

PLANNING COMMISSION STAFF REPORT

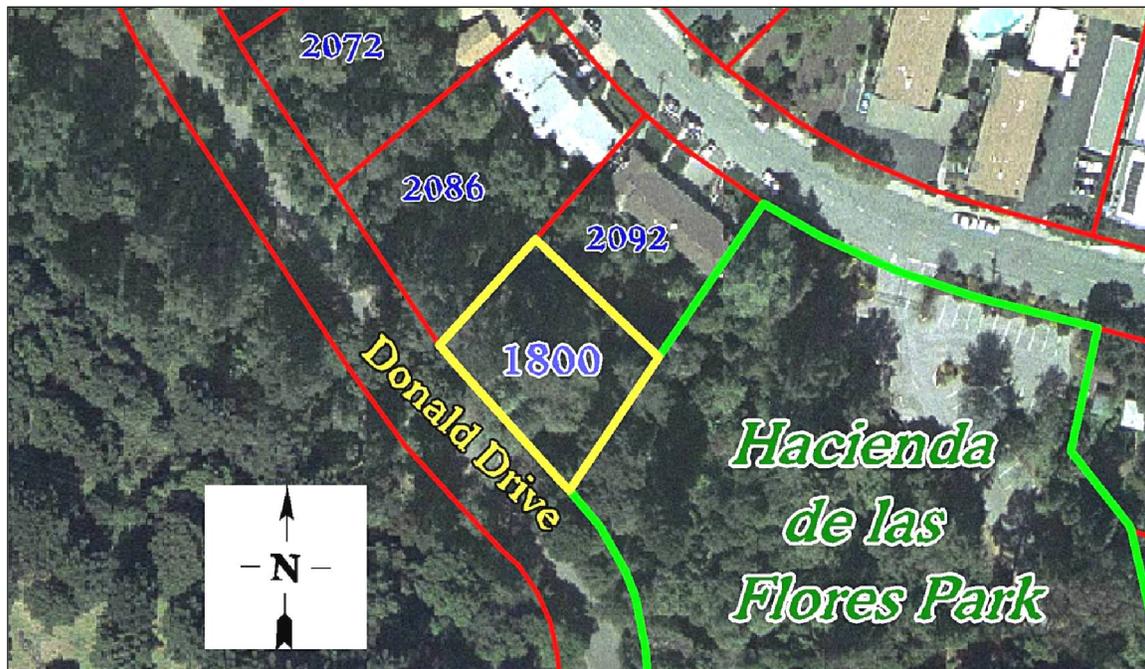
DATE: November 2, 2011 for **November 7, 2011 MEETING**

ITEM: V. A. – Planning Commission Public Hearing

FILE: **DRB 04-11 / James Phillip Wright (Applicant), Stephen Williams – Pensco Trust Co. (Owner) 1800 Donald Drive.** Consider and receive comments on a draft mitigated negative declaration for a new 5,132 square foot residence with an attached second unit on a vacant 13,203 square foot property on the northeast side of Donald Drive approximately 1,000 feet southeast of the intersection with Laird Drive. If a mitigated negative declaration is adopted for the project, then the Planning Commission will consider a hillside development permit for the project. APN 255-183-011

PROJECT DESCRIPTION:

The 1,207 square foot upper level would include a two-car garage and a one-car garage with access from a circular bridge driveway off of Donald Drive. The 2,647 square foot middle or mezzanine level would include the main living area, the attached second unit, and a cantilevered back deck. The 1,277 square foot lower level would include two bedrooms, two bathrooms, and shell space. Since the slope of the hillside is greater than 20% (approximately 65% or 1-foot vertical to 1.54-feet horizontal), a hillside development permit is required. The proposed grading for the building foundation is less than 50 cubic yards and the depth of cuts into the hillside is less than 3-feet deep. The location of the proposed residential project would be on the hillside above the existing duplex residence at 2092 and 2094 Donald Drive and is shown on the aerial photo map below:



TOWN ZONING: 6-DUA (Six Dwelling Units per Acre)

GENERAL PLAN DESIGNATION: Residential 6 du/ac

PUBLIC NOTICE AND CORRESPONDENCE:

The public hearing notice for this project was mailed on October 18, 2011. The Notice of Intent to Adopt a Negative Declaration was posted at the Contra Costa County Clerk's Office as required by the California Environmental Quality Act (CEQA) guidelines. **EXHIBIT A** includes the area of notice map, mailing list and public hearing notice for the project. The notice list was expanded beyond the minimum 300-foot radius to include all residents living on Donald Drive above the project site and owners of property along Donald Drive to the intersection of Laird Drive. One letter dated October 24, 2011 and signed by Carol and Ted Gamble (1762 Donald Dr.), Sandra Reed (1750 Donald Dr.) and Michelle and J.P. Maeders (1758 Donald Dr.) was received by the planning department on November 1st. This letter is enclosed as **EXHIBIT B**. The letter is opposed to the project and expresses concerns for obstruction of traffic and emergency vehicles on Donald Drive. Any additional written correspondence received prior to the hearing will be brought to the meeting.

BACKGROUND:

The 25,498 square foot lot at 2092 - 2094 Donald Drive was subdivided into two lots on February 28, 1964. The subdivision of the property was approved by Contra Costa County prior to the incorporation of Moraga. The property under consideration for this application was designated as Parcel "A" on the minor subdivision map and the existing duplex was designated Parcel "B". Following the lot split, the owner of Parcel "A" attempted three times to get variances to build on the lot. The requested variances were for the front building setback and building height. Contra Costa County denied two of the variance applications (numbers 352-71 and 1029-74). The Town of Moraga denied the third variance application (file no.1001-76) because the General Plan and Zoning Ordinance were not adopted in 1976, when the application was considered.

After the General Plan was adopted in 1980, the Town did not deem applications for development of Parcel "A" complete because the portion of Donald Drive southeast of the intersection with Laird Drive was a private road and the Town required proof that the owner of Parcel "A" had a legal access easement on the private portion of Donald Drive. The section of Donald Drive leading up to Mulholland Ridge was owned by a succession of property owners concluding with Wayne Batavia. In 1998, Mr. Batavia gave the Town of Moraga approximately 300 acres for the Mulholland Open Space Preserve. As a result, the private portion of Donald Drive became a publicly owned road. The parcels abutting Donald Drive are now accessible to the road, but the steep slope below Donald Drive would make access difficult.

In 2006 and 2007 the Planning Commission and Town Council held several hearings to consider a negative declaration and general plan consistency findings for a 2,809 square foot residence with an attached 364 square-foot studio apartment unit and a 526 square-foot garage on Parcel "A". The project submitted in 2006 required variances to the front building setback and building height limit, and it required significant grading into the hillside. General Plan policies LU1.8 and PS4.10 prohibit grading on land with an average predevelopment

slope of 25% or more unless the Town Council finds that a minimum amount of grading is proposed and the grading is supported by site-specific analysis. The Town Council held a Public Hearing on the 2006 project on May 9, 2007. A copy of an excerpt from the May 9, 2007 Town Council meeting minutes is attached as **EXHIBIT C**. The Town Council continued the meeting to have the Town Attorney, Town Engineer and Fire District address several legal and safety questions, which are summarized below:

- i The Town Attorney was asked to research the scope of the grant of the road to Mulholland Ridge for public access and secondly to determine if properties that abut Donald Drive have the right of access to it automatically.
- i Given the steep slope on the site, the Town Attorney was asked if there is any discretion for the Town to deny construction of a building on the site and what the potential ramifications are for the Town to deny construction on the property, even though this is a legal lot.
- i The Town Engineer was asked to determine whether the depth of cut below Donald Drive for the building foundation would potentially cause substantial damage to the public street.
- i Due to the steep slope on the site and the possibility for an accident during construction, such as equipment rolling down the hill, the safety precautions and procedure for constructing the building on the slope needs to be addressed.
- i The Moraga-Orinda Fire District should determine the amount of defensible space needed around the structure and whether additional trees would need to be removed.

Following the May 9th Town Council hearing, the owner of the property did not continue to fund the processing of the application and the project was not scheduled for another hearing. During their deliberations, both the Planning Commission and the Town Council expressed concerns with the process because neither body believed they could make the findings to grant the two variances that would have been necessary for the project.

ENVIRONMENTAL REVIEW STATUS:

Prior to making any discretionary decision on a project, the California Environmental Quality Act (CEQA) requires the reviewing body to make an environmental determination. The proposed project is not exempt from CEQA because it will involve grading for the building foundation on a slope over 10%. Staff has prepared an Initial Study (IS) for the project, dated September 15, 2011, which is attached as **EXHIBIT D**. A Mitigated Negative Declaration is recommended with mitigation measures to reduce potentially significant environmental impacts to a less than significant level. The draft Mitigated Negative Declaration is enclosed as **EXHIBIT E**.

The applicant has agreed to make revisions to the project necessary to implement the mitigation measures. The applicant may also suggest alternative mitigation measures deemed equally effective to address environmental issues. The project plans call for the removal of 7 native trees to accommodate the new building and driveway bridges. The applicant is having an arborist prepare a report to address the mitigation measures listed under "Aesthetics MM1" and "Biological Resources MM3". The applicant is also retaining a qualified wildlife biologist to prepare a biotic survey of the property in accordance with "Biological Resources MM1". There are a number of foundation and soils issues raised by the Town's Geotechnical peer review consultant, Cal Engineering and Geology, which will be addressed by the project geotechnical engineer, Friar Associates, Inc.

After hearing public testimony regarding the IS and the draft Mitigated Negative Declaration, the Commission should discuss whether the proposed mitigation measures will reduce all the environmental impacts to a “less than significant” level and consider the findings in the draft Mitigated Negative Declaration. The Planning Commission can make amendments to the Mitigation Measures and to the findings in the Mitigated Negative Declaration. Following adoption of the Mitigated Negative Declaration, no significant changes can be made to the mitigation measures without re-opening the public hearing on the environmental determination, unless the change is an alternate mitigation measure that would be equally effective at reducing the environmental impact.

At the April 26, 2006 Town Council meeting, Lynda Deschambault, an adjacent resident, expressed concern that no monitoring plan was included to ensure that the mitigation measures would be implemented. On relatively small projects, our procedure has been to include all the adopted mitigation measures as mandatory conditions of approval for the project. The proposed mitigation measures are listed in **EXHIBIT F**. The mitigation measures are clearly labeled as “mitigation measures” in the conditions of approval so that they will not be eliminated or changed without re-opening the public hearing on the Mitigated Negative Declaration. Review of final project plans for compliance with the conditions of approval serves as the “mitigation monitoring program” for the project. However, long term mitigation measures may also require an agreement with the property owner or the recordation of deed restrictions to require adherence to mitigation measures by future owners of the property.

If the Commission finds that the IS has adequately discussed all the issues and that the environmental impacts can be adequately mitigated, then a motion should be made to adopt the Mitigated Negative Declaration. If the Commission finds that one or more environmental impacts are not adequately addressed or mitigated in the Initial Study, staff should be directed to amend the Initial Study and address the deficiency. If the Commission determines that there is a significant environmental impact that cannot be mitigated to a “less than significant” level, then a focused Environmental Impact Report would need to be prepared with regard to the particular significant impact.

HILLSIDE DEVELOPMENT PERMIT:

Following approval of a Mitigated Negative Declaration, the Planning Commission can then open the hearing to consider approval of a hillside development permit (HDP) for the project in accordance with the Town’s Slope Density Ordinance. A HDP is required because the slope of the property exceeds 20 percent. The slope under the building is 65%, which is equivalent to a 33-degree angle. Moraga Municipal Code (MMC) Section 8.136.070 lists the factors to be considered for a HDP. The factors include slope, soil instability, drainage, soil characteristics, seismic factors, existing and future residential development, view shed, access, potential traffic congestion, fire risk, noise, glare, wildlife, dust and impact on existing vegetation. A discussion of these factors is included in **EXHIBIT G**.

With regard to slope stability and soil characteristics, the Town’s geotechnical peer review consultant, Cal Engineering and Geology (CE&G), completed their review of the applicant’s geotechnical investigation update report on August 22, 2011. The applicant’s geotechnical report and the peer review letter are included as **EXHIBITS H- (1) and H- (2)**. The recommendations from CE&G are summarized below:

1. Sheet A4.0 shows the foundation benched into the hillside as a series of short basement type retaining walls. It is recommended that FAI provide the appropriate geotechnical design parameters for these foundation retaining walls.
2. The slope stability analyses previously prepared should be updated to address the revised recommendations contained in Special Publication 117 (2008). The analyses may also need to be revised to account for the soil which was to be removed, but which will now be left in place.
3. The previous FAI report recommended removal of surficial soils while the updated report indicates that little or no grading will occur and therefore recommends modeling creep forces on the piers to account for the colluviums and fill to remain. Since both the colluviums and existing fill are potentially unstable, we recommend that consideration be given to applying passive pressure only in the underlying weathered bedrock materials.
4. The FAI report recommends directing drainage to an appropriate location. This recommendation should be clarified to indicate where the water will be discharged.
5. The surficial soils encountered in the 2005 FAI borings reported plasticity indices of 14 to 20 percent, which are generally indicative of expansive soils. The FAI update report does not include recommendations for uplift pressures from expansive soils.
6. The plans do not show the building supported on a pier and grade beam foundation in accordance with the recommendations contained in the June 21, 2011 FAI report.
7. Several trees seem to be missing from the plans including an oak tree within the proposed driveway bridge alignment, which was shown as a 16-inch oak on the 2005 development plans.
8. The preliminary plans do not show enough detail to reflect the recommendations of the geotechnical report or address items in the Initial Study.

In addition to the factors discussed in **EXHIBIT G**, MMC Section 8.136.070 requires an appropriate living space consistent with the sites constraints, with the building site located at the lowest possible elevation on the site and residential development designed with the principal and accessory structures blending with the topography. Since the property has no level outdoor area, the plans include a large 600 square foot cantilevered deck. Both the primary unit and secondary living unit have access to the deck area on the "Mezzanine level", sheet A2.1 of the plans. The location of the building site is at the lowest possible elevation because the garages on the top of the building could not be any lower without making the driveway bridges too steep. The location of the building is at a lower elevation than the residential project proposed in 2006. There will be no grading beyond the footprint of the building and the foundation is designed to step down the existing slope with minimal grading. The curved roof over the garages follows the slope of the hillside and helps to blend the structure with the topography.

Under MMC Section 8.136.080, the Planning Commission may impose additional restrictions or requirements or both on a parcel of hillside land if it finds that the parcel requires protection because of its prominence and location or determines that there may be exceptional hazards to its development.

APPLICABLE GENERAL PLAN POLICIES:

The first part of General Plan Policy LU1.8 states, ***“No new residential structures may be placed on after-graded average slopes of 25 percent or steeper within the development area, except that this provision shall not apply to new residential structures on existing lots that were either legally created after March 1, 1951 or specifically approved by the Town Council after April 15, 2002.”*** The subject property was legally subdivided on February 28, 1964 and is exempt from this first provision of LU1.8.

The second part of General Plan Policy LU1.8 states ***“Grading on any non-MOSO land with an average predevelopment slope of 25% or more within the proposed development area shall be prohibited unless formally approved by the Town Council where it can be supported by site-specific analysis and shown that a minimum amount of grading is proposed in the spirit of and not incompatible with all other policies of the General Plan.”*** On August 9, 2006 the Town Council adopted a new Grading Ordinance (MMC Chapter 14) for the Town. “Grading” is defined under Section 14.56.010 as *“the physical movement of Earth Material by forces other than nature including but not limited to, excavating, filling, compacting, hauling, and related work, excluding disking.”* Under the definition, grading will be done for the foundation of the building; however, Section 14.04.031 of the Grading Ordinance lists quantities of soil and other parameters which require a grading permit, such as movement of 50 cubic yards of soil or more, and excavations measured vertically greater than 3-feet deep. Section 14.04.032 lists exemptions from a grading permit including excavations below finished grade for basements and footings of a building, retaining wall, swimming pool, or other structure authorized by a valid building permit. The project architect has worked with the Town’s Engineering Department to design a foundation that would be exempt from a grading permit. The excavation for the building foundation was engineered to be less than 50 cubic yards of soil with no cuts into the slope deeper than 3-feet, excluding any drilled piers that may be necessary into the bedrock below the surficial soils. The architect intends to present a visual computer model of the proposed building at the meeting, which shows accurately the extent of the foundation grading. There would be no other grading on the site except for some trenching that may be necessary for drainage retention areas. It seems reasonable to assume that grading that does not require a grading permit would be considered “minimal grading”. Site specific analysis with geotechnical peer review has been done for this project and is included in the discussion of the hillside development permit (**EXHIBITS G and H**).

The first part of General Plan Policy PS4.10 states, ***“Grading for any purpose whatsoever may be permitted only in accordance with an approved development plan that is found to be geologically safe and aesthetically consistent with the Town’s Design Guidelines.”*** The geotechnical report and peer review report that address the geological issues are included in **EXHIBIT H**. No landslides were identified on the property and geotechnical recommendations indicate that a foundation with piers into the underlying weathered bedrock could be “geologically safe”. The project will require Design Review Board approval, at which time a determination will be made regarding whether the proposed structure is “aesthetically consistent with the Town’s Design Guidelines.”

The second part of General Plan Policy PS4.10 states, ***“Land with a predevelopment average slope of 25% or greater within the development area shall not be graded except at the specific direction of the Town Council and only where it can be shown that a minimum amount of grading is proposed in the spirit of, and not incompatible with, the intention and purpose of all***

other policies of the General Plan.” This policy is essentially the same as the second part of General Plan Policy LU1.8, which was discussed above.

The third part of General Plan Policy PS4.10 states, **“The Town shall develop an average slope limit beyond which grading shall be prohibited unless grading is required for landslide repair or slope stabilization.”** Grading restriction number 4 in Section 14.04.033 of the new grading ordinance states **“No Grading shall occur on Predevelopment Average Slopes steeper than 25% (4 horizontal to 1 vertical) unless Grading is required for landslide repair, slope stabilization or other emergencies, and at the specific direction of the Town Council”** If the Town Council does not allow any grading on the site, then construction of a residence on the property would have to be supported on piers with no excavations or fill on the hillside. This would increase the height of the structure and the mass or bulk of the building would appear to increase since no part of the structure would be below grade.

FINDINGS AND OTHER APPROVAL PROCEDURES:

The architect for the project has endeavored to minimize all impacts from the proposed development. Unlike the 2006 project, the proposed plans do not require a variance for the building setbacks or for the maximum building height. The plans also conform to the Town’s off-street parking requirements. The circular driveway bridge allows the residence to be moved further down the slope and provides additional area for some guest parking off of Donald Drive. The primary residence has a total of 3,001 square feet, not including the 717 square feet “shell space” on the lower level or the 510 square foot garage on the top level. If the “shell space” is included in the total for the primary unit, then the total floor area would be 3,718 square feet. The second living unit has a floor area of 553 square feet, not including the 351 square foot single car garage. The second unit includes a small kitchen area, which has been determined by staff to qualify as a duplex unit. Duplex units are a “permitted use” under MMC Section 8.32.020-B in the 6-DUA Multifamily Residential District. A single-family residence is a conditional use in the 6 DUA district and requires a Conditional Use Permit.

Since the use is a “permitted use” and the project has been designed to eliminate the need for any variances, there are no specific findings required under the administrative procedures listed in MMC Chapter 8.12. However, the Design Review Board will need to make findings under MMC Section 8.72.080-B when they review the plans. A tree removal permit will also be necessary to cut down the 7 native trees. The tree removal permit will be considered by the Design Review Board in case there are adjustments to the building and/or driveway bridge locations that change the number of trees that would need to be removed. The Moraga-Orinda Fire District could also require the removal of any large trees within 15-feet of the new residence to maintain a defensible space around the new home.

The Slope Density Ordinance does not list any required findings for approval of a hillside development permit, but Sections 8.136.010-A and B list the declarations of intent and purpose of the ordinance. These have been modified as “findings” in the draft resolution for approval of the hillside development permit. Comments on the intent and purpose of the Slope density Ordinance are included below.

1. Traditional flat land practices for residential development should not be used on hillside land to minimize cut and fill operations to retain the natural character of the hill areas and to preserve the predominant views both from and of the hill areas.

Comment: There will be no fill on the site. The excavated soil for the stepped foundation will be removed from the site. There will be no grading or padding of the hillside beyond the proposed footprint of the home. The home has been designed to have as low a profile as possible given the steep topography. The applicant wants to retain as many trees as possible in order to preserve the natural forested look of the hillside. The exterior walls of the structure will use milled planks from redwood trees with the bark left on the planks so that the building will blend with the trees on the site.

2. The retention of hillsides in as near a natural state as is feasible is important for the maintenance of community values.

Comment: The grading for the project has been limited to the minimum necessary to install the stepped foundation for the building. It is the applicant's intention to do no grading beyond the foundation of the home, except as necessary to install a drainage retention basin for preservation of storm water quality.

3. Maintain the suburban character and beauty of the town by preserving its open and natural topographic features.

Comment: The existing steep slope on the site will not be altered except under the building, where the view of the cuts into the hillside will be blocked by the building.

4. Minimize soil erosion and slides and potential residual damage to life or property associated with involuntary and seismic-induced earth movement.

Comment: The design of the foundation will be modified to comply with the recommendations of the geotechnical engineers for piers to anchor the foundation into the weathered bedrock and prevent the downslope creep of the undocumented fill and colluviums that overlay the weathered bedrock. There are no mapped landslides on the property.

5. Control the scarring and cutting of hillsides.

Comment: The only grading will be for the foundation under the building and for a drainage retention basin. The design of the retention basin shall be reviewed by the Town Engineer to minimize any scarring and cutting of the hillside below the home.

6. Limit the development of hillsides so that the foregoing purposes are achieved.

Comment: The subject property was subdivided in Contra Costa County prior to the incorporation of the Town of Moraga and is a legal lot. Although the Town would probably deny approval of a subdivision on a hillside with an average slope greater than 25%, the proposed development of this lot was designed to achieve most of the goals to preserve the hillside.

7. Regulate the development of hillside areas by providing for the imposition of standards for streets, trails and other improvements consistent with these purposes.

Comment: Since this is not a subdivision application, most of the standards for street and trail improvements cannot be implemented; however, the proposed project will have significantly less impact on Donald Drive than previous applications for this lot because the project complies with the off-street parking requirements and the double bridge driveway allow for forward egress from the site and additional guest parking on the site.

RECOMMENDATION:

Prior to any discretionary decision on the project, the Planning Commission must first consider approval of the Mitigated Negative Declaration, with any amendments to the mitigation measures that the Planning Commission may wish to make after hearing testimony from the public. Staff has enclosed a draft resolution for approval of the mitigated negative declaration, which is attached as **EXHIBIT I**. If the mitigated negative declaration is adopted, then the hearing can be re-opened for discussion of the hillside development permit for the project. Staff has prepared a second draft resolution for approval of the hillside development permit, which is enclosed as **EXHIBIT J** and includes recommended conditions of approval. Since the project will also require Design Review Board approval, the draft resolution for the hillside development permit does not include any specific conditions with regard to the design of the structure. However, the Planning Commission may make recommendations to the Design Review Board.

Prepared by: Richard Chamberlain, Senior Planner

Reviewed by: Shawna Brekke-Read, Planning Director

EXHIBITS:

- A - Area of Notice Map, Mailing List and Public Hearing Notice
- B - Written Correspondence
- C - Town Council meeting minutes from May 9, 2007
- D - Initial Study for 1800 Donald Drive Residential Project
- E - Draft Negative Declaration
- F - List of all Mitigation Measures (Mandatory Conditions of Approval)
- G - Factors to be considered for Hillside Development Permit
- H - Geotechnical Reports and Peer Review Reports
 - (1) Geotechnical Investigation by Friar Associates, Inc. (FAI) dated June 21, 2011
 - (2) CE&G Peer Review Letter dated August 22, 2011
- I - Draft Resolution for approval of a Mitigated Negative Declaration
- J - Draft Resolution for approval of a Hillside Development Permit
- K - Project Plans

EXHIBIT A

**AREA OF NOTICE MAP
MAILING LIST AND
PUBLIC HEARING NOTICE**

**Draft Mitigated Neg.
Declaration and
Hillside Dev. Permit
File: DRB 04-11**

**1800 Donald Drive
Mailing List**

**Planning
Commission
Public Hearing**

APN	Name	Address	City & Zip
255202021	Richard P Segner	90 DEVIN DR	MORAGA, CA 94556 1302
255190001	Ray J & Gail A Steinman	2 DONALD PL	MORAGA, CA 94556 1405
255183010	John D Iii Warbritton Trust	172 ALICE LN	ORINDA , CA 94563 3601
255183008	Mario Quintero	49279 SALT RIVER RD	INDIO, CA 92201 8851
255183007	Victor & Ruth Brill Trust	1975 STANLY AVE	SANTA CLARA , CA 95050 5729
255170018	Jason P Brim	2083 DONALD DR	MORAGA, CA 94556 1401
255170020	Michael G Vronis	4479 DEER RIDGE RD	DANVILLE , CA 94506 6019
255183006	Lynda Ann Deschambault Trust	2066 DONALD DR	MORAGA , CA 94556 1402
255170013	George Sr & Ruby Tellsworth	2069 DONALD DR	MORAGA, CA 94556 1401
255170003	Alfred Wong	2443 FILLMORE ST, Apt.#228	SAN FRANCISCO, CA 94115 1800
255202025	Dean & Mary Schlobohm	1754 DONALD DR	MORAGA, CA 94556 1306
255202022	Jean-pierre & Michelle Maeder	1758 DONALD DR	MORAGA, CA 94556 1306
255202026	Sandra C Reed Trust	1750 DONALD DR	MORAGA, CA 94556 1306
255202023	C T & Carol Ann Gamble Trust	1762 DONALD DR	MORAGA, CA 94556 1306
255202006	Robert L Sanders	92 DEVIN DR	MORAGA, CA 94556 1302
255202003	David Strugeon Trust	91 DEVIN DR	MORAGA, CA 94556 1301
255202002	Edward K & Amanda L Chan	93 DEVIN DR	MORAGA, CA 94556 1301
255190002	Ross Sakamoto Trust	4 DONALD PL	MORAGA, CA 94556 1405
255183002	Walter F & Kathleen Nelson Trust	2024 DONALD DR	MORAGA, CA 94556 1402
255183001	Victor P & Elizabeth Segal	2016 DONALD DR	MORAGA, CA 94556 1402
255183005	Benjamin F & Annette M Spiteri	26 THORNDALE PL	MORAGA , CA 94556
255183004	Sun Cha Chang	1702 MARY LYN CIR	PETALUMA , CA 94954 5842
255170002	Walter E Bateman Trust	36 CARR DR	MORAGA , CA 94556 1942
255183003	Robert Bernie	219 BRANNAN ST, Apt.#11H	SAN FRANCISCO , CA 94107 4030
255170001	Deborah S Faaborg Trust	PO BOX 1562	VACAVILLE, CA 95696 1562
255181009	Samuel C Garcia	PO BOX 6761	MORAGA , CA 94570 6761
255181007	Joseph A & Josephine Mele Trust	249 SCOFIELD DR	MORAGA, CA 94556
255181008	Jill A Noriye	605 MURRAY LN	LAFAYETTE , CA 94549 5429
255183011	Pensco Trust Company	PO BOX 26903	SAN FRANCISCO, CA 94126 6903
	James Phillip Wright	5 Greenvalley Court	Lafayette, CA 94549
	Stephen R. Williams	2647 Pleasant Hill Road	Pleasant Hill, CA 94523



PLANNING COMMISSION

NOTICE OF PUBLIC HEARING

1800 Donald Drive

Draft Mitigated Negative Declaration and Hillside Development Permit for File Number DRB 04-11 to consider and receive comments on an environmental initial study and draft mitigated negative declaration for a new residence with an attached second unit on a vacant lot on the northeast side of Donald Drive and 1,000 feet southeast of the Laird Drive intersection. The project site is on the hillside above the duplex residence at 2092 and 2094 Donald Drive. Access to the garage level at the top of the building will be from a semi-circular bridge driveway. The 2,647 square foot middle level would include the main living area, the attached second unit, and a cantilevered deck at the rear. The 1,277 square foot lower level would include two bedrooms and two bathrooms. If the Planning Commission approves the mitigated negative declaration, then the hillside development permit will be considered for the project. APN 255-183-011

The Planning Commission of the Town of Moraga will hold a public hearing on the above matter, pursuant to Zoning Ordinance Section 8.08.020, on **Monday, November 7, 2011** at the Moraga Library Community Meeting Room, 1500 St. Mary's Road (wheelchair accessible). The meeting starts at 7:00 p.m.

PROJECT DATA:

- 2 dwelling units on a 13,203 square feet lot
- 5,132 square feet of residential floor area including the 862 square feet garage area
- 2 stories plus garages for 3 cars on third level above the living areas
- Maximum building height of 35 feet and aggregate building height of 45 feet.
- Seven existing trees will be removed to clear the building site

PERMITS REQUIRED:

- Hillside Development Permit because the slope of the building site is greater than 20% (approximate slope is 65% or 1-foot vertical to 1.54-feet horizontal)
- Design Review for a new residential structure

APPLICANT: James Phillip Wright, 5 Greenvalley Court, Lafayette, CA 94549

PROPERTY OWNER: Stephen R. Williams, 2647 Pleasant Hill Road, Pleasant Hill, CA 94523

ZONING DISTRICT: 6-DUA (Six Dwelling Units per Acre)

ENVIRONMENTAL REVIEW STATUS: An environmental initial study was prepared for the project on September 15, 2011. Although the proposed project could have a significant effect on the environment, the initial study found that there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent and a mitigated negative declaration has been prepared for consideration and adoption. The review period for the draft Mitigated Negative Declaration is from October to November. Copies of the Environmental Initial Study for the 1800 Donald Drive residential project are available for public review on the Town's web site at moraga.ca or may be purchased at the

Planning Department, 329 Rheem Boulevard, Moraga, California, 94556, during normal business hours, Monday through Friday 8 a.m. to noon and 1 to 5 p.m.

ATTACHMENTS: Mitigated negative declaration, vicinity map, project plans (some drawings are not included to facilitate mailing; all drawings are available for public review; see “Further Information” below).

PUBLIC COMMENT

Comments may be made verbally at the public hearing and in writing before the hearing. Those wishing to speak at the hearing must submit a speaker card by 7:15 p.m. The Commission may limit the number of speakers and the time granted to each speaker. Written comments to the Commission are encouraged and should be directed to:

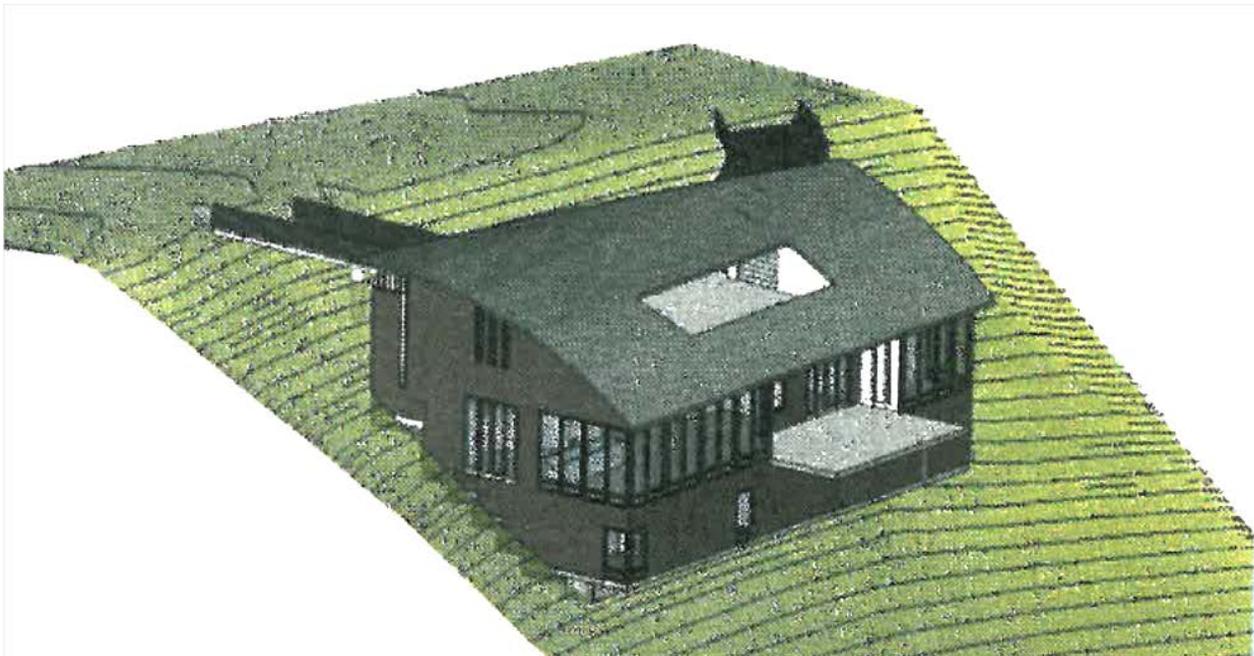
Planning Department
329 Rheem Boulevard
Moraga, CA 94556

Fax: (925) 376-5203
E-mail: planning@moraga.ca.us

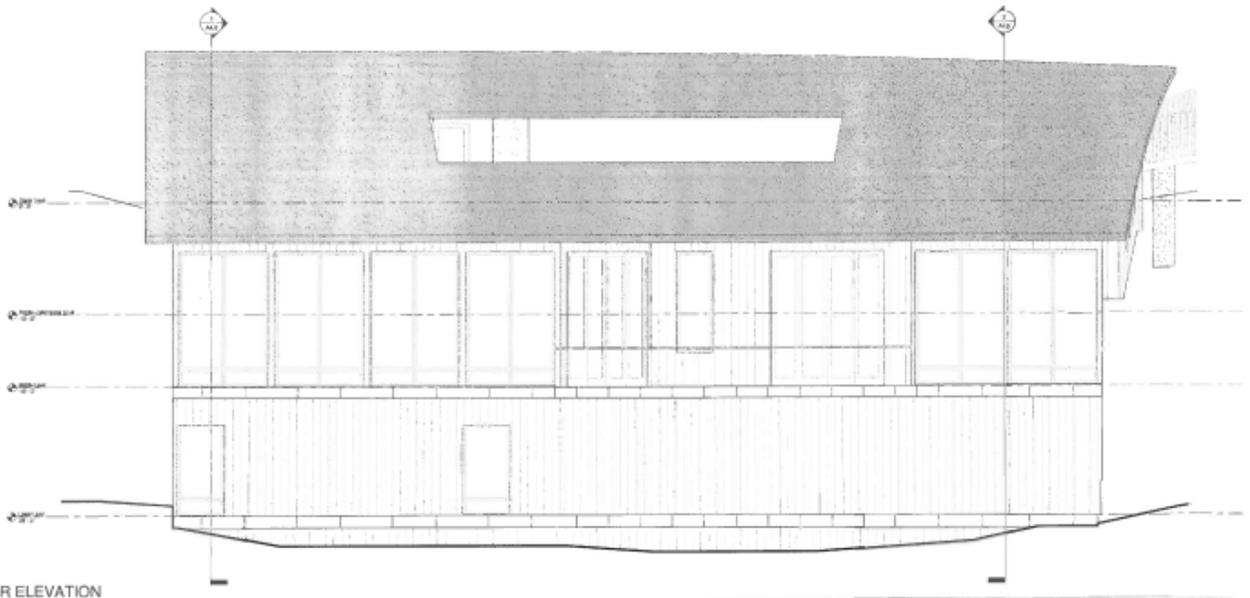
To assure distribution to Commission members prior to the meeting, **correspondence must be received by 12:00 noon, seven (7) days before the meeting.** 15 copies must be submitted of any correspondence with more than ten (10) pages or any item submitted less than seven days before the meeting.

FURTHER INFORMATION

Questions about the project should be directed to the project planner, Richard Chamberlain, at (925) 888-7042 or planning@moraga.ca.us. All project application materials, including full-size plans and the environmental initial study may be viewed at the Planning Department, 329 Rheem Boulevard, during normal office hours.

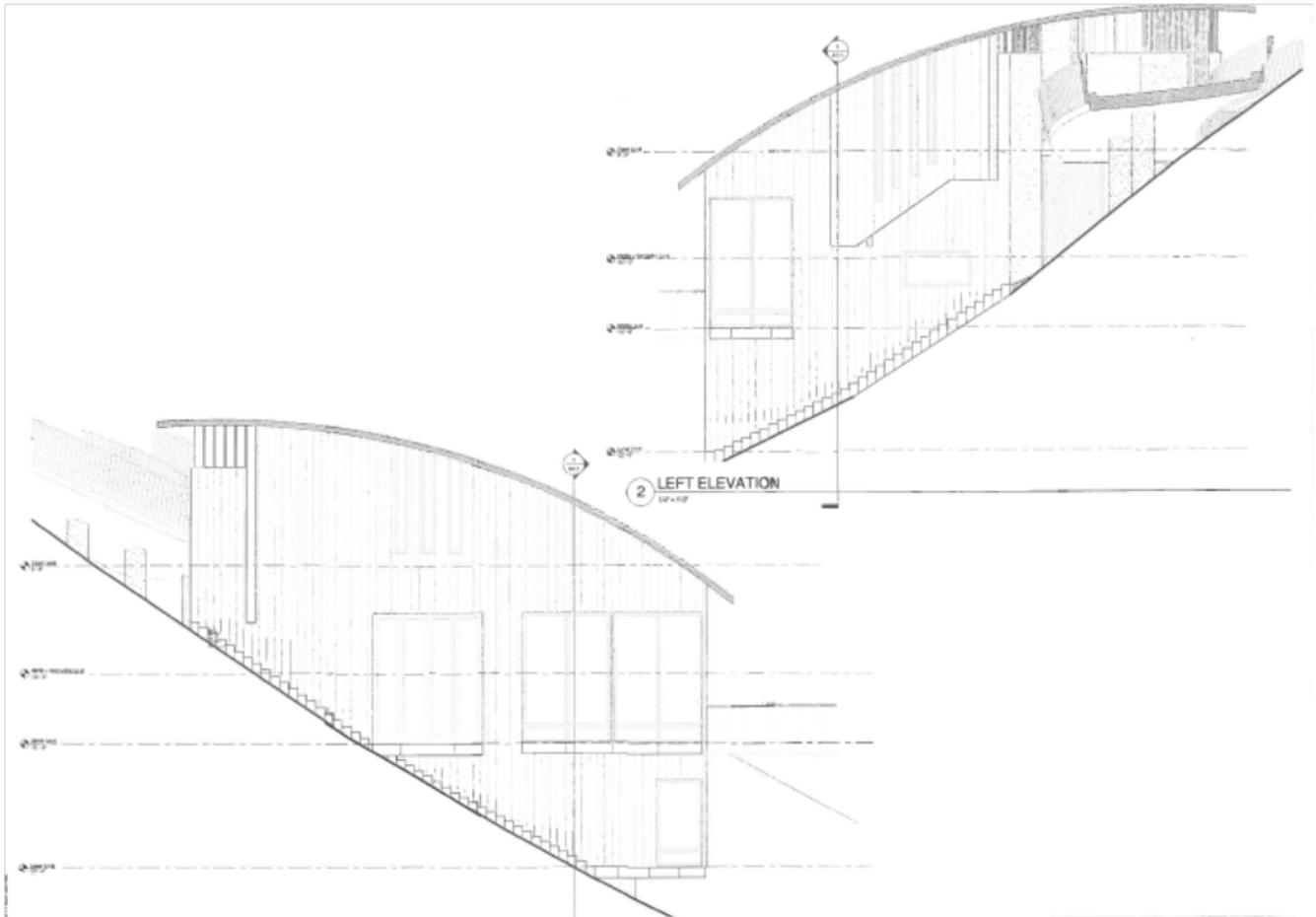


Rendering of Proposed Residential Structure at 1800 Donald Drive



2 REAR ELEVATION
1/8" = 1'-0"

Rear Elevation (Northeast side)



2 LEFT ELEVATION
1/8" = 1'-0"

Side Elevations

EXHIBIT B

WRITTEN CORRESPONDENCE

RECEIVED

NOV 1 2011

October 24, 2011

MORAGA PLANNING DEPT.

Dear Mr. Richard Chamberlain, project planner, and Members of the Town of Moraga Planning Commission:

This is the second time in as many years that the residents of 1750, 1758, and 1762 Donald Drive have written to express our concern about the proposed construction at 1800 Donald Drive. Two years ago the property was under different ownership from the current owner, Stephen R. Williams, broker/owner of Diablo Realtors. It seems that not much else has changed.

Once again the residents of our community are writing to express dismay about a project that seems to be essentially the same as the one before it. When the original project plan was under consideration we were told by the Town's project planner that the lot was "unbuildable" and that neither the Town of Moraga nor Contra Costa County would approve the project. In the October 2011 public hearing notice it is stated that "although the proposed project could have a significant effect on the environment, the initial study found that there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent...." We don't understand how a so-called "unbuildable" lot has become "buildable", and since we live directly above the project site it is important that you address our concerns.

First of all, the project site is too steep to be built upon safely when you consider that there are residences directly above it and a densely populated area of Donald Drive directly below it. We live on the section of Donald Drive that leads directly to the Mulholland Ridge open space, and we have no other means of getting to and from our homes. Should this project be approved access to and from our homes could be impeded by construction equipment subjecting us to inconvenient delays over an extended period of time. In addition how will construction equipment access the proposed site? Where will it be stored when not in the process of construction? Is the equipment too heavy for the road? If so, might the equipment cause road erosion and breakage down the steep hillside?

Secondly there is an issue of safety. The road leading to the gate at Mulholland Ridge is very curvy and narrow, and on a daily basis there is substantial vehicular and pedestrian traffic seeking access to the open space. This fact in and of itself is an issue, particularly on weekdays when cars and SUV's are parked on both sides of the road leading to the gate, leaving little space for residents or emergency vehicles to get through. (Please note that on two instances over the past two years an ambulance has been required at one of our residences, and if cars had been parked on both sides of the road and there had been construction going on, as had been proposed, treatment might have been delayed with possible fatal consequences.) The hearing notice also notes that the proposed project includes "garages for 3 cars on a third level above the living areas." If this results in more traffic entering and leaving Donald Drive and/or parking along the road, congestion as well as the possibility of accidents will increase.

Third of all, the issue of safety extends to the densely developed section of Donald Drive directly below our homes. This part of Donald consists of duplexes, apartments, condos, and some single-family dwellings. Donald Rheem Elementary School sits in the cul de sac at the end of Laird Drive, and Donald Drive is the only means in or out of the school. In the event of an emergency how will police, fire, and paramedics gain access to residences or the school with heavy construction equipment possibly blocking the way?

Finally, there is the issue of the aesthetics and scale of the proposed project which will alter the view from Moraga Road where the proposed construction at 1800 Donald Drive fundamentally changes the hillside. The proposed project includes "5,132 square feet of residential floor area including the 862 square feet of garage area, 2 stories plus garages for 3 cars on a third level above the living areas...." If built, the result not only will dwarf all other construction on Donald Drive and along Mulholland Ridge, but it will be of a design completely out of character with already-existing residential structures. One analogy is that the proposed dwelling might look like the "mother ship" hovering over its much smaller and more modest craft. Another is that the proposed dwelling might be the castle overlooking its domain. This will be the lasting impression a driver on the Moraga Road retains.

For all of these reasons we hope that the Town Planning Commission considers its decision carefully in order to preserve the safety and character of this busy and beautiful neighborhood.

Yours truly,

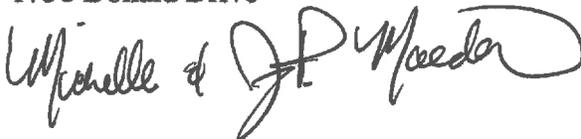
Carol and Ted Gamble
1762 Donald Drive



Sandra Reed
1750 Donald Drive



Michelle and J.P. Maeders
1758 Donald Drive



Cc: Members of the Moraga Town Council

EXHIBIT C

**TOWN COUNCIL MEETING
MINUTES FROM MAY 9, 2007**

**EXCERPT FROM TOWN OF MORAGA TOWN COUNCIL REGULAR MEETING
MAY 9, 2007 MINUTES**

Joaquin Moraga Intermediate School Auditorium
1010 Camino Pablo, Moraga, California 94556

I. CALL TO ORDER

The meeting was called to order at 7:30 p.m. by Mayor Michael Metcalf.

ROLL CALL Councilmembers present: Mayor Michael Metcalf; Vice Mayor Lynda Deschambault; Councilmember Rochelle Bird; Councilmember Ken Chew; and Councilmember Dave Trotter

Councilmembers Absent: None

BREAK

The Mayor called for a five-minute break, and the Council thereafter reconvened the regular meeting at 9:35 p.m.

IX. NEW BUSINESS

B. 1800 Donald Drive Residential Project

RECUSAL

Vice Mayor Deschambault recused herself from participating on the item due to a conflict of interest due to her residency being within 500 feet of the project.

Richard Chamberlain, Senior Planner, gave the staff report, stating the purpose of the proposal was to conduct a public hearing, receive comments and consider a revised EIS and draft mitigated negative declaration for a proposed 3,699 square foot residence with a studio apartment unit on a vacant 13,204 square foot lot on the northeast side of Donald Drive. He noted that in 1998, the Town acquired 200 acres for the Mullholland Open Space Preserve and the project portion of Donald Drive became a publicly owned road, providing the property at 1800 Donald Drive with access. He said prior to making any discretionary decision on the project, CEQA requires the reviewing body make an environmental determination. The proposed project is not exempt from CEQA because it will involve grading on a slope over 20% and Council is requested to consider adopting a mitigated negative declaration if the project will not have a significant environmental impact.

Mr. Chamberlain said this was the fourth public hearing on the EIS and draft mitigated negative declaration. On April 26, 2006, the Council considered the proposal and requested a recommendation from the Planning Commission with regard to adoption of the negative declaration and also on the determination on minimum grading in compliance with general plan policies LU 1.8 and PS 4.10. On May 15, 2006, the Planning Commission requested revisions to the initial study, to further address impacts under Section 1, Aesthetics, Section 4, Geology and Soils, Section 8, Hydrology and Water Quality, and Section 9, Land Use and Planning. Under Section 9, the Planning Commission specifically requested discussion of general plan policies CD 1.2, CD 1.4, CD 1.5 in addition to LU 1.8 and PS 4.10.

He said at the third public hearing on March 19, 2007, the Planning Commission recommended approval of the mitigated negative declaration based on mitigation measures listed in the Initial Study. After hearing public testimony regarding the initial study and draft mitigated negative declaration, the Town Council should discuss whether the proposed mitigation measures will reduce all environmental impacts to less than significant level and consider the findings in the draft mitigated negative declaration. The applicant has agreed to the implementation of the mitigation measures; however, the applicant may still express reservations with some listed and suggest alternatives.

At the March 19, 2007 public hearing, the Planning Commission also identified some conflicting issues between several of the mitigation measures which need to be resolved as revisions to the design; mitigation measure 3 requires more trees to be planted and screen the duplex from the lower part of Donald Drive, and Public Services mitigation measure 1.b. includes requirements from the fire district, or a 100 foot defensible space around the structure. Likewise, there is conflict between aesthetics with mitigation measure 2.a. that suggests wood siding and railings would help the project blend with the natural wooded hillside, but Public Services Mitigation measure 1.h. requires exterior walls on the slope side of the structure to be non-combustible or ignition resistive construction. Such conflicts between mitigation measures can usually be resolved, but if the project cannot comply it cannot be approved.

The Town Council can make changes to mitigation measures and the findings in the mitigated negative declaration. After the mitigated negative declaration is adopted, no changes can be made to the measures without re-opening the hearing on the environmental determination. It is important because it involves mitigation monitoring and for projects like this, staff makes all adopted mitigation measures become mandatory conditions of approval and review of the final project plans for compliance of conditions serve as the mitigation monitoring program. Long-term mitigation measures would require agreement with the property or the recordation of a deed restriction.

If the Council finds the initial study has adequately addressed all issues, a motion should be made to adopt the negative declaration. If it is still not adequately addressed or mitigated, staff should be directed to further amend the initial study and address the deficiency. If the Council determines there is a significant environmental impact that cannot be mitigated to a less than significant level, then a focused EIR would need to be prepared with regard to the particular significant impact.

The second part of the public hearing is regarding the determination of project consistency with general plan policies of slope restrictions and grading. He said General Plan policies LU 1.8 and PS 4.10 prohibit grading on land with an average pre-development slope of 25% or more unless the Town Council finds that a minimum amount of grading is proposed and grading is supported by site specific analysis. The pre-development slope of the project is actually about 66% at the location of the proposed residence. The subject property was legally subdivided on February 28, 1964 and is exempt therefore from the first provision of LU 1.8. The application under consideration is for general plan consistency finding and has not submitted for a grading permit at this time. However, staff has included a discussion of 10 factors listed under section 14.16.030 of the new grading ordinance in order to help make a determination regarding minimum grading for the project. Mr. Chamberlain said; however, there is no definition, per se, of minimum grading.

An analysis of the project's consistency with the Town guidelines was included in Exhibit I in the packet. A question of public safety was the second item in the list of 10 factors, a determination of the slope stability and geotechnical analysis of the property, all geotechnical reports from the applicant's engineer Friar Associates, Inc. and the geotechnical peer review reports prepared by the Town's consultant, Cal Engineering and Geology were included as Exhibit J in the packet. In the second peer review letter, the Town's consultant requested additional information and made recommendations which have been included in the mitigation measures for the project. One of the recommendations was that consideration should be given to requiring that new fill be keyed and benched into the bedrock due to the site soils and materials on the steepness of the lot.

The Planning Commission put several questions to the project's geotechnical engineer at their March 19th meeting. They were trying to determine whether the required remedial grading would establish the desired finished grades and would have an impact on the existing trees outside the building envelope. The amount of remedial grading was another factor that also should be taken into

consideration in making a determination on minimum grading. However, the problem is that the estimate of grading is often increased during actual construction.

The impact of the project on the storm water run-off was discussed on pages 30-36 in Section 8 of the initial study. The Town Engineer would also be reviewing additional drainage details if the project is approved to make sure there are no adverse runoff impacts. All factors required to be considered for a hillside development permit under the slope density ordinance were also discussed in Exhibit K of the report.

With regard to the issue of natural contour grades, the staff report made a distinction between structural grading for building foundations and contour grading beyond the footprint of the building. Structural grading was generally hidden by the building. The building is built into a hillside with no grading beyond the foundation of the building and the visual impact is significantly less. The term used in the grading ordinance for contour grading refers to transitions of graded slopes to appear natural without abrupt angles and edges to the slopes. The applicant's grading plan has an estimated 234 cubic yards of excavation and 124 cubic yards of fill. The grading could be reduced if the cutting of hillside is used, but the depth of the cut of the foundation would not necessarily improve the aesthetic impact of the structure on the hillside. The fact that most of the grading proposed is structural grading under and behind the building is a factor also that the Council should take into consideration in making a determination on the minimum grading.

With regard to the amount of grading that is feasible, that a structure could be built on a property without any grading or retaining walls, the 66% slope on the property is equivalent to a one foot vertical drop for each 1.5 feet of horizontal distance. Using that slope, staff included a sketch in the staff report to show the sizes of the potential rooms on a hillside if there were no cuts into the hill at all. However, there are limitations on the size based primarily on the design guidelines number 11.d. under Section 2 of building design which limits the skirt wall height to 6 foot maximum on the down slope. Staff also indicated in that sketch the size of the 9 foot wide room of the lower level on that slope and the 21 foot wide room above because of the ability of increasing it to 3 feet if you cantilever it beyond the foundation over the skirt wall. The minimum of a 4 foot wide cut into the hillside on that slope would be required to achieve a 16 foot wide room on the lowest level. The proposed plan has a 16.3 foot cut into the hillside, so there is a lot of room there for adjustments and less grading than what is proposed.

The consistency of the project with the other applicable general plan policies was discussed on pages 39-42 of Section 9 of the environmental study. The third part of general plan policy PS 4.10 states that the Town should develop an average slope limit beyond which grading shall be prohibited unless grading is required for landslide repair or slope stabilization. At the time the application was filed, the town did not have that policy developed yet, but since that time, the grading ordinance has been adopted and grading restriction # 4 in Section 14.04.033 states that no grading shall occur on pre-developed average slopes steeper than 25% unless the grading is required for landslide repair, stabilization or other emergencies at the specific direction of the Town Council.

If the Council does not allow any grading on the site, then development of the structure would have to be on piers with no excavation or fill on site. If the Town Council finds the project to be consistent with general plan policies LU 1.8 and PS 4.10 and authorizes grading on 66% slope, then the project would also require consideration of several other entitlements, including a variance to the required front drive setback and an encroachment permit for the driveway bridge. Modification of the project in compliance with some of the recommended mitigation measures could change the entitlement process for this project. If the studio apartment is eliminated from the plan, then a use permit would be required if the project is zoned residential, 6 dwelling units per acre. However, if the studio unit is removed, there would be no need for modification of the parking requirements.

The project would also require a hillside development permit, design review and tree removal approval. Regarding compliance with the general plan policies LU 1.8 and PS 4.10, the Planning Commission recommended on March 19, 2007 that the proposed grading for the project was a minimum amount of grading because it was mostly structural grading for the foundation as opposed to contour site grading. Staff believes the grading could be reduced further if an alternative plan is followed with homes further down the slope to comply with the 25 foot front setback and separated from the garage structure. This change would require an increase in the aggregate building height but the residence separated from the garage could be reduced only 21 feet in height. Staff also recommends that the studio apartment should be eliminated from the plans so that it would delete the off-street parking requirements and also feels that a reduction in density and approval of the use permit for single family residence would help eliminate parking deficiencies and reduce other impacts of parking on Donald Drive.

Councilmember Trotter asked specifically what environmental impacts would be eliminated if the studio apartment were eliminated. Mr. Chamberlain said the studio unit technically is required to have covered two off-street parking spaces. It has also been brought up by neighbors that the curb in the road is not conducive to a safe environment in front of the unit as proposed in the plan.

Councilmember Chew questioned Planning Commission and staff's recommendation on the project. Mr. Chamberlain said staff thought that the Planning Commission's recommendation on the initial study was complete and the negative declaration as complete and felt this step should be done prior to making a discretionary decision on the project. The Town used to have a process during 1980 and 1981 where we routinely did general plan and zoning consistency findings on projects before environmental reports were done so that the Town could tell applicants if they were in the ballpark or were they totally out of the question and could not be approved prior to spending a fortune on an environmental report. However, staff learned that after doing this for a couple of years, this was contrary to CEQA; that in making any determination on general plan consistency was a discretionary decision because there may be factors that come to light in doing the environmental assessment to help make a determination as to whether it is consistent or not. So, the recommendation is to find that the initial study is complete and the negative declaration adequately addresses all potential impacts so they are mitigated to a less than significant level. Then, afterwards, the Council will consider whether the project is consistent with general plan policies involving grading and slope.

Councilmember Chew confirmed with Mr. Chamberlain that he was recommending adoption of the mitigated negative declaration. He agrees with the Planning Commission that there would be minimum grading because of the structural grading versus contour grading of the site, but he still thinks they would be able to do some more.

Mayor Metcalf said the geotechnical peer review covered a possible inconsistency in whether or not to do an initial soil analysis. Specifically, they were not counting the three different types of material. He questioned if the City's engineers were satisfied with slope stability and safety. Mr. Chamberlain said they were taking into account the three levels of different soil types.

Councilmember Trotter said if the applicant gets built what they want to get built, they will have to get two variances for a front yard setback and overall building height and confirmed that the Planning Commission has never addressed the variance issues. Mr. Chamberlain said the original application was for a variance and staff first felt the project needed to be reviewed as to whether or not it was consistent with the general plan. However, after the lot was created, there were two variance applications which were denied by the County and an application in 1976 which was never acted on. He said the applicants will need to deal with the variances; however, the final plan may not require a variance. If the garage is separated from the house, the house is lowered down in the hill, it would make it in compliance for front setback requirements and lowered height.

Councilmember Trotter said the staff report indicates the house is a 13,203 square foot property, which is about 3/10 of an acre. He asked how this was measured and Mr. Chamberlain said the property is measured on a horizontal basis.

Councilmember Bird questioned the need for additional landscaping, even though the project was required to have a defensible space and trees, and Mr. Chamberlain said the fire district can recommend non-combustible plants, trees and landscaping and this would be achieved with more planting, depending on how it is built.

Alexander Davis, representative for the applicant, Mikail Nijar, said Mr. Nijar said two technical surveys have been made and both were very positive. The proposed structure would be firmly planted in bedrock making it more stable than foundations. He discussed benefits to the slope, said the Planning Commission comments included a) the project will still go through the Design Review Board and the project will most likely look much different from what is proposed; b) grading and excavation is very minimal; and c) Mr. Nijar appreciates the review of the Council and hopes it will recognize the detail and discussion the Planning Commission went through to arrive at the decision to approve the mitigated negative declaration.

Councilmember Trotter confirmed the applicant acquired the property in 2001 or 2002 at a price of approximately \$120,000.

Mayor Metcalf said Mr. Davis had indicated that the amount of grading would meet the Town's minimum grading requirements and asked what that was. Mr. Davis said he was not sure, as he simply read Mr. Nijar's letter to the Council.

John Friar, Friar Associates, Inc., said if the applicant separates the site excavation from grading, then the site excavation would be minimal. He did not know what the Town's standard was. Mr. Chamberlain said this could mean that the least amount possible, but there is no definition and that is why there is a lot of discussion in the report. He said grading under a foundation would require a permit, but it still calls for an "x" amount of fill, so staff feels just any amount was not necessarily deemed as "minimum grading."

Councilmember Trotter noted the foundations will be built in the bedrock, and he asked if it were on a pier and gradient basis. Mr. Davis said the applicant is going through the process of the foundation plan. He said typically the piers were done by a structural engineer and down at least 6 feet. He said the piers would be designed to be spaced apart as appropriate by the structural engineer. He confirmed with **Councilmember Trotter** that drilling equipment would be on site and discussed how the applicant would get an estimator to get equipment stationed and onto the site.

Public Comment:

Lynda Deschambault, owner of a duplex two doors up from the property, said it seems that the negative declaration raises some issues in terms of policy setting, but at the same time we are getting wrapped up in the process and focus and the negative declaration. She attended the Planning commission meeting; it was clear that they were not in favor necessarily of the project and not necessarily adopting or recommending the negative declaration. They made clear to staff that it was a very convoluted process and if they did not accept it, it would force the applicant to go down the path of an EIR and no one wanted to do that. She found it confusing and although the Planning Commission recommended adoption, she believes that they were accepting the negative declaration more than they were approving it. She said it was the same sort of discussion the Planning Commission took on minimal grading. It was convoluted as to what was minimal and what was not and she encouraged the Council focus on its policy setting this evening. She felt 66% slope was a huge digression from 25% and nothing in the Town is over 45%. It raises questions on bridges to

driveways, garages on rooftops, elevators down to living buildings, and she does not know where the Town would head with this. Regarding the mitigated negative declaration's acceptance versus approval, she does not believe impacts have been mitigated, as there are huge issues involving water, drainage, aesthetics, structural integrity, equipment and construction. She said the hill continues to slide and has done so more so over the last year. More rainfall is hitting the hills because of brush removal by the fire department and the death of Monterey pine trees. So, she felt the long-term impacts have not been reviewed for mitigation and they should be more thoroughly investigated. She disagreed with having an EIR done but instead look at policy—not divert from setbacks, heights, and the grading ordinance. She also said there is an endangered species nesting in the immediate area on the property that has not been accounted for. She said the applicant has been turned down two or three times due to not having access to the property. The Town took Mullholland Ridge as their property, but she questioned when it provided public access to the owner of the project site. Town Attorney Whelan said she would have to look at the grant deed by which the Town got the property to see how extensive the grant was.

Ms. Deschambault said to automatically assume this is public access was not right; 9 other homeowners in the area do not currently have access, and Ms. Whelan agreed to research this question.

Councilmember Trotter said once there is a public road and a public street, then there are certain roads that need an encroachment permit and he asked if this also should be asked.

Town Attorney Whelan said the question she was asked from Ms. Deschambault was regarding the scope of the grant of the road to Mullholland Ridge, and secondly from Councilmember Trotter, if you abut that road, do you have the right to use it automatically.

Ms. Deschambault summarized by saying she did not believe the Council has a clear recommendation from the Planning Commission on the two issues of the negative declaration and she felt this was up to the Council to decide. She did not feel mitigations have adequately been addressed and the determination of whether it is consistent with the general plan was very vague and urged the Council not to approve the project.

Councilmember Chew questioned her not accepting the negative declaration process. Ms. Deschambault felt the minutes were vague but it seemed clear to her that the majority of the Commission's opinion was that they did not want this project and denying the negative declaration would push the applicant into an EIR. Staff's recommendation was to accept the negative declaration so it could come back to the Council for a hearing. There were other people there and it was a very confusing evening.

Mr. Davis said he did not think that during the Planning Commission meeting, anyone said that they did not approve of the negative declaration, as a vote was taken and passed. He felt they did approve it. And, regarding slides on the property, he did not think there were any. **Mayor Metcalf** asked for the public comment period to continue and then the applicant could have a rebuttal period.

Ted Gamble, said he was a family member of the Robert Parks Commission and president of the Foundation for a number of years, has a background of why Moraga was incorporated and the reasons the residents decided to adopt the General Plan. He said when the Town was incorporated, one of their reasons for doing so was to gain control of law enforcement, but also to address the type of development that started to occur in Moraga, such as hillside development, homes built on piers, etc. He said the townhouses built across from the Chevron Station were contentious and now, most of the project is shielded by Monterey pines. But, it was exactly the type of project that people were very upset about. His concerns are that he did not think aesthetically it was the type of project that the voters of the Town envisioned. Any approval that goes out on piers, is massive compared to other

homes in the area, is not what voters envisioned. Also, safety is a major issue. Donald Drive is very narrow. The project is located on a sharp turn, many people park at the foot of Donald Drive and walk up with children, pets, strollers, and it is not common for people to forget the road is public. From a safety issue, there are deliveries and guests who will not be able to park in the driveway and will have to park on Donald Drive. This, coupled with the magnitude of the construction, type of equipment, noise, etc. will create chaos for 6-8 months and does not make sense. If there is a provision in the general plan to limit this type of construction to a 25% grade, to consider an average slope of 66% was not feasible and should not occur.

Jake Hubinear, resides on Donald Drive, said he is surprised that a 66% slope is being proposed, felt it was not feasible, voiced concerns with removing 40-60 foot trees and the time it will take for new trees to grow, his new view of the new project, cited he had just missed running into a fallen tree while driving, cited a recent slide on the hill, and urged the Council not to approve the project for the future of Moraga.

Carol Gamble, said he heard the Mayor use the word, "spirit" a lot, felt that people in Moraga long ago wanted to direct their own vision, noted a moratorium was in place for 3 years and a major subject was to save the hills and ridges. She said Moraga was beautiful, felt if the County had their way it would not be. She felt there was a reason building on slopes should be no more than 25% and felt 66% was unreasonable. If the project is approved, she felt the Council would set a precedent for the future to change the general plan voted on by the people and asked the Council to think about the "spirit" of what the people wanted; not a way they can vote for a project and get around the general plan and hoped the Council does not change it.

Bob York, 47 year resident of Moraga, said he has had many meetings with builders and developers, said Ron Harrison, a friend, indicated that today we have the technology to do anything they want to, we can build anything unbuildable. Subsequently, Ron Harrison sued the Town of Moraga and lost. He subscribes to what Mr. Gamble said about building on the hillside and taking the control away from Martinez. He has trouble seeing the home built where it is and hoped the Council will continue to make good decisions of past predecessors.

Wayne Ritter, said many speakers have covered what he feels and echoed opinions that aesthetically, he did not feel anything could be done to mitigate the effect the project will have on the hillside. He was at the Planning Commission meeting and it seemed to him that the aesthetics and impacts were not really considered. It felt like the attitude was that it was possible this could be done, so let's approve it. He did not understand how someone could submit a plan for a home and expect the Council to approve it when it is not the final plan, and to him, this is not a good way to make policy. Regarding planting trees to hide the structure, he questioned how anyone could plant trees high enough when they are planted below the structure, and he questioned how the hillside would support those tree roots. He felt the owner took a gamble economically, the land has not been built on since 1964, the project has many issues, and asked it not be approved.

Rebuttal

Mr. Davis said he feels everyone should separate their emotions from the facts. He understands everyone's concerns, he lives here too, but it does not mean that anyone has the ability to deny the owner's right to build on the property. He felt the design of the building can be controlled by the Planning Commission, said there were no slides on the property but on the other side of the road that was built many years ago. He said the 66% slope is not for the entire property, but an average and he felt grading has been minimized.

Councilmember Chew questioned if Mr. Davis had any interest with the property, and Mr. Davis said he was doing work as a conservator to the owner.

A speaker also representing the owner said he has been involved in the process from the beginning, said the owner has had soils engineering work done, a topography map, architects, and the owner has done all of his homework and due diligence.

Councilmember Trotter asked why the architect was not present tonight, and Mr. Davis said the architect has changed from the initial architect originally hired 5 years ago. He said two different architects originally came to the site to advise him as to whether it was a buildable lot and did a feasibility study.

Councilmember Trotter said it would be nice to have the applicant present for a decision on this magnitude, and secondly, if there is an architect involved, the Council cannot have questions answered about the design, and he felt this was troublesome. Mr. Davis said the owner could not be here, thinks what we are here to decide is not so much the finance or the planning. He said geotechnical reports have been done, the colluvium has been very shallow, and he felt it was a very solid project.

The Mayor closed the public hearing.

Councilmember Trotter noted it was 10:55 p.m. There are many questions and he did not believe there was a way to be able to make a decision on the matter tonight. He did not want to rush this and he suggested providing direction to staff on answers to questions and continue the hearing. He said the lot was a remnant of a 4-5 parcel split, dating back to the days when the County had control over it, this is not a lot that the Town would ever have approved, and as we deal with new proposals for development or subdivision of land, we must be very careful where we draw those lines. He was on the Planning Commission for 6.5 years in the 1990's, approved many projects and they never approved anything on a 66% slope.

Regarding observation number 2, he felt the Council was faced with an interesting situation here; on one hand we have a parcel. On the other hand, it is an extremely challenged piece of property and he would be interested in knowing from the Town Attorney if there is any discretion and what the potential ramifications are for the Town to say, even though this is a lot, given conditions on the site, we do not have to approve permits to build a structure on the site. He asked if the Town had that type of discretion or was the Town stuck with the fact that this might be a legal lot entitled to have something be built on it.

He said it is a given that the Council does not necessarily have to approve any variances for a project. They have not been discussed yet, but speaking for himself, if you are going to approve a structure here, you will also be stuck with also approving a front yard setback because otherwise, the garage will be floating in the middle of the air with no access to the road. He does not think for one second that we have to approve a building height variance here. He felt there does not need to be a home of this size and the Council can request and require the architect to come back with something that does not require a building height variance. It will have the effect of reducing the visual impacts on the neighborhood. He was interested in hearing from the Town Attorney on whether the Council has discretion to allow nothing at all. He agreed with fellow councilmember and resident Deschambault that an EIR is not necessary here for the Council to process this information. He said he wanted to hear from the Town Engineer on some of the testimony on whether that road, given the depth of building and way in which it was recently improved, would, in fact, be able to take the construction activity without substantial damage done to the public street. He also has concerns in the initial study goal. There is a question of public safety and staff may not have addressed this entirely, but he could definitely see potential risks to public safety not just on the road, but given the steepness of the site and the possibility for some failure of a large piece of equipment or accident during construction. He questioned if there were things the Town would require of the applicant to build something from having equipment from rolling downhill. He felt there were also post-construction issues as well, like a

catastrophic failure of the hill above. So, he said he wanted answers to those questions and would not make any decision tonight.

Councilmember Bird felt that within certain bounds, property owners should have a right to enjoy their land, but for her, the general plan is something that adheres to land use and policy decisions and she would be interested in hearing answers to questions that have been raised. She said she would have a hard time believing there is a feasible way of putting something of such mass at that location, and she questioned the wisdom of creating the parcel to begin with. She also agreed there was a real question of safety for the property owner, the dwelling, and those around the property. She felt much more information was needed and if asked to make a decision tonight, she would not support the project.

Councilmember Chew said when the project came before the Planning Commission in 2006 one of the questions of the applicant was how he would build a trench on the slope. He confirmed this question would be reviewed by the Town Engineer. He did not feel it was the Council's job to design the home, but to make a determination as to the project's consistency with the general plan. He said felt the 66% slope was of great magnitude, there were safety concerns, was concerned about homes directly below the lot, he did not need any more information or questions answered and felt the Council needed to determine whether the project was consistent with the general plan or not.

Councilmember Trotter said if it were not for some of the interesting aspects of this project, Councilmember Chew would be right, but before he could personally can make a policy decision on compliance with the general plan he wanted staff input on safety issues and legal issues raised. He was not comfortable in taking action tonight without knowing what our options, range of discretion and potential exposure might be. Regarding other points Councilmember Chew raised, the Council is being asked to approve a mitigated negative declaration which has detailed conditions and if we do not think those conditions are sufficient, the Council cannot approve or deny the negative declaration and personally, he has concerns about the accuracy of the initial study and of the proposed mitigation measures, and believes Council should not take action tonight.

Mayor Metcalf said he saw the project one year ago; it was not scheduled to go to the Planning Commission only because the Code said it did not have to go. It was sent to the Planning Commission with two questions posed by him; was the negative declaration adequate and was it consistent with the general plan. It turns out that this was exactly what the Planning Commission did and absolutely no more. He can believe that the Planning Commission might not have felt comfortable about the project, felt the project has some real fundamental problems, he agreed with Councilmember Trotter's comments, and said his question was about intent of the general plan. He said the general plan has very, very specific intent and philosophies to follow; we do not want to build on steep slopes. The language limits building to no more than 25% if it can be supported by site specific considerations. He said the lot was inherited from the County, said the project is taking advantage of a loophole, felt this was nonsense that it flies in the face of the intent of the general plan with respect to grading, felt uncomfortable that we might be saddled with this grandfathered lot and questioned if we could stop it. And, if we can stop it, are we going to have to be involved in a major legal battle. He questioned whether it would be something to be scheduled for a closed session. He suggested getting advice.

In addition, this issue involving a minimum amount of grading, the intent of the grading ordinance was that the Town does not want grading over 25% slopes. There was no distinction between structural or contour grading, and he felt there was a lot to be done. He referred to the trees down the hill and felt the hill was moving and would need grading. Also, the project would be 8 feet from the street and would require a front yard setback variance. He felt this was not something the forefathers of the town envisioned and he wondered if this was legally defensible. Regarding height, the way the building is configured, the applicant has an aggregate height issue from the bottom of the building to

the top close to 40 feet and he did not know if a height variance should be approved. Regarding drainage, he felt the issues were correctable, although information was still needed, and he felt this was a much more serious issue. The issues of safety are significant and if it is not consistent with policy, the Council does not have to accept it. He felt there were many other issues and felt the item should be continued.

Councilmember Trotter suggested continuing the item for the Council to receive legal input, Town Engineer input, public safety and fire input. **Mayor Metcalf** felt this should be done carefully so the applicant's rights and the Town's rights are preserved.

Town Manager Vince noted upcoming agendas were fairly full until the July meeting. Mr. Chamberlain said the clock starts ticking after the project receives CEQA approval, so since the Council has not acted on this, there is no 60 day time limit and is not bound.

Councilmember Trotter noted he would not be present during August. Town Manager Vince noted July 11 and 25th were the meeting dates and thinks there was room to schedule the item for July. Town Attorney Whelan suggested bringing back the item to a date certain.

ACTION: It was M/S (Trotter/Bird) to continue the hearing to a date in July to be determined by staff, that staff will re-notice the applicant and interested parties, and that during that time, staff will provide input to the Council on the various questions raised tonight, and that staff will also contact the applicant and his representatives and ascertain what his intentions are. Vote: 4-0-1 (Deschambault recused).

EXHIBIT D

**ENVIRONMENTAL INITIAL STUDY
FOR 1800 DONALD DRIVE
RESIDENTIAL PROJECT**



ENVIRONMENTAL INITIAL STUDY TOWN OF MORAGA

September 15, 2011

INTRODUCTION

This is an Initial Study for the proposed development of a new 5,132 square foot residence with an attached second unit and associated site improvements at 1800 Donald Drive (APN 255-183-011). The initial study was prepared in accordance with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines.

PROJECT LOCATION

The project would be located on a 13,203 square foot property on the northeast side of Donald Drive on a hillside above an existing duplex at 2092 - 2094 Donald Drive. The project site (outlined in yellow) is shown on the GIS aerial photograph below:



ENVIRONMENTAL CHECKLIST

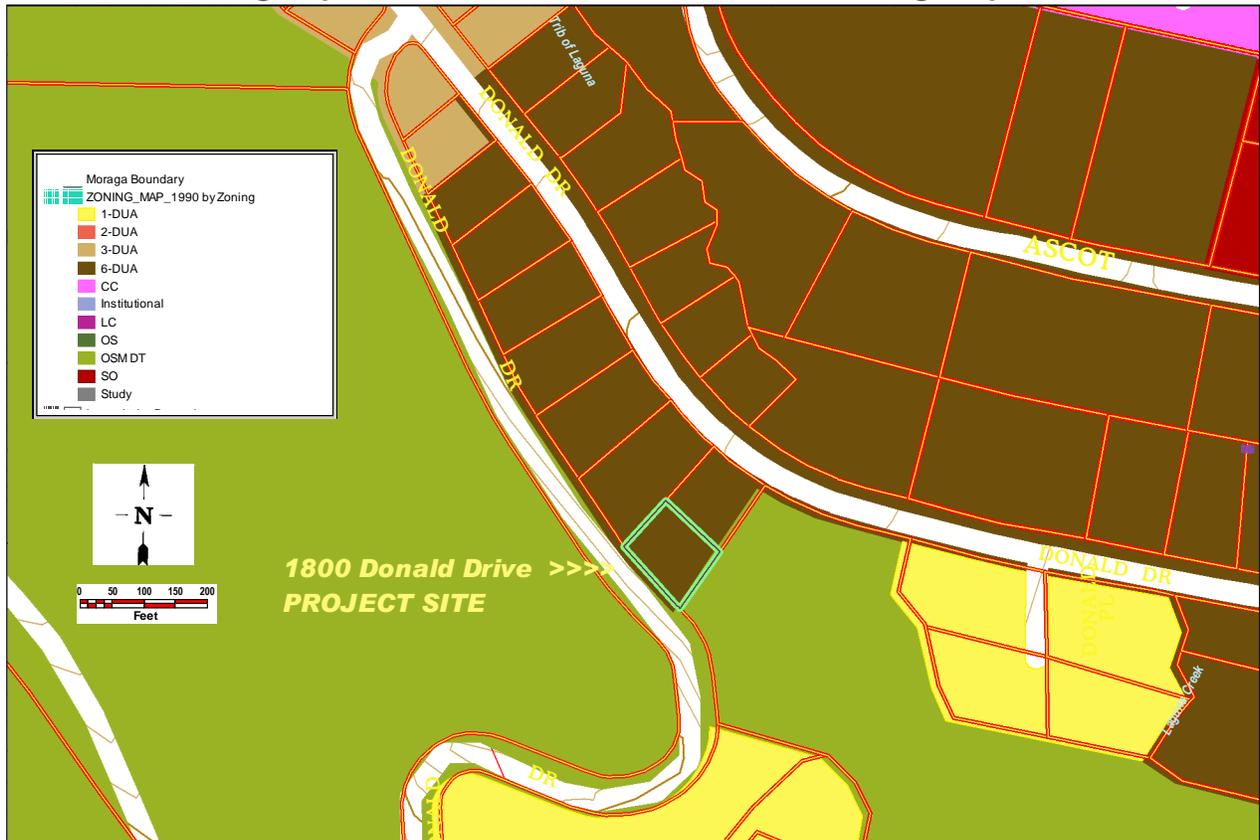
Project Information:

1. Project Title: 1800 Donald Drive Residential Development
2. Lead Agency Name and Address: Town of Moraga
329 Rheem Boulevard
Moraga, CA 94556
3. Contact Person and Phone Number: Richard Chamberlain (925) 888-7042
Kelly Suronen (925) 888-7041
4. Project Location: 1800 Donald Drive (APN 255-183-011)
Moraga, CA 94556
5. Project Sponsor's Name and Address: Applicant:
James Wright
5 Green Valley Court
Lafayette, CA 94549

Property Owner:
Stephen R. Williams
2647 Pleasant Hill Road
Pleasant Hill, CA 94523
6. General Plan Designation: Residential 6 du/ac
7. Zoning: 6-DUA (six dwellings per acre)
Multi-Family Residential District
8. Description of Project: The proposed 5,132 square foot three level residence with an attached second unit would step down the hillside making it a low profile structure that conforms to the 25-foot front setback. The 1,207 square foot upper level would include one and two-car garages and the entry halls and stairways. The 2,647 square foot middle or mezzanine level would include the main living area, the attached second unit, and a cantilevered back deck. The 1,277 square foot lower level would include two bedrooms, two bathrooms, and shell space. A circular bridge driveway off of Donald Drive would lead directly to the garages on the top level. The 511 square foot two-car garage would be on the southeast side with an elevator, entry vestibule and stairway down to the main middle living level below. The 351 square foot one car garage would be on the northwest side with a stair hall down to the 551 square foot second unit below. The new residence would be built on an existing hillside with a slope over 20%. The excavations for the building foundation would be less than 50 cubic yards.
9. Surrounding Land Uses and Setting: The zoning of the subject property and the surrounding properties is shown on the map on the following page. The properties located to the northeast and northwest of the project site are zoned 6-DUA (six dwelling units per acre Multi-Family Residential District) and are developed with existing duplex units. The properties located to the southeast and southwest of the project site are zoned OSM-DT (Open Space-MOSO-Density Transfer). The property to the southeast is known as the Hacienda de las Flores Park and a public parking lot for the park is located about 200-feet east of the subject property. The property on the southwest side across Donald Drive is

known as the Mulholland Ridge Open Space Preserve and is owned by the Town of Moraga.

Zoning Map of 1800 Donald Drive and the Surrounding Properties



10. Other agencies whose approval is required:

- a) Central Contra Costa Sanitary District for sewer connection
- b) Moraga-Orinda Fire District for site review
- c) East Bay Municipal Utility District for water supply
- d) Contra Costa County Building Department for plan review

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project. The factors that are checked below involve at least one impact that would be potentially significant unless it is mitigated as listed in the analysis on the following pages.

- | | | |
|---------------------------------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------|
| <input checked="" type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Geology/Soils |
| <input checked="" type="checkbox"/> Hazardous Materials | <input checked="" type="checkbox"/> Hydrology/Water Quality | <input checked="" type="checkbox"/> Land Use/Planning |
| <input type="checkbox"/> Mineral Resources | <input checked="" type="checkbox"/> Noise | <input checked="" type="checkbox"/> Population/Housing |
| <input checked="" type="checkbox"/> Public Services | <input checked="" type="checkbox"/> Recreation | <input checked="" type="checkbox"/> Transportation/Traffic |
| <input checked="" type="checkbox"/> Utilities/Service Systems | <input checked="" type="checkbox"/> Mandatory Findings of Significance | |

DETERMINATION

On the basis of this initial evaluation:

	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
X	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

September 15, 2011
Date

Kelly Suronen
Name

Town of Moraga Planning Department
For

EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is provided for all answers except "No Impact" answers that are adequately supported by information sources cited in parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to the project (e.g., the project falls outside a fault rupture zone). A "No Impact" answer is explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis). In this report, the letters **NI** after a question indicate "No Impact" followed by the explanation or reference source information.
- 2) The whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts have been considered in all answers.
- 3) If it has been determined that a particular physical impact may occur, then the checklist answers indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially

Significant Impact" entries when the determination is made, an EIR is required. In this report, the letters **PSI** will be used after a question if a "Potentially Significant Impact" is identified that cannot be mitigated to a less than significant impact.

- 4) "Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." In this report, the letters **LTSWMI** indicate "Less Than Significant With Mitigation Incorporated" and the recommended mitigation measures are suggested following the discussion of the question. An explanation of how the mitigation measures reduce the effect to a less than significant level is also included in the discussion or reference to mitigation measures from Section XVIII, "Earlier Analyses," is cross-referenced. The letters **LTSI** indicate "Less Than Significant Impact" followed by an explanation and reference to sources used.
- 5) If an earlier analysis is referenced in this report, pursuant to the tiering, program EIR, or other CEQA process, and an effect has been adequately analyzed in an earlier EIR or negative declaration, a brief discussion identifies the following:
 - a) The earlier analysis used and where they are available for review.
 - b) The impacts or effects that were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards. If the impacts or effects were addressed by mitigation measures in the earlier analysis then these mitigation measures shall be included in the discussion.
 - c) For "Less than Significant with Mitigation Measures Incorporated" the mitigation measures are described, which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) References to information sources for potential impacts (e.g., general plans, zoning ordinances) are incorporated into the discussion of impacts where appropriate, including a reference to the page or pages where the statement is substantiated.
- 7) The source list or individuals contacted and cited in the discussion is attached under Section XVIII.
- 8) This environmental checklist form is based on the current form in Appendix G, downloaded from the Governor's Office of Planning and Research web site.
- 9) The explanation of each issue attempts to identify:
 - a) The significance criteria or threshold, if any, used to evaluate each question.
 - b) The mitigation measure(s) identified, if any, to reduce the impact to less than significance.

ENVIRONMENTAL ISSUES

I. AESTHETICS -- Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?		X		
c) Substantially degrade the existing visual character or quality of the site and its surroundings?		X		
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?		X		

Discussion of Aesthetic Impacts:

a) Would the project have a substantial adverse effect on a scenic vista? **LTSI**

The project will not be visible from Moraga's designated scenic corridors. The site can be seen from Rheem Boulevard just east of the Rheem Boulevard and Moraga Road intersection; however, the view from this location is at a considerable distance from the site. The location of the project is more than 500 feet from Mullholland Ridge and the portion of Donald Drive that is designated as a scenic corridor.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? **LTSWMI**

The project site does not contain any historic buildings, large rock outcroppings, or other scenic resources that are visible from a state scenic highway. The project plans call for the removal of seven trees including bay, oak and pine. Bay, oak, and knobcone pine trees are native trees defined under Moraga's Tree Protection Ordinance. These trees contribute to the perception of the project site as a natural woodland area. The photos below show the existing site as viewed from the upper part of Donald Drive.



As stated under the Biological Resources section of this Initial Study, the Town may require that the applicant submit a certified arborist's report to be reviewed by the Design Review Board in order to reduce the impact of the project on existing native and general trees to a less than significant level. Removal of the seven trees has the potential to substantially impact the existing visual character of the project site unless mitigation measures are undertaken. The mitigation measures listed below are recommended in order to reduce the aesthetic impacts to a less than significant level.

Mitigation Measure:

AESTHETICS MM 1 / BIOLOGICAL RESOURCES MM 3 - Given that the proposed project will necessitate the removal of or may otherwise affect the health of existing trees at the site, which in turn may affect geotechnical conditions, site drainage, and screening of the project site from nearby rights-of-way, the applicant shall submit a certified arborist's report as part of the project design review, hillside development permit, and tree removal permit applications. The applicant shall incorporate the recommendations of the arborist's report into the project plans that will be reviewed by the Design Review Board. The arborist's report shall:

- i Accurately document the location, size, species, and health/stability of all existing native and general trees at the project site that are over 5-inches in diameter measured 3-feet above grade.
- i Shall include recommendations to prevent any adverse impact to those trees proposed to remain in post-project conditions.
- i Shall include recommendations for the safe removal for all trees proposed for removal, including all standing and fallen trees.
- i Shall take into account the General Plan Policy OS2.9 Tree-covered areas, which gives preference to the retention of original growth over replanting and which requires that tree-covered areas shall be preserved or substantially maintained in their present form, especially with respect to their value as wildlife habitats, even if development is permitted.
- i Shall include recommendations for the maintenance of all trees in post-project conditions, including recommendations for soil amendments, irrigation schedules, and pruning for fire safety. The report shall take into account that, at minimum, all trees removed with a trunk diameter between 5 and 9 inches will be required to be replaced at a 1:1 replacement ratio with a 15-gallon size California native tree and all trees with a trunk diameter over 9-inches shall be replaced with a specimen size California native tree.
- i Shall include recommendations for trees to be planted that will provide screening of the residence.

c) Would the project substantially degrade the existing visual character or quality of the site and its surroundings? **LTSWMI**

The proposed residence will step down the slope and the roof will be curved over the garage area at the top of the building making it less visible and less massive off-site. The aggregate building height, from the low point of the foundation to the highest roof, is 45-feet. The modern style home will be 'green' with a net zero energy system using a co-generation heating and power system. The most visible side of the building will be the northeast elevation, which will be seen above the existing duplex at 2092-2094 Donald Drive. The northeast elevation has a series of large windows and glass doors and a cantilevered deck. In order to help evaluate the aesthetic impact of the new building, the applicant prepared a photomontage to show the view as

it would be seen from the lower part of Donald Drive (see picture below). The proposed residence and second unit will have redwood bark siding to blend with the surrounding trees on the hillside. The modern architectural style of the new building makes no attempt to complement the architecture of the existing ranch style duplexes on the lower part of Donald Drive. The aesthetic design of the building and construction materials would be reviewed by the Design Review Board prior to the issuance of any building permit.



The site improvements associated with the development include the construction of new drainage facilities, connections to the sewer and water system and other utilities, and the installation of landscaping. Grading and other site preparation work will be necessary for those areas of the project site needed for the residence's foundation and drainage facilities. The new residence could visually impact the existing duplex at 2092-2094 Donald Drive. The incorporation of the mitigation measure below could help reduce privacy impacts between the proposed development and the duplex.

Mitigation Measures:

AESTHETICS MM 2 – In order to help reduce the visual impact of the development on the hillside and improve the privacy between the new building and the existing duplex at 2092-2094 Donald Drive, additional tall growing trees shall be planted below the new structure. It is recommended to use a tall fast growing native evergreen tree, such as *Sequoia sempervirens* (Coast Redwood Tree). Eucalyptus and Monterey Pine Trees are not recommended.

d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? **LTSWMI**

The project will probably include some exterior lighting. The glass windows on the northeastern elevation of the residence could contribute to some glare, although the orientation of the building would only catch the early morning sun rising in the east. The incorporation of the mitigation measure below should reduce any potential impacts from glare to a less than significant level.

Mitigation Measure:

AESTHETICS MM 3 – In order to reduce impacts from glare of any new lighting and from windows on the northeast side of the building the following measures shall be considered by the project architect and Design Review Board:

- i Consider anti-glare glass or coatings on the northeast windows
- i Consider exterior lighting on the residence and within the landscaping areas that is low-wattage, shielded, and does not spill off-site.

II. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				X

Discussion of Agricultural Resources Impacts:

a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? **NI**

The property is not shown on the aforementioned maps as farmland, nor has the property previously been used for agricultural purposes.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract? **NI**

The project site is not covered by a Williamson Act contract. Although the Open Space zoning lists agricultural use as a “permitted use”, the steep topography of the site and existing tree coverage are not conducive to agricultural use.

c) Would the project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? **NI**

The project would not cause changes in the existing environment that could result in the conversion of farmland to a non-agricultural use. The site can be best described as a natural woodland habitat.

III. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?				X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		X		
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?				X
d) Expose sensitive receptors to substantial pollutant concentrations?			X	
e) Create objectionable odors affecting a substantial number of people?			X	

Discussion of Air Quality Impacts:

a) Would the project conflict with or obstruct implementation of the applicable air quality plan? **NI**

The project is consistent with the Bay Area Air Quality Management District Clean Air Plan.

b) Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation? **LTSWMI**

The project does not involve the demolition of buildings where there could be an impact from the introduction of airborne asbestos-containing materials. Vehicles traveling to and from the site would represent the primary “indirect” sources of air pollutant emissions for the project. The estimates of air pollutant emissions for the project are compared to the thresholds of significance for each pollutant listed on Table 3, page 16 of the BAAQMD CEQA Guidelines. The amounts of Reactive Organic Gases (ROG), Nitrogen Oxides (Nox), Carbon Monoxide (CO) were calculated using the URBEMIS 2002 program from the California Air Resources Board website. The area of the property where the soil will be disturbed is about 5,000 square-feet. Based on 51 pounds

per acre during the construction phase on page 28 of the BAAQMD CEQA Guidelines, the calculation of PM₁₀ emissions would be 5.85 lbs/day.

Thresholds of Significance for Construction Emissions

Pollutant	ROG	Nox	CO	PM ₁₀
Maximum (lbs/day)	80.0	80.0	550	80.0
Project (lbs/day)	5.49	0.00	0.14	5.85

Thresholds of Significance for Operational (Vehicle) Emissions

Pollutant	ROG	Nox	CO	PM ₁₀
Maximum (lbs/day)	80.0	80.0	550	80.0
Project (lbs/day)	0.25	0.36	2.78	0.21

Airborne dust from the grading for the foundation and drilling of piers will be the primary “direct” source of air pollutant emissions for the project. Since the area of disturbance is relatively small, it is unlikely that the PM₁₀ emissions for the site grading work would exceed the threshold of significance in the BAAQMD CEQA Guidelines, unless the grading is done during dry and windy conditions. PM₁₀ emissions are fine particulate matter with a diameter equal or less than 10 microns, which can be inhaled into human lungs. The BAAQMD approach to mitigation of construction impacts is to implement effective and comprehensive control measures rather than making detailed quantification of emissions. The following mitigation measure, which was derived from Table 2 on Page 15 of the BAAQMD CEQA Guidelines, should be considered in order to reduce the potential air quality impact for the grading and pier drilling.

Mitigation Measure:

AIR QUALITY MM 1 - In order to reduce potential dust impacts (PM₁₀ emissions) from the grading and pier drilling operations for the project, the following best management practices should be conducted during the construction phase of the project:

- i Periodically water all active grading areas where the ground cover has been removed.
- i Periodically sweep with water sweepers all paved access roads to the construction site where dirt and dust have settled or where construction vehicles have tracked dirt onto the paving.
- i Apply non-toxic soil stabilizers to graded areas that have been inactive for ten days or more.
- i Cover or periodically water exposed stockpiles of dirt or soil.
- i Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.
- i Replant vegetation in the disturbed areas as quickly as possible upon completion of the grading and construction.

c) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)? **NI**

The project would not have a significant cumulative impact according to the parameters in Figure 2 on Page 20 of the BAAQMD CEQA Guidelines. The project does not exceed the density anticipated for the site in the General Plan population projections and would be consistent with the Clean Air Plan (CAP).

d) Would the project expose sensitive receptors to substantial pollutant concentrations? **LTSI**

During the grading operations and drilling of piers for the foundation, the residents living near the project site could be exposed to airborne dust. The mitigation measures listed above under item III. (b) will reduce this impact to a less than significant level.

e) Would the project create objectionable odors affecting a substantial number of people? **LTSI**

The project does not include any of the operations identified as potentially significant odor sources as listed in Table 4 in the BAAQMD CEQA Guidelines. In addition, there are no existing significant odor sources within one (1) mile of the project. The odor from diesel engines of construction equipment used for grading of the site would be for a short duration and is considered a less than significant impact.

IV. BIOLOGICAL RESOURCES – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?			X	
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		X		
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

Discussion of Impacts to Biological Resources:

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? **LTSWMI**

Upon review of the Moraga 2000 General Plan Update EIR which lists the special status species and their habitats known to occur in the Moraga area, it has been determined that the development of the project is not likely to have a significant effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species because it is highly unlikely that special status species are located at the site. The site most closely resembles a Coast Live Oak Forest. The site does not contain any riparian habitat area that could contain red-legged frogs. The northeast facing slope of the hillside is not good habitat for the Alameda Whip Snake, which must have south and west facing slopes with rock outcroppings and few trees for maximum sun exposure. Nevertheless, in order to reduce this potential impact to a less than significant level consistent with the Moraga 2000 General Plan Update EIR Section on biological resources, the following mitigation measure is recommended:

Mitigation Measure:

BIOLOGICAL RESOURCES MM 1 - Prior to the approval of the project, the applicant shall submit a site-specific biotic survey to determine the presence or absence of individuals and/or occupied or designate critical habitat of endangered, threatened, or rare wildlife or plant species. Prior to conducting these surveys a current listing of rare, threatened, and endangered species that may occur in the project area will be obtained. The site biotic survey shall specifically address whether or not there are any white-tailed kites nesting on the property as requested by Lynda Deschambault at the April 26, 2006 Town Council hearing. It should also be determined if the project site includes any significant wildlife corridors. Consultation with CDFG and USFWS will be necessary if any special status species or wildlife corridors are present in order to develop site-specific protection strategies for these species.

BIOLOGICAL RESOURCES MM 2 - Prior to construction of the project, the applicant shall submit the results of a pre-construction survey for breeding and nesting raptors and other migratory or protected birds at the project site. Typically, the most sensitive times of year for breeding and nesting are between February 1 and August 31. The survey must be conducted within two weeks prior to ground breaking. The survey must also include areas that are adjacent to the site. If active nest sites are located, the applicant shall consult with CDFG to determine appropriate construction setbacks from the nest sites. No construction activities shall occur within the construction setback during the nesting season of the affected species. If active nests (with eggs or live young) of protected species are found, then the project will not be permitted to conduct any activity that might disturb or remove those active nests until the young birds are able to leave the nest and forage on their own. The project would be allowed to remove empty nests, but if eggs or young were present, the project will be required to leave the nests undisturbed until the young birds leave.

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? **LTSI**

The project site does not have any creeks or pond areas that would include a riparian habitat. The site has characteristics of a Coast Live Oak Forest natural community. The slope of the site and shallow topsoil do not facilitate the sustenance of the Coast Live Oak community. Consequently, the potential impact of the project upon the Coast Live Oak Forest community is less than significant.

c) Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? **NI**

The project will not have an impact on any marsh, vernal pool, coastal area or any other defined wetland area because none of these features are located on the project site.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? **LTSI**

The project is not likely to interfere with the movement of any native resident or migratory species, an established wildlife corridor, or the use of a native wildlife nursery site because the project does not present any major obstacles. The project covers 22% of the site area and there is room for the movement of deer and other animals to traverse the site. The primary impediment to the movement of animals on the site is the steep slope. It is also very unlikely that a native wildlife nursery is located on the project site due to the steep slope. However, in order to reduce this potential impact to a less than significant level consistent with the Moraga 2000 General Plan Update EIR Section on biological resources, the mitigation measures listed above in item 4. (a) should be implemented.

Mitigation Measure:

See Mitigation Measures under item IV. (a).

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? **LTSWMI**

The project plans (sheet A1.0) call for the removal of 7 trees. These 7 trees are oak, bay and pine trees which are native to Moraga. The Tree Protection Ordinance requires that any person who desires to cut down, destroy or remove a native tree shall file an application with the Planning Director, who in turn may impose reasonable conditions to insure compliance with the Tree Protection Ordinance. In considering an application to remove native trees, it is reasonable for the Town to require that the applicant submit a certified arborist's report that addresses the topics outlined in the mitigation measure below and to require that the arborist report recommendations be incorporated into the project plans that will be reviewed by the Design Review Board in order to reduce the impact of the project on existing native and general trees to a less than significant level.

Mitigation Measure:

BIOLOGICAL RESOURCES MM 3 / AESTHETICS MM 1 - Given that the project will necessitate the removal of or may otherwise affect the health of existing trees at the site, which in turn may affect geotechnical conditions, site drainage, and screening of the project site from nearby rights-of-way, the applicant shall submit a certified arborist's report as part of the project design review, hillside development permit, and tree removal permit applications. The applicant shall incorporate the recommendations of the

arborist's report into the project plans that will be reviewed by the Design Review Board. The arborist's report shall:

- i Accurately document the location, size, species, and health/stability of all existing native and general trees at the project site.
- i Shall include recommendations to prevent any adverse impact to those trees proposed to remain in post-project conditions.
- i Shall include recommendations for the safe removal for all trees proposed for removal, including all standing and fallen trees.
- i Shall take into account General Plan Policy OS2.9 Tree-covered areas, which gives preference to the retention of original growth over replanting and which requires that tree-covered areas shall be preserved or substantially maintained in their present form, especially with respect to their value as wildlife habitats, even if development is permitted.
- i Shall include recommendations for the maintenance of all trees in post-project conditions, including recommendations for soil amendments, irrigation schedules, and pruning for fire safety. The report shall take into account that, at minimum, all trees removed with a trunk diameter between 5 and 9 inches will be required to be replaced at a 1:1 replacement ratio with a 15-gallon size California native tree and all trees with a trunk diameter over 9-inches shall be replaced with a specimen size California native tree.
- i Shall include recommendations for trees to be planted that will provide screening of the residence.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? **NI**

The project does not conflict with any Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan because currently none of these plans exist for the Town of Moraga.

V. CULTURAL RESOURCES -- Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?				X
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?		X		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
d) Disturb any human remains, including those interred outside of formal cemeteries?		X		

Discussion of Impacts to Cultural Resources:

a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in '15064.5? **NI**

There are no historical resources or designated heritage trees located on the project site. The development of the proposed residence would not have an impact on any known historical resources.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5? **LTSWMI**

There are no known cultural resources existing at the project site or in the immediate vicinity, such as historical, archeological, or paleontological resources, unique geologic features, or human remains. Therefore, the project would not disturb any known cultural resources. The steep topography and previous grading and fill placement for the construction of Donald Drive also makes it very unlikely that there would be archeological or paleontological resources on the site. Nevertheless, the following mitigation measure is recommended to ensure that there will be no significant impact to any unforeseen cultural resources.

Mitigation Measure:

CULTURAL RESOURCES MM 1 - The applicant is required to follow the procedures outlined in Government Code Section 15064.5. In the event that any cultural resources are uncovered during site preparation and construction activities, all activities shall be immediately suspended for a period to be determined by a historical, archeological, or paleontological resources specialist consultant for the Town of Moraga to allow for adequate inspection, recommendation, and retrieval of the resources, if appropriate. Appropriate historical, archeological, or paleontological resources mitigation measures shall be developed and implemented and disposition of the find shall be consistent with state and federal laws pertaining to archaeological resources. The discovery of human skeletal remains will necessitate the immediate suspension of all work in the vicinity of the remains until the County Coroner, the Planning Department, and the Native American Heritage Commission can be contacted to develop an appropriate mitigation plan. Upon determination by the County Coroner that the remains are Native American, the California Native American Heritage Commission shall be contacted to determine the "most likely descendant" of the human skeletal remains. An individual designated by the Native American Heritage Commission shall recommend the most appropriate procedures to be followed in handling the remains.

c) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? **NI**

The project would not disturb any paleontological resources because the soils under the proposed residence are geologically recent formations. The shale and sandstone bedrock below the soil may contain some fossilized organisms, but they could not be categorized as "unique" paleontological resources. There are no tar pits or peat bogs on the site that could preserve animals or plants from the Pliocene Age (7 to 1 million years old).

d) Would the project disturb any human remains, including those interred outside of formal cemeteries? **LTSWMI**

No evidence of a Native American burial site has been documented for the property. The steep slope of the project site makes it extremely unlikely that the property was used as a Native

American burial site. Nevertheless, the mitigation measure under item V.(b) above is recommended to address this potential impact.

VI. GEOLOGY AND SOILS Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Map issued by the State Geologist for the area or other substantial evidence of a known fault? Refer Div. of Mines & Geology Special Publication 42.				X
ii) Strong seismic ground shaking?		X		
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?		X		
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		X		
d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?		X		
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X

Discussion of Geology and Soils Impacts:

a) (i) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? **NI**

The Moraga fault, Bollinger fault, Cull Creek fault and Las Trampas fault are all located in close proximity to Moraga; however, none of these faults are known to be active. The project site is not within a State of California Earthquake Fault Hazard Zone. According to the June 2011 Geotechnical Investigation by Friar Associates Inc. (FAI), the project site is outside any of the Alquist-Priolo Earthquake Fault Zones (page 2). Since no active faults are known to cross the

project site, the risk of earthquake-induced ground rupture occurring across the project site appears to be remote (page 2, FAI Geotechnical Investigation).

a) (ii) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking? **LTSWMI**

The June 2011 FAI Geotechnical Investigation states the distance of the project site from the nearest active faults (page 2). The following list includes the name of the active faults followed by the distance from the project site in parenthesis: San Andreas Fault (23.7 miles), Hayward Fault (7.8 miles), Calaveras Fault (8.3 miles), and the Concord-Green Valley Fault (no distance listed). The Hayward and Calaveras faults experienced strong earthquakes in the 1860's. According to the United States Geological Survey (1990), the northern section of the Hayward fault has a 28 percent probability of generating an earthquake of magnitude 7.1 (Richter), with a maximum ground acceleration of 0.39g within the next 30 years. Strong seismic ground shaking can be expected during the projected lifespan of the proposed residence.

Paragraph PS4.6 in the Public Safety Element of the Moraga 2002 general Plan requires all new construction to be built to established standards with respect to seismic and geologic safety. The project geotechnical engineer, Friar Associates, Inc. (FAI), submitted their Geotechnical Investigation of the site in June 21, 2011. The Town's geotechnical peer review consultant, Cal Engineering and Geology (CE&G) reviewed the FAI Geotechnical Investigation on August 22, 2011 in compliance with PS4.2 of the Public Safety Element of the General Plan. The following mitigation measures are recommended as conditions of approval in order to reduce potential impacts related to seismic ground shaking and seismic-related ground failure to a less than significant level.

Mitigation Measures:

GEOLOGY AND SOILS MM 1 - The project should be designed to meet the current California Building Code requirements at the time of building permit issuance.

GEOLOGY AND SOILS MM 2 - The project shall incorporate all the geotechnical recommendations in the June 21, 2011 geotechnical reports by FAI, which include recommendations regarding building foundations, concrete slabs-on-grade, utility trenches, surface drainage, subsurface drainage, and the need for follow-up geotechnical services during construction. The project shall consider and incorporate as appropriate the geotechnical recommendations in the August 22, 2011 Geotechnical peer view report by CE&G.

a) (iii) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction? **LTSI**

If an earthquake with an epicentral location close to the project site occurred, groundshaking would be severe but the soils at the project site are unlikely to liquefy according to the Friar Associates Inc. Geotechnical Investigation (page 2). Soil liquefaction is a phenomenon where loose (cohesionless) and sandy soils can become saturated with ground water and thereby experience a temporary loss of strength during strong ground shaking.

a) (iv) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides? **LTSI**

Paragraph PS4.1 of the Public Safety Element of the Moraga 2002 General Plan requires appropriate technical evaluation to determine if there are any geologically hazardous areas or

potential impacts from known landslide areas to the proposed project site. The Geotechnical Investigation by Friar Associates, Inc. (FAI) dated June 21, 2011 was submitted to the Town on June 22, 2011 in compliance with PS4.1 of the Public Safety Element. The FAI report states that the site is underlain by weathered bedrock and no landslide features have been observed on the site. Paragraph PS4.2 requires review by the Town of the technical reports prior to approval of a development plan. The FAI Geotechnical Investigation was reviewed by the Town's geotechnical peer review consultant, Cal Engineering and Geology (CE&G), on August 22, 2011.

b) Would the project result in substantial soil erosion or the loss of topsoil? **LTSWMI**

The project would be built over a 20% slope and construction would result in less than 50 cubic yards of grading. Any disturbance of steep slopes would be conducive to soil erosion and the loss of top soil. If the removal of some of the existing vegetation and grading for the foundation are not conducted properly, they could result in substantial soil erosion. The following mitigation measures should reduce the potential for erosion impacts to a less than significant level.

Mitigation Measures:

GEOLOGY AND SOILS MM 3 - The project shall be designed to maximize slope and soil stability and minimize the potential for erosion at the project site during construction and in post-project conditions. The applicant shall:

- i Submit a certified copy of the referenced property and topographic survey with the project building permit submittal.
- i Submit a Storm Water Pollution Prevention Plan (SWPPP) prior to release of plans to the County Building for permitting.
- i Have all project plans, including all grading and drainage plans, calculations, and stormwater related items signed and stamped by a Registered Civil Engineer.
- i Address the requirements of Chapter 13.04 of the Moraga Municipal Code regarding Storm Water Management and Discharge Control.

GEOLOGY AND SOILS MM 4 – The project should be designed to minimize the potential for erosion of surface soils that could be caused by surface water runoff. The project site would not have more than 10,000 square feet of impermeable surfaces and would not be subject to the Contra Costa Clean Water Program Stormwater C.3 Guidebook, third edition, effective October 2006 and the Hydromodification Management Plan (HMP), effective October 16, 2006 approved by the Regional Water Quality Control Board for Contra Costa County. However, the drainage on the site will need to comply with the Best Management Practices (BMPs) required under the Town's NPEDS Permit.

c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off site landslide, lateral spreading, subsidence, liquefaction or collapse? **LTSWMI**

The potential impacts of landslides, subsidence and liquefaction were discussed under items a)ii, a)iii, and a)iv, above.

Mitigation Measures:

See Mitigation Measures under item VI. (a) (ii), above.

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? **LTSWMI**

The FAI report indicates that colluvium was encountered below the fill. The colluvium is underlain by weathered bedrock. The FAI report states that both the fill and the colluvium may

be subject to down slope creep and would impact proposed building foundation elements. Recommendations for the foundation design can be found page 4 of the FAI report. The CE&G peer review reports states that the FAI report does not include recommendations for uplift pressures from expansive soils (page 2). The following mitigation measure is recommended as a condition of approval to reduce the impact of expansive soils on the foundation system for the development of the project.

Mitigation Measure:

GEOLOGY AND SOILS MM 5 – The project shall incorporate FAI’s recommendations on building foundations as required by **MM2** above. FAI shall provide recommendations for uplift pressures from expansive soils.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? **NI**

Paragraph OS3.1 of the Open Space and Conservation Element of the Moraga 2002 General Plan requires all new development to be connected to a sewage system. The property has a drainage and sewage easement across the adjacent property at 2092-2092 Donald Drive.

VII. HAZARDS AND HAZARDOUS MATERIALS Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		X		
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?		X		

Discussion of Hazards and Hazardous Materials Impacts:

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? **LTSI**

The project would not normally involve any transport or disposal of hazardous materials. Landscape maintenance contractors working on the property may use some pesticides or herbicides for weeds occasionally. The homeowner may have some cleaning solvents and other typical household products that are toxic to the environment. None of these materials would be used in large enough quantities to be considered a significant hazard to the public.

b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? **LTSWMI**

The possibility exists that a resident in the new home or a maintenance employee could improperly dispose of a cleaning product, solvent, pesticide or other hazardous material in a storm drain or accidental spill on the property. There is also the possibility of a leak or spill of gasoline fuel from the tank of a vehicle parked on the property. The following mitigation measures should reduce this potential impact to a less than significant level:

Mitigation Measures:

HAZARDS AND HAZARDOUS MATERIALS MM 1 - All storm drains shall be marked with signs or stenciling to prohibit improper disposal of any hazardous materials such as cleaning solvents, pesticides and herbicides.

HAZARDS AND HAZARDOUS MATERIALS MM 2 - A provision shall be included in all landscaping maintenance contracts for the project that pesticides shall be disposed of at approved hazardous waste collection facilities.

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? **NI**

The subject property is located approximately 1,458-feet (0.276 miles) from Donald Rheem Elementary School. The project will not emit or require the handling of any hazardous or acutely hazardous materials therefore; there will be no impact to the school.

d) Would the project be located on a site, which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? **NI**

The property is not included on the list of sites in Moraga with hazardous materials. There are no known existing health hazards on the property and the project should not expose people to any existing sources of toxic material.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? **NI**

The project is not located within an airport land use plan area or within two miles of a public airport.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? **NI**

The project is not within the vicinity of a private airstrip.

g) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? **NI**

The project would have no impact on any emergency evacuation plan.

h) Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? **LTSWMI**

The project will not significantly increase the threat of a wildland fire to adjacent residential areas. The proposed density conforms to the zoning district for the property and there are other homes in the immediate area that are located on wooded hillside sites. Nevertheless, there is the possibility of a wildland fire on Mullholland Ridge or elsewhere in the immediate area. As such, the following mitigation measures are recommended in keeping with the requirements of the Moraga-Orinda Fire District and consistent with the Town of Moraga Design Guidelines for fire safe landscaping.

Mitigation Measures:

HAZARDS AND HAZARDOUS MATERIALS MM 3 / PUBLIC SERVICES MM 1 – The project plans shall comply with the following requirements:

- i The landscaping plan for the project shall be submitted to the Fire District for review and approval.
- i Vegetation shall be maintained in a fire safe manner, meaning that defensible space shall be provided around the structure. This defensible space shall employ the use of fire resistive plants and control of seasonal growth.
- i Addressing for the property shall be visible at all times and be visible from the main roadway serving the structure. Lettering and/or numbering is suggested to be no smaller than 4 inches in height.
- i A spark arrestor shall be installed on all fireplace chimneys.
- i Since the new home would be located on a densely wooded hillside area, the Fire District may require a fire suppression sprinkler system within the home. The plans for the home are subject to review and approval by the MOFD.

HAZARDS AND HAZARDOUS MATERIALS MM 4 / PUBLIC SERVICES MM 2 – The project landscaping plans shall comply with the Town of Moraga Design Guidelines for fire safe landscaping.

VIII. HYDROLOGY AND WATER QUALITY -- Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?		X		
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?		X		
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on or off-site?		X		
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?		X		
f) Otherwise substantially degrade water quality?		X		
g) Place housing within a special flood hazard area subject to inundation by the 1% annual chance flood as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place a structure within an area subject to inundation by the 1% annual chance flood, which would impede or redirect flood flows?				X

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j) Inundation by seiche, tsunami, or mudflow?			X	

Discussion of Hydrology and Water Quality Impacts:

a) Would the project violate any water quality standards or waste discharge requirements?

LTSWMI

The project plans show a total of 5,725 square feet of impervious surface area. Since the project site would not have more than 10,000 square feet of impermeable surfaces, the project would not be subject to the Contra Costa Clean Water Program Stormwater C.3 Guidebook, third edition, effective October 2006 or the Hydromodification Management Plan (HMP), effective October 16, 2006 approved by the Regional Water Quality Control Board for Contra Costa County. Nevertheless, contamination of the storm drainage coming from new roofs and paved areas proposed on the property should be controlled to avoid any measurable effect on the water quality of San Leandro reservoir. Oil or gasoline from vehicles could drip onto the pavement and be washed into storm drains. Landscaping maintenance should avoid chemicals that are not biodegradable. Paragraph OS3.1 of the Open Space and Conservation Element of the Moraga 2002 General Plan requires all new development to be connected to a sewage system. The following mitigation measures are recommended to reduce potential water quality and waste discharge impacts to a less than significant level.

Mitigation Measures:

HYDROLOGY AND WATER QUALITY MM 1 - Project construction shall be done in accordance with all applicable provisions of the federal Clean Water Act, which protects the quality of surface waters through the National Pollution Discharge Elimination System (NPDES). Prior to issuance of a building permit, the applicant shall prepare a *Storm Water Pollution Prevention Plan (SWPPP)*, subject to approval of the Town Engineer, to control erosion on the site during construction and until vegetative cover is restored to areas where the soil has been disturbed. The applicant shall provide evidence to the Town of the State Water Resources Control Board (SWRCB) approval of the SWPPP.

HYDROLOGY AND WATER QUALITY MM 2 - Storm water discharges from roofs and paved areas will need to comply with the Best Management Practices (BMPs) required under the Town's NPDES Permit. All roof drains and surface drains for new impervious surfaces must be routed through a biofilter, sand filter, or planted vegetated swale for ten or more feet prior to entering any storm drainage pipe or tight line drainage system. Although infiltration of storm water is preferred for water quality, the storm drain system will require review by the project geotechnical engineer to confirm that the area for infiltration will not induce soil instability on the site. The vegetated drainage swale may require a buried subdrain under the swale to avoid saturation of the slope. In addition, the storm water from the increased impervious surface area on the site shall not increase the run-off onto the property below at 2092 and 2094 Donald Drive. Water that is routed through a biofilter, sand filter or planted vegetated swale shall be conducted through a pipe in the drainage easement across the property at 2092 and 2094 Donald Drive to avoid any increase in surface drainage across the adjacent property.

HYDROLOGY AND WATER QUALITY MM 3 - Prior to issuance of a building permit, the project applicant shall prepare a “source control program” to remove non-point source pollutants before they are picked up by storm water runoff. A registered Civil Engineer (or other licensed professional acceptable to the Town) shall prepare the source control program, subject to approval by the Town Engineer. The program shall include the following provisions:

- a. A pavement maintenance program, which consists of regular surface cleaning for the new driveway and parking area.
- b. Labeling all catch basins “No Dumping-Pollutes Our Creeks” to limit direct disposal of contaminants into the storm drains.
- c. Strictly limiting the use of non-biodegradable fertilizers or pesticides in the landscape maintenance program.

HYDROLOGY AND WATER QUALITY MM 4 - The site drainage shall be reviewed in accordance with the most recent “Start at the Source Design Guidelines” from BASMAA. This may include drainage to swales to allow for infiltration of runoff water and lessen the peak surge of the runoff.

HYDROLOGY AND WATER QUALITY MM 5 - The project shall be connected to the Central Contra Costa Sanitary District (CCCSD) sewer system and shall comply with the requirements of the CCCSD for service.

b) Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level, which would not support existing land uses or planned uses for which permits have been granted)? **LTSI**

The project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge because the project would not draw groundwater as its water source. The project also does not cover an area that is significant for groundwater recharge because the project site is a steep slope with shallow topsoil over the sandstone bedrock and no natural drainage basin to catch and absorb groundwater.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on or off-site? **LTSWMI**

The project does not involve the alteration of any creek or stream. The project will change the drainage pattern of the site by introducing new impervious surfaces. On page 3 of the Geotechnical Investigation by Friar Associates Incorporated (FAI), dated June 21, 2011, it the following:

“As with all hillside development, the lack of adequate drainage to collect both surface and subsurface water to suitable collection and discharge facilities can adversely affect slope stability in general. Therefore, proper and adequate drainage (surface and subsurface) system should be incorporated into the planned residential development. Runoff collected from roof drains and area drains as well as discharge from subdrains should not be released on portions of the slope that could be the cause of instability or erosion. Appropriate discharge locations should be provided during site grading. As a precaution, we recommend that site grading be minimized only to area where necessary.”

During construction of the project, there is a possibility that there could be substantial erosion or siltation on site unless measures are taken to prevent the erosion of the disturbed soils. Some impacts of erosion were addressed in this report in the discussion of Geology and Soils under item VI. (b), but the following mitigation measures are recommended as conditions of approval to reduce the potential impacts of the site drainage on erosion to a less than significant level.

Mitigation Measures:

HYDROLOGY AND WATER QUALITY MM 6 – Drainage plans for all surface and subsurface drains shall be reviewed and approved by both the project geotechnical engineer and the Town Engineer. The discharge or outlet pipes from the drainage plan shall not result in substantial erosion or siltation on or off-site.

HYDROLOGY AND WATER QUALITY MM 7 – An Erosion Control Plan shall be submitted as one of the selected Best Management Practices (BMPs) as outlined in Moraga's Storm Water Management Plan (SWMP). The Erosion Control Plan is subject to review and approval by the Town Engineer, prior to the issuance of a grading permit. The California Storm Water Best Management Practice Handbook and the ABAG Manual of Standards for Erosion and Sediment Control Measures will be used to evaluate the Erosion Control Plan.

HYDROLOGY AND WATER QUALITY MM 8 – Grading operations shall occur between April 15 and October 15, in order to avoid seasonal rainfall. All erosion control measures shall be installed and deemed operational by the project engineer, the Contra Costa County Grading Inspector and Town Engineer prior to October 1.

HYDROLOGY AND WATER QUALITY MM 9 – The erosion control facilities shall be maintained until all improvements are completed and project landscaping or a heavy growth of grass is established on all exposed slopes. A minimum of 4,000 pounds per acre of straw mulch or alternative acceptable to the Town Engineer shall be placed on all slopes where grass is not firmly established each year before October 1.

HYDROLOGY AND WATER QUALITY MM 10 – Erosion control facilities must be maintained after every storm and as needed in between storms, and replaced whenever necessary. Any sediment reaching detention basins or settlement ponds shall be periodically cleaned out to avoid spilling over into catch basins and storm drains.

HYDROLOGY AND WATER QUALITY MM 11 – Any exposed slopes shall be landscaped or hydroseeded with a mixture of annual grasses, wild flowers and clover, no later than October 1, in anticipation of rain in the fall and winter seasons. This applies to rough graded slopes as well as areas where grading has been completed. The landscaped or hydroseeded areas shall be maintained to ensure adequate plant growth and rooting. If an area is disturbed after hydroseeding, then the area shall be revegetated, or protected from erosion by other approved methods.

d) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on or off-site? **LTSWMI**

The proposed site plan shows two 4-inch drain pipes 18-inches below grade on each side of the home that would connect to the roof drain. An energy dissipater with 87-feet of 6-inch perforated pipe is proposed at the rear of the home 18-inches below grade which would provide some measure of delay in peak runoff. The following mitigation measures are recommended as

conditions of approval to reduce the potential impacts of the site drainage on peak runoff and potential flooding of properties downstream of the project site to a less than significant level.

Mitigation Measures:

HYDROLOGY AND WATER QUALITY MM 12 – The project shall employ a drainage system that does not increase runoff rates relative to pre-project conditions. The drainage plans shall be designed in accordance with the Best Management Practices as required by the Town’s NPDES permit.

HYDROLOGY AND WATER QUALITY MM 13 – Downstream runoff shall be decreased from historic peak flows wherever possible. A detention basin should be considered to ensure that there is no increase in the historic peak flows in down stream channels or pipes during 10 and 100-year storm events. The detention basin could be subterranean if no above ground location is deemed feasible. The design should include storm hydrographs for the historic and developed flows for each storm frequency along with detention basin routing calculations. If a detention basin is not incorporated into the drainage system to reduce peak flows, then a report shall be prepared by a registered Civil Engineer (or other licensed professional acceptable to the Town Engineer) with the following information:

- a. A statement of the reasons that a detention basin cannot be used on the site to reduce peak flows. The project geotechnical engineer shall provide confirmation, if a detention basin cannot be installed due to slope stability issues.
- b. A drainage study to evaluate the effects of increased peak flows on downstream facilities.

The report shall be subject to review by the Town Engineer and recommendations for necessary improvements to existing downstream storm drains to handle the increase in peak flow shall be incorporated into an off-site improvement plan.

e) Would the project create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? **LTSWMI**

See discussion in item VIII. (c) and (d) above.

Mitigation Measures:

See Mitigation Measures under items VIII. (c) and (d)

f) Would the project substantially degrade water quality? **LTSWMI**

As stated under question VIII(a), above, the storm water runoff from the site eventually flows into the San Leandro reservoir. The mitigation measures proposed for item VIII(a) would decrease the impacts to water quality in San Leandro reservoir to a less than significant level.

Mitigation Measures:

See Mitigation Measures under items VIII. (a)

g) Would the project place housing within a special flood hazard area subject to inundation by the 1% annual chance flood as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? **NI**

The project site is not located within a special flood hazard area subject to inundation by the 1% annual chance flood as delineated on the Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency (FEMA) dated June 16, 2009. The areas of 1% annual chance of flood (previously designated 100-year flood hazard area) and 2% annual chance of flood (previously called the 500-year flood zone) are shown on the map below as a turquoise blue and purple shaded area, respectively: The project site is more than 700-feet from any flood hazard area.



h) Would the project place structures within a special flood hazard area, subject to inundation by the 1% annual chance flood, which would impede or redirect flood flows? **NI**

The project will not place any structures within a special flood hazard area as shown on the flood map above.

i) Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? **NI**

The only dams and levees in the vicinity of the project site are the Lafayette Reservoir dam and the San Leandro Reservoir dam. Both of these dams are located at a lower elevation than the project site; therefore, there is no possibility of loss, injury or death to the resident of the project from failure of these dams.

j) Would the project expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow? **LTSI**

The project site is not located near any large body of water so there is no possibility of a seiche or tsunami inundating the site. Given the soil and bedrock characteristics of the project site and wooded setting, it is unlikely that the project would expose people or structures to risk associated with a mudflow. There is the potential for a mudflow on the Mulholland Open Space Preserve

property southwest of the project site, which could deposit mud and soil onto Donald Drive, but this would not be a project induced impact. Such a mudflow could occur whether the project is built or not.

IX. LAND USE AND PLANNING – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

Discussion of Land Use and Planning Impacts:

a) Would the project physically divide an established community? **NI**

The project would not physically divide an established community. The project site is zoned for residential development at the density proposed and the project would be adjacent to other existing duplex residential structures on the northeast and northwest sides. The site is also adjacent to two city parks. The Hacienda de las Flores Park is located along the southeast property line and the Mullholland Open Space Preserve is located across Donald Drive southwest of the project site.

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? **LTSI**

The project is consistent with the land use designation and zoning for the site. The new single family dwelling unit has an attached second unit which is permitted in the 6-DUA (Six Dwellings Per Acre – Multifamily Residential District) zoning district. The project architect has complied with the required building setbacks and maximum height requirements under the zoning ordinance. The architect has also endeavored to minimize the grading necessary for the building foundation. The project will require consideration of several additional applications as listed below:

Tree Removal Permit: The plans call for the removal of 7 native trees as defined in the Town of Moraga Tree Protection Ordinance. The mitigation measures from Section I and IV (Aesthetic and Biological Resources) require an arborist’s report to be submitted on the condition of each tree that is proposed for removal. It is customary to replace native trees with between 1 to 5 native trees for each tree that is removed, depending on the size and visual impact caused by the loss of the original tree.

Architectural and Landscape Design: An application for Design Review will be required to evaluate the aesthetic merits of the project and determine whether the project complies with the Town's Design Guidelines. The Design Review Board's decision on the architectural design of the building and the landscaping improvements would be final, unless the action is appealed to the Planning Commission.

Hillside Development Permit: The Design Review Board would review an application for a hillside development permit for alteration of a slope over 20%. If the second unit is removed from the plan, then a use permit would be required for a single family residence. The Planning Commission would then consider the Hillside Development Permit in conjunction with the use permit.

Encroachment Permit: An encroachment permit from the Engineering Department would be required for any construction or alteration within the Donald Drive public right-of-way including: sidewalk repair, installation of a drainpipe through the curb, connection of a new underground gas or water service, or new curb cuts for driveways.

Six General Plan policies are relevant to the project and are listed below in italic print. The consistency of the proposed project with each of the listed General Plan policies is discussed after the statement of the policy.

LU1.8 Slope Restrictions. *The soil characteristics in Moraga are prone to landslide conditions which can cause damage to property, injury to persons, public cost and inconvenience; therefore, development shall be avoided on slopes of 20 percent or steeper, but may be permitted if supported by site-specific analysis. No new residential structures may be placed on after-graded average slopes of 25 percent or steeper within the development area, except that this provision shall not apply to new residential structures on existing lots that were either legally created after March 1, 1951 or specifically approved by the Town Council after April 15, 2002. All new non-MOSO lots shall contain an appropriate development area with an average after-graded slope of less than 25%. Grading on any non-MOSO land with an average predevelopment slope of 25% or more within the proposed development area shall be prohibited unless formally approved by the Town Council where it can be supported by site-specific analysis and shown that a minimum amount of grading is proposed in the spirit of and not incompatible with all other policies of the General Plan.*

Project consistency with LU1.8: Site specific geotechnical analysis was discussed under Section VI (Geology and Soils). Since the site is underlain by weathered bedrock and no landslide features have been observed on the site, it would appear that development of the site is feasible from an engineering point of view, with the mitigation measures previously listed in Section VI. The subject property was legally subdivided on February 28, 1964 and is exempt from the provision of LU1.8 that would prohibit new residential structures on the lot.

PS4.10 Grading. *Grading for any purpose whatsoever may be permitted only in accordance with an approved development plan that is found to be geologically safe and aesthetically consistent with the Town's Design Guidelines. Land with a predevelopment average slope of 25% or greater within the development area shall not be graded except at the specific direction of the Town Council and only where it can be shown that a minimum amount of grading is proposed in the spirit of, and not incompatible with, the intention and purpose of all other policies of the General Plan. The Town shall develop*

an average slope limit beyond which grading shall be prohibited unless grading is required for landslide repair or slope stabilization.

Project consistency with PS4.10: The question of geological safety was reviewed by the project geotechnical engineer and by the Town's geotechnical peer review consultant as discussed under Section VI (Geology and Soils). The project architect has designed the project to conform to the Town's height limitations and quantitative Design Guidelines. The subjective Design Guidelines, such as architectural compatibility with the adjacent residential homes, are issues that should be resolved by the Design Review Board. The mitigation measures proposed in Section I (Aesthetics) would help to reduce the impact of the proposed structure on the steep hillside lot. The architect worked with the Town's Engineering Department to carefully design the stepped foundation for the building to have less than 50 cubic yards of soil movement and no cuts deeper than 3-feet to avoid the requirement for a grading permit.

CD1.1 Location of New Development. *To the extent possible, concentrate new development in areas that are least sensitive in terms of environmental and visual resources, including:*

- a) *Areas of flat or gently sloping topography outside of flood plain or natural drainage areas.*
- b) *The Moraga Center area and Rheem Park area.*
- c) *Infill parcels in areas of existing development.*

Project consistency with CD1.1: Though the project site has slopes exceeding 25% the architect for the new residence has attempted to reduce the height of the building on the hillside by stepping it down the slope. The slope and vertical curves required for the driveway bridge determine the elevation of the garage floor level, which must be fairly close to the elevation of Donald Drive. The double driveway bridges allowed the building to be located further down the hillside, where the slope is not quite as steep.

CD1.2 Site Planning, Building Design and Landscaping. *Retain natural topographic features and scenic qualities through sensitive site planning, architectural design and landscaping. Design buildings and other improvements to retain a low visual profile and provide dense landscaping to blend structures with the natural setting.*

Project consistency with CD1.2: The project would be recessed into the hillside with rooflines conforming to the terrain. The topography of the hillside beyond the footprint of the building is not being altered. The scenic qualities of the site will not be significantly impacted because the building has a low visual profile on the down slope site as viewed from the lower part of Donald Drive. If development is permitted, the mitigation measures in Section I (Aesthetics) will need to be implemented to reduce the visual impact and help screen the building from the existing duplex at 2092-2094 Donald Drive.

CD1.4 Canyon and Valley Areas. *Protect the scenic and environmental qualities of canyon and valley areas to retain the Town's semi-rural character. Preserve both close-up and distant views of the natural hillside landscape from valley areas, and preserve significant linear open spaces in major canyons and grassland valleys with floodplain zones as the visual focus.*

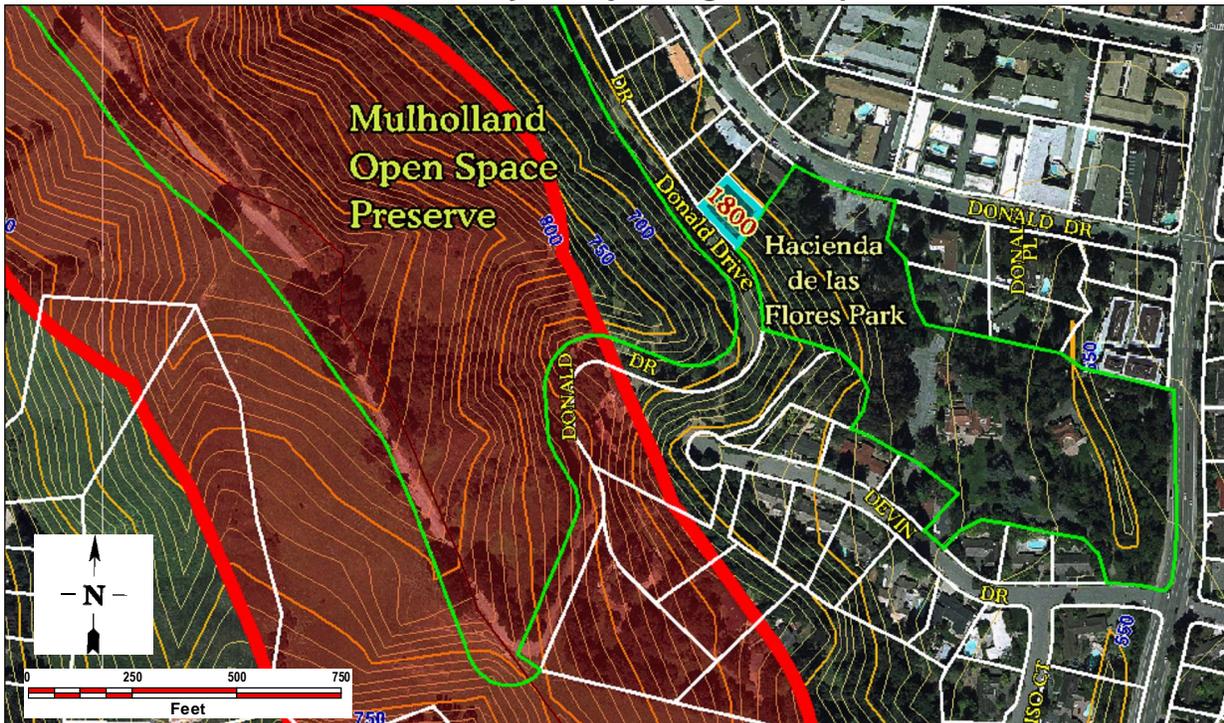
Project consistency with CD1.4: There are other existing homes located on the eastern end of Mulholland Ridge with access from Donald Drive. Some of these

homes are located at a higher elevation than the proposed residence. If the mitigation measures recommended under Section I (Aesthetics) are implemented, then the visual impact of the project would not be significantly greater than the other residential structures on this hillside.

CD1.5 Ridgelines and Hillside Areas. *Protect ridgelines from development. In hillside areas, require new developments to conform to the site's natural setting, retaining the character of existing landforms preserving significant native vegetation and with respect to ridgelines, encourage location of building sites so that visual impacts are minimized. When grading land with an average slope of 20% or more, require 'natural contour' grading to minimize soil displacement and use of retainer walls. Design buildings and other improvements in accordance with the natural setting, maintaining a low profile and providing dense native landscaping to blend hillside structures with the natural setting.*

Project consistency with CD1.5: The project site is not located on a ridgeline. The lot is not located within the 500-foot development exclusion area from Mulholland Ridge, which is shown with a heavy red line on the map below. The elevation of the lot at the top of the slope adjacent to Donald Drive is 650-feet, which is about the same elevation as the existing homes at the west end of Devin Drive. The existing homes located at 1750 and 1762 Donald Drive, further up the road from the project site, are at an elevation above the 700-foot elevation and are within 500-feet of the major ridgeline. These existing homes are legally non-conforming to the Town's Ridgeline Protection Ordinance because they were constructed prior to the adoption of the Town's General Plan and Zoning Ordinance. Most of the existing slope contours beyond the footprint of the building would remain unchanged. The mitigation measures previously listed under Section I (Aesthetics) and Section IV (Biological Resources) would require additional landscaping to retain a measure of privacy between the new residence and the duplex at 2092-2094 Donald Drive.

Red Line delineates boundary of Major Ridge Development Exclusion Area



c) Would the project conflict with any applicable habitat conservation plan or natural community conservation plan? **NI**

The project site is not listed as an area of natural significance under paragraph OS2.4 in the Moraga 2002 General Plan. The project does not conflict with any Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan because none of these plans currently exist for the Town of Moraga. As previously stated in Section IV (Biological Resources), the location of the project site on a wooded northeast facing slope is not good habitat for Alameda Whip Snakes and the site does not include any wetland areas that would serve as suitable habitat for Red-legged Frogs. Nevertheless, in order to reduce any potential impacts to habitat conservation or natural community conservation, the mitigation measures listed in Section IV as **Biological Resources MM 1** and **MM 2**, should be implemented.

X. MINERAL RESOURCES -- Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

Discussion of Impacts to Mineral Resources:

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? **NI**

There are no known mineral resources on or below the project site. Additionally, the development of the new residence would not prevent subterranean mining shafts from exploring mineral resources deep underground below; therefore, the project would not result in the loss of a mineral resource, should one be identified on the property.

b) Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? **NI**

The property is not a locally important mineral resource recovery site and no mineral resource recovery sites are delineated in the General Plan, or any other specific plan or land use plan.

XI. NOISE Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

Discussion of Noise Impacts:

a) Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? **LTSWMI**

There are no acoustic standards established in the Moraga 2002 General Plan, but policy OS6.1 within the Open Space and Conservation Element requires that acoustic standards be developed and implemented in the Zoning and Subdivision Ordinances and in the Building and Grading Codes. General Plan policy OS6.5 requires submittal of acoustical data, when and where appropriate, so that noise impacts can be properly evaluated and mitigated. No excessive noise levels are anticipated to be generated by the project after its construction phase. Temporary noise impacts from construction and grading activities are discussed under item XI. (d), below. The following mitigation measure is recommended as a condition of approval to ensure that post-project significant noise impacts will be reduced to a less than significant level.

Mitigation Measure:

NOISE MM 1 - The applicant shall show all equipment that has the potential to create noise on the plans that will be reviewed by the Design Review Board. The equipment shall not produce noise in excess of 65 dBA as measured at all property lines.

b) Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? **LTSI**

During the excavation of the foundation and drilling of pier holes on the site there may be some groundborne vibration, but this will be a temporary condition. After completion of the new residence there would be no generation of any groundborne vibrations.

c) Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? **LTSWMI**

See discussion under item XI. (a).

Mitigation Measure:

See Mitigation Measure under item XI. (a).

d) Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? **LTSWMI**

The use of construction equipment during the construction phase of the project could result in a temporary increase in ambient noise levels. The following mitigation measures are recommended as a condition of approval to ensure that there will be a less than significant impact on noise levels in the vicinity of the project.

Mitigation Measures:

NOISE MM 2 - Construction and grading operations for the project shall take place only between the hours of 8:00 AM and 5:00 PM on weekdays. The Public Works Director may permit grading work during a weekend if the grading is deemed necessary by the project soil engineer due to a potentially hazardous and unforeseen condition that requires immediate attention.

NOISE MM 3 - All construction equipment operated at the project site shall be equipped with manufacturer's standard noise control devices (i.e., mufflers, intake silencers, and/or engine enclosures). Newer equipment shall be used whenever possible.

NOISE MM 4 - Grading equipment and trucks used for project construction shall utilize the best available noise control techniques to maintain noise levels within the Federal Government established noise control requirements shown in the table below:

RECOMMENDED NOISE LIMITS FOR CONSTRUCTION EQUIPMENT

Equipment Type	Leq at 50 Ft., dBA	Equipment Type	Leq at 50 Ft., dBA
Air Compressor	75	Loader	75
Backhoe	75	Pneumatic Tool	80
Concrete Mixer	75	Pump	75
Dozer	75	Scraper	80
Generator	75	Shovel	75
Grader	75	Truck	75
Jack Hammer	75		

NOISE MM 5 - Noisy operations shall be avoided whenever possible. For example, concrete shall be mixed off site instead of on site, and the quietest construction equipment shall be selected for use on site.

NOISE MM 6 - Stationary noise generating equipment, such as air compressors and concrete pumpers, shall be located as far away from the public as possible. If they must be used near existing homes, they shall be adequately muffled, and enclosed within temporary sheds.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? **NI**

The project is not located within an airport land use plan or within two miles of a public airport.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? **NI**

The project site is not within the vicinity of a private airstrip.

XII. POPULATION AND HOUSING – Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

Discussion of Population and Housing Impacts:

a) Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? **NI**

The project would not induce substantial population growth in Moraga. The new driveway for the residence will not serve as a road extension or access to other properties for future development and the proposed density of the project is consistent with the allowable density for the project’s zoning district.

b) Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? **NI**

The project does not involve the demolition of any existing housing and would not displace any housing.

c) Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? **NI**

The project will not displace any people or require the construction of replacement housing.

XIII. PUBLIC SERVICES Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Fire protection?		X		
b) Police protection?			X	
c) Schools?			X	
d) Parks?			X	
e) Other public facilities?				X

Discussion of Impacts to Public Services:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection? **LTSWMI**

The project would have a less than significant impact on the maintenance of acceptable service ratios and response times for the Moraga-Orinda Fire District. The following mitigation measures are recommended as conditions of approval for the project in order to reduce the project’s impact on fire protection services to a less than significant level.

Mitigation Measures:

PUBLIC SERVICES MM 1 / HAZARDS AND HAZARDOUS MATERIALS MM 3 – The project shall comply with the following requirements:

- i The landscaping plan for the project shall be submitted to the Fire District for review and approval.
- i Vegetation shall be maintained in a fire safe manner, meaning that a defensible space shall be provided around the structure. This defensible space shall employ the use of fire resistive plants and control of seasonal growth.
- i Addressing for the property shall be visible at all times and be visible from the main roadway serving the structure. Lettering and/or numbering is suggested to be no smaller than 4 inches in height.
- i A spark arrestor shall be installed on all fireplace chimneys.
- i Since the new home would be located on a densely wooded hillside area, the Fire District may require a fire suppression sprinkler system within the home. The plans for the home are subject to review and approval by the MOFD.

PUBLIC SERVICES MM 2 / HAZARDS AND HAZARDOUS MATERIALS MM 4 – The project landscaping plans shall comply with the Town of Moraga Design Guidelines for fire safe landscaping.

b) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection? **LTSI**

The project would not require any significant change to the level of service by the Moraga Police Department. The Police Department is prepared to respond promptly to calls to the project site, since the police station is located approximately 1 mile from the project.

c) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools? **LTSI**

The closest elementary school is the Donald Rheem School on Laird Drive, which is located approximately 1,458-feet northwest from the project site. The closest high school is Campolindo High, which is approximately 1.5 miles north from the project site. Based on an average of 3.7 people per household for the single family home, the project could conceivably add 2 new students to the Moraga School District and Acalanes Union High School District. This would be considered a less than significant impact on school enrollment or attendance, given that the project density is consistent with the allowed density allowed in the zoning district. The second unit could be a rental for a St. Mary's College student.

d) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for parks? **LTSI**

The project would not have any substantial adverse impact to the existing public parks or construction of any new parks. None of the parks would require expansion of the existing facilities to accommodate the increased usage generated from the proposed residence and second unit. However, the project is located on the access road to the Mulholland Open Space Preserve. There is no parking lot for the trailhead at the southwest end of Donald Drive and visitors park their cars along Donald Drive. The new residence is located approximately 1000-feet down the road from the gate at the Mulholland Open Space Preserve. The project is not expected to have any impact the available parking for the use of the trailhead, but at the public hearings for a previous development project on this property, existing residents living further up Donald Drive expressed concern for guests parking along Donald Drive at the curve of the road. This concern is discussed further in the traffic section of this initial study.

e) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for other public facilities? **NI**

The proposed project would have no anticipated impacts on any other public facilities.

XIV. RECREATION	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?			X	

Discussion of Recreation Impacts:

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? **LTSI**

The project would not substantially increase the use of existing neighborhood and regional parks or cause substantial physical deterioration of any recreational facilities. In accordance with Section 8.140.060 of the Zoning Ordinance, the applicant shall pay a fee in lieu of parkland dedication prior to release of the building permit.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment? **LTSI**

The project does not include any recreational facilities, nor does it require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment. The ability to provide recreational facilities on-site is limited by site slopes and stability and by Moraga General Plan policies LU1.8 Slope Restrictions and PS4.10 Grading.

XV. TRANSPORTATION/TRAFFIC -- Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?			X	
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?			X	

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
e) Would the project result in inadequate emergency access?			X	
f) Result in inadequate parking capacity?			X	
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X

Discussion of Transportation and Traffic Impacts:

a) Would the project cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

LTSI

The peak hour trip generation has been estimated based on research compiled by the Institute of Transportation Engineers' (ITE) Trip Generation, 5th Edition, 1991. The ITE provides trip generation data for single family detached homes and for apartments. The average trip generation rate for a single family home on a weekday is 9.55 trips per dwelling unit. The average trip generation rate for an apartment unit on a weekday is 6.47 trips per dwelling unit. The total trip generation rate for the project is estimated at 16 trips per day. The primary arterial street providing access to Donald Drive is Moraga Road. The average daily traffic volume (ADT) on Moraga Road will increase from 15,500 in 1995 to 19,000 in 2010, according to the cumulative traffic forecasts on page 58 of the Initial Study for the Moraga Road/Ascot Drive Apartment project (Luxor Apartments). Therefore, the ADT on Moraga Road in 2011 is estimated at over 19,000 trips per day based on the traffic projection above. Assuming that the 16 vehicle trips generated by the project will add to the traffic on Moraga Road, there would be a 0.088% increase in traffic on Moraga Road due to the project.

Figure 11 on page 51 of Reference #6 shows a total pm peak traffic volume on Donald Drive of 93 vehicles per hour. The pm peak hour trip generation is 1.01 for the single family home and 0.69 for the apartment, for a total of 1.7 trips for the project. This would be a projected 1.83% increase in traffic on Donald Drive. This would not change the level of service (LOS) for the signalized intersection at Donald Drive and Moraga Road and is considered a less than significant increase in the traffic volume.

b) Would the project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

LTSI

Traffic on Donald Drive can often back up at the Moraga Road traffic signal when parents are driving their children to the Donald Rheem Elementary School in the morning or picking them up in the afternoon between 2:30 and 3:00 pm. Traffic service standards, established by the Contra Costa Transportation Authority (CCTA) and adopted by the Town, designate Moraga Road as an

“Urban Road” with a Level of Service (LOS) operating standard of LOS “D” for a signal controlled intersection and a volume/capacity ratio not exceeding the 0.85-0.89 range. The General Plan Background Report dated August 2000 shows that the intersection of Rheem Boulevard and Moraga Road has a level of service (LOS) “B”, which corresponds to operations with low delay and good progression of traffic through the intersection. The average stopped delay at the intersection is 14.5 seconds per vehicle. The LOS for the intersection of Donald Drive and Moraga Road was not calculated for the General Plan Background Report or in the Town of Moraga Available Roadway Capacity Study prepared by Robert I Harrison and dated May 1998. Nevertheless, the traffic volumes at the intersection of Donald Drive and Moraga Road, including the estimated 1.7 additional vehicle trips per hour for the proposed project, are less than the traffic volumes at the intersection of Rheem Boulevard and Moraga Road, which has a LOS “B”. Therefore, it is safe to assume that the LOS for the intersection of Donald Drive and Moraga Road would not exceed the LOS “D” minimum standard.

c) Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? **NI**

The project would have no impact on air traffic patterns or air traffic levels.

d) Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? **LTSI**

The project will not pose any hazards due to design features or incompatible uses when completed, but construction equipment will probably be required to use the side of Donald Drive as a staging area in order to drill pier holes and pour concrete during the construction phase. The double driveway design was conceived to allow the cars parked in the on-site garages to exit the site in a forward direction so they do not have to back out onto Donald Drive. There is a curve in Donald Drive that restricts visibility, but the volume of traffic on this section of Donald Drive is very low.

e) Would the project result in inadequate emergency access? **LTSI**

Police and fire access to the site would be provided directly off of Donald Drive and as such the project would not result in inadequate emergency access.

f) Would the project result in inadequate parking capacity? **LTSI**

The Moraga Municipal Code Chapter 8.76 addresses the parking requirements and parking design standards for the project. A single-family residence is required to provide two covered off-street parking spaces and a second unit is required to have one covered off-street parking space. The project includes a 2-car garage for the primary unit and a single garage for the secondary unit with a double driveway to allow ingress and egress alternatively for each garage. The parking for guests could be along the side of Donald Drive, but some trimming of trees and shrubs along the sides of the road would help improve the clearance for passing cars.

g) Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? **NI**

The project would not conflict with any adopted policies for alternative transportation. Transit service in the project area is provided by County Connection, which has a bus stop on Moraga Road near the intersection with Devin Drive. This bus stop is approximately 1 mile from the project site. County Connection provides service between the Lafayette BART station and the Orinda BART station, with some scheduled trips to St. Mary’s College and up Camino Pablo to Sanders Ranch Road.

XVI. UTILITIES AND SERVICE SYSTEMS Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
e) Result in a determination by the wastewater treatment provider that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?		X		
g) Comply with federal, state, and local statutes and regulations related to solid waste?		X		

Discussion of Impacts to Utilities and Service Systems:

a) Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? **LTSI**

The project will be served by the Central Contra Costa Sanitary District (CCCSD). The requirements of the CCCSD will need to be met for the type of plumbing fixtures in the home to achieve water conservation standards and to reduce the amount of wastewater as far as possible. The project would not exceed any wastewater treatment requirements from the Regional Water Quality Control Board.

b) Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? **LTSI**

The project would not exceed the current total development capacity shown on the Moraga 2002 General Plan. Assuming that the Central Contra Costa Sanitary District has sized their treatment

facilities based upon the maximum number of housing units in each jurisdiction, then the additional home and second unit would not require construction of new water or wastewater treatment facilities. Likewise, if the East Bay Municipal Utility District has provided adequate storage capacity for the potential development capacity of the Town, then the project should have no impact on the amount of storage of water available in Moraga or require the construction of any new water storage tanks for potable water.

c) Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? **LTSI**

The project may require the construction of a new detention basin on site to prevent an increase in peak runoff in post-project conditions as discussed previously under item VIII. (d). Depending upon the Town Engineer's review of the drainage plan for the project and the adequacy of downstream facilities, there may be some repair or reconstruction of existing drainage facilities. However, it is unlikely that the project will require any major construction of new storm drainage facilities off site that would cause significant environmental effects.

d) Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? **LTSI**

Potable water supplies for the project will come from the East Bay Municipal Utility District (EBMUD). EBMUD has two reservoir tanks at the top of Mulholland Ridge that are approximately 4,550-feet from the project site. A third reservoir tank is located on the ridge over Warfield Drive approximately 2,750-feet from the project site. It is not known whether an EBMUD water main is located in Donald Drive at the frontage of the property. The applicant will also need to determine from the Moraga-Orinda Fire District whether there are any requirements for fire hydrants on the property.

e) Would the project result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? **LTSI**

The project would not require any significant increase in demand for wastewater treatment; but a determination by the Central Contra Costa Sanitary District (CCCSD) is still required. The applicant's fees to the CCCSD for connection to the sewer may include a facilities surcharge for the cumulative impact as a result of the new home and second unit.

f) Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? **LTSWMI**

The additional amount of solid waste from the project would have a cumulative impact to the capacity of the landfills in Contra Costa County. Consequently, the following mitigation measure is recommended as condition of approval to reduce the impact of the project upon landfill capacity to a less than significant level.

Mitigation Measure:

UTILITIES AND SERVICE SYSTEMS MM 1 – Efforts should be made to recycle household waste and reduce the amount of material taken to the landfill. Additionally, cuttings from pruning shrubs and mowing grass shall be mulched and used for compost whenever possible on site.

g) Would the project comply with federal, state, and local statutes and regulations related to solid waste? **LTSWMI**

In order to implement the directives from State Assembly Bill 939 (AB 939) and the Central Contra Costa County Solid Waste Authority (CCCSWA), the Town of Moraga must reduce the amount of material that goes to the landfill by 50% from the amount of material taken to the landfill in the base year of 1990. The reduction in the amount of material includes waste from demolition and construction activities. The following mitigation measure is recommended as a condition of approval so that the project will comply with federal, state, and local statutes and regulations related to solid waste.

Mitigation Measure:

UTILITIES AND SERVICE SYSTEMS MM 2 – Construction and waste materials shall be recycled to the greatest extent possible. Any existing concrete or asphalt paving that will be removed for the project shall be recycled to comply with AB 939. This material is generally 100% recyclable.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b) Does the project have impacts that are individually limited but cumulatively considerable? (Cumulatively considerable means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?		X		
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

Discussion of Mandatory Findings of Significance:

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or

restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? **LTSWMI**

The project is not anticipated to have any significant adverse impacts to the habitat of a fish or wildlife species or cause a fish or wildlife population to drop below self-sustaining levels. **Aesthetics MM 1 through MM 3** on pages 7, 8, and 14 and **Biological Resources MM 1 through MM 3** on page 7 and pages 12 through 14 will reduce the impacts of the project to the existing plants and animals located on the property and prevent any impact to a rare or endangered plant or animal. **Cultural Resources MM 1** on pages 15 and 16 will ensure that the project has no significant impact on the loss of artifacts or remains from California history or prehistory.

b) Does the project have impacts that are individually limited, but cumulatively considerable? **LTSWMI**

The cumulative impacts of the project are not significant since the density of the proposed development is within the existing development capacity projected in the General Plan. Therefore, the cumulative impacts were addressed in the EIR for the Moraga 2002 General Plan revisions. The only cumulative impact identified in this initial study was the impact on landfill capacity, which has been adequately mitigated by **Utilities and Service Systems MM1 and MM 2** on page 43.

c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly? **LTSI**

To ensure that the project will not have any substantial adverse effects on human beings, either directly or indirectly the mitigation measures listed under the Air Quality, Geology, Hazards, Hydrology, Land Use, Noise, Public Service and Transportation sections of this Initial Study will reduce any adverse effects of the project to a less than significant level. These mitigation measures include: **Air Quality MM 1** on pages 10 and 11; **Geology and Soils MM 1 through MM 5** on pages 17 through 19; **Hazards and Hazardous Materials MM 1 through MM 4** on pages 21, 22, 36, and 37; **Hydrology and Water Quality MM 1 through MM 13** on pages 23 through 26; **Noise MM 1 through MM 6** on pages 33 through 35; and, **Public Service MM 1 and MM 2** on pages 22, 36, and 37.

VIII. SUPPORTING INFORMATION SOURCES AND EARLIER ANALYSES:

The following documents were consulted in preparation of this initial study. Earlier analyses may be used where one or more effects have been adequately analyzed in an earlier EIR or negative declaration (Section 15063(c)(3)(D)). All of the below listed documents are available at the Moraga Planning Department, 329 Rheem Boulevard, Moraga, CA 94556.

1. MORAGA 2002 GENERAL PLAN (Adopted by the Moraga Town Council on June 4, 2002)
2. ZONING ORDINANCE FOR TOWN OF MORAGA (MMC Chapter 7.12 (Noise Control), Title 8 (Planning and Zoning), Chapter 12.10 (Preservation, Maintenance and Removal of Trees))
3. GENERAL PLAN BACKGROUND REPORT for Moraga 2000 General Plan Update, August 2000 and prepared by Parsons Harland Bartholomew Associates, with traffic analysis prepared by Fehr and Peers Associates, Inc.

4. GENERAL PLAN FINAL ENVIRONMENTAL IMPACT REPORT for Moraga 2000 General Plan Update, August 2000 and prepared by Parsons Harland Bartholomew Associates, with traffic analysis prepared by Fehr and Peers Associates, Inc.
5. FLOOD INSURANCE STUDY prepared by the Federal Emergency Management Agency (FEMA) dated November 19, 1980 and New Flood Insurance Rate Map (FIRM) dated June 16, 2009.
6. BAAQMD (Bay Area Air Quality Management District) CEQA Guidelines. Assessing the Air Quality Impacts of Projects and Plans, Revised December 1999.
7. INSTITUTE OF TRANSPORTATION ENGINEERS dated 1991 – Trip Generation (5th edition).
8. GEOTECHNICAL INVESTIGATION – NEW RESIDENTIAL DEVELOPMENT – DONALD DRIVE, MORAGA, CALIFORNIA dated June 21, 2011 as prepared by Friar Associates, Incorporated.
9. GEOLOGIC AND GEOTECHNICAL PEER REVIEW dated August 22, 2011 and prepared by Mitchell Wolfe P.G. C.E.G. and Mark Myers P.E. G.E., Cal Engineering and Geology.
10. Town of Moraga Available Roadway Capacity Study prepared by Robert I Harrison and dated May 1998.
11. REVISED ENVIRONMENTAL INITIAL STUDY for the Town of Moraga for 1800 Donald Drive dated March 14, 2007 prepared by Richard Chamberlain.

EXHIBIT E

DRAFT NEGATIVE DECLARATION

DRAFT MITIGATED NEGATIVE DECLARATION

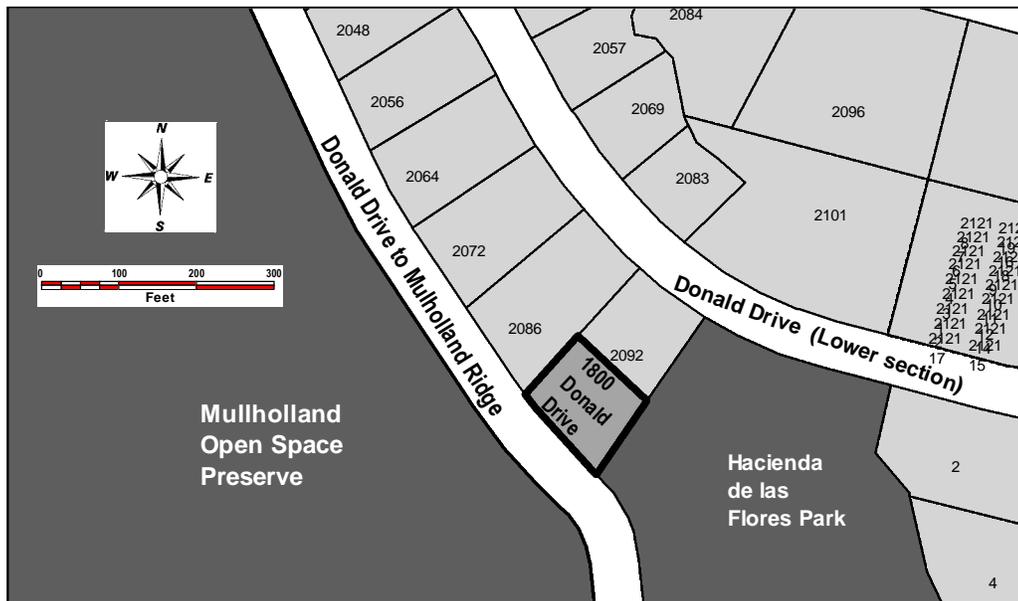
For review by interested agencies and the public in accordance with California Environmental Quality Act, an Initial Study has been prepared of possible environmental impacts of the following project:

Project Title and Description:

Single-Family Residential Project with attached Secondary Living Unit: A 5,132 square foot three-level residence with an attached second unit is proposed. The 1,207 square foot upper level would include a 351 square foot one-car garage on the northwest side and a 511 square foot two-car garage on the southeast side of the residence. The 2,647 square foot middle level would include the primary residence main living area, the attached second unit, and a cantilevered back deck. The 1,277 square foot lower level would include two bedrooms and two bathrooms, and “shell” space. A half circular driveway bridge off Donald Drive allows for ingress and egress to the upper level garages, where the vehicles can enter and exit the site in a forward direction. The half circular driveway approach also allows the structure to comply with the 25-foot front setback requirement. The new residence would be built on an existing hillside with a slope over 20%. The proposed grading for the foundation of the residence has been reduced to less than 50 cubic yards. (APN 255-183-011) Zoning: 6 DUA (Six Dwelling Units per Acre).

Project location:

1800 Donald Drive. The project site is on a 13,203 square foot lot located on the hillside above 2092 and 2094 Donald Drive, with access from the upper section of Donald Drive 1000 feet beyond the intersection with Laird Drive. The location of the property is shown on the map below:



Applicant	Property Owner
James P. Wright 5 Green Valley Court Lafayette, CA 94549	Stephen R. Williams 2647 Pleasant Hill Road Pleasant Hill, CA 94523

Findings Which Support a Negative Declaration:

After preparation of an Initial Study and a public hearing to consider a draft negative declaration, the Moraga Planning Commission has determined that the proposed project will not have a significant effect on the environment because revisions to the project design have been made or agreed to by the project proponent to mitigate all identified impacts to a less than significant level. The following findings support a Negative Declaration:

1. The project site does not include any significant agricultural, biotic or mineral resources that would be permanently lost as a result of the proposed project. The native trees that will be removed for the project will be replaced at a minimum 1:1 replacement ratio with 15-gallon or specimen size California native trees in accordance with Mitigation Measures Aesthetics MM 1 and Biological Resources MM 3, item number (e). Mitigation Measures under Biological Resources MM 1 and MM 2 will further reduce any impacts to less than significant.
2. General Plan goal LU1.8 restricting new residential structures on slopes 25% or steeper does not apply to lots that were legally created after March 1, 1951. General Plan goal PS4.10 has been addressed by the applicant by minimizing the amount of cut and fill to less than 50 cubic yards and reducing the depth of cuts to less than 3-feet deep for the foundation to avoid the requirement for a grading permit under MMC Title 14 (Grading Ordinance). The application has complied with Paragraphs PS4.1 and PS4.2 of the Public Safety Element of the Moraga 2002 General Plan, with submittal and review of appropriate geotechnical investigation to determine if there were any geologically hazardous areas or potential impacts from known landslide areas to the proposed project site. Further geotechnical issues will be considered with a Hillside Development Permit by the Planning Commission in accordance with Mitigation Measures Geology and Soils MM 1 through MM 5.
3. The proposed project is consistent with the land use designation for the property and complies with the required building setbacks and off-street parking requirements.
4. The possibility that Native American artifacts or burial grounds could be found on the property during grading operations would be reduced to a less than significant impact by implementation of the Mitigation Measure listed under Cultural Resources MM 1.
5. The proposed residence and attached second unit will not have any substantial adverse effects on human beings, either directly or indirectly because the following Mitigation Measures will reduce any adverse effects of the project to a less than significant level: Air Quality MM 1, Hazards and Hazardous Materials MM 1 through MM 4, and Hydrology and Water Quality MM 1 through MM 13.
6. The cumulative impacts of the additional single family home and second living unit on Donald Drive are not significant since the density of the proposed development is within the existing development capacity projected in the General Plan and were therefore addressed in the EIR for the General Plan. The only cumulative impact identified in this Initial Study was the impact on landfill capacity, which has been adequately mitigated under Utilities and Service Systems MM 1 and MM 2.
7. Temporary environmental effects due to dust and noise from the grading and construction activities on the property have been addressed with appropriate Mitigation Measures under Air Quality MM 1 and Noise MM 1 through MM 6.

The list of mitigation measures, which has been agreed to by the applicant, is attached to this Mitigated Negative Declaration. A copy of the Initial Study and supporting documents are available for public review at the Planning Department, 329 Rheem Boulevard, Moraga, California, 94556, during normal business hours, Monday through Friday 9 a.m. to noon and 1 to 5 p.m.

EXHIBIT F

LIST OF ALL MITIGATION MEASURES (MANDATORY CONDITIONS OF APPROVAL)

Mitigation Measures from Initial Study for 1800 Donald Drive

September 15, 2011

Although the proposed project could have a significant effect on the environment, there will not be a significant effect because revisions in the project in accordance with the mitigation measures listed below have been made by or agreed to by the project proponent.

AESTHETICS MM 1 / BIOLOGICAL RESOURCES MM 3 - Given that the proposed project will necessitate the removal of or may otherwise affect the health of existing trees at the site, which in turn may affect geotechnical conditions, site drainage, and screening of the project site from nearby rights-of-way, the applicant shall submit a certified arborist's report as part of the project design review, hillside development permit, and tree removal permit applications. The applicant shall incorporate the recommendations of the arborist's report into the project plans that will be reviewed by the Design Review Board. The arborist's report shall:

- a. Accurately document the location, size, species, and health/stability of all existing native and general trees at the project site that are over 5-inches in diameter measured 3-feet above grade.
- b. Shall include recommendations to prevent any adverse impact to those trees proposed to remain in post-project conditions.
- c. Shall include recommendations for the safe removal for all trees proposed for removal, including all standing and fallen trees.
- d. Shall take into account the General Plan Policy OS2.9 Tree-covered areas, which gives preference to the retention of original growth over replanting and which requires that tree-covered areas shall be preserved or substantially maintained in their present form, especially with respect to their value as wildlife habitats, even if development is permitted.
- e. Shall include recommendations for the maintenance of all trees in post-project conditions, including recommendations for soil amendments, irrigation schedules, and pruning for fire safety. The report shall take into account that, at minimum, all trees removed with a trunk diameter between 5 and 9 inches will be required to be replaced at a 1:1 replacement ratio with a 15-gallon size California native tree and all trees with a trunk diameter over 9-inches shall be replaced with a specimen size California native tree.
- f. Shall include recommendations for trees to be planted that will provide screening of the residence.

AESTHETICS MM 2 – In order to help reduce the visual impact of the development on the hillside and improve the privacy between the new building and the existing duplex at 2092-2094 Donald Drive, additional tall growing trees shall be planted below the new structure. It is recommended to use a tall fast growing native evergreen tree, such as *Sequoia sempervirens* (Coast Redwood Tree). *Eucalyptus* and *Monterey Pine* Trees are not recommended.

AESTHETICS MM 3 – In order to reduce impacts from glare of any new lighting and from windows on the northeast side of the building the following measures shall be considered by the project architect and Design Review Board:

- a. Consider anti-glare glass or coatings on the northeast windows
- b. Consider exterior lighting on the residence and within the landscaping areas that is low-wattage, shielded, and does not spill off-site.

AIR QUALITY MM 1 - In order to reduce potential dust impacts (PM₁₀ emissions) from the grading and pier drilling operations for the project, the following best management practices should be conducted during the construction phase of the project:

- a. Periodically water all active grading areas where the ground cover has been removed.

- b. Periodically sweep with water sweepers all paved access roads to the construction site where dirt and dust have settled or where construction vehicles have tracked dirt onto the paving.
- c. Apply non-toxic soil stabilizers to graded areas that have been inactive for ten days or more.
- d. Cover or periodically water exposed stockpiles of dirt or soil.
- e. Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.
- f. Replant vegetation in the disturbed areas as quickly as possible upon completion of the grading and construction.

BIOLOGICAL RESOURCES MM 1 - Prior to the approval of the project, the applicant shall submit a site-specific biotic survey to determine the presence or absence of individuals and/or occupied or designate critical habitat of endangered, threatened, or rare wildlife or plant species. Prior to conducting these surveys a current listing of rare, threatened, and endangered species that may occur in the project area will be obtained. The site biotic survey shall specifically address whether or not there are any white-tailed kites nesting on the property as requested by Lynda Deschambault at the April 26, 2006 Town Council hearing. It should also be determined if the project site includes any significant wildlife corridors. Consultation with CDFG and USFWS will be necessary if any special status species or wildlife corridors are present in order to develop site-specific protection strategies for these species.

BIOLOGICAL RESOURCES MM 2 - Prior to construction of the project, the applicant shall submit the results of a pre-construction survey for breeding and nesting raptors and other migratory or protected birds at the project site. Typically, the most sensitive times of year for breeding and nesting are between February 1 and August 31. The survey must be conducted within two weeks prior to ground breaking. The survey must also include areas that are adjacent to the site. If active nest sites are located, the applicant shall consult with CDFG to determine appropriate construction setbacks from the nest sites. No construction activities shall occur within the construction setback during the nesting season of the affected species. If active nests (with eggs or live young) of protected species are found, then the project will not be permitted to conduct any activity that might disturb or remove those active nests until the young birds are able to leave the nest and forage on their own. The project would be allowed to remove empty nests, but if eggs or young were present, the project will be required to leave the nests undisturbed until the young birds leave.

CULTURAL RESOURCES MM 1 - The applicant is required to follow the procedures outlined in Government Code Section 15064.5. In the event that any cultural resources are uncovered during site preparation and construction activities, all activities shall be immediately suspended for a period to be determined by a historical, archeological, or paleontological resources specialist consultant for the Town of Moraga to allow for adequate inspection, recommendation, and retrieval of the resources, if appropriate. Appropriate historical, archeological, or paleontological resources mitigation measures shall be developed and implemented and disposition of the find shall be consistent with state and federal laws pertaining to archaeological resources. The discovery of human skeletal remains will necessitate the immediate suspension of all work in the vicinity of the remains until the County Coroner, the Planning Department, and the Native American Heritage Commission can be contacted to develop an appropriate mitigation plan. Upon determination by the County Coroner that the remains are Native American, the California Native American Heritage Commission shall be contacted to determine the "most likely descendant" of the human skeletal remains. An individual designated by the Native American

Heritage Commission shall recommend the most appropriate procedures to be followed in handling the remains.

GEOLOGY AND SOILS MM 1 - The project should be designed to meet the current California Building Code requirements at the time of building permit issuance.

GEOLOGY AND SOILS MM 2 - The project shall incorporate all the geotechnical recommendations in the June 21, 2011 geotechnical reports by Friar Associates, Inc., which include recommendations regarding building foundations, concrete slabs-on-grade, utility trenches, surface drainage, subsurface drainage, and the need for follow-up geotechnical services during construction. The project shall consider and incorporate as appropriate the geotechnical recommendations in the August 22, 2011 Geotechnical peer view report by Cal Engineering and Geology.

GEOLOGY AND SOILS MM 3 - The project shall be designed to maximize slope and soil stability and minimize the potential for erosion at the project site during construction and in post-project conditions. The applicant shall:

- a. Municipal Code regarding Storm Water Management and Discharge Control. Submit a certified copy of the referenced property and topographic survey with the project building permit submittal.
- b. Submit a Storm Water Pollution Prevention Plan (SWPPP) prior to release of plans to the County Building for permitting.
- c. Have all project plans, including all grading and drainage plans, calculations, and stormwater related items signed and stamped by a Registered Civil Engineer.
- d. Address the requirements of Chapter 13.04 of the Moraga

GEOLOGY AND SOILS MM 4 – The project should be designed to minimize the potential for erosion of surface soils that could be caused by surface water runoff. The project site would not have more than 10,000 square feet of impermeable surfaces and would not be subject to the Contra Costa Clean Water Program Stormwater C.3 Guidebook, third edition, effective October 2006 and the Hydromodification Management Plan (HMP), effective October 16, 2006 approved by the Regional Water Quality Control Board for Contra Costa County. However, the drainage on the site will need to comply with the Best Management Practices (BMPs) required under the Town’s NPEDS Permit.

GEOLOGY AND SOILS MM 5 – The project shall incorporate FAI’s recommendations on building foundations as required by **MM2** above. FAI shall provide recommendations for uplift pressures from expansive soils.

HAZARDS AND HAZARDOUS MATERIALS MM 1 - All storm drains shall be marked with signs or stenciling to prohibit improper disposal of any hazardous materials such as cleaning solvents, pesticides and herbicides.

HAZARDS AND HAZARDOUS MATERIALS MM 2 - A provision shall be included in all landscaping maintenance contracts for the project that pesticides shall be disposed of at approved hazardous waste collection facilities.

HAZARDS AND HAZARDOUS MATERIALS MM 3 / PUBLIC SERVICES MM 1 – The project plans shall comply with the following requirements:

- a. The landscaping plan for the project shall be submitted to the Fire District for review and approval.

- b. Vegetation shall be maintained in a fire safe manner, meaning that defensible space shall be provided around the structure. This defensible space shall employ the use of fire resistive plants and control of seasonal growth.
- c. Addressing for the property shall be visible at all times and be visible from the main roadway serving the structure. Lettering and/or numbering is suggested to be no smaller than 4 inches in height.
- d. A spark arrestor shall be installed on all fireplace chimneys.
- e. Since the new home would be located on a densely wooded hillside area, the Fire District may require a fire suppression sprinkler system within the home. The plans for the home are subject to review and approval by the MOFD.

HAZARDS AND HAZARDOUS MATERIALS MM 4 / PUBLIC SERVICES MM 2 – The project landscaping plans shall comply with the Town of Moraga Design Guidelines for fire safe landscaping.

HYDROLOGY AND WATER QUALITY MM 1 - Project construction shall be done in accordance with all applicable provisions of the federal Clean Water Act, which protects the quality of surface waters through the National Pollution Discharge Elimination System (NPDES). Prior to issuance of a building permit, the applicant shall prepare a *Storm Water Pollution Prevention Plan* (SWPPP), subject to approval of the Town Engineer, to control erosion on the site during construction and until vegetative cover is restored to areas where the soil has been disturbed. The applicant shall provide evidence to the Town of the State Water Resources Control Board (SWRCB) approval of the SWPPP.

HYDROLOGY AND WATER QUALITY MM 2 - Storm water discharges from roofs and paved areas will need to comply with the Best Management Practices (BMPs) required under the Town's NPDES Permit. All roof drains and surface drains for new impervious surfaces must be routed through a biofilter, sand filter, or planted vegetated swale for ten or more feet prior to entering any storm drainage pipe or tight line drainage system. Although infiltration of storm water is preferred for water quality, the storm drain system will require review by the project geotechnical engineer to confirm that the area for infiltration will not induce soil instability on the site. The vegetated drainage swale may require a buried subdrain under the swale to avoid saturation of the slope. In addition, the storm water from the increased impervious surface area on the site shall not increase the run-off onto the property below at 2092 and 2094 Donald Drive. Water that is routed through a biofilter, sand filter or planted vegetated swale shall be conducted through a pipe in the drainage easement across the property at 2092 and 2094 Donald Drive to avoid any increase in surface drainage across the adjacent property.

HYDROLOGY AND WATER QUALITY MM 3 - Prior to issuance of a building permit, the project applicant shall prepare a "source control program" to remove non-point source pollutants before they are picked up by storm water runoff. A registered Civil Engineer (or other licensed professional acceptable to the Town) shall prepare the source control program, subject to approval by the Town Engineer. The program shall include the following provisions:

- a. A pavement maintenance program, which consists of regular surface cleaning for the new driveway and parking area.
- b. Labeling all catch basins "No Dumping-Pollutes Our Creeks" to limit direct disposal of contaminants into the storm drains.
- c. Strictly limiting the use of non-biodegradable fertilizers or pesticides in the landscape maintenance program.

HYDROLOGY AND WATER QUALITY MM 4 - The site drainage shall be reviewed in

accordance with the most recent “Start at the Source Design Guidelines” from BASMAA. This may include drainage to swales to allow for infiltration of runoff water and lessen the peak surge of the runoff.

HYDROLOGY AND WATER QUALITY MM 5 - The project shall be connected to the Central Contra Costa Sanitary District (CCCSD) sewer system and shall comply with the requirements of the CCCSD for service.

HYDROLOGY AND WATER QUALITY MM 6 – Drainage plans for all surface and subsurface drains shall be reviewed and approved by both the project geotechnical engineer and the Town Engineer. The discharge or outlet pipes from the drainage plan shall not result in substantial erosion or siltation on or off-site.

HYDROLOGY AND WATER QUALITY MM 7 – An Erosion Control Plan shall be submitted as one of the selected Best Management Practices (BMPs) as outlined in Moraga’s Storm Water Management Plan (SWMP). The Erosion Control Plan is subject to review and approval by the Town Engineer, prior to the issuance of a grading permit. The California Storm Water Best Management Practice Handbook and the ABAG Manual of Standards for Erosion and Sediment Control Measures will be used to evaluate the Erosion Control Plan.

HYDROLOGY AND WATER QUALITY MM 8 – Grading operations shall occur between April 15 and October 15, in order to avoid seasonal rainfall. All erosion control measures shall be installed and deemed operational by the project engineer, the Contra Costa County Grading Inspector and Town Engineer prior to October 1.

HYDROLOGY AND WATER QUALITY MM 9 – The erosion control facilities shall be maintained until all improvements are completed and project landscaping or a heavy growth of grass is established on all exposed slopes. A minimum of 4,000 pounds per acre of straw mulch or alternative acceptable to the Town Engineer shall be placed on all slopes where grass is not firmly established each year before October 1.

HYDROLOGY AND WATER QUALITY MM 10 – Erosion control facilities must be maintained after every storm and as needed in between storms, and replaced whenever necessary. Any sediment reaching detention basins or settlement ponds shall be periodically cleaned out to avoid spilling over into catch basins and storm drains.

HYDROLOGY AND WATER QUALITY MM 11 – Any exposed slopes shall be landscaped or hydroseeded with a mixture of annual grasses, wild flowers and clover, no later than October 1, in anticipation of rain in the fall and winter seasons. This applies to rough graded slopes as well as areas where grading has been completed. The landscaped or hydroseeded areas shall be maintained to ensure adequate plant growth and rooting. If an area is disturbed after hydroseeding, then the area shall be revegetated, or protected from erosion by other approved methods.

HYDROLOGY AND WATER QUALITY MM 12 – The project shall employ a drainage system that does not increase runoff rates relative to pre-project conditions. The drainage plans shall be designed in accordance with the Best Management Practices as required by the Town’s NPDES permit.

HYDROLOGY AND WATER QUALITY MM 13 – Downstream runoff shall be decreased from historic peak flows wherever possible. A detention basin should be considered to ensure that

there is no increase in the historic peak flows in downstream channels or pipes during 10 and 100-year storm events. The detention basin could be subterranean if no above ground location is deemed feasible. The design should include storm hydrographs for the historic and developed flows for each storm frequency along with detention basin routing calculations. If a detention basin is not incorporated into the drainage system to reduce peak flows, then a report shall be prepared by a registered Civil Engineer (or other licensed professional acceptable to the Town Engineer) with the following information:

- a. A statement of the reasons that a detention basin cannot be used on the site to reduce peak flows. The project geotechnical engineer shall provide confirmation, if a detention basin cannot be installed due to slope stability issues.
- b. A drainage study to evaluate the effects of increased peak flows on downstream facilities.

The report shall be subject to review by the Town Engineer and recommendations for necessary improvements to existing downstream storm drains to handle the increase in peak flow shall be incorporated into an off-site improvement plan.

NOISE MM 1 - The applicant shall show all equipment that has the potential to create noise on the plans that will be reviewed by the Design Review Board. The equipment shall not produce noise in excess of 65 dBA as measured at all property lines.

NOISE MM 2 - Construction and grading operations for the project shall take place only between the hours of 8:00 AM and 5:00 PM on weekdays. The Public Works Director may permit grading work during a weekend if the grading is deemed necessary by the project soil engineer due to a potentially hazardous and unforeseen condition that requires immediate attention.

NOISE MM 3 - All construction equipment operated at the project site shall be equipped with manufacturer's standard noise control devices (i.e., mufflers, intake silencers, and/or engine enclosures). Newer equipment shall be used whenever possible.

NOISE MM 4 - Grading equipment and trucks used for project construction shall utilize the best available noise control techniques to maintain noise levels within the Federal Government established noise control requirements shown in the table below:

RECOMMENDED NOISE LIMITS FOR CONSTRUCTION EQUIPMENT

Equipment Type	Leq at 50 Ft., dBA	Equipment Type	Leq at 50 Ft., dBA
Air Compressor	75	Loader	75
Backhoe	75	Pneumatic Tool	80
Concrete Mixer	75	Pump	75
Dozer	75	Scraper	80
Generator	75	Shovel	75
Grader	75	Truck	75
Jack Hammer	75		

NOISE MM 5 - Noisy operations shall be avoided whenever possible. For example, concrete shall be mixed off site instead of on site, and the quietest construction equipment shall be selected for use on site.

NOISE MM 6 - Stationary noise generating equipment, such as air compressors and concrete pumpers, shall be located as far away from the public as possible. If they must be used near existing homes, they shall be adequately muffled, and enclosed within temporary sheds.

UTILITIES AND SERVICE SYSTEMS MM 1 – Efforts should be made to recycle household waste and reduce the amount of material taken to the landfill. Additionally, cuttings from pruning shrubs and mowing grass shall be mulched and used for compost whenever possible on site.

UTILITIES AND SERVICE SYSTEMS MM 2 – Construction and waste materials shall be recycled to the greatest extent possible. Any existing concrete or asphalt paving that will be removed for the project shall be recycled to comply with AB 939. This material is generally 100% recyclable.

EXHIBIT G

FACTORS TO BE CONSIDERED FOR HILLSIDE DEVELOPMENT PERMIT

EXHIBIT G

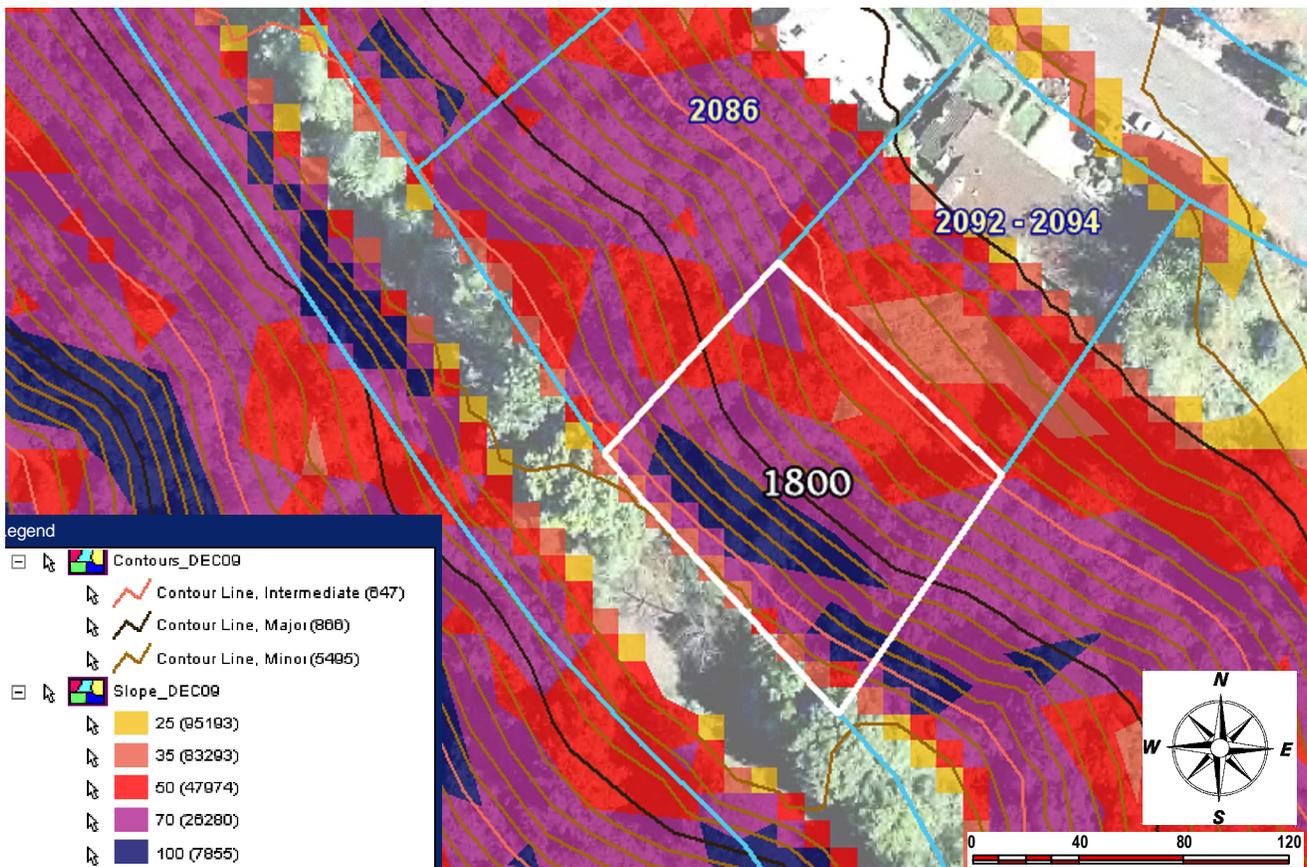
HILLSIDE DEVELOPMENT PERMIT FACTORS TO BE CONSIDERED FOR 1800 DONALD DRIVE RESIDENCE

Moraga Municipal Code Section 8.136.070 requires the reviewing body to consider the following factors for construction upon slopes steeper than 20%:

1. Slope

The slope of the property at the location of the proposed residential structure is about 65% based on the topography on the applicant's plans. The GIS slope map below shows the average slope to be about 70% in the area of the building site and 100% under the proposed driveway bridges.

Average Slope Map for 1800 Donald Drive



Some people confuse percent slope with the angle in degrees of the slope. A 100% slope is equivalent to a 45-degree angle and a 65% slope would be equivalent to a 33-degree angle. The Town has approved some development on steep slopes, including the office building at 329 Rheem Boulevard, which is now the Police Department and Town Office. The slope behind the Town Office varied between 50% to 70% and the entire lower floor and a portion of the second floor have retaining walls into the hillside. The steep slope on the 1800 Donald Drive property is an existing condition, although the slope was probably increased when

Donald Drive was built. The proposed residential project would not change the existing slope or make the slope any steeper. No fill is proposed on the slope and the excavations for the foundation have been limited to a depth of 3-feet.

2. Soil Instability

The soil characteristics and potential landslide conditions on the subject property were discussed under Section VI of the IS on pages 17 through 20. The project geotechnical engineer, Friar Associates, Inc. (FAI) report dated August 8, 2005 stated that no landslides were indicated on available regional maps in the vicinity of the project site. The report also stated that it was unlikely that the cuts made into the bedrock for construction of Donald Drive would result in bedding dipping out of slope based upon the orientation of the underlying geologic units at the project site. FAI prepared a geotechnical investigation update on June 21, 2011, which is attached as **EXHIBITS H-(1)**. The update report indicates that the undocumented fill and colluviums that overlay the weathered bedrock is subject to downslope creep and would impact the proposed building foundation elements.

The Town's geotechnical peer review consultant, Cal Engineering and Geology (CE&G), completed their review of the update report on August 22, 2011. The peer review letter is included as **EXHIBIT H-(2)**. The recommendations from CE&G are listed on pages 2 and 3 in their peer review letter. The following is a summary of CE&G's comments on the FAI report and on the plans submitted for the project:

1. Sheet A4.0 shows the foundation benched into the hillside as a series of short basement type retaining walls. It is recommended that FAI provide the appropriate geotechnical design parameters for these foundation retaining walls.
2. The slope stability analyses previously prepared should be updated to address the revised recommendations contained in Special Publication 117 (2008). The analyses may also need to be revised to account for the soil which was to be removed, but which will now be left in place.
3. The previous FAI report recommended removal of surficial soils while the updated report indicates that little or no grading will occur and therefore recommends modeling creep forces on the piers to account for the colluviums and fill to remain. Since both the colluviums and existing fill are potentially unstable, we recommend that consideration be given to applying passive pressure only in the underlying weathered bedrock materials.
4. The FAI report recommends directing drainage to an appropriate location. This recommendation should be clarified to indicate where the water will be discharged.
5. The surficial soils encountered in the 2005 FAI borings reported plasticity indices of 14 to 20 percent, which are generally indicative of expansive soils. The FAI update report does not include recommendations for uplift pressures from expansive soils.
6. The plans do not show the building supported on a pier and grade beam foundation in accordance with the recommendations contained in the June 21, 2011 FAI report.
7. Several trees seem to be missing from the plans including an oak tree within the proposed driveway bridge alignment, which was shown as a 16-inch oak on the 2005 development plans.

8. The preliminary plans do not show enough detail to reflect the recommendations of the geotechnical report or address items in the environmental initial study.

Although the existing site has no landslide features, the stepped foundation for the proposed home could induce instability in the surficial soils above the weathered bedrock if it is not anchored into the bedrock by piers. Another problem with development on steep hillsides is the placement of excess soil in a temporary stock pile before it is taken off site. There is really no place on this site that would be safe for a temporary stock pile of soil. During the excavations necessary for the foundation and drilling of any piers into the underlying bedrock, excess soil could easily slide down the steep slope and have an adverse impact on the trees and native vegetation below the proposed building site. Condition #19 requires a grading excavation plan. The project civil engineer and geotechnical engineer should consider the logistical problems for excavation of the foundation without causing significant damage to the areas beyond the footprint of the proposed home.

3. Drainage

Drainage issues were discussed under Section VIII of the IS on pages 23 through 28, pertaining to hydrology and water quality. The proposed drainage with a perforated pipe dissipation system would conform to the new drainage requirements from the Regional Water Quality Control Board, which require treatment of storm water by infiltration into the soil. However, the type of soil on the property may not be suited to good absorption of water and the project geotechnical engineer does not recommend saturation of the slope by drainage. Mitigation Measure MM 2 under Section VIII requires storm water discharges from roofs and paved areas to comply with the Best Management Practices (BMPs) required under the Town's NPEDS Permit. All roof drains and surface drains for new impervious surfaces must be routed through a biofilter, sand filter, or planted vegetated swale for ten or more feet prior to entering any storm drainage pipe or tight line drainage system. Although infiltration of storm water is preferred for water quality, the storm drain system will require review by the project geotechnical engineer to confirm that the area for infiltration will not induce soil instability on the site. On other sites in Town where the geotechnical engineer recommends against infiltration and saturation of the soil, a plastic liner has been used below the infiltration area to prevent saturation of the soil below. There can be no increase in storm runoff onto the lower property at 2092-2094 Donald Drive. After storm water is treated by one of the BMPs, it should be piped through the drainage easement across the lower property at 2092-2094 Donald Drive. There are a total of 13 mitigation measures dealing with hydrology and water quality, which will become conditions of project approval.

4. Soil Characteristics

The borings on site indicate that there are three distinctly different materials on the site, undocumented fill, native soil (colluviums) and weathered bedrock. The undocumented fill was probably placed on the site when Donald Drive was graded into the hillside above the site. As noted above, recommendation number 3 from the Town's geotechnical peer review consultant stated that consideration should be given to applying passive pressure only in the underlying weathered bedrock materials because both the colluviums and undocumented fill are potentially unstable. FAI and CE&G both recommend that a piers be used to anchor the foundation into the bedrock. FAI reported plasticity indices of 14 to 20 percent in the surficial soils encountered in their 2005 borings on site. CE&G recommends that FAI should include recommendations for uplift pressures from these expansive surficial soils.

5. Seismic Factors

The project site is not within a State of California Earthquake Fault Hazard Zone (Alquist-Priolo Earthquake Fault Zones). The project site is located 23.6 miles from the San Andreas Fault, 4.8 miles from the Hayward Fault, 5.2 miles from the Calaveras Fault and 8.7 miles from the Concord-Green Valley Fault. The United States Geological Survey has estimated that the northern section of the Hayward fault has a 28 percent probability of generating an earthquake of magnitude 7.1 (Richter), with a maximum ground acceleration of 0.39g within the next 30 years. Strong seismic ground shaking can be expected during the projected lifespan of the proposed two-unit residence. Mitigation measures have been recommended in Section VI of the IS and will become conditions of approval for the project.

6. Existing and Future Residential Development

The only future residential development that might occur on the surrounding properties would be additions to the existing duplex structures on the lower section of Donald Drive. There would be no new residential development of the Hacienda de las Flores Park or the Mulholland Open Space Preserve on the southeast and southwest sides of the property.

7. View Shed

The proposed location of the new duplex residential unit is lower down the slope than the previous application filed in 2006. The two driveways forming a semi-circular loop allow the garage deck above the unit to be lower. The residence has been designed to minimize the impact to the view shed by using natural redwood siding that will be milled with the redwood bark left on the planks. The photomontage below shows the visual impact of the proposed residence as seen from the lower section of Donald Drive.



The structure has been designed so that variances are not required for the front building setback or for the height of the building as was previously the case with the 2006 plans. The curved roof over the garages will follow the slope of the hillside.

8. Noise

The noise impacts that could be expected from the proposed project were discussed under Section XI in the IS on pages 33 to 36. There are six mitigation measures recommended, which would become conditions if the project is approved. Most of the significant noise would be a temporary condition during the excavation for the foundation and construction of the residence. The completed project is not expected to generate a significant amount of noise.

9. Potential traffic congestion

The vehicular traffic generated by the project would have no significant impact on total traffic congestion in the area. The primary traffic congestion occurs in the morning on the lower part of Donald Drive and Laird Drive due to parents dropping their children off at the Donald Rheem Elementary School. The upper portion of Donald Drive is the primary access to the Mulholland Open Space Preserve. There is no public parking lot or staging area at the end of Donald Drive where the access gate is located to the Open Space Preserve. Donald Drive does not have sidewalks because there are steep slopes on both sides of the street. Many visitors to the preserve walk up the road. No significant traffic impacts were identified under Section XV (transportation and traffic) of the IS. Unlike the 2006 application, the proposed plans comply with the required off-street parking requirements and the semi-circular driveway bridges will provide some additional off-street parking for guests, thereby reducing the potential for parking on Donald Drive. Condition #10 requires a parking and construction traffic staging plan.

10. Fire risk

The applicant is trying to cut the minimum number of trees necessary for the construction of the building and driveway bridges. The Moraga-Orinda Fire District (MOFD) may require trees within 15-feet of the building to be removed to comply with defensible space guidelines. The new residence will require an internal fire suppression sprinkler system. The proposed exterior of the building will have milled redwood planks with the bark left on the planks. Redwood bark is actually quite fire resistant, but the MOFD may have concerns with wood siding on this forested hillside.

11. Wildlife

The development of the proposed new residence would not have a significant effect on any known habitat for species identified as a candidate, sensitive, or special status species. The site does not contain any riparian habitat area that could contain red-legged frogs and the northeast facing slope of the hillside is not good habitat for the Alameda Whip Snake, which must have south and west facing slopes with rock outcroppings and few trees for maximum sun exposure. Mitigation Measure MM 1 in Section VI of the IS requires the applicant to prepare a site biotic survey to address whether or not there are any white-tailed kites nesting on the property and to determine if the project site includes any significant wildlife corridors.

12. Dust

Mitigation measures for dust control are included in Section III (Air Quality) in the IS pages 10 to 12. Dust emissions will depend upon the type of construction activity and the

weather conditions. During construction and grading for the project and the drilling of the foundation pier holes, some dust could be generated. Wetting down the surface of the area where the pier holes will be drilled and where other excavations are made should help to reduce dust. Air Quality MM-1 will be included as a condition of approval to mitigate dust from the construction of the project. The completed project would not generate any significant amount of dust.

13. Glare

The project site is on a northeast facing hillside. There could be some glare from windows early in the morning as the sun rises in the east. There should be no glare from window reflections between 10:00 am and sunset, because the sun angle will be behind the ridge at the back of the home. Aesthetics MM-3 on page 9 of the IS would address any potential glare issues. The double glazed energy efficient windows that are proposed on the building are also low in reflectance.

14. Impact on Existing Vegetation

The project plans call for seven native trees to be removed for the construction of the new residence. Two mitigation measures have been recommended in the IS to address the removal of the trees. An arborists report is required under Aesthetics MM-1 and Biological Resources MM-3 on page 7 of the IS. Aesthetics MM-2 on page 8 of the IS requires the planting of additional trees between the new building and the existing duplex at 2092-2094 Donald Drive to help mitigate the loss of the native trees and improve the privacy between the two residential structures.

EXHIBIT H

GEOTECHNICAL REPORTS AND PEER REVIEW REPORTS

- (1) GEOTECHNICAL INVESTIGATION BY
FRIAR ASSOCIATES, INC. (FAI)
DATED JUNE 21, 2011**

- (2) CAL ENGINEERING AND GEOLOGY
PEER REVIEW LETTER DATED
AUGUST 22, 2011**

Friar Associates, Incorporated . Engineers . Consultants
Soils . Foundations . Geology . Geotechnology

2656 Nicholson Street, San Leandro, CA 94577

Tel: (510) 351-3930 Fax: (510) 351-1020

June 21, 2011

Project 1412

Mr. Stephen R. Williams

DIABLO VIEW REALTORS/CRH GROUP

2641 Pleasant Hill Road

Pleasant Hill, CA 94523

RECEIVED

JUN 22 2011

Gentlemen:

Report Update
Geotechnical Investigation
Proposed Residential Development
1800 Donald Drive
Moraga, California

MORAGA PLANNING DEPT.

Introduction

As requested, we are pleased to submit this update for the geotechnical investigation conducted at the site for the proposed residential development. The site is located on the east side of Donald Drive, a short distance south of the intersection of Donald Drive with Laird Drive in Moraga, California. The near-rectangularly shaped parcel is currently undeveloped.

Planned Construction

The site is to be developed into a single family residence. The planned develop includes the construction of a single family residential building with other improvements including a driveway from Donald Drive. Based on conversation with the project architect, site grading will be minimal. We understand that no retaining walls are anticipated either as part of the proposed building or as part of site grading. We also understand that there will be little or no site grading to warrant the issue of a grading permit.

Background

We performed a site investigation for a proposed building and submitted a report dated January 25, 2005. Subsequent letters were also submitted to address concerns and issues raised by the geotechnical consultants for the town of Moraga. During the site investigation undocumented fill was encountered. The report and subsequent letters identified the depth and limits of the fill. Recommendations were provided to minimize the detrimental effect the fill could have on the planned development. A slope stability analysis was done under pseudo-static conditions on the site slopes and copies of the results were also submitted to the town at th town's request.

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Site Reconnaissance

As part of this report update, we made a site reconnaissance visit on Tuesday, June 21, 2011, to compare the current conditions at the site to the conditions at the time of our original site investigation. We did not observe any sign of recent grading on the site during our site visit. Except for uncut weeds and brush, site conditions appear to be identical to those at the time of our original site investigation.

Seismic Considerations

This site is located within the seismically active San Francisco Bay region but outside any of the Alquist-Priolo Earthquake Fault Zones.

Type A and Type B faults close to the site are listed in the following table.

TABLE 1 - TYPES A AND B FAULTS CLOSE TO THE SITE *				
Fault	Type	Maximum Moment Magnitude	Slip Rate (mm/yr)	Distance (miles/km)
San Andreas (1906 Segment)	A	7.9	24	23.7/
Hayward (Total Length)	A	7.1	9	7.8/4.8
Calaveras (North of Calaveras Reservoir)	A	6.8	6	8.3/5.2
Concord-Green Valley	B	6.9	6	

* California Division Of Mines & Geology Open File Report 96-08

Seismic hazards can be divided into two general categories, hazards due to ground rupture and hazards due to ground shaking. Since no active faults are known to cross this property, the risk of earthquake-induced ground rupture occurring across the project site appears to be remote.

Should a major earthquake with an epicentral location close to the site occur, ground shaking at site will undoubtedly be severe, as will be for other properties in the general vicinity of the site. Even under the influence of severe ground shaking, the soils that underlie the area proposed for the development are unlikely to liquefy.

The following general site seismic parameters may be used for design in accordance with the 2010 California Building Code.

The following general site seismic parameters may be used for design in accordance with the 2010 California Building Code:

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Site Class: D
Site Coordinates Latitude = 37.85 degrees Longitude = -122.13 degrees
Fa = 1.0; Fv = 1.5

Spectral Response Accelerations SMs and SM1
SMs = FaSs and SM1 = FvS1; For Site Class D with Fa = 1.0, and Fv = 1.5

Period Sa
(sec) (g)
0.2 1.500 (SMs, Site Class D)
1.0 0.900 (SM1, Site Class D)

SDs = 2/3 x SMs and SD1 = 2/3 x SM1; For Site Class D with Fa = 1.0, and Fv = 1.5

Period Sa
(sec) (g)
0.2 1.000 (SDs, Site Class D)
1.0 0.600 (SD1, Site Class D)

Discussion

The pertinent items that will impact the proposed development are: the presence of undocumented fill at the site, site topography and site drainage. As noted in the original geotechnical investigation report, colluvium was encountered below the fill. The colluvium is underlain by weathered bedrock. We should note that both the fill and the colluvium may be subject to downslope creep and would impact proposed building foundation elements. Therefore, the design for the proposed building foundations should recognize the potential for creep loads on foundation elements. This is particularly pertinent since minimal or no grading is anticipated at the proposed building site. Recommendations are provided in a section below.

As with all hillside development, the lack of adequate drainage to collect both surface and subsurface water to suitable collection and discharge facilities can adversely affect slope stability in general. Therefore, proper and adequate drainage (surface and subsurface) system should be incorporated into the planned residential development. Runoff collected from roof drains and area drains as well as discharge from subdrains should not be released on portions of the slope that could be the cause of instability or erosion. Appropriate discharge locations should be provided during site grading. As a precaution, we recommend that site grading be minimized only to areas where necessary.

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Recommendations

We understand that not much grading is going to be done during site development. However, any grading that will be done at the site should be done as recommended under "Site Preparation, Grading and Compaction".

Building Foundations

We recommend that the proposed structure be supported on reinforced concrete "pier and beam" foundations with the piers deriving their vertical support from "skin friction" or adhesion between the shaft of the pier and the surrounding competent soil/bedrock material. The piers should be a minimum of 16 inches in diameter and should penetrate at least six feet into the bedrock material. It is important that the building loads be transferred to piers that do not rely on the fill for load carrying capacity.

Piers should be spaced at least three diameters apart (center to center) but no more than 10 feet apart. The allowable load-carrying capacity (dead plus normal live loads) of each pier may be calculated assuming "skin friction" or adhesion of 500 psf between the shaft of the pier and the adjacent competent material, but ignoring the upper two feet of embedment of the pier below the lowest adjacent grade. No adhesion should be assumed in any fill. The piers should be designed by the project structural engineer based on soil parameters given above but actual depths should be determined in the field based on soil conditions during foundation construction.

Reinforced concrete piers should be designed to resist lateral loads resulting from potential creep of the near-surficial layer of colluvium and or loose fill in areas where the ground surface gradient is 5horizontal:1vertical or steeper. A lateral soil pressure of at least 65 pounds per cubic foot may be assumed to act on the top five feet over 2 ½ diameters of the piers. The allowable lateral bearing pressure of the ground in front of the piers may be taken as 350 pounds per square foot per foot of depth below five feet to a maximum value of 3500 psf in the weathered bedrock. The lateral resisting pressure may be taken over 1 ½ pier diameters.

The allowable foundation pressures given previously may be increased by one-third when considering additional short-term wind or seismic loading.

Concrete Slabs-On-Grade

Concrete floor slabs should be constructed on compacted soil subgrade. To minimize floor dampness, a section of capillary break material at least five inches thick and covered with a membrane vapor barrier should be placed between the floor slab and the compacted soil subgrade. The capillary break should be a free-draining material, such as 3/8" pea gravel or a permeable aggregate complying with CALTRANS Standard Specifications, Section 68, Class 1,

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Type A or Type B. The material proposed for use as a capillary break should be tested in our laboratory to verify its effectiveness as a capillary break. The membrane vapor barrier should be a high quality membrane. A protective cushion of sand or capillary break material at least two inches thick should be placed between the membrane vapor barrier and the floor slab.

If floor dampness is not objectionable, concrete slabs may be constructed directly on a minimum six-inch thick compacted aggregate base over the water-conditioned and compacted soil subgrade. The aggregate base material should be compacted to at least 93 percent relative compaction (ASTM D1557-09).

Utility Trenches

The attention of contractors, particularly the underground contractor, should be drawn to the requirements of California Code of Regulations, Title 8, Construction Code Section 1540 regarding Safety Orders for "Excavations, Trenches, Earthwork".

For purposes of this section of the report, bedding is defined as material placed in a trench up to one foot above any utility pipe and backfill is all material placed in the trench above the bedding.

Unless concrete bedding is required around utility pipes, free-draining sand should be used as bedding. Sand proposed for use in bedding should be tested in our laboratory to verify its suitability and to measure its compaction characteristics. Sand bedding should be compacted by mechanical means to achieve at least 90 percent compaction density based on ASTM Tests D1557-09.

Approved, on-site, inorganic soil, or imported material may be used as utility trench backfill. Proper compaction of trench backfill will be necessary under and adjacent to structural fill, building foundations, concrete slabs and vehicle pavements. In these areas, backfill should be conditioned with water (or allowed to dry) to produce a soil-water content of about two percent above the optimum value and placed in horizontal layers not exceeding six inches in thickness (before compaction). Each layer should be compacted to 85-90 percent relative compaction based on ASTM Test D1557-09. The upper twelve inches of pavement subgrades should be compacted to about 90 percent relative compaction based on ASTM Test D1557-09.

Where any trench crosses the perimeter foundation line of any building, the trench should be completely plugged and sealed with compacted clay soil for a horizontal distance of at least two feet on either side of the foundation.

Surface Drainage

Surface drainage gradients should be planned to prevent ponding and to promote drainage of

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surface water away from top of slopes, building foundations, slabs, edges of pavements and sidewalks, and towards suitable collection and discharge facilities. The proposed building should be provided with downspouts that should be connected to non-perforated pipes. The non-perforated pipes should discharge to suitable drainage facilities located away from the proposed building site.

To minimize the potential for erosion of surface soils that could be caused by surface water runoff, provisions should be made to collect and control surface runoff. Paved ditches with catch basins are recommended on the backfill side of all retaining walls. Water collected in these catch basins should be conveyed by pipes to suitable discharge points downslope and away from critical areas of the project site.

Water seepage or the spread of extensive root systems into the soil subgrades of foundations, slabs, or pavements, could cause differential movements and consequent distress in these structural elements. This potential risk should be given due consideration in the design and construction of landscaping.

E recommend that the energy dissipater to be located downslope of the proposed building should be located into the weathered bedrock material to minimize future slope instability or soil erosion.

Subsurface Drainage

Subsurface drainage systems will be required if saturated soils or subsurface water is encountered during site excavations for foundation construction. Should this condition arise, we will provide recommendations for the provisions of subsurface drainage system at the site.

Follow-up Geotechnical Services

Our recommendations are based on the assumption that FRIAR ASSOCIATES, INCORPORATED will be commissioned to perform the following services.

1. Review final drainage and foundation plans prior to construction.
2. Observe, test and advise during site preparations and excavations.
3. Test proposed capillary break material that will be used beneath concrete slabs-on-grade and advise on suitability.
4. Observe and advise during foundation construction.

January 25, 2005
Project 1412

5. Observe, test and advise during utility trench backfilling.

Limitations

The recommendations contained in this report are based on certain plans, information and data that have been provided to us. Any change in those plans, information and data will render our recommendations invalid unless we are commissioned to review the change and to make any necessary modifications and/or additions to our recommendations.

Subsurface exploration of any site is necessarily confined to selected locations. Conditions may, and often do, vary between and around such locations. Should conditions different from those encountered in our explorations come to light during project development, additional exploration, testing and analysis may be necessary; changes in project design and construction may also be necessary.

Our recommendations have been made in accordance with the principles and practices generally employed by the geotechnical engineering profession. This is in lieu of all other warranties, express or implied.

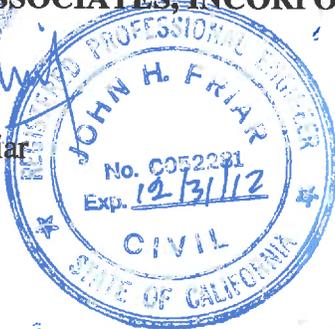
Should conditions different from those assumed in this report come to light during project development, additional exploration, testing and analysis may be necessary; changes in project design and construction may also be necessary.

All earthwork and associated construction should be observed by our field representative, and tested where necessary, to compare the generalized site conditions assumed in this report with those found at the site at the time of construction, and to verify that construction complies with the intent of our recommendations.

Sincerely,

FRIAR ASSOCIATES, INCORPORATED


John H. Friar
CE 52281





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California 94596

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22 August 2011

Town of Moraga
Planning Department
329 Rheem Boulevard
Moraga, California 94556
Attention: Richard Chamberlain

RE: Proposed New Residence
1800 Donald Drive
Moraga, California

Dear Mr. Chamberlain:

At your request, we have completed our geologic and geotechnical peer review of the geotechnical report and the development plans for the proposed new residence to be constructed at 1800 Donald Drive in Moraga, California. The following documents were reviewed:

- A report by Friar Associates Incorporated (FAI) titled, *Report Update, Geotechnical Investigation, Proposed Residential Development, 1800 Donald Drive Moraga, California*, dated June 21, 2011.
- Plans by James Phillip Wright Architect, Sheets A1.0, A2.0, A2.1, A2.2, A3.0, A3.1, A4.0, and A4.1 dated 7 February 2011 titled "New Residence, 1800 Donald Drive, Moraga, CA." and stamped "not for construction."

Our review of the geotechnical report and the provided plans for the proposed residence has included examination of the above referenced materials for pertinent information regarding the technical feasibility of the project. We have also performed reconnaissance level observations of the project site and reviewed information in our files which included a prior geotechnical report for the property by FAI.

PROPOSED PROJECTS

We understand that it is currently proposed to develop the property with a new single family residence. The new residence will be accessed by a circular bridge which extends off of Donald Drive. The proposed development includes a new residence which steps down the slope. The residence has three levels with the top floor containing two garages and living space located in the lower levels. The proposed construction is intended to result in less than 50 cubic yards of grading such that a grading permit will not be required.

REVIEW OF GEOTECHNICAL REPORT AND DEVELOPMENT PLANS

Based upon our review of the development plans and updated FAI update geotechnical report, we have the following comments:

FAI UPDATE REPORT

1. The FAI updated report indicates that no retaining walls are proposed. However, the sections contained on Sheet A4.0 of the plans show the foundation benched into the hillside. As a result, the foundation looks to be a series of short basement type retaining walls which roughly follow the existing ground surface. Consideration should be given to treating these as restrained retaining walls and applying the driving force to the pier and grade beam foundation. It is recommended that FAI provide the appropriate geotechnical design parameters for these foundation retaining walls.
2. The slope stability analyses previously prepared should be updated to address the revised recommendations contained in Special Publication 117 (2008). The analyses may also need to be revised to account for the soil which was to be removed, but which will now be left in place.
3. The previous FAI report recommended removal of surficial soils while the updated report indicates that little to no grading will occur and therefore recommends modeling creep forces on the piers to account for the colluvium and fill to remain. The recommended creep forces extends to a depth of 5 feet and an allowable passive pressure of 350 psf below that depth to a maximum of 3500 psf in the weathered bedrock. Since both the colluvium and the existing fill are potentially unstable, we recommend that consideration be given to applying passive pressure only in the underlying weathered bedrock materials.
4. The FAI report recommends directing drainage to an appropriate location. This recommendation should be clarified to indicate the where the water will be discharged.
5. The surficial soils encountered in the 2005 FAI borings reported plasticity indices of 15 to 20 percent which are generally indicative of expansive soils. The FAI update report does not include recommendations for uplift pressures from expansive soils.

“NOT FOR CONSTRUCTION” ARCHITECTURAL PLANS

6. The plans do not reflect the recommendations contained in the 21 June 2011 report. Specifically, the plans do not show the building to be supported on a pier and grade beam foundation.
7. Based on our site visit, several trees seem to be missing from the plans including an oak tree which appears to be located within the proposed driveway bridge alignment and which was shown on the 2005 development plans as a 16 inch oak.
8. The plans are preliminary and do not show enough detail to reflect the recommendations of the geotechnical report nor to address the items in the original environmental initial study.

CLOSURE

This review has been performed by request of the Town of Moraga. Our role has been to provide technical advice to assist the Town in its discretionary permit decisions, and we are afforded the same protection under state law. Our services have been limited to the review of the documents listed above, and a visual review of the property. We have no control over the future construction on this property and make no representations regarding its future conditions.

We have employed accepted geotechnical engineering procedures, and our professional opinions and conclusions are made in accordance with generally accepted geotechnical engineering principles and practices. This standard is in lieu of all other warranties, either expressed or implied.

Yours truly,

CAL ENGINEERING & GEOLOGY, INC.


Mitchell Wolfe, P.G., C.E.G.
Principal Geologist


Mark W. Myers, P.E., G.E.
Senior Engineer



EXHIBIT I

**DRAFT RESOLUTION FOR
APPROVAL OF A MITIGATED
NEGATIVE DECLARATION**

BEFORE THE TOWN OF MORAGA PLANNING COMMISSION

In the Matter of:

Adopting a Mitigated Negative Declaration for a new 5,132 square foot duplex residential structure including a 3-car roof top garage at 1800 Donald Drive. (APN 255-183-011)

Resolution No. xx-2011 PC

File No. DRB 04-11

Planning Commission Adoption Date: November 7, 2011

Effective Date: November 17, 2011

WHEREAS, an application was submitted on March 31, 2011 by James P. Wright (Applicant) and Stephen R. Williams (Owner) for Design Review Board approval to construct a 3001 square foot residence, with a 511 square foot garage and 717 square foot shell space, and an attached 553 square foot second unit, with a 351 square foot garage, on a vacant 13,203 square foot property on the northeast side of Donald Drive approximately 1,000 feet southeast of the intersection with Laird Drive; and

WHEREAS, on April 27, 2011 staff informed the applicant that the project was not exempt from CEQA (California Environmental Quality Act) and would require an initial environmental study; and

WHEREAS, on June 17, 2011 the applicant submitted the environmental information form with the deposit for preparation of the Initial Study; and

WHEREAS, a draft Initial Study (IS) was completed for the project on September 15, 2011; and

WHEREAS, the IS found that although the proposed project could have a significant effect on the environment, the proposed mitigation measures would reduce the impacts to a less than significant impact; and

WHEREAS, on September 22, 2011 the planning staff met with the applicant and property owner to review the proposed mitigation measures from the IS and the applicant and owner agreed to implementation of the mitigation measures; and

WHEREAS, a draft Mitigated Negative Declaration was prepared for the project listing all the mitigation measures from the Initial Study on October 5, 2011; and

WHEREAS, on October 18, 2011 a notice of intent to adopt a mitigated negative declaration for the project was filed with the county recorder 20 days prior to the

scheduled public hearing date pursuant to Section 15072 of the CEQA Statutes and Guidelines; and

WHEREAS, a public hearing notice was mailed to all property owners within 300-feet of the project site on October 18, 2011 for the Planning Commission hearing on November 7, 2011 to consider the adoption of the mitigated negative declaration; and

WHEREAS, on November 7, 2011 the Planning Commission held a public hearing and heard testimony on the draft IS and proposed adoption of a Mitigated Negative Declaration.

NOW, THEREFORE, BE IT RESOLVED that the Planning Commission of the Town of Moraga hereby adopts the Mitigated Negative Declaration for the proposed development of the new duplex residential structure at 1800 Donald Drive with the findings listed in Part I, below, and the mitigation measures listed in Part II of this resolution:

PART I – FINDINGS THAT SUPPORT A MITIGATED NEGATIVE DECLARATION

The Planning Commission has determined that the proposed project will not have a significant effect on the environment because revisions to the project design have been made or agreed to by the project proponent to mitigate all identified impacts to a less than significant level. The following findings support a Negative Declaration:

1. The project site does not include any significant agricultural, biotic or mineral resources that would be permanently lost as a result of the proposed project. The native trees that will be removed for the project will be replaced at a minimum 1:1 replacement ratio with 15-gallon or specimen size California native trees in accordance with Mitigation Measures Aesthetics MM 1 and Biological Resources MM 3. Mitigation Measures under Biological Resources MM 1 and MM 2 will further reduce any impacts to less than significant.
2. General Plan goal LU1.8 restricting new residential structures on slopes 25% or steeper does not apply to lots that were legally created after March 1, 1951. General Plan goal PS4.10 has been addressed by the applicant by minimizing the amount of cut and fill to less than 50 cubic yards and reducing the depth of cuts to less than 3-feet deep for the foundation to avoid the requirement for a grading permit under MMC Title 14 (Grading Ordinance). The application has complied with Paragraphs PS4.1 and PS4.2 of the Public Safety Element of the Moraga 2002 General Plan, with submittal and review of appropriate geotechnical investigation to determine if there were any geologically hazardous areas or potential impacts from known landslide areas to the proposed project site. Further geotechnical issues will be considered with a Hillside Development Permit by the Planning Commission in accordance with Mitigation Measures Geology and Soils MM 1 through MM 5.

3. The proposed project is consistent with the land use designation for the property and complies with the required building setbacks and off-street parking requirements.
4. The possibility that Native American artifacts or burial grounds could be found on the property during grading operations would be reduced to a less than significant impact by implementation of the Mitigation Measure listed under Cultural Resources MM 1.
5. The proposed residence and attached second unit will not have any substantial adverse effects on human beings, either directly or indirectly because the following Mitigation Measures will reduce any adverse effects of the project to a less than significant level: Air Quality MM 1, Hazards and Hazardous Materials MM 1 through MM 4, and Hydrology and Water Quality MM 1 through MM 13.
6. The cumulative impacts of the additional single family home and second living unit on Donald Drive are not significant since the density of the proposed development is within the existing development capacity projected in the General Plan and were therefore addressed in the EIR for the General Plan. The only cumulative impact identified in this Initial Study was the impact on landfill capacity, which has been adequately mitigated under Utilities and Service Systems MM 1 and MM 2.
7. Temporary environmental effects due to dust and noise from the grading and construction activities on the property have been addressed with appropriate Mitigation Measures under Air Quality MM 1 and Noise MM 1 through MM 6.

PART II – MITIGATION MEASURES FROM THE INITIAL STUDY FOR 1800 DONALD DRIVE

1. **AESTHETICS MM 1 / BIOLOGICAL RESOURCES MM 3-** Given that the proposed project will necessitate the removal of or may otherwise affect the health of existing trees at the site, which in turn may affect geotechnical conditions, site drainage, and screening of the project site from nearby rights-of-way, the applicant shall submit a certified arborist's report as part of the project design review, hillside development permit, and tree removal permit applications. The applicant shall incorporate the recommendations of the arborist's report into the project plans that will be reviewed by the Design Review Board. The arborist's report shall:
 - a. Accurately document the location, size, species, and health/stability of all existing native and general trees at the project site that are over 5-inches in diameter measured 3-feet above grade.
 - b. Shall include recommendations to prevent any adverse impact to those trees proposed to remain in post-project conditions.
 - c. Shall include recommendations for the safe removal for all trees proposed for removal, including all standing and fallen trees.

- d. Shall take into account the General Plan Policy OS2.9 Tree-covered areas, which gives preference to the retention of original growth over replanting and which requires that tree-covered areas shall be preserved or substantially maintained in their present form, especially with respect to their value as wildlife habitats, even if development is permitted.
 - e. Shall include recommendations for the maintenance of all trees in post-project conditions, including recommendations for soil amendments, irrigation schedules, and pruning for fire safety. The report shall take into account that, at minimum, all trees removed with a trunk diameter between 5 and 9 inches will be required to be replaced at a 1:1 replacement ratio with a 15-gallon size California native tree and all trees with a trunk diameter over 9-inches shall be replaced with a specimen size California native tree.
 - f. Shall include recommendations for trees to be planted that will provide screening of the residence.
- 2. AESTHETICS MM 2** – In order to help reduce the visual impact of the development on the hillside and improve the privacy between the new building and the existing duplex at 2092-2094 Donald Drive, additional tall growing trees shall be planted below the new structure. It is recommended to use a tall fast growing native evergreen tree, such as Sequoia sempervirens (Coast Redwood Tree). Eucalyptus and Monterey Pine Trees are not recommended.
- 3. AESTHETICS MM 3** – In order to reduce impacts from glare of any new lighting and from windows on the northeast side of the building the following measures shall be considered by the project architect and Design Review Board:
- a. Consider anti-glare glass or coatings on the northeast windows
 - b. Consider exterior lighting on the residence and within the landscaping areas that is low-wattage, shielded, and does not spill off-site.
- 4. AIR QUALITY MM 1** - In order to reduce potential dust impacts (PM₁₀ emissions) from the grading and pier drilling operations for the project, the following best management practices should be conducted during the construction phase of the project:
- a. Periodically water all active grading areas where the ground cover has been removed.
 - b. Periodically sweep with water sweepers all paved access roads to the construction site where dirt and dust have settled or where construction vehicles have tracked dirt onto the paving.
 - c. Apply non-toxic soil stabilizers to graded areas that have been inactive for ten days or more.
 - d. Cover or periodically water exposed stockpiles of dirt or soil.
 - e. Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.

- f. Replant vegetation in the disturbed areas as quickly as possible upon completion of the grading and construction.

5. **BIOLOGICAL RESOURCES MM 1** - Prior to the approval of the project, the applicant shall submit a site-specific biotic survey to determine the presence or absence of individuals and/or occupied or designate critical habitat of endangered, threatened, or rare wildlife or plant species. Prior to conducting these surveys a current listing of rare, threatened, and endangered species that may occur in the project area will be obtained. The site biotic survey shall specifically address whether or not there are any white-tailed kites nesting on the property as requested by Lynda Deschambault at the April 26, 2006 Town Council hearing. It should also be determined if the project site includes any significant wildlife corridors. Consultation with CDFG and USFWS will be necessary if any special status species or wildlife corridors are present in order to develop site-specific protection strategies for these species.
6. **BIOLOGICAL RESOURCES MM 2** - Prior to construction of the project, the applicant shall submit the results of a pre-construction survey for breeding and nesting raptors and other migratory or protected birds at the project site. Typically, the most sensitive times of year for breeding and nesting are between February 1 and August 31. The survey must be conducted within two weeks prior to ground breaking. The survey must also include areas that are adjacent to the site. If active nest sites are located, the applicant shall consult with CDFG to determine appropriate construction setbacks from the nest sites. No construction activities shall occur within the construction setback during the nesting season of the affected species. If active nests (with eggs or live young) of protected species are found, then the project will not be permitted to conduct any activity that might disturb or remove those active nests until the young birds are able to leave the nest and forage on their own. The project would be allowed to remove empty nests, but if eggs or young were present, the project will be required to leave the nests undisturbed until the young birds leave.
7. **CULTURAL RESOURCES MM 1** - The applicant is required to follow the procedures outlined in Government Code Section 15064.5. In the event that any cultural resources are uncovered during site preparation and construction activities, all activities shall be immediately suspended for a period to be determined by a historical, archeological, or paleontological resources specialist consultant for the Town of Moraga to allow for adequate inspection, recommendation, and retrieval of the resources, if appropriate. Appropriate historical, archeological, or paleontological resources mitigation measures shall be developed and implemented and disposition of the find shall be consistent with state and federal laws pertaining to archaeological resources. The discovery of human skeletal remains will necessitate the immediate suspension of all work in the vicinity of the remains until the County Coroner, the Planning Department, and the Native American Heritage Commission can be contacted to develop an appropriate mitigation plan. Upon determination by the County Coroner that the remains are Native American, the California Native American Heritage Commission shall be contacted to determine the "most likely

descendant" of the human skeletal remains. An individual designated by the Native American Heritage Commission shall recommend the most appropriate procedures to be followed in handling the remains.

8. **GEOLOGY & SOILS MM 1** - The project should be designed to meet the current California Building Code requirements at the time of building permit issuance.
9. **GEOLOGY & SOILS MM 2** - The project shall incorporate all the geotechnical recommendations in the June 21, 2011 geotechnical reports by Friar Associates, Inc., which include recommendations regarding building foundations, concrete slabs-on-grade, utility trenches, surface drainage, subsurface drainage, and the need for follow-up geotechnical services during construction. The project shall consider and incorporate as appropriate the geotechnical recommendations in the August 22, 2011 Geotechnical peer view report by Cal Engineering and Geology.
10. **GEOLOGY & SOILS MM 3** - The project shall be designed to maximize slope and soil stability and minimize the potential for erosion at the project site during construction and in post-project conditions. The applicant shall:
 - a. Municipal Code regarding Storm Water Management and Discharge Control. Submit a certified copy of the referenced property and topographic survey with the project building permit submittal.
 - b. Submit a Storm Water Pollution Prevention Plan (SWPPP) prior to release of plans to the County Building for permitting.
 - c. Have all project plans, including all grading and drainage plans, calculations, and stormwater related items signed and stamped by a Registered Civil Engineer.
 - d. Address the requirements of Chapter 13.04 of the Moraga
11. **GEOLOGY & SOILS MM 4** – The project should be designed to minimize the potential for erosion of surface soils that could be caused by surface water runoff. The project site would not have more than 10,000 square feet of impermeable surfaces and would not be subject to the Contra Costa Clean Water Program Stormwater C.3 Guidebook, third edition, effective October 2006 and the Hydromodification Management Plan (HMP), effective October 16, 2006 approved by the Regional Water Quality Control Board for Contra Costa County. However, the drainage on the site will need to comply with the Best Management Practices (BMPs) required under the Town's NPEDS Permit.
12. **GEOLOGY & SOILS MM 5** – The project shall incorporate FAI's recommendations on building foundations as required by **MM2** above. FAI shall provide recommendations for uplift pressures from expansive soils.

- 13. HAZARDS & HAZARDOUS MATERIALS MM 1** - All storm drains shall be marked with signs or stenciling to prohibit improper disposal of any hazardous materials such as cleaning solvents, pesticides and herbicides.
- 14. HAZARDS & HAZARDOUS MATERIALS MM 2** - A provision shall be included in all landscaping maintenance contracts for the project that pesticides shall be disposed of at approved hazardous waste collection facilities.
- 15. HAZARDS & HAZARDOUS MATERIALS MM 3 / PUBLIC SERVICES MM 1** – The project plans shall comply with the following requirements:
- a. The landscaping plan for the project shall be submitted to the Fire District for review and approval.
 - b. Vegetation shall be maintained in a fire safe manner, meaning that defensible space shall be provided around the structure. This defensible space shall employ the use of fire resistive plants and control of seasonal growth.
 - c. Addressing for the property shall be visible at all times and be visible from the main roadway serving the structure. Lettering and/or numbering is suggested to be no smaller than 4 inches in height.
 - d. A spark arrestor shall be installed on all fireplace chimneys.
 - e. Since the new home would be located on a densely wooded hillside area, the Fire District may require a fire suppression sprinkler system within the home. The plans for the home are subject to review and approval by the MOFD.
- 16. HAZARDS & HAZARDOUS MATERIALS MM 4 / PUBLIC SERVICES MM 2** – The project landscaping plans shall comply with the Town of Moraga Design Guidelines for fire safe landscaping.
- 17. HYDROLOGY & WATER QUALITY MM 1** - Project construction shall be done in accordance with all applicable provisions of the federal Clean Water Act, which protects the quality of surface waters through the National Pollution Discharge Elimination System (NPDES). Prior to issuance of a building permit, the applicant shall prepare a *Storm Water Pollution Prevention Plan* (SWPPP), subject to approval of the Town Engineer, to control erosion on the site during construction and until vegetative cover is restored to areas where the soil has been disturbed. The applicant shall provide evidence to the Town of the State Water Resources Control Board (SWRCB) approval of the SWPPP.
- 18. HYDROLOGY & WATER QUALITY MM 2** - Storm water discharges from roofs and paved areas will need to comply with the Best Management Practices (BMPs) required under the Town's NPDES Permit. All roof drains and surface drains for new impervious surfaces must be routed through a biofilter, sand filter, or planted vegetated swale for ten or more feet prior to entering any storm drainage pipe or tight line drainage system. Although infiltration of storm water is preferred for water quality, the storm drain system will require review by the project geotechnical engineer to confirm that the area

for infiltration will not induce soil instability on the site. The vegetated drainage swale may require a buried subdrain under the swale to avoid saturation of the slope. In addition, the storm water from the increased impervious surface area on the site shall not increase the run-off onto the property below at 2092 and 2094 Donald Drive. Water that is routed through a biofilter, sand filter or planted vegetated swale shall be conducted through a pipe in the drainage easement across the property at 2092 and 2094 Donald Drive to avoid any increase in surface drainage across the adjacent property.

- 19. HYDROLOGY & WATER QUALITY MM 3** - Prior to issuance of a building permit, the project applicant shall prepare a "source control program" to remove non-point source pollutants before they are picked up by storm water runoff. A registered Civil Engineer (or other licensed professional acceptable to the Town) shall prepare the source control program, subject to approval by the Town Engineer. The program shall include the following provisions:

 - a. A pavement maintenance program, which consists of regular surface cleaning for the new driveway and parking area.
 - b. Labeling all catch basins "No Dumping-Pollutes Our Creeks" to limit direct disposal of contaminants into the storm drains.
 - c. Strictly limiting the use of non-biodegradable fertilizers or pesticides in the landscape maintenance program.
- 20. HYDROLOGY & WATER QUALITY MM 4** - The site drainage shall be reviewed in accordance with the most recent "Start at the Source Design Guidelines" from BASMAA. This may include drainage to swales to allow for infiltration of runoff water and lessen the peak surge of the runoff.
- 21. HYDROLOGY & WATER QUALITY MM 5** - The project shall be connected to the Central Contra Costa Sanitary District (CCCSD) sewer system and shall comply with the requirements of the CCCSD for service.
- 22. HYDROLOGY & WATER QUALITY MM 6** – Drainage plans for all surface and subsurface drains shall be reviewed and approved by both the project geotechnical engineer and the Town Engineer. The discharge or outlet pipes from the drainage plan shall not result in substantial erosion or siltation on or off-site.
- 23. HYDROLOGY & WATER QUALITY MM 7** – An Erosion Control Plan shall be submitted as one of the selected Best Management Practices (BMPs) as outlined in Moraga's Storm Water Management Plan (SWMP). The Erosion Control Plan is subject to review and approval by the Town Engineer, prior to the issuance of a grading permit. The California Storm Water Best Management Practice Handbook and the ABAG Manual of Standards for Erosion and Sediment Control Measures will be used to evaluate the Erosion Control Plan.
- 24. HYDROLOGY & WATER QUALITY MM 8** – Grading operations shall occur between April 15 and October 15, in order to avoid seasonal rainfall. All

erosion control measures shall be installed and deemed operational by the project engineer, the Contra Costa County Grading Inspector and Town Engineer prior to October 1.

- 25. HYDROLOGY & WATER QUALITY MM 9** – The erosion control facilities shall be maintained until all improvements are completed and project landscaping or a heavy growth of grass is established on all exposed slopes. A minimum of 4,000 pounds per acre of straw mulch or alternative acceptable to the Town Engineer shall be placed on all slopes where grass is not firmly established each year before October 1.
- 26. HYDROLOGY & WATER QUALITY MM 10** – Erosion control facilities must be maintained after every storm and as needed in between storms, and replaced whenever necessary. Any sediment reaching detention basins or settlement ponds shall be periodically cleaned out to avoid spilling over into catch basins and storm drains.
- 27. HYDROLOGY & WATER QUALITY MM 11** – Any exposed slopes shall be landscaped or hydroseeded with a mixture of annual grasses, wild flowers and clover, no later than October 1, in anticipation of rain in the fall and winter seasons. This applies to rough graded slopes as well as areas where grading has been completed. The landscaped or hydroseeded areas shall be maintained to ensure adequate plant growth and rooting. If an area is disturbed after hydroseeding, then the area shall be revegetated, or protected from erosion by other approved methods.
- 28. HYDROLOGY & WATER QUALITY MM 12** – The project shall employ a drainage system that does not increase runoff rates relative to pre-project conditions. The drainage plans shall be designed in accordance with the Best Management Practices as required by the Town's NPDES permit.
- 29. HYDROLOGY & WATER QUALITY MM 13** – Downstream runoff shall be decreased from historic peak flows wherever possible. A detention basin should be considered to ensure that there is no increase in the historic peak flows in downstream channels or pipes during 10 and 100-year storm events. The detention basin could be subterranean if no above ground location is deemed feasible. The design should include storm hydrographs for the historic and developed flows for each storm frequency along with detention basin routing calculations. If a detention basin is not incorporated into the drainage system to reduce peak flows, then a report shall be prepared by a registered Civil Engineer (or other licensed professional acceptable to the Town Engineer) with the following information:
 - a. A statement of the reasons that a detention basin cannot be used on the site to reduce peak flows. The project geotechnical engineer shall provide confirmation, if a detention basin cannot be installed due to slope stability issues.

- b. A drainage study to evaluate the effects of increased peak flows on downstream facilities.

The report shall be subject to review by the Town Engineer and recommendations for necessary improvements to existing downstream storm drains to handle the increase in peak flow shall be incorporated into an off-site improvement plan.

- 30. **NOISE MM 1** - The applicant shall show all equipment that has the potential to create noise on the plans that will be reviewed by the Design Review Board. The equipment shall not produce noise in excess of 65 dBA as measured at all property lines.
- 31. **NOISE MM 2** - Construction and grading operations for the project shall take place only between the hours of 8:00 AM and 5:00 PM on weekdays. The Public Works Director may permit grading work during a weekend if the grading is deemed necessary by the project soil engineer due to a potentially hazardous and unforeseen condition that requires immediate attention.
- 32. **NOISE MM 3** - All construction equipment operated at the project site shall be equipped with manufacturer's standard noise control devices (i.e., mufflers, intake silencers, and/or engine enclosures). Newer equipment shall be used whenever possible.
- 33. **NOISE MM 4** - Grading equipment and trucks used for project construction shall utilize the best available noise control techniques to maintain noise levels within the Federal Government established noise control requirements shown in the table below:

RECOMMENDED NOISE LIMITS FOR CONSTRUCTION EQUIPMENT

Equipment Type	Leq at 50 Ft., dBA	Equipment Type	Leq at 50 Ft., dBA
Air Compressor	75	Loader	75
Backhoe	75	Pneumatic Tool	80
Concrete Mixer	75	Pump	75
Dozer	75	Scraper	80
Generator	75	Shovel	75
Grader	75	Truck	75
Jack Hammer	75		

- 34. **NOISE MM 5** - Noisy operations shall be avoided whenever possible. For example, concrete shall be mixed off site instead of on site, and the quietest construction equipment shall be selected for use on site.
- 35. **NOISE MM 6** - Stationary noise generating equipment, such as air compressors and concrete pumpers, shall be located as far away from the

public as possible. If they must be used near existing homes, they shall be adequately muffled, and enclosed within temporary sheds.

36. UTILITIES AND SERVICE SYSTEMS MM 1 – Efforts should be made to recycle household waste and reduce the amount of material taken to the landfill. Additionally, cuttings from pruning shrubs and mowing grass shall be mulched and used for compost whenever possible on site.

37. UTILITIES AND SERVICE SYSTEMS MM 2 – Construction and waste materials shall be recycled to the greatest extent possible. Any existing concrete or asphalt paving that will be removed for the project shall be recycled to comply with AB 939. This material is generally 100% recyclable.

PASSED AND ADOPTED by the Planning Commission of the Town of Moraga on November 7, 2011, the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

Russell Driver, Chair

Attest: _____
Shawna Brekke-Read, Planning Director
Secretary

EXHIBIT J

**DRAFT RESOLUTION FOR
APPROVAL OF A HILLSIDE
DEVELOPMENT PERMIT**

BEFORE THE TOWN OF MORAGA PLANNING COMMISSION

In the Matter of:

Approval of a hillside development permit for a)
new 5,132 square foot duplex residential)
structure including a 3-car roof top garage at)
1800 Donald Drive. (APN 255-183-011))

Resolution No. xx-2011 PC

File No. DRB 04-11

Planning Commission Adoption
Date: November 7, 2011

Effective Date: November 17, 2011

WHEREAS, an application was submitted on March 31, 2011 by James P. Wright (Applicant) and Stephen R. Williams (Owner) for Design Review Board approval to construct a 3001 square foot residence, with a 511 square foot garage and 717 square feet of “shell space”, and an attached 553 square foot second unit, with a 351 square foot garage, on a vacant 13,203 square foot property on the northeast side of Donald Drive approximately 1,000 feet southeast of the intersection with Laird Drive; and

WHEREAS, on April 27, 2011 staff requested the applicant to file an application for a hillside development permit, including submittal of a geotechnical report; and

WHEREAS, on June 22, 2011 the Town received the Geotechnical Investigation Report Update from Friar Associates, Inc. (FAI) and sent the update report to Cal Engineering and Geology (CE&G) for geotechnical peer review; and

WHEREAS, CE&G completed their peer review on August 22, 2011, which included 8 comments on the FAI update report; and

WHEREAS, a public hearing notice was mailed to all property owners within 300-feet of the project site on October 18, 2011 for the Planning Commission hearing on November 7, 2011 to consider the adoption of a mitigated negative declaration for the project and to consider a hillside development permit; and

WHEREAS, on November 7, 2011 the Planning Commission held a public hearing and heard testimony on the draft Initial Study (IS) and proposed Mitigated Negative Declaration; and

WHEREAS, after deliberation on the IS and discussion of the proposed mitigation measures for the project, the Planning Commission adopted the Mitigated Negative Declaration for the proposed development of the new duplex residential structure at 1800 Donald Drive; and

WHEREAS, following adoption of the Mitigated Negative Declaration, the Planning Commission opened the public hearing and heard testimony on the application for a hillside development permit.

NOW, THEREFORE, BE IT RESOLVED that the Planning Commission of the Town of Moraga hereby approves the hillside development permit for the proposed development of the new duplex residential structure at 1800 Donald Drive with the findings listed in Part I, below, and subject to the conditions of approval listed in Part II.

PART I – FINDINGS FOR APPROVAL OF HILLSIDE DEVELOPMENT PERMIT

The findings listed below were derived from MMC Sections 8.136.010-A and B, which define the intent and purpose of the Slope Density Ordinance. Planning Commission has determined that these findings support approval of the hillside development permit for the project at 1800 Donald Drive:

1. The project does not use flat land or padded lot grading. There will be no fill on the site and the excavated soil for the stepped foundation will be removed from the site. The project has been designed to have the minimum amount of grading necessary for construction of the building foundation.
2. The hillside will be retained in as near a natural state as is feasible because there will be no grading or padding of the hillside beyond the proposed footprint of the duplex residence, except as necessary to install a drainage retention basin for preservation of storm water quality.
3. The proposed project will maintain the suburban character and beauty of the town by preserving its open and natural topographic features because the project retains many of the trees in order to preserve the natural forested look of the hillside. The exterior walls of the structure will use milled planks from redwood trees with the bark left on the planks so that the building will blend with the trees on the site to help preserve the views both from and of the hill areas. The structure has been designed to have as low a profile as possible and does not exceed the maximum building height limits.
4. The construction of the duplex residential structure will minimize soil erosion and slides and potential residual damage to life or property associated with involuntary and seismic-induced earth movement because the design of the foundation will comply with the recommendations of the geotechnical engineers for piers to anchor the foundation into the weathered bedrock and prevent the downslope creep of the undocumented fill and colluviums that overlay the weathered bedrock. There are no mapped landslides on the property.
5. The project will control the scarring and cutting of hillsides because the existing steep slope on the site will not be altered except under the building, where the view of the cuts into the hillside will be blocked by the building. The only grading will be for the foundation under the building and for a drainage retention basin. The design of the retention basin shall be reviewed by the Town Engineer to minimize any scarring and cutting of the hillside below the home.

6. The subject property was subdivided in Contra Costa County prior to the incorporation of the Town of Moraga and the proposed development of this lot was designed to achieve most of the goals to preserve the hillside with limited impact to the natural hillside. The proposed duplex structure would cover only 22% of the project site.
7. The proposed project will have less impact on Donald Drive than previous applications for this property because the project complies with the off-street parking requirements and the double bridge driveway allow for forward egress from the site and additional guest parking on the site.

PART II – CONDITIONS OF APPROVAL FOR HILLSIDE DEVELOPMENT PERMIT

1. All mitigation measures listed in Part II of Resolution xx-2011 for adoption of the Mitigated Negative Declaration shall become conditions of project approval. No changes shall be made to conditions identified as mitigation measures without re-opening the hearing on the mitigated negative declaration. In accordance with Section 15074.1 of the California Environmental Quality Act, prior to approval of the project, the lead agency may substitute mitigation measures which the lead agency determines are equivalent or more effective provided they hold a public hearing on the matter and adopt written findings that the new mitigation measure is equivalent.
2. The project requires review and approval by the Design Review Board. The tree removal permit shall be considered by the Design Review Board during their review of the project. The Board shall review of the Arborist's Report required by "Aesthetics MM-1" and the recommendations of the Moraga-Orinda Fire District for defensible space prior to action on the tree removal permit.
3. The recommendations of the Town's geotechnical peer review consultant, Cal Engineering and Geology (CE&G), dated August 22, 2011 shall be addressed by the project geotechnical engineer as follows:
 - a. Sheet A4.0 shows the foundation benched into the hillside as a series of short basement type retaining walls. FAI shall provide the appropriate geotechnical design parameters for these foundation retaining walls.
 - b. The slope stability analyses previously prepared shall be updated to address the revised recommendations contained in Special Publication 117 (2008). The analyses may also need to be revised to account for the soil which was to be removed, but which will now be left in place.
 - c. The previous FAI report recommended removal of surficial soils while the updated report indicates that little or no grading will occur and therefore recommends modeling creep forces on the piers to account for the colluviums and fill to remain. Since both the colluviums and existing fill are potentially unstable, consideration shall be given to applying passive pressure only in the underlying weathered bedrock materials.

- d. The FAI report recommends directing drainage to an appropriate location. This recommendation should be clarified to indicate where the water will be discharged.
 - e. The surficial soils encountered in the 2005 FAI borings reported plasticity indices of 14 to 20 percent, which are generally indicative of expansive soils. The FAI update report does not include recommendations for uplift pressures from expansive soils.
 - f. The plans do not show the building supported on a pier and grade beam foundation in accordance with the recommendations contained in the June 21, 2011 FAI report.
 - g. Several trees seem to be missing from the plans including an oak tree within the proposed driveway bridge alignment, which was shown as a 16-inch oak on the 2005 development plans.
 - h. The preliminary plans do not show enough detail to reflect the recommendations of the geotechnical report or address items in the Initial Study.
4. Prior to issuance of a building permit for the project, the applicant shall pay the fees listed below:
- a. In accordance with the Lamorinda Fee and Finance Authority's (LFFA) Fee Adjustment schedule adopted January 1, 2011, the fee for a multiple-family dwelling unit is **\$3,723.00 per dwelling unit** (\$2,935 - Regional and \$788 - Local). Note: if this fee is not paid prior to January 1, 2012, the amount of the fee may be increased by the LFFA.
 - b. The Town's development impact fees include: General Government Fee, Public Safety Fee, Storm Drainage Fee, Local Traffic Impact Fee and Park Development Impact Fee. These fees were established under Moraga Municipal Code (MMC) Section 17.04.030. The effective date of the fees listed in the table below is July 28, 2010.

Land Use	General Gov't	Public Safety	Storm Drainage	Traffic Mitigation	Park Development	TOTAL
Multi-Family / Duplex	\$2,046	\$344	\$3,958	\$296	\$1,641	\$8,286.00

- c. The fee in lieu of parkland dedication in accordance with Moraga Municipal Code (MMC) Section 8.140.090 for each new multiple-family duplex is **\$10,200.00**. This fee is based on the fair market value of .005 acres per dwelling unit times \$850,000.00 per acre parkland value as determined by Town Council Resolution Number 14-2008 (\$8,500.00) plus 20% toward costs of off-site improvements.
- d. The applicant shall apply for and pay all appropriate fees for building permits, plan checks and inspections.

5. Any significant changes to the preliminary grading plans for the foundation, whereby the depth of cuts for the foundation exceed three feet or the total amount of excavated earth exceeds 50 cubic yards, not including the pier hole drilling, will require a grading permit in accordance with Chapter 14 of the Municipal Code (Grading Ordinance).
6. The applicant shall apply to the Town's Engineering Department for an encroachment permit for the two driveway approaches on Donald Drive.
7. The applicant shall provide the Town Engineer with a traffic control plan for any blockage of Donald Drive during the foundation excavation work and construction work. The traffic control plan shall include the number and type of vehicles to be parked along Donald Drive during the construction work and the estimated duration of the work.
8. Temporary slope stabilization below Donald Drive may be required at the direction of the Town Engineer if unsupported cuts into the slope for the building foundation excavations pose a threat to the integrity of the road and to prevent any subsidence of the road surface.
9. The applicant shall provide a staging plan for the excavation of the building foundations to show how the cuts can be made into the hillside from Donald Drive. If any construction vehicles must traverse the slope during construction of the project, the applicant shall provide a safety plan to show measures to be taken to prevent any vehicles or equipment from accidentally rolling down the steep slope.
10. Parking of tractor tread vehicles on Donald Drive is prohibited. If tractor tread vehicles are required, they shall be delivered to the property by trailer and kept on site during the grading and construction operations. The Applicant shall adopt a reasonable parking plan to be used by construction employees, including the use of an off-site staging area, subject to review and approval by the Planning Director prior to the issuance of the building permit.

PASSED AND ADOPTED by the Planning Commission of the Town of Moraga on November 7, 2011, the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

Russell Driver, Chair

Attest: _____
Shawna Brekke-Read, Planning Director
Secretary

DRAFT

EXHIBIT K

PROJECT PLANS