

DESIGN REVIEW BOARD MEETING AGENDA

MEETING DATE: MONDAY, April 11, 2011, at 7:00 pm

LOCATION: **Moraga Library Meeting Room, 1500 St. Mary's Road, Moraga, CA 94556**

NOTE: Applicants or their representatives are required to attend the meeting. An applicant's presentation should not exceed ten minutes. Agenda items, which the Board has not acted upon prior to 10:00 p.m. may be continued to the next open agenda, unless the Board chooses to discuss the item after 10:00 p.m.

I. CALL TO ORDER AND ROLL CALL

Design Review Board

- A. Escano-Thompson, Kline, Kuckuk, Sayles, Zhu
- B. Conflict of Interest

II. ADOPTION OF MEETING AGENDA

III. PUBLIC COMMENTS

NOTE: This part of the agenda is limited to comments regarding matters that are not on this agenda. Action cannot be taken on public comments at the meeting but they may be referred to a subcommittee for response.

IV. PLANNING COMMISSION LIAISON REPORT- Commissioner Socolich

V. ADOPTION OF THE CONSENT AGENDA

Consent agendas consist of items that are considered to be non-controversial and routine by the Town Planning Department. Anyone attending the meeting that would like to discuss an item listed on the consent agenda should request the Board to move the item from the consent agenda to the regular agenda when the Chair presents that option to the audience. Any member of the Board may also direct that a consent agenda item be placed on the regular agenda for consideration and discussion by the Board. Items that are not removed from the consent agenda are approved under one motion by the Board, and are not subject to individual debate and discussion.

A. APPROVAL OF MINUTES for March 28, 2011

VI. DESIGN REVIEW

Opening remarks by an applicant shall not exceed ten minutes. Comments by others shall not exceed three minutes. The purpose of a public hearing is to supply the Design Review Board with information that it cannot otherwise obtain. Please limit testimony and presentation to the supplying of factual information. In fairness to everyone in attendance, please avoid redundant, superfluous or otherwise inappropriate questions or testimony.

A. DRB 14-06 Richard and Rose Wang (Applicant and Owners) 226 Rheem Boulevard

Consideration of a design review application and hillside development permit for revisions to the landscape plans and grading plans for the new 2-story home under construction at 226 Rheem Boulevard. The revised plans include a 1,015 sq.ft. expansion of the driveway at the northeast front corner of the garage and a 1,034 sq.ft. patio at the southwest rear side of the house. The new patio area will be paved with travertine pavers and petrified forest paver bands. The driveway and circular parking court will be paved with dry-land permeable unit pavers. The revised grading plan includes two new retaining walls at the southeast side of the garage with stairs going up from the driveway to the main floor level above the garage. The hillside at the southeast side of the garage has been altered with up to 6-feet of fill for a service road connection between the upper end of the driveway and the old paved road along the northeast property line. About 250 lineal feet at the top of the service road will be covered with open cell concrete block and gravel paving and the lower section will just have gravel paving. Several low rock walls have also been installed to provide planting pockets for trees along the edges of the bio-retention basins. All of the grading is within the approved MOSO building cell on the property. The property is zoned OS-M (Open Space-MOSO). APN 270-470-001

VII. OTHER MATTERS - None

VIII. STAFF REPORT

IX. BOARD MEMBER REPORTS – Escano-Thompson, Kline, Kuckuk, Sayles and Zhu.

X. ADJOURNMENT

Next meeting: Monday, April 25, 2011 at 7:00 pm at the Moraga Library Meeting Room located at 1500 Saint Mary's Road, Moraga, CA 94556.

Design Review Board meeting Agendas are posted at 2100 Donald Drive – Hacienda de las Flores, Moraga Commons Park, and the Moraga Public Library.

NOTICE: If you challenge a town's zoning, planning or other decision in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the Design Review Board at, or prior, to the public hearing. Judging review of any town administrative decision may be had only if petition is filed with the court not later than the 90th day following the date upon which the decision becomes final. Judicial review of environmental determinations may be subject to a shorter time period for litigation, in certain cases 30 days following the date of final decision.

The Town of Moraga will provide special assistance for disabled citizens upon at least 24 hours advance notice to the Planning Department (925-888-7040). If you need sign language assistance or written material printed in a larger font or taped, advance notice is necessary. All meeting rooms are accessible to disabled.

Copies of all staff reports and documents subject to disclosure that relate to each item of business referred to on the agenda are available for public inspection on the Monday before each regularly scheduled meeting located at the Planning Department, 329 Rheem Blvd, Moraga, CA. Any documents subject to disclosure that are provided to all, or a majority of all, of the members of the Board regarding any item on this agenda after the agenda has been distributed will also be made available for inspection at 329 Rheem Blvd, Moraga, CA during regular business hours.

DESIGN REVIEW BOARD STAFF REPORT

MEETING DATE: April 11, 2011 REPORT WRITTEN: April 7, 2011
ITEM NUMBER: V.A. – DESIGN REVIEW
FILE NUMBER: **DRB 14-06 Richard and Rose Wang (Applicant and Owners) 226 Rheem Boulevard** Consideration of a design review application and Hillside Development Permit for revisions to the landscape plans and grading plans for the new 2-story home under construction at 226 Rheem Boulevard. APN 270-470-001
ZONING: Zone OS-M (Open Space-MOSO)
CEQA STATUS: A mitigated negative declaration was approved for development of a single family residence on August 19, 1991 at the time the property was subdivided. The current project involves some relatively minor revisions to the original grading and landscape plans approved by the Design Review Board on October 22, 2007.

PUBLIC NOTICE AND MAILING LIST:

A public meeting notice for the application was mailed to all property owners and residents within three hundred (300) feet of the subject property on Friday, April 1, 2011 in accordance with Moraga Municipal Code (MMC) Section 8.72.130A1. The map showing the area of notice and the public notice address list is attached as **EXHIBIT A**.

BACKGROUND:

On November 20, 2006, the Planning Commission adopted Resolution 14-2006 (Use Permit 08-2006), which established the site development standards for the property at 226 Rheem Boulevard. A copy of Resolution 14-2006 is enclosed as **EXHIBIT B**. On October 22, 2007 the Design Review Board approved the application for a new 5,776 square foot two-story home on the 9.57 acre lot. The conditions of approval are listed in the DRB Action Memorandum attached as **EXHIBIT C**. The new home has a 1,067 square foot garage and a 1,274 square foot covered pool area. Prior to the start of construction for the home, extensive grading was done for installation of a buttress fill to stabilize the slope behind the home. A keyway was installed about 30 to 35-feet below the driveway. The project also included a new island in Rheem Boulevard to reduce the paved area at the frontage of the property and to address drainage issues from existing storm water runoff on Rheem Boulevard. While most of the grading for the project has been completed in accordance with the approved plans, some changes were made during the installation of the landscaping and the Town's grading inspector stopped all site work until the proposed changes could be reviewed by the Town.

DESIGN DESCRIPTION:

The revised plans include a 1,015 square foot expansion of the driveway at the northeast front corner of the garage and a 1,034 square foot patio at the southwest rear side of the house. The new patio area will be paved with travertine pavers and petrified forest paver bands. The driveway and circular parking court will be paved with dry-land permeable unit

pavers. The revised grading plan also includes two new retaining walls at the southeast side of the garage with stairs going up from the driveway to the main floor level above the garage. The hillside at the southeast side of the garage has been altered with up to 6-feet of fill for a service road connection between the upper end of the driveway and the old paved road along the northeast property line. Based on the as-built topography provided by the project civil engineer, the upper retaining wall will be approximately 2 feet in height and the lower retaining wall will be approximately 4 feet in height. The new retaining walls will match the short block retaining wall behind the house. About 250 lineal feet at the top of the service road will be covered with open cell concrete block and gravel paving and the lower section will just have gravel paving. Several low rock landscape walls have been installed to provide planting pockets for trees along the edges of the bio-retention basins.

OVERVIEW DISCUSSION:

On August 19, 1991, the Planning Commission made a Moraga Open Space Ordinance (MOSO) status determination, where a building “cell” with an average slope less than 20% was established on the property at 226 Rheem Boulevard. The portion of the lot outside the building “cell” was recorded as a scenic easement. The additional grading proposed on the property is within the approved MOSO building cell. The boundary of the MOSO cell is shown on sheet 2 of the RMR Design Group plans as a heavy dash-dot line.

The project site is within 500-feet of the Rheem Boulevard scenic corridor. The visual impact of the new home from the scenic corridor was discussed previously with the approval of the project on October 22, 2007. The grading for the service driveway and two additional retaining walls are partially screened from view by two existing oak trees and would have minimal impact to the scenic corridor.

The revised grading consists of approximately 375 cubic yards of cut and fill. The project civil engineer has determined that the average gradient within the limits of the expanded graded area is 23.6%. In accordance with MMC Section 14.12.010, Design Review Board approval is required for all grading operations exceeding 200 cubic yards and where the predevelopment average slope is greater than 20% and less than 25%. In order to approve the grading, the Design Review Board is required to make the findings listed under MMC Section 14.12.030, which are presented later in this report.

Hillside land is defined in Moraga as any land with a slope of 20% or greater. MMC Section 8.136.050 requires a “hillside development permit” for any grading, clearing, construction or alteration of hillside land. A hillside development permit was previously approved for the grading and construction of the new home, but another hillside development permit is required for the expanded grading at the southeast side of the garage.

HILLSIDE DEVELOPMENT PERMIT REVIEW:

The factors to be considered for a hillside development permit (HDP) in accordance with MMC Section 8.136.070 are listed in **EXHIBIT D** with staff discussion of each factor. The Town received a letter from the project geotechnical engineer, Friar Associates, Inc. (FAI), on April 5, 2011, which is attached as **EXHIBIT E**. The FAI letter states that the proposed retaining walls are necessary to support the existing excavations that were cut into the hillside. However, the FAI letter does not address some of the HDP factors with regard to other potential slope stability issues and the letter does not include any engineering design

recommendations for the retaining walls or drainage. The following questions should be addressed by the project geotechnical engineer in order to satisfy the requirements for the HDP:

1. Will the proposed design for the retaining walls be sufficient to hold the slope and if not, what are the recommended design specifications for the retaining walls?
2. Should there be a keyway under the 6-feet of fill below the service driveway?
3. Should drainage pipes be installed below the gravel service driveway to help prevent water from the hillside that drains down to the driveway from saturating the soil below and possibly over-loading the deep sub-drain pipes installed with the buttress fill?

Staff has included a condition of approval that requires geotechnical peer review of FAI's slope stability analysis for the additional grading and retaining walls for the service driveway. The project civil engineer, Bob Rourke, has confirmed that the addition of the low rock retaining walls for tree planting at the edges of the two existing retention basins does not compromise the design capacity of the retention basins and that they are sized to handle the 2,058 square feet of additional paved area.

Condition 8 on page 6 of the October 22, 2007 DRB Action Memorandum prohibits grading, compaction, stockpiling or change in ground elevation within the drip line of the native trees. The fill soil that has been placed below the service driveway extension has a 2:1 slope and stops just short of the drip line of the Oak Trees. Sheet 2 of the revised grading plans shows a 3:1 slope below the service drive and the bottom of the fill would encroach into the drip line. Staff has asked for an arborist's report to address whether this fill would jeopardize the health of the Oak Trees. The Design Review Board may want to consider some alternatives, such as installation of a low rock wall at the drip line with a 3:1 slope above the wall. If the Design Review Board grants an exception to Design Guideline ID10.6 to allow a 2:1 slope below the service road, then the planting on the slope would need to be reviewed to make sure that it could retain the soil and prevent erosion on the steeper slope.

FINDINGS FOR APPROVAL OF THE GRADING PERMIT:

In accordance with MMC Section 14.12.030 on average slopes less than twenty-five (25) percent and greater than or equal to twenty (20) percent, the grading may be approved by the Design Review Board with a determination that the grading is:

1. Consistent with the Town Design Guidelines;
***Finding:** An analysis with respect to compliance with the Town's Design Guidelines was done in **EXHIBIT G** for the staff report. Most of the revised grading was to provide an access driveway connecting to the abandoned portion of "Goodfellow Drive" along the northeast property line and is not visually prominent from the Rheem Boulevard scenic corridor or from adjacent residences.*
2. Consistent with the regulations of Town's Grading Ordinance (Chapter 14)
***Finding:** The grading for the two retaining walls and driveway extension at the southeast side of the garage is consistent with the Town's Grading Ordinance. The addition of the low rock retaining walls within the two retention basins for tree planting does not impair the required capacity of the retention basins.*

3. Not detrimental to public safety;
Finding: *The previously approved slope stabilization work is expected to improve the safety of the hillside for public safety. The project geotechnical engineer, Friar Associates, Inc (FAI)., submitted a letter on April 6, 2010 that recommends the installation of the two retaining walls in order to stabilize the cuts in the hillside above the service access road. The FAI letter does not state categorically that the proposed revisions to the grading will not compromise the previous slope stabilization work. When the Town receives a response to our concerns for slope stability from FAI, the response will be sent to the Town's consulting geotechnical engineer for peer review. All recommendations of the project geotechnical engineer will be included in the conditions of approval for the grading permit.*
4. Not detrimental to stormwater runoff;
Finding: *The original approved grading plan included installation of on-site stormwater treatment devices and retention basins in compliance with the C.3 guidelines since the project site had over 10,000 square feet of impervious surfaces. The revised grading includes a couple of low rock retaining walls that have been installed within the retention basins. The project civil engineer has confirmed that the encroachment of these retaining walls does not compromise the design capacity of the retention basins.*
5. Consistent with the requirements of MMC Chapter 8.136 (Hillside Development);
Finding: *The factors to be considered for a hillside development permit were reviewed in EXHIBIT D attached to the staff report. As noted in finding number 3, above, the project geotechnical engineer needs to confirm that the revised grading will not compromise the slope stabilization work that was previously completed.*
6. Natural contour grading;
Finding: *A portion of the naturally contour graded slope at the southeast side of the garage will be changed with two stacked retaining walls above a gravel service road and a 3:1 slope below the road. Based on the as-built topography submitted by the project civil engineer, the upper wall will be approximately 2 feet in height and the lower wall will be approximately 4 feet in height. The proposed retaining walls are partially hidden behind two oak trees below the proposed service road and the grading beyond the retaining walls will blend in with the natural contours of the hillside. The area east and south of the proposed retaining walls conforms to the natural contours of the slope.*
7. Minimizes soil displacement;
Finding: *The revised grading comprises approximately 375 cubic yards of cut and fill. The grading is balanced on site and there will be no soil displacement off site. The average gradient within the limits of the expanded graded area is 23.6%. The amount of the cut has been minimized consistent with the goals of the project.*
8. Minimizes the use of retaining walls;
Finding: *The original grading plans included several low landscaped terrace walls at the front of the home and some large structural foundation retaining walls behind the home. The large retaining walls beneath the home do not contribute to an unnatural appearance of the slopes because they are hidden by the home. The two additional retaining walls above the service driveway are necessary to hold the slope above the*

driveway. The retaining walls comply with the new Town design guidelines for retaining walls.

9. Not inconsistent with the general plan.

Finding: *There are no conflicting General Plan policies that would prohibit the revised grading at 226 Rheem Boulevard. In accordance with the Moraga 2002 General Plan Public Safety Element, Policy PS4.2, the technical recommendations from FAI shall be reviewed by an independent licensed soil engineer, geologist and/or structural engineer approved by the Town and at the expense of the developer prior to approval of the grading permit for the amended grading plan. The addition of the service driveway at the southeast side of the garage could enhance fire safety by providing better access to the hillside south of the home.*

DESIGN ASPECTS TO BE CONSIDERED:

The design aspects listed under MMC Section 8.72.080-A that pertain to projects in zoning districts other than single-family residential districts, are discussed in **EXHIBIT F**. A new concrete pad has been provided at the southeast side of the garage for the garbage containers, including a fence to screen the garbage containers from view. **EXHIBIT F** includes several photographs of the property which will be useful to evaluate the visual impacts of the grading.

APPLICABLE TOWN DESIGN GUIDELINES:

The applicable design guidelines have been listed in **EXHIBIT G**. There are no exceptions to the design guidelines; however, the Design Review Board may choose to grant an exception to guideline ID10.6 to allow the 2:1 slope to remain below the service driveway extension in order to avoid any fill within the drip line of the two Oak trees northeast of the driveway. The two new retaining walls comply with guideline ID11.4 for separation of the walls. The highest wall will be 4-feet and the minimum separation would be 8-feet. The proposed separation is 28-feet.

REQUIRED FINDINGS FOR DESIGN REVIEW APPROVAL:

MMC Section 8.72.080-B lists standards to be used by the Design Review Board for review of projects in zoning districts other than single-family residential districts. These standards are used as the basis for findings to support any decision to approve a project. The findings listed below have been included in a draft action memorandum prepared for this project.

1. **The proposed structure conforms with good taste, good design and in general contributes to the character and image of the Town as a place of beauty, spaciousness, balance, taste, fitness, broad vistas, and high quality because the additional grading and retaining walls at the southeast side of the garage represent a relatively minor change to the previously approved plans and the grading conforms with the Town's Design Guidelines.**
2. **The structure be protected against exterior and interior noise, vibrations and other factors, which may tend to make the environment less desirable because the project does not include any additional structures or any exterior equipment that would produce noise or vibrations.**
3. **The exterior design and appearance of the structure is not of inferior quality as to cause the nature of the neighborhood to materially depreciate in appearance**

and value because the two new retaining walls above the service driveway extension at the southeast side of the garage will match the approved retaining wall behind the home. The location of the new stairs and retaining walls is more than 100-feet from any adjacent residence.

4. **The structure is in harmony with proposed developments on land in the general area** because the height and length of the additional retaining walls is not out of character with similar retaining walls on other properties in the vicinity and the walls and grading are within the approved MOSO building cell on the property.

PROCEDURE:

MMC Section 8.72.090 was amended by Town Council Ordinance No. 211 on September 27, 2006. This amendment authorized the Design Review Board to make a final decision on a project in zoning districts other than single-family residential districts. The Design Review Board's decision on the project will be final unless the decision is appealed within 10-days. Any appeal of the DRB decision would be heard by the Planning Commission.

PERMIT STREAMLINING ACT:

The development of the new home and associated grading is an approved project. The current application is for approval of amendments to the previously approved plans and there is no mandatory deadline for action under the Permit Streamlining Act.

RECOMMENDATION:

Staff has prepared a Draft Action Memorandum with findings and conditions of approval for the revised grading, new retaining walls and additional paved areas at 226 Rheem Boulevard. The Draft Action Memorandum has been enclosed as **EXHIBIT H**. Since there is a stop work order on the site development work pending approval of the revisions to the grading, the Town is trying to expedite the review of the proposed changes. Nevertheless, there are a number of technical issues that will need to be resolved prior to release of the revised grading permit by staff. Hopefully, the plans are complete enough for the Board to make an aesthetic evaluation of the proposed grading changes and consider the recommended findings and conditions for approval.

REPORT PREPARED BY: Richard Chamberlain, Senior Planner

EXHIBITS:

- A – Notice Area Map, Mailing List and Public Meeting Notice
- B – Resolution 14-2006 PC, Approving use permit number 08-2006 establishing the site development standards for 226 Rheem Boulevard
- C – Design Review Action Memorandum dated October 22, 2007
- D – Hillside Development Permit Factors under MMC Section 8.136.070
- E – Letter from Friar Associates, Inc. dated April 5, 2011
- F – Design Aspects under Planning Commission Resolution 16-01
- G – Applicable Design Guidelines for 226 Rheem Boulevard
- H – Draft Design Review Board Action Memorandum
- I – Revised Landscape and Hardscape Plans, Revised Grading Plans and Retaining Wall Plan

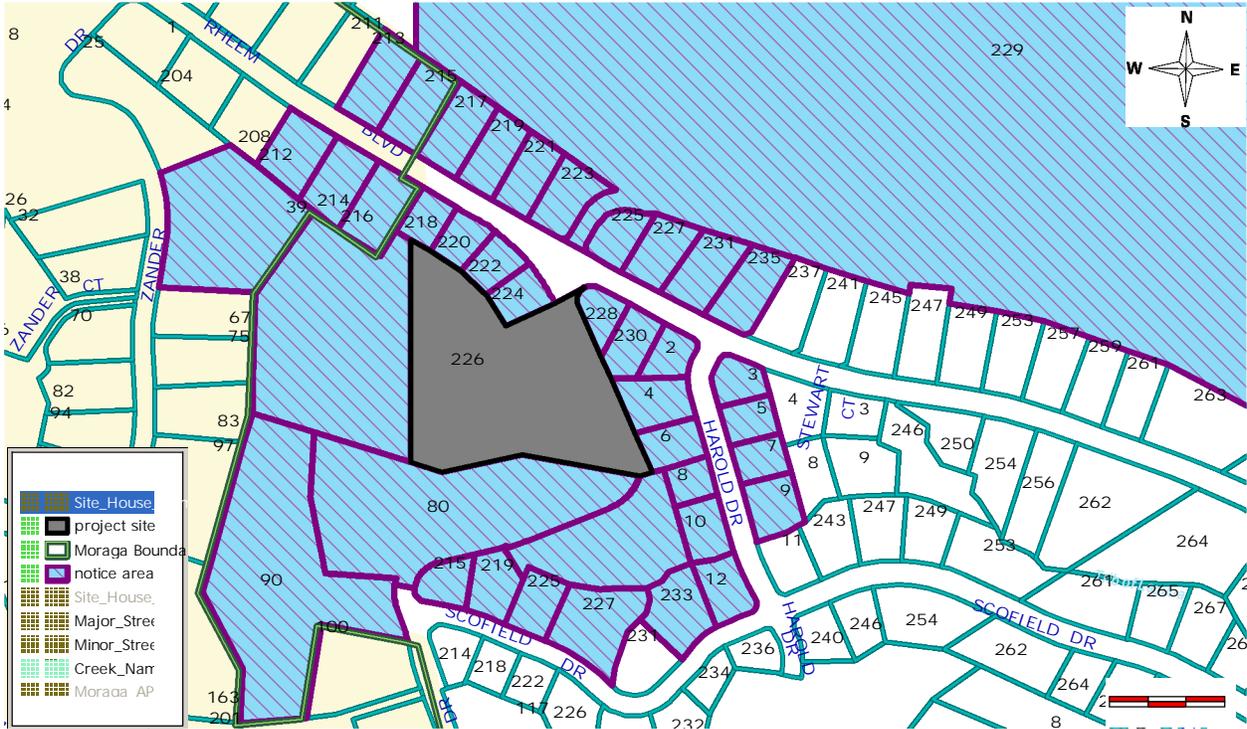
EXHIBIT A

**NOTICE AREA MAP,
MAILING LIST AND
PUBLIC MEETING NOTICE**

VICINITY MAP AND AREA OF NOTICE

226 Rheem Boulevard

File Number: DRB-14-06



PUBLIC MEETING

TOWN OF MORAGA

YOU ARE HEREBY NOTIFIED THAT on Monday, **April 11, 2011**, at 7:00 p.m., in the meeting room at the Moraga Library, 1500 St. Mary's Road, Moraga, California, the Design Review Board of the Town of Moraga will hold a Public Meeting to consider the following application:

FILE NUMBER: DRB 14-06 An application for revisions to the landscape plans and grading plans for the new 2-story home under construction at 226 Rheem Boulevard. The revised plans include a 1,015 sq.ft. expansion of the driveway at the northeast front corner of the garage and a 1,034 sq.ft. patio at the southwest rear side of the house. The new patio area will be paved with travertine pavers and petrified forest paver bands. The driveway and circular parking court will be paved with dry-land permeable unit pavers. The revised grading plan includes two new retaining walls at the southeast side of the garage with stairs going up from the driveway to the main floor level above the garage. The hillside at the southeast side of the garage has been altered with up to 6-feet of fill for a service road connection between the upper end of the driveway and the old paved road along the northeast property line. About 250 lineal feet at the top of the service road will be covered with open cell concrete block and gravel paving and the lower section will just have gravel paving. Several low rock walls have also been installed to provide planting pockets for trees along the edges of the bio-retention basins. All of the grading is within the approved MOSO building cell on the property. The property is zoned OS-M (Open Space-MOSO). APN 270-470-001

Applicant and Property Owner
Richard and Rose Wang 226 Rheem Boulevard Moraga, CA 94556

The project plans are available for public review at the Moraga Planning Department, 329 Rheem Boulevard, during normal business hours (Monday, Tuesday and Thursday from 9 am to 12 noon) or by appointment at other times.

Comments regarding the proposed project can be submitted in writing or orally at the Public Meeting. In any challenge to the Town's decision on this matter in court, you may be limited to raising only those issues you or someone else raised at the Public Meeting described in this notice, or in written correspondence delivered to the Town at, or prior to, the Public Meeting. Public comments will be considered before a decision is reached.

For additional information, contact the Planning Department at 925-888-7040

Project Planner: Richard Chamberlain, Senior Planner

Mailing List for 226 Rheem Boulevard

	Name	Address	City	Zip
255081016	Mayo, Ronald J	225 SCOFIELD DR	MORAGA CA	94556
255081011	Voegtly, John B	PO BOX 03115291	SIoux FALLS SD	57186
255081009	Long, Eric G	233 SCOFIELD DR	MORAGA CA	94556
255081014	Knox, Mark D	215 SCOFIELD DR	MORAGA CA	94556
255081008	Adza, Thomas V	12 HAROLD DR	MORAGA CA	94556
255081013	Jang, Alan	219 SCOFIELD DR	MORAGA CA	94556
255081007	Bianchi, Eugene	10 HAROLD DR	MORAGA CA	94556
255091005	Litchfield, William P	9 HAROLD DR	MORAGA CA	94556
255081017	Voegtly, John B	PO BOX 03115291	SIoux FALLS SD	57168
255081006	Ko, Chae Jean	8 HAROLD DR	MORAGA CA	94556
255091004	Hennigh, Mark S	7 HAROLD DR	MORAGA CA	94556
270470006	Friar, John	80 GOODFELLOW DR	MORAGA CA	94556
255081005	Santucci, Hugo J	6 HAROLD DR	MORAGA CA	94556
270470005	Thoms, Arthur W	90 GOODFELLOW DR	MORAGA CA	94556
255091003	Seeley, Todd W	5 HAROLD DR	MORAGA CA	94556
255081004	Nielsen, David E	4 HAROLD DR	MORAGA CA	94556
255091002	Schulman, Paul	3 HAROLD DR	MORAGA CA	94556
255081003	Edwards, Alfred Mark	2 HAROLD DR	MORAGA CA	94556
255081002	Mirabdal, Ali	230 RHEEM BLVD	MORAGA CA	94556
255081001	Paden, Robert H	228 RHEEM BLVD	MORAGA CA	94556
270141006	Edalati, Behnam	216 RHEEM BLVD	ORINDA CA	94563
255071004	Micklas, M Jeffrey	223 RHEEM BLVD	MORAGA CA	94556
270344001	Burdett, David M	39 ZANDER DR	ORINDA CA	94563
255073004	Low, Norman	224 RHEEM BLVD	MORAGA CA	94556
255072004	Boardman, Danvers	235 RHEEM BLVD	MORAGA CA	94556
270470001	Wang, Judy	151 CALLE LAMESA	MORAGA CA	94556
255073003	Call, David H	222 RHEEM BLVD	MORAGA CA	94556
255072003	Reichick, Lana H	12811-B ALCOSTA BLVD	SAN RAMON CA	94583
255072002	French, Leigh H	227 1/2 RHEEM BLVD	MORAGA CA	94556
270470002	Wang, Judy	151 CALLE LAMESA	MORAGA CA	94556
255072001	Ross, Scott	225 RHEEM BLVD	MORAGA CA	94556
255073002	Webster, Donald R	220 RHEEM BLVD	MORAGA CA	94556
255073001	Lin, Bruce	218 RHEEM BLVD	MORAGA CA	94556
270141005	Resident	214 RHEEM BLVD	ORINDA CA	94563
255071003	Banapour, Babak	221 RHEEM BLVD	MORAGA CA	94556
255071002	Connlain, Bradley W	219 RHEEM BLVD	MORAGA CA	94556
270141004	Litten, Jefferson K	99 OVERHILL RD	ORINDA CA	94563
255071001	Silva, Tulio	217 RHEEM BLVD	MORAGA CA	94556
270142001	Bani, Larry	263 RHEEM BLVD	MORAGA CA	94563
270142002	Resident	213 RHEEM BLVD	ORINDA CA	94563
255010015	Weinberg, Mitchell D	PO BOX 6697	MORAGA CA	94570
	Richard and Rose Wang	151 Calle La Mesa	MORAGA CA	94556
	RMR Design Group	Send by email		
	Friar Associates	2656 Nicholson Street	San Leandro CA	94577
	Garden Lights Landscape and Design	One Northwood Dr. Suite 2	Orinda CA	94563

EXHIBIT B

**RESOLUTION 14-2006 PC,
APPROVING USE PERMIT
NUMBER 08-2006
ESTABLISHING THE SITE
DEVELOPMENT STANDARDS FOR
226 RHEEM BOULEVARD**

BEFORE THE TOWN OF MORAGA PLANNING COMMISSION

In the Matter of:

Resolution 14-2006

Approval of a Conditional Use)
Permit to establish the Site)
Development Standards for the)
construction of a single-family)
dwelling on a 9.57-acre lot at)
226 Rheem Boulevard.)

File No. UP-08-2006
Adoption Date: Nov. 20, 2006
Effective Date: Nov. 30, 2006

WHEREAS, Richard and Rose Wang (Applicants/Owners) filed an application for approval of a new 8,117 sq.ft. two-story home, including a 4-car garage and covered swimming pool, on an existing 9.57 acre lot addressed as 226 Rheem Boulevard on July 28, 2006; and

WHEREAS, the Moraga Planning Commission adopted Resolution 18-91 PC on August 19, 1991, which included a MOSO status determination for a building “cell” on the subject property, approval of a Mitigated Negative Declaration and a Use Permit for residential development of the property, subject to conditions; and

WHEREAS, the mitigation measures from the Negative Declaration are applicable to the current project except where they conflict with the Contra Costa Clean Water Program Stormwater C.3 Guidebook, as revised, effective February 15, 2005 and the Hydromodification Management Plan (HMP), effective October 16, 2006 approved by the Regional Water Quality Control Board for Contra Costa County; and,

WHEREAS, the proposed home at 226 Rheem Boulevard would be located on Parcel “A” of Minor Subdivision MS 602-89, which was approved by the Moraga Planning Commission on January 21, 1992 subject to the conditions listed in Resolution 3-92; and

WHEREAS, the Town Council approved the Final Parcel Map for MS 602-89 on September 9, 1992 with execution of a subdivision improvement agreement which requires frontage improvements for Parcel “A”; and,

WHEREAS, a new subdivision improvement agreement will need to be executed and recorded with the property owner of Parcel “A” prior to issuance of the building permit for the proposed home at 226 Rheem Boulevard and the frontage improvements will need to be installed prior to occupancy of the new residence; and,

WHEREAS, Moraga Municipal Code Section 8.52.130 requires the establishment of precise site standards for the development of property within Open Space-MOSO districts, with approval of a Conditional Use Permit to specify the lot area, frontage, front, side and rear setbacks, building height and site coverage requirements; and,

WHEREAS, site development standards for Parcel "A" were established by the Moraga Planning Commission with approval of conditional use permit 91-2001 and specifically condition numbers 3 and 4 in Resolution 18-91 PC; and,

WHEREAS, condition number 20 from Resolution 18-91 PC states that the conditional use permit becomes void if not exercised by the issuance of a building permit and the commencement of construction within one year from the date the use permit is granted; and,

WHEREAS, no building permit was approved for Parcel "A" within one year of the adoption of Resolution 18-91 PC and a new use permit and site development standards are required for the project; and,

WHEREAS, on September 25, 2006, the Design Review Board reviewed the plans for the proposed 8,117 square foot home with four car garage and covered swimming pool at a study session and made recommendations to the Planning Commission for new site development standards for Parcel "A"; and,

WHEREAS, on November 9, 2006, public hearing notices for a new use permit and site development standards for 226 Rheem Boulevard were mailed to all property owners within 300 feet of the property in accordance with Moraga Municipal Code Section 8.12.070 and the notices were posted at 2100 Donald Drive, Moraga Commons, and the Moraga Library; and

WHEREAS, on November 20, 2006 the Planning Commission held a public hearing and received testimony from the applicant, applicant's consultants and interested parties.

NOW, THEREFORE, BE IT RESOLVED that the Planning Commission of the Town of Moraga hereby approves Conditional Use Permit UP-08-2006 for the construction of a single family residence located at 226 Rheem Boulevard with the findings listed below in accordance with Sections 8.12.120 of the Moraga Municipal Code, and subject to the conditions listed herein:

USE PERMIT FINDINGS:

SPECIFIC FINDINGS NECESSARY FOR ALL CONDITIONAL USE PERMITS:

- 1. The proposed use is appropriate to the specific location;** The proposed single family residential building site was previously approved in 1991 and the specific location for the home site was defined by the approved MOSO building cell and the conceptual house plan approved by the Design Review Board on November 26, 1991. The remainder of the 9.57 acre site is restricted from development by a recorded scenic easement. The location of the new proposed home has been shifted on the property in accordance with the recommendations of the Design Review Board and is still within the approved MOSO building cell, with an average slope less than 20%.

2. **The proposed use is not detrimental to the health, safety, and general welfare of the Town;** The addition of this single family dwelling within the existing residential neighborhood along Rheem Boulevard will not be detrimental to the health, safety, and general welfare of the Town provided that the mitigation measures, recommendations of the Town Engineer and Town's Geotechnical Consultant and conditions of approval recommended in the draft Resolution are satisfied.
3. **The proposed use will not adversely affect the orderly development of property within the Town;** The proposed 8,117 square foot home is 3.4 times larger than the homes in the vicinity, which have an average floor area of 2,382 square feet. However, the lot area is 29 times the size of the parcels in the vicinity, not including the adjacent lot at 80 Goodfellow Drive. The setbacks of the proposed home are quite large and the setback along the north side has been increased to 50-feet to provide a greater privacy buffer. The proposed new landscaping for the project may also mitigate the impact of the new home on the neighboring properties.
4. **The proposed use will not adversely affect the preservation of property values and the protection of the tax base and other substantial revenue sources within the Town;** The construction of a single-family dwelling is not expected to have any significant effect on property values or revenue sources within the Town.
5. **The proposed use is consistent with the objectives, policies, general land uses and programs specified in the general plan and applicable specific plans;** The proposed building site is consistent with the requirements of the Moraga Open Space Ordinance (MOSO). The lot is below the 800-foot elevation and is not on a minor ridgeline. The lot has a "cell" area that exceeds the minimum 10,000 sq. ft. building area with an average slope of less than 20% as required by the MOSO guidelines adopted by the Town Council. The use of the lot for a single-family dwelling is consistent with the Town's general plan.
6. **The proposed use will not create a nuisance or enforcement problem within the neighborhood;** There have been numerous problems in the past with illegal dumping on this vacant lot and one previous owner used the lot illegally for storage of construction equipment and supplies. The construction of this single-family dwelling is not expected to create a nuisance or enforcement problem within the neighborhood and should help to prevent the problems with illegal dumping that have occurred in the past.
7. **The proposed use will not encourage marginal development within the neighborhood;** The construction of a custom-designed single family dwelling should not encourage marginal development and should have a positive effect on the quality of future improvements to the Rheem Boulevard residential neighborhood.
8. **The proposed use will not create a demand for public services within the Town beyond that of the ability of the Town to meet in light of taxation and spending restraints imposed by law;** The proposed single family dwelling is not likely to create a significant demand for additional public services. The location is within reasonable distance of the Moraga Police Department and the Moraga-Orinda Fire Department. The maintenance obligations for the proposed dedication to the Town of the portion of Rheem Boulevard at the front of the lot will be discussed by the Town Council when they consider the acceptance of the offer of dedication.

9. The proposed use is consistent with the Town’s approved funding priorities.

The development of one single-family dwelling and guesthouse will have no substantial impact on the Town’s funding priorities.

CONDITIONS OF APPROVAL:

1. Prior to the issuance of a building or grading permit for construction of a single-family residence on Parcel “A” of Minor Subdivision MS 602-89, addressed as 226 Rheem Boulevard, all applicable conditions and mitigation measures listed in Resolution 18-91 PC (attached hereto as Exhibit 1) shall be addressed to the satisfaction of the Town of Moraga, with the following amendments or exceptions:

a. Conditions 1, 2, 3 and 4 of RES. 18-91 PC shall be replaced by new site development standards for the property as listed in the table below.

	Site Development Standards for 226 Rheem Boulevard (Parcel “A” MS 602-89)
Lot Area	9 Acres
Frontage	50 feet (Actual frontage of Parcel “A” after dedication of Rheem Boulevard frontage of property)
Front Yard Setback	25 feet
Minimum Side Yard Setback	50 feet on north side
Sum of Side Yards	70 Feet (20 plus 50)
Rear Yard Setback	20 feet
Maximum Building Height	35 feet
Maximum Aggregate Building Height	40 feet
Maximum Site Coverage	15.7% (Limited by MOSO Cell area which is 1.51 acres in size)
Maximum Floor Area	8,117 square feet, including garage and covered pool

b. A new subdivision improvement agreement shall be executed and recorded with the property owner of Parcel “A” prior to issuance of the building permit for the proposed home at 226 Rheem Boulevard and the frontage improvements shall be installed prior to occupancy of the new residence.

- c. All previous conditions and mitigation measures pertaining to drainage improvements on the property shall be modified as necessary by the Town Engineer for compliance with the Contra Costa Clean Water Program Stormwater C.3 Guidebook, as revised October 2006 and in accordance with the Hydromodification Management Plan (HMP), effective October 16, 2006 approved by the Regional Water Quality Control Board for Contra Costa County. Where the new C.3 stormwater drainage requirements differ from the mitigation measures and drainage conditions listed in RES. 18-91 PC, the new requirements will take precedence over the previous conditions.
- d. The project engineer and Town Engineer shall investigate the condition of the existing downstream storm drain pipes to ascertain the capacity of the pipes and their state of repair to make sure that they can handle the storm flows. The project engineer shall size the on-site detention basin to reduce peak flows to minimize flooding for 10, 50 and 100 year storm events at the existing storm drain inlet that is 130-feet southeast of the entrance gate columns.
- e. With regard to the repair of the unstable landslide area referenced in mitigation measure numbers 1 and 12 on pages 2 and 3 of RES. 18-91 PC a Geotechnical Investigation Report was submitted by Friar Associates, Incorporated (FAI) on July 28, 2006 and reviewed by the Town's Geotechnical Peer Review consultant, Cal Engineering and Geology (CE&G). The additional information listed below that was requested by CE&G on September 15, 2006 shall be submitted and evaluated by CE&G prior to submittal of the final building plans to the Design Review Board,
 - I. The FAI report of 7 July 2003 indicated that much of the property is underlain by deposits of landslide debris and colluvial soil, including the footprint of the new building. A geologic map of the property should be prepared showing the location of the landslide debris, deposits of colluvial soil, artificial fill, bedrock, etc., and in particular the locations of any recently active landslides relative to the proposed building location. It is recommended that a geologic cross section be developed through the property. The cross section should be oriented perpendicular to the slope contours, extend from the top of the property to the abandoned road below and pass through the building footprint. The section should show the location and projected depths of the landslide features at the site, the approximate location of the bedrock surface, the locations of proposed cuts and fills including the recommended buttress fill, the building location and length of the foundation piers, etc.
 - II. The FAI report recommends that the stability of the slope above the proposed building area be enhanced by the construction of a drained buttress fill. Cross section A-A and the figure on Sheet C-2 of the RMR plans depicts the location and configuration of the proposed buttress fill. CE&G's review of the information on the FAI boring logs suggest that the thickness of the colluvium/landslide debris is most likely deeper than shown on section A-A. It is recommended that section A-A be revised based on the FAI borings and the geologic cross section recommended in Item 1, above. It is also recommended that a stability analysis be performed by FAI to determine the necessary minimum dimensions of the buttress fill. The sizing of the buttress fill should be based on the information shown on the geologic cross section recommended in Item 1.

- III. Page 8 of the FAI report indicates that regular maintenance will be needed to remove any debris flow that may come from the upslope areas. FAI apparently feels there is a risk the developed area of the property may be impacted by landslides originating from the upslope areas. It is, therefore, recommended that consideration be given to construction of a landslide debris catchment area upslope of the proposed residence. The size and location of the catchment area should be based on the anticipated run out area of the landslide debris. It would be advisable to incorporate the catchment area into the proposed buttress fill.
 - IV. Sheet C-3 indicates that between 5 and 8 feet of fill will be required to establish the desired pad grades on the downhill side of the building footprint. FAI should provide specific recommendations for placement of fill within the building footprint. CE&G is specifically concerned with the advisability placing up to 8 feet of fill on a deposit of landslide debris.
 - V. Page 12 of the FAI report recommends construction of a subdrain around the perimeter of the residence. CE&G recommends that the subdrain should be shown on the RMR civil engineering plans.
 - VI. The development of the site will require cuts and fills in excess of 15 feet deep. This will likely require temporary stock piling of soil on the site. Considering the site's predisposition to landsliding, it is recommended that FAI identify temporary stock pile areas for the excavated soil. The approximate areas for stock piling the soil should be shown on the plans. It is recognized that the precise location of the stock pile areas will likely be determined by the grading contractor during mass grading operations for the project. The purpose of this comment is to determine the areas where the project geotechnical engineer feels are most appropriate for temporary stock piling of soil.
 - VII. After the geologic cross section is prepared, FAI should review the applicability of their foundation recommendations with respect to the landslide deposits that exist at the site. FAI should also review and discuss the impact, if any, of placing fill on top of landslide deposits.
2. The project has impervious surface coverage over 10,000 square feet, including the home and driveway areas; therefore, the project engineer will need to consider an area of the site for infiltration or on-site stormwater treatment through an integrated management practices (IMP) device. Based on the Contra Costa Clean Water Program's (CCCWP) county wide sizing factor for stormwater treatment, the project engineer will need to set aside an area equal to at least 4% of the impervious surface area for swales, planters or bioretention areas to be used as IMPs. The project geotechnical engineer, Friar Associates, Incorporated, (FAI) shall be consulted to recommend the best area of the site for any proposed infiltration area to minimize adverse soil movement or slope instability.
 3. The revised improvement plans for the former intersection of Rheem Boulevard and Goodfellow Drive (6,680 square feet triangular area at northeast corner of Parcel "A") shall be submitted to the Town Engineer for approval. The following design issues shall be considered in the review of the plans:
 - a. The proposed island shall be designed to accommodate the turning radius of school busses and fire trucks, which use this wide area in Rheem Boulevard to turn around.

- b. The flow of drainage coming down Rheem Boulevard shall be studied to determine if any new catch basins, valley gutters or drainage swales should be installed to divert or control the flow of water from Rheem Boulevard onto the project site and into the existing storm drain inlet that is 130-feet southeast of the entrance gate columns.
- 4. This conditional use permit approval shall be valid for a period of two years and is renewable for an additional year in accordance with the requirements of section 8.16.030 of the Moraga Municipal Code.

ADOPTED by the Planning Commission of the Town of Moraga on November 20, 2006, by the following vote:

AYES: Kirkpatrick, Whitley, Chew, Evans and Cummins
NOES: Sos
ABSTAIN: None
ABSENT: Brown

Gerald Kirkpatrick, Chairman

Attest: _____
Lori Salamack, Planning Director

EXHIBIT C

**DESIGN REVIEW ACTION
MEMORANDUM DATED
OCTOBER 22, 2007**



Town of Moraga

PLANNING DEPARTMENT
329 RHEEM BOULEVARD
MORAGA, CA 94556
(925) 888-7040

DESIGN REVIEW BOARD ACTION MEMORANDUM

On October 22, 2007 the Town of Moraga Design Review Board considered the application described below:

DRB 14-06 / UP 08-2006 Richard and Rose Wang (Applicant and Owners)
226 Rheem Boulevard An application for a new 5,776 sq.ft. 2 story home on a 9.57 acre lot addressed as 226 Rheem Boulevard. The plans for the new home include a 1,067 sq.ft. garage and 1,274 sq.ft. covered pool. The project includes a revised grading plan to address the slope stabilization work recommended by the geotechnical engineers. Four Live Oak trees with 6" to 18" trunk diameters, six pine trees with 18" to 36" trunk diameters and 1 Bay Tree with an 18" trunk diameter would be removed for the grading. The project also includes revisions to the subdivision improvement plans for an island in Rheem Boulevard to reduce the paved area at the former intersection of the abandoned portion of Goodfellow Drive and to address drainage issues from existing storm water runoff on Rheem Boulevard. The property is zoned OS-M (Open Space-MOSO). APNs 270-470-001 and 270-470-002.

DESIGN REVIEW BOARD ACTION:

The DESIGN REVIEW BOARD hereby grants approval of the project in accordance with the following findings, design guideline exceptions and conditions of approval:

PART 1: DESIGN REVIEW FINDINGS:

In accordance with Moraga Municipal Code Section 8.72.080(B), the following findings must be made in order to approve an application for design review in land use districts other than single-family residential:

- 1. The proposed structure conforms with good taste, good design and in general contributes to the character and image of the Town as a place of beauty, spaciousness, balance, taste, fitness, broad vistas, and high quality because the proposed residence is on an exceptionally large 9.57 acre lot where most of the**

property will remain as permanent open space. Although the proposed home has a large floor area, the home is set into the hillside with substantial basement areas that do not contribute to the overall mass of the home. The new home will not have any significant impact on the spaciousness and beauty of the hills in Moraga because it will be built near the bottom of the hill with a large permanent open space area that covers 85.7% of the project site.

2. **The structure be protected against exterior and interior noise, vibrations and other factors, which may tend to make the environment less desirable** because the proposed home will be constructed in accordance with the California Building Code. The location of the building site is more than 60 feet from the nearest occupied home and the noise from any exterior mechanical equipment shall be blocked by sound walls and landscape screening.
3. **The exterior design and appearance of the structure is not of inferior quality as to cause the nature of the neighborhood to materially depreciate in appearance and value** because the proposed home is a high quality custom designed residence that is expected to increase the value of homes in the neighborhood.
4. **The structure is in harmony with proposed developments on land in the general area** because the lot area is about 29 times the size of the parcels in the vicinity and there will be extensive landscaping installed that will help create a harmonious relationship with the existing neighborhood. Although the home is quite large, the mass of the home has been reduced by using hipped roofs with a fairly flat pitch of 4:12 and the second story is centered over the main level to reduce the bulk of the structure. Most of the garage and home theater on the lowest level is set into the hillside to help reduce the apparent mass even further. The proposed home is also setback a considerable distance from the adjacent homes, with a 56.2 feet distance to the home on the north side and 168.1 feet to the home at 228 Rheem Boulevard.

PART 2: FINDINGS FOR APPROVAL OF THE GRADING PERMIT:

In accordance with MMC Section 14.12.030 on average slopes less than twenty-five (25) percent and greater than or equal to twenty (20) percent, the grading permit is granted with a determination that the grading is:

- A. Consistent with the Town Design Guidelines;
Finding: An analysis with respect to compliance with the Town's Design Guidelines was done in Exhibit I for the staff report. Most of the grading is for the purpose of insuring slope stability by the installation of subdrains and an engineered buttress fill under and behind the new home. After the slope remediation work is completed, the project at 226 Rheem Boulevard will restore a natural appearing slope.
- B. Consistent with the regulations of Town's Grading Ordinance (Chapter 14)
Finding: The grading for slope stabilization at 226 Rheem Boulevard and for the driveway and foundation of the new home is consistent with the Town's Grading Ordinance in that it will restore a natural looking slope behind the home, will comply with the C.3 guidelines for stormwater runoff and has no adverse impacts on public safety.

- C. Not detrimental to public safety;
Finding: *The geotechnical reports for the project were sent for peer review by the Town's consulting geotechnical engineer and the recommendations of the Town's consultant have been included in the conditions of approval for the project. The slope stabilization will improve the safety of the hillside for public safety and the conditions address various safety issues during the deep excavations necessary for the keyways and buttress fill for the slope.*
- D. Not detrimental to stormwater runoff;
Finding: *Stormwater treatment will be improved with the installation of on-site stormwater treatment devices and detention in compliance with the C.3 guidelines since the project site will have over 10,000 square feet of impervious surfaces. The drainage plans will be reviewed by the assistant Town Engineer in accordance with the conditions of approval for the project.*
- E. Consistent with the requirements of MMC Chapter 8.136 (Hillside Development);
Finding: *The factors to be considered for a hillside development permit were reviewed in Exhibit J attached to the staff report. Since a natural slope will be restored behind the new home after the slope stabilization work is completed, the proposed grading is consistent with the requirements of MMC Chapter 8.136.*
- F. Natural contour grading;
Finding: *Most of the grading will have natural contour grading. Some small landscape retaining walls are proposed as landscaped terraces at the front of the home and the house will be set into the slope with retaining walls behind the garage and home that will be concealed from view by the home.*
- G. Minimizes soil displacement;
Finding: *Due to the depth necessary to construct a keyway into competent material and bedrock, a large amount of soil must be excavated below the project site; however, this soil will be replaced as engineered fill so that the net cut and fill will be balanced on site.*
- H. Minimizes the use of retaining walls;
Finding: *There will be some low landscaped terrace walls at the front of the home and some large structural foundation retaining walls behind the home but these retaining walls do not contribute to an unnatural appearance of the slopes. The proposed retaining walls comply with the new Town design guidelines for retaining walls.*
- I. Not inconsistent with the general plan.
Finding: *There are no conflicting General Plan policies that would prohibit the proposed grading at 226 Rheem Boulevard. Most of the grading is for slope stability work, which has been integrated into the excavation necessary for the foundation of the new home.*

PART 3: DESIGN GUIDELINE EXCEPTION:

A Design Guideline Exception is hereby granted to permit the height of the roof of the proposed two-story home to be 33-feet, which exceeds the 28-foot height requirement under Design Guideline number 6 in Section III of the old design guidelines applicable to single family residential development. **Finding:** *The relocation of the home 50-feet from the north property line complies with the requirement for "special siting" and the setback of the upper story from the lower story qualifies as "special design treatment".*

PART 4: CONDITIONS OF APPROVAL:

NOTE: Mitigation measures from Resolution No. 18-91 PC are applicable to this project and a copy of Resolution No. 18-91 PC is attached for reference. However, revised storm water requirements from the Regional Water Quality Control Board may supersede the specific drainage requirements listed in the mitigation measures.

Required Fees:

1. The applicant shall pay a fee in lieu of parkland dedication in accordance with Section 8.140.060 of the Zoning Ordinance, prior to release of the building permit. Currently, the fee is the fair market value of 0.017 acres plus 20% toward costs of off-site improvements in accordance with Section 8.140.090 or the applicable fee at the time the building permit is issued.
2. Prior to the issuance of a building permit, the applicant shall pay the Lamorinda Fee and Finance Authority (LFFA) Transportation Impact Fee in effect at the time. The current amount of the fee (effective January 1, 2007) is \$5,110.00. The Transportation Impact Fee is adjusted annually by the LFFA and the amount due would be the current fee at the time the fee is paid.
3. The applicant shall submit a \$137 design review fee to the Moraga-Orinda Fire District prior to receiving Planning Department approval of the building permit plans.
4. Prior to the issuance of any permits, the applicant shall apply for and pay all appropriate fees for building permits, grading permits, erosion control permits, plan checks and inspections.

Conditions required prior to approval of the building or grading permits:

5. Prior to issuance of the building permit for the home, the required subdivision improvements listed in Resolution No. 3-92 PC shall be installed. In order to proceed with the frontage improvements, the revised subdivision improvement plan will need to be approved by the Town Council with a new subdivision improvement agreement.
6. Prior to the release of the grading permit for the slope remediation work the applicant's geotechnical Engineer, Friar and Associates, Inc., shall respond to the Town's geotechnical peer review consultant's letter dated July 31, 2007 and provide the following additional information or clarification as summarized below:

- a. Post-construction stability of the buttress fill has been satisfactorily demonstrated, but the stability of the landslide area when the deep excavations are made to construct the buttress fill shall be addressed. It is recommended that an excavation plan be jointly prepared by the grading contractor and the owner's design team to address slope stability during the remedial grading operations. The excavation plan should be reviewed prior to issuance of a grading permit. As a minimum the plan shall include:
 - (1). The planned sequencing of the deep construction excavations.
 - (2). Slope stability analysis of the unsupported landslide debris adjacent to the deep construction excavations.
 - (3). Provisions that will be put in place to monitor the slopes adjacent to the deep excavations.
 - (4). Contingency plans to address any slope movement that is detected during grading.
 - (5). The projected depth of the excavation along the northwest property line should be estimated by developing a transverse cross section across the body of the buttress fill and a contingency design in the event the excavation necessary exceeds a predetermined depth that would threaten to undermine the stability of the adjacent property.
 - b. Discrepancies between the geologic map/grading plan and FAI recommendations with regard to the catchment area shall be clarified. Will the catchment area be between station 4+50 and 5+00 or station 3+50 and 4+00 and will a slope of 10% meet the design intent for a slope of "at least 1%" for the catchment area.
 - c. The subdrains proposed 30 to 35 feet below the finished grade of the buttress fill may have to be constructed at a higher elevation than shown on the cross sections to accommodate gravity flow to the outlet drain. If this is the case, then the slope stability analysis shall be revised to reflect what can be reasonably constructed for a gravity flow system. Otherwise, FAI shall provide additional information to show how the subdrain system will be drained if they are constructed at the elevations shown on the geologic cross section.
 - d. FAI shall review their recommendations for the foundation pier depths because the building pad may be underlain by upwards of 30 to 35 feet of engineered fill and piers drilled "six feet into competent native soil or bedrock material" would require pier depths on the order of 35 to 40 feet, which could be drilled through subdrains. FAI shall consider whether the uniform engineered fill is competent for support of the piers and that the "pad" of the buttress fill would not require the piers to be designed for a lateral load.
 - e. The final grading plans shall include the location of the keyway, subdrains, drain pipe locations and subdrain outfall line. CE&G shall review the final grading plans prior to release of the grading permit.
7. Prior to the release of the grading permit for the slope remediation work the applicant's geotechnical Engineer, Friar and Associates, Inc., shall provide recommendations for the placement of any stockpiles of earth that may be necessary during the excavation of the keyway and buttress fill. The location of the stockpile areas shall be shown on the final grading plans.

8. Prior to the release of the grading permit, the following notes shall be added to the grading plans and drainage plans by the applicant's engineer:
 - a. Any native trees near the construction or grading site shall be protected by temporary fencing around the drip line and root zone of each tree to prevent soil compaction, tree damage, or inadvertent removal.
 - b. No grading, storage or stockpiling of earth, compaction of soil, change in ground elevation or paving shall be done within the drip line of trees that are to be saved.
 - c. No trenching within the drip line of trees that is to be saved.
9. The four Live Oak trees with 6" to 18" trunk diameters, six pine trees with 18" to 36" trunk diameters and 1 Bay Tree with an 18" trunk diameter that are to be removed shall be clearly marked on the site prior to the start of grading. These trees shall be replaced with 7 box specimen Oak trees as shown on the preliminary landscape plan.
10. Prior to the issuance of a building permit, the Moraga-Orinda Fire Protection District shall review and approve the plans.
11. Prior to the issuance of the building permit, the Planning Director shall review and approve a plan for recycling construction and demolition materials that will be generated from the project. The plan shall include a quantitative estimate of recyclable material(s). Demonstration of plan implementation including receipts (or similar) from recyclers shall be submitted to the Planning Department in accordance with the approved schedule.
12. If the grading contractor or the home builder proposes a temporary contractor's storage yard or construction trailer, a plan showing the location, security fencing, lighting and landscaping shall be submitted for review and approval by the Design Review Board.

General Conditions:

13. The plans for construction of the new 5,776 sq.ft. 2 story home, 1,067 sq.ft. garage and 1,274 sq.ft. covered pool. at 226 Rheem Boulevard shall be substantially in accordance with the plans date stamped "Official Exhibit", October 22, 2007. Any significant architectural changes to the home or to the proposed grading and site development plans shall be subject to further DRB approval.
14. Finishing materials, such as stucco siding, trim, and paint color shall be consistent with the colors and materials board approved by the Design Review Board.
15. Seismic design of all structures shall be consistent with the Uniform Building Code, Seismic Zone 4, and the recommendations of the geotechnical report.
16. Prior to the issuance of certificate of occupancy, landscaping necessary for erosion control and bio-filtration of stormwater runoff shall be installed.
17. Exterior lighting around the home, guest house, detached garage and swimming pool shall be not cause undue glare or brightness and shall be directed away from adjacent properties.
18. The Conditions of Approval shall be located in the "Notes" section of the Building Plans.
19. If construction is not commenced within one year from the date of final action, the permit becomes null and void. However, this discretionary action may be renewed by the Planning Director for a maximum period of one (1) year provided the applicant places

such a request in writing to the Planning Director showing good cause prior to the expiration of the discretionary action.

20. This permit and each condition contained herein shall be binding upon applicant and any transferor, or successor in interest.

Drainage Conditions:

21. Prior to the issuance of the grading or building permit, a “Storm Water Control Plan” shall be submitted with a minimum area equal to 4% of the impervious surface area dedicated to infiltration to comply with the Contra Costa Clean Water Program Stormwater C.3 Guidebook and the Hydromodification Management Plan as approved by the Regional Water Quality Control Board for Contra Costa County or other device approved by the Town Engineer. The project engineer shall demonstrate to the satisfaction of the Town Engineer that the additional impervious surfaces will not cause an increase in the peak off-site flows. This may require the installation of a detention basin or other device approved by the Town Engineer to retain peak storm flows for controlled release to the creek channel below the site. The project geotechnical engineer, Friar Associates, Incorporated, shall be consulted to confirm that the areas chosen for infiltration would not increase soil movement or slope instability.
22. Prior to the issuance of the grading or building permit the drainage plans for the project shall be submitted for review and approval by the Town Engineer to comply with the Best Management Practices (BMPs) required under the Town’s NPDES Permit. Typically, all roof drains and surface drains for new impervious surfaces shall be routed through a biofilter, sand filter, or other stormwater treatment BMP prior to entering any storm drainage pipe or tight line drainage system. The landscaping plan submitted for the project shall show the location for infiltration and bio-filtration of storm water runoff from impervious surfaces and be consistent with the proposed drainage plan. Landscaped areas shall be drained away from paved areas to prevent these landscaped areas from being included in the total area that must have treated drainage water.
23. The applicant shall file a Notice of Intent (NOI) with the State Water Resources Control Board according to NPDES requirements.
24. Prior to the final grading inspection, the project civil engineer shall prepare a record drawing showing the as-built locations of all drainage facilities including inlets, outlets, cleanouts, and access ports. The project engineer shall also prepare a maintenance plan and schedule for all drainage facilities. The record drawing and maintenance plan shall be submitted to the Town and is subject to review and approval by the Town Engineer. The applicant shall provide to the individual property owners a copy of the record drawing and the maintenance plan, and maintenance schedule.

Construction Parking and Road Maintenance Conditions:

25. All work to be undertaken within the right-of-way of Rheem Boulevard shall be shown on the construction plans (i.e. storm drain, joint utility trench, curb and gutter improvements, etc.). Prior to undertaking any work within the public right-of-way, an encroachment permit shall be obtained from the Town.

26. Traffic striping and pavement messages that become illegible or obliterated due to the movement of construction vehicles on their route to and from the site shall be repainted prior to final acceptance of the grading or improvements. If during the grading and construction of the project, the Town Engineer determines that the legibility of striping or messages is a hazard, the applicant shall re-stripe or replace the messages during the construction period.
27. The grading contractor and the applicant shall be responsible for preventing spills of soil, rock or other debris on to the Town's streets. If any spills occur, the grading contractor and the applicant will be required to immediately cleanup the spill and repair any damage to the streets to the satisfaction of the Town Engineer. Pavement and/or base rock apron shall be provided at the entrance to the site to minimize dirt carried onto the Town streets. Specifications for the pavement or base rock apron shall be provided to the Town Engineer for review and approval prior to installation. Streets in the vicinity of the site shall be swept clean of soil on a frequent basis to reduce the accumulation of dirt during the grading operations.

Utility Connections:

28. All new utility distribution facilities including electric, telephone and cable television systems shall be installed underground from point of connection.
29. The Applicant shall comply with the requirements of the Central Contra Costa County Sanitary District (CCCSD) for sanitary sewer connections. These requirements include but are not limited to the following:
 - a. Prior to the issuance of a grading permit or working on the existing public sewer the applicant must contact the District.
 - b. The District requires gravity sewers in preference to pumped systems and locations in the public right-of-way.
 - c. The proposed sewers shall be designed to operate under gravity flow.
 - d. The applicant must extend a minimum 8-inch public sewer to serve each lot.
 - e. An exclusive public sewer easement must be established over the alignment of each public sewer in an off-street or private street location to provide access for future maintenance.
 - f. Toxic substances such as gasoline, oil, paint, and pesticide residue are prohibited from being introduced into the District sewer system.
 - g. The Applicant shall submit construction plans involving work on the public sewer for review and approval by the District, prior to applying for a building permit.
 - h. The Applicant shall pay Facilities Capacity Fees to the District at the time of connection to the sewer system.
 - i. The requirements listed in the District "Hillside and Creek Area Sewer Policy" shall be followed when construction plans are prepared.
 - j. The Applicant shall be responsible for the installation and operation and maintenance of the side sewers.
30. To reduce hazards from underground utility line breakage, flexible conduits and piping shall be utilized in fill areas where settlement or earthquake movements could cause a break in service lines, subject to approval by the Town Engineer.

31. To reduce earthquake hazards, manual shut-off valves for gas and water lines shall be installed for each lot.
32. If any relocation of Pacific Gas and Electric facilities becomes necessary, such relocation shall be done at the Applicant's expense.
33. The Applicant shall comply with requirements of AT&T for underground installation of telephone service as follows:
 - a. The Applicant shall be responsible for furnishing and installing conduit if AT&T requires it for the service connection wire or cable.
 - b. The Applicant shall provide and pay the cost of the underground supporting structure (usually a trench) for the buried wire or cable to be used for the service connections.

Grading Conditions:

34. Prior to the issuance of a grading permit, a certificate of insurance shall be provided to the Town to verify that both the applicant and the grading contractor have public liability insurance. The amount and type of insurance shall be reviewed by the Town and shall be sufficient to cover damages that may result from the grading operation.
35. The geologic and geotechnical hazards identified in the geotechnical report for the project shall be repaired in conformance with the recommendations of the project geotechnical engineer and the approved grading plan. Repair of geotechnical hazard areas shall not adversely affect properties adjacent to the project site.
36. If archaeological materials are encountered during grading operation, all work within 100 feet of the find shall be stopped, and the Planning Director shall be notified within 24 hours. The Applicant shall retain a qualified archaeologist to evaluate the significance of the find, prepare a report that documents the field investigation, and advise the Town and the Applicant regarding any mitigation measures deemed necessary.
37. The Applicant shall retain a civil engineer to periodically perform surveying during the grading operations. An as-graded record drawing shall be prepared by the project civil engineer at the completion of the project grading and submitted to the Town. The record drawing shall include as a minimum: the location of the limits of grading, the invert elevations of surface and subsurface drainage facilities, the locations and depths of keyways, and the finished rough graded pad elevations.
38. The Applicant shall retain a geotechnical engineer and an engineering geologist to periodically observe the grading operation.
39. Two weeks prior to commencement of the grading operation, notice shall be sent to residents in the vicinity to inform them of the date of the start-up of the grading. The notice shall include the telephone number of the construction supervisor and/or other responsible parties who may be contacted regarding the grading operation.
40. Prior to the start up of the grading, a pre-work meeting shall be held among the grading contractor, a representative of the Applicant, the project geotechnical engineer, the project engineer, the Town Engineer, the Town's Consultant Geotechnical Engineer, the Planning Director, and the various utility agencies. The purpose of the meeting shall be

to review the conditions of approval and to advise the individuals performing the work of the requirements of the Town.

41. All cut and fill excavations shall be balanced on-site. If any material is determined to be unsuitable for use as compacted fill by the project geotechnical engineer, the material shall be removed from the site to an approved dumpsite, with appropriate documentation from the project geotechnical engineer and approval by the Town Engineer and the Town's Consultant Geotechnical Engineer. An estimate of the amount of unsuitable material to be off-hauled from the site shall be provided to the Town Engineer. If the amount of soil exceeds 500 cubic yards, then the hauling of the soil shall be in accordance with PC Resolution 46-82 as amended by the Town Council on January 19, 1983.
42. Following the completion of the grading operations, the Town Engineer, Town Grading Inspector and Town's Consultant Geotechnical Engineer shall verify that the building pad is located in accordance with the approved grading plans and the pad elevation conforms to the plans.
43. The project geotechnical engineer following grading of the site shall prepare a grading completion report. The grading report shall be submitted to the Planning Director, Town Engineer and the Town's Consultant Geotechnical Engineer for review and approval. The report shall include the following information:
 - a. A summary of construction observations;
 - b. Adverse conditions encountered and the implemented remedial measures;
 - c. Testing performed during grading. Describing the methods of fill replacement and the results of density testing;
 - d. Certification that the grading operations were in accordance with the project geotechnical engineer's recommendations and the approved grading plan;
 - e. Re-evaluation of slope stability and erosion hazards on the site after the completion of grading;
 - f. The geotechnical engineer's specific recommendations for maintenance by the property owners to achieve long-term stability of the hillside areas;
 - g. Recommendations for maintaining drainage facilities and landscaping, including proper watering consistent with soil conditions; and
 - h. The geotechnical constraints on construction on the property, such as recommended setbacks from the top or bottom of graded slopes.
44. Following the completion of the grading operation, the property owner's geotechnical engineer shall submit a supplemental geotechnical report to confirm the assumptions that were made in the initial geotechnical engineering investigation. The supplemental geotechnical report shall contain geotechnical design parameters for the foundation system, retaining walls, and slabs on grade, control of on-site drainage, mitigation of adverse soil conditions, and any other relevant geotechnical issues. The supplemental geotechnical report shall also confirm that the project complies with the xxx-foot setback requirements from the landslides on the hillside. These reports shall be reviewed by the Town's Consultant Geotechnical Engineer and the cost of review shall be borne by the owner of the lot.

45. The applicant's grading contractor shall take precautions to see that topsoil is not inadvertently utilized as fill. This material shall be spread over building pad area following grading to assist in the establishment of a vegetative cover.

Erosion and Dust Control Requirements:

46. Prior to the issuance of a grading permit, erosion control measures shall be implemented for all areas impacted by the installation of the subdrain system. These measures shall be designated to minimize the amount of sediment reaching the Town's stormwater drainage system. The erosion control measures are subject to review and approval by the Town Engineer and the Town's Consultant Geotechnical Engineer. The applicant shall obtain an Erosion Control Permit, pay the Erosion Control fees and provide a performance bond to ensure continued effectiveness of erosion control measures. The Erosion Control Permit must be renewed annually.
47. Weather permitting; grading operations shall occur between April 15 and October 15, in order to avoid seasonal rainfall. An erosion control plan shall be submitted to the Town Engineer for review and approval prior to September 1. All erosion control measures shall be installed and deemed operational by the project engineer, Town Grading Inspector and Town Engineer prior to October 1. Erosion control measures shall be designed for long-term maintenance in order to provide protection during the build out of the project.
48. If grading continues beyond October 1, a cash bond or Certificate of Deposit for \$10,000 shall be provided to the Town guaranteeing maintenance of the erosion control measures. The applicant shall be responsible for payment of any fines imposed by the Regional Water Quality Control Board due to the applicant's failure to control erosion on the site. Grading operations that occur after October 1 shall not disturb the erosion control measures.
49. The Town of Moraga shall be authorized to draw against the cash bond or Certificate of Deposit for erosion control and to take appropriate action as may be required to protect off-site properties or water quality under the following circumstances:
 - a. The applicant has failed to install or maintain the erosion control measures in accordance with the approved plan.
 - b. The installation or correction of erosion control measures is not proceeding in accordance with the approved time schedule.
 - c. The Town Engineer finds that an emergency situation exists or is threatened whereby damage to off-site properties or water quality may result due to the discharge of soils, earthen material or debris.
50. The Applicant and its contractors shall be responsible to prevent erosion of soil on their property. If inspection by the Town shows evidence that sediments have been carried off-site, then the Applicant and its contractor shall be held responsible for the immediate cleanup of the deposits attributed to its project and correction of the cause of the off-site sediment deposition.
51. The Applicant shall provide phone numbers for its grading contractor and other responsible individuals so that the Town can contact these people at any time during the

day or night in the event that emergency repairs to the erosion control measures are needed.

52. 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 fall rains. 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.
53. Grading and construction efforts shall be conducted in such a manner as to minimize the generation of dust. During the grading operation, the contractor shall wet down the grading areas and any haul routes used by construction equipment at least twice daily during dry periods or as needed to prevent the generation of excessive dust. The wheels of hauling trucks and graders shall be washed as needed when exiting the site to prevent tracking excessive dirt onto nearby roadways, and roads shall be cleaned as required. All non-active graded areas shall be protected from erosion and wind exposure by applying a hydromulch with a tackifier. Any dust producing material shall be covered while being hauled, and storage piles of dust producing material on site shall be covered.

Noise and Pollution Abatement Requirements:

54. During project construction and grading operations, the hours of operation shall be limited to the hours from 8 a.m. to 5 p.m. Monday through Friday to minimize potential disturbance of adjacent residents. No construction shall occur on weekends or holidays unless an emergency situation develops, such as the potential collapse of a cut slope within a landslide. In an emergency situation, the Planning Director or Town Engineer may authorize extended work hours on weekdays or on weekends until the situation is no longer deemed an emergency.
55. All construction and grading equipment shall be equipped with manufacturer's standard noise control devices (i.e., mufflers, lagging, and/or engine enclosures). Equipment and trucks used for project construction shall utilize the best available noise control techniques (improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds to maintain the construction equipment noise limits used on General Services Administration projects. Newer equipment shall be used whenever possible. All construction equipment should be inspected at periodic intervals to ensure proper maintenance and hence, lower noise levels.
56. Equipment used for project construction shall have hydraulically or electrically powered impact tools (e.g., jack hammers, pavement breakers, and rock drills) whenever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used. This muffler can lower noise levels from the exhaust up to about 10 dBA. External jackets on the tools themselves shall be used where feasible, thereby achieving a further reduction of 5 dBA. Quieter procedures shall be used such as drilling rather than impact equipment, whenever feasible.

57. Stationary noise sources shall be located as far from any existing on and off site sensitive receptors as possible. If they must be located near existing receptors, they shall be adequately muffled, and enclosed within temporary sheds.
58. Temporary noise barriers shall be used to provide shielding when construction activities are within 100 feet of residential land uses, and are expected to continue for more than seven days in a specific area. Barriers would also be necessary in areas where the background noise is relatively low and construction activities are expected to continue for more than three days in a specific area. Noise barriers can be made of ¾ inch plywood, natural or temporary earth berms, or stockpiles of construction material. Such noise barriers shall be safely secured on site.
59. Construction equipment shall be maintained and tuned at the interval recommended by the manufacturers to minimize exhaust emissions. Equipment idling shall be kept to a minimum when equipment is not in use. No piece of equipment shall idle in one place for more than 30 minutes.

Design Review Board action is appealable to the Planning Commission within 10 calendar days after the date of the decision. If you have any questions regarding the action of the Board, please contact the Moraga Planning Department at (925) 888-7040.

EXHIBIT D

**HILLSIDE DEVELOPMENT PERMIT
FACTORS UNDER
MMC SECTION 8.136.070**

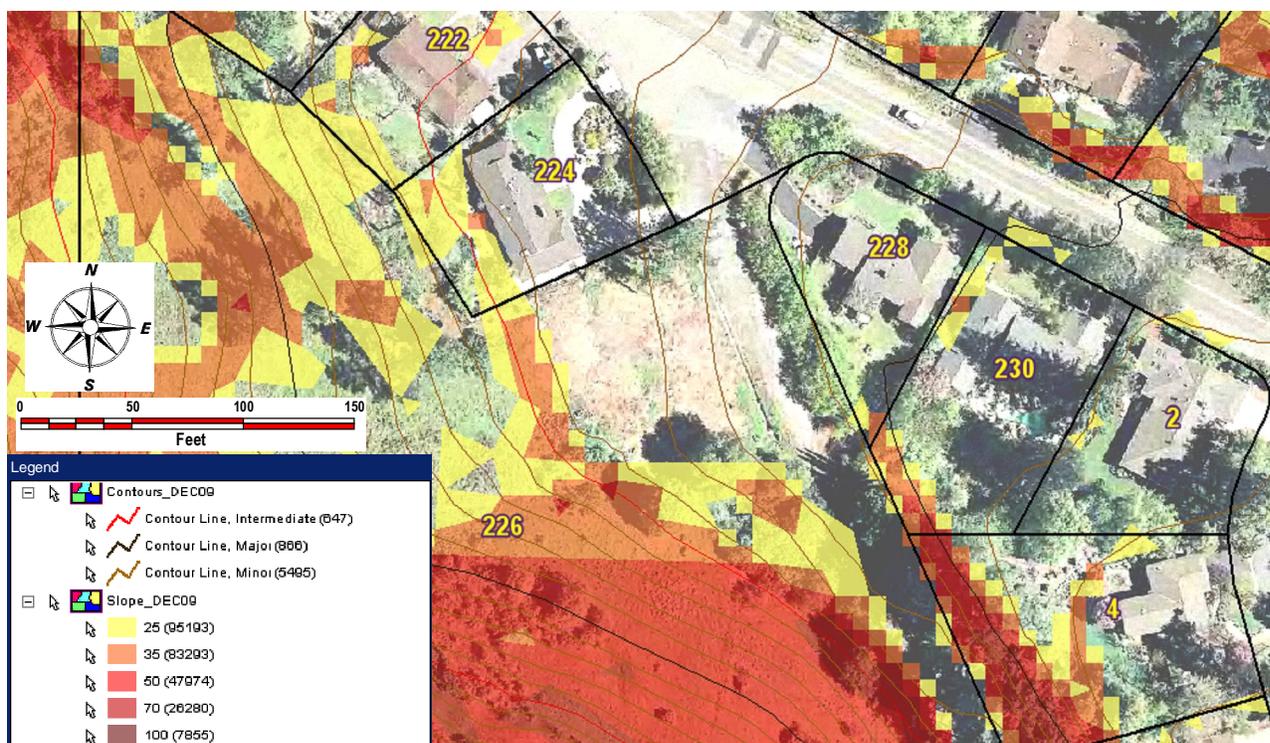
EXHIBIT D

HILLSIDE DEVELOPMENT PERMIT FACTORS TO BE CONSIDERED FOR 226 RHEEM BOULEVARD FOR REVISED GRADING

Moraga Municipal Code Section 8.136.070 requires the reviewing body to consider the following factors:

1. Slope

Chapter 8.136 of the Moraga Municipal Code (MMC) applies to any project with a slope of 20% or greater. Although the average slope within the MOSO “building cell” is less than 20%, a hillside development permit is required because the grading and alteration of the hillside for the service driveway is on some slopes that are greater than 20% as shown on the GIS slope map below.



The areas on the GIS aerial map above with no color overlay have a slope less than 20%

2. Soil Instability

Prior to construction of the new home, extensive grading was done for installation of a deep buttress fill to stabilize the slope behind the home. A keyway was installed with subdrains located about 30 to 35-feet below the finished grade of the buttress fill. The project geotechnical engineer, Friar Associates, Inc. (FAI), should address slope stability issues for the proposed revisions to the grading. The Town received a letter from FAI on April 5, 2011, which is attached as **EXHIBIT E**. The FAI letter states that the proposed retaining walls need to be installed to support the existing excavations that were cut into the hillside. In staff’s opinion, there are several other slope stability and design recommendation issues that should be addressed by FAI as listed on the next page.

1. Will the proposed design for the retaining walls be sufficient to hold the slope and if not, what are the recommended design specifications for the retaining walls?
2. Was a keyway installed under the 6-feet of fill and 3:1 slope northeast of the service driveway and if not, should one be installed?
3. Should drainage pipes be installed below the gravel on the service driveway to help prevent water from the hillside that drains down to the driveway from saturating the soil below and possibly over-loading the deep sub-drain pipes installed with the buttress fill?

In accordance with the Moraga 2002 General Plan Public Safety Element, Policy PS4.2, the technical recommendations from FAI shall be reviewed by an independent licensed soil engineer, geologist and/or structural engineer approved by the Town and at the expense of the developer. The determination of slope stability must be made prior to approval of the grading permit for the amended grading plan. The prior Town consultant for geotechnical peer review at 226 Rheem was Cal Engineering and Geology, Inc.

3. Drainage

The footprint of the new home, including the garage and pool enclosure, is 6,070 sq.ft. and the area of the previously approved driveways and site paving is 6,335 sq.ft. The total impervious surface area that was approved on October 22, 2007 was 12,405 sq.ft. Since the impervious surface area exceeded 10,000 sq.ft., the project was required to comply with the Contra Costa Clean Water Program Stormwater C.3 Guidebook and the Hydromodification Management Plan (HMP) approved by the Regional Water Quality Control Board for all of Contra Costa County. The revised plans include 1,015 sq.ft. of additional driveway near the northeast front corner of the garage and 1,043 sq.ft of patio at the southwest rear side of the house. The project civil engineer, Bob Rourke, has confirmed that the addition of the low rock retaining walls for tree planting at the edges of the two existing retention basins does not compromise the design capacity of the retention basins and that they are sized to handle the 2,058 additional paved area. Drainage recommendations from FAI, to address the gravel service road or drainage behind the new retaining walls will need to be incorporated into the plans.

4. Soil Characteristics

The soil characteristics on the project site were described on Pages 3 and 4 of the July 7, 2003 FAI report. In the FAI April 5, 2011 letter, John Friar indicates that the excavations for the two walls have been made into stiff clay soil. Since the soil is not very porous, permeable paving surfaces, including the proposed gravel on the service road, would not necessarily increase the infiltration and absorption of water into the soil.

5. Seismic Factors

The project site is not within an Alquist-Priolo Earthquake Fault Zone delineated by the State Geologist, and therefore the risk of fault offset across the site is remote. However, the site is located about 4.7 miles from the Hayward fault, 5 miles from the Calaveras fault, 8.4 miles from the Concord-Green Valley fault and 23 miles from the San Andreas fault. The maximum moment magnitude of M7.9 would be from a seismic event on the San Andreas fault. The seismic design parameters are listed on page 5 of the July 7, 2003 Friar Associates, Inc. (FAI) report.

6. Existing and Future Residential Development

The home that is under construction will be the only home built on the 9+ acre property. Most of the property at 226 Rheem Boulevard is covered by a scenic easement beyond the approved MOSO building cell. Future residential development would be limited to additions to the existing homes in the vicinity.

7. View Shed

The new home under construction at 226 Rheem Boulevard is higher up the slope than the adjacent residence at 224 Rheem Boulevard; however, it is not located on or near a minor ridgeline. The location of the home was moved 56-feet from the adjacent home on the north side. The installation of the low rock walls in the two retention basins along the northwest side and north front corner of the lot was done in order to provide a better planting area for the trees. The two retention basins show clearly on sheet 5 of the grading plans. Prior to the major slope stabilization work and installation of the buttress fill, there were a number of pine trees along the northwest side property line that partially blocked the view of the property from the Rheem Boulevard scenic corridor. The approved landscape plan includes a row on either side of the driveway of Chionanthus Retuses Allee (Chinese Fringe Trees). These trees grow to 20-feet high and have flower clusters in June and July. They are described as a tremendous white lilac. There will be Japanese Maple Trees located further up the slope between the house and the driveway and new Oak Trees along the northwest side property line. There are two existing Oak Trees below the service driveway extension. All the proposed landscaping will substantially filter the views of the new home and the proposed new retaining walls above the service driveway.

8. Noise

Most of the grading has already been completed; therefore, there should not be very much additional noise from grading equipment. There are quite a few large pallets of stone pavers and retaining wall blocks, which will probably be moved closer to the work site by a fork lift. No exterior equipment that would contribute to noise or vibrations is shown on the revised plans. The Town's Noise Ordinance limits construction and grading activities to between the hours of 8:00 a.m. and 5:00 p.m. In addition, the previous conditions of approval with standards for the noise levels of construction equipment have been referenced in the draft action memorandum.

9. Potential traffic congestion

The proposed amendments to the grading and landscape plans will not adversely impact traffic in the area. When the new island was installed in Rheem Boulevard near the driveway entrance to the property, it was designed to allow the school bus to turn around the island. However, there were some problems with people parking at an angle to the curb and blocking the turning radius needed for the school bus driver to make the turn. Presumably this problem has been solved because I haven't heard any complaints recently from the school district. The island helps to delineate the south side of Rheem Boulevard at the former intersection with Goodfellow Drive and is depressed to help intercept some of the water coming down Rheem Boulevard.

10. Fire risk

This project should help improve access for the Moraga-Orinda Fire District (MOFD) where their smaller trucks could drive on the new service driveway and gain access to the old paved section of the abandoned “Goodfellow Drive” along the northeast side property line. There are no other aspects of the proposed plans that would significantly increase the fire risk.

11. Wildlife

When the new home was approved on October 22, 2007, the applicant was permitted to remove four Live Oak trees with 6” to 18” trunk diameters, six pine trees with 18” to 36” trunk diameters and 1 Bay Tree with an 18” trunk diameter. The applicant’s landscape plan includes the planting of three 24-inch box specimen Oak trees and four 36-inch box specimen Oak trees as replacements. No additional trees will be removed for the amended grading and new retaining walls. 344,309 square feet (7.9 acres) of the property is located in a scenic easement and will not be developed.

12. Dust

Standard conditions of approval for dust control have been included in the draft action memorandum or reference has been made to the original conditions of approval, which remain in effect.

13. Glare

The project site is on the north side of a minor spur ridge. The additional paved driveway area, patio area, retaining walls and gravel service road would not contribute to glare.

14. Impact on Existing Vegetation

The grading that has been done for the service driveway extension at the southeast side of the garage includes fill soil on the slope above two existing Oak Trees, which is shown in the photo below. The existing fill is at approximately a 2:1 slope and the fill stops just short of the drip line of the Oak Trees. Condition 8 on page 6 of the October 22, 2007 DRB Action Memorandum prohibits grading, compaction, stockpiling or change in ground elevation within the drip line of the native trees. Sheet 2 of the revised grading plans shows a 3:1 slope below the service drive and the bottom of the fill would encroach into the drip line. Staff has asked for an arborist’s report to address whether this fill would



jeopardize the health of the Oak Trees. Assuming that it would be harmful to the trees, the Design Review Board may choose to consider some alternatives. A low rock wall similar to the one in the lower retention basin could be installed at the drip line and thereby allow a 3:1 slope above the wall. If the Design Review Board grants an exception to allow a 2:1 slope below the service road, then the planting on the slope would need to be reviewed to make sure that it could retain the soil and prevent erosion on the steeper slope.

15. Additional factors to be considered in reviewing a Hillside Development Permit:

a. Minimum Lot Area

This 9.57 acre lot was subdivided in 1992. The net lot area, excluding the portion to be dedicated to the Town, is about 29 times the size of the parcels in the vicinity. The developable building cell area is about 1.5 acres in size. The proposed changes to the approved grading and landscape plans will not change the lot area.

b. Appropriate Living Space

The proposed amendment to the plans include a new 1,034 sq.ft. patio behind the home, which will increase the outdoor living space adjacent to the home. The addition of the new stairs at the southeast side of the garage will provide more direct access to the large deck over the garage at the south side of the family room. The proposed gravel service driveway extension will improve the access to the southeast side of the property.

c. Location of Building Sites Adjacent to Steep Slopes

The new home is located higher up the slope than the lowest possible elevation, but it is within the developable MOSO building cell and is well below the ridgeline above the property on Zander Drive. The new retaining walls proposed southeast of the garage are also located near the bottom of the hill adjacent to the home.

d. Additional Restrictions or Requirements

On November 20, 2006, the Planning Commission agreed with the Design Review Board's recommendation for a 50-foot minimum building setback from the north property line to reduce the view impact to the adjacent home at 224 Rheem Boulevard. There were no other significant restrictions on the development of the property.

EXHIBIT E

**LETTER FROM
FRIAR ASSOCIATES, INC.
DATED APRIL 5, 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

April 5, 2011
Project 1079Mor

Mr. & Mrs. Richard & Rose Wang
151 Calle La Mesa
Moraga, CA 94556

Dear Mr. & Mrs. Wang:

Proposed Landscape Retaining Walls
Residential Development
(File No. DRB 12-2006)
226 Rheem Boulevard
Moraga, California

We are submitting this letter in response to the request by the Planning Department of the Town of Moraga regarding the additional grading and in particular, the excavations made for the planned garden walls at the subject residence. The residence is located at 226 Rheem Boulevard in Moraga, California. The excavations have been made in the area to the southeast of the garage for the building.

We understand that a stop work order on grading activities has been given by the town as a result of this additional grading. We were at the site on Saturday, April 2, 2011, to evaluate the existing conditions. Excavations have been made for a two tiered wall; an upper wall which will join an existing wall, and a lower wall. The excavations have been made into the stiff clay. The maximum height of the excavation is about five feet. We understand that the highest portion of the planned wall will be about four feet.

At the time of our site visit, the area where the excavations had been made had been covered with plastic sheeting. However, we noticed that there has been some minor slumping from the top to the toe of the excavations. In addition, there has been some loss of soil in the face of the excavations. The slumping and the loss of soil occurred as a result of the recent storms.

April 5, 2011
Project 1079Mor

Based on the site conditions, it appears the excavations can stand on their own without support for a temporary short-term construction period. However, if left unsupported for a long period of time, there could be further loss of soil from the excavations which cause slope instability at the site.

Sincerely,

FRIAR ASSOCIATES, INCORPORATED


John H. Friar
CE 52281



Copies: Addressee (1)
Planning Department (1)

EXHIBIT F

**DESIGN ASPECTS UNDER
PLANNING COMMISSION
RESOLUTION 16-01**

EXHIBIT F

DESIGN ASPECTS TO BE CONSIDERED IN ACCORDANCE WITH MUNICIPAL CODE SECTION 8.72.080-A FOR 226 RHEEM BOULEVARD

1. Maximum height, lot coverage and setbacks:

The site development standards for 226 Rheem Boulevard were adopted by the Planning Commission on November 20, 2006 (Resolution 14-2006 PC). The site development standards are listed in the following table.

	Site Development Standards for 226 Rheem Boulevard (Parcel "A" MS 602-89)	Project Compliance
Lot Area	9 Acres	Yes (9.57 acres)
Frontage	50 feet (Actual frontage of Parcel "A" after dedication of Rheem Boulevard frontage of property)	Yes
Front Yard Setback	25 feet	Yes (113.6 feet)
Minimum Side Yard Setback	50 feet on north side	Yes (50 feet)
Sum of Side Yards	70 Feet (20 plus 50)	Yes (279 feet)
Rear Yard Setback	20 feet	Yes (186 feet min.)
Maximum Building Height	35 feet	Yes (33 feet at the highest roof ridge)
Maximum Aggregate Building Height	40 feet	Yes (39 feet 2 inches)
Maximum Site Coverage	15.7% (Limited by MOSO Cell area which is 1.51 acres in size)	Yes (1.5% coverage by home, garage and pool structure)
Maximum Floor Area	8,117 square feet, including garage and covered pool	Yes (8,117 square feet)

The approved plans for the new home and the on-site construction comply with all the site development standards. The proposed expansion of the driveway at the southeast side of the garage and addition of the 1,034 sq.ft. patio at the back do not conflict with the lot coverage requirements. The proposed 2-foot and 4-foot high retaining walls do not exceed any standards.

2. Overall mass and bulk of structures:

The FAR guidelines do not apply to parcels that are over 20,000 square feet in area. A comparison of the floor area of the new home to the floor area of the surrounding homes was provided in the staff report for the October 22, 2007 DRB meeting and is not applicable to the current revisions to the grading and landscaping plans.

3. Special features of the development, such as walls, screens, towers and signs:

The revised grading and landscape plans will have two additional retaining walls at the southeast side of the garage. These walls are proposed for a cut into the slope to provide for a new service driveway connecting to the old paved road along the northeast property line. There are also two low rock walls made with boulders to provide planting pockets at the margins of two retention basins. The project civil engineer, Bob Rourke, has determined that the encroachment of the low rock walls will not impair the design capacity of the retention basins.

4. Effective concealment and sound attenuation of exposed mechanical and electrical equipment:

The mechanical equipment room for the new home is located in the basement area under the house. The swimming pool equipment is located at the northwest side of the home and about 12-feet from the west rear corner of the property at 224 Rheem Boulevard. The plans show a wood screen around the pool equipment. A new concrete pad has been provided at the southeast side of the garage for the garbage containers. The landscape plans show a short section of fence to screen the garbage containers from view.

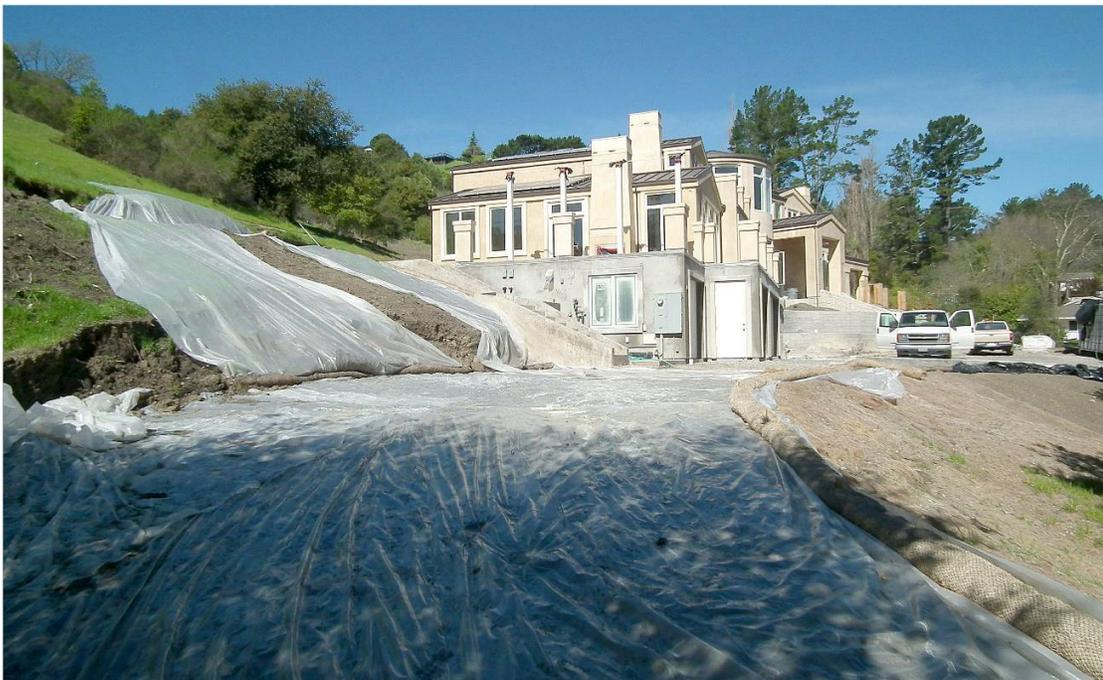
5. Colors and materials on the exterior face of the building or structures, striving for a limited number of colors and materials for each project:

The approved color pallet for the new home is shown at the right. The material for the exterior walls will be stucco, with two colors. The tower at the center of the home will be a light beige and the rest of the stucco will be a darker shade of beige. The stucco will have two textures, with scored stucco on the skirt walls and garage walls, and smooth stucco on the main floor and second story. The roof will be a standing seam metal roof in a dark brown color. The two new retaining walls at the southeast side of the garage will match the existing retaining wall that is behind the home. The pictures on the next page show the existing retaining wall and the area for the new retaining walls.





Retaining Wall behind the home at 226 Rheem Boulevard



Cut into hill above driveway extension southeast of the garage

6. Avoidance of repetition of identical entities whenever possible:

In staff's opinion, the two new retaining walls southeast of the garage should match the exiting retaining wall behind the house. The circular terraced retaining walls in the front yard below the home have wide tops and tie in with the circular parking court. The dark brown cement blocks on the retaining wall behind the house blend in with the hillside.

7. Harmonious relationship with existing adjoining developments avoiding both excessive variety and monotonous repetition, but allowing similarity of style, if warranted:

There are similar retaining walls residential lots along Rheem Boulevard and the proposed retaining walls at the southeast side of the garage would be compatible with these other walls.

8. Pleasing landscaping which incorporates existing landscaping and terrain as a complement to the structure, using plants which thrive in the Moraga climate and which are large enough in size to be effective:

The revised landscaping plan is basically the same as the previously approve plan except for the expanded driveway area in front of the southeast garage, the new patio at the rear, and the grading and retaining walls for the service driveway at the southeast side of the garage. Aside from the concerns for fill soil within the drip line of the two Oak Trees below the service road that were discussed in Exhibit D, the landscaping plan should enhance the appearance of the project site. In order to provide planting pockets for some of the trees along the entrance driveway, some low rock walls were installed within the retention basins. The photo below shows the rock wall in the lower retention basin. A similar rock wall could be used below the service road to eliminate or reduce any encroachment of fill within the drip line of the Oak Trees.



Rock retaining wall at southwest side of entrance driveway

9. Compliance with Chapter 8.132 (scenic corridors):

The subject property is located within 500-feet of the Rheem Boulevard scenic corridor. Compliance with the scenic corridor design guidelines was discussed in the October 22, 2007 staff report. The grading for the service driveway and two additional retaining walls are partially screened from view by two existing Oak Trees and would have minimal impact to the scenic corridor.

10. Impact on neighboring properties:

The proposed revisions to the landscaping and grading are located more than 100-feet from any adjacent neighbor and are not expected to have any significant impacts on the surrounding properties. The draft action memorandum includes conditions pertaining to construction noise, dust and hours of work or reference to the existing conditions of approval, which are still in effect.

11. Impact on public safety:

The proposed retaining walls will have no adverse impact on public safety because they will be constructed in accordance with all applicable building and safety codes. With regard to slope stability, the primary grading work with the deep buttress fill was completed. The project geotechnical engineer still needs to address some specific concerns that were discussed in Exhibit D for the Hillside Development Permit. Nevertheless, the cut in the slope and fill below the service road are not located near any habitable structures and their failure would not pose a serious public safety issue.

12. Harmony with the general plan, design review guidelines and floor area ratio guidelines:

The expansion of the driveway, additional patio area, two retaining walls and service driveway connection to the abandoned “Goodfellow Drive” road along the northeast property line are not in conflict with any General Plan policies. Compliance with applicable Town Design Guidelines is discussed in **EXHIBIT G**. As noted previously, the project is exempt from the FAR guidelines because the lot is over 20,000 square feet.



Pan from entrance driveway with Oak Trees and service driveway extension on left side



New stairs at southeast side of garage

EXHIBIT G

APPLICABLE DESIGN GUIDELINES FOR 226 RHEEM BOULEVARD

EXHIBIT G

APPLICABLE DESIGN GUIDELINES FOR 226 RHEEM BOULEVARD

3 MAINTAIN THE TOWN'S SEMI-RURAL CHARACTER (SRC)

SRC1 Retain, protect, and utilize existing natural features, such as trees and other vegetation, interesting ground forms, rocks, water, and significant views in the design.
Comment: The proposed revisions to the grading do not disturb any existing natural features or result in the removal of trees. See EXHIBIT D for concerns regarding fill soil within drip line of the two oak trees below the service driveway.

SRC2 The impact and presence of vehicles resulting from the development should be minimized through proper siting and screening in order to buffer parking areas from locations both interior and exterior to the site.
Comment: The expanded driveway at the northeast front corner of the garage is needed to provide more maneuvering area in front of the third garage. The service driveway connection to the old paved road along the northeast property line (abandoned Goodfellow drive) will provide better access to the south side of the property for both the owner and the Moraga-Orinda Fire District.

SRC5 Preserve natural site amenities.

- Development should be planned in relation to natural features.
- Natural features must be protected both during and after construction of the project.
- Retain trees and other native vegetation, consistent with tree preservation ordinance, to maintain current stability of steep hillsides, retain moisture, prevent erosion, and enhance the natural scenic beauty. Grading under tree driplines should be avoided to protect the root system during development.
- Treat significant natural features, such as creeks, rock out-croppings, and prominent knolls, as assets.

Comment: No natural features or trees will be removed for the expanded driveway or new patio area behind the home.

SRC8 Mature native tree groupings should be protected.
Comment: The Design Review Board conditions of approval dated October 22, 2007 prohibit any fill soil within the drip line of native trees. Staff recommends that a low rock wall should be installed along the drip line of the oak trees below the service road so that the proposed 3:1 slope will not be extended into the drip line of the trees. Alternatively, the Board could approve an exception to allow the 2:1 slope to remain below the road.

4 PROTECT RIDGELINES AND HILLSIDE AREAS (RH)

RH1 Protect ridgelines from development.
Comment: The new home and driveway improvements are within the MOSO cell on the property, which is at the bottom of the slope. The proposed grading revisions are well below the ridgeline at Zander Drive above the property.

- RH2 New development should be sited in areas that are least sensitive in terms of environmental and visual resources, including areas of flat or gently sloping topography.
Comment: The project civil engineer calculated that the average slope within the limits of the expanded graded area is 23.6%. The hillside area that is proposed for the driveway extension southeast of the garage is not an environmentally sensitive area. There are no streams of riparian habitat. The only concern is the potential for fill soil within the drip line of the oak trees below the driveway extension.
- RH6 Hillside grading shall blend with natural slopes and be contoured to achieve a natural appearance. The use of retaining walls and other man-made grading features to mitigate geologic hazards should be avoided.
Comment: In order to create a level bench for the service road, the slopes above and below the road need to be steeper. The slope above the road cannot be contour graded to create the bench because the slope would be too steep. Retaining walls are required for the cuts for the road but not to mitigate any geologic hazards.
- RH7 On hillside lots fire safe landscaping should be used. Landscaping should be distributed around structures to provide screening from off-site views. Adequate water supplies and fire-fighting access shall be provided.
Comment: The proposed road extension connecting to the old paved road southeast of the new home will improve fire access in this area. The plants on the landscaping plan are the same as previously approved on October 22, 2007.
- RH10 Preserve both close-up and distant views of the natural hillside and ridgeline landscape as seen from valley areas.
Comment: The expanded driveway areas will not block any close-up or distant views of the hillside or ridgeline from valley areas.

5 COMPLEMENT EXISTING LANDSCAPING (L)

L1 FIRE SAFE LANDSCAPING

- L1.1 On residential lots located adjacent to open space or heavily wooded areas, trees should be planted no closer than 15 feet from the exterior wall of a residence.
Comment: The trees on the landscaping plan are further than 15 feet from the exterior walls of the new residence.
- L1.3 Landscaping should be properly irrigated to assure that plants retain their fire retardant capability, but shall not be over watered so as to create runoff from the site.
Comment: The landscaping will have an irrigation system.

L2 SINGLE-FAMILY RESIDENTIAL LANDSCAPING AND IRRIGATION

- L2.2 New irrigation systems shall include automatic rain shut-off controller devices.
Comment: This design guideline is also a requirement under the new CalGreen Building Code for new homes.

- L2.3 Irrigation runoff shall not be discharged into the storm drain system. Therefore, over watering of the landscape shall be avoided. Opportunities shall be provided for biofiltration that routes stormwater through landscaping and then to an appropriate drainage facility.
Comment: The project site has two retention basins below the home, which are shown on sheet 5 of the grading plans. Any irrigation runoff from the front or northwest side of the home would flow into these retention basins. There is also a depression with a drain at the southeast side of the driveway and northeast of the two oak trees below the proposed service driveway. This depression would catch runoff from the southeast side of the home.
- L2.4 Drought tolerant plant species are encouraged as they use less water and are often fire safe.
Comment: The plant species on the landscape plan have not been changed since the original approval on October 22, 2007. The changes to the landscape plan are primarily hardscape changes with the expanded driveway and patio areas.

6 ENHANCE TOWN'S SCENIC CORRIDORS (SC)

- SC3 The greenbelt separating a single-family residence from a scenic corridor roadway should have a minimum depth of 20 feet. This depth can be lessened if mitigated by shrubbery, trees and/or other acceptable elements or landscaping.
Comment: The greenbelt between the new home and Rheem Boulevard exceeds 20-feet. The home has been set-back much further from the road than most of the existing homes in the area.
- SC9 In order to enhance the landscaping along designated scenic corridors, new development within 500 feet of these corridors should include trees and shrubs from the list in the design guidelines under SC9 and the list of trees and shrubs recommended by the Moraga Beautification Committee in Appendix A of the design guidelines, which includes several planting palettes for Oak, Redwood, Traditional and Bio-swales.
Comment: Much of the palette for the planting is from the Oak palette in Appendix A; however, when this project was approved in October 22, 2007, the new guidelines with the planting palettes from the Gates Report had not been added to the guidelines.
- SC12 Design shall be consistent with the Moraga Municipal Code Section 8.132.
Comment: The visual impact of the new home from the scenic corridor was discussed with the approval of the project on October 22, 2007. The grading for the service driveway and two additional retaining walls are partially screened from view by two existing oak trees and would have minimal impact to the scenic corridor.
- SC13 Viewsheds, including but not limited to close up and distant views, ridgelines, hillsides and mature native tree groupings should be protected along the Town's scenic corridors to retain the Town's semi-rural character.
Comment: The proposed retaining walls, service road and expanded driveway would not block any close-up or distant views from the scenic corridor.

7 MINIMIZE THE IMPACTS OF DEVELOPMENTS (ID)

ID1-7 APPLICABLE TO ALL DEVELOPMENT

- ID1 Downhill or uphill portions of any project shall provide landscaped treatment to address potential erosion, to be in harmony with adjacent developments, and to provide a complimenting view from distant horizons. Dense native landscaping should be used to blend hillside structures with the natural setting.
Comment: If the Board grants an exception to allow the 2:1 slope below the service driveway to remain in order to avoid any fill within the drip-line of the oak trees, then the landscape treatment for the slope will need to be submitted to prevent erosion on the slope.
- ID3 Wind barriers, shade, sound absorption, dust abatement, glare reduction, and proper drainage should be provided on site.
Comment: The recommended conditions of approval include noise limitations and dust abatement measures. Drainage issues will be addressed by the Town Engineer.
- ID5 Geologic hazards shall be addressed:
a. Construction should not take place in geologic hazard areas identified as landslides, springs, or earthquake fault zones.
b. Risk of off-site geologic property damage should be minimized by locating development away from areas which are vulnerable to slope failure.
c. Professional evaluation of soil conditions and potential geologic hazards should be completed for all new homes.
*Comment: The geologic hazards were discussed in **EXHIBIT D** for the hillside development permit. The recommended conditions of approval require professional evaluation of the soil conditions and potential geologic hazards.*
- ID6 The level of lighting should not exceed the needs for security and safety or detract from the aesthetics of the development.
a. Outdoor lighting should be related to the design of the structure.
b. Outdoor light fixtures should be designed and mounted so that the source of light has minimal impact off site.
c. Outdoor lighting should be directed inward toward the property and may require additional screening to avoid spillage onto adjacent residential properties.
*Comment: The exterior lighting fixture on the home was approved on October 22, 2007 and is shown on the color palette pictured in **EXHIBIT F** on page 2. No other exterior lights are shown on the project plans. The driveway and circular parking court are quite extensive and the property owner may need to install more lights for safety and security in this area. Any additional lighting must comply with the design guidelines under ID6, above.*
- ID7 Design shall be consistent with the Moraga Municipal Code section 13.04.090.
Comment: The Town Engineer will be reviewing the project for compliance with best management practices for erosion control.

ID8 SWIMMING POOLS

- ID8.1 The draining of all swimming pools shall be directed to the sanitary sewer system whenever feasible and be conducted in compliance with the permitting and standards established by Central Contra Costa Sanitary District. Overflow drains from swimming pools shall be directed to a landscape area or manufactured treatment system prior to connecting to the storm drain system. Best Management Practices (BMPs) shall be used to manage overflows.
Comment: This design guideline requirement has been added to the recommended conditions of approval in the Draft Action Memorandum because it was not included in the original approval. The property owner needs to be aware of the restrictions on draining a pool to the storm drain system.

ID9 PAVING

- ID9.1 Impervious surfaces shall be minimized through site design and building methods. Directly connected impervious surfaces shall be minimized to avoid excessive concentrated stormwater runoff. Any runoff from impervious surfaces shall be directed to pervious areas or landscaped depressions.
Comment: The hardscape plans show dry-laid permeable unit pavers on the driveway with paver bands. The extension of the driveway at the southeast side of the garage will have a gravel surface. The problem with permeable paving surfaces in Moraga is that most of the underlying soil has lots of clay and is not very good for absorption of drainage after it becomes saturated. The driveway is sloped to drain towards the retention basin.
- ID9.2 Impervious paving may be reduced by using permeable materials for pedestrian walkways, parking facilities, and areas with light traffic. Examples include:
- a. Unit pavers-on-sand: turf block, brick, natural stone, or concrete unit pavers
 - b. Poured pervious surfaces: pervious concrete or pervious asphalt
 - c. Granular materials: crushed shells, gravel, aggregate base, cobbles, or wood mulch.
- Comment: The new 1,034 square foot patio behind the home will have travertine pavers mortared on concrete. As noted for guideline ID9.1, above, it really doesn't make a big difference whether the paving is permeable due to the type of clay-like adobe soil found in Moraga.*

ID10 GRADING

- ID10.1 Grading for any purpose may be permitted only in accordance with an approved development plan that is found to be geologically safe and aesthetically pleasing.
*Comment: The safety of the grading was discussed in **EXHIBIT D** for the hillside development permit. The question of whether the additional grading and retaining walls will be aesthetically pleasing is for the Design Review Board to decide.*
- ID10.3 When the pre-development slope is greater than or equal to 20%, development shall be avoided, but may be permitted if supported by site-specific analysis. When grading land with a slope of 20% or more, soil displacement and retaining wall use shall be minimized by using contour grading techniques. In MOSO areas,

development shall be prohibited on slopes with an average gradient of 20% or greater. Design shall be consistent with Moraga Municipal Code Title 14.

*Comment: The procedural requirements for the grading permit were discussed in the staff report and in **EXHIBIT D**.*

ID10.5 Cut slopes should be placed behind buildings or other structures where they will be screened.

Comment: Most of the cut slopes have been placed behind and under the new home. The proposed 2-foot and 4-foot high retaining walls southeast of the garage will be partially hidden behind the two Oak trees below the service road extension.

ID10.6 Preserve the natural topography of the land, especially at the horizon:

- a. Round off graded slopes, in a manner that conforms to the natural contours of the land and to the surrounding terrain. Sharp angles produced by earth moving, specifically at the top and toe of graded slopes shall be avoided.
- b. Slopes shall be contour graded to achieve a natural appearance.
- c. Slopes shall be blended with the contours of contiguous properties and create a smooth transition.
- d. Grading shall minimize scars due to cuts, fills, and drainage benches on natural slopes.

Comment: The proposed grading conforms to the above guidelines except for the two new retaining walls. The 28-foot separation between the walls will allow for some landscaping to help screen the walls and make them blend with the hillside.

Neither cuts nor fills shall result in slopes steeper than 3:1 (horizontal to vertical), except where natural slopes are steeper. Where steeper slopes are unavoidable, special mitigation measures shall be incorporated into the design construction and maintenance of the slopes.

Comment: The project civil engineer, Bob Rourke, has shown a 3:1 slope below the service driveway. This slope will require fill to be placed within the drip line of the two Oak trees below the driveway. In order to avoid any fill below the trees, a low rock retaining wall could be built along the drip line of the trees to catch the 3:1 slope. An alternate would be an exception to this guideline to allow the 2:1 slope to remain below the driveway.

ID11 RETAINING WALLS

ID11.1 Retaining walls (excluding foundation retaining walls) and other man-made grading features may only be used to mitigate geologic hazards when:

- a. required to decrease the possibility of personal injury or property damage
- b. designed to blend with the natural terrain and avoid an artificial or structural appearance
- c. appropriately screened by landscaping
- d. designed to avoid creating a tunnel effect along roadways and to ensure unrestricted views for vehicular and pedestrian safety
- e. designed to ensure minimal public and/or private maintenance costs

Comment: The proposed retaining walls will be partially screened from view by the two existing Oak trees and additional landscaping could be added to the hillside between the two walls.

- ID11.2 Exterior retaining walls shall be limited to five feet in height, unless it is visible from off site, in which case it shall be no higher than three feet. The total height of a retaining wall and fencing on top of the wall shall not exceed eight feet without Design Review Board approval. A guardrail or handrail (provided a solid fence does not support it) may be located on top of the retaining wall.
Comment: Neither of the retaining walls exceeds 5-feet in height. The project civil engineer estimated that the lower wall adjacent to the driveway will be 4-feet high, but it would not exceed 5-feet in height.
- ID11.3 A retaining wall exceeding 3 feet requires professional engineering, a building permit, and may require a grading permit. Design Review Board approval is required if the retaining wall is visible from off-site.
Comment: The retaining walls on the hillside above the service driveway will require building permits even if they are less than 3-feet high because they have a surcharge or slope above the retaining wall.
- ID11.4 The horizontal depth of the terraces between stacked retaining walls should be a minimum of twice the height of the larger adjacent wall.
Comment: The horizontal depth of the terrace between the two retaining walls is 28-feet, which exceeds the 8-foot design guideline requirement for the 4-foot high wall.
- ID11.5 Retaining walls should be built a minimum of three feet from a property line.
Comment: The retaining wall that is closest to a property line is about 65-feet from the northeast property line.

ID12 STORMWATER GUIDELINES

- ID12.2 Regulations set forth by the San Francisco Bay Regional Water Quality Control Board (RWQCB) shall apply to all new or redeveloped residential and commercial projects. Please see RWQCB Order No. 99-058 and Order No. R2-2003-0022.
- If the project creates or replaces more than 10,000 square feet of impervious surface;
 - Relative to the 10,000 square foot threshold, if 50% or more of the existing impervious surface is replaced then 100% of the site must comply with Provision C.3 of the Town's Stormwater Permit; or
 - Relative to the 10,000 square foot threshold, if less than 50% of the existing impervious surface is replaced, then Provision C.3 of the Town's Stormwater Permit only applies to said portion.
- Comment: The project was reviewed for compliance with the C.3 provisions by the Town Engineering Department. The project civil engineer has confirmed that the design capacity of the retention basins has not been compromised by the addition of the low rock walls for the tree planting pockets at the edges of the basins. The Town Engineer has included a condition of approval in the Draft Action Memorandum that requires the existing engineered soil in the stormwater treatment basins to be removed and replaced with fresh soil and protected from foot and construction traffic to avoid compaction.*

- ID12.5 In new development only BMP-treated stormwater shall be discharged into the Town's storm drain system.
Comment: The Town Engineer has reviewed the plans for compliance with the "Best Management Practices" for stormwater treatment.
- ID12.6 A sufficient number of drains should be provided for retaining wall backdrains and in the crawl space under the foundation to provide an outlet for water that may accumulate behind retaining walls and beneath the house and to drain any areas that may be divided by internal grade beams. Such drainage facilities shall be directed to a landscape area or manufactured treatment system prior to connecting to the storm drain system. Design shall be consistent with the Moraga Municipal Code section 13.04.060d.
Comment: The cross section drawing of the retaining wall shows a 4-inch PVC drain pipe behind the wall with geo-grid fabric and ¾-inch drain rock. The outlet for the drains is not shown on the plans. This will be a detail that the Engineering Department will want to see.

8 THOUGHTFULLY DESIGN SINGLE-FAMILY RESIDENTIAL NEIGHBORHOODS (SFR)

SFR1 SINGLE-FAMILY RESIDENTIAL SITE PLANNING

- SFR1.6 Development of residential lots should take advantage of natural features and unique topography of the site through split level pads or natural contour grading.
Comment: The new home was set into the slope of the hill. The proposed driveway extension curves naturally around and through a small group of Oak trees. When all the landscaping matures on the property, the view of the retaining walls above the driveway extension will be totally blocked from view.
- SFR1.7 Pervious surfacing is encouraged for all driveways. Driveways longer than 50' or wider than 16' should be constructed of pervious materials. See Guideline ID9.2. Multiple-car garages are encouraged to use flared driveways to minimize impervious surface coverage.
Comment: The use of pervious surfaces for the driveways was discussed under guidelines ID9.1 and ID9.2.
- SFR1.8 Where topography allows, driveways should slope toward a depressed lawn or other vegetated landscape feature to allow for biofiltration.
Comment: The driveway slopes towards the landscaped areas and not towards Rheem Boulevard.
- SFR1.9 Circular or hammerhead driveways may be considered for homes that front on busy streets.
Comment: The project has a circular parking court.
- SFR1.11 There should be a near level area of at least 25' x 40', other than the front yard, for usable yard area.
Comment: The new home has a 1,274 square foot covered pool area at the northwest side of the home. The proposed 1,034 square foot patio at the rear is adjacent to the covered pool. The home also has a very large deck over the garage.

EXHIBIT H

DRAFT DESIGN REVIEW BOARD ACTION MEMORANDUM

DRAFT

Town of Moraga



PLANNING DEPARTMENT
329 RHEEM BOULEVARD
MORAGA, CA 94556
(925) 888-7040

DESIGN REVIEW BOARD ACTION MEMORANDUM

On April 11, 2011 the Town of Moraga Design Review Board considered the application described below:

DRB 14-06 / UP 08-2006 Richard and Rose Wang (Applicant and Owners)
226 Rheem Boulevard Consideration of a design review application and Hillside Development Permit for revisions to the landscape plans and grading plans for the new home under construction at 226 Rheem Boulevard. The revised plans include a 1,015 sq.ft. expansion of the driveway at the northeast front corner of the garage and a 1,034 sq.ft. patio at the southwest rear side of the house. The revised grading plan includes two new retaining walls at the southeast side of the garage with stairs going up from the driveway to the main floor level above the garage. The hillside at the southeast side of the garage has been altered for a service road connection between the upper end of the driveway and the old paved road along the northeast property line. The grading for the service road includes a maximum of 6-feet of fill and approximately 375 cubic yards of cut and fill. Several low rock walls have also been installed to provide planting pockets for trees along the edges of the bio-retention basins.
APN 270-470-001

DESIGN REVIEW BOARD ACTION:

The DESIGN REVIEW BOARD hereby grants approval of the project in accordance with the following findings and conditions of approval:

PART 1: DESIGN REVIEW FINDINGS:

In accordance with Moraga Municipal Code Section 8.72.080(B), the following findings must be made in order to approve an application for design review in land use districts other than single-family residential:

1. **The proposed structure conforms with good taste, good design and in general contributes to the character and image of the Town as a place of beauty, spaciousness, balance, taste, fitness, broad vistas, and high quality** *because the additional grading and retaining walls at the southeast side of the garage represent a relatively minor change to the previously approved plans and the grading conforms with the Town's Design Guidelines.*
2. **The structure be protected against exterior and interior noise, vibrations and other factors, which may tend to make the environment less desirable** *because the project does not include any additional structures or any exterior equipment that would produce noise or vibrations.*
3. **The exterior design and appearance of the structure is not of inferior quality as to cause the nature of the neighborhood to materially depreciate in appearance and value** *because the two new retaining walls above the service driveway extension at the southeast side of the garage will match the approved retaining wall behind the home. The location of the new stairs and retaining walls is more than 100-feet from any adjacent residence.*
4. **The structure is in harmony with proposed developments on land in the general area** *because the height and length of the additional retaining walls is not out of character with similar retaining walls on other properties in the vicinity and the walls and grading are within the approved MOSO building cell on the property.*

PART 2: FINDINGS FOR APPROVAL OF THE GRADING PERMIT:

The cut and fill for the revised grading is approximately 375 cubic yards and the project civil engineer has determined that the average gradient within the limits of the expanded graded area is 23.6%. In accordance with MMC Section 14.12.030 on average slopes less than twenty-five (25) percent and greater than or equal to twenty (20) percent, the Design Review Board hereby approves the grading with a determination that the grading is:

1. Consistent with the Town Design Guidelines;
Finding: *An analysis with respect to compliance with the Town's Design Guidelines was done in **EXHIBIT G** for the staff report. Most of the revised grading was to provide an access driveway connecting to the abandoned portion of "Goodfellow Drive" along the northeast property line and is not visually prominent from the Rheem Boulevard scenic corridor or from adjacent residences.*
2. Consistent with the regulations of Town's Grading Ordinance (Chapter 14)
Finding: *The grading for the two retaining walls and driveway extension at the southeast side of the garage is consistent with the Town's Grading Ordinance. The addition of the low rock retaining walls within the two retention basins for tree planting does not impair the required capacity of the retention basins.*
3. Not detrimental to public safety;
Finding: *The previously approved slope stabilization work is expected to improve the safety of the hillside for public safety. The project geotechnical engineer, Friar Associates, Inc (FAI)., submitted a letter on April 6, 2010 that recommends the installation of the two retaining walls in order to stabilize the cuts in the hillside above*

the service access road. The FAI letter does not state categorically that the proposed revisions to the grading will not compromise the previous slope stabilization work. When the Town receives a response to our concerns for slope stability from FAI, the response will be sent to the Town's consulting geotechnical engineer for peer review. All recommendations of the project geotechnical engineer will be included in the conditions of approval for the grading permit.

4. Not detrimental to stormwater runoff;
Finding: *The original approved grading plan included installation of on-site stormwater treatment devices and retention basins in compliance with the C.3 guidelines since the project site had over 10,000 square feet of impervious surfaces. The revised grading includes a couple of low rock retaining walls that have been installed within the retention basins. The project civil engineer has confirmed that the encroachment of these retaining walls does not compromise the design capacity of the retention basins.*
5. Consistent with the requirements of MMC Chapter 8.136 (Hillside Development);
Finding: *The factors to be considered for a hillside development permit were reviewed in EXHIBIT D attached to the staff report. As noted in finding number 3, above, the project geotechnical engineer needs to confirm that the revised grading will not compromise the slope stabilization work that was previously completed.*
6. Natural contour grading;
Finding: *A portion of the naturally contour graded slope at the southeast side of the garage will be changed with two stacked retaining walls above a gravel service road and a 3:1 slope below the road. Based on the as-built topography submitted by the project civil engineer, the upper wall will be approximately 2 feet in height and the lower wall will be approximately 4 feet in height. The proposed retaining walls are partially hidden behind two oak trees below the proposed service road and the grading beyond the retaining walls will blend in with the natural contours of the hillside.*
7. Minimizes soil displacement;
Finding: *The revised grading comprises approximately 375 cubic yards of cut and fill. The grading is balanced on site and there will be no soil displacement off site. The average gradient within the limits of the expanded graded area is 23.6%. The amount of the cut has been minimized consistent with the goals of the project.*
8. Minimizes the use of retaining walls;
Finding: *The original grading plans included several low landscaped terrace walls at the front of the home and some large structural foundation retaining walls behind the home. The large retaining walls beneath the home do not contribute to an unnatural appearance of the slopes because they are hidden by the home. The two additional retaining walls above the service driveway are necessary to hold the slope above the driveway. The retaining walls comply with the new Town design guidelines for retaining walls.*
9. Not inconsistent with the general plan.
Finding: *There are no conflicting General Plan policies that would prohibit the revised grading at 226 Rheem Boulevard. In accordance with the Moraga 2002 General Plan Public Safety Element, Policy PS4.2, the technical recommendations from FAI shall be*

reviewed by an independent licensed soil engineer, geologist and/or structural engineer approved by the Town and at the expense of the developer prior to approval of the grading permit for the amended grading plan. The addition of the service driveway at the southeast side of the garage could enhance fire safety by providing better access to the hillside south of the home.

PART 3: CONDITIONS OF APPROVAL:

NOTE: Mitigation measures from Resolution No. 18-91 PC are applicable to this project, except where new storm water requirements from the Regional Water Quality Control Board supersede conflicting drainage requirements listed in the mitigation measures.

Required Fees:

1. Prior to release of the stop work order, the applicant shall pay the required fees to the Planning Department for the preparation of the staff report for the Design Review Board, the new hillside development permit for the amended grading and the peer review of any supplemental geotechnical reports.
2. Prior to final approval for the revisions to the grading permit by the Town Engineering Department, the applicant shall pay all appropriate fees for plan check of the grading revisions, review of any changes to the erosion control permit and inspections of the grading and storm water pollution prevention procedures on site.
3. Prior to the issuance of any building permits for any retaining walls over 3-feet in height or structural retaining walls with a surcharge, the applicant shall apply for and pay all applicable fees to the Contra Costa County (Lamorinda) Building Department.

Conditions required prior to approval of the amended grading permit:

4. The applicant's geotechnical Engineer, Friar and Associates, Inc. (FAI), shall address the following questions to satisfy the requirements for the hillside development permit:
 - a. Will the proposed design for the retaining walls be sufficient to hold the slope?
 - b. What are the recommended design specifications for the retaining walls?
 - c. Should there be a keyway under the 6-feet of fill below the service driveway?
 - d. Are any additional drainage pipes necessary below the gravel service driveway to help prevent stormwater from saturating the soil below and possibly over-loading the deep sub-drain pipes installed with the buttress fill?
 - e. Will any of the proposed revisions to the grading compromise the previously installed buttress fill for stability of the slope above the home?

The response and recommendations from FAI shall be reviewed by the Town's geotechnical peer review consultant for confirmation that the additional grading for the service driveway extension at the southeast side of the garage will not compromise the post-construction stability of the buttress fill previously installed.

5. Prior to the release of the amended grading permit, the following notes shall be added to the grading plans and drainage plans by the applicant's engineer:
 - a. The recommendations of the project arborist shall be followed to protect the two oak trees located northeast of the engineered fill slope below the service driveway

extension. The two oak trees shall be protected by temporary fencing around the drip line and root zone of each tree to prevent soil compaction, tree damage, or inadvertent removal.

- b. No grading, trenching, storage or stockpiling of earth, compaction of soil, change in ground elevation or paving shall be done within the drip line of the existing oak trees.
6. Prior to the release of the amended grading permit, a revised "Storm Water Pollution Prevention Plan" (SWPPP) shall be submitted to encompass the area to be graded for the service driveway extension and retaining walls east of the garage.
 7. The existing engineered soil in the stormwater treatment basins must be removed and replaced with fresh soil and protected from foot and construction traffic to avoid compaction.

General Conditions:

8. Finishing materials for the new short block retaining walls east of the garage shall match the existing wall behind the house.
9. Prior to the issuance of certificate of occupancy, landscaping necessary for erosion control and bio-filtration of stormwater runoff shall be installed.
10. Since the driveway and circular parking court are quite extensive, the property owner may need to install more lights for safety and security in this area. Any additional lighting must comply with design guideline ID6, as listed below.
 - a. Outdoor lighting should be related to the design of the structure.
 - b. Outdoor light fixtures should be designed and mounted so that the source of light has minimal impact off site.
 - c. Outdoor lighting should be directed inward toward the property and may require additional screening to avoid spillage onto adjacent residential properties.
11. This permit and each condition contained herein shall be binding upon applicant and any transferor, or successor in interest.

Drainage Conditions:

12. Prior to the issuance of the amended grading permit, drainage plans for the new service driveway area shall be submitted for review and approval by the Town Engineer to comply with the Best Management Practices (BMPs) required under the Town's NPDES Permit.
13. Prior to the final grading inspection, the project civil engineer shall prepare a record drawing showing the as-built locations of all drainage facilities including inlets, outlets, cleanouts, and access ports. The project engineer shall also prepare a maintenance plan and schedule for all drainage and stormwater treatment facilities. The record drawing and maintenance plan shall be submitted to the Town and is subject to review and approval by the Town Engineer. A copy of the record drawing and the maintenance plan, and maintenance schedule shall be provided to the property owners.

14. Draining the swimming pool shall be directed to the sanitary sewer system and be conducted in compliance with the permitting and standards established by Central Contra Costa Sanitary District. Overflow drains from the swimming pool shall be directed to a landscape area or manufactured treatment system prior to connecting to the storm drain system. Best Management Practices (BMPs) shall be used to manage overflows.

General Grading Conditions:

15. The grading contractor and the applicant shall be responsible for preventing spills of soil, rock or other debris on to the Town's streets. If any spills occur, the grading contractor and the applicant will be required to immediately cleanup the spill and repair any damage to the streets to the satisfaction of the Town Engineer. Pavement and/or base rock apron shall be maintained at the entrance to the site to minimize dirt carried onto the Town streets.
16. All applicable grading conditions from the October 22, 2007 Design Review Board Action memorandum remain in effect with regard to the amended grading plan.

Erosion and Dust Control Requirements:

17. The applicant shall renew the Erosion Control Permit, with the performance bond, to ensure continued effectiveness of erosion control measures. Erosion Control Permit coverage must be maintained until the landscaping is complete and plants are established. The erosion control measures are subject to review and approval by the Town Engineer. All erosion control measures shall be installed and deemed operational by the project engineer, Town Grading Inspector and Town Engineer prior to October 1. Erosion control measures shall be designed for long-term maintenance in order to provide protection during the build out of the project.
18. Weather permitting; grading operations to complete the grading and site work shall occur between April 15 and October 15, in order to avoid seasonal rainfall.
19. Grading and construction of the new retaining walls shall be done in such a manner as to minimize the generation of dust. During the grading operation, the contractor shall wet down the grading areas and any haul routes used by construction equipment at least twice daily during dry periods or as needed to prevent the generation of excessive dust. The wheels of hauling trucks and graders shall be washed as needed when exiting the site to prevent tracking excessive dirt onto nearby roadways, and roads shall be cleaned as required. All non-active graded areas shall be protected from erosion and wind exposure by applying a hydromulch with a tackifier. Any dust producing material shall be covered while being hauled, and storage piles of dust producing material on site shall be covered.
20. All applicable erosion control measures from the October 22, 2007 Design Review Board Action memorandum remain in effect with regard to the amended grading plan.

Noise and Pollution Abatement Requirements:

21. During grading operations and construction of the new retaining walls, the hours of operation shall be limited to the hours from 8 a.m. to 5 p.m. Monday through Friday to minimize potential disturbance of adjacent residents. No construction shall occur on weekends or holidays unless an emergency situation develops, such as the potential collapse of a cut slope. In an emergency situation, the Planning Director or Town Engineer may authorize extended work hours on weekdays or on weekends until the situation is no longer deemed an emergency.
22. All applicable noise control conditions from the October 22, 2007 Design Review Board Action memorandum remain in effect with regard to the amended grading plan.

Design Review Board action is appealable to the Planning Commission within 10 calendar days after the date of the decision. If you have any questions regarding the action of the Board, please contact the Moraga Planning Department at (925) 888-7040.

EXHIBIT I

**REVISED LANDSCAPE AND
HARDSCAPE PLANS,
REVISED GRADING PLANS AND
RETAINING WALL PLAN**

EXHIBIT J
ARBORISTS REPORT