

Re: Olgaard Residence- Project Justification Letter
Site Address:15365 Santella Court; APN: 527-09-036. Architecture & Site Application# S-18-052.

Date:
Dec 16, 2019

Dear Planning Commissioners
Community Development Department.
Town of Los Gatos

On behalf of Christian and Helen Olgaard, I am pleased to present this new sustainable (green) design project, featuring net zero energy use. From the very beginning of our collaboration with the Town of Los Gatos, your knowledgeable planning and engineering staff helped us understand the Hillside Development Standards and Guidelines and the Town's desire to preserve the natural hillside environment.

We consulted with your staff early on and through our frequent meetings, they prepared us for this comprehensive compliance design review process. Our design team also had the support and willingness of our clients to design a creative and innovative contemporary sustainable home that brings the outdoor natural hillside environment, indoors in a seamless way. As a result of this collaborative process we had minimal revisions to the overall original design concept and are able to create a home design that meets all requirements without any exceptions.

The proposed single-family home design to be developed on a vacant lot has two-levels, 4 bedrooms, 4 1/2 baths and a 3 car-garage, and has 5,840 sf. of countable floor area including 756 sf below grade space (exempt from countable floor area), in an HR-2½: Planned Development Zone

This letter details the factors that lead to this design, how it complies with the Hillside Development Standards and Guidelines and addresses any specific concerns raised by the planning staff. The attached building plans and additional exhibits are provided as supporting information.

EXISTING PROPERTY DESCRIPTION

The site is a part of the planned development of Highlands of Los Gatos subdivision that includes approximately 66 acres of custom hillside residential lots, accessed from Shady Lane and Gum Tree Lane. This 2-acre vacant property, located on the north end of Santella Court, presents great opportunities and some constraints that we carefully studied and mapped before any placement of the proposed home was considered.

The project scope involves development of a downward sloping, south facing flag lot with a natural setting of undulating hillsides and mature oak trees. In contrast to the other street level homes on Santella court, this proposed house would be located substantially lower on the hillside and accessed through a private driveway. From here, the lot widens to a triangular shape spreading in the east-west direction. The site is surrounded by dense clusters of mature coast live oak and blue oak trees along its slopes with a small relatively clear and level area in the middle that extends to the rear. The tree inventory by the arborist contains 44 trees (with some undocumented along inaccessible slopes) in either good or fair condition, 4 trees in poor health, and one that fell due to natural causes after

the arborist report was prepared. The land tapers off to a steeper slope along the perimeter of the property. Due to these steep 30% slopes surrounding the site, the LRDA is limited to the level area in the midsection of the property.

DESCRIPTION OF PROPOSED DESIGN

Site design

Given all the opportunities and constraints, and with considerable deliberation, we chose a linear form for the house, and a winding sloped driveway. We chose these forms for their adaptability to the shape of the site grading contours and to minimize tree removal.

The private driveway from Santella Court slopes down to the fire truck turnaround/visitor parking area in front of the home's garage. From here a winding stair path leads to the front entrance located on the upper level. The visitor parking area also leads to a side yard at the lower level that opens to a patio and pool towards the north-east side of the property.



The site and hillside slopes are stable and geotechnically suitable for the proposed structure as outlined in the geologist report, which has been approved through the peer review.

Articulation of the building mass

We designed the linear form to start as a single story at the garage, and to rise to a two-story volume towards the rear. This shape enables screening of the larger mass by tall trees along the north and the west property lines, that form a dense cluster around the building. There are 15 trees, including the 4 trees in poor health, mostly along the interior of the site that shall be removed to construct the residence and driveway.

This low-profile home with a linear horizontal building form follows the site contours and levels so that the structure appears integrated into the hill side. At the north end of the property, as the site grading contours turn, so does the building form, creating a backdrop for the terraces and patio areas to follow. This approach i.e. stepping the terrain along the contours reduces the amount of grading required and integrates the building into the site.

Building Features

The building roof form picks up on the undulating site profile, combining sloped and flat roofs in an alternating rhythm. The alternating flat roof sections as one continuous sculptural unifying roof form, feature live green roofing and the sloped roof sections provide for photovoltaics.

Much of the home will be at the lower level with private spaces such as bedrooms, media and family rooms and a wine cellar in addition to a garage. The upper level will have an entry foyer, kitchen, dining and living spaces that offer spectacular views of the distant hills.

The contemporary home design with doors and windows that open to the outdoor spaces merge them seamlessly with the indoors to take advantage of the natural beauty of the site and the moderate weather we all enjoy in California. The house wraps around the entry courtyard with operable windows situated to catch the summer breezes from the west to naturally cool the house.

The exterior skin of the home consists of an insulated rain-screen system clad with sintered stone panels. These earth toned panels run every 2 ft. with varying widths throughout the home to emphasize horizontal nature of the building form.

The aluminum windows and door frames will feature a dark oxidized metal finish with similar interplay of horizontal and vertical lines of the stone cladding system. The glazing will have low light and heat reflective coating to reduce glare and increase the thermal performance of the home.

Site grading

The driveway design became a critical factor in site layout, and was defined by the narrow and steep terrain, existing trees, firetruck turnaround space requirements.

We took advantage of the level changes in the terrain to create floor levels that closely followed the adjacent grades. As the land dipped and flattened out at the firetruck turn around space, we set the lower floor garage height 4ft. (max. allowed cut) below grade to reduce the appearance of a larger mass. Then as the terrain rose higher to towards the rear of the property, we set the upper floor level close to the higher terrain level. A series of serpentine shaped steps rise with the existing grade to access the upper level concealing the lower level floor below and effectively making the building appear as a single-story home.

As the terrain slopes more gradually on the east side of the home, we created terraces that follow contour grades, that open to the lower floor level. The upper floor level was able to access the outdoor deck set close to the higher terrain level on the west side of the home. This approach reduced the cut and fill volumes and height of retaining walls.

Sustainable (green) design

As all sustainable efforts should begin with passive strategies our initial efforts focused on the sustainable site design practices such as

- Building orientation, passive solar design and shading and cooling from existing vegetation.
- High performance thermal envelope (insulated building skin),

- Low reflective, dual glazed, low E windows, and doors that allow natural light natural and cross ventilation,
- Green roof to keep the home cool protect from forest fires and filter the roof rain runoff.

In addition, our clients have set project goals for LEED Gold or Platinum (green building) certification and a net zero energy use for the home. As these are highly ambitious goals, we incorporated a photovoltaic system and a geothermal system combined with a ceiling radiant heating and cooling system.

COMPLIANCE WITH HILLSIDE DEVELOPMENT STANDARDS & GUIDELINES

In addition to what was identified above, the proposed home specifically addresses the Hillside Development Standards and Guidelines as follows:

Justification for home size in the immediate neighborhood

The proposed home is both smaller in total size and smaller in appearance compared to others in the neighborhood. This home area when below grade area is also considered, is smaller than the neighborhood homes. To illustrate the point, we have attached a neighborhood floor area comparison sheet that show the floor areas including below grade area. For example, the home at 15310 Santella Ct. has 5,671 sf. Floor area, which is smaller to the proposed home with 5,840 sf. of floor area. However, if the below grade area is included the total home floor area for 15310 Santella Ct. is 7,425 sf. which is larger than the total area of this proposed home of 6,596 sf.

This neighborhood home is on a relatively level lot and all of the home's upper mass is visible to the observer. Therefore, to reduce the appearance of a large home size, more of the area was allocated to the below grade. See picture below (courtesy -Redfin website).

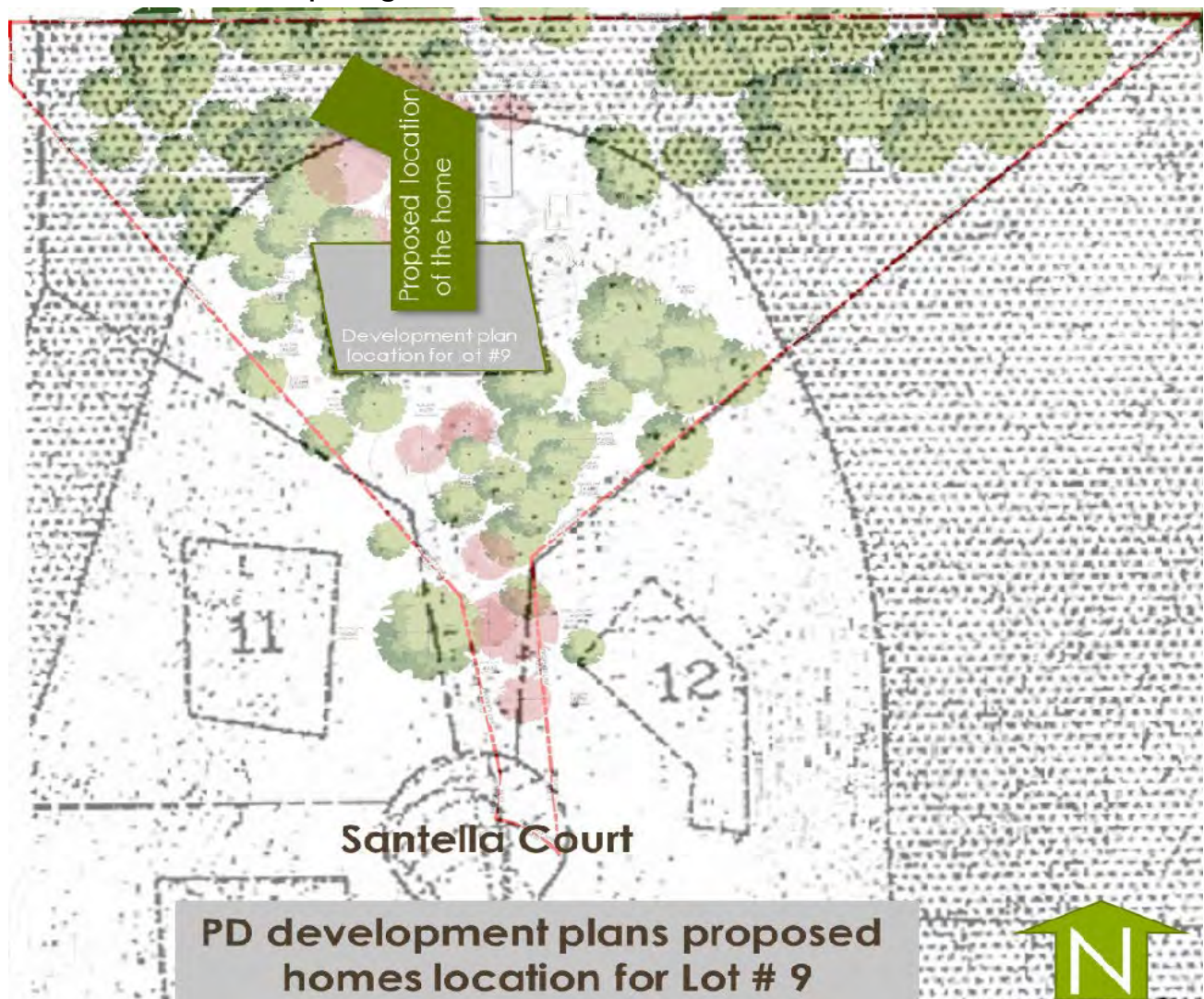


This proposed home would be located substantially lower on the hillside in contrast to the other street level homes on Santella court. This home is on a sloped lot and the design reduces the appearance of a larger home due to the home siting and the articulation of the massing. (see rendering on previous page). This slender shape, split-level design and low-profile home with the roof close to the ground, will appear smaller than a traditional home with traditional hip and gable roofs, even with a large below grade area. We have attached the neighborhood comparison data for your reference.

Siting of the home

After detailed evaluation of the site conditions, we situated the home further north than the location indicated in the approved PD development plans. The image below shows the original location shown in the PD development plans overlaid by our proposed home location.

Below are several compelling reasons:



- Due to the flag lot shape and the narrow access exceeding 150 ft. in length, we were required by the Santa Clara County Fire Department to create a fire engine truck turn around space of 55 ft. X 75 ft. with the grade level of the turnaround space not to exceed 5%.

- The building location was pushed further north to accommodate the required the firetruck turnaround space and driveway length at the maximum allowed 17% grade slope.
- We chose a linear mass for the home to minimize the impact of the building footprint on the existing tree locations. This enabled us to preserve many native oak trees, increase the tree screening and reduce visibility of the home to the neighborhood.
- The linear building form also followed the site grading contour levels to have the house sit at a lower level, reduce site grading and overall building height. We achieved this by partially building into the hill side to maximum depth of 4 ft. cut at the exterior patios and driveways so that the structure appears as an integrated part of the environment.
- The north south orientation of the home allows the maximum amount of solar energy to be harvested.



Specific site conditions that influenced the location of the home within the site

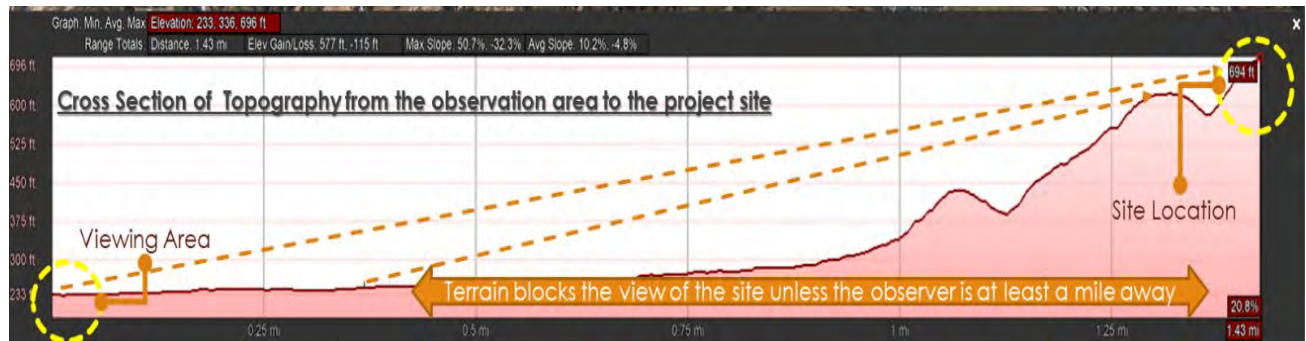


Project visibility analysis

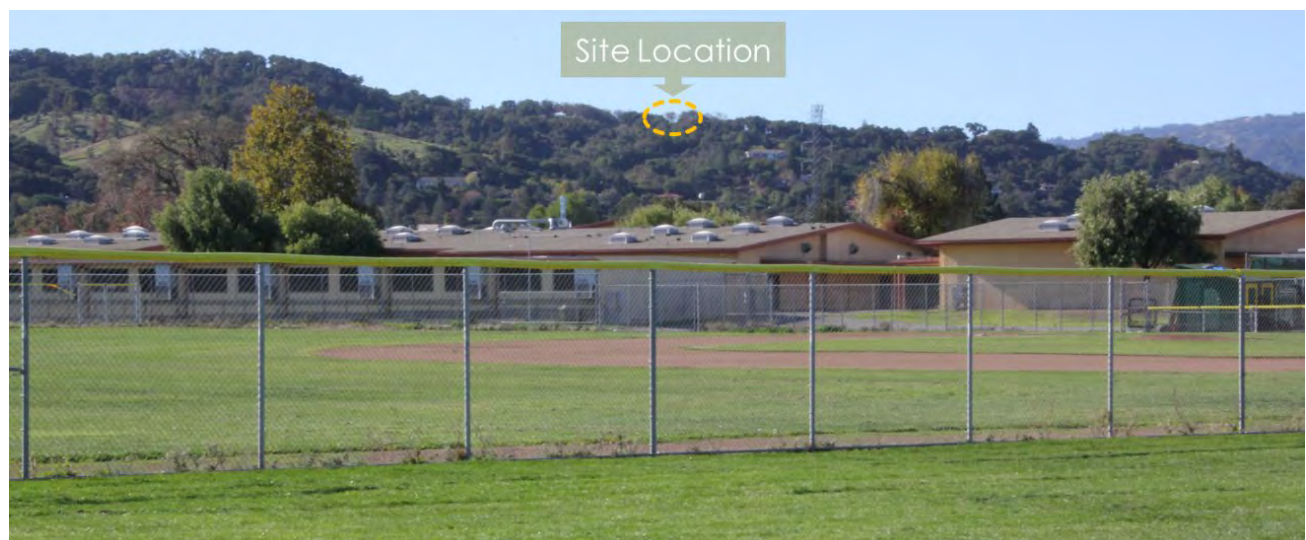
We have done an exhaustive study of the site, the surrounding topography, screening of the matures trees in the vicinity, and the visibility of the project from the viewing areas. **Blossom Hill/LG Blvd.** and **Selinda Way/LG Almaden Rd.** viewing areas were identified as the two viewing areas nearest to the project from where the home could be potentially seen.

Our initial studies with the computer model indicated that the project wouldn't be seen from **Blossom Hill /LG Blvd intersection** viewing area due to dense tree cover. This fact was later confirmed by the subsequent pictures taken after the story-poles are installed.

We then focused on our study on the Selinda Way/LG Almaden Rd. viewing area. When we studied the cross section of the topography of the hillsides and the ridges from the Selinda Way/LG Almaden Rd., it became obvious why this project site wouldn't be seen from anywhere nearby. Due to a secondary ridge in front of the site, the home wouldn't be seen, unless the observer is a mile or more away. As shown in the illustration below, the view is blocked when an observer comes within a mile of the project.



The property it is barely visible with a naked eye when seen from a **mile away**. This picture below is taken from Selinda Way/LG Almaden Rd. intersection, which is further than a mile away. To get an unobstructed view we took the 50mm lens picture (below) from the Lee high school fence.



To clearly see this site, one would need 300 mm telephoto lens standing a mile or more away, as it is not possible to see it closer due to the ridge in the front.

Our subsequent detailed analysis indicated that only a portion of the home that is less than 24% would be seen with a 300 mm telephoto lens. This fact was confirmed by subsequent pictures taken after story-poles were installed as shown in the image below. Therefore, this home would not be considered a visible home per the HDS&G.

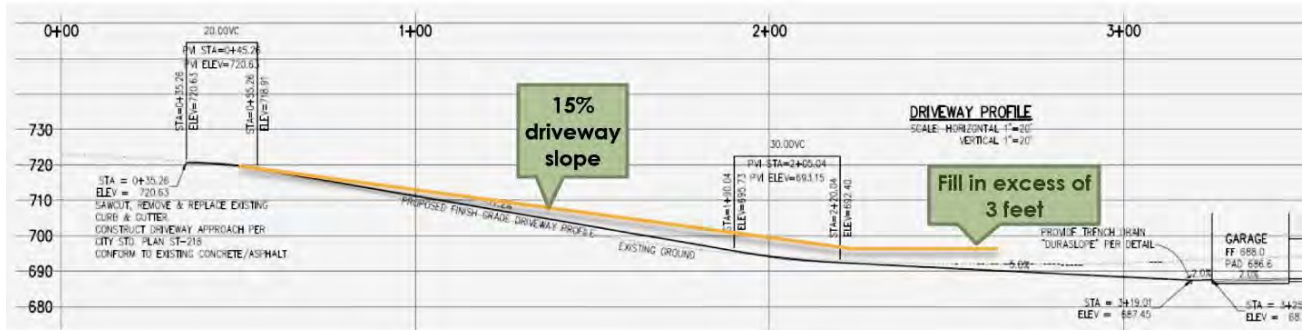


A full and comprehensive visibility screening analysis is provided along with this letter.

Grading for driveway and visitor parking

As previously mentioned, the narrow and steep terrain at the entrance of the site effects the configuration of the driveway.

- As the land dips and flattens out after the driveway, we utilized the shallow terrain to create the firetruck turn around space, and guest parking. Staying close to the terrain and utilizing the shallow grade allowed us to meet the fire truck turn-around space clearances and grading slope (5% maximum) and the HDS&G cut and fill requirements.
- The 5% slope of the firetruck turn around space enabled us to set the home's lower floor height 4ft. below grade to reduce the appearance of a larger mass.
- Then as the terrain rose higher to towards the rear of the property, we set the upper floor level close to the higher terrain level.
- A series of serpentine shaped steps rise with the existing grade to access the upper level masking the lower level floor below and effectively making the building appear as a single-story home.



We requested a driveway slope of 17%, versus the typical 15%, for the following reasons;

- A driveway slope of 15% would cause the lower parts of the driveway at the fire truck turnaround space to exceed the 3ft. maximum fill requirement of HDS&G.
- A driveway slope of 15% would also require the home to move further north due to fire truck turnaround space requirements and that would encroach into the rear setback area. A 17% slope brings the firetruck turn around space closer to the cul-de-sac and locates it in the shallow existing terrain area (relatively free of mature trees) and makes the grading compliant with HDS&G requirements.
- We met with the Fire Marshal early in the design process and have his consent for a 17% slope for the driveway, We worked with the lot #8 design team to facilitate a lower desired driveway access level for their site, as it is shared with this neighbor.

Neighbor friendly, site design

- Privacy of the neighbors is protected by dense surrounding vegetation and the additional landscape screening proposed along the north property line.
- All the upper level doors windows and outdoor areas face away from neighbors' properties.
- Outdoor activity areas at the lower level are designed to face eastern side of the property which is further away from the immediate neighbors. These outdoor activity areas are also surrounded by dense vegetation.
- All four adjacent neighbors have reviewed the design drawings and have no concerns regarding the design.

Sustainable design

The sustainable design features of this home include a net zero energy design and LEED certification. The home's orientation takes advantage of the clear area in front of the home for integrating the photovoltaic system into the sloping roof. All the living and active spaces at the upper level open to the south-southeast orientation to allow winter sun in and the deep overhangs over openings protect them from summer heat gain. The home wraps around the entry courtyard to capture summer breezes for cross ventilation. The clearstory windows at the high level create a stack effect like a chimney to let warm air out while drawing in cooler air from the lower level.

The home has a rainscreen wall system with sintered stone panel cladding. It breathes much like our skin, with an airgap behind the exterior cladding to let moisture

accumulated within the building to escape outside while the inner layers of high-performance insulation reduce building heat gain or loss.

The live roof will feature succulent plants that collect and filter rainwater, while keeping the home cool. Once these plants are well established, they can survive with minimal irrigation.

To reduce the overall carbon footprint of the building, all systems shall be run only with electricity, and no natural gas HVAC equipment shall be utilized. This 48,400 kwh/year photovoltaic (PV) system for the home shall be designed to offset 100% of the anticipated energy usage of the home its occupants, on an annual basis. In other words, the roof mounted photovoltaic system will generate enough electricity for heating of domestic hot water, pool and jacuzzi, cooking, heating /cooling of the house, lighting and other home energy loads, and two electric vehicles.

The geothermal system utilizes the earth's constant temperature of 60° F to pre-heat or cool the water for the electric heat pump and domestic hot water. This pump further cools or warms this water and circulates it throughout the house ceiling panels. This radiant heating and cooling system is highly energy efficient.

Among all other stringent requirements for the LEED certification we are considering rainwater harvesting and grey water for toilets & landscape irrigation. Our current estimation of LEED V4 for Homes certification credits totaled 76.5 points, close to certification thresholds for LEED Gold or Platinum.

Fire safety

The home design incorporates the following fire safety measures and complies with stringent Wildlife Urban Interface standards and HDS&G;

- Fire rated exterior envelope with ceramic panel exterior cladding.
- All steel structure with concrete slab foundation and retaining walls.
- Fire sprinkler system.
- Tempered exterior glazing.
- Undersides of roofs and decks are either enclosed or protected with noncombustible materials.
- Live green roof with succulent plants.
- The 100 feet defensible space for landscaping.
- An 18 ft. wide firetruck access road and location of turn-around space deep into the property for firefighting access.
- Drought tolerant landscaping with underbrush cleared.

Building height, bulk and mass

This home is on a sloped lot and can reduce the appearance of larger home due to the home siting and the articulation of the massing. This low-profile home with slender shape, split-level design and a continuous roof that stays closer to the ground, will appear like a single-story home. The following design strategies are utilized to minimize bulk and mass:

- The linear form of the home starts at the garage as a single story and rises up to a two-story volume towards the rear. This shape enables screening of the larger mass

by tall trees along the north and the west property lines, reducing the impact of a taller mass.

- The varying flat and sloped roof forms follow the hill slopes with deep overhangs to reinforce horizontality, making the home appear smaller.
- The live roof blends with varied site terrain patterns in its form, color and texture.
- Most of the roof follows the site slopes at a 17 ft maximum height from the adjacent grade. A small portion culminates as a clearstory element in the roof composition at 22 ft from the adjacent grade. This small clearstory roof area is only 15% of the overall roof area and is setback from the exterior face. This is the only element of the building that is higher than the rest of the roof but is very critical to the roof form, massing composition and indoor air circulation.



Selective use of glazing

This contemporary home is designed to have a strong connection to outdoor spaces and bring in the natural beauty of the site. The doors and windows with dark oxidized aluminum frames are integrated with the rhythms and patterns of the exterior sintered stone panels to articulate the exterior massing and make the home appear smaller, lighter, slender and delicate. They are integral part of the exterior building skin and the architectural composition. The solid surface of the exterior panels with low LRV surface material values is punctuated by the window openings used selectively at critical locations. The solid form with its projections, roof awnings and recesses reduces the continuity of the glazing. They are deliberately placed to frame the views of the distant hills and away from neighbors to protect their privacy. The dense tree cover and surrounding hill side ridges also shields them from all lower level views.



Materials and colors



All materials colors and textures conform with HDS&G. See images above.

The two primary exterior sintered stone (like ceramic tile) cladding panels are of earth tones and warm gray and oxidized iron colors and have only LRV values of only 17 and 12. Stained concrete retaining wall have a LRV value of 13. All are maintenance free durable materials. Exposed metal surfaces shall be painted to compliment adjacent materials or anodized to a dark color. The glazing we specified is a low reflective and energy efficient coating. The live roof system will have the same colors and textures of the native vegetation. The cumulative LRV of the home is 13.

Landscaping & retaining walls

The landscape design plays a key role in creating the seamless merger of indoor-outdoor spaces. The interior spaces open directly to the terraces covered with natural travertine stone or wood decking. The terrace levels set closely to the existing grades minimize cut and fill quantities and reduce the height of the retaining walls.

The driveway surface is asphalt up to the home's entry gate, and then paved tile to support the fire trucks and vehicular traffic in front of the home.

All site retaining walls are equal to or less than 4 ft in height. They will be constructed with stained textured concrete walls that have a natural appearance and allow water to seep through weep holes.

Most of the landscaping is specified to be native Californian, deer resistant and drought tolerant. The landscaping is also designed to blend in with the native landscaping and



most of the property will kept in its natural state in perpetuity. The underbrush will be cleared to reduce wildfire hazard including the creation of 100 ft defensible space for planting. All outdoor spaces, seating areas and the pool are located away from the neighbors to maintain privacy of the neighbors as well as the homeowners.

CONCLUSION

This design has been envisioned and developed from the beginning to enhance and elevate the natural beauty of the hill side environment. The home is designed to integrate into the land become part of the harmonious natural order. The design closely follows Hillside Development Standards and Guidelines in its intent, scale, colors, massing and overall design.

Sincerely



Hari Sripadanna AIA C-30730



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We collaborate to create sustainable spaces.

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Neighborhood Compatibility- 15365 Santella Ct. (Lot 9)

Lot	Address	Date Approved	House	Garage Area (400sf. exempt)	Floor Area	Below Grade Area	Current Status
1	15685 Shady Lane	4/29/2014	4,457	504	4,961	3,191	Occupied
2	15672 Shady Lane	7/3/2012	4,652	337	4,989	1,490	Occupied
3	15644 Shady Lane	12/11/2013	4,796	1,172	5,568	3,224	Occupied
4	15657 Shady Lane	7/30/2013	4,169	1,120	4,889	4,519	Occupied
5	15615 Shady Lane	12/18/2012	4,658	340	4,998	2,370	Occupied
6	15315 Santella Ct.	7/30/2012	4,534	417	4,951		Occupied
7	15343 Santella Ct.	N/A	N/A	N/A	N/A	N/A	Vacant
8	15371 Santella Ct.	N/A	N/A	N/A	N/A	N/A	Vacant
10	15358 Santella Ct.	11/03/2017	4,401	476	4,877	965	Under Construction
11	15330 Santella Ct.	1/8/2013	4,625	346	4,971	2,566	Occupied
12	15310 Santella Ct.	2/13/2013	4,660	611	5,271	2,154	Occupied
13	15415 Santella Ct.	N/A	N/A	N/A	N/A	N/A	Vacant
14	15574 Shady Lane	7/10/2012	4,574	384	4,958	2,583	Occupied
15	15588 Shady Lane	12/18/2012	4,508	402	4,910	3,190	Occupied
16	15602 Shady Lane	8/14/2012	4,331	550	4,881	1,429	Occupied
17	15630 Shady Lane	8/20/2013	4,712	286	4,998	2,390	Occupied
18	15685 Gum Tree Lane	7/3/2012	4,590	407	4,997	2,048	Occupied
19	15675 Gum Tree Lane	2/26/2013	4,602	365	4,967	3,039	Occupied
9	15365 Santella Ct.	Proposed Project	5,530	310	5,840	756	Pending

15500 Francis Oaks Way	11/06/00	5,897	512	6,409	790	Occupied
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