



■ MENLO PARK, CA ■ 94025
www.modernahomes.com

Attn: Santa Clara County
Santa Clara County
March 11, 2022

Re: PLN21-187 Additional Information – Concern Letter

Carl Hilbrant:

Per the concern letter dated November 24, 2021, regarding the proposed grading for development of a new residence and accessory structures located at 24591 Summerhill Avenue, we are providing an alternative analysis of different building locations for the property. In addition to grading comments received we received fire department comments that led to redesign of the driveway and ultimately a more optimal design and preferable driveway design for both the fire department and from a grading perspective. The analysis demonstrates that this proposed alternative is the most optimal location for the home when considering the site constraints and the allowable use for the property.

Background and Assumptions for the Comparative/Alternative Analysis

The property is located at the end of a Cul de Sac on a hillside slope with an existing building pad and a second gradually flat area mid-slope of larger hill that continues upslope with homes, 3 new homes, that sit higher along the hillside with more visual impact from surrounding area.



Homes uphill to the east of 24591



Homes to the north hidden by existing trees that will remain.



View of existing home from upper pad

Allowable Use and Program for Project

Here is a summary of the site characteristics and allowable use for property:

- 1) 49,000 SF sloping lot
- 2) Max floor area of 5,700 sf
- 3) 500 sf accessory

- 4) 800 sf ADU
- 5) Pool
- 6) Sport court, lawn, garden area
- 7) Off street parking

Multiple site alternatives were reviewed with the following use requirement set forth by the property owner:

- 1) 5,700 SF home with 5 bedrooms
- 2) High ceiling living, dining and kitchen space (up to 15' high per the municipal code) with access to outdoor/landscape – deck, patio or lawn
- 3) Views of the mountains from living spaces and pool
- 4) Guest space with master suite, family area with direct access to outdoor area
- 5) Office and workout areas
- 6) 2-car garage and 2-3 additional parking for guests and family members, part of house or accessory structure
- 7) Pool, patio accessible from either family room or other living space and access to bathroom and changing space
- 8) Landscape/Hardscape:
 - a. 3,000 SF of outdoor living – deck or patio
 - b. 2,380 sf Lawn
 - c. Sport court 40x40, min. slope 1"/10' - can use portion of parking or turn-around for court
- 9) Keep as many of the large trees on site and screening from street and neighbors
- 10) Southern exposure for outdoor entertaining area with maximum natural daylight to rooms
- 11) Pool with southern exposure

The following locations for the home were analyzed and each analysis includes a calculation of cut/fill. Table 2 at the end of the document compares the cut/fill for each analysis and an accompanying document includes a 24x36 sheet of each analysis with site plan, section, and table of cut/fill.

Please let us know if you need further information to address any concerns regarding the proposed grading for 24591 Summerhill.

Thank you, Kathleen Liston

OPTION A: Home at Existing Pad

First option is building a 5,700 sf home at existing pad (See Figure 1). This scenario is not feasible and forces property owner to not meet allowable use for the property:

- 1) The distance from Summerhill Court to the garage exceeds 150'. This requires a fire-truck turnaround. The turnaround must meet one of 4-approved turnarounds for unincorporated areas and the existing driveway requires grading and widening to comply with Santa Clara County fire access standards.
- 2) Existing house is 2,400 SF. Adding a second floor would get to 4,800 SF, but not allow for high ceiling living area, only first floor rooms at front with any access to outdoor area, limiting sun exposure.
- 3) Pool and garden would require locating at upper pad and thus a requirement for a structure for bathroom and spaces for that area and that would then require ensuring a driveway to reach 200' to that structure

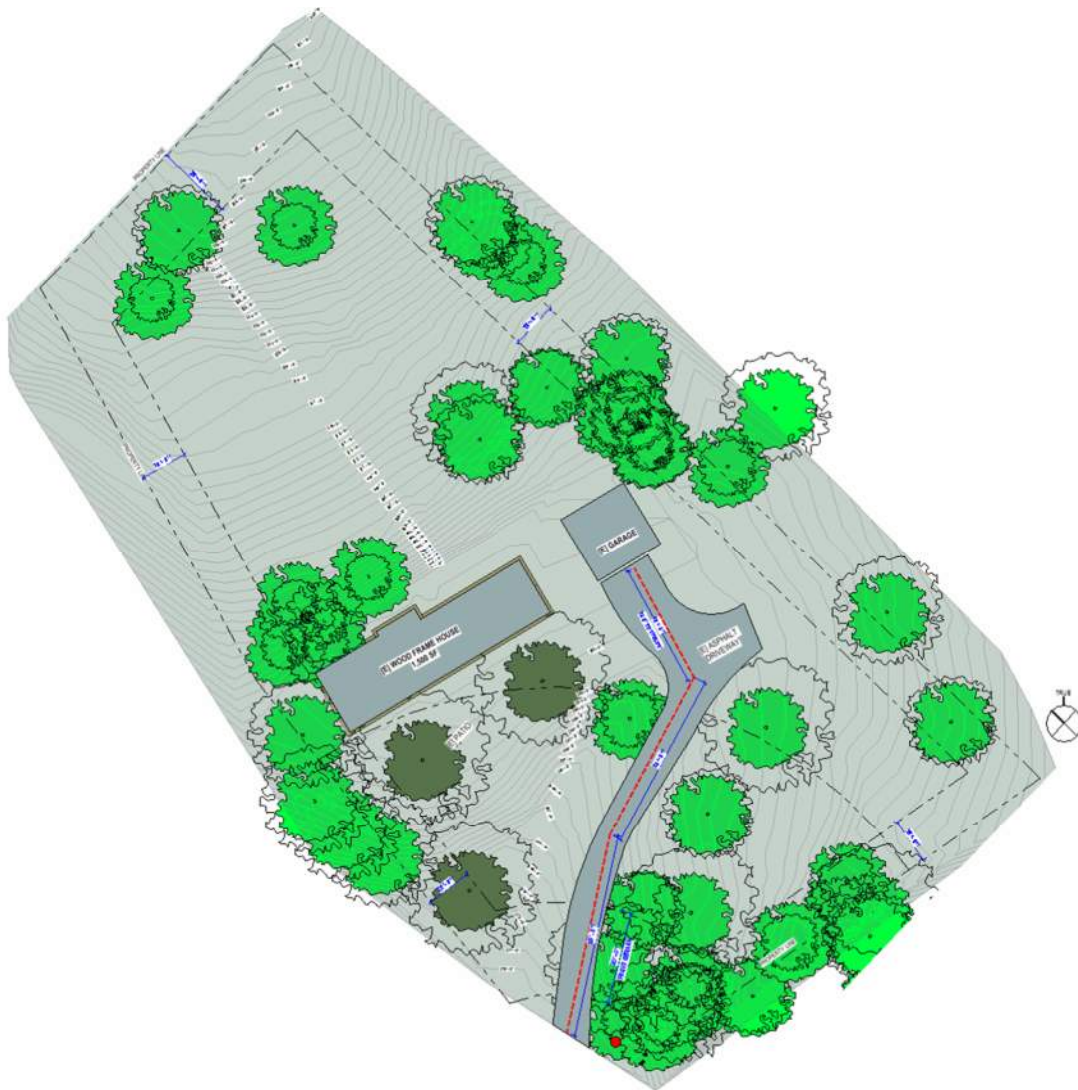


Figure 1: Option A with residence at existing pad. Garage location requires fire truck-turnaround and due to 100' light and air easement, no room for yard, pool.

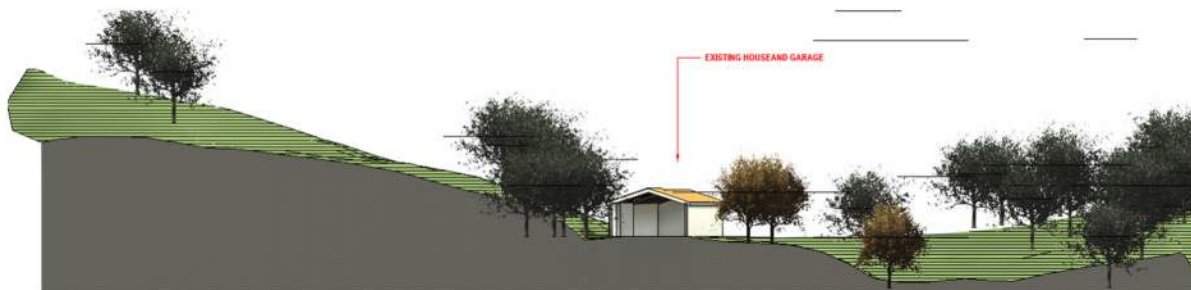


Figure 2: Profile of site showing location of existing house that sits up against a small hill that leads up to a more gradual pad

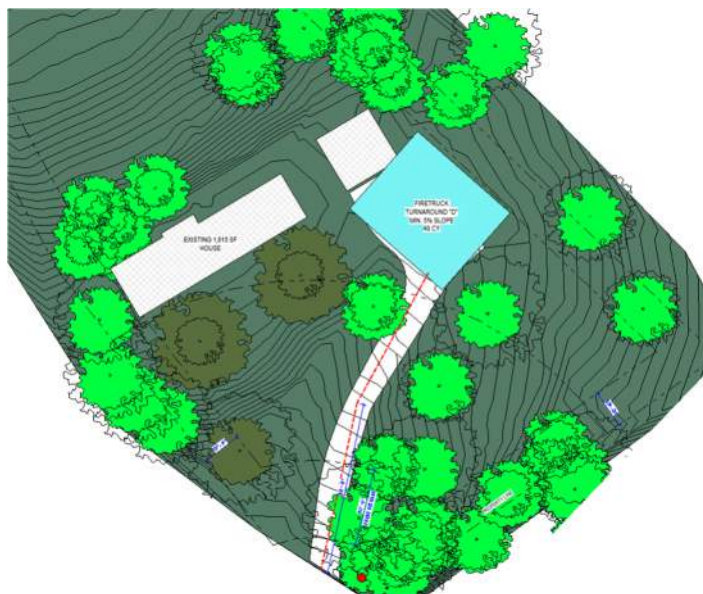


Figure 3: Site plan showing footprint of required fire truck turn-around. Due to the sloped nature of the site only Fire truck turn-around D works at lower pad due to minimum 5% grade requirement. At a minimum the grading for the lower portion for this driveway is 50 CY. This leaves no space for pool, 5,700 SF house with indoor/outdoor space due to hillside abutting existing pad, or lawn, sport court area.

OPTION A:

- NOT FEASIBLE DUE TO REQUIREMENT FOR FIRE TRUCK TURN-AROUND AND 100' LIGHT/AIR EASEMENT

Option B: TURN-AROUND, HOUSE AT PAD, TERRACED LANDSCAPE

The second option evaluated was a “stepped” house with multi-levels with garage at existing pad and rooms at existing pad with access to outdoor and southern exposure, but does not provide access to pool, patio, or other outdoor use of property without going to a 3rd level. A 3rd level requires an elevator shaft for access for elderly relatives to all spaces in the home. This option also uses up all the flat space by the house and requires significant grading for sport court, lawn, and patios and access to those spaces. This option does not meet most of the property owner’s criteria for living spaces with southern exposure, access to outdoor space- as the upper level is constrained in terms of SF due to the steep incline mid-property from existing building pad to upper, northern site area. The result is a home that requires. The net result is a home that meets few of the desired allowable use for the property

Figure 4: Option B showing 5,700 sf house at existing pad, stepped up to stepped terraces with pool, landscape and ADU at northern part of property.



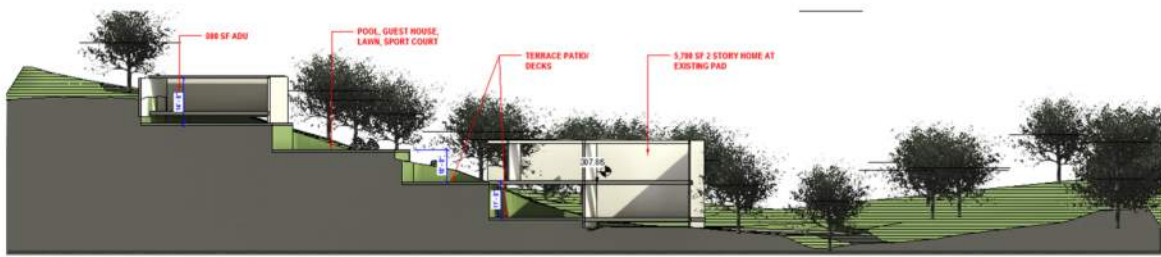


Figure 5: Section of Option B showing terraced patios with house at existing pad to patio and pool area for ADU. Patios and outdoor access from main house living areas are limited.



Figure 6: Site plan showing minimum site grading with fire truck turn-around, widening of existing driveway to meet fire apparatus road requirements, parking, and access to northern part of property. Total grading is 456 CY with net of 254 CY, before any hardscape patios or any landscape grading.

Table 1: Summary of Cut/Fill for Minimum site grading to meet fire truck turnaround and access to upper portion of property

	CUT	FILL	TOTAL	NET
BASELINE WIDENING		2.3	2.3	-2.3
	0.4	1.4	1.8	-1.0
	3.0	30.4	33.3	-27.4
PARKING	35.7		35.7	35.7
TURNAROUND	77.0		77.0	77.0

ACCESS TO NORTHERN	126.0	66.6	192.6	59.4
BACKUP	144.5	0.0	144.5	144.5
TOTAL	386.6	100.7	487.3	285.8

OPTION B CONCLUSION:

- FIRE TRUCK TURN-AROUND 'D' IS ONLY OPTION AT EXISTING HOUSE PAD DUE TO SIZE AND MIN. SLOPE REQ'TS. REQUIRES MIN. 150 CY OF GRADING.
- HOUSE LOCATION AGAINST MID-SLOPE OF PROPERTY REQUIRES POOL AT UPPER LEVEL, INCLUDING ADU OR STRUCTURE FOR USE OF POOL AND ACCESS.
- MINIMAL GRADING FOR SITE IS 456 CY EXCLUDING ANY HARDSCAPE OR LANDSCAPE

Option C: Stepped House

The next option we considered is a house with entry level at existing pad, set further back and with 2 upper level stepped back with potential to access outdoor space mid-slope or on the upper flat area. To make this work, we need circulation that can access all levels in a central location and make sure that the design complies with maximum height calculations. This option uses the same baseline fire truck turnaround, parking, and access to upper part of property as Option B. Additional grading, though, is required for the sport court and patios around pool and pool house to use those spaces. A lawn, although not as large as desired, is feasible at existing pad.

The issue with this option, though, in addition to grading required for sport court and patios, is that this is a 3-story house which is not allowable under the current code. Due to the steep slope, the distance from existing pad to area for pool and outdoor areas is 24' and

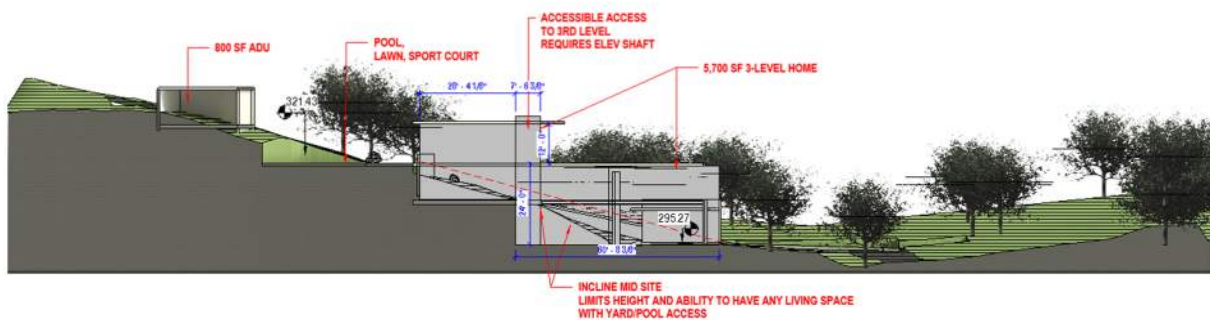




Figure 9: Option C-1 with basement showing house in lower steep side with space for lawn at lower level but requiring same amount of grading for sport court and patios at upper pad.



Figure 10: Section for Option C-1 showing entry level meeting 'basement' so house meets zoning code. However, patios and sport court require grading in addition to baseline grading to get to upper portion of property. Additionally the second level has no access to outdoor area unless an additional patio submerged in hillside is added.

OPTION C CONCLUSION: REQUIRES GRADING FOR LANDSCAPE/PATIOS AND IS A 3-STORY STRUCTURE

- HOUSE LOCATION AGAINST MID-SLOPE OF PROPERTY REQUIRES POOL AT UPPER LEVEL, INCLUDING ADU OR STRUCTURE FOR USE OF POOL AND ACCESS.
- GRADING FOR SITE IS 750 CY
- DOES NOT COMPLY WITH ZONING ORDINANCE SINCE IT QUALIFIES AT 3-STORIES AND LOWER LEVEL DOES NOT MEET 'BASEMENT' CRITERIA.
- OPTION C-1 MEETS BASEMENT CRITERIA, ALLOWS FOR DESIRED LAWN, BUT REQUIRES SAME AMOUNT OF GRADING AS OPTION C, AND LIMITS ACCESS TO OUTDOOR SPACE/NATURAL SUNLIGHT FOR LOWER LEVEL

Option D: Stepped House Mid-Site

The next option is a home located abutting the steep slope. This allows for sport court and fire-truck turnaround to use the same area with limited grading at existing pad and landscape areas at existing pad with no required grading. Locating the house near edge of steep slope requires the driveway to go to the upper portion for access to garage and ample space to backup. This results in net cut/fill that is 1,024 CY which is greater than original submittal and other options, but overall net cut/fill is a more balanced site.



Figure 11: Option D Site plan showing a house stepped mid-site

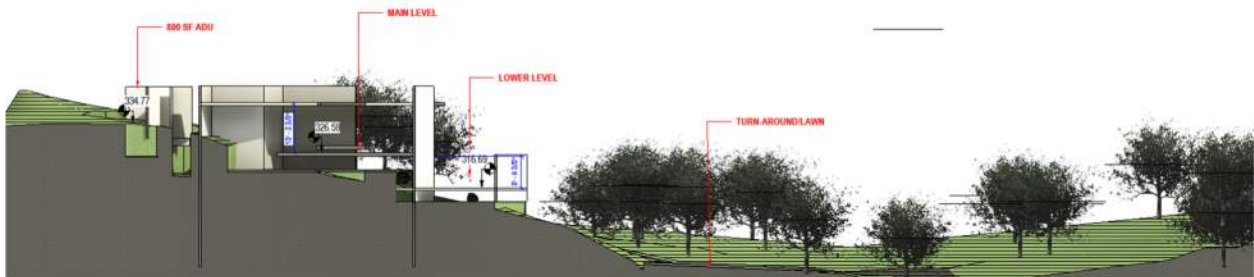


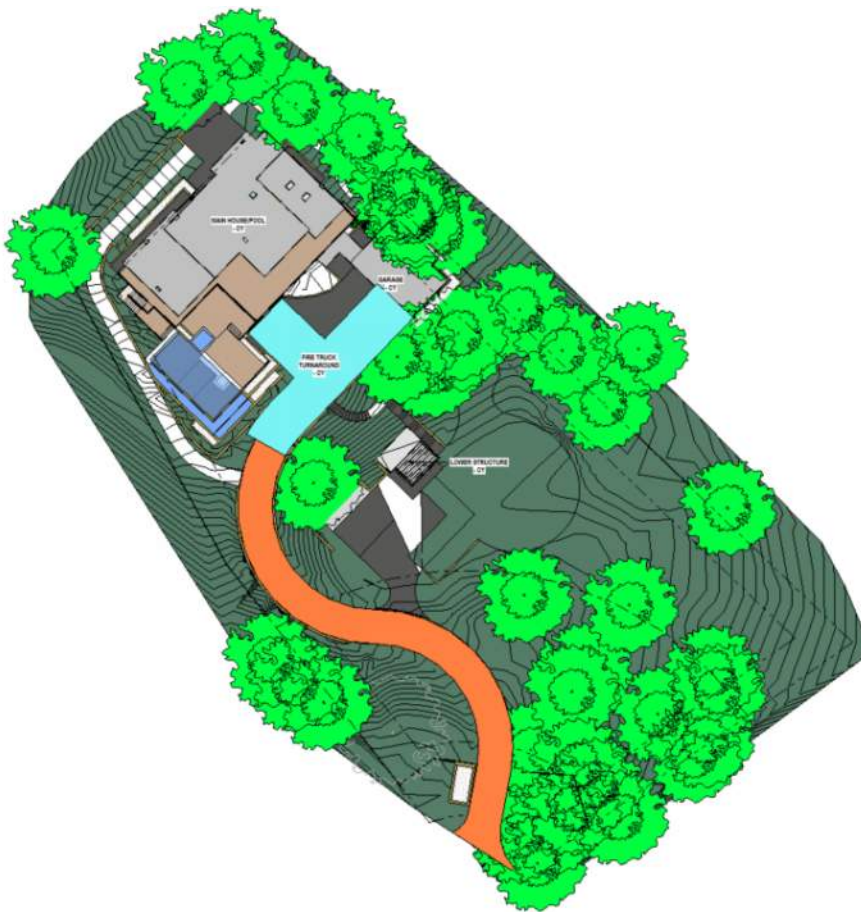
Figure 12: Section through house mid-site

OPTION D CONCLUSION:

- FIRE TRUCK TURN-AROUND AT EXISTING PAD WITH LAWN LIMITS GRADING FOR HARDSCAPE/LANDSCAPE
- HOUSE LOCATION AGAINST MID-SLOPE OF PROPERTY REQUIRES POOL AT UPPER LEVEL, INCLUDING ADU OR STRUCTURE FOR USE OF POOL AND ACCESS.
- GRADING FOR SITE IS 1,204 CY

OPTION E: PERMIT SUBMITTAL

The original submittal showed the house at northern end of property at upper pad with driveway at eastern portion and fire truck turnaround at upper pad. Similar to Option D, this limited grading to driveway and fire truck turnaround requirements since sport court and lawn could be at existing pad and all outdoor spaces could be at decks above grade. The net cut/fill for original submittal was 533 CY and total cut/fill was 953 CY.



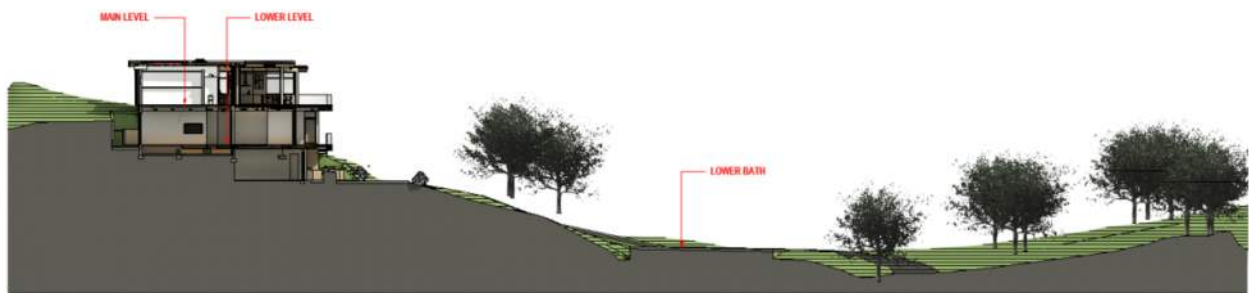
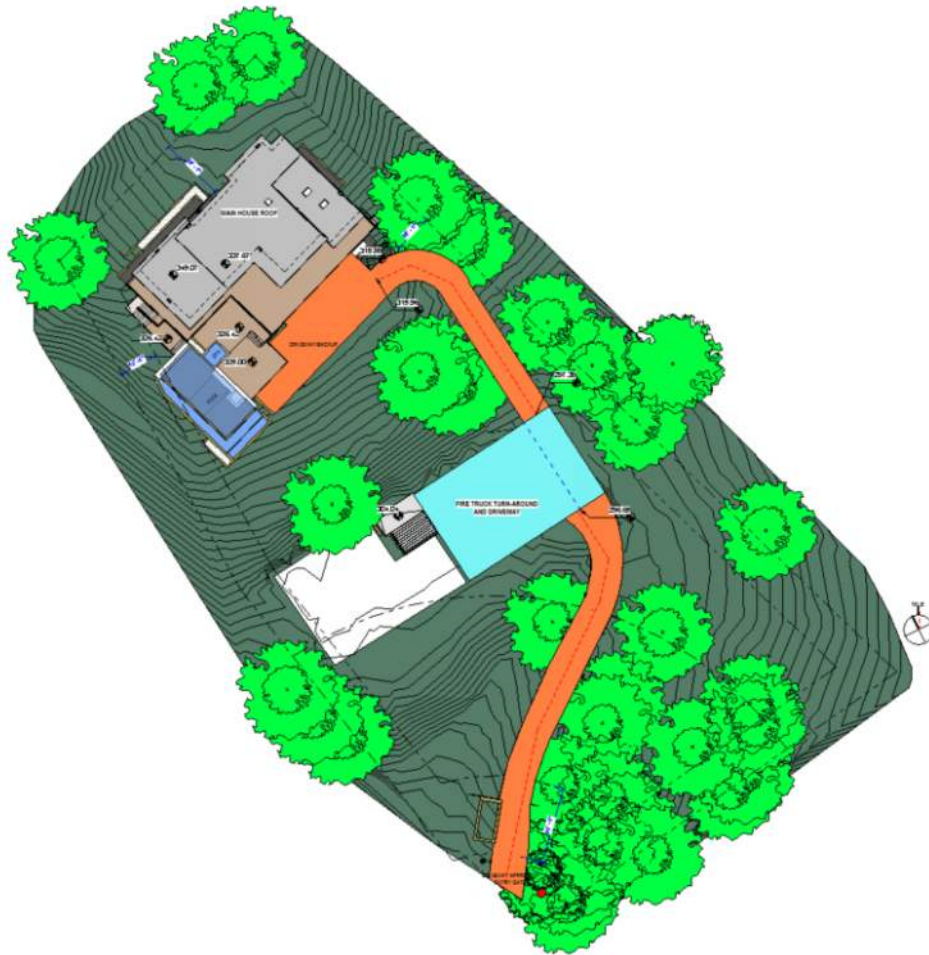


OPTION E CONCLUSION:

- GRADING INCLUDED PRIMARILY THE DRIVEWAY AND TURN-AROUND AND ONE REAR PATIO AND SOME LANDSCAPE ELEMENTS
- HOUSE LOCATION AGAINST MID-SLOPE OF PROPERTY REQUIRES POOL AT UPPER LEVEL, INCLUDING ADU OR STRUCTURE FOR USE OF POOL AND ACCESS.
- GRADING IS 953 CY

OPTION F: CURRENT PROPOSAL

The current proposal moves the driveway to the eastern property line and reuses the existing driveway entry similar to Options B, C and D, but locates house similar to Option E – optimizing grading required for driveway, yet meeting all owner requirements. All the outdoor spaces off of house are raised decks and lawn and sport court are at existing building pad. The total cut/fill is 466 CY and an almost balanced site with a net cut/fill of 26 CY. This option is 200 CY less than any other option and allows for owner to consider some additional landscape elements or improvements. Additionally, the straight driveway, as opposed to the curved, is far preferred by Santa Clara County Fire department.



OPTION F CONCLUSION:

- COMBINES OPTION E BENEFITS OF OUTDOOR SPACES AND SOUTHERN EXPOSURE WITH USE OF EXISTING PAD FOR LANDSCAPE AND FIRE TRUCK TURN-AROUND
- GRADING FOR SITE IS 466 CY AND AN ALMOST BALANCED GRADING AT NET 26 CUT

Table 2: Comparison of Options using Analysis Criteria for Allowable use and total grading

ANALYSIS/CRITERIA	A	B	C/C-1	D	E	F
1) 5,700 SF home with 5 bedrooms		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2) High ceiling living, dining and kitchen space (up to 15' high per the municipal code) with access to outdoor/landscape – deck, patio or lawn		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3) Views of the mountains from master suites, living, kitchen, family, office, bedroom, pool deck					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4) Guest space with master suite, family area with direct access to outdoor area					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5) Office and workout areas open to south					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6) 2-car garage and 2-3 additional parking for guests and family members, part of house or as accessory structure			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7) Pool, patio accessible from either family room or other living space and access to bathroom and changing space		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8) Lawn and extensive garden area and sport court area		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
9) Keep as many of the large trees on site and screening from street and neighbors		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10) Southern exposure for outdoor entertaining area with maximum natural daylight to rooms					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
11) Pool with southern exposure		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TOTAL BLDG SF		7,000	7,000	6,500	6,200	6,200
TOTAL CUT/FILL		946	750.3	1,024	953	466
BALANCE CUT/FILL		602	458.8	194	533	-26

Thank you,



Kathleen Liston

APPENDIX A: CUT/FILL TABLES

OPTION B: HOUSE AT PAD, TURNAROUND, ADU, TERRACED YARD

	CUT	FILL	TOTAL	NET
HARDSCAPE	45.0		45.0	45.0
LANDSCAPE	481.0		481.0	481.0
DRIVEWAY	386.6	100.7	487.3	285.8
	912.6	100.7	1013.3	811.8

OPTION C: STEPPED HOUSE

	CUT	FILL	TOTAL	NET
HARDSCAPE	218.0	45.0	263.0	173.0
LANDSCAPE	0.0	0.0	0.0	0.0
DRIVEWAY	386.6	100.7	487.3	285.8
	604.6	145.7	750.3	458.8

OPTION D: STEPPED HOUSE MID SITE

	CUT	FILL	TOTAL	NET
HARDSCAPE	0.0	0.0	0.0	0.0
LANDSCAPE	0.0	0.0	0.0	0.0
DRIVEWAY	609.0	415.0	1024.0	194.0
	609.0	415.0	1024.0	194.0

OPTION E: SUBMITTAL

	CUT	FILL	TOTAL	NET
HARDSCAPE	75.0	153.0	228.0	-78.0
LANDSCAPE	35.0	150.0	185.0	-115.0
DRIVEWAY	100.0	440.0	540.0	-340.0
	210.0	743.0	953.0	-533.0

OPTION F: CURRENT PROPOSAL

	CUT	FILL	TOTAL	NET
HARDSCAPE	0.0	0	0	0
LANDSCAPE	0.0	0.0	0.0	0.0
DRIVEWAY	220.0	246.0	466.0	-26.0
	220.0	246.0	466.0	-26.0