Staff Report to the Zoning Administrator

Application Number: 231157

Applicant: Sea For Yourself LLC
Owner: Sea For Yourself LLC
APN: 038-461-18
Site Address: 753 Las Olas Drive, Aptos

Agenda Date: 4/19/2024
Agenda Item #: 1
Time: After 9:00 a.m.

Project Description: Proposal to remodel an existing nonconforming single-family dwelling (including relocation of kitchen, 2 bathrooms, and bedrooms), construct a 598 square foot addition, integrate an attached habitable accessory structure into the single-family dwelling, extend exterior decks, and recognize an existing 7-foot fence located in the front yard setback.

Location: Property is located on the south side of Las Olas Drive (753 Las Olas Drive), approximately 0.86 miles southeast of the intersection of Center Avenue and Las Olas Drive in the Aptos area.

Permits Required: Requires a Coastal Development Permit, Variances to reduce the front setback for the dwelling from 20 feet to 11 feet 2 inches, the western side setback from 5 feet to 4 feet 2.25 inches, and the eastern side setback from 5 feet to 4 feet 9.5 inches, Development Permit to recognize an existing 7 foot fence within in the front yard setback, and a determination that the project is exempt from further review under the California Environmental Quality Act.

Supervisorial District: 2 District (District Supervisor: Zach Friend)
Staff Recommendation:

- Determine that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.
- Approval of Application 231157, based on the attached findings and conditions.

Project Description & Setting

The project property is located in "Beach Lands", a gated beach community lying at the base of a steep, coastal bluff that is located to the west of Seacliff State Park. The gated community is accessed via a 20-foot right-of-way, Las Olas Drive, which lies at the base of the bluff and crosses the northern end of the subject property. The subject property is nearly level with a slight slope down from Las Olas Drive towards the Pacific Ocean; an existing rip rap seawall roughly bisects the parcel, running between the residential development and the unimproved portion of the parcel that is sandy beach.

The homes along Las Olas Drive vary widely in architectural style, size and scale and include smaller one-story structures, together with two-story dwellings and some newer homes that appear

to be three-stories because they have been required to be elevated above of the wave run-up zone. The development pattern within this community is characterized by dwellings that are located very close to the southern edge of Las Olas Drive, away from the Pacific Ocean, and most are separated from the right-of-way by fences that exceed three feet in height, with parking for dwellings located either in garages or within the right-of-way.

Project Background

The parcel is currently developed with a legal nonconforming two-story, 2,163 square foot, 2 bedroom, single-family dwelling with a 2 bedroom attached habitable accessory structure (resulting in a total of 4 bedrooms), and attached garage that was built in 1938 with major remodels in 1973 and 1990. The dwelling is accessed by a fenced off courtyard adjacent to Las Olas Drive. The current nonconforming walls of the structure encroach into both side setbacks with the garage entrance having an almost zero-foot front yard setback to the Las Olas Drive right-of-way. The attached garage includes two compact parking spaces that were removed in the early 2000's by an unpermitted expansion of a first-floor bathroom, which resulted in a lack of required parking.

This project includes remodel of the existing nonconforming single-family dwelling (including relocation of the kitchen, 2 bathrooms, and 4 bedrooms), construction of 598 square feet of building additions, integration of the attached habitable accessory structure into the single-family dwelling, extension of the exterior 12-inch high first floor deck and 10 foot high second floor deck directly above the existing and proposed first floor addition, and recognition of an existing 7-foot fence located in the front yard setback.

The proposed additions to the dwelling include: a 113 square foot expansion to a first-floor bedroom in the front yard setback, a 94 square foot expansion of the entry way, a 34 square foot expansion at the rear for new pocket sliding doors, a 174 square foot first floor expansion at the rear and within the eastern side yard setback, and a 183 square foot expansion of the rear second story bedroom and deck.

The 174 square foot and 183 square foot expansions of the first and second stories are partially visible from the public beach and designed to reduce visual impacts by not locating farther from the beach than the existing dwelling and maintaining a 25-foot building height. To achieve a break in massing from the beach, improvements were extended into the existing nonconforming side yard setback area and by developing improvements further towards the right-of-way of Las Olas Drive. This achieved greater conformance with neighborhood development pattern. The removal and relocation of the unpermitted bathroom in the garage results in the correction of the unpermitted garage encroachment and restores the two required compact spaces per the original development.

<u>Regulatory Information</u>

This project was determined to be complete before the County of Santa Cruz's Sustainability Update (SU) to the Zoning and Development regulations which were put into effect on March 18th, 2024. The SU regulations specifically preclude projects deemed complete prior to the effective date of the SU regulations from being subject to these new regulations. Therefore, the project is subject to the previous code in effect at the time of application completeness and not the code in effect at the time of the Zoning Administrator public hearing date.

Zoning & General Plan Consistency

The subject property is a 10,764 square foot lot, located in the R-1-8 (Single Family Residential, 8,000 square foot minimum lot) zone district, a designation which allows for single-family residential uses. The proposed single-family remodel, addition, and existing fence recognition are consistent with the standards of the zone district and the site's R-UL and O-R (Urban Residential, Low Density and Parks, Recreation and Open Space) General Plan designation; the residential development is located in the R-UL area, while no development is proposed in the O-R area or allowed per Book 113 Page 371 of the County of Santa Cruz Records.

The net developable area is calculated by deducting rights-of-way and area seaward of the mean high tide. Thus, net developable area of the parcel is reduced to 6,579 square feet by the existing 20-foot right-of-way on the north part of the property and the area seaward of the mean high tide on the south side. However, the smaller net site area does not result in a nonconforming floor area ratio or lot coverage for this parcel, even though the existing structure is nonconforming to the front and side yard setbacks. The applicable site and development standards for parcels in the R-1-8 zone district are set out in SCCC 13.10.323. A summary of the required, existing, and proposed site and development standards relevant to the project are summarized in the table below:

Development Standard	R-1-8 Zone District	Existing	Proposed
Front Yard Setback at dwelling	20 feet	20 feet	**11 feet 2 inches**
Front Yard Setback at the garage/minimum setback to a garage entrance	20 feet	**1 foot 5 inches**	**1 foot 5 inches**
Side Yard Setback (parcel < 60 feet wide)	5 feet	***Eastern:* 4 feet 9.5 inches** and partially 9 feet 2.25 inches ***Western:* 4 feet 2.25 inches**	***Eastern:* 4 feet 9.5 inches** ***Western:* 4 feet 2.25 inches**
Rear Yard Setback	15 feet	Greater than 30 feet from the deeded restriction line	same
Maximum Height	28 feet	25 feet	25 feet
Maximum Front Yard Fence Height	6 feet with Over height fence certificate	7 feet	7 feet
Maximum FAR	50%	29%	38%
Maximum Lot Coverage	40%	25%	31%
Bedrooms	N/A	Existing bedrooms 4	Proposed bedrooms 4
Parking	3 parking spaces for 4 bedrooms	**0 parking spaces due to unpermitted work**	2 compact parking spaces being reinstated*

**Per Assessor's Official Building Records, the original garage was shown to have 2 compact parking*

spaces, which were removed due to an unpermitted bathroom remodel. In addition, no additional bedrooms are being added so the current zone district standards for parking is not triggered. There were four legal bedrooms originally and four proposed bedrooms.

There are additional code sections and standards to consider, such as the following:

Nonconforming Structures, SCCC 13.10.262

As set out in SCCC 13.10.262 – "Nonconforming Structures", structural alterations may be made to an existing nonconforming structure without additional permit requirements, where such modifications do not constitute reconstruction. Reconstruction is defined by SCCC 13.10.260(B)(6) as modifications that alter 65% or more of the major structural components within a five-year period. Further, nonconforming additions are allowed with the approval of variances or minor exceptions. A Modifications Worksheet was submitted for the proposed project, which shows that approximately 28% of the major structural components of the existing single-family dwelling and attached habitable accessory structure will be altered. As proposed, the proposed remodel of the existing dwelling does not meet the definition of reconstruction and does not require a Site Development Permit.

The proposed 598 square feet of floor area additions to the existing structure will encroach into the front and both side setbacks, therefore variances are being requested together with the Coastal Development Permit.

Parking

The existing dwelling and attached habitable accessory structure consist of a total of 4 legal bedrooms that are developed around, and currently accessed from, a walled courtyard that opens towards Las Olas Drive. Because two of the bedrooms do not have any internal access to the main dwelling, they are considered to be an attached habitable accessory structure that consists of 2 bedrooms out of the 4 total legal originally built bedrooms. The proposed construction will result in the integration of the two legal accessory bedrooms to the main dwelling, by the addition of an interior stairway. Therefore, the proposed bedroom count for the dwelling results in four bedrooms and is therefore not considered an intensification of use per SCCC 13.10.700-I definition because there is no increase in the number of legal bedrooms per SCCC 13.10.700-B Bedrooms definition.

The existing dwelling does not have any onsite parking due to the unpermitted construction of a bathroom addition into the original garage, that blocked the two original, nonconforming compact parking spaces that previously existed. The unpermitted encroachment into the garage will be removed, thereby reinstating the two original parking spaces. As no additional bedrooms are proposed no additional parking beyond these two spaces is required per County Code 13.10.552.

Variances

The project includes additional habitable space that will be constructed partially within the required 20-foot front setback, resulting in the dwelling located 11 feet 2 inches from the edge of the right-of-way. In addition, the extension of the existing nonconforming walls that encroach into the required 5-foot side setbacks on both sides of the parcel, such that the proposed addition will maintain the existing eastern setback of 4 feet 9.5 inch while the western setback stays at 4 feet 2.25 inches. Pursuant to SCCC 13.10.230, specific findings are required for variances to be

granted. These findings can be met in that the subject parcel has topographic constraints and historical community development patterns that restrict development of the proposed building site. Therefore, variances to the front setback and both side setbacks are necessary for the construction of the type of residential development found on other parcels in the vicinity. A complete list of Variance findings is included with this report.

Geologic Hazards

As proposed, the project does not meet the definition of "Substantial Improvement" or "Development/Development Activities" under the Geologic Hazards Ordinance, County Code 16.10.040(65) or (19). Therefore, the project does not require compliance with coastal flood hazard regulations, which would require raising the structure above the FEMA flood elevation level. However, if during construction the need for additional structural modifications occur, all additional work will be evaluated for Substantial Improvement compliance with all FEMA and County regulations for new construction within the FEMA-designated VE-Zone and to determine if geologic review is required. A Geologic Hazards Assessment was completed on July 1, 2019, prior to discretionary permit submittal, and minimum conditions were outlined regarding grading and drainage (see Exhibit C for full list of conditions). In addition, approval of a submitted geotechnical report was completed for foundation design.

Fence Regulations, SCCC 13.10.525

Fences are allowed to be located within the front setback per SCCC 13.10.525(C)(3), see table below:

Property and Fence Location	Maximum Height without Permit Outside of Corner Sight Distance Triangles**, ***	Maximum Height with Over-Height Fence Certification outside of Corner Sight Distance Triangles**, ***	Maximum Height with a Level IV or above Permit ***
Front Yard inside Urban Services Line (USL) and Rural Services Line (RSL)	3 feet*	6 feet	As determined through permit process
Front Yard outside USL and RSL	3 feet*	8 feet	As determined through permit process
Side/Rear Yard Abutting on a Street	6 feet	8 feet if fence at least 5 feet back from property line	As determined through permit process
Side/Rear Yard Not Abutting on a Street	8 feet	N/A: already at 8 feet; would need Level IV to go higher	As determined through permit process

The parcel is located within the Urban Services Line. Therefore, a development permit is required to recognize the existing unpermitted 7-foot fence located in the front setback, 2 feet 2.5 inches from the edge of the right-of-way at the closest point. The need for site distance triangle

compliance is not required for this parcel since the garage is built closer to the right-of-way boundary line and the existing fence would not impact sightlines for vehicles exiting the garage. Therefore, the findings can be made to recognize this existing 7-foot fence because it is consistent with the existing development pattern of the neighborhood, which includes fences and dwellings that are located immediately adjacent to the right-of-way. In addition, allowing a fence that is consistent with the existing pattern of development promotes private yard areas in the front yard, which reduces the potential public viewshed impact from the beach.

Design Review

Because the project is located within a designated scenic area, the project is subject to the County's Design Review Ordinance, Chapter 13.11. The proposed addition to the existing nonconforming single-family dwelling and recognition of a 7-foot fence in the front setback complies with the requirements of the County Design Review Ordinance. In particular, the proposed project will incorporate site and architectural design features such as the use of natural materials, including brick and wood paneling, as well as a light grey color palate, which helps blend the dwelling into the surrounding natural landscaping and dwellings. In addition, the majority of the proposed additional square footage is located away from the public viewshed. Furthermore, all of the additions that are visible from the public viewshed are not located closer to the beach than the existing dwelling footprint. Lastly, the project is designed to minimize the visual impact of the proposed development on surrounding land uses and the natural landscape. As proposed, the project will comply with the County Design Review Ordinance as outlined in SCCC 13.11.070 through 13.11.076.

Local Coastal Program Consistency

The proposed addition to the existing nonconforming single-family dwelling and recognition of a 7-foot fence in the front setback is in conformance with the County's certified Local Coastal Program, in that the structure is sited and designed to be visually compatible, in scale with, and integrated with the character of the surrounding neighborhood. Developed parcels in the area contain single family dwellings. Size and architectural styles vary in the area, and the design submitted is consistent with the existing development pattern and range of styles. The parcel is located within a mapped scenic area on the shoreline. Coastal Design Criteria requires that new development be located on parts of the site not visible or least visible from public view, and that the development not block public views of the shoreline. The site is located on a private and gated right-of-way that is not accessible to the public. Therefore, the proposed additions are significantly below the height of the adjacent bluff and will not block any public views of the shoreline. While some of the additions are visible from the beach, there is no increase in roof height and the proposed dwelling is located further back from the beach than other dwellings. The project also includes colors and materials to blend into the natural setting. Therefore, there will be only a minor change in the impact on the existing scenic views from the beach.

The project site is located between the shoreline and the first public road but is not identified as a priority acquisition site in the County's Local Coastal Program. The proposed project will not interfere with public access to the beach, ocean, or other nearby body of water because the parcel is located on a private gated right-of-way and the project has been conditioned to address public access concerns if any work is required within the public side of Las Olas Drive during construction.

Conclusion

As proposed and conditioned, the project is consistent with all applicable codes and policies of the Zoning Ordinance and General Plan/LCP. Please see Exhibit "B" ("Findings") for a complete listing of findings and evidence related to the above discussion.

Staff Recommendation

- Determine that the proposal is exempt from further Environmental Review under the California Environmental Quality Act.

- **APPROVAL** of Application Number **231157,** based on the attached findings and conditions.

Supplementary reports and information referred to in this report are on file and available for viewing at the Santa Cruz County Planning Division, and are hereby made a part of the administrative record for the proposed project.

The County Code and General Plan, as well as hearing agendas and additional information are available online at: www.sccoplanning.com

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Exhibits

A. Categorical Exemption (CEQA determination)
B. Findings
C. Conditions
D. Project plans
E. Assessor's, Location, Zoning and General Plan Maps
F. Parcel information
G. Geotechnical Report (REV241022)
H. Geologic Hazards Assessment (REV191044)
I. Substantial Improvement Documentation

CALIFORNIA ENVIRONMENTAL QUALITY ACT
NOTICE OF EXEMPTION

The Santa Cruz County Planning Division has reviewed the project described below and has determined that it is exempt from the provisions of CEQA as specified in Sections 15061 - 15332 of CEQA for the reason(s) which have been specified in this document.

Application Number: 231157
Assessor Parcel Number: 03846118
Project Location: 753 Las Olas Drive, Aptos, 95003

Project Description: Proposal to remodel the existing nonconforming single-family dwelling (including relocation of kitchen, 2 bathrooms, and bedrooms), creation of 598 square foot addition, the integration of the attached habitable accessory structure into the single-family dwelling, extension of the exterior decks, and recognition of an existing 7-foot fence located in the front yard setback.

Person or Agency Proposing Project: Sea For Yourself LLC, Molly Robson

Contact Phone Number: 408-458-0012

A. _____ The proposed activity is not a project under CEQA Guidelines Section 15378.

B. _____ The proposed activity is not subject to CEQA as specified under CEQA Guidelines Section 15060 (c).

C. _____ **Ministerial Project** involving only the use of fixed standards or objective measurements without personal judgment.

D. _____ **Statutory Exemption** other than a Ministerial Project (CEQA Guidelines Section 15260 to 15285).

E. X Categorical Exemption

Specify type: Class 1 – Existing Facilities (Section 15301) and Class 3 – New Construction or Conversion of Small Structures (Section 15303)

F. Reasons why the project is exempt:

The remodel includes interior and exterior alterations of the existing dwelling; the addition is not more than 50% of the floor area (at 27.6%); and the project includes building of accessory appurtenant structures such as fences. All improvements are allowed under Class 1, Existing Facilities, and Class 3, New Construction, exemption.

In addition, none of the conditions described in Section 15300.2 apply to this project.

_____ Date:_____

Alexandra Corvello, Project Planner

EXHIBIT A

Coastal Development Permit Findings

1. That the project is a use allowed in one of the basic zone districts that are listed in LCP Section 13.10.170(D) as consistent with the LCP Land Use Plan designation of the site.

This finding can be made, in that the property is zoned R-1-8 (Single-Family Residential, 8,000 square foot parcel minimum size), a designation which allows residential uses. The proposed dwelling and fence are principal permitted uses within the zone district, and the zoning is consistent with the site's R-UL; O-R (Urban Residential, Low Density; Parks, Recreation and Open Space) General Plan designation.

2. That the project does not conflict with any existing easement or development restrictions such as public access, utility, or open space easements.

This finding can be made in that the proposed project is located entirely outside the right-of-way for Las Olas Drive and therefore will not interfere with street access to other parcels in the area. In addition, the development is located inland of the riprap seawall and is therefore outside of the beach area on the parcel, within which no permanent structures may be constructed in accordance with the deed recorded in Book 113 page 371, of the Official Records of the Santa Cruz County.

3. That the project is consistent with the design criteria and special use standards and conditions of this chapter pursuant to SCCC 13.20.130 and 13.20.140 et seq.

This finding can be made, in that the proposed development is consistent with the surrounding neighborhood in terms of development pattern and architectural style. Similar to the majority of residences along Las Olas Drive, that have either the dwelling and/or courtyard walls situated close to or within the right-of-way for Las Olas Drive, the existing dwelling and courtyard walls are nonconforming to required front and side yard setbacks. The proposed additions will not encroach further into the required setbacks than the existing structure along the side property lines and will not encroach closer to the right-of-way than the existing garage in the front yard setback. Therefore, the project will be consistent with a design that could be approved on any similar lot located along Las Olas Drive. The proposed colors will be natural in appearance and complementary to the site and include light grey siding similar to the color palate used by neighboring dwellings. It will also be similar to the color of the bluffs located behind the dwelling. The proposed front yard fence is not visible from the public beach and does not impact any public view of the beach because Las Olas Drive is a gated private street. In addition, the fence is in character with the neighboring development and does not impact the scenic quality of the area. Although the project includes minor additions of the first floor and the second floor, as well as the extension of the second story deck located directly in line with the new habitable square footage within the public viewshed, there will be no change to the height of the structure and only a minor change in the impact on the existing scenic views from the beach.

4. That the project conforms with the public access, recreation, and visitor-serving policies, standards and maps of the LCP Land Use Plan, including Chapter 2: Section 2.5 and Chapter 7.

This finding can be made, in that the project site is not identified as a priority acquisition site in the County Local Coastal Program. While the project site is accessed from Las Olas Drive, which

is located in the Seacliff State Beach public area, the end of Las Olas Drive is gated private neighborhood with this property being part of the private gated community area, which does not allow public access. The project has been conditioned to ensure existing public beach access is not restricted during the construction phase.

5. That the project conforms to all other applicable standards of the certified LCP.

This finding can be made, in that the structure is sited and designed to be visually compatible and integrated with the character of the surrounding neighborhood. Developed parcels in the area contain single family dwellings. Size and architectural styles vary in the area, and the design submitted is consistent with the pattern of development and the architectural style of other homes within the surrounding neighborhood. Additionally, residential uses are allowed in the R-1-8 (Single-Family Residential, 8,000 minimum parcel size) zone district, as well as the General Plan and Local Coastal Program land use designation.

In addition to a Coastal Development Permit, the proposed additions will be located in the required front and side setbacks. Therefore, in accordance with SCCC 13.10.230, the proposed project requires the approval of Variances to: reduce the front setback for the dwelling from 20 feet to 11 feet 2 inches, to increase the nonconforming area along the western side setback from 8 feet to 4 feet 2.25 inches, and to increase the nonconforming area along the eastern side setback from 5 feet to 4 feet 9.5 inches. A complete list of Variance Findings is included with this report.

The proposed remodel does not meet the definition of reconstruction per SCCC 13.10.262, since less than 65% of the structure is being modified. In addition, the project does not meet the definition of "Substantial Improvement" under the Geologic Hazards Ordinance. Therefore, the project does not require compliance with coastal flood hazard regulations. The proposed development will result in the integration of the two accessory bedrooms with the main dwelling by the addition of an interior stairway. Therefore, there is no intensification of use per SCCC 13.10.700-I definition because there is no increase in the number of bedrooms per SCCC 13.10.700-B Bedrooms definition.

As proposed, the proposed project will meet all other site and development standards for the zone district, including height, lot coverage and floor area ratio. In addition, the proposed development will also require removal of an unpermitted bathroom addition that encroaches into the garage, thereby reinstating the two original nonconforming compact parking spaces.

6. If the project is located between the nearest through public road and the sea or the shoreline of any body of water located within the Coastal Zone, that the project conforms to the public access and public recreation policies of Chapter 3 of the Coastal Act.

The project will not impact public access or recreation in accordance with Chapter 3 of the Coastal Act, even though the project site is located between the shoreline and the first public road.
The project site is located within a gated community at the western end of Las Olas Drive, a private road, and public beach access is available to the east of the community, outside of the gated area from within Seacliff State Park. The project has been conditioned to ensure existing beach access is not restricted during the construction phase. Therefore, this finding can be made.

Development Permit Findings

1. That the proposed location of the project and the conditions under which it would be operated or maintained will not be detrimental to the health, safety, or welfare of persons residing or working in the neighborhood or the general public, and will not result in inefficient or wasteful use of energy, and will not be materially injurious to properties or improvements in the vicinity.

This finding can be made, in that the project is located in an area designated for residential uses. Although the project is located within a coastal high hazard area, the modifications to the existing dwelling do not meet the definition of development which is defined in SCCC 16.10.040(19)(b). In particular, projects greater than 65% structural modification require the establishment of a 100-year stability for the site. Based upon the submitted Modification Worksheet around 28% of the existing structure will be modified, which does not meet the definition of development. In addition, the project does not meet the definition of "Substantial Improvement" under SCCC 16.10.040(65) and therefore does not require compliance with coastal flood hazard regulations.

Construction will comply with prevailing building technology, the California Building Code, and the County Building ordinance to ensure the optimum in safety and the conservation of energy and resources. The proposed development will not deprive adjacent properties or the neighborhood of light, air, or open space, in that with the approval of Variances still ensure access to these amenities. Variance findings are included with this report.

2. That the proposed location of the project and the conditions under which it would be operated or maintained will be consistent with all pertinent County ordinances and the purpose of the zone district in which the site is located.

This finding can be made, in that the proposed location of the residence and fence, as well as the conditions under which it would be operated or maintained, will be consistent with all pertinent County ordinances and the purpose of the R-1-8 (Single-family Residential, 8,000 square feet minimum parcel size) zone district as the primary use of the property will be residential. With the approval of the proposed Variances, the project will meet all current site standards for the zone district.

In accordance with SCCC 13.10.700-B "Bedroom Definition", no new bedrooms are proposed to be added to the existing dwelling. Thus, the project does not constitute an intensification of the existing use on the site, as defined in SCCC 13.10.700-I "Intensification of Use" and does not generate a requirement for the provision of additional parking on the site. As part of this discretionary permit, the unpermitted bathroom and mechanical equipment that currently encroach into the garage, are being removed so that the two original compact 7.5 foot by 16-foot parking spaces are being reinstated.

The proposed remodel of the existing dwelling does not meet the definition of reconstruction per SCCC 13.10.262, since less than 65% of the structure is being modified.

3. That the proposed use is consistent with all elements of the County General Plan and with any specific plan which has been adopted for the area.

This finding can be made, in that the proposed residential use is consistent with the use and density requirements specified for the R-UL (Urban Residential, Low Density) land use designation in the County General Plan in which it is located. The remaining unimproved beach area of the parcel is consistent with the O-R (Parks, Recreation, and Open Space) land use designation.

The proposed development will not adversely impact the light, solar opportunities, air, and/or open space available to other structures or properties and, with the approval of Variances to the front and side yard setbacks. Variance findings are attached.

The proposed development will be properly proportioned to the parcel size and the character of the neighborhood as specified in General Plan Policy 8.6.1 (Maintaining a Relationship Between Structure and Parcel Sizes), in that the proposed additions and existing fence recognition will, with the approval of Variances (see Variance Findings, Exhibit B) will result in a structure consistent with a design that could be approved on any similarly sized lot in the vicinity. All of the homes surrounding the subject property have been constructed with a reduced front setback to the edge of the right-of-way and reduced side setbacks, consistent with the submitted design.

A specific plan has not been adopted for this portion of the County.

4. That the proposed use will not overload utilities and will not generate more than the acceptable level of traffic on the streets in the vicinity.

This finding can be made in that the proposed development is to be constructed on an existing developed lot and will not change the expected level of traffic generated. Therefore, the proposed project will not adversely impact existing roads or intersections in the surrounding area or overload utilities.

5. That the proposed project will complement and harmonize with the existing and proposed land uses in the vicinity and will be compatible with the physical design aspects, land use intensities, and dwelling unit densities of the neighborhood.

This finding can be made, in that the proposed structure is located in a mixed neighborhood containing a variety of eclectic architectural styles, with dwellings set close to or within the right-of-way for Las Olas Drive. In addition, most existing dwellings include portions of the structure and/or high walls or fences that are constructed within the required front and side yard setbacks. The proposed development is therefore consistent with the varied architectural styles, development pattern and the land use intensity and density of the neighborhood. Furthermore, the project will be consistent with surrounding development through the use of a neutral grey color.

6. The proposed development project is consistent with the Design Standards and Guidelines (sections 13.11.070 through 13.11.076), and any other applicable requirements of this chapter.

This finding can be made, in that the proposed development will be of an appropriate scale and type of design that will enhance the aesthetic qualities of the surrounding properties and will not reduce or visually impact available open space in the surrounding area. Because the site is located on a private and gated right-of-way that is not accessible to the public and the existing structure is two-stories with no proposed change in height, the proposed additions to the dwelling, will not

block any public views of the shoreline. Therefore, although the project includes a slight increase in bulk that will be visible, there will be only a minor change in the impact on the existing scenic views from the beach.

Variance Findings

1. That because of special circumstances applicable to the property, including size, shape, topography, location, and surrounding existing structures, the strict application of the Zoning Ordinance deprives such property of privileges enjoyed by other property in the vicinity and under identical zoning classification.

This finding can be made in that the proposed variances to the site and development standards are required due to special circumstances. This includes the location of the parcel on a beach and at the foot of a steep bluff, and a parcel that is further encumbered by the right-of-way for Las Olas Drive, which severely constrain the parcel. Taken together, these factors reduce the developable portion of the subject parcel. In addition, the parcel is located in the coastal high hazard zone, requiring all development located inland from the existing rip-rap seawall that roughly bisects the site. In order to construct additions to the existing nonconforming dwelling that do not increase the height and have negligible change in visual impact on coastal scenic area and public beach viewshed, a reduction in setbacks is required to be approved.

The proposed project is located in a gated community comprised of a mix area of older and newer homes where almost all of the homes are nonconforming with respect to setbacks; all homes have either been constructed prior to permit requirements or have been constructed subject to Variance approvals because they are also constrained by the same circumstances. The proposed project is therefore in character with other developments in the vicinity that are under identical zoning classification.

2. That the granting of the variance will be in harmony with the general intent and purpose of zoning objectives and will not be materially detrimental to public health, safety, or welfare or injurious to property or improvements in the vicinity.

This finding can be made in that the intent and purpose of the residential zone district is to provide for residential uses. The approval of Variances to reduce the front setback for the dwelling are in line with the existing nonconforming walls. These variances will be in character with other properties along Las Olas Drive, the majority of which have structures and/or high fences that are also constructed within the required front and side setbacks. The proposed two-story dwelling, will align with the existing nonconforming walls within the east and west side setbacks, will not impact public health, safety or welfare, or injurious to property or improvements in the vicinity as well as will not obstruct sight lines for traffic travelling along Las Olas Drive.

3. That the granting of such variances shall not constitute a grant of special privileges inconsistent with the limitations upon other properties in the vicinity and zone in which such is situated.

This finding can be made since other properties within the surrounding neighborhood are also nonconforming to setbacks, several with greater encroachment than at the subject property. Further, the proposed additions, which increase the existing nonconforming walls will be consistent with the side and front yard setbacks at other neighboring dwellings. Previous variance approvals for additions to dwellings along Las Olas Drive include 89-0642 on APN 038-191-17, which allowed for reduced setbacks based upon restrictions imposed by the coastal high hazards and beach location. In addition, Permit 141291 on APN 038-461-14, also

allowed reduced front yard setback to almost zero feet and an increased encroachment into the side yard setbacks. The current project represents a significantly less intensive development. Therefore, the project does not constitute a grant of special privilege inconsistent with the limitations upon other properties in the vicinity and zone in which such is situated.

Conditions of Approval

Exhibit D: Project plans, prepared by SCDC Architecture Interior Design, dated 1/26/2024.

I. This permit authorizes the remodel of an existing nonconforming single-family dwelling, construction of a 598 square foot addition, integration of a habitable accessory structure into the main dwelling, extension of the exterior decks, and recognition of an existing 7-foot fence in the front yard setback, as indicated on the approved Exhibit "D" for this permit. This approval does not confer legal status on any existing structure(s) or existing use(s) on the subject property that are not specifically authorized by this permit. Prior to exercising any rights granted by this permit including, without limitation, any construction or site disturbance, the applicant/owner shall:

A. Sign, date, and return to Santa Cruz County Planning one copy of the approval to indicate acceptance and agreement with the conditions thereof.

B. Obtain a Demolition Permit from the Santa Cruz County Building Official, if required.

C. Obtain a Building Permit from the Santa Cruz County Building Official.

1. Any outstanding balance due to Santa Cruz County Planning must be paid prior to making a Building Permit application. Applications for Building Permits will not be accepted or processed while there is an outstanding balance due.

D. Obtain a Grading Permit from the Santa Cruz County Building Official, if required.

E. Obtain an Encroachment Permit from the Department of Public Works for all off-site work performed in the County maintained right-of-way.

II. Prior to issuance of a Building Permit the applicant/owner shall:

A. Submit final architectural plans for review and approval by Santa Cruz County Planning. The final plans shall be in substantial compliance with the plans marked Exhibit "D" on file with Santa Cruz County Planning. Any changes from the approved Exhibit "D" for this development permit on the plans submitted for the Building Permit must be clearly called out and labeled by standard architectural methods to indicate such changes. Any changes that are not properly called out and labeled will not be authorized by any Building Permit that is issued for the proposed development. The final plans shall include the following additional information:

1. A copy of the text of these conditions of approval incorporated into the full-size sheets of the architectural plan set.

2. One elevation shall indicate materials and colors as they were approved by this Discretionary Application.

3. Grading, drainage, and erosion control plans.

4. Grading activities must be kept to a minimum.

5. To mitigate light pollution in views of the structure located on the beach, all lighting for the dwelling and on decks shall be projected down to reduce the impact to the public viewshed and low wattage.

6. Provide updated floor area ratio and lot coverage calculations based on net site area, which exclude the 20-foot right-of-way for Las Olas Drive and anything below the mean tide line.

7. The wooden first floor deck shall not be greater than 18 inches in height when measured from the existing grade.

8. All exterior finishes and materials, including windows and glass deck railings, shall be non-reflective.

9. Revise the eastern side yard setbacks on the proposed site plans to reflect the correct side yard setback of 4 feet 9.5 inches (sheet A1.0).

10. Details showing compliance with fire department requirements.

B. Coastal Hazards Risk – By acceptance of the Coastal Development Permit, the Applicant/Owner acknowledges and agrees on behalf of itself, and all successors and assigns, to the following:

1. Coastal Hazards. That the site is subject to coastal hazards including but not limited to episodic and long-term shoreline retreat and coastal erosion, high seas, ocean waves, storms, tsunami, tidal scour, coastal flooding, liquefaction and the interaction of same;

2. Assume Risks. To assume the risks to the Applicant/Owner and the properties that are the subject of this CDP of injury and damage from such coastal hazards in connection with the permitted development;

3. Waive Liability. To unconditionally waive any claim of damage or liability against the County, its officers, agents, and employees for injury or damage from such coastal hazards;

4. Indemnification. To indemnify and hold harmless the County, its officers, agents, and employees with respect to the County's approval of the development against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such coastal hazards; and

5. Property Owner Responsible. That any adverse effects to property caused by the permitted development shall be fully the responsibility of the property owner.

C. Meet all requirements of the County Department of Public Works, Stormwater Management. Drainage fees will be assessed on the net increase in impervious area.

1. Drainage from impermeable surfaces (such as the proposed roof and driveway) must be collected and properly disposed of. Runoff must not be allowed to sheet off these areas in an uncontrolled manner. An engineered drainage plan is required for this project.

2. The application submittal shall adhere to the County Stormwater Design Criteria (CDC). Pre-development runoff patterns and rates shall be maintained, and safe stormwater overflow shall be incorporated into the project design. Final stormwater management plans shall show how runoff is conveyed, controlled, and mitigated.

D. Meet all requirements of the Environmental Planning section of Santa Cruz County Planning.

E. Submit copies of the completed Substantial Improvement Forms, including a contractor affidavit, owner affidavit, and cost breakdown, and of the appraisal based on the final plans submitted with the building application.

1. Note: If the project cost estimate exceeds 50% of the structure's value, either portion of the project shall be removed from the project plans prior to building permit issuance to reduce project costs below 50%, or the applicant shall modify the application to bring the structure into compliance with all FEMA and County regulations for new construction within the FEMA-designated VE-Zone.

F. Provide construction details of all proposed outdoor improvements. Please note that the deck is not allowed to be 18 inches or greater in height and shall be designed to meet the standards set forth in FEMA Technical Bulletin 5, "Free of Obstruction Requirements." A copy of the bulletin can be downloaded here: https://www.fema.gov/sites/default/files/2020-07/fema_tb5_free_obstruction_requirements.pdf

G. Meet all requirements and pay any applicable plan check fee of the Central Fire Protection District.

H. Submit an updated soils report letter of the prepared and stamped by a licensed Geotechnical Engineer.

I. Pay the current fees for Parks mitigation. Currently, these fees are $4.51 per square foot for additional floor area at single family dwellings.

J. Pay the current fees Child Care mitigation. Currently, these fees are $0.74 per

square foot for additional floor area at single family dwellings.

K. Pay the current Affordable Housing Impact Fee. The fees are based on unit size and the current fee for a dwelling up to 2,000 square feet is $2 per square foot for additional floor area.

L. Provide the required off-street parking for 2 cars. Parking spaces must be 7.5 feet wide by 16 feet long and must be located entirely outside vehicular rights-of way. Parking must be clearly designated on the plot plan.

M. Submit a written statement signed by an authorized representative of the school district in which the project is located confirming payment in full of all applicable developer fees and other requirements lawfully imposed by the school district.

N. Complete and record a Declaration of Restriction to maintain a 324 square foot garage with a minimum of two compact (7.5 feet by 16 feet) parking spaces. **You may not alter the wording of this declaration**. Follow the instructions to record and return the form to Santa Cruz County Planning.

III. All construction shall be performed according to the approved plans for the Building Permit. Prior to final building inspection, the applicant/owner must meet the following conditions:

A. All site improvements shown on the final approved Building Permit plans shall be installed.

B. All inspections required by the building permit shall be completed to the satisfaction of the County Building Official.

C. No additional structural modifications or repairs of the existing structure over 50% of the value of the existing structure are allowed without the prior written approval of the Planning Director. Structural modifications that exceed 65% are not allowed without an Amendment to this Permit.

D. No additional structural modifications, repairs, and/or improvements of the existing structure not shown on the submitted Substantial Improvement Forms are authorized without prior written approval from Environmental Planning Staff.

E. The project must comply with all recommendations of the approved soils reports.

F. Public Beach Access located in Seacliff State Beach, located outside of the gated area of Las Olas Drive, shall remain unimpeded during construction. If temporary work within the Las Olas Drive outside of the gated area right-of-way is necessary, signage shall be placed in a visible location indicating that beach access is open/available.

G. Pursuant to Sections 16.40.040 and 16.42.080 of the County Code, if at any time during site preparation, excavation, or other ground disturbance associated with this

development, any artifact or other evidence of an historic archaeological resource or a Native American cultural site is discovered, the responsible persons shall immediately cease and desist from all further site excavation and notify the Sheriff-Coroner if the discovery contains human remains, or the Planning Director if the discovery contains no human remains. The procedures established in Sections 16.40.040 and 16.42.080, shall be observed.

IV. Operational Conditions

A. In the event that future County inspections of the subject property disclose noncompliance with any Conditions of this approval or any violation of the County Code, the owner shall pay to the County the full cost of such County inspections, including any follow-up inspections and/or necessary enforcement actions, up to and including permit revocation.

B. To mitigate light pollution in views of the structure located on the beach, all lighting for the dwelling and on decks shall be projected down to reduce the impact to the public viewshed and low wattage.

C. All exterior finishes and materials, including windows and glass deck railings, shall be non-reflective.

D. All exterior colors and materials shall be in alignment with Coastal Design criteria, including the use of natural materials and colors that are similar to the surrounding natural landscape or of a darker tone to reduce the visual impact on the public viewshed.

V. Indemnification

The applicant/owner shall indemnify, defend with counsel approved by the COUNTY, and hold harmless the COUNTY, its officers, employees, and agents from and against any claim (including reasonable attorney's fees, expert fees, and all other costs and fees of litigation), against the COUNTY, its officers, employees, and agents arising out of or in connection to this development approval or any subsequent amendment of this development approval which is requested by the applicant/owner, regardless of the COUNTY's passive negligence, but excepting such loss or damage which is caused by the sole active negligence or willful misconduct of the COUNTY. Should the COUNTY in its sole discretion find the applicant's/owner's legal counsel unacceptable, then the applicant/owner shall reimburse the COUNTY its costs of defense, including without limitation reasonable attorney's fees, expert fees, and all other costs and fees of litigation. The applicant/owner shall promptly pay any final judgment rendered against the COUNTY (and its officers, employees, and agents) covered by this indemnity obligation. It is expressly understood and agreed that the foregoing provisions are intended to be as broad and inclusive as is permitted by the law of the State of California and will survive termination of this development approval.

A. The COUNTY shall promptly notify the applicant/owner of any claim, action, or

proceeding against which the COUNTY seeks to be defended, indemnified, or held harmless. The COUNTY shall cooperate fully in such defense.

B. Nothing contained herein shall prohibit the COUNTY from participating in the defense of any claim, action, or proceeding if both of the following occur:

1. COUNTY bears its own attorney's fees and costs; and

2. COUNTY defends the action in good faith.

C. Settlement. The applicant/owner shall not be required to pay or perform any settlement unless such applicant/owner has approved the settlement. When representing the COUNTY, the applicant/owner shall not enter into any stipulation or settlement modifying or affecting the interpretation or validity of any of the terms or conditions of the development approval without the prior written consent of the COUNTY.

D. Successors Bound. The "applicant/owner" shall include the applicant and/or the owner and the successor'(s) in interest, transferee(s), and assign(s) of the applicant and/or the owner.

Minor variations to this permit which do not affect the overall concept or density may be approved by the Planning Director at the request of the applicant or staff in accordance with Chapter 18.10 of the County Code.

Please note: This permit expires three years from the effective date listed below unless a building permit (or permits) is obtained for the primary structure described in the development permit (does not include demolition, temporary power pole or other site preparation permits, or accessory structures unless these are the primary subject of the development permit). Failure to exercise the building permit and to complete all of the construction under the building permit, resulting in the expiration of the building permit, will void the development permit, unless there are special circumstances as determined by the Planning Director.

Approval Date: _____

Effective Date: _____

Expiration Date: _____

Zoning Administrator: _____

_____

Appeals: Any property owner, or other person aggrieved, or any other person whose interests are adversely affected by any act or determination of the Zoning Administrator, may appeal the act or determination to the Planning Commission in accordance with chapter 18.10 of the Santa Cruz County Code.

LAS OLAS

753 LAS OLAS DRIVE
APTOS, CA 95003

PROJECT TEAM

OWNER

SEA FOR YOURSELF LLC
2185 THE ALAMEDA, SUITE 150
SAN JOSE, CA 95126

ARCHITECT

SALVATORE CARUSO DESIGN CORPORATION
980 EL CAMINO REAL, SUITE 200
SANTA CLARA, CA 95050
PHONE: (408) 998-4087
FAX: (408) 998-4088

CIVIL

BOWMAN&WILLIAMS CONSULTING CIVIL ENGINEERS & LAND SURVEYORS
3949 RESEARCH PARK CT, STE 100, SOQUEL, CA 95073
PHONE: 831-426-3560
FAX: 831-426-9182

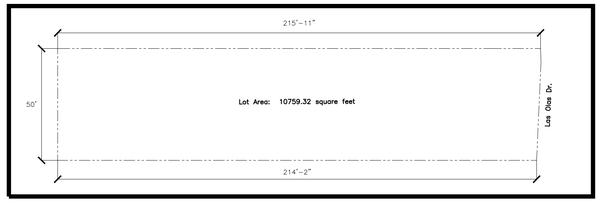
INDEX OF DRAWINGS

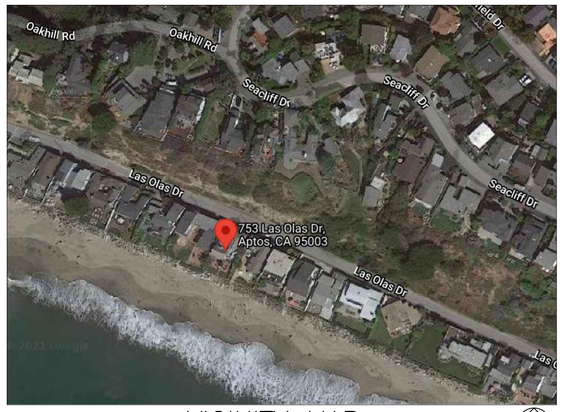
ARCHITECTURAL

SCOPE OF WORK

1

- PARTIAL EXTERIOR WINDOWS AND DOORS TO BE REPLACED & OR RELOCATED
- INTERIOR MODIFICATION INCLUDING RELOCATION OF KITCHEN, THREE BATHROOMS, AND BEDROOMS. NO NEW BEDROOMS OR BATHROOMS.
- REMODEL OF EXISTING HOUSE. ADDED 598 SQ FT TOTAL.
- EXTERIOR DECK TO BE EXTENDED.
- NEW FENCE TO BE RECOGNIZED THROUGH AN OVER HEIGHT FENCE PERMIT.
- VARIANCE REQUESTED FOR AN ADDITION INTO THE 20-FOOT FRONT YARD SETBACK.
- VARIANCE REQUESTED FOR 5 FOOT SIDE YARD SETBACK AND 8 FOOT SIDE YARD SETBACK. 2
- ALL NEW FOUNDATION UNDER NEW PERIMETER WALLS ARE TO NOW COMPLY WITH THE GEOTECHNICAL STUDY DATED 01/26/24 PROVIDING FOR DEEP PEER FOUNDATION PER GEOTECHNICAL REPORT. 3





VICINITY MAP

PROJECT DATA	
APN	03846118
ZONING	R-1-8
GENERAL PLAN DESIGNATION	O-R; R-UL
GENERAL PLAN DESIGNATION DESCRIP	EXISTING PARKS & REC.; URBAN LOW RESIDENTIAL
GENERAL PLAN BOUNDRIES	APTOS
ASSESSOR'S SQUARE FOOTAGE	10759.32
GENERAL PLAN SCENIC AREA	SCENIC
WITHIN URBAN SERVICES LINE	YES
COASTAL ZONE	YES
FLOODWAY	VE
FIRE SPRINKLER	NO
TYPE OF CONSTRUCTION	V-B
OCCUPANCY	R-3/U
MAXIMUM ALLOWED BUILING HEIGHT	28'
EXISTING BUILDING HEIGHT (VIF)	28'
PROPOSED BUILDING HEIGHT	28'
NUMBER OF STORY	2
EXISTING NUMBER OF BEDROOMS	4
PROPOSED NUMBER OF BEDROOMS	4
FAR/LOT COVERAGE CALCULATION	
A.EXISTING FIRST FLOOR GARAGE	292
B.EXISTING FIRST FLOOR (INCLUDE GARAGE)	1622
C.EXISTING SECOND FLOOR	541
TOTAL EXISTING (B+C)	**2163**
D.DEMOLITON ON FIRST FLOOR	20
	2
E.ADDITION ON FIRST FLOOR	415
F.ADDITION ON SECOND FLOOR	183
G.PROPOSED FIRST FLOOR W/GARAGE (B-D+E)	2037
H.PROPOSED 2ND FLOOR (C+F)	724
TOTAL PROPOSED (G+H)	**2761**
I. COVERED PATIO ON FIRST FLOOR	0
J. COVERED BALCONIES ON SECOND FLOOR	0
K. GARAGE CREDIT FOR ONE PARKING SPACE	255
L.GROSS SITE AREA PER ALTA SURVEY	10764
M.NET SITE AREA PER ALTA SURVEY	6579 2
MAXIMUM ALLOWED FAR	0.5
EXISTING FAR (B+C-K)/M	0.29
PROPOSED FAR (G+H+I+J-K)/M	**0.38**
MAXIMUM ALLOWED LOT COVERAGE	40%
EXISTING LOT COVERAGE(B/M)	25%
PROPOSED LOT COVERAGE(G/M)	**31%**

APPLICABLE CODES

PART 1.0,	2022 CALIFORNIA ADMINISTRATIVE CODE
PART 2.0,	2022 CALIFORNIA BUILDING CODE (CBC)
PART 2.5,	2022 CALIFORNIA RESIDENTIAL CODE (CRC)
PART 3.0,	2022 CALIFORNIA ELECTRIC CODE (CEC)
PART 4.0,	2022 CALIFORNIA MECHANICAL CODE (CMC)
PART 5.0,	2022 CALIFORNIA PLUMBING CODE
PART 6.0,	2022 CALIFORNIA ENERGY CODE
PART 9.0,	2022 CALIFORNIA FIRE CODE (WITH LOCAL AMENDMENTS)
PART 11.0,	2022 CALIFORNIA GREEN BUILDING CODE (CALGREEN)

THE APPLICABLE CODES ARE AS AMENDED BY THE
STATE OF **CALIFORNIA** AND THE COUNTY OF **SANTA CRUZ**

EXHIBIT D

SCDC
ARCHITECTURE
INTERIOR DESIGN
SALVATORE CARUSO
DESIGN CORPORATION
980 EL CAMINO REAL, # 200, SANTA CLARA, CA 95050
TEL. No. (408) 998-4087 • FAX. No. (408) 998-4088

PROJECT :

LAS OLAS
753 LAS OLAS DRIVE
APTOS, CA 95003

APN: 03846118

GENERAL NOTES :

1. THIS SHEET IS PART OF A SET & IS NOT TO BE USED ALONE.
2. THIS SHEET IS NOT FOR CONSTRUCTION UNTIL THE ARCHITECT'S STAMP & SIGNATURE ARE ON THIS SHEET.
3. THESE PLANS & PRINTS ARE OWNED BY THE ARCHITECT & ARE FOR USE ON THIS PROJECT ONLY. REPRODUCTION AND/OR DISTRIBUTION WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT IS FORBIDDEN.
4.

SHEET NAME :

COVER SHEET

REVISIONS	BY
1 RESPONSE TO COMMENTS 07/06/23	SM
2 RESPONSE TO COMMENTS 08/31/23	SM

DRAWN:
CHECKED:
DATE: 09/01/2023
SCALE: NTS
JOB No.: 21.02.03

SHEET No.:

A0.1

SHEETS IN SET

1. ALL MATERIAL STORED ON THE SITE SHALL BE PROPERLY STACKED AND PROTECTED TO PREVENT DAMAGE AND DETERIORATION UNTIL USE. FAILURE TO PROTECT MATERIALS MAY BE CAUSE FOR REJECTION OF WORK.

2. ALL CONSTRUCTION AND MATERIALS SHALL BE AS SPECIFIED AND/OR AS REQUIRED BY THE ADOPTED EDITION OF THE BUILDING CODE, ALL LOCAL AND NATIONAL CODES, AND AUTHORITIES WHICH ARE APPLICABLE.

3. ALL PRODUCTS, MATERIALS AND FINISHES TO BE INSTALLED PER MANUFACTURERS SPECIFICATIONS.

4. ALL REQUIRED EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.

5. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO COMMENCING ANY WORK. THE GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCY OF THESE PLANS AND SPECIFICATIONS.

6. THE GENERAL CONTRACTOR SHALL MAINTAIN THE JOB SITE IN A CLEAN, ORDERLY CONDITION FREE OF DEBRIS AND LITTER. EACH SUBCONTRACTOR IMMEDIATELY UPON COMPLETION OF EACH PHASE OF HIS WORK SHALL REMOVE ALL TRASH AND DEBRIS AS A RESULT OF HIS OPERATION. THE JOB SITE SHALL BE LEFT CLEAN AND SWEPT EACH DAY BY THE END OF WORK THAT DAY.

7. NO PORTION OF THE WORK REQUIRING A SHOP DRAWING OR SAMPLE SUBMISSION SHALL BE COMMENCED UNTIL THE SUBMISSION HAS BEEN REVIEWED AND ACTED UPON BY THE ARCHITECT. ALL SUCH PORTIONS OF WORK SHALL BE IN ACCORDANCE WITH THE REVIEWED SHOP DRAWINGS AND SAMPLES.

8. THE CONTRACTOR SHALL CONFINE OPERATIONS AT THE SITE TO AREAS PERMITTED BY LAW, ORDINANCES, PERMITS AND THE CONTRACT DOCUMENTS, AND SHALL NOT UNREASONABLY ENCUMBER THE SITE WITH ANY MATERIAL OR EQUIPMENT.

9. SHOULD AN ERROR APPEAR IN SPECIFICATIONG, DRAWINGS, OR IN WORK DONE BY OTHERS, AFFECTING THIS WORK, NOTIFY THE ARCHITECT AT ONCE. IF CONTRACTOR PROCEEDS WITH WORK AFFECTED WITHOUT INSTRUCTIONS FROM THE ARCHITECT, THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR THE WORK.

10. SHOULD CONFLICT OCCUR IN OR BETWEEN DRAWINGS AND SPECIFICATIONS OR WHERE DETAIL REFERENCES ON CONTRACT DRAWINGS HAVE BEEN OMITTED, CONTRACTOR IS DEEMED TO HAVE ESTIMATED THE MOST EXPENSIVE MATERIALS AND CONSTRUCTION INVOLVED UNLESS HE SHALL HAVE ASKED FOR AND OBTAINED WRITTEN DECISION FROM ARCHITECT AS TO WHICH METHOD OR MATERIALS WILL BE REQUIRED.

11. ALL PATCHING, REPAIRING AND REPLACING OF MATERIALS AND SURFACES CUT OR DAMAGED IN EXECUTION OF WORK SHALL BE DONE WITH APPLICABLE MATERIALS SO THAT SURFACES REPLACED WILL, UPON COMPLETION, MATCH SURROUNDING SIMILAR SURFACES.

12. SEE DOCUMENTS PREPARED BY THE CIVIL ENGINEERING, IF APPLICABLE, FOR ALL FINISH GRADES, DRAINAGE AND SITE DETAILS. REVIEW ALL SITE UTILITY DOCUMENTS, LANDSCAPE AND IRRIGATION DOCUMENTS PRIOR OR COMMENCEMENT OF ANY UNDER GROUNDING OR TRENCHING. NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES OF THE CONTRACT DOCUMENTS.

13. CONSTRUCTION CONTRACTOR AND HIS SUBCONTRACTORS AGREE THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR AND HIS SUBCONTRACTORS WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR AND HIS SUBCONTRACTORS FURTHER AGREE TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL AS IDENTIFIED IN ITEM #14 OF THESE GENERAL CONDITIONS.

14. GENERAL CONTRACTORS, SUBCONTRACTORS, BUILDERS, AND OWNER ARE TO CHECK ALL DRAWINGS FOR ERRORS AND OMISSIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY ERRORS AND/OR OMISSIONS MUST BE REPORTED IMMEDIATELY TO THE ARCHITECT IN WRITING PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE ARCHITECT WILL NOT TAKE LIABILITY FOR ANY ERRORS AND/OR OMISSIONS NOT REPORTED IMMEDIATELY IN WRITING PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE ARCHITECT'S LIABILITY FOR THE TOTAL PROJECT SHALL NOT EXCEED ONE THOUSAND DOLLARS.

15. ALL SCREWS/NAILS IN FINISH WOODWORK TO BE COUNTERSUNK AND FILLED SMOOTH WITH PUTTY TO MATCH FINISH.

16. IF THE MANUFACTURER'S SPECIFICATIONS AND APPLICABLE CODES ARE NOT CONSISTENT WITH EACH OTHER, NOTIFY THE ARCHITECT IMMEDIATELY PRIOR TO COMMENCEMENT OF ANY WORK AND AWAIT DIRECTION OR CONTRACTOR ACCEPTS FULL RESPONSIBILITY OF WORK COMPLETED.

17. ALL GYPSUM BOARD TO BE A MINIMUM OF 5/8" TYPE "X" SHEETROCK, MINIMUM LEVEL 5 SMOOTH FINISH OR AS OTHERWISE INDICATED ON DRAWINGS. INSTALL AS NEEDED TO MEET APPLICABLE CODES. USE RADIUSED CORNERS.

18. SHOP DRAWINGS (3 BLUE LINES, 1 REPRODUCIBLE VELLUM) DEFERRED SUBMITTALS, SEE NOTE #27 BELOW.
ITEMS #1:
    1. ARCHITECTURAL SHEET METAL
    2. WINDOWS
    3. LADDERS
    4. MECHANICAL SYSTEMS
    5. HVAC DUCTWORK
    6. HANDRAIL/GUARDRAIL
    7. STRUCTURAL STEEL
    8. REBAR
    9. LOCKERS
    10. STAIR SHOP DWGS.
    11. ELEVATOR SHOP DWGS.

19. MANUALS / CUT SHEETS (4 COPIES).
ITEMS #2:
    1. DOOR HARDWARE
    2. ACCESS DOORS
    3. ROOF HATCH
    4. LIGHT FIXTURES
    5. ELECTRICAL PANELS
    6. PLUMBING FIXTURES
    7. FIRE EXTINGUISHER
    8. SKYLIGHTS

20. A DELTA ("∆") SYMBOL LOCATED AT THE TOP RIGHT HAND CORNER OF ANY DRAWING INDICATES THAT DRAWING HAS BEEN SIGNIFICANTLY REVISED AND SHOULD BE TREATED AS AN ENTIRELY NEW DRAWING.

21. CONTRACTOR TO PROTECT ALL INTERIOR SPACES (AS REQUIRED) FROM ANY WEATHER, THEFT, OR VANDALISM.

22. CONCTRACTOR TO BE RESPONSIBLE FOR ALL WALLS, FLOORS AND CEILINGS TO BE 'LEVEL' AND PLUMB' AND FINISH TO MATCH EXISTING ADJACENT SURFACES. ALL NEW FINISHES AND FIXTURES ARE TO BE APPROVED BY ARCHITECT, PRIOR TO INSTALLATION. NEW MATERIALS MATCHING EXISTING MATERIALS TO BE 'LIKE' MATERIAL, NOT JUST MATCHING IN STYLE.

23. RELOCATE OR INSTALL NEW PLUMBING, GAS, AND ELECTRICAL LINES (AS REQUIRED) FOR THE NEW CONSTRUCTION. SEE MECHANICAL DRAWINGS.

24. CONTRACTOR TO DISPOSE OF ALL DEBRIS AT AN APPROVED DUMP SITE PER ALL TOWN, COUNTY, STATE AND FEDERAL REGULATIONS.

25. CONTRACTOR TO NOTIFY OWNER AND ARCHITECT IF HE SUSPECTS THAT ANY ASBESTOS IS ON SITE, STOP WORK IMMEDIATELY UNTIL AUTHORITIES HAVE PROVED THE WORK TO BE SAFE.

26. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO COMMENCING ANY CONSTRUCTION OR ORDERING ANY MATERIALS FOR THE PROJECT.

27. ANY DEFERRED SUBMITTAL SHALL BE FIRST SUBMITTED TO THE PROJECT ARCHITECT AND/ OR ENGINEER FOR REVIEW OR COORDINATION; FOLLOWING THE COMPLETION OF PROJECT ARCHITECT/ENGINEER REVIEW AND COORDINATION, A SUBMITTAL TO THE CITY SHALL BE MADE (FOR CITY REVIEW AND APPROVAL), WHICH SHALL INDICATE A LETTER STATING THIS REVIEW AND COORDINATION HAS BEEN PERFORMED AND COMPLETED AND PLANS AND CALCULATIONS FOR THE DEFERRED ITEMS ARE FOUND TO BE ACCEPTABLE (E.G. WITH REGARD TO GEOMETRY, LOAD CONDITION, ETC.) WITH NO EXCEPTIONS.

NOTE #1:
THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CHANGE ORDER, OR A SEPARATED SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY THE OFFICE BEFORE PROCEEDING WITH THE WORK.

28. SWITCHES / CONTROLS / THERMOSTATS / ARE TO BE INSTALLED A MAX. OF 48" ABOVE THE FLOOR, AND ANY RECEPTACLE OUTLETS ARE TO BE INSTALLED AT LEAST 15" ABOVE THE FLOOR.

29. FIRE BLOCKS SHOULD BE PROVIDED IN ACCORDANCE WITH SECTION 717.2, CBC 2010 IN THE FOLLOWING LOCATIONS, PLAN TO NOTE:
    A. IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES, AT THE CEILING AND FLOOR LEVELS.
    B. IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES, AT 10'-0" INTERVALS ALONG THE LENGTH OF THE WALL.
    C. AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS AND COVE CEILINGS.
    D. IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN BETWEEN STUDS ALONG AND IN LINE WITH THE RUN OF THE STAIRS IF THE WALLS UNDER THE STAIRS ARE UNFINISHED.
    E. IN OPENINGS AROUND VENTS, PIPES, DUCTS, CHIMNEYS, FIREPLACES AND SIMILAR OPENINGS THAT AFFORD A PASSAGE FOR FIRE AT CEILING AND FLOOR LEVELS, WITH NON COMBUSTIBLE MATERIALS.

30. ALL INTERIOR AND EXTERIOR FINISHES:
AT ALL INSIDE AND OUTSIDE CORNER AND EDGE DETAILS FOR ALL FINISH MATERIALS MUST USE THE APPROPRIATE MANUFACTURER'S RECOMMENDED INSIDE AND OUTSIDE CORNER AND EDGE MATERIALS AND FINISHES.

31. ALL FIRE RATED INTERIOR STAIRS AND ELEVATOR ENCLOSURES AND LOBBIES, FINISH THE RATED WALLS PRIOR TO THE INSTALLATION OF THE ELEVATOR AND STAIRS.

32. ALL WOOD COMING IN CONTACT WITH CONCRETE MUST BE PRESSURE TREATED, TYPICAL.

33. CONTRACTOR & SUB-CONTRACTOR'S RESPONSIBILITY TO MAKE SURE THAT ALL MATERIALS INSTALLATION & CRAFTSMANSHIP FOR THIS PROJECT MEETS ALL APPLICABLE CODES.

34. INCORPORATE BEST MANAGEMENT PRACTICE (CBMP'S) INTO CONSTRUCTION PLANS & INCORPORATE POST CONSTRUCTION WATER RUN-OFF MEASURES INTO PROJECT PLANS IN ACCORDANCE WITH THE CITY'S URBAN RUN-OFF POLLUTION PREVENTION PROGRAM.

35. ALL EXTERIOR PLASTER FINISH SHALL BE 7/8" SMOOTH CEMENT PLASTER FINISH UNLESS OTHERWISE NOTED.

36. PLASTER EXPANSION JOINTS SHOULD MEET THE FOLLOWING CRITERIA OR AS SHOWN ON THE DRAWINGS.
    A. NO LENGTH SHOULD BE GREATER THAN 18 FT. IN EITHER DIRECTION. B. NO PANEL SHOULD EXCEED 144 SQ. FT. FOR VERTICAL APPLICATIONS
    B. NO PANEL SHOULD EXCEED 100 SQ. FT. FOR HORIZONTAL, CURVED, OR ANGULAR SECTIONS D. NO LENGTH-TO-WIDTH RATIO SHOULD EXCEED 2 1/2 TO 1 IN ANY GIVEN PANEL.

37. FLASHING PROVIDER TO PRIME AND PAINT WITH RUST PROOF PAINT ALL FLASHINGS.

38. SUBMITTAL REVIEW:
REVIEW IS FOR THE LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH INFORMATION GIVEN AND THE DESIGN CONCEPT EXPRESSED IN THE CONTRACT DOCUMENTS. REVIEW OF SUCH SUBMITTALS IS NOT CONDUCTED FOR THE PURPOSE OF DETERMINING THE ACCURACY AND COMPLETENESS OF OTHER DETAILS SUCH AS DIMENSIONS AND QUANTITIES, OR FOR SUBSTANTIATING INSTRUCTIONS FOR INSTALLATION OR PERFORMANCE OF EQUIPMENT OR SYSTEMS, ALL OF WHICH REMAIN THE RESPONSIBILITY OF THE CONTRACTOR AS REQUIRED BY THE CONTRACT DOCUMENTS. NON CONFORMITIES AND ERRORS ARE NOTED. CONTRACTOR IS SOLELY RESPONSIBLE FOR: CORRECTNESS OF DIMENSIONS AND QUANTITIES AND FITTING TO OTHER WORK VERIFICATION OF PHYSICAL INTERRELATION OF ELEMENTS OF THE WORK FROM PLANS AND SPECIFICATIONS AND IN THE FIELD. THE ARCHITECT'S REVIEW SHALL NOT CONSTITUTE APPROVAL OF SAFETY PRECAUTIONS, OR UNLESS OTHERWISE SPECIFICALLY STATED BY THE ARCHITECT, OF ANY CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES. THE ARCHITECT'S REVIEW OF A SPECIFIC ITEM SHALL NOT INDICATE APPROVAL OF AN ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. THIS REVIEW DOES NOT RELIEVE THE CONTRACTOR FROM THESE RESPONSIBILITIES. THIS REVIEW DOES NOT CONSTITUTE APPROVAL OR ACCEPTANCE OF DEVIATIONS AND OR VARIATIONS. DEVIATIONS AND OR VARIATIONS MUST BE CLEARLY IDENTIFIED AND REQUESTED BY WRITTEN CORRESPONDENCE BY THE CONTRACTOR TO SALVATORE CARUSO DESIGN CORPORATION AND IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

39. BIDDING:
    A. THE CONTRACTOR NEEDS TO EXAMINE ALL THE DRAWINGS AND THE SITE CONDITIONS IF THEY ARE DIFFERENT FROM THE DRAWINGSVERIFY ALL THE EXISTING CONDITIONS ON SITE AND NOTIFY THE ARCHITECT PRIOR TO ANY CONSTRUCTION.
    B. PLEASE BID FOR MAX. OF 10 COLORS IN A BID, NOT EXCEEDING 4 COLORS IN ANY GIVEN ROOM AT A TIME.

40. REQUEST FOR INFORMATION:
REVIEW OF REQUEST FOR INFORMATION WILL TAKE A MINIMUM OF THREE WORKING DAYS.

41. CHANGE ORDER:
    A. CHANGE ORDERS MUST BE SUBMITTED BY THE CONTRATOR MAXIMUM OF ONE CALENDAR WEEK FROM THE TIME CONTRACTOR IS AWARE OF THE ISSUE AND/OR HAS A CHANGE ORDER REQUEST BY THE OWNER.
    B. NO MATERIAL(S) SHALL BE PURCHASED OR WORK DONE UNLESS WITH AN APPROVED, SIGNED, CHANGE ORDER HAS BEEN PROCESSED.

42. INTERIOR AND EXTERIOR PAINT TO BE MINIMUM OF ONE (1) COAT OF PRIMER AND MINIMUM OF TWO (2) COATS OF PAINT.

43. EXTERIOR WALL PAINT TO BE EGGSHELL, EXTERIOR TRIM TO BE GLOSSY, UNLESS NOTED OTHERWISE. CONTACTOR TO PROVIDE FULL COVERAGE WITH PAINT.

A

A.B.	ANCHOR BOLT
A.C.	ASPHALT CONCRETE
A.C.C.M.P.	ASPHALT COATED CORRU-GATED METAL PIPE
A.C.I.	AMERICAN CONCRETE INSTITUTE ALTERNATING CURRENT OR ACRES
ACOUS.	ACOUSTICAL
A.C.P.	ASBESTOS CEMENT PIPE
ADD.	ADDENDUM
AD	AREA DRAIN
ADD'NL	ADDITIONAL
ADJ.	ADJUSTABLE
A.F.F.	ABOVE FINISH FLOOR
AGA.	AMERICAN GAS ASSOCI-ATION
AGG.	AGGREGATE
A.H.	AIR HANDLING
AIR COND.	AIR CONDITIONING
A.I.A.	AMERICAN INSTITUTE OF ARCHITECTS
A.I.E.E.	AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS
A.I.S.C.	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AI.SI	AMERICAN IRON & STEEL INSTITUTE
ALT.	ALTERNATE
ALUM.	ALUMINUM
AMP.	AMPERE
ANOD.	ANODIZED
APPROX.	APPROXIMATE
ARCH.	ARCHITECT/ARCHITECTURAL
ASB.	ASBESTOS
ASCE	AMERICAN SOCIETY OF HEATING, REFRIGERATING & AIR CONDITIONING ENGINEERS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASPH	ASPHALT
ASR	AUTOMATIC SPRINKLER RISER
ASSOC.	ASSOCIATION
ATEG	ACOUSTIC TILE EXPOSED GRID
AVE	AVERAGE

B

B & B	BURLAPPED & BALLED
BD.	BOARD
BIT.	BITUMINOUS
BLDG.	BUILDING
BLK.	BLOCK
BLKG.	BLOCKING
BM.	BEAM
B.M.	BENCH MARK
BOT.	BOTTOM
BRG.	BEARING
BRON.	BRONZE
B.S.	BOTH SIDED
BTN.	BETWEEN
BTU	BRITISH THERMAL UNIT
B.V.C.	BEGINNING OF VERTICAL CURVE
B.W.	BOTH WAYS

C

CAB.	CABINET
CAL.	CALIPER
CAR	CARPET
C.B.	CATCH BASIN
CBI	CATCH BASIN INVERT
CEM.	CEMENT
CER.	CERAMIC
C.F.	CUBIC FEET
C.F.M.	CUBIC FEET PER MINUTE
C.F.S.	CUBIC FEET PER SECOND
CHWS (R)	CHILLED WATER SUPPLY (RETURN)
C.I.	CAST IRON
C.I.P.	CAST IRON PIPE
CIR.	CIRCULAR
C.L.	CENTER LINE OR CHAIN LINK (FENCE)
CLG.	CEILING
CLO	CLOSET
CLR	CLEAR
C.M.U.	CONCRETE MASONRY UNIT
C.M.P.	CORRUGATED METAL PIPE
CNTR	COUNTER
CO.	COMPANY
CO	CLEAN-OUT
COL.	COLUMN
COMB.	COMBINATION
COMP.	COMPOSITION
CONC.	CONCRETE
CONN.	CONNECTION
CONST.	CONSTRUCTION
CONTR.	CONTRACTOR
CONT.	CONTINUOUS
COR.	CORNER
CORP.	CORPORATION
CORR.	CORRIDOR
CRR	CORRUGATE
C/S	CROSS SLOPE
CTSK	COUNTERSINK
C.W.	COLD WATER
C.W.S.(R)	CONDENSER WATER SUPPLY (RETURN)
CU	CUBIC
C.Y.	CUBIC YARD

D

d	PENNY (NAILS)
DBL.	DOUBLE
DC.	DIRECT CURRENT SEE AC.
DEG.	DEGREE
DEPT.	DEPARTMENT
DET.	DETAIL
D.F.	DRINKING FOUNTAIN, DOUGLAS FIR
DIA.	DIAMETER
DIAG.	DIAGONAL
DIM.	DIMENSION
DISP.	DISPENSER
DIV.	DIVISION
D.M.H.	DROP MAN HOLE
DN.	DOWN
D.O.	DOOR OPENING
DR.	DOOR, DRAIN
DS	DOWNSPOUT
D.S.P.	DRY STAND PIPE
DW.	DISHWASHER
DWG.	DRAWING
DWR.	DRAWER

E

E.	EAST
EA.	EACH
E.A.P.	EXPOSED AGGREGATE PAVING
E.F.	EACH FACE
EL.	ELEVATION
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
E.M.R.	ELEVATOR MACHINE ROOM
ENAM.	ENAMEL
ENCL.	ENCLOSURE
ENGR.	ENGINEER
E.P.	ELECTRICAL PANEL
EQ.	EQUIVALENT
EQUIP.	EQUIPMENT
ETC.	AND SO FORTH
EX. OR (E)	EXISTING
EXH.	EXHAUST
EXPO.	EXPOSED
EXP.	EXPANSION
EXT.	EXTERIOR
E.W.	EACH WAY
E.W.C.	ELECTRIC WATER COOLER
E.W.M.	ELECTRIC WELDED MESH
E.V.C.	END OF VERTICAL CURVE

F

F.A.	FRESH AIR, FIRE ALARM
FAB.	FABRICATE
F.B.	FLAT BAR
F.D.	FLOOR DRAIN
FDN.	FOUNDATION
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXTINGUISHER CABINET
F.F.	FINISH FLOOR
F.G.	FINISH GRADE
F.H.C.	FIRE HOSE CABINET
F.H.	FIRE HYDRANT
FHWS	FLAT HEAD WOOD SCREW
FIN.	FINISH
F.L.	FLOW LINE
FL.LT.	FLUORESCENT LIGHT
FLR.	FLOOR
F.P.	FIRE PROTECTION
F.O.B.	FACE OF BLOCK
F.O.C.	FACE OF CONCRETE
F.O.F.	FACE OF FINISH
F.O.G.	FACE OF GLAZING
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUD
F.O.W.	FACE OF WALL
FPRF.	FIREPROOF
F.R.	FLOOR SINK
FT.	FEET
FTG.	FOOTING
FURR.	FURRING
FUT.	FUTURE

G

GA.	GAUGE
GAL.	GALLON
GALV.	GALVANIZE
G.B.	GRAB BAR
G.C.	GENERAL CONTRACTOR
G.D.	GARBAGE DISPOSAL
G.I.	GALVANIZED IRON
GL.	GLASS
GLU-LAM	GLU-LAMINATED
G.L.B.	GLU-LAMINATED BEAM
GND.	GROUND
G.P.H.	GALLONS PER HOUR
G.P.M.	GALLONS PER MINUTE
G.RAIL	GUARD RAIL
G.V.	GAS VALVE
GYP.	GYPSUM BOARD

H

H.B.	HOSE BIBB
H.C.	HOLLOW CORE
HD.	HEAD
HDR.	HEADER
HT.	HEIGHT
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL
HP	HORSEPOWER
H.P.	HIGH POINT
HR.	HOUR
H.RAIL	HANDRAIL
HDWR.	HARDWARE
HTG.	HEATING
H.V.A.C.	HEATING, VENTILATING & AIR CONDITIONING
HW	HEAD WALL
H.W.	HOT WATER
HWY	HIGHWAY
HYD.	HYDRAULIC, HYDRANT
Hz	HERTZ

I

I.E.S.	ILLUMINATING ENGINEERS SOCIETY
I.D.	INSIDE DIAMETER
IMPG.	IMPREGNATE
IN.	INCH
INCL.	INCLUDES
INC.	INCORPORATED
INFO.	INFORMATION
INL	INLET
INSUL	INSULATION
INT.	INTERIOR
ISOL	ISOLATION, ISOLATOR
I.C.W.	INDUSTRIAL COLD WATER
I.H.W.	INDUSTRIAL HOT WATER
INV.	INVERT

J

JAN.	JANITOR
J.B.	JUNCTION BOX
JCT.	JUNCTION
JST.	JOIST
JT.	JOINT

K

K.D.	KILN DRIED
KIT.	KITCHEN
K.O.	KNOCK OUT
K.W.	KILOWATT

L

L.	LENGTH OF CURVE
L.A.	LANDSCAPE ARCHITECT
LAB.	LABORATORY
LAG.	LAG SCREW
LAV.	LAVATORY
LAM.	LAMINATE
LAT.	LATERAL
LB.	POUND
L.C.	LANDSCAPE CONTRACTOR
LF	LINEAR FEET
LG.	LONG
LIN.	LINEAR
L.P.	LOW POINT
LT.	LIGHT
LVR.	LOUVER
LT.W.C.	LIGHT WEIGHT CONCRETE

M

M	METER
MAS.	MASONRY
MATL.	MATERIAL
MAX.	MAXIMUM
M.B.	MACHINE BOLT
MECH.	MECHANICAL
MEMB.	MEMBRANE
MET.	METAL
MFR.	MANUFACTURER
M.H.	MANHOLE
M.I.	MALLEABLE IRON
MIN.	MINIMUM, MINUTE
MIR.	MIRROR
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
MOD.	MODULE
MON.	MONUMENT
M.S.	MACHINE SCREW
MTD.	MOUNTED
MUL.	MULLION

N

N.	NORTH
NAT.	NATURAL
N.B.S.	NATIONAL BUREAU OF STANDARDS
NEC.	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOC.
N.G.	NATURAL GRADE
N.I.C.	NOT IN CONTRACT
NO.	NUMBER
NOM.	NOMINAL
N.T.S.	NOT TO SCALE
N.S.	NO SCALE

O

O.A.	OVERALL
O.A.I.	OUTSIDE AIR INTAKE
OBS.	OBSCURE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.F.	OVERFLOW
OFL	OVERFLOW LEADER
O.F.S.	OUTSIDE FACE OF STUD
OFF.	OFFICE
O.H.	OVAL HEAD
OPNG.	OPENING
OPP.	OPPOSITE
ORIG.	ORIGINAL
O.T.O.	OUT TO OUT
OVHD.	OVERHEAD

P

P.A.	PUBLIC ADDRESS
PC	PIECE
P.C.P.	POROUS CONCRETE PIPE
P G & E	PACIFIC GAS & ELECTRIC
PG.	PAGE
P.H.	PANIC HARDWARE
PL.	PLATE
P.L.	PROPERTY LINE
P. LAM.	PLASTIC LAMINATE
PLAS.	PLASTER
PLMBG.	PLUMBING
PLY.	PLYWOOD
P.M.	PRESSED METAL
PNL.	PANEL
P.O.C.	POINT OF CONNECTION
POL.	POLISHED
PORC.	PORCELAIN
P.P.	POWER POLE
PR.	PAIR
PRCT.	PRECAST
PREFAB.	PREFABRICATED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
P.T.	PRESSURE TREATED
PT.	POINT
P.T.D.	PAPER TOWEL DISPENSER
P.T.D./R	COMBINATION PAPER TOWEL DISPENSER/ RECEPTACLE
PTN.	PARTITION
P.T.R.	PAPER TOWEL RECEPTACLE
PVC	POLYVINYLCHLORIDE
P.V.T.	POINT OF VERTICAL TANGENT

Q

QT.	QUART
Q.T.	QUARRY TILE

R

R.	RISER
RAD.	RADIUS
R.C.P.	REINFORCED CONCRETE PIPE
R.D.	ROOF DRAIN
R.E.	RIM ELEVATION
RECPT.	RECEPTACLE
REF.	REFERENCE
REFR.	REFRIGERATOR, REFRIGERATION
REINF.	REINFORCEMENT
REQD.	REQUIRED
RESIL.	RESILIENT
RF.	ROOF
RGTR.	REGISTER
R.H.	ROUND HEAD
REL. HUM.	RELATIVE HUMIDITY
REV.	REVISION
RM.	ROOM
R.O.	ROUGH OPENING
R.O.W.	RIGHT OF WAY
R.P.M.	REVOLUTIONS PER MINUTE
R.R.	RAILROAD
R.V.	ROOF VENT
RWD.	REDWOOD
RWL.	RAIN WATER LEADER

S

S.	SOUTH
SAN.	SANITARY
S.C.	SOLID CORE
SCHED.	SCHEDULE
S.D.	STORM DRAIN
SECT.	SECTION
SEIS.	SEISMIC
SF	SQUARE FEET
SH.	SHELF
SHR.	SHOWER
SHT.	SHEET
SHTG.	SHEATHING
S.I.	STORM INLET
SIM.	SIMILAR
S.J.	SEISMIC JOINT
SK	SINK
S.M.	SHEET METAL
SND.	SANITARY NAPKIN DISPENSER
S.N.R.	SANITARY NAPKIN RECEPTACLE
SPECS.	SPECIFICATIONS
SPR.	SPRINKLER
SQ.	SQUARE
S/S.	SERVICE SINK,
S.S.	SANITARY SEWER
S.STL.	STAINLESS STEEL
ST.	STREET
STA.	STATION
STAG.	STAGGERED
STD.	STANDARD
STIFF.	STIFFENER
ST.	STEEL
STOR.	STORAGE
STR.	STRINGER
STRL.	STRUCTURAL
SUSP.	SUSPENDED
SWBD.	SWITCHBOARD
S.Y.	SQUARE YARD
SYM.	SYMMETRICAL

MANDATORY ENVELOPE FEATURES:

ENVELOPE:

SEE TITLE 24 REQUIREMENTS

T

TANG.	TANGENT
T.B.	TOWEL BAR
T & B	TOP AND BOTTOM
T.C.	TOP OF CURB, TOP OF COUNTER
T.C.P.	TERRA COTTA PIPE
T.E.	TAPERED END
TEL.	TELEPHONE
TEMP.	TEMPERATURE
TEMPD.	TEMPERED
TER.	TERRAZZO
T & G	TONGUE AND GROOVE
TH.	THRESHOLD
THERMO.	THERMOSTAT
THK.	THICK, THICKNESS
THRU.	THROUGH
TOL.	TOLERANCE
T.P.	TOP OF PARAPET, TELEPHONE POLE, TOP OF PAVEMENT
T.P.H.	TOILET PAPER HOLDER
T.PL.	TOP OF PLATE
TRANSF.	TRANSFORMER
TRD.	TREAD
T.S.	TOP OF SLAB, TOP OF SLOPE, TOP OF STEEL
T.V.	TELEVISION
T.W.	TOP OF WALL
TYP.	TYPICAL

U

U.B.C.	UNIFORM BUILDING CODE
U.D.	UNDER DRAIN
U.L.	UNDERWRITER'S LABOR-ATORIES, INC.
UNF.	UNFINISHED
U.O.N.	UNLESS OTHERWISE NOTED
U.S.G.S.	U.S. GEOLOGICAL SURVEY
UR.	URINAL

V

V.	VENT, VOLT
VAR.	VARIES, VARIABLE
V.C.	VERTICAL CURVE
VEN.	VENEER
VERT.	VERTICAL
VEST.	VESTIBULE
VGDF.	VERTICAL GRAIN DOUGLAS FIR
VOL.	VOLUME
VIT.	VITRIFIED
V.C.P.	VITRIFIED CLAY PIPE

W

W.	WEST
W/	WITH
W.C.	WATER CLOSET
WD.	WOOD
W.F.	WIDE FLANGE
WF.	WIRE FABRIC
W.GL.	WIRE GLASS
W.H.	WATER HEATER
W.I.	WROUGHT IRON
WIND.	WINDOW
W.M.	WIRE MESH, WATER MESH
W/O	WITHOUT
W.P.	WATERPROOF, WORK POINT
W.R.	WATER RESISTANT
WSCT.	WAINSCOT
W.S.P.	WET SAND PIPE
WT.	WEIGHT
W.W.M.	WELDED WIRE MESH
WV	WATER VALVE

Y

YD.	YARD
Y.D.	YARD DRAIN
#	POUND (LB.) OR NUMBER
0°	DEGREES
@	AT
ø	DIAMETER
ф	SQUARE

EXITING NOTES:

E1. EXIT DOORS SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.

E2. EXIT DOORS SHALL SWING IN THE DIRECTION OF EXIT TRAVEL WHEN SERVING ANY HAZARDOUS AREA OR WHEN THE AREA SERVED HAS AN OCCUPANT LOAD OF 50 OR MORE.

E3. NUMBER OF EXITS. EVERY BUILDING OR USABLE PORTION THEREOF SHALL HAVE AT LEAST ONE EXIT AND SHALL HAVE NOT LESS THAN TWO EXITS WHERE REQUIRED BY SECTION 1014 AND 1019, AND ADDITIONAL EXITS AS REQUIRED BY THIS SECTION.

E4. EXITS SHALL BE ILLUMINATED AT ANY TIME THE BUILDING IS OCCUPIED WITH LIGHT HAVING INTENSITY OF NOT LESS THAT 1 FOOT-CANDLE AT FLOOR LEVEL.

E5. SEPARATE SOURCES OF POWER. THE POWER SUPPLY FOR EXIT ILLUMINATION SHALL NORMALLY BE PROVIDED BY THE PREMISES' WIRING SYSTEM. IN THE EVENT OF ITS FAILURE, ILLUMINATION SHALL BE AUTOMATICALLY PROVIDED FROM AN EMERGENCY SYSTEM FOR GROUP 1, DIVISIONS 1.1 AND 1.2. OCCUPANCIES AND FOR ALL OTHER OCCUPANCIES WHERE THE EXISTING SYSTEM SERVES MORE THAN 100 PERSONS.

E6. WHEN TWO OR MORE EXITS ARE REQUIRED FROM A ROOM OR AREA, EXIT SIGNS SHALL BE INSTALLED AT THE REQUIRED EXITS. DIRECTIONAL SIGNAGE SHALL BE INSTALLED WHERE NEEDED TO INDICATE THE DIRECTION OF EGRESS. GRAPHICS, ILLUMINATION AND POWER SUPPLY SHALL COMPLY WITH CBC 1011, 1011.5.3 AND 1006.3

E7. AISLES LEADING TO REQUIRED EXITS SHALL BE PROVIDED FROM ALL PORTIONS OF BUILDINGS. IN PUBLIC AREAS OF GROUP B AND M OCCUPANCIES, AND IN ASSEMBLY OCCUPANCIES WITHOUT FIXED SEATS THE MINIMUM CLEAR AISLE WIDTH SHALL BE 36 INCHES WHERE TABLES, COUNTERS, FURNISHINGS, MERCHANDISE OR OTHER SIMILAR OBSTRUCTIONS ARE PLACE ON ONE SIDE OF THE AISLE ONLY AND 44 INCHES WHEN SUCH OBSTRUCTIONS ARE PLACED ON BOTH SIDES OF THE AISLE.

E8. ANY GLAZING WITHIN 24 INCHES OF EITHER SIDE OF ANY DOOR GREATER THAN 9 S.F. OF AREA WITH BOTTOM EDGE LESS THAN 18 INCHES ABOVE (AND HORIZONTALLY, WITHIN 36 INCHES) OF WALKING SURFACE SHALL BE SAFETY GLAZED (i.e. TEMPERED).

SCDC

EXHIBIT D

ARCHITECTURE INTERIOR DESIGN

SALVATORE CARUSO DESIGN CORPORATION

980 EL CAMINO REAL, # 200, SANTA CLARA, CA 95050

TEL. No. (408) 998-4087 • FAX. No. (408) 998-4088

PROJECT :

LAS OLAS

753 LAS OLAS DRIVE

APTOS, CA 95003

APN: 03846118

GENERAL NOTES :

1. THIS SHEET IS PART OF A SET & IS NOT TO BE USED ALONE.
2. THIS SHEET IS NOT FOR CONSTRUCTION UNTIL THE ARCHITECT'S STAMP & SIGNATURE ARE ON THIS SHEET
3. THESE PLANS & PRINTS ARE OWNED BY THE ARCHITECT & ARE FOR USE ON THIS PROJECT ONLY. REPRODUCTION AND/OR DISTRIBUTION WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT IS FORBIDDEN.
4.

SHEET NAME :

GENERAL NOTES

REVISIONS	BY
1 RESPONSE TO COMMENTS 07/06/23	SM
2 RESPONSE TO COMMENTS 08/31/23	SM

DRAWN:	
CHECKED:	
DATE:	09/01/2023
SCALE:	NTS
JOB No.:	21.02.03

SHEET No.:

A0.2

SHEETS IN SET ______

Modification Worksheet

To be used in association with evaluating the extent of proposed modifications of the major structural components of a nonconforming structure or structure accomodating a nonconforming use, and for a determination whether a structure may be considered development per the Geologic Hazards Ordinance and thus may be required to prepare a geologic report or geologic assessment.

How to use this calculator:

For each building component (roof, exterior walls, floor framing or foundation), you may enter either an estimated percentage to be modified or you can enter the actual measurements and use the calculator to obtain the percent modification of that component. Enter values only in the green fields. The result is given in the blue box a the bottom of the spreadsheet.

For spreadsheet guidelines, click the index tab (below page margin at bottom of this page) called "User Guide".

Roof

Enter either	Do not enter words or symbols	
Estimated % of roof to be modified	1%	
or		
Area of Existing Roof		SF
Total Modified Area of Roof		SF

Calculation Tips

Roof Calculation Notes:
Measure as a flat plane, neglecting slope. Do not count deck roofs or eaves. Do count sealed decks that are part of the main roof system. On most one-story structures, the roof area will equal the floor area.

Exterior Walls

Enter either		
Estimated % of exterior walls to be modified	42%	
or		
Total length of existing exterior walls		LF
Total length of modified exterior walls		LF

Exterior Walls Calculation Notes:
Modified segments wrap around corners and have no minimum separation. Attic walls and most cripple walls do not count. To assist with measuring modified segments in multiples of four feet, use the wall modification calculator.

Floors

Enter either		
Estimated % of floor area to be modified	1%	
or		
Total area of existing floors		SF
Total area of modified floors		SF

Floor Calculation Notes:
The modified area of each structural member extends halfway to each adjacent member. For cross pieces and diagonal members, the modified area extends 16 inches on either side. Exclude decks and additions. Do not use FAR guidelines.

Foundations

Enter either		
Estimated % of foundations to be modified		
or		
Perimeter Foundations		
Total length of existing perimeter foundation		LF
Total length of modified perimeter foundation		LF
Area of first floor supported by perimeter foundation		SF
Slab Foundations		
Total area of existing slab foundation		SF
Total area of modified slab foundation		SF
Area of first floor supported by slab foundation		SF
Pier and Grade Beam Foundation		
Total length of existing pier and grade beam foundation	257.125	LF
Total length of modified pier and grade beam foundation	15.25	LF
Area of first floor supported by pier and grade beam foundation	1914	SF
	6%	

Foundation Calculation Notes:
Modification of a perimeter and pier and grade beam foundations are measured as percentage of length;

Modification of a slab is measured as percentage of area.

Where piers are added or reinforced, multiply the number of modified piers by the average spacing. Where one pier or anchor is added, count as a modification of 4'.

Modification of an existing foundation to enable an addition is included, but not a separate addition foundation.

Summary

Roof Modification (15%)	**0%**
Exterior Wall Modification (65%)	**27%**
Floor Framing Modification (10%)	**0%**
Foundation Modification (10%)	**1%**
	28%

For Planning Staff Only

If structural modifications exceed the level of modification indicated below, a discretionary application is required.

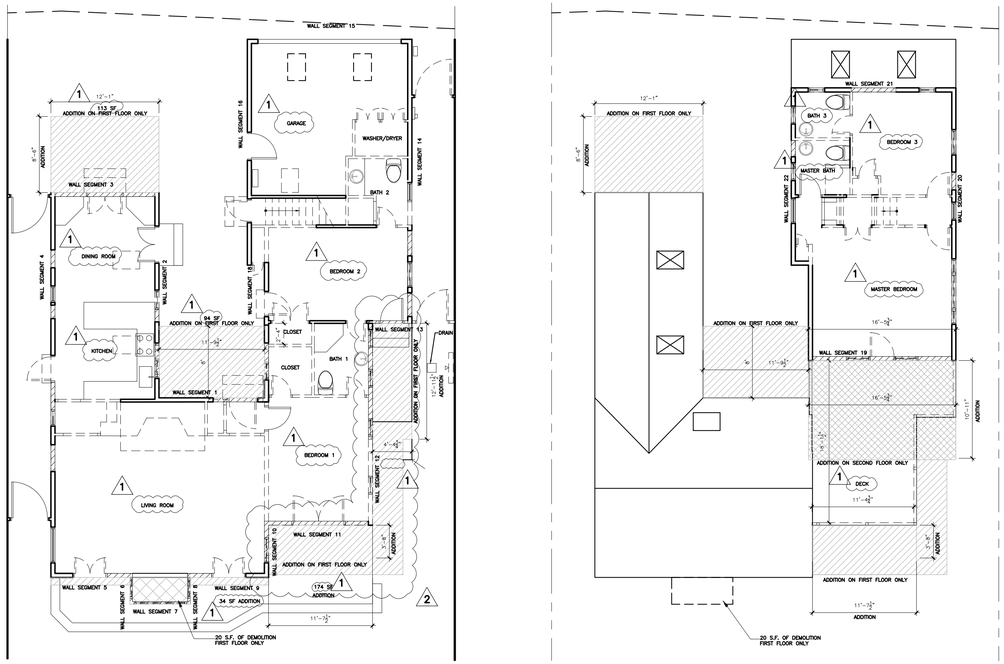
☐ 65% ☐ Other*
☐ 50% ☐ No Maximum*

*Explain: _____

APN: _____ Owner Name:_____ Date:_____

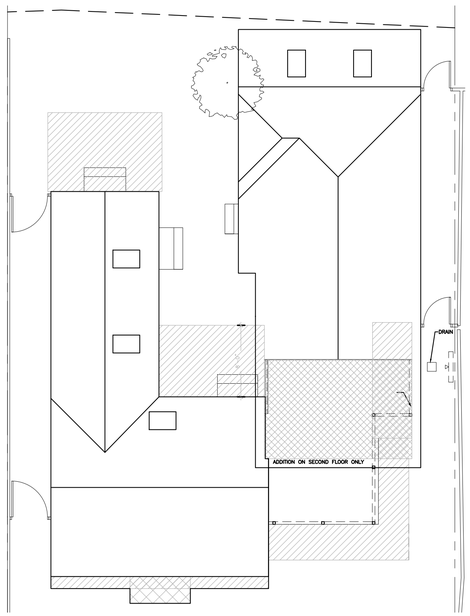
I certify that this worksheet is accurate. I understand that when the worksheet is evaluated as part of the application review, if the proposed work exceeds the established threshold, additional permits, information, and fees may be required for my project.

Signature _____ Print Name _____



1 EXISTING FLOOR PLANS

SCALE: 1/8"=1'-0"



2 EXISTING ROOF PLAN

SCALE: 1/8"=1'-0"

LEGEND

EXTERIOR WALL MODIFICATION

NOTE: DIMENSIONS ARE FOR REFERENCE ONLY

EXHIBIT D

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INTERIOR DESIGN

SALVATORE CARUSO
DESIGN CORPORATION

980 EL CAMINO REAL, # 200, SANTA CLARA, CA 95050
TEL. No. (408) 998-4087 • FAX. No. (408) 998-4088

PROJECT :

LAS OLAS
753 LAS OLAS DRIVE
APTOS, CA 95003

APN: 03846118

GENERAL NOTES :

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4.

SHEET NAME :

MODIFICATIONS

REVISIONS	BY
1 RESPONSE TO COMMENTS 07/06/23	SM
2 RESPONSE TO COMMENTS 08/31/23	SM

DRAWN:
CHECKED:
DATE: 09/01/2023
SCALE: 3/16"=1'-0"
JOB No.: 21.02.03

SHEET No.:

A0.3

SHEETS IN SET _____

NOTE: ELEVATIONS TO MATCH EXISTING COLORS AND MATERIALS FOR ALL PAINT, ROOFING, SIDING, WINDOW CASINGS AND WINDOW TRIMS.

EXHIBIT D

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INTERIOR DESIGN

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DESIGN CORPORATION

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4.

SHEET NAME :

PHOTOS

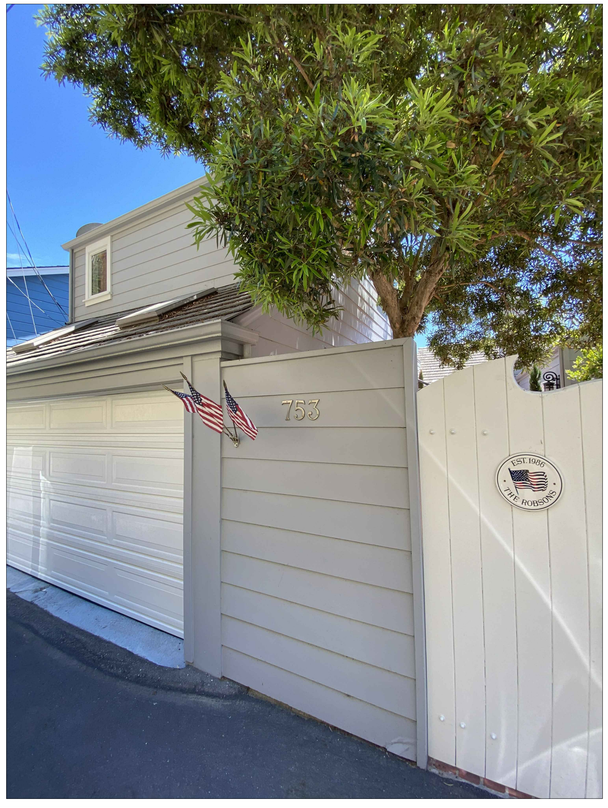
REVISIONS	BY
1 RESPONSE TO COMMENTS 07/06/23	SM
2 RESPONSE TO COMMENTS 08/31/23	SM

DRAWN:	
CHECKED:	
DATE:	09/01/2023
SCALE:	Not To Scale
JOB No.:	21.02.03

SHEET No.:

A0.4

SHEETS IN SET _____



NOTE: ELEVATIONS TO MATCH EXISTING COLORS AND MATERIALS FOR ALL PAINT, ROOFING, SIDING, WINDOW CASINGS AND WINDOW TRIMS.

EXHIBIT D

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SHEET NAME :

PHOTOS

REVISIONS	BY
1 RESPONSE TO COMMENTS 07/06/23	SM
2 RESPONSE TO COMMENTS 08/31/23	SM

DRAWN:
CHECKED:
DATE: 09/01/2023
SCALE: Not To Scale
JOB No.: 21.02.03

SHEET No.:

A0.5

SHEETS IN SET

EXHIBIT D

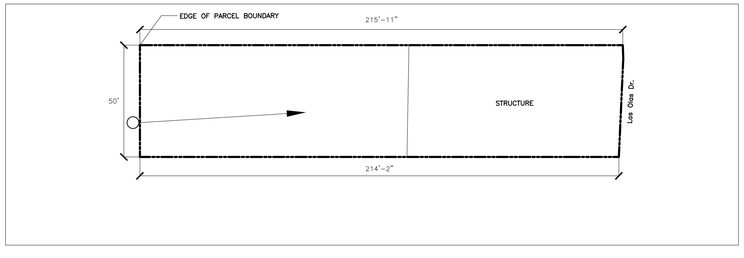
MATERIAL COLORS

DOOR AND WINDOW TRIMS
COLOR:
KELLY–MOORE
KMW43 WHITEST WHITE

SIDING AND BRICK
COLOR:
DUNN–EDWARDS
DE6351 COLD WIND

ROOF COLOR:
DARK GREY

NOTE: MATERIAL COLORS CHOSEN ACCORDING TO THE NATURAL ENVIRONMENT OF SANTA CRUZ.



3 KEY PLAN — SCALE: 1/32" = 1'-0"

2 PROPOSED RESTORATION — SCALE: NTS

1 EXISTING PHOTO — SCALE: NTS

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4.

SHEET NAME :

RENDERING

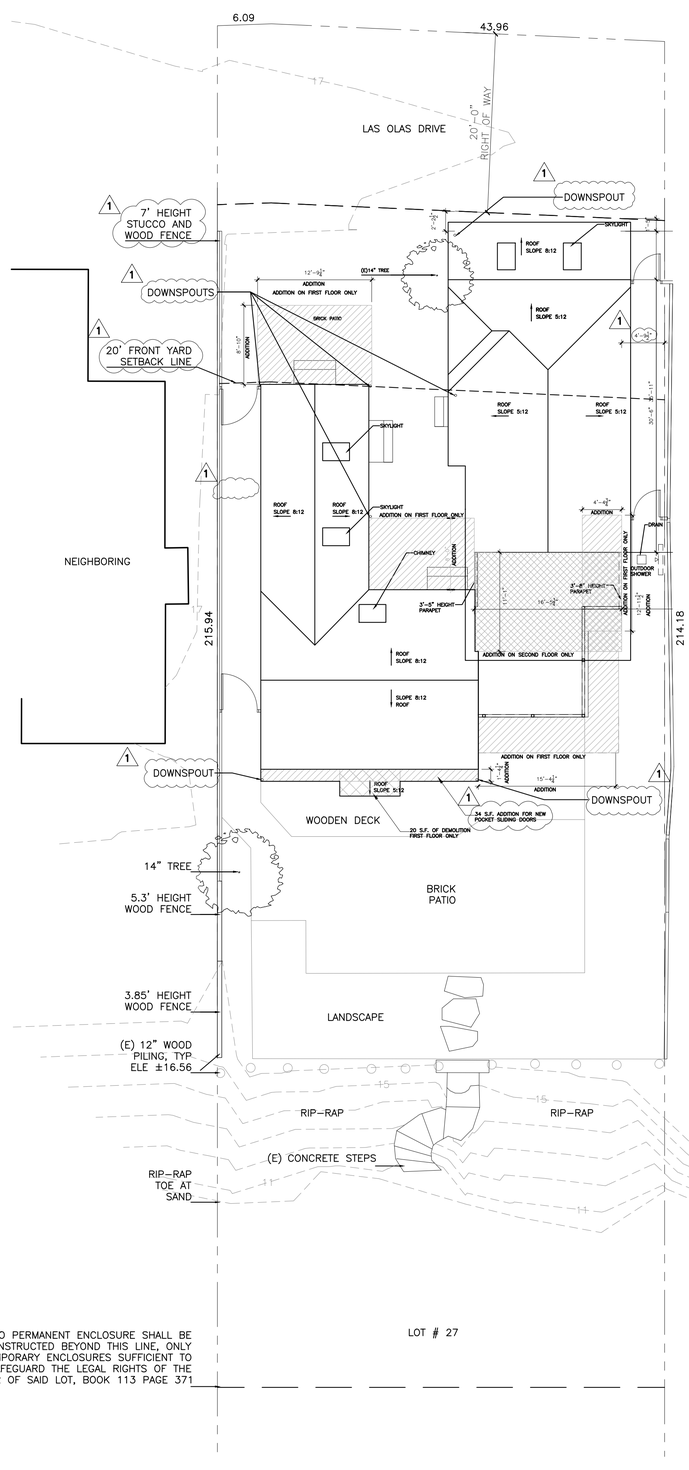
REVISIONS	BY
1 RESPONSE TO COMMENTS 07/06/23	SM
2 RESPONSE TO COMMENTS 08/31/23	SM

DRAWN:	
CHECKED:	
DATE:	09/01/2023
SCALE:	Not To Scale
JOB No.:	21.02.03

SHEET No.:

2 A0.6

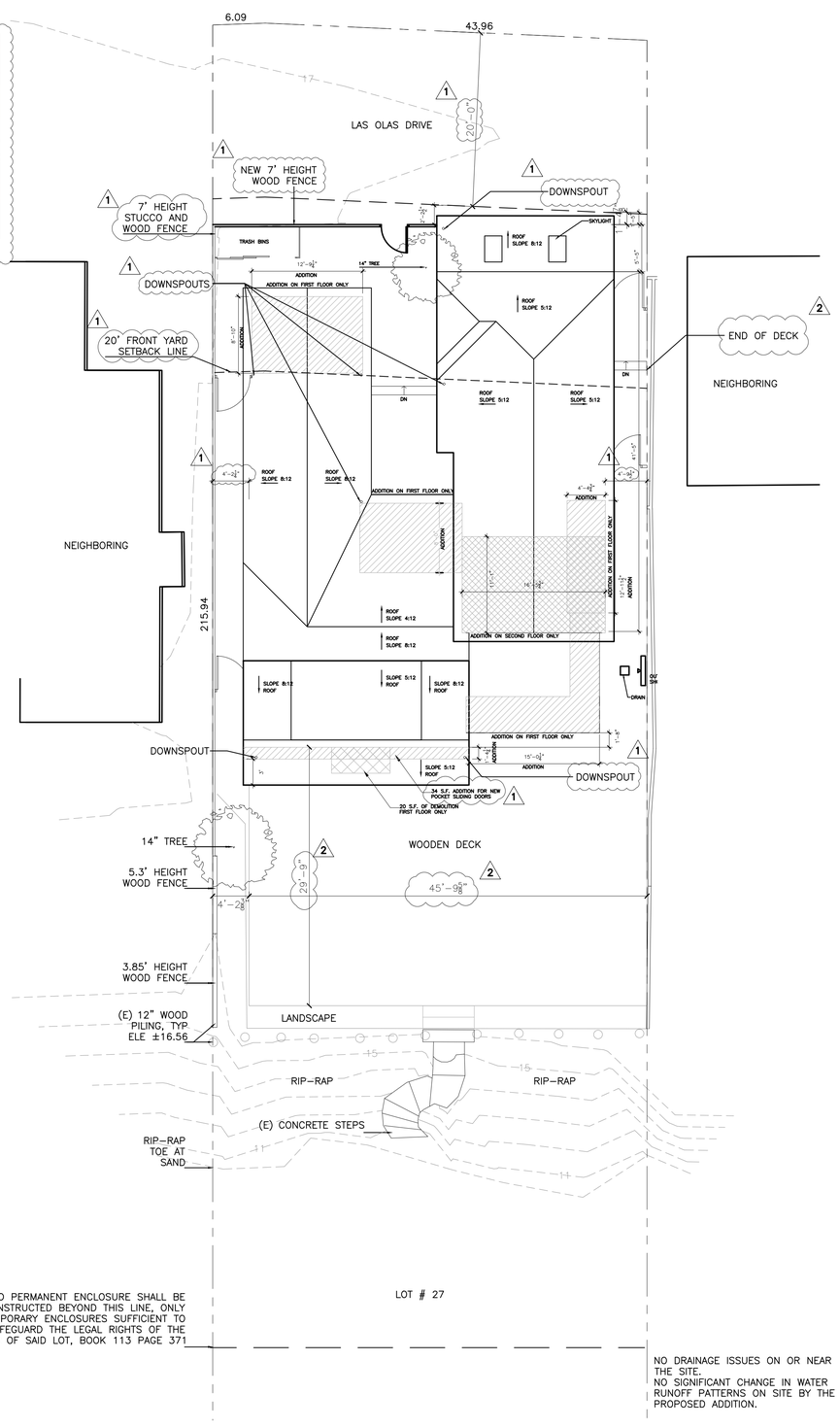
SHEETS IN SET



1 EXISTING SITE PLAN

SCALE: 1/8"=1'-0"

NEIGHBORING



2 PROPOSED SITE PLAN

SCALE: 1/8"=1'-0"

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APN: 03846118

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SHEET NAME :

SITE PLAN

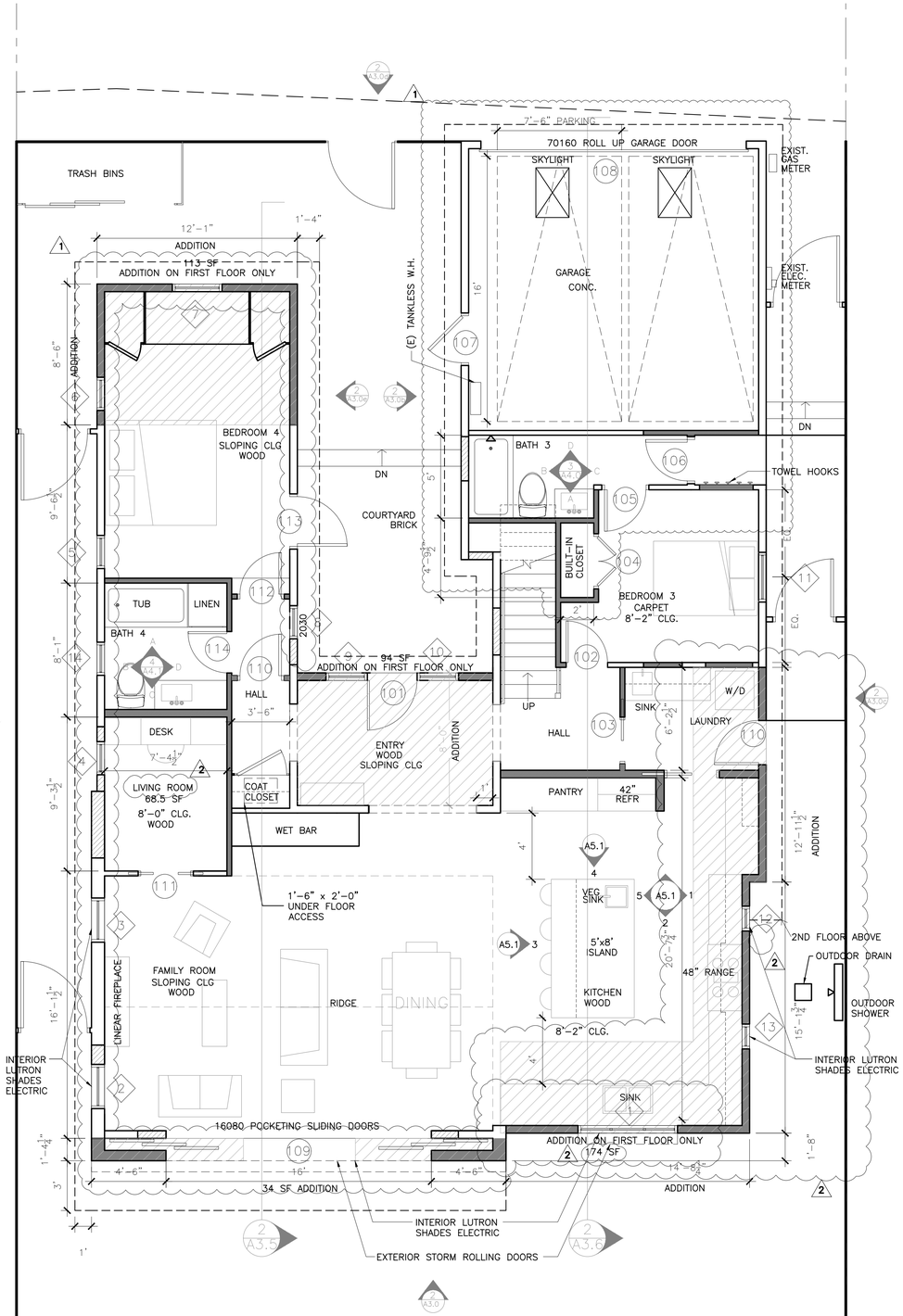
REVISIONS	BY
1 RESPONSE TO COMMENTS 07/06/23	SM
2 RESPONSE TO COMMENTS 08/31/23	SM

DRAWN:	
CHECKED:	
DATE:	09/01/2023
SCALE:	1/8" = 1'-0"
JOB No.:	21.02.03

SHEET No.:

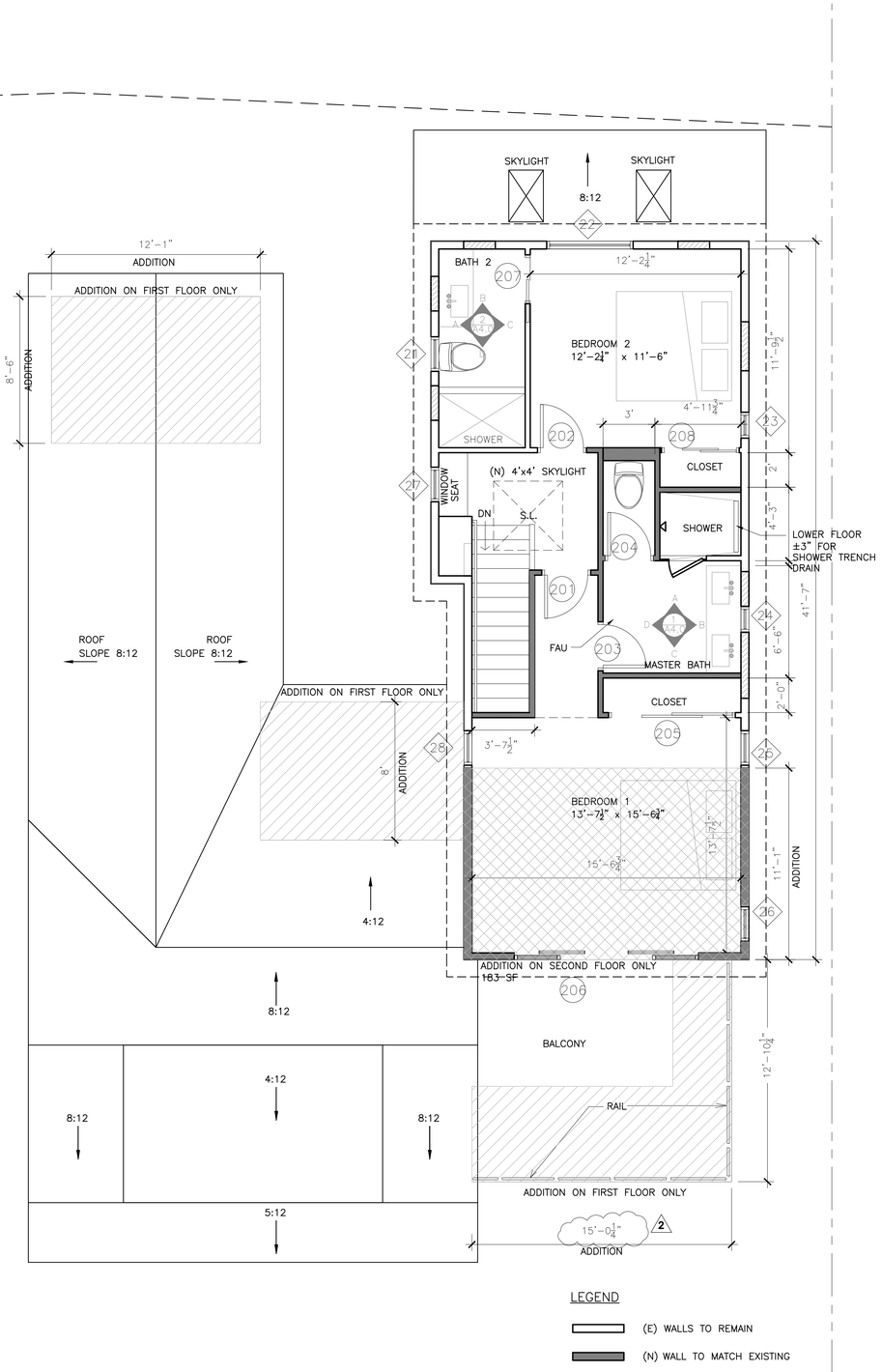
A1.0

SHEETS IN SET



1 PROPOSED 1ST FLOOR PLAN

SCALE: 1/4"=1'-0"



LEGEND

- (E) WALLS TO REMAIN
- (N) WALL TO MATCH EXISTING
- (E) WINDOW/DOOR INFILL ONLY

NOTE: DIMENSIONS ARE FOR REFERENCE ONLY

2 PROPOSED 2ND FLOOR PLAN

SCALE: 1/4"=1'-0"

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APN: 03846118

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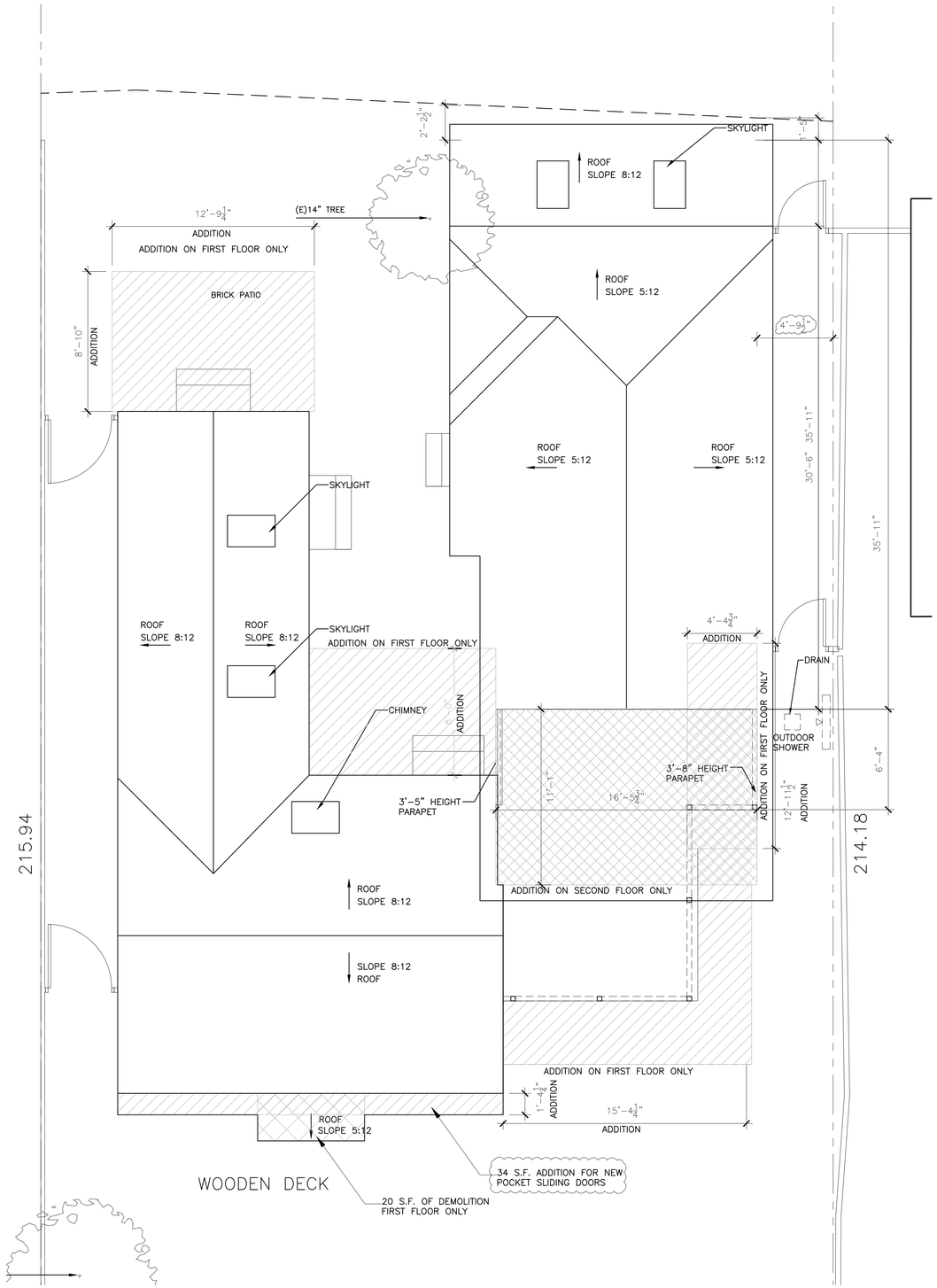
4.

SHEET NAME :

PROPOSED PLANS

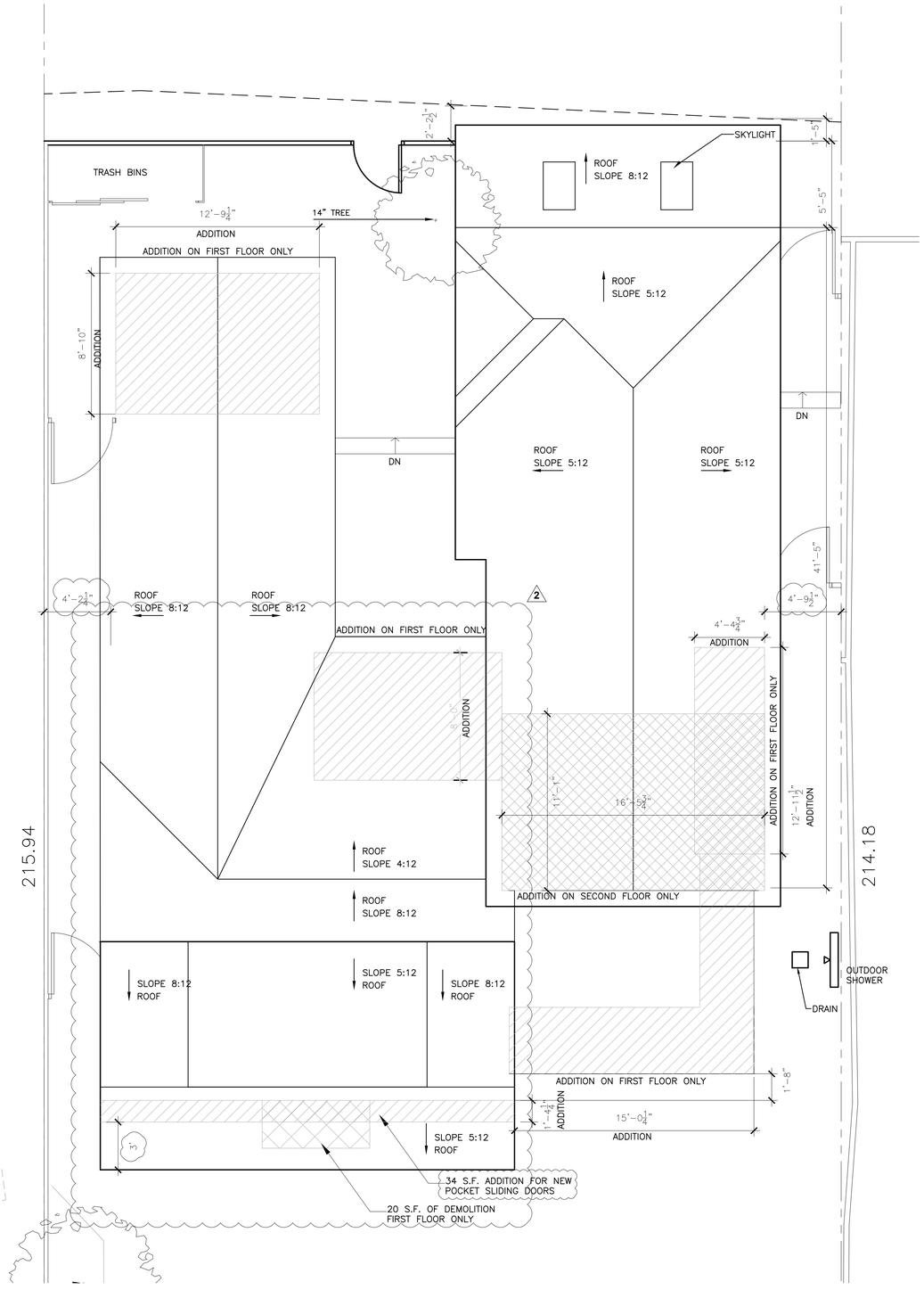
REVISIONS	BY

DRAWN:
CHECKED:
DATE: 07/21/2023
SCALE: 1/4" = 1'-0"
JOB No.: 21.02.03
SHEET No.: A2.1A
SHEETS IN SET



1 EXISTING ROOF PLAN

SCALE: 1/4"=1'-0"



2 PROPOSED ROOF PLAN

SCALE: 1/4"=1'-0"

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TEL. No. (408) 998-4087 • FAX. No. (408) 998-4088

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APTOS, CA 95003

APN: 03846118

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SHEET NAME :

ROOF PLAN

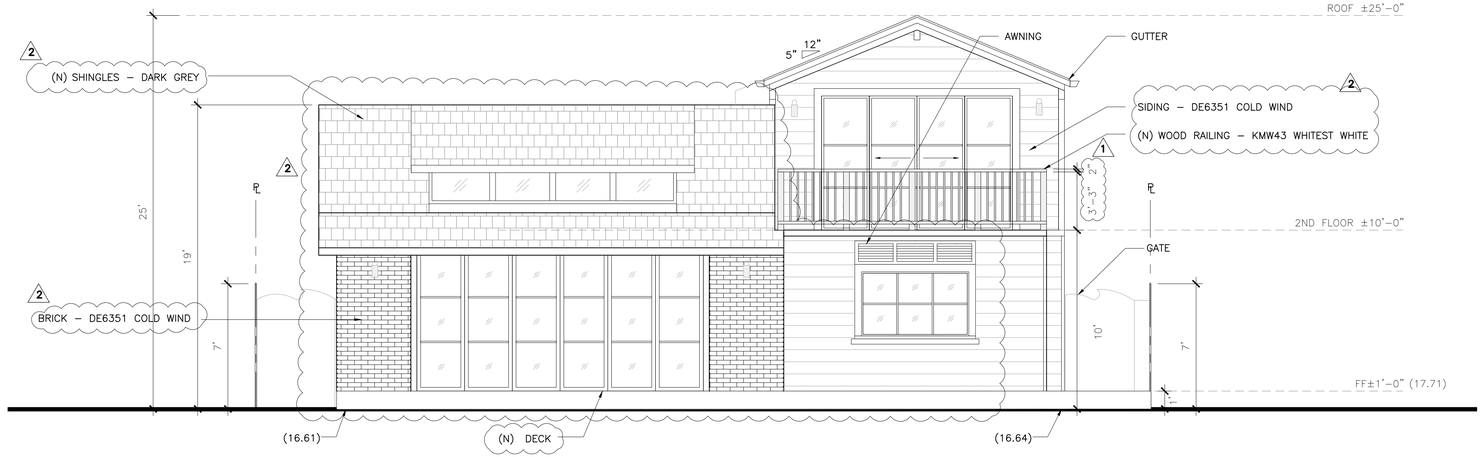
REVISIONS	BY
1 RESPONSE TO COMMENTS 07/06/23	SM
2 RESPONSE TO COMMENTS 08/31/23	SM

DRAWN:	
CHECKED:	
DATE:	09/01/2023
SCALE:	1/4" = 1'-0"
JOB No.:	21.02.03

SHEET No.:

A2.3

SHEETS IN SET

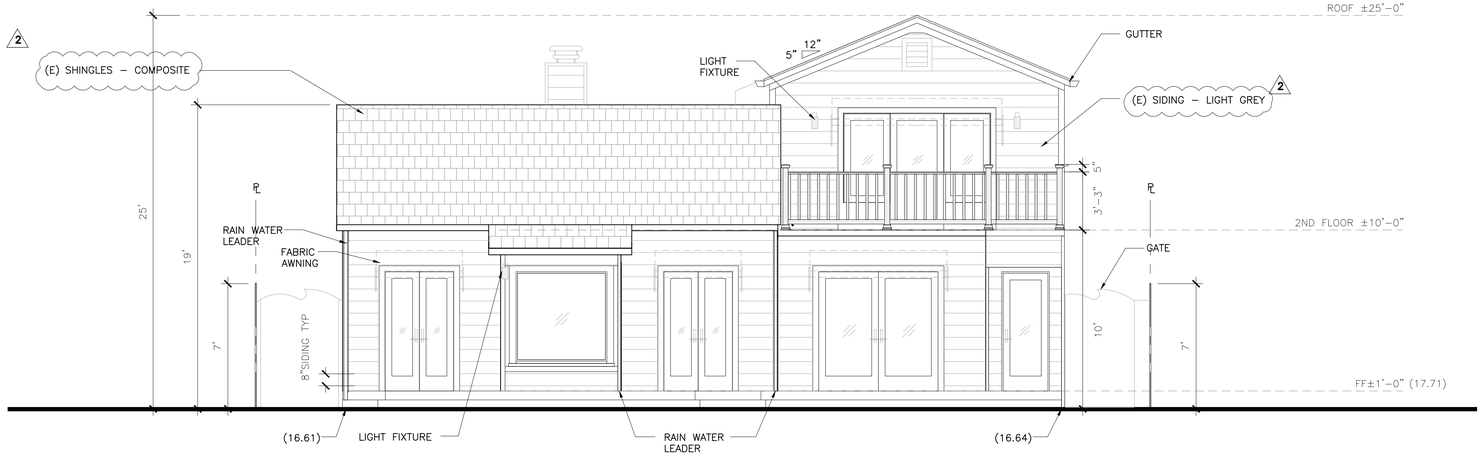


EXISTING AND PROPOSED THE SAME HEIGHT

EXISTING AND PROPOSED THE SAME HEIGHT

2 PROPOSED SOUTH ELEVATION

SCALE: 1/4"=1'-0"



EXISTING AND PROPOSED THE SAME HEIGHT

EXISTING AND PROPOSED THE SAME HEIGHT

1 EXISTING SOUTH ELEVATION

SCALE: 1/4"=1'-0"

NOTE:
1.VERIFY ALL EXISTING DIMENSION ON SITE
2.ELEVATIONS TO MATCH EXISTING COLORS AND MATERIALS UNLESS INDICATED

EXHIBIT D

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INTERIOR DESIGN
SALVATORE CARUSO DESIGN CORPORATION
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4.

SHEET NAME :

ELEVATIONS

REVISIONS	BY
1 RESPONSE TO COMMENTS 07/06/23	SM
2 RESPONSE TO COMMENTS 08/31/23	SM

DRAWN:	
CHECKED:	
DATE:	09/01/2023
SCALE:	1/4" = 1'-0"
JOB No.:	21.02.03

SHEET No.:

A3.0

SHEETS IN SET

2 PROPOSED WEST ELEVATION

SCALE: 1/4"=1'-0"

NOTE: ELEVATIONS TO MATCH EXISTING COLORS AND MATERIALS

1 EXISTING WEST ELEVATION

SCALE: 1/4"=1'-0"

NOTE:
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2.ELEVATIONS TO MATCH EXISTING COLORS AND MATERIALS UNLESS INDICATED

EXHIBIT D

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SHEET NAME :

ELEVATIONS

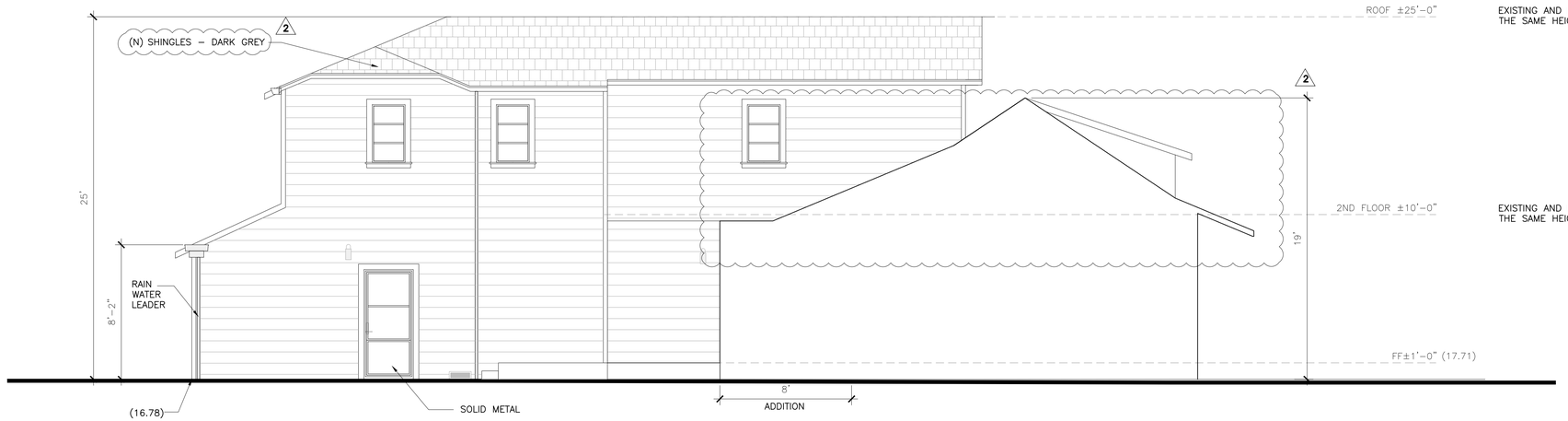
REVISIONS	BY
1 RESPONSE TO COMMENTS 07/06/23	SM
2 RESPONSE TO COMMENTS 08/31/23	SM

DRAWN:	
CHECKED:	
DATE:	09/01/2023
SCALE:	1/4" = 1'-0"
JOB No.:	21.02.03

SHEET No.:

A3.0A

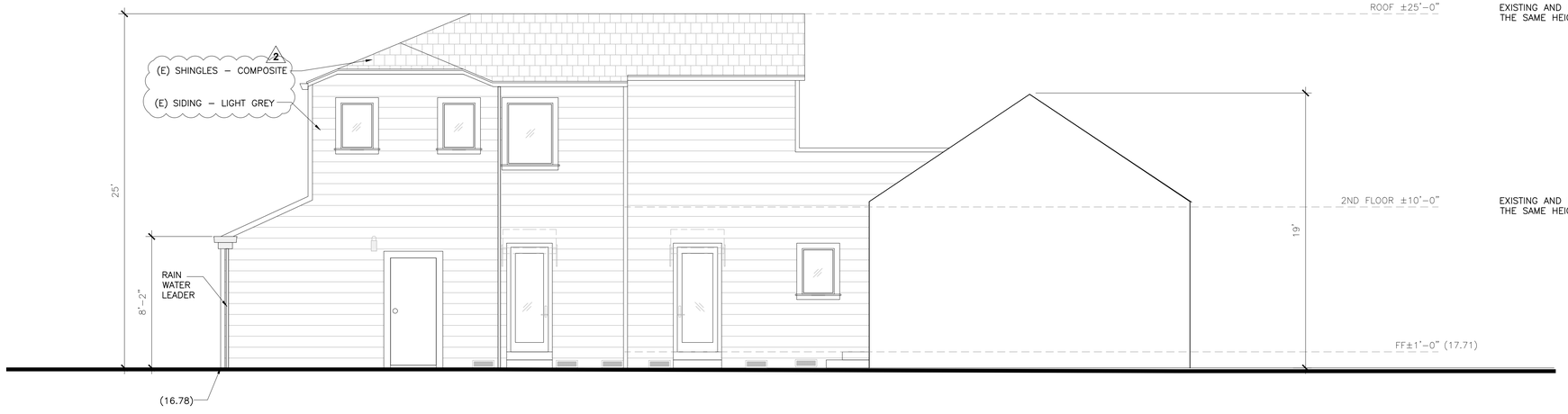
SHEETS IN SET



2 PROPOSED COURTYARD ELEVATION

SCALE: 1/4"=1'–0"

NOTE: ELEVATIONS TO
MATCH EXISTING
COLORS AND MATERIALS



1 EXISTING COURTYARD ELEVATION

SCALE: 1/4"=1'–0"

NOTE:
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2.ELEVATIONS TO MATCH EXISTING COLORS
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SHEET NAME :

ELEVATIONS

REVISIONS	BY
1 RESPONSE TO COMMENTS 07/06/23	SM
2 RESPONSE TO COMMENTS 08/31/23	SM

DRAWN:

CHECKED:

DATE: 09/01/2023

SCALE: 1/4" = 1'–0"

JOB No.: 21.02.03

SHEET No.:

A3.0B

SHEETS IN SET _____

2 PROPOSED EAST ELEVATION

SCALE: 1/4"=1'-0"

1 EXISTING EAST ELEVATION

SCALE: 1/4"=1'-0"

NOTE:
1.VERIFY ALL EXISTING DIMENSION ON SITE
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EXHIBIT D

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ARCHITECTURE
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APN: 03846118

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SHEET NAME :

ELEVATIONS

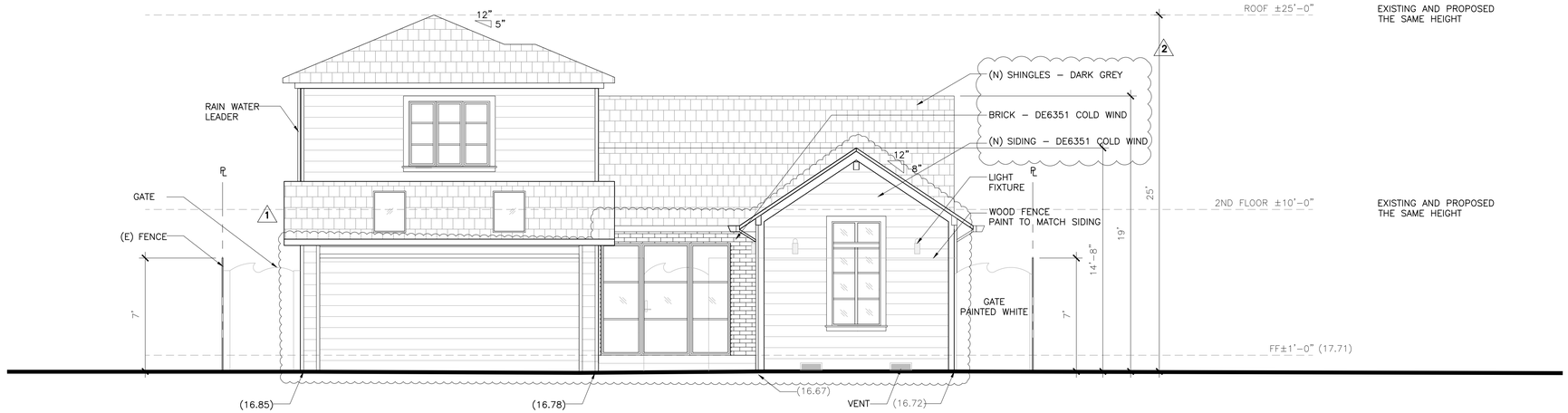
REVISIONS	BY
1 RESPONSE TO COMMENTS 07/06/23	SM
2 RESPONSE TO COMMENTS 08/31/23	SM

DRAWN:	
CHECKED:	
DATE:	09/01/2023
SCALE:	1/4" = 1'-0"
JOB No.:	21.02.03

SHEET No.:

A3.0C

SHEETS IN SET _____



2 PROPOSED NORTH ELEVATION

SCALE: 1/4"=1'-0"

NOTE: ELEVATIONS TO
MATCH EXISTING
COLORS AND MATERIALS

1 EXISTING NORTH ELEVATION

SCALE: 1/4"=1'-0"

NOTE:
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2.ELEVATIONS TO MATCH EXISTING COLORS
AND MATERIALS UNLESS INDICATED

SCDC
EXHIBIT D
ARCHITECTURE
INTERIOR DESIGN
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SHEET NAME :

ELEVATIONS

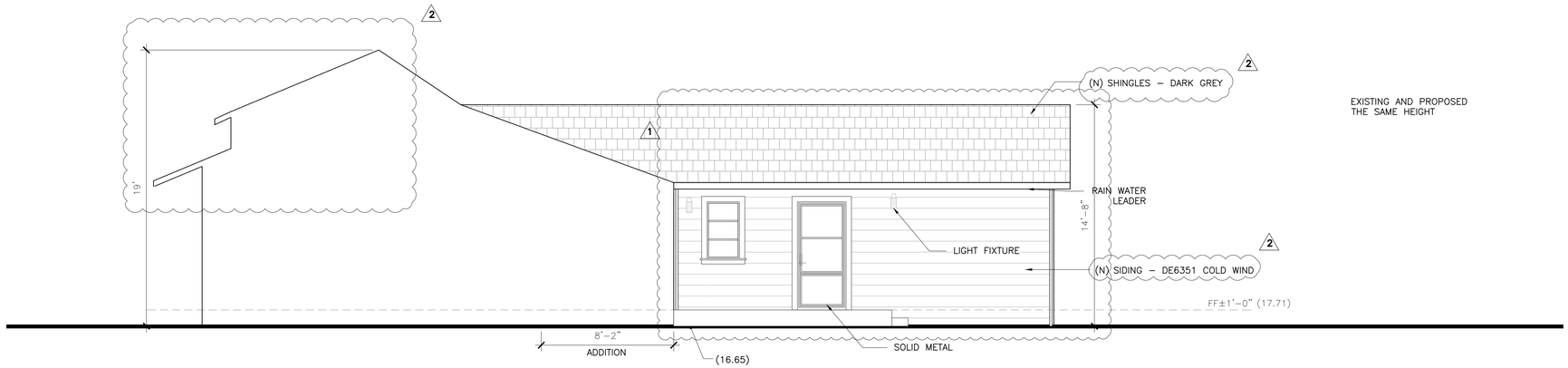
REVISIONS	BY
1 RESPONSE TO COMMENTS 07/06/23	SM
2 RESPONSE TO COMMENTS 08/31/23	SM

DRAWN:	
CHECKED:	
DATE:	09/01/2023
SCALE:	1/4" = 1'-0"
JOB No.:	21.02.03

SHEET No.:

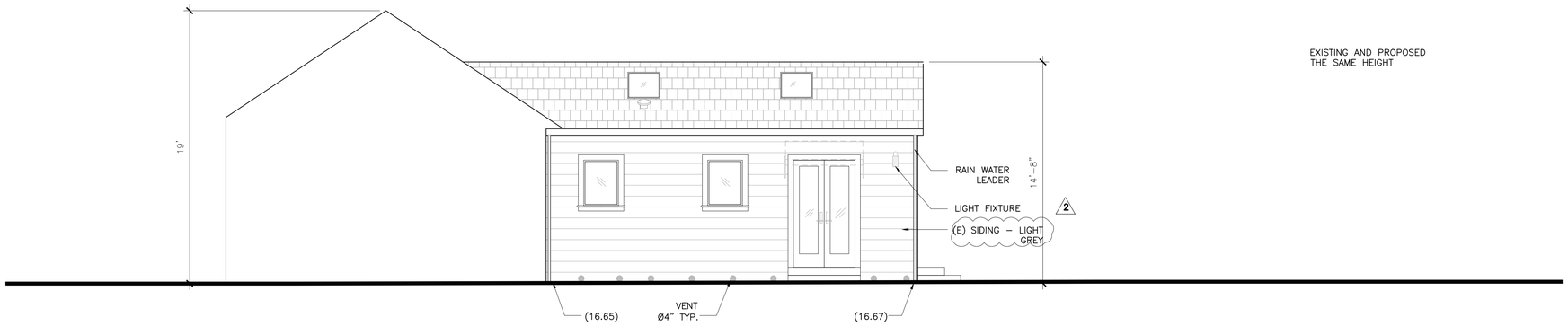
A3.0D

SHEETS IN SET



2 PROPOSED COURTYARD ELEVATION

SCALE: 1/4"=1'-0"



1 EXISTING COURTYARD ELEVATION

SCALE: 1/4"=1'-0"

NOTE:
1.VERIFY ALL EXISTING DIMENSION ON SITE
2.ELEVATIONS TO MATCH EXISTING COLORS
AND MATERIALS UNLESS INDICATED

SCDC
ARCHITECTURE
INTERIOR DESIGN
SALVATORE CARUSO
DESIGN CORPORATION
980 EL CAMINO REAL, # 200, SANTA CLARA, CA 95050
TEL. No. (408) 998-4087 • FAX. No. (408) 998-4088

EXHIBIT D

PROJECT :

LAS OLAS
753 LAS OLAS DRIVE
APTOS, CA 95003

APN: 03846118

GENERAL NOTES :

1. THIS SHEET IS PART OF A SET & IS NOT TO BE USED ALONE.
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3. THESE PLANS & PRINTS ARE OWNED BY THE ARCHITECT & ARE FOR USE ON THIS PROJECT ONLY. REPRODUCTION AND/OR DISTRIBUTION WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT IS FORBIDDEN.
4.

SHEET NAME :

ELEVATIONS

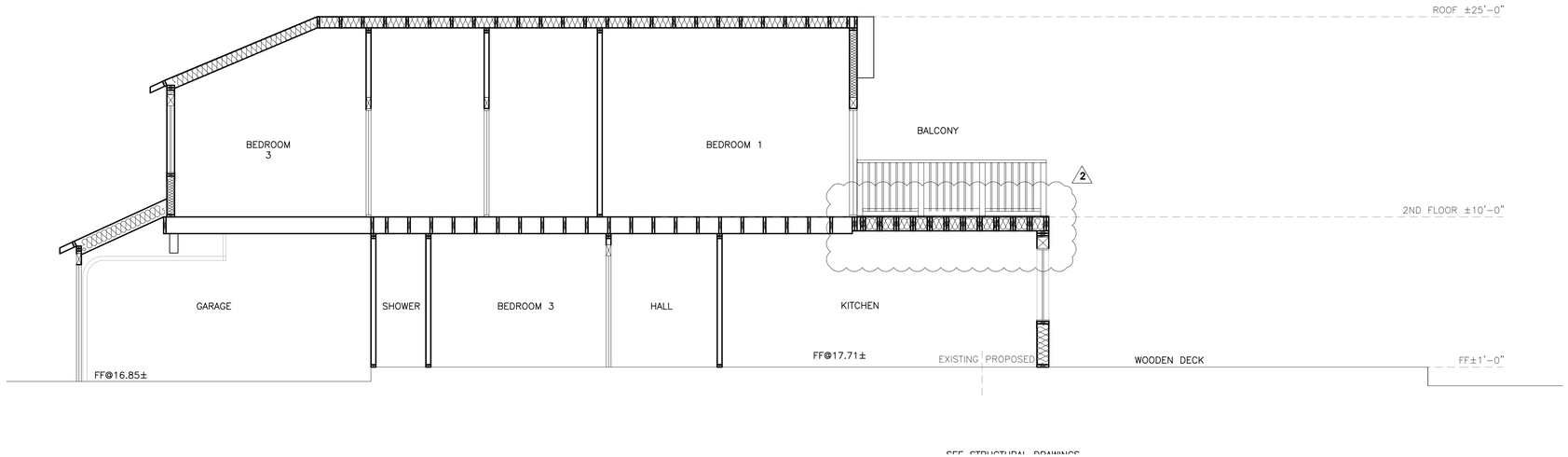
REVISIONS	BY
1 RESPONSE TO COMMENTS 07/06/23	SM
2 RESPONSE TO COMMENTS 08/31/23	SM

DRAWN:	
CHECKED:	
DATE:	09/01/2023
SCALE:	1/4" = 1'-0"
JOB No.:	21.02.03

SHEET No.:

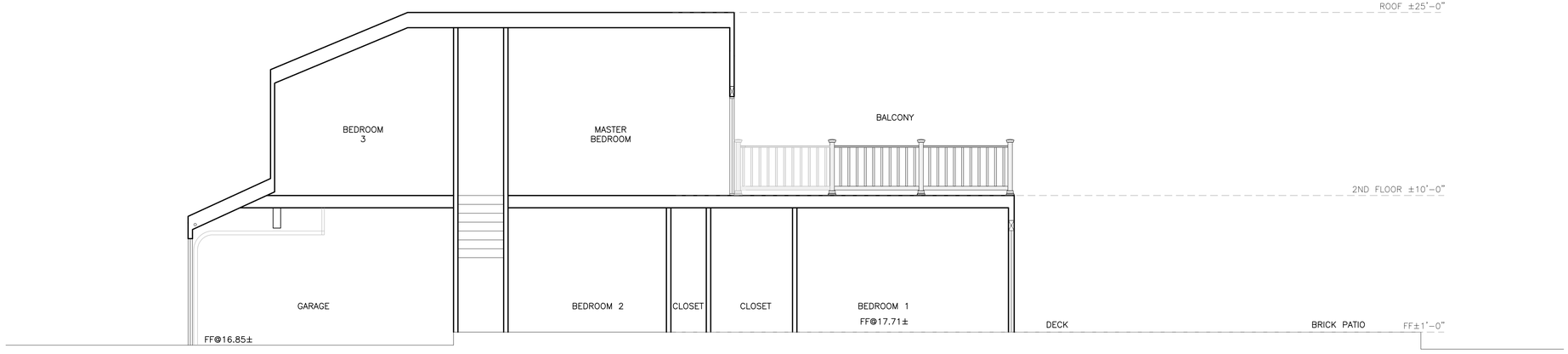
A3.0E

SHEETS IN SET _____



2 PROPOSED SECTION A

SCALE: 1/4"=1'-0"



1 EXISTING SECTION A

SCALE: 1/4"=1'-0"

EXHIBIT D

SCDC
ARCHITECTURE
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SALVATORE CARUSO
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980 EL CAMINO REAL, # 200, SANTA CLARA, CA 95050
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SHEET NAME :

SECTIONS

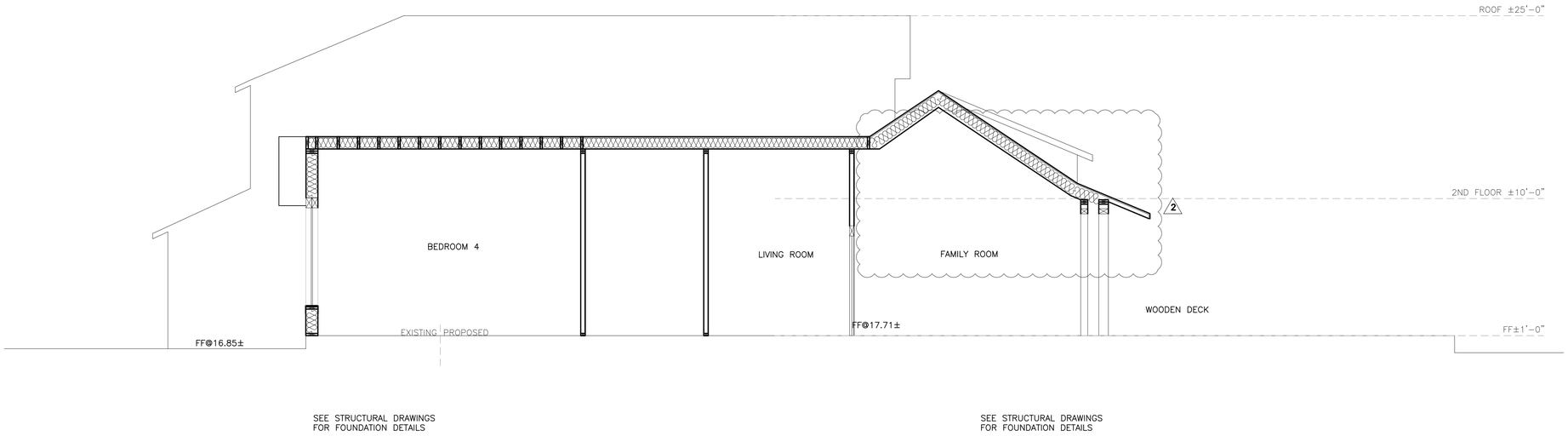
REVISIONS	BY
1 RESPONSE TO COMMENTS 07/06/23	SM
2 RESPONSE TO COMMENTS 08/31/23	SM

DRAWN:	
CHECKED:	
DATE:	09/01/2023
SCALE:	1/4" = 1'-0"
JOB No.:	21.02.03

SHEET No.:

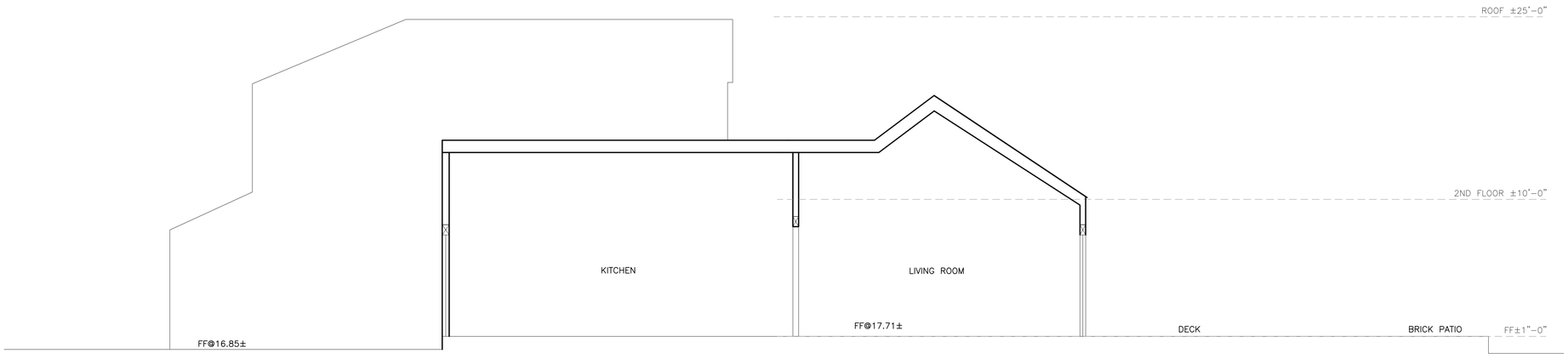
A3.5

SHEETS IN SET



2 PROPOSED SECTION B

SCALE: 1/4"=1'-0"



1 EXISTING SECTION B

SCALE: 1/4"=1'-0"

EXHIBIT D

SCDC
ARCHITECTURE
INTERIOR DESIGN
SALVATORE CARUSO
DESIGN CORPORATION
980 EL CAMINO REAL, # 200, SANTA CLARA, CA 95050
TEL. No. (408) 998-4087 • FAX. No. (408) 998-4088

PROJECT :

LAS OLAS
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APTOS, CA 95003

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SHEET NAME :

SECTIONS

REVISIONS	BY
1 RESPONSE TO COMMENTS 07/06/23	SM
2 RESPONSE TO COMMENTS 08/31/23	SM

DRAWN:	
CHECKED:	
DATE:	09/01/2023
SCALE:	1/4" = 1'-0"
JOB No.:	21.02.03

SHEET No.:

A3.6

SHEETS IN SET

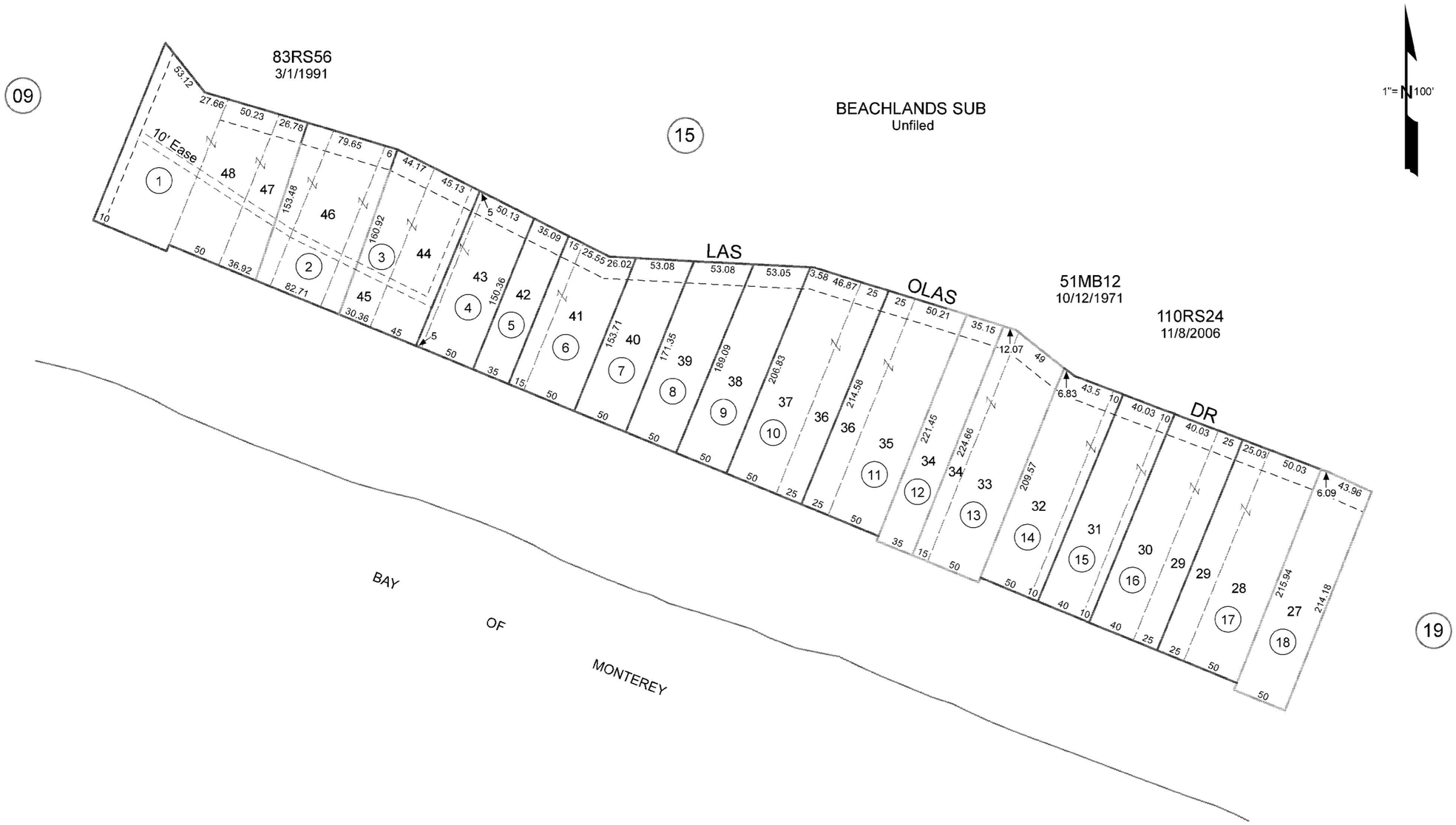
FOR TAX PURPOSES ONLY

APTOS RANCHO
POR. SEC. 13, T.11S., R.1W., M.D.B. & M.

Tax Area Code
69-273

38-46

EXHIBIT E



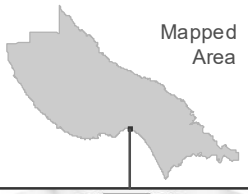
Electroncially drawn 8-16-95 KSA
Rev 5/4/98 KSA (CA)
Rev 3/12/99 GG (Cor. Pg. references)
Rev 3/24/06 MD (Spatial Adjustment)
Rev 6/27/07 td (110RS24)

Note - Assessor's Parcel & Block
Numbers Shown in Circles.

Assessor's Map No. 38-46
County of Santa Cruz, Calif.
Aug. 1995

SANTA CRUZ COUNTY PLANNING DEPARTMENT

Parcel Location Map



SEACLIFF DR

Seacliff
State Beach

LAS OLAS DR

LAS OLAS DR

038-461-18

PACIFIC OCEAN

Parcel: 03846118

Study Parcel

Assessor Parcel Boundary

Existing Park

N

0 25 50

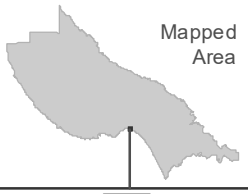
Feet

Map printed: 10 Apr. 2024

EXHIBIT E

SANTA CRUZ COUNTY PLANNING DEPARTMENT

Parcel General Plan Map



R-UM

R-UL

038-461-18
(O-R; R-UL)

O-R

O-R

O-R *Parks, Recreation & Open Space*

R-UM *Res. Urban Medium Density*

R-UL *Res. Urban Low Density*

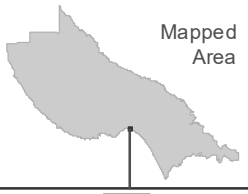
N

0 25 50
Feet

EXHIBIT E

SANTA CRUZ COUNTY PLANNING DEPARTMENT

Parcel Zoning Map



R-1-10

R-1-4

038-461-18
(R-1-8)

R-1-8

PR

PR

PACIFIC OCEAN

PR *Parks, Recreation, & Open Space*

R-1 *Single-Family Residential*

N

0 25 50

Feet

EXHIBIT E

Parcel Information

Services Information

Urban/Rural Services Line:	_X_ Inside __ Outside
Water Supply:	Soquel Creek Water District
Sewage Disposal:	Santa Cruz Sanitation District
Fire District:	Central Fire District
Drainage District:	Zone 6

Parcel Information

Parcel Size:	10,759.32 square feet
Existing Land Use - Parcel:	Single Family Residential
Existing Land Use - Surrounding:	Single Family Residential; Park and Recreation
Project Access:	Las Olas Drive
Planning Area:	Aptos
Land Use Designation:	O-R; R-UL (Parks, Recreation, and Open Space; Urban Residential, Low Density)
Zone District:	R-1-8 (Single-Family Residential, minimum 8,000 square foot parcel)
Coastal Zone:	_X_ Inside __ Outside
Appealable to Calif. Coastal Comm.	_X_ Yes __ No

Technical Reviews: Geologic Hazards Assessment (REV191044); Geotechnical Report (REV241022)

Environmental Information

Geologic Hazards:	Flood Zone VE
Fire Hazard:	Not a mapped constraint
Slopes:	N/A
Env. Sen. Habitat:	Not mapped/no physical evidence on site
Grading:	No grading proposed
Tree Removal:	No trees proposed to be removed
Scenic:	Scenic
Archeology:	Not mapped/no physical evidence on site

GEOTECHNICAL STUDY
RESIDENTIAL IMPROVEMENTS

753 LAS OLAS DRIVE
APTOS, CALIFORNIA

January 26, 2024
PROJECT PA23.1045.00

SUBMITTED TO:

Robson Homes
2185 The Alameda, Suite 150
San Jose, CA 95126

PREPARED BY:

Geo-Logic Associates
6300 San Ignacio Avenue, Suite A
San Jose, California 95119
(408) 778-2818

EXHIBIT G

GEOLOGIC AND GEOTECHNICAL STUDY
PROPOSED IMPROVEMENTS TO EXISTING RESIDENCE
753 LAS OLAS DRIVE
APTOS, CALIFORNIA

Table of Contents

EXHIBIT G

Figures

EXHIBIT G

1 INTRODUCTION

This report presents the results of our geotechnical study for the proposed improvements to the existing residence located at 753 Las Olas Drive, Aptos, California. The property is identified with Assessor Parcel Number (APN) 038-461-18. The approximate location of the subject property is shown on the Vicinity Map included in the Site Plan, Figure 1, of this report. Figure 1 shows the existing residence and the proposed building additions.

We understand from the County of Santa Cruz Planning Department that, based on their preliminary assessment, the currently proposed project would not be considered as "Development" under the County Geologic Hazards Ordinance 16.10.040(19). Therefore, a full geologic investigation and report is not required for the project. However, because the proposed additions exceed 500 square feet, a geotechnical investigation is required to address foundation design parameters reflecting the seismic shaking, coastal, and potential liquefaction hazards.

This report presents our findings, conclusions, and recommendations for project design and construction. These findings, conclusions, and recommendations are based on information collected during this study. The conclusions and recommendations in this report should not be extrapolated to other areas or used for other projects without our review.

1.1 Project Description

The project will involve first and second story building additions in the northwestern, southwestern, and southeastern portions of the existing two-story single-family residence. The project will also involve re-construction of the beach front patio south of the residence.

The above project descriptions are based on information provided to us. If the actual project differs from those described above, Geo-Logic Associates (GLA) should be contacted to review our findings, conclusions, and recommendations and present any necessary modifications to address the different project development schemes.

1.2 Information Provided

For this study, the project architect, Salvatore Caruso Design Corporation, provided us with the following information.

- A set of thirteen architectural drawings dated March 2, 2023.
- A drawing titled "Alta Survey of the Lands of Las Olas Property, LCC," prepared by Bowman & Williams, Consulting Civil Engineers, dated October 3, 2005.
- A set of nine sheets of structural design drawings titled "Las Olas," prepared by Gouvis Engineering, with signed date of November 15, 2023.

1.3 Objective and Scope of Services

The objective of our geotechnical study was to explore subsurface conditions at the site and to provide geotechnical recommendations for design and construction of the planned improvements. For this study, we completed the following services.

1. Visited the site to observe existing site conditions and mark locations of our borings.

2. Reviewed pertinent geologic and geotechnical information for the site, including geotechnical reports for nearby properties.

3. Subcontracted with a private underground service locator to check the proposed boring locations for presence of underground utilities.

4. Obtained a drilling permit from Santa Cruz County Environmental Health.

5. Notified Underground Service Alert (USA) for underground utility clearance.

6. Coordinated our drilling with you.

7. Conducted subsurface exploration by means of three drill holes using portable Minuteman drilling equipment.

8. Performed laboratory testing on selected soil samples.

9. Performed engineering analysis on the collected data.

10. Prepared this report.

2 SITE INVESTIGATION

This study consists of a site reconnaissance and a subsurface exploration program. The site reconnaissance was to observe existing site surface conditions. The subsurface exploration program was to explore subsurface earth conditions at the project site. The observed surface and subsurface site conditions are discussed in Section 3 of this report.

2.1 Subsurface Exploration

For this study, three exploratory drill holes (DH-1 through DH-3) were advanced on December 1, 2023. The drill holes were located in the field by referencing to existing site features and pacing; therefore, their locations are approximate. The approximate locations of the drill holes are shown in Figure 1.

The exploratory drill holes were advanced using portable Minuteman drilling equipment with 4-inch diameter continuous flight augers. The depth of exploration ranged between roughly 14.3 and 20.3 feet below ground surface (bgs). The drill holes were backfilled with cement grout as required by Santa Cruz County Environmental Health Department.

Soil samples were obtained in the drill holes using a 2-inch outside diameter Standard Penetration Test (SPT) sampler and a 3-inch outside diameter (2-inch inside diameter) split-barrel sampler. Soil samples were obtained by driving the sampler up to 18 inches into the earth material using a 140-pound hammer falling 30 inches, operated on a rope and cathead system. The number of blows required to drive the sampler was recorded for each 6-inch penetration interval. The number of blows required to drive the sampler the last 12 inches, or the penetration interval indicated on the log when harder material was encountered, is shown as blows per foot (blow count) on the drill hole logs.

In the field, our personnel visually classified the materials encountered and maintained a log of each drill hole. Visual classification of soils encountered in our drill holes was made in general accordance with the Unified Soil Classification System (ASTM D 2487 and D 2488). The results of our laboratory tests were used to refine our field classifications. Two Keys to Soil Classification, one for fine grained soils and one for coarse grained soils, are included in Appendix A, together with the logs of these drill holes.

2.2 Laboratory Testing

Laboratory testing were performed on selected soil samples recovered from the drill holes. These tests included moisture content and percent passing a No. 200 sieve. The laboratory test results are presented on the drill hole logs at the corresponding sample depths.

3 FINDINGS

3.1 Surface Conditions

The property is located on the beach front on the south side of Las Olas Drive, at the base of a coastal bluff. Existing site improvements are located in the northern portion of the property. An approximate 6-feet high boulder revetment bisects the mid-point of the property. The southern portion of the property slopes down gently to the south across beach sand toward the Pacific Ocean. Our review of the 2005 Alta Survey map indicates that ground elevations range from roughly 17 feet NGVD29 (roughly 19.75 feet NAVD88[1]) on Las Olas Drive to roughly 16 feet NGVD29 (18.75 feet NAVD88[1]) at the concrete deck south of the existing house to roughly 10 feet NGVD29 (12.75 feet NGVD88[1]) at the base of the boulder revetment south of the concrete deck. North of Las Olas Drive is a steep bluff rising to about El. 130 to 135 feet.

3.2 Subsurface Conditions

The subsurface conditions at the site may generally be described as beach sand underlain by Purisima Formation sandstone bedrock. A brief description of these units and the subsurface materials encountered in our drill holes is provided below.

Beach sand (Qbs) – this Holocene age deposit is described as unconsolidated well-sorted sand with local layers of pebbles and cobbles. Thin discontinuous lenses of silt relatively common in back-beach areas. Thickness variable, in part due to seasonal changes in wave energy; commonly less than 20 feet thick. May interfinger with either well-sorted due sand or, where adjacent to coastal cliff, poorly-sorted colluvial deposits. Iron and magnesium-rich heavy minerals locally from placers as much as 2 feet thick.

Purisima Formation (Tp) – very thick bedded yellowish-gray tuffaceous and diatomaceous siltstone containing thick interbeds of bluish-gray, semifriable, fine-grained andesitic sandstone. As shown, includes Santa Cruz Mudstone east of Scotts Valley and North of Santa Cruz. Thickness approximately 3,000 feet in the Corralitos Canyon area.

In our drill hole DH-1, the upper sand layer is roughly 15½ feet thick, over dense to very dense poorly graded sand (Purisima formation sandstone). The sandstone is weakly cemented and contains fine gravel and seashell fragments.

In our drill hole DH-2, the upper sand layer is roughly 16½ feet thick, over dense to very dense poorly graded sand (Purisima formation sandstone). The sandstone is weakly cemented and contains fine gravel and seashell fragments.

In our drill hole DH-3, a layer of brick and a layer of concrete were encountered below the ground

[1] In Santa Cruz County area, NAVD88 elevation is about 2.756 feet high than NGVD29 elevation (National Oceanic and Atmospheric Administration NCAT Tool).

surface. Under the concrete, the upper sand layer is roughly 10 feet thick, over dense to very dense poorly graded sand (Purisima formation sandstone). The sandstone is weakly cemented and contains local fine gravel and seashell fragments. A piece of wood was encountered in the sample at a depth of about 13 to 14 feet bgs.

For a more detailed description of the earth materials encountered in our drill holes, refer to the drill hole logs in Appendix A.

3.3 Groundwater

Groundwater was encountered in our three drill holes at the time of drilling, ranging from about 11 to 13 feet bgs.

It should be noted that fluctuations in the groundwater level may occur due to seasonal variations in tidal effects, rainfall and temperature, pumping from wells, regional groundwater recharge program, irrigation, or other factors that were not evident at the time of our study.

3.4 Variations in Subsurface Conditions

Our interpretations of soil and groundwater conditions, as described in this report, are based on information obtained from subsurface exploration and laboratory testing for this study. Our conclusions and recommendations are based on these interpretations. Please realize the site has undergone different phases of development and grading. Therefore, it is likely that undisclosed variations in subsurface conditions exist at the site, particularly old foundations, abandoned utilities, and localized areas of deep and loose fill.

Careful observations should be made during construction to verify our interpretations. Should variations from our interpretations be found, we should be notified to evaluate whether any revisions should be made to our recommendations.

4 SEISMIC CONSIDERATIONS

4.1 Seismic Sources

The San Francisco and Monterey Bay areas are seismically dominated by the active San Andreas Fault system, the tectonic boundary between the northward moving Pacific Plate (west of the fault) and the North American Plate (east of the fault). This movement is distributed across a complex system of generally strike-slip, right-lateral, and subparallel faults.

Potential sources of significant earthquake ground shaking at the site include several active and potentially active faults in the Greater San Francisco and Monterey Bay areas, as well as faults farther afield. The faults were first compiled on the State's Fault Activity Map (Jennings, 1974; Jennings and Bryant, 2010). This map has now been integrated into the US Geological Survey's Quaternary Fault and Fold Database and made available as a .kmz "drape" over Google Earth terrain files.

The distance to a seismic source (fault) is defined by the NGA relationships as the closest distance to the seismogenic zone, be it in the subsurface or at the surface; distances may therefore differ from distances measured on the ground surface. The distances shown on the table below are for reference only, as they are horizontal distances from the site to the surface trace of the seismic source, and not necessarily the closest distance to a (dipping) seismogenic zone. These distances were measured using the US Geological Survey's Quaternary Fault and Fold Database, with major faults listed in approximate order of distance from the site; not all sources are listed in the summary table below.

Fault Name	Approximate Distance	Orientation from Site
Zayante - Vergeles	7½ km	Northeast
San Andreas (Santa Cruz Mts.)	12½ km	Northeast
Sargent	15¾ km	Northeast
Monterey Bay – Tularcitos	17 km	Southwest
San Gregorio	24 km	Southwest
Calaveras (central segment)	35¾ km	Northeast

4.2 Site Class

The site is underlain by a thin layer of sand (generally less than 20 feet thick) over Purisima sandstone bedrock. We judge a Site Class C is appropriate for this site.

The site would normally be Site Class F because it is underlain by potentially liquefiable soils (see Section 4.6 below). But if the fundamental period of vibration of the proposed structure is less than 0.5 second, the site class can be determined by assuming there is no liquefaction (ASCE 7-16 Section 20.3.1). Under this criterion, the site would be under Site Class C.

4.3 Ground Motion

According to the 2022 CBC and ASCE 7-16, the spectral response acceleration at any period can be taken as the lesser of the spectral response accelerations from the probabilistic and deterministic ground motion approaches. The U.S. Seismic Design Maps tool available at the Structural Engineers Association of California (SEAOC) website was used for this purpose to retrieve seismic design parameter values for design of buildings at the subject site. Two levels of ground motions are considered in the Application: Risk-targeted Maximum Considered Earthquake (MCE_R) and Design Earthquake (DE), with both probabilistic and deterministic values defined in terms of maximum-direction rather than geometric-mean horizontal spectral acceleration (S_a). The probabilistic MCE_R spectral response accelerations are represented by a 5 percent damped acceleration response spectrum having a 1 percent probability of collapse within a 50-year period and in the direction of the maximum horizontal response. The probabilistic Design Earthquake (DE) S_a value at any period can be taken as two-thirds of the MCE_R S_a value at the same period.

Using the Seismic Design Maps application at the SEAOC website, a site Class C, and the latitude and longitude of the site (latitude 36.97639º N, longitude -121.924331º W), the calculated geometric mean peak ground acceleration adjusted for site class effects (PGA_M) for the MCE_G (Geometric Mean Maximum Considered Earthquake) is 0.976g.

4.4 Seismicity

The Working Group on California Earthquake Probabilities' (WGCEP) estimates of the probabilities of major earthquakes are now in their sixth iteration, with the greatest changes in approach being the inclusion of multifold rupture scenarios, in the progressive consideration of more potential seismic sources, the possibility of earthquakes on unrecognized faults, and the inclusion of the notion of fault "readiness". Current estimates (WGCEP, 2014) for the San Francisco region indicate a 72% probability of a large (magnitude 6.7 or greater) earthquake in the San Francisco Bay area as a whole over the 30-year period beginning in 2014; this overall probability is greater than the previous (WGCEP, 2007) probability of 63%, due mainly to the inclusion of multi-fault rupture scenarios. The estimate for the Calaveras fault alone is 14.4% (revised up from the 7% presented by WGCEP, 2007); for the (northern) San Andreas fault alone, 27.4% (revised upward from the WGCEP (2007) value of 21%); and for the Hayward fault, 45.3% (revised upward from the WGCEP (2007) value of 31%).

4.5 Liquefaction Potential

Soil liquefaction is a phenomenon in which saturated granular soils, and certain fine-grained soils, lose their strength due to build-up of excess pore water pressure during cyclic loading, such as from earthquakes. Soils most susceptible to liquefaction are saturated, clean, loose, fine-grained sands and non-plastic silts. Certain gravels, plastic silts, and clays are also susceptible to liquefaction. The primary factors affecting soil liquefaction include: 1) intensity and duration of seismic shaking; 2) soil type; 3) relative density of granular soils; 4) moisture content and

plasticity of fine-grained soils; 5) overburden pressure; and 6) depth to ground water.

We assessed the liquefaction potential at the project site using the subsurface information from our drill holes DH-1 through DH-3. The assessment was based on a peak ground acceleration (PGA) of 0.976g, earthquake moment magnitude of 7.5, and a groundwater level of 6 feet bgs. A groundwater level of 6 feet was selected based on our review of tidal information in the Aptos area. The results of our liquefaction analysis are summarized below and the calculation spreadsheets are included in Appendix B.

Results of Liquefaction Assessment and Estimated Ground Settlements		
Drill Hole	**Liquefaction Soil Zone (feet)**	**Estimated Ground Settlement (inches)**
DH-1	6 – 13.5	1.6
DH-2	No liquefaction	0
DH-3	6 – 7.5	0.5

Our review of Plate 2, Map Showing Locations of Liquefaction and Associated Ground-failure Effects Related to the Loma Prieta Earthquake, California, of October 17, 1989 – Southern Part, Professional Paper 1551-B, indicates there was no reported ground failure such as lateral spread, ground settlement, sand boil, cracks in streets, pipeline breakage, disturbed wells, etc. in the vicinity of the project site.

4.6 Lateral Spreading

Lateral spreading is horizontal movement of soil toward a free face, such as a creek bank, typically associated with liquefaction. Liquefaction-induced lateral spreading can also occur on mild slopes (flatter than 5%) underlain by loose sands and a shallow groundwater table. If liquefaction occurs, the unsaturated overburden soil can slide as intact blocks over the lower, liquefied deposit, creating fissures and scarps. The potential for lateral spreading in general mirrors the potential for liquefaction, and the depth of the liquefiable soil layers.

The potential and magnitude of lateral spreading was evaluated based on the publication "Estimating Liquefaction-induced Lateral Displacement Using the Standard Penetration Test or Cone Penetration Test," by G. Zhang, P.K. Robertson, & R.W. Brachman, 2004, using the information from our drill holes DH-1 through DH-3. The results of our analysis (see spreadsheets in Appendix B) suggest the potential lateral displacement could be up to about 5½ feet. Such lateral horizontal displacement is higher than the code upper limit of 18 inches for shallow foundations (ASCE 7-16 Table 12.13-2, Risk Category I/II); therefore, deep foundations are required for potential horizontal lateral ground displacement exceeding the code upper limit.

4.7 Ground Motion Design Parameters

Design of the proposed structure should comply with design for structures located in seismically active areas. Structures should be designed in accordance with the requirements of governing jurisdictions and applicable building codes. GLA evaluated ASCE 7-16 seismic design parameters

for the site using the SEAOC U.S. Design Maps application. The table below lists the seismic design parameters for the site.

Seismic Design Parameter	Value
Site Class	C
Site Coefficient, F_a	1.2
Site Coefficient, F_v	1.4
Mapped Spectral Acceleration at 0.2-second Period, S_s	1.939g
Mapped Spectral Acceleration at 1.0-second Period, S_1	0.746g
Spectral Acceleration at 0.2-second Period Adjusted for Site Class, S_{MS}	2.327g
Spectral Acceleration at 1.0-second Period Adjusted for Site Class, S_{M1}	1.045g
Design Spectral Response Acceleration at 0.2-second Period, S_{DS}	1.551g
Design Spectral Response Acceleration at 1.0-second Period, S_{D1}	0.696g
Long-period Transition Period, T_L	12 sec.

Note:

a. The site would be Site Class F because it is underlain by potentially liquefiable soils. But if the fundamental period of vibration of the structure is equal to or less than 0.5 second, the Site Class can be determined by assuming there is no liquefaction (ASCE 7-16 Section 20.3.1). Therefore, Site Class C was selected for this project. If the fundamental period of vibration of the structures is larger than 0.5 second, contact our office for a site-specific seismic response analysis.

5 CONCLUSIONS AND DISCUSSION

Based on our geotechnical evaluation, it is our opinion the project site may be developed as discussed in this report, provided our geotechnical recommendations are incorporated in the design and construction of the project. Our opinions, conclusions, and recommendations are based on our understanding of the proposed development, data review, properties of soils encountered in our previous boreholes, and engineering analyses. Geotechnical considerations for this project are discussed below.

5.1 Ground Rupture

The project site is not located in an Alquist-Priolo Earthquake Fault Zone, not in a State of California Zone of Required Investigation for fault rupture (CGS website, accessed November 2023), and not in a Santa Cruz County Fault Zone Hazard Areas (Figure 8, Santa Cruz County Local Hazard Mitigation Plan 2021-2033, dated July 2021). Because no active or potentially active faults are known to cross the site, it is reasonable to conclude that the risk of fault rupture through the project site is low.

5.2 Seismic Shaking

The project site is located in an area of high seismicity. Based on general knowledge of the site seismicity, it should be anticipated that, during their useful life, the proposed structures will be subject to at least one severe earthquake (magnitude 7 to 8+) that could cause considerable ground shaking at the site. It is also anticipated that the site will periodically experience small to moderate magnitude earthquakes.

5.3 Coastal Flooding and Erosion

The subject property and surrounding areas are located in the California Coastal Zone (see Figure 2). The property lies within a Federal Emergency Management Agency (FEMA) “VE” Special Flood Hazard Area (SFHA) with a base flood elevation (BFE) of 25 feet NAVD88 (see Figure 3). According to FEMA, VE zones are coastal high hazard areas subject to high velocity water including waves; defined by the 1% annual chance flood limits (100-year flood) and wave effects 3 feet or greater.

The existing house and patio area is bordered by a linear boulder revetment constructed around 1975 along the beach on the seaward side. We understand the revetment is not keyed into the underlying bedrock based on previous exploration by another consultant (verbal communication with County of Santa Cruz on December 27, 2023). We also understand the revetment is not certified by FEMA as a seawall. Therefore, the adequacy of the existing boulder revetment to provide proper protection to the subject property is questionable.

A review of aerial imagery from 1975 through 2020 captures reversals of beach sand partially covering and uncovering revetment boulders suggesting that the seaward limit of the revetment

experiences infrequent run-up of ocean waves. Aerial imagery review demonstrates that the revetment boulders have remained stationary between 2007 and 2020. The area is susceptible to infrequent 50-year wave run-up events.

As discussed in Section 1 of this report, preliminary assessment by Santa Cruz County suggests the proposed project would not be considered as "Development" under Santa Cruz County Geologic Hazards Ordinance 16.10. Therefore, a full geologic investigation and report is not required for the project. The assessment performed by Santa Cruz County indicates that the cost of the new improvements will be less than 50 percent of the market value of the existing structure; therefore, the project does not meet the county's "Development" definition.

However, because the proposed additions exceed 500 square feet, a geotechnical study is required to address foundation design parameters reflecting the seismic shaking, coastal, and potential liquefaction hazards. We also understand from the County that the new additions (not being considered as "Development") may not need to raise above the base flood elevation (BFE) and that pier foundations are only required for the new additions. Areas located below the BFE, however, will be subject to inundation by coastal flooding and lost, damaged, and destruction should be anticipated.

The following information was obtained for use in the project flood load analysis. Forces due to flooding and wave action are presented in the Recommendation section of this report.

Parameter	Value	Source of Information
FEMA Base Flood Elevation (BFE)	25 feet NAVD88	Transect 54, FEMA National Flood Insurance Rate Map, Panel 356 of 470, Map # 06087C0356F
Existing ground surface at DH-1 and DH-2	18.75 feet NAVD88 (16 NGVD29)	2005 Alta Survey and conversion factor from NGVD29 to NAVD88 for Santa Cruz area)
Eroded ground surface	2.75 feet NAVD88	GLA borings DH-1 and DH-2 with Purisima formation encountered at about 16 ft bgs
100-yr Stillwater Elevation	25.1 feet NAVD88	Flood Insurance Study report, FEMA, Santa Cruz County, California and Incorporated Areas, September 29, 2017, Table 17, transect 54
10-yr Stillwater Elevation	21.6 feet NAVD88	Flood Insurance Study report, FEMA, Santa Cruz County, California and Incorporated Areas, September 29, 2017, Table 17, transect 54
Design Stillwater Flood Depth	22.4 feet	Calculation based on Section 8, FEMA Coastal Construction Manual, August 2011
Flood Velocity	26.8 feet/sec	Calculation based on Section 8, FEMA Coastal Construction Manual, August 2011

5.4 Landsliding

Our review of Figure 23, Landslide hazard areas, in the County of Santa Cruz Local Hazard Mitigation Plan 2021-2033, dated July 2021, indicates the property is not located in a landslide hazard area (see Figure 4 of this report).

According to CGS's Earthquake Zones of Required Investigation, the property has not been evaluated by CGS for seismic landslide hazards.

Our review of Plate 1, Landslides and Ground Cracks Generated by the 1989 Loma Prieta Earthquake in Southern Santa Cruz Mountains and Along Adjacent Sections of the California Coast, USGS Professional Paper 1551-C, indicates there were reported landslide (coastal bluff) failures along Las Olas Drive and vicinity.

An in-depth evaluation of landslide potential at the site was not performed because a full geologic investigation is not required for the proposed project.

5.5 Liquefaction and Lateral Spreading

The results of our liquefaction assessment indicate the beach sands underlying the project site can liquefy when subject to shaking of the design earthquake. The estimated ground settlement as a result of liquefaction varies from 0.5 to 1.6 inches.

The results of our lateral spreading analysis suggest the potential lateral ground displacement could be up to 5½ feet. This potential displacement exceeds the code upper limit for shallow foundations; therefore, deep foundations are required for the proposed additions.

Our review of the foundation plans suggests the existing house is supported on shallow footing foundations. Because the potential lateral spreading displacement is significant, the owner should consider improving the existing footing foundations to a deep foundation system.

5.6 Loose Sands

The sands encountered in our DH-3 to a depth of about 4 feet below ground surface is loose. This sand should be over-excavated and re-compacted as recommended in this report.

5.7 Expansion Potential of Surficial Soils

The subsurface soils consist of poorly graded sand with variable fines content. These sands are judged to have a low expansion potential.

5.8 Existing Improvements

Existing improvements at the site include the existing house, underground utilities, fences, and brick patio. The proposed improvements will be constructed near existing improvements. Project designers should be careful in their design and contractors should be careful during construction to avoid impact or damage to the existing buildings and improvements.

5.9 Tsunami

According to CGS's Tsunami Hazard Area Map, the property is located within a tsunami evacuation area (see Figure 5).

6 GEOTECHNICAL RECOMMENDATIONS

6.1 Earthwork

6.1.1 Site Preparation, Clearing and Stripping

Prior to grading, construction areas should be cleared of obstructions and deleterious and unsuitable materials, including abandoned or designated utility lines, designated trees, and other below grade obstacles encountered during the clearing operation. Tree stumps should be grubbed. Roots with diameter of about 1 inch or larger or length of about 3 feet or longer should be removed. Depressions, excavations, and holes that extend below the planned finish grades should be cleaned and backfilled with engineered fill compacted to the requirements given under the section of "Engineered Fill Placement and Compaction."

6.1.2 Excavation, Temporary Construction Slopes, and Shoring

Excavations are expected to include demolition excavations, over-excavation of loose and disturbed soils, cuts to achieve design grades, trenching to construct new underground utilities, and foundation excavations. Excavations and temporary construction slopes should be constructed in accordance with the current CAL-OSHA safety standards and local jurisdiction. The stability and safety of excavations, braced or unbraced, is the responsibility of the contractor. Care should be exercised when excavating in the proximity of existing structures and improvements.

Contractors are responsible for the design, installation, maintenance, and removal of temporary shoring and bracing systems. The presence of existing structures, pavements, and underground utilities must be incorporated in the design of the shoring and bracing systems.

Trench excavations adjacent to existing or proposed foundations should be above an imaginary plane having an inclination of 1½:1 (horizontal to vertical) extending down from the bottom edge of the foundations.

6.1.3 Over-excavation and Re-compaction of Loose Soils

Loose sand was encountered in drill hole DH-3 to a depth of about 4 feet bgs. After site clearing, the upper 3 feet of sand should be over-excavated. The sand exposed by over-excavation should be properly prepared as recommended below under “Subgrade Preparation.” After the subgrade has been prepared, the excavation may be raised to design grade with engineered fill.

6.1.4 Subgrade Preparation

In areas to receive engineered fills, foundations, and exterior concrete slabs-on-grade, the subgrade soils should be scarified to a depth of 8 inches, moisture-conditioned, and compacted in accordance with the recommendations given in the "Engineered Fill Placement and

Compaction" section below. In building and concrete slab-on-grade areas, subgrade preparation should extend a minimum of 5 feet horizontally beyond the limits of the proposed structures and any adjoining flatwork, unless it is restricted by existing improvements.

Prepared soil subgrades should be non-yielding. Moisture conditioning of subgrade soils should consist of adding water if the soils are too dry and allowing the soils to dry if the soils are too wet. After the subgrades are properly prepared, the areas may be raised to design grades by placement of engineered fill.

Wet soils should be anticipated during and after rainy months. Where encountered, unstable, wet or soft soil will require processing before compaction can be achieved. If construction schedule does not allow for air-drying, other means such as lime or cement treatment of the soil or excavation and replacement with suitable material may be considered. Geotextile fabrics may also be used to help stabilize the subgrade. The method to be used should be determined at the time of construction based on the actual site conditions. We recommend obtaining unit prices for subgrade stabilization during the construction bid process.

6.1.5 Materials for Fill

In general, on-site soils with an organic content of less than 3 percent by weight, free of deleterious materials or hazardous substances, and meeting the gradation requirements below may be used as engineered fill except where special material is required.

Engineered fill material should not contain rocks or lumps larger than 3 inches in greatest dimension, should not contain more than 15 percent of the material larger than 1½ inches, and should contain at least 20 percent passing the No. 200 sieve. In addition to these requirements, import fill should have a low expansion potential as indicated by Plasticity Index of 15 or less (per ASTM D4318), or Expansion Index of less than 20 (per ASTM D4829).

Fills should be approved by the Geotechnical Engineer prior to delivery to the site. At least 5 working days prior to importing to the site, a representative sample of the proposed import fill should be delivered to our laboratory for evaluation. Import fills should be tested and approved for residential use per the California Department of Toxic Substances Control (DTSC) guidelines.

6.1.6 Engineered Fill Placement and Compaction

Engineered fill should be placed in horizontal lifts each not exceeding 8 inches in thickness, moisture conditioned to the required moisture content, and mechanically compacted to the recommendations below. Relative compaction or compaction is defined as the in-place dry density of the compacted soil divided by the laboratory maximum dry density as determined by ASTM Test Method D1557, latest edition, expressed as a percentage. Moisture conditioning of soils should consist of adding water to the soils if they are too dry and allowing the soils to dry if they are too wet.

Engineered fills consisting of on-site or imported soils should be compacted to at least 90 percent relative compaction with moisture content between about 1 and 3 percent above the laboratory optimum value. In pavement areas, the upper 8 inches of subgrade soil should be compacted to a minimum of 95 percent relative compaction. Aggregate base in vehicle pavement areas should be compacted at slightly above the optimum moisture content to a minimum of 95 percent relative compaction.

6.1.7 Utility Trench Backfill

Backfilling of utility trenches in public areas should comply with the requirements of County of Santa Cruz.

In private areas, pipe bedding extending from the bottom of the trench to about 1 foot above the top of pipe may consist of free-draining sand (less than 5% passing a No. 200 sieve), lean concrete or sand cement slurry. Sand, if used as bedding, should be compacted to at least 90 percent relative compaction.

Above the pipe bedding, utility trenches may be backfilled with on-site soil or imported soil. Trench backfill above the pipe bedding should be compacted to the requirements given in the section of "Engineered Fill Placement and Compaction." Trench backfill should be capped with at least 12 inches of compacted, on-site soil similar to that of the adjoining subgrade. The backfill material should be placed in lifts not exceeding about 6 inches in uncompacted thickness. Thinner lifts may be necessary to achieve the recommended level of compaction of the backfill due to equipment limitations. Compaction should be performed by mechanical means only. Water jetting or flooding to attain compaction of backfill should not be permitted.

6.1.8 Wet Weather Construction

If site grading and construction is to be performed during the winter rainy months, the owner and contractors should be fully aware of the potential impact of wet weather. Rainstorms can cause delay to construction and damage to previously completed work by saturating compacted pads or subgrades, or flooding excavations.

Earthwork during rainy months will require extra effort and caution by the contractors. The contractors are responsible for protecting their work to avoid damage by rainwater. Standing pools of water should be pumped out immediately. Construction during wet weather conditions should be addressed in the project construction bid documents and/or specifications. We recommend the contractors submit a wet weather construction plan outlining procedures they will employ to protect their work and to minimize damage to their work by rainstorms.

6.2 Foundations

Project foundation design should comply with the applicable California Building Code, 2011 FEMA Coastal Construction Manual (CCM), and local jurisdiction requirements. According to Table 10-1

in FEMA CCM Volume II, open/deep foundations are required in FEMA Zone V. Examples of open foundations are pile, pier, and column foundations.

As discussed earlier in this report, preliminary assessment by Santa Cruz County determines that the proposed project would not be considered as "Development" under Santa Cruz County Geologic Hazards Ordinance 16.10. Therefore, pier foundations are only required for the new additions.

The Geotechnical Engineer should review the foundation plans and details before construction and observe the foundation excavations during construction to determine if the foundation excavations extend into suitable bearing material. Prior to placement of concrete, foundation excavations should be cleaned of loose soils. If unsuitable soils are encountered in the foundation excavations, the soils should be removed as recommended by our Geotechnical Engineer and replaced with approved material such as compacted engineered fill or lean concrete.

Foundation excavations should not be allowed to dry before placement of concrete. If visible cracks appear in the foundation excavations, the excavations should be thoroughly moisture conditioned beginning at least 2 days prior to placement of concrete to close all cracks. It is also important that the base of the foundation excavations not be allowed to become excessively wet, resulting in soft soils. Water should not be allowed to pond in the bottom of the excavations. Areas that become water damaged should be over-excavated to a firm base. The foundation excavations should be monitored by our representative for compliance with appropriate moisture control and to confirm the adequacy of the bearing materials.

6.2.1 Drilled Pier Foundation System

The new additions should be supported on drilled, cast-in-place, reinforced concrete piers founded in the competent sandstone below the beach sand. The top of the sandstone may be assumed at elevation +2.75 feet NAVD88. Piers should be designed to derive their vertical supporting capacity from "skin friction" between the pier shafts and the surrounding earth materials. For dead plus live vertical loads, a net allowable adhesion value of 650 pounds per square foot (psf) may be assumed along the pier shafts. This value may be increased by one-third when including transient loads, such as wind or seismic. The portion of piers above the sandstone (above +2.75 feet NAVD88) should be ignored in the calculation of vertical load capacity. End bearing capacity should also be ignored.

Piers should have a diameter of 18 inches or greater and should extend to at least 8 feet into the sandstone. Center to center spacing of the piers should be a minimum of 4 pier diameters. Grade beams should be at least 12 inches wide and extend at least 12 inches below adjacent grade. Reinforcement in the piers and grade beams should be determined by the structural engineer.

Resistance to lateral loads may be calculated based on passive soil pressure acting against the piers. For dead plus live loads, the ultimate passive resistance in the sandstone may be calculated

using an equivalent fluid weight of 450 pounds per cubic foot (pcf) acting on 2 times the pier diameter. The portion of piers above the sandstone (above +2.75 feet NAVD88) should be ignored in the calculation of passive resistance. It should be noted that passive resistance is only applicable where the concrete is placed directly against undisturbed soil or engineered fill.

The presence of granular materials should be considered in the design and construction of the foundation piers because granular materials are prone to caving if the holes are not cased. Steel casing should be provided to keep the pier holes open. If piers extend below groundwater level, concrete should be placed by the "tremie" method to replace the water in the pier holes.

Per FEMA CCM, the following forces should be considered in the pier design.

- Breaking wave force (F_{brkp}) on the seaward row of pilings: 15.7 kips per foot of pier diameter, acting at the design stillwater elevation of 25.1 feet NAVD88
- Hydrodynamic force (F_{dyn}) on non-seaward rows of pilings: 19.2 kips per foot of pier diameter, acting at an elevation of 13.9 feet NAVD88 (halfway between the design stillwater elevation and the eroded ground surface elevation)
- Debris Impact Load (Fi): 7.2 kips per foot of pier diameter, acting at the design stillwater elevation of 25.1 feet NAVD88

6.3 Exterior Concrete Slabs-on-Grade

The proposed additions will consist of raised wood floors. Concrete slabs-on-grade are expected to be limited to exterior slabs. Slab subgrades should be constructed on properly moisture conditioned and compacted subgrade soil as recommended in the "Earthwork" section of this report. Soil subgrades should be maintained in a moist condition prior to placement of concrete. Design of reinforcement, joint spacing, etc. is the responsibility of the design engineer.

A lower water-cement ratio (0.45 to 0.50) will also help reduce the permeability of the floor slab. It should be understood that the recommended plastic membrane is not intended to waterproof the concrete slab floor. If waterproofing is desired, the project designers and/or a flooring expert should be contacted.

Exterior concrete slabs-on-grade should be cast free from adjacent foundations or other non-heaving edge restraints. This may be accomplished by using a strip of 1/2-inch asphalt-impregnated felt divider material between the slab edges and the adjacent structure. Frequent construction or control joints should be provided in all concrete slabs where cracking is objectionable. Continuous reinforcing or dowels at the construction and control joints will also aid in reducing uneven slab movements.

6.4 Surface and Subsurface Drainage

Engineering design of grading and drainage at the site is the responsibility of the project Civil Engineer. Sufficient surface drainage should be provided to direct water away from buildings, foundations, concrete slabs-on-grade and pavements, and towards suitable collection and discharge facilities. Ponding of surface water should be avoided by establishing positive drainage away from all improvements.

7 LIMITATIONS

In preparing the findings and professional opinions presented in this report, Geo-Logic Associates (GLA) has endeavored to follow generally accepted principles and practices of the engineering geologic and geotechnical engineering professions in the area and at the time our services were performed. No warranty, either express or implied, is provided.

The conclusions and recommendations presented in this report are applicable only to the specific project development on this specific site. These data should not be used for other projects, sites or purposes unless they are reviewed by GLA or the role of project engineering geologist are assumed by another firm/professional.

The conclusions and recommendations contained in this report are based, in part, on information that has been provided to us. In the event that the general development concept or general location and type of structures are modified, our conclusions and recommendations shall not be considered valid unless we are retained to review such changes and to make any necessary additions or changes to our recommendations.

Subsurface exploration is necessarily confined to selected locations and conditions may, and often do, vary between these locations. Should conditions different from those described in this report be encountered during project development, GLA should be consulted to review the conditions and determine whether our recommendations are still valid. Additional exploration, testing, and analysis may be required for such evaluation.

Should persons concerned with this project observe geotechnical features or conditions at the site or surrounding areas which are different from those described in this report, those observations should be reported immediately to GLA for evaluation.

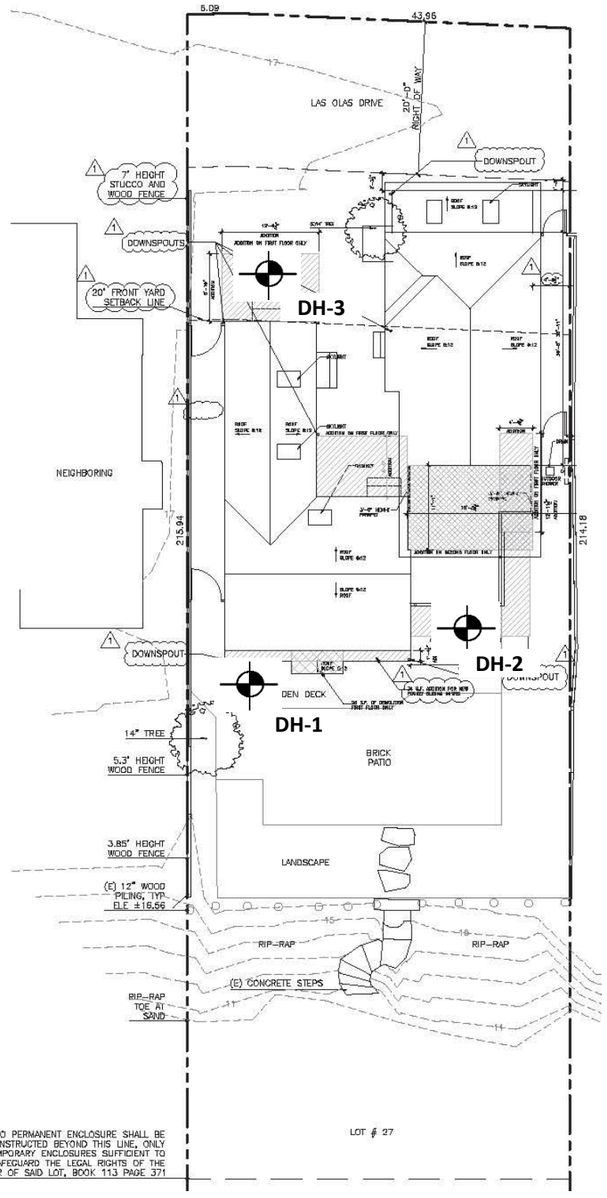
It is important that the information in this report be made known to the design professionals involved with the project, that our recommendations be incorporated into project drawings and documents, and that the recommendations be carried out during construction by the contractor and subcontractors. It is not the responsibility of GLA to notify the design professionals and the project contractors and subcontractors.

Report prepared by,

Geo-Logic Associates

Chalerm (Beeson) Liang
GE 2031

Copy: Molly Robson, Robson Homes (1 electronic copy)



Vicinity Map – no scale

Legend

Exploratory drill hole

Approximate Scale (Feet)

0 20 40 60

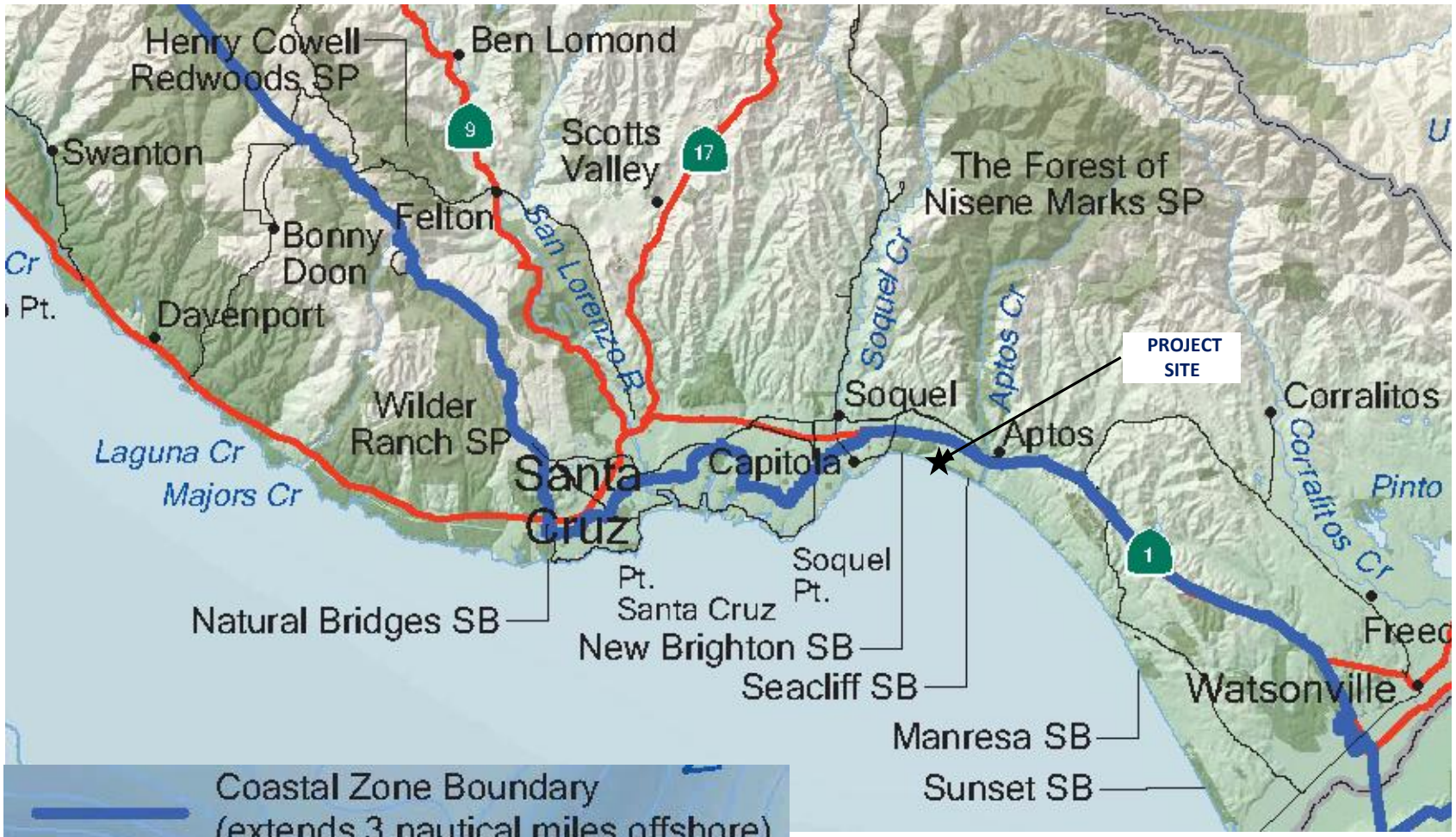
Base: Site Plan, 753 Las Olas Drive, Aptos, CA 95003, prepared by Salvatore Caruso Design Corporation, latest revision dated 8/31/23.

Geo-Logic ASSOCIATES	6300 San Ignacio Avenue, Suite A San Jose, California 95119 Phone (408) 778-2818	Drafted By: Date: January 2024 Checked By: Revision:	**PROPOSED BORING LOCATIONS** Proposed Residential Development 753 Las Olas Drive Aptos, California

FIGURE 1

PROJECT PA23.1045

EXHIBIT G



Base: Map of Coastal Zone Boundary, Santa Cruz County, downloaded from California Coastal Commission website, November 2023.

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Compiled by:	Date: January 2024
Reviewed by:	Revision:

COASTAL ZONE BOUNDARY
753 Las Olas Drive
Aptos, California

FIGURE
2
PROJECT
PA23.1045

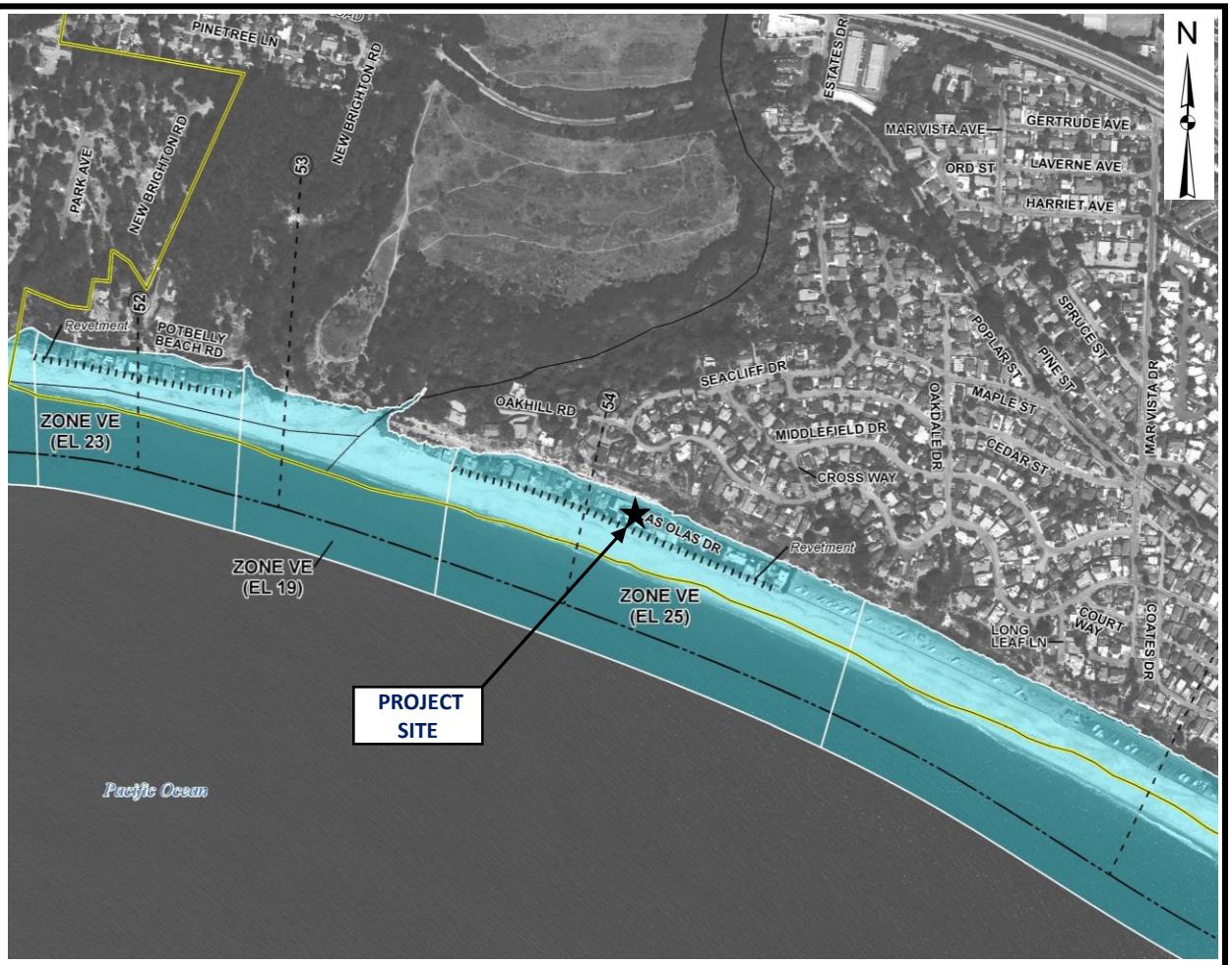
EXHIBIT G

FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT HTTP://MSC.FEMA.GOV

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) *Zone A, V, A99*
	With BFE or Depth *Zone AE, AO, AH, VE, AR*
	Regulatory Floodway
	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
	Future Conditions 1% Annual Chance Flood Hazard *Zone X*
OTHER AREAS OF FLOOD HAZARD	Area with Reduced Flood Risk due to Levee See Notes *Zone X*
OTHER AREAS	NO SCREEN Areas of Minimal Flood Hazard *Zone X*
	Area of Undetermined Flood Hazard *Zone D*
GENERAL STRUCTURES	Channel, Culvert or Storm Sewer
	Accredited or Provisionally Accredited Levee, Dike or Floodwall
	Non-accredited Levee, Dike or Floodwall
	(E) 18.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation (BFE)
	(8) Coastal Transect
	Coastal Transect Baseline
	Profile Baseline
	Hydrographic Feature
	513 Base Flood Elevation Line (BFE)
OTHER FEATURES	Limit of Study
	Jurisdiction Boundary



Approximate Scale

0 250 500 750 1,000 2,000 Feet

Base: National Flood Insurance Rate Map, Santa Cruz County, California, Panel 356 of 470, Federal Emergency Management Agency (FEMA), Map Number 06087C0356F, September 29, 2017.

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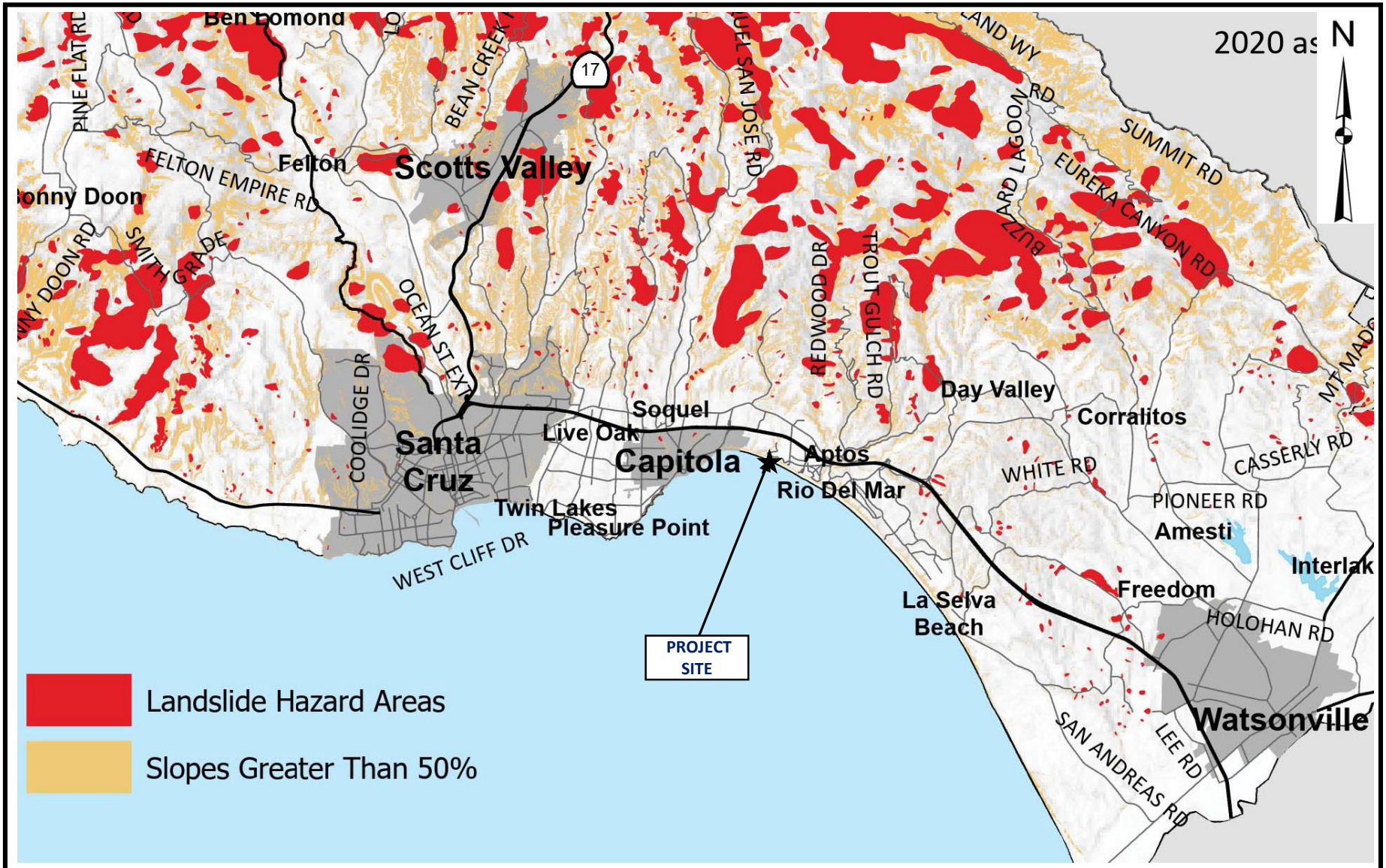
FEMA FLOOD HAZARD MAP
753 Las Olas Drive
Aptos, California

FIGURE
3
PROJECT
PA23.1045

EXHIBIT G



Base: Landslide Hazard Areas, County of Santa Cruz, 003-21 Jan 2021.

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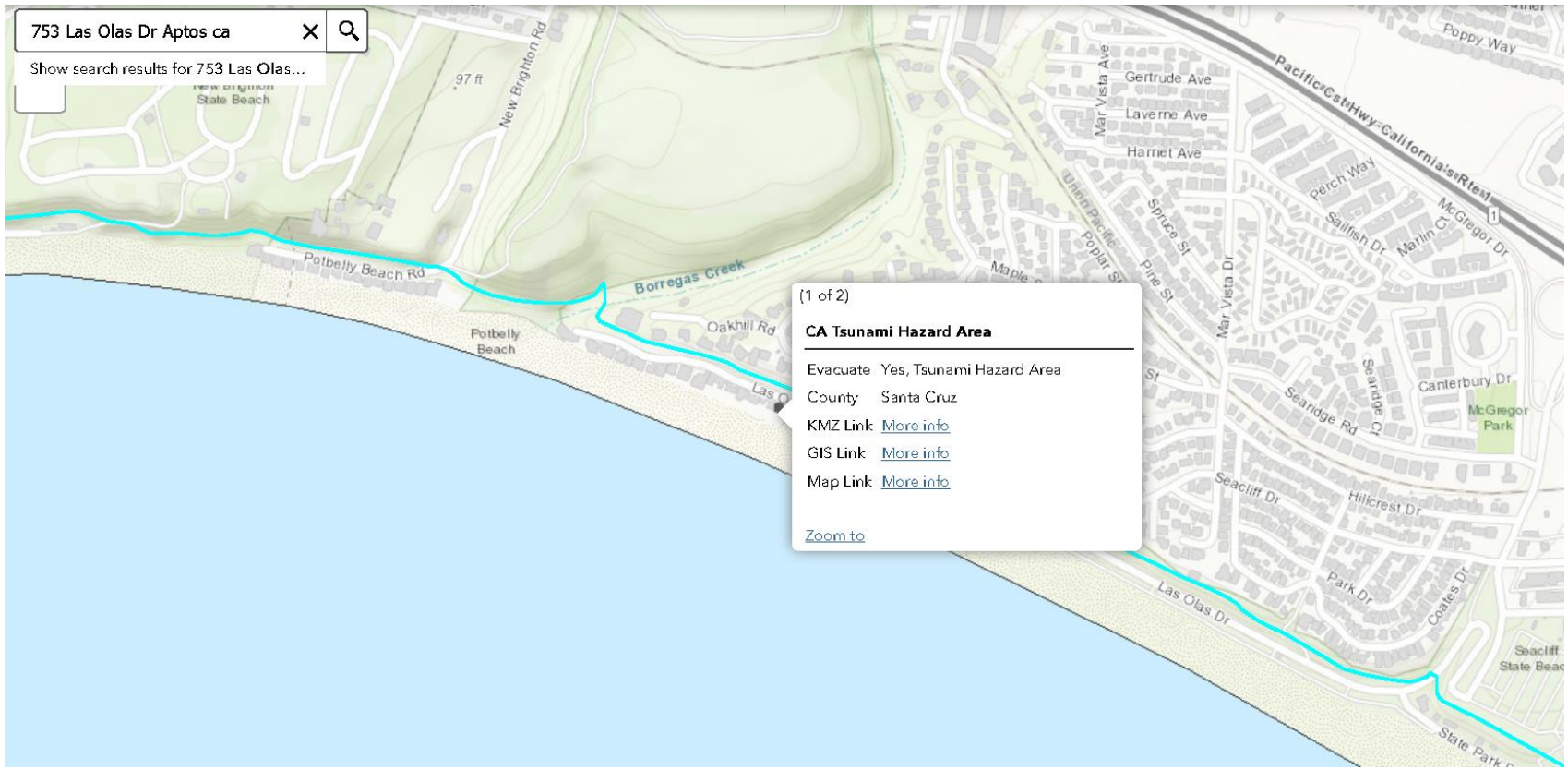
Compiled by:	Date: January 2024
Reviewed by:	Revision:

LANDSLIDE HAZARD AREAS
753 Las Olas Drive
Aptos, California

FIGURE
4
PROJECT
PA23.1045

EXHIBIT G



N

Base: Tsunami Hazard Area, from California Geological Survey website, November 2023.

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Compiled by:	Date: January 2024
Reviewed by:	Revision:

TSUNAMI HAZARD AREAS
753 Las Olas Drive
Aptos, California

FIGURE
5
PROJECT
PA23.1045

EXHIBIT G

APPENDIX A

SUBSURFACE EXPLORATION

- **Keys to Soil Classification (fine and coarse grained soils)**
- **Logs of Drill Holes DH-1, DH-2, and DH-3**

EXHIBIT G

KEY TO SOIL CLASSIFICATION - FINE GRAINED SOILS

(50% OR MORE IS SMALLER THAN NO. 200 SIEVE SIZE)

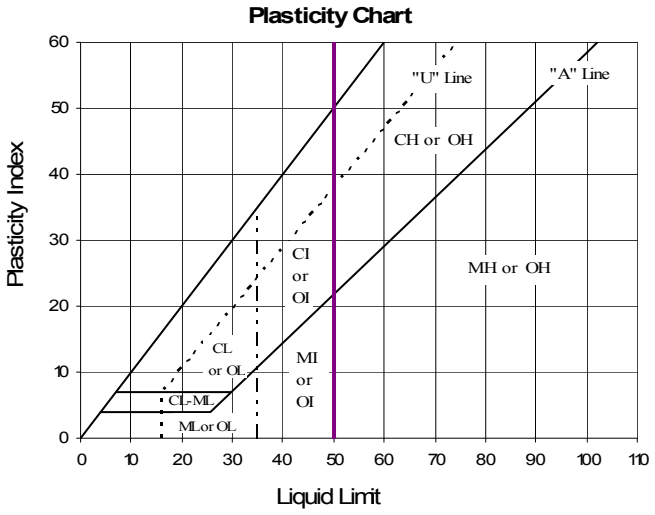
(modified from ASTM D2487 to include fine grained soils with intermediate plasticity)

MAJOR DIVISIONS			GROUP SYMBOLS	GROUP NAMES
SILTS AND CLAYS (Liquid Limit less than 35) Low Plasticity	Inorganic	PI < 4 or plots below "A" line	ML	Silt, Silt with Sand or Gravel, Sandy or Gravelly Silt, Sandy or Gravelly Silt with Sand or Gravel
	Inorganic	PI > 7 or plots on or above "A" line	CL	Lean Clay, Lean Clay with Sand or Gravel, Sandy or Gravelly Lean Clay, Sandy or Gravelly Lean Clay with Sand or Gravel
	Inorganic	PI between 4 and 7	CL-ML	Silty Clay, Silty Clay with Sand or Gravel, Sandy or Gravelly Silty Clay, Sandy or Gravelly Silty Clay with Sand or Gravel
	Organic	See footnote 3	OL	Organic Silt (below "A" Line) or Organic Clay (on or above "A" Line) (1,2)
SILTS AND CLAYS (35 ≤ Liquid Limit < 50) Intermediate Plasticity	Inorganic	PI < 4 or plots below "A" line	MI	Silt, Silt with Sand or Gravel, Sandy or Gravelly Silt, Sandy or Gravelly Silt with Sand or Gravel
	Inorganic	PI > 7 or plots on or above "A" line	CI	Clay, Clay with Sand or Gravel, Sandy or Gravelly Clay, Sandy or Gravelly Clay with Sand or Gravel
	Organic	See footnote 3	OI	Organic Silt (below "A" Line) or Organic Clay (on or above "A" Line) (1,2)
SILTS AND CLAYS (Liquid Limit 50 or greater) High Plasticity	Inorganic	PI plots below "A" line	MH	Elastic Silt, Elastic Silt with Sand or Gravel, Sandy or Gravelly Elastic Silt, Sandy or Gravelly Elastic Silt with Sand or Gravel
	Inorganic	PI plots on or above "A" line	CH	Fat Clay, Fat Clay with Sand or Gravel, Sandy or Gravelly Fat Clay, Sandy or Gravelly Fat Clay with Sand or Gravel
	Organic	See note 3 below	OH	Organic Silt (below "A" Line) or Organic Clay (on or above "A" Line) (1,2)

1. If soil contains 15% to 29% plus No. 200 material, include "with sand" or "with gravel" to group name, whichever is predominant.
2. If soil contains ≥30% plus No. 200 material, include "sandy" or "gravelly" to group name, whichever is predominant. If soil contains ≥15% of sand or gravel sized material, add "with sand" or "with gravel" to group name.
3. Ratio of liquid limit of oven dried sample to liquid limit of not dried sample is less than 0.75.

CONSISTENCY	UNCONFINED SHEAR STRENGTH (KSF)	STANDARD PENETRATION (BLOWS/FOOT)
VERY SOFT	< 0.25	< 2
SOFT	0.25 – 0.5	2 – 4
FIRM	0.5 – 1.0	5 – 8
STIFF	1.0 – 2.0	9 – 15
VERY STIFF	2.0 – 4.0	16 – 30
HARD	> 4.0	> 30

MOISTURE	CRITERIA
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp, but no visible water
Wet	Visible free water, usually soil is below the water table



GEO-LOGIC ASSOCIATES

EXHIBIT G

KEY TO SOIL CLASSIFICATION – COARSE GRAINED SOILS

(MORE THAN 50% IS LARGER THAN NO. 200 SIEVE SIZE)

(modified from ASTM D2487 to include fines with intermediate plasticity)

MAJOR DIVISIONS			GROUP SYMBOLS	GROUP NAMES[1]
GRAVELS (more than 50% of coarse fraction is larger than No. 4 sieve size)	Gravels with less than 5% fines	Cu ≥ 4 and 1 ≤ Cc ≤ 3	GW	Well Graded Gravel, Well Graded Gravel with Sand
		Cu < 4 and/or 1 > Cc > 3	GP	Poorly Graded Gravel, Poorly Graded Gravel with Sand
	Gravels with 5% to 12% fines	ML, MI or MH fines	GW-GM	Well Graded Gravel with Silt, Well Graded Gravel with Silt and Sand
			GP-GM	Poorly Graded Gravel with Silt, Poorly Graded Gravel with Silt and Sand
		CL, CI or CH fines	GW-GC	Well Graded Gravel with Clay, Well Graded Gravel with Clay and Sand
			GP-GC	Poorly Graded Gravel with Clay, Poorly Graded Gravel with Clay and Sand
	Gravels with more than 12% fines	ML, MI or MH fines	GM	Silty Gravel, Silty Gravel with Sand
		CL, CI or CH fines	GC	Clayey Gravel, Clayey Gravel with Sand
		CL-ML fines	GC-GM	Silty Clayey Gravel; Silty, Clayey Gravel with Sand
SANDS (50% or more of coarse fraction is smaller than No. 4 sieve size)	Sands with less than 5% fines	Cu ≥ 6 and 1 ≤ Cc ≤ 3	SW	Well Graded Sand, Well Graded Sand with Gravel
		Cu < 6 and/or 1 > Cc > 3	SP	Poorly Graded Sand, Poorly Graded Sand with Gravel
	Sands with 5% to 12% fines	ML, MI or MH fines	SW-SM	Well Graded Sand with Silt, Well Graded Sand with Silt and Gravel
			SP-SM	Poorly Graded Sand with Silt, Poorly Graded Sand with Silt and Gravel
		CL, CI or CH fines	SW-SC	Well Graded Sand with Clay, Well Graded Sand with Clay and Gravel
			SP-SC	Poorly Graded Sand with Clay, Poorly Graded Sand with Clay and Gravel
	Sands with more than 12% fines	ML, MI or MH fines	SM	Silty Sand, Silty Sand with Gravel
		CL, CI or CH fines	SC	Clayey Sand, Clayey Sand with Gravel
		CL-ML fines	SC-SM	Silty, Clayey Sand; Silty, Clayey Sand with Gravel

US STANDARD SIEVES	3 Inch	¾ Inch	No. 4	No. 10	No. 40	No. 200	
	COARSE	FINE	COARSE	MEDIUM	FINE		
COBBLES & BOULDERS	GRAVELS		SANDS				SILTS AND CLAYS

RELATIVE DENSITY (SANDS AND GRAVELS)	STANDARD PENETRATION (BLOWS/FOOT)
Very Loose	0 - 4
Loose	5 – 10
Medium Dense	11 – 30
Dense	31 - 50
Very Dense	50+

1. Add “with sand” to group name if material contains 15% or greater of sand-sized particle. Add “with gravel” to group name if material contains 15% or greater of gravel-sized particle.

MOISTURE	CRITERIA
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp, but no visible water
Wet	Visible free water, usually soi is below the water table

GEO-LOGIC ASSOCIATES

DATE: 12/1/2023	LOG OF EXPLORATORY DRILL HOLE	DH- 1
PROJECT NAME:	753 Las Olas Drive, Aptos, California	**PROJECT NUMBER:** PA23.1045
DRILL RIG:	Minuteman, 140-lb hammer on rope & cathead system	**LOGGED BY:** BL
HOLE DIAMETER:	4-inch diameter continuous flight auger	**HOLE ELEVATION:** ---
SAMPLER:	D = 3" OD, 2½" ID Split-spoon X = 2½" OD, 2" ID Split-spoon I = Standard Penetrometer (2" OD SPT) S = Slough in sample	**GROUND WATER DEPTH:** **Initial:** 11 ft **Final:** ---

DESCRIPTION OF EARTH MATERIALS	SOIL TYPE	DEPTH (ft)	SAMPLE	BLOWS PER FOOT	POCKET PEN (tsf)	% PASSING #200 SIEVE	LIQUID LIMIT	WATER CONTENT	PLASTICITY INDEX	DRY DENSITY (pcf)	FAILURE STRAIN (%)	UNCONFINED COMPRESSIVE STRENGTH (psf)
CLAYEY SAND: Brown (10YR 5/3), moist, medium dense; mostly fine sand	SC	1	S	15		24		14				
		2	D									
		3	D	22								
		4	S									
		5	D	20								
POORLY GRADED SAND: Light gray (10YR 7/2), dry to moist, medium dense; mostly fine sand	SP	6	S	25		2		3				
		7	D									
		8	D	26								
		9	S									
		10	D	22								
		11	D									
dark gray (10YR 4/1), wetter below roughly 11 feet		12	S	18								
		13	D									
wet at sampler tip		14	D	16								
		15	S									
very dense, mostly fine sand		16	D	33								
		17	S	33/6" 60/4"		2		21				
POORLY GRADED SAND with CLAY: Dark gray (10YR 4/1), wet, very dense; with fine gravel and sea shell fragments (Purissima formation)	SP-SC	18	I	60								
		19	I	50/6" 58/6"								
		20	S	85		11		12				
			I									
			I									
BOTTOM OF HOLE @ 19½ FEET												

GEO-LOGIC ASSOCIATES	PAGE: 1 of 1

EXHIBIT G

DATE: 12/1/2023	LOG OF EXPLORATORY DRILL HOLE	DH- 2
PROJECT NAME:	753 Las Olas Drive, Aptos, California	**PROJECT NUMBER:** PA23.1045
DRILL RIG:	Minuteman, 140-lb hammer on rope & cathead system	**LOGGED BY:** BL
HOLE DIAMETER:	4-inch diameter continuous flight auger	**HOLE ELEVATION:** ---

SAMPLER: D = 3" OD, 2½" ID Split-spoon; X = 2½" OD, 2" ID Split-spoon; I = Standard Penetrometer (2" OD SPT); S = Slough in sample

GROUND WATER DEPTH: **Initial:** 13 feet **Final:** ---

DESCRIPTION OF EARTH MATERIALS	SOIL TYPE	DEPTH (ft)	SAMPLE	BLOWS PER FOOT	POCKET PEN (tsf)	% PASSING #200 SIEVE	LIQUID LIMIT	WATER CONTENT	PLASTICITY INDEX	DRY DENSITY (pcf)	FAILURE STRAIN (%)	UNCONFINED COMPRESSIVE STRENGTH (psf)
CLAYEY SAND: Brown (10YR 5/3), moist, medium dense; mostly fine sand	SC	1	S D D	19								
		2										
		3										
		4										
		5										
POORLY GRADED SAND: Light gray (10YR 7/2), wet, medium dense; mostly fine sand	SP	6	S I I	26								
		7										
		8										
		9										
dark gray (10YR 4/1), medium dense to dense		10	S I I	31		2		15				
		11										
		12										
		13										
		14										
dark grayish brown (10YR 4/2), very dense, mostly fine sand, with trace fine gravel		15	S I I	85		4		18				
		16										
POORLY GRADED SAND with CLAY: Dark gray (10YR 4/1), wet, very dense; with fine to coarse gravel and sea shell fragments; hard drilling below approximately 19½ feet (Purisima formation)	SP-SC	17										
		18										
		19										
BOTTOM OF HOLE @ 20½ FEET		20	S D	50/4"								

GEO-LOGIC ASSOCIATES **PAGE:** 1 of 1

EXHIBIT G

DATE: 12/1/2023	LOG OF EXPLORATORY DRILL HOLE	DH- 3
PROJECT NAME:	753 Las Olas Drive, Aptos, California	**PROJECT NUMBER:** PA23.1045
DRILL RIG:	Minuteman, 140-lb hammer on rope & cathead system	**LOGGED BY:** BL
HOLE DIAMETER:	4-inch diameter continuous flight auger	**HOLE ELEVATION:** ---
SAMPLER:	D = 3" OD, 2½" ID Split-spoon X = 2½" OD, 2" ID Split-spoon I = Standard Penetrometer (2" OD SPT) S = Slough in sample	**GROUND WATER DEPTH:** **Initial:** 11 feet **Final:** ---

DESCRIPTION OF EARTH MATERIALS	SOIL TYPE	DEPTH (ft)	SAMPLE	BLOWS PER FOOT	POCKET PEN (tsf)	% PASSING #200 SIEVE	LIQUID LIMIT	WATER CONTENT	PLASTICITY INDEX	DRY DENSITY (pcf)	FAILURE STRAIN (%)	UNCONFINED COMPRESSIVE STRENGTH (psf)
Brick surface underlain by 3" concrete												
POORLY GRADED SAND: Dark grayish brown (10YR 4/2), moist, loose, mostly fine sand	SP	1	S									
		2	D	4								
		3	S									
		4	D	7								
medium dense		5	S									
		6	D	23								
with gravel-size quartz fgragments		7	S	26		12		8				
		8	D									
		9	S	23								
		10	I	28								
POORLY GRADED SAND with CLAY: Brown (10YR 5/3), moist to wet, dense to very dense (Purisima formation)	SP-SC	11	S	50/6"		9		14				
	SC	12	I	48		26		28				
grading to clayey sand below 11 feet		13	S	63								
with a piece of wood, grading to poorly graded sand with clay	SP-SC	14	I	50/3"		6		15				
BOTTOM OF HOLE @ 14¼ FEET		15										
		16										
		17										
		18										
		19										
		20										

APPENDIX B

RESULTS OF LIQUEFACTION & LATERAL SPREADING ASSESSMENT

EXHIBIT G

LIQUEFACTION POTENTIAL ANALYSIS

REFERENCE: Liquefaction Resistance of soils, Summary Report from the 1996 NCEER and 1998 NCEER/NSF Workshops on Evaluation of Liquefaction Resistance of Soils, by T.L. Youd and I.M. Idriss, Journal of Geotechnical & Geoenvironmental Engineering, April 2001

Last revision Jan 2023

Project Name: 753 Las Olas Drive, Aptos, CA **Proj. #:** PA23.1045 **Date:** 12/7/2023 **By:** BL

Design peak ground accel., PGA = 0.98 g
Design earthquake magnitude = 7.5
New fill thickness = 0 feet @ 125 pcf =

Hammer weight, Wh = 140 lbs
(MSF = 10^2.24/(Mw^2.56) = 1.00
0 psf additional overburden

Hammer drop, d = 30 inches
Atmospheric pressure= 2116 psf
Rod length above GS = 3 ft

Soil Layer	Depth to Bottom of Layer, ft	Total Density, pcf	USCS	Total Vertical Stress @ bottom of layer, psf	Effective Vertical Stress @ layer bottom, psf	Boring #	Diameter*, Db, in	Depth to groundwater @ drilling, ft	GW depth below finish grade for liquefaction analysis, ft	Energy ratio correction Ce
0	0	0	0	0.0	0.0	DH1	4	11	6	1
1	1.50	115.0	SP	172.5	172.5	* use Db = 4.5, 6 or 8 inches				
2	3.00	115.0	SP	345.0	345.0					
3	4.50	115.0	SP	517.5	517.5					
4	6.00	115.0	SP	690.0	690.0					
5	7.50	115.0	SP	862.5	862.5					
6	9.00	115.0	SP	1035.0	1035.0					
7	10.50	115.0	SP	1207.5	1207.5					
8	12.00	115.0	SP	1380.0	1317.6					
9	13.50	115.0	SP	1552.5	1396.5					
10	15.00	115.0	SP	1725.0	1475.4					
11	16.50	115.0	SP	1897.5	1554.3					
12	18.00	115.0	SP	2070.0	1633.2					
13	19.50	115.0	SP	2242.5	1712.1					
14				2242.5	2242.5					
15				2242.5	2242.5					
16				2242.5	2242.5					
17				2242.5	2242.5					
18				2242.5	2242.5					
19				2242.5	2242.5					
20				2242.5	2242.5					

Correction Factor Ce	
Equipment variable	Values
Donut hammer	0.5 - 1.0
Safety hammer	0.7 - 1.2
Auto trip donut hammer	0.8 - 1.3

C2, Code for Sampler Type	Type of Sampler	O.D. of Sampler (in)	I.D. of Sampler shoe (in)	Sampler-Hammer Ratio for CLAY (x10^5)	Sampler-Hammer Ratio for Sand (x10^5)
1	SPT	2	1.375	4.19	0.89
2	2" MC	2.5	1.875	5.43	1.49
3	D&M	3	2.375	6.67	2.25
4	SPT1	2	0	7.94	1.32

N1cs = Blowcount corrected for fines content = alpha + beta*N160		
fines content (FC)	alpha	beta
<= 5%	0	1
5% - 35%	exp(1.76-(190/FC^2))	(0.99+FC^1.5/1000)
>35%	5	1.2

Correction Factors to SPT (modified from Skempton 1986)

Factor	Term	Equipment variable	Values
Overburden	Cn	(Pa/Pv')^0.5 <=1.7	
Energy Ratio	Ce	Donut hammer	0.5 - 1.0
		Safety hammer	0.7 - 1.2
		Auto trip donut hammer	0.8 - 1.3
Borehole diameter	Cb	65-115 mm (2.5"-4.5")	1.00
		150 mm (6")	1.05
		200 mm (8")	1.15
Rod length	Cr	< 3 m (10')	0.75
		3-4 m (10'-13')	0.80
		4-6 m (13'-20')	0.85
		6-10 m (20'-33')	0.95
		10-30 m (33'-98')	1.00
Sampling Method	Cs	Standard sampler	1.0
		Sampler w/o liners	1.1-1.3

Reference:

Estimating Liquefaction-induced Lateral Displacement Using the Standard Penetration Test or Cone Penetration Test

G. Zhang, P.K. Robsertson, & R.W. Brachman, 2004

Level Ground with a Free Face (4>L/H<40)

L, horiz dist. free face to site, ft =
H, vert. ht. of free face, ft =
LDI, in. = 0.00
Lateral displacement, LD, in. = **#DIV/0!**
LD = 6*LDI*(L/H)^-0.8; for 4<L/H<40

Sloping Ground Surface, 0.2%<S<3.5%

S, slope of ground surface, % = 2
LD=(S+02)*LDI, in. = **66.60**
Note: displacement below 2*H is ignored

MUST HAVE A LAYER BREAK AT THE GROUNDWATER TABLE

Note: if (N1)60cs is over 30, soil is considered non-liquefiable

Depth below O.G. (ft)	Field blow count, N	Code for Sampler Type, C2	Fines Content (%)	Rod Length, L(rod) (ft)	Cs	Cr	Total Vertical Stress (psf), σ_V	Effective Vertical Stress (psf), $\sigma_{V'}$	N' = N corrected for sampler size	Cn	(N1)60 = N'*Cn*Cr*Ce*Cb*Cs	(N1)60cs (corrected for % fines)	Total Vertical Stress w/ Fill (psf)	Effective Vertical Stress @ design GW (psf)	rd	CSR	CRR(7.5) for clean granular soils	High Overburden Correction Factor	FS against liquefaction	Seismic Ground Settlement (in)	Post Liquefaction Strength, psf [NRC 2015]	Post Liquefaction Strength, psf [Caltrans 2020]	USCS	Relative Density, Dr (%)	Ymax (%)	LDI (in), Free Face	LDI (in), Free Face
1.00	15	3	24	4.00	1.0	0.75	115.0	115.0	8	1.70	10	15	115.0	115.0	1.000	0.637	0.160	1.00	Above GW	0.00	n.a.	n.a.	SP	54.2%	0.00	0.00	0.00
2.50	22	3	24	5.50	1.0	0.75	287.5	287.5	12	1.70	15	20	287.5	287.5	0.996	0.635	0.215	1.00	Above GW	0.00	n.a.	n.a.	SP	62.6%	0.00	0.00	0.00
4.00	20	3	24	7.00	1.0	0.75	460.0	460.0	10	1.70	13	19	460.0	460.0	0.993	0.632	0.203	1.00	Above GW	0.00	n.a.	n.a.	SP	61.0%	0.00	0.00	0.00
5.50	25	3	2	8.50	1.0	0.75	632.5	632.5	13	1.70	17	17	632.5	632.5	0.989	0.630	0.181	1.00	Above GW	0.00	n.a.	n.a.	SP	57.7%	0.00	0.00	0.00
7.00	26	3	2	10.00	1.0	0.80	805.0	805.0	14	1.58	17	17	805.0	742.6	0.986	0.681	0.181	1.00	0.27	0.28	339.0	375.0	SP	57.7%	24.74	0.00	4.45
8.50	22	3	2	11.50	1.0	0.80	977.5	977.5	12	1.43	13	13	977.5	821.5	0.982	0.745	0.141	1.00	0.19	0.32	207.0	255.2	SP	50.5%	33.51	0.00	6.03
10.00	18	3	2	13.00	1.0	0.85	1150.0	1150.0	9	1.32	11	11	1150.0	900.4	0.979	0.797	0.122	1.00	0.15	0.36	166.4	200.8	SP	46.4%	39.57	0.00	7.12
11.50	16	3	2	14.50	1.0	0.85	1322.5	1291.3	8	1.24	9	9	1322.5	979.3	0.976	0.840	0.104	1.00	0.12	0.38	133.7	173.9	SP	42.0%	47.30	0.00	8.51
13.00	33	3	2	16.00	1.0	0.85	1495.0	1370.2	17	1.21	18	18	1495.0	1058.2	0.973	0.875	0.192	1.00	0.22	0.23	472.5	475.6	SP	59.4%	23.06	0.00	4.15
14.50	93	3	2	17.50	1.0	0.85	1667.5	1449.1	49	1.17	49	49	1667.5	1137.1	0.970	0.906	N.L.	1.00	2.00	0.00	n.a.	n.a.	SP	90.7%	0.83	0.00	0.00
16.00	60	1	11	19.00	1.0	0.85	1840.0	1528.0	60	1.14	58	61	1840.0	1216.0	0.966	0.931	N.L.	1.00	2.00	0.00	n.a.	n.a.	SP	90.7%	0.83	0.00	0.00
17.50	108	1	11	20.50	1.0	0.95	2012.5	1606.9	108	1.12	114	119	2012.5	1294.9	0.963	0.953	N.L.	1.00	2.00	0.00	n.a.	n.a.	SP	90.7%	0.83	0.00	0.00
19.00	85	1	11	22.00	1.0	0.95	2185.0	1685.8	85	1.09	88	91	2185.0	1373.8	0.959	0.972	N.L.	1.00	2.00	0.00	n.a.	n.a.	SP	90.7%	0.83	0.00	0.00
																Estimated liquefaction induced settlement, in =			**1.57**					**LDI=**	**0.00**	**30.27**

EXHIBIT G

LIQUEFACTION POTENTIAL ANALYSIS

REFERENCE: Liquefaction Resistance of soils, Summary Report from the 1996 NCEER and 1998 NCEER/NSF Workshops on Evaluation of Liquefaction Resistance of Soils, by T.L. Youd and I.M. Idriss, Journal of Geotechnical & Geoenvironmental Engineering, April 2001

Last revision Jan 2023

Project Name: 753 Las Olas Drive, Aptos, CA **Proj. #:** PA23.1045 **Date:** 12/7/2023 **By:** BL

Design peak ground accel., PGA = 0.98 g
Design earthquake magnitude = 7.5
New fill thickness = 0 feet @ 125 pcf = 0 psf additional overburden

Hammer weight, Wh = 140 lbs
(MSF = 10^2.24/(Mw^2.56) = 1.00
Hammer drop, d = 30 inches
Atmospheric pressure= 2116 psf
Rod length above GS = 3 ft

Soil Layer	Depth to Bottom of Layer, ft	Total Density, pcf	USCS	Total Vertical Stress @ bottom of layer, psf	Effective Vertical Stress @ layer bottom, psf	Boring #	Diameter*, Db, in	Depth to groundwater @ drilling, ft	GW depth below finish grade for liquefaction analysis, ft	Energy ratio correction Ce
0	0	0	0	0.0	0.0	DH2	4.5	11	6	1
1	3.00	115.0	SP	345.0	345.0	* use Db = 4.5, 6 or 8 inches				
2	6.00	115.0	SP	690.0	690.0					
3	8.00	115.0	SP	920.0	920.0					
4	13.00	115.0	SP	1495.0	1370.2					
5	18.00	115.0	SP	2070.0	1633.2					
6	23.00	115.0	SP	2645.0	1896.2					
7				2645.0	2645.0					
8				2645.0	2645.0					
9				2645.0	2645.0					
10				2645.0	2645.0					
11				2645.0	2645.0					
12				2645.0	2645.0					
13				2645.0	2645.0					
14				2645.0	2645.0					
15				2645.0	2645.0					
16				2645.0	2645.0					
17				2645.0	2645.0					
18				2645.0	2645.0					
19				2645.0	2645.0					
20				2645.0	2645.0					

Correction Factor Ce	
Equipment variable	Values
Donut hammer	0.5 - 1.0
Safety hammer	0.7 - 1.2
Auto trip donut hammer	0.8 - 1.3

C2, Code for Sampler Type	Type of Sampler	O.D. of Sampler (in)	I.D. of Sampler shoe (in)	Sampler-Hammer Ratio for CLAY (x10^5)	Sampler-Hammer Ratio for Sand (x10^5)
1	SPT	2	1.375	4.19	0.89
2	2" MC	2.5	1.875	5.43	1.49
3	D&M	3	2.375	6.67	2.25
4	SPT1	2	0	7.94	1.32

N1cs = Blowcount corrected for fines content = alpha + beta*N160		
fines content (FC)	alpha	beta
<= 5%	0	1
5% - 35%	exp(1.76-(190/FC^2))	(0.99+FC^1.5/1000)
>35%	5	1.2

Correction Factors to SPT (modified from Skempton 1986)

Factor	Term	Equipment variable	Values
Overburden	Cn	(Pa/Pv')^0.5 <=1.7	
Energy Ratio	Ce	Donut hammer	0.5 - 1.0
		Safety hammer	0.7 - 1.2
		Auto trip donut hammer	0.8 - 1.3
Borehole diameter	Cb	65-115 mm (2.5"-4.5")	1.00
		150 mm (6")	1.05
		200 mm (8")	1.15
Rod length	Cr	< 3 m (10')	0.75
		3-4 m (10'-13')	0.80
		4-6 m (13'-20')	0.85
		6-10 m (20'-33')	0.95
		10-30 m (33'-98')	1.00
Sampling Method	Cs	Standard sampler	1.0
		Sampler w/o liners	1.1-1.3

Reference:

Estimating Liquefaction-induced Lateral Displacement Using the Standard Penetration Test or Cone Penetration Test

G. Zhang, P.K. Robsertson, & R.W. Brachman, 2004

Level Ground with a Free Face (4>L/H<40)

L, horiz dist. free face to site, ft =
H, vert. ht. of free face, ft =
LDI, in. = 0.00
Lateral displacement, LD, in. = **#DIV/0!**
LD = 6*LDI*(L/H)^-0.8; for 4<L/H<40

Sloping Ground Surface, 0.2%<S<3.5%

S, slope of ground surface, % = 2
LD=(S+02)*LDI, in. = **0.00**
Note: displacement below 2*H is ignored

MUST HAVE A LAYER BREAK AT THE GROUNDWATER TABLE

Note: if (N1)60cs is over 30, soil is considered non-liquefiable

Depth below O.G. (ft)	Field blow count, N	Code for Sampler Type, C2	Fines Content (%)	Rod Length, L(rod) (ft)	Cs	Cr	Total Vertical Stress (psf), σ_V	Effective Vertical Stress (psf), $\sigma_{V'}$	N' = N corrected for sampler size	Cn	(N1)60 = N'*Cn*Cr*Ce*Cb*Cs	(N1)60cs (corrected for % fines)	Total Vertical Stress w/ Fill (psf)	Effective Vertical Stress @ design GW (psf)	rd	CSR	CRR(7.5) for clean granular soils	High Overburden Correction Factor	FS against liquefaction	Seismic Ground Settlement (in)	Post Liquefaction Strength, psf [NRC 2015]	Post Liquefaction Strength, psf [Caltrans 2020]	USCS	Relative Density, Dr (%)	Ymax (%)	LDI (in), Free Face	LDI (in), Free Face
1.00	19	3	2	4.00	1.0	0.75	115.0	115.0	10	1.70	13	13	115.0	115.0	1.000	0.637	0.141	1.00	Above GW	0.00	n.a.	n.a.	SP	50.5%	0.00	0.00	0.00
6.00	26	1	2	9.00	1.0	0.75	690.0	690.0	26	1.70	33	33	690.0	690.0	0.988	0.629	N.L.	1.00	2.00	0.00	n.a.	n.a.	SP	80.4%	0.00	0.00	0.00
11.00	31	1	2	14.00	1.0	0.85	1265.0	1265.0	31	1.26	33	33	1265.0	953.0	0.977	0.826	N.L.	1.00	2.00	0.00	n.a.	n.a.	SP	80.4%	0.81	0.00	0.00
16.00	85	1	4	19.00	1.0	0.85	1840.0	1528.0	85	1.14	83	83	1840.0	1216.0	0.966	0.931	N.L.	1.00	2.00	0.00	n.a.	n.a.	SP	90.7%	0.83	0.00	0.00
20.00	100	3	11	23.00	1.0	0.95	2300.0	1738.4	52	1.07	53	56	2300.0	1426.4	0.957	0.983	N.L.	1.00	2.00	0.00	n.a.	n.a.	SP	90.7%	0.83	0.00	0.00

Estimated liquefaction induced settlement, in = **0.00** **LDI=** **0.00** **0.00**

EXHIBIT G

LIQUEFACTION POTENTIAL ANALYSIS

REFERENCE: Liquefaction Resistance of soils, Summary Report from the 1996 NCEER and 1998 NCEER/NSF Workshops on Evaluation of Liquefaction Resistance of Soils, by T.L. Youd and I.M. Idriss, Journal of Geotechnical & Geoenvironmental Engineering, April 2001

Last revision Jan 2023

Project Name: 753 Las Olas Drive, Aptos, CA **Proj. #:** PA23.1045 **Date:** 12/7/2023 **By:** BL

Design peak ground accel., PGA = 0.98 g
Design earthquake magnitude = 7.5
New fill thickness = 0 feet @ 125 pcf =

Hammer weight, Wh = 140 lbs
(MSF = 10^2.24/(Mw^2.56) = 1.00
0 psf additional overburden

Hammer drop, d = 30 inches
Atmospheric pressure= 2116 psf
Rod length above GS = 3 ft

Soil Layer	Depth to Bottom of Layer, ft	Total Density, pcf	USCS	Total Vertical Stress @ bottom of layer, psf	Effective Vertical Stress @ layer bottom, psf	Boring #	Diameter*, Db, in	Depth to groundwater @ drilling, ft	GW depth below finish grade for liquefaction analysis, ft	Energy ratio correction Ce
0	0	0	0	0.0	0.0	DH3	4	11	6	1
1	1.50	115.0	SP	172.5	172.5	* use Db = 4.5, 6 or 8 inches				
2	3.00	115.0	SP	345.0	345.0					
3	4.50	115.0	SP	517.5	517.5					
4	6.00	115.0	SP	690.0	690.0					
5	7.50	115.0	SP	862.5	862.5					
6	9.00	115.0	SP	1035.0	1035.0					
7	10.50	115.0	SP	1207.5	1207.5					
8	12.00	115.0	SP	1380.0	1317.6					
9	13.50	115.0	SP	1552.5	1396.5					
10	15.00	115.0	SP	1725.0	1475.4					
11	16.50	115.0	SP	1897.5	1554.3					
12	18.00	115.0	SP	2070.0	1633.2					
13	19.50	115.0	SP	2242.5	1712.1					
14				2242.5	2242.5					
15				2242.5	2242.5					
16				2242.5	2242.5					
17				2242.5	2242.5					
18				2242.5	2242.5					
19				2242.5	2242.5					
20				2242.5	2242.5					

Correction Factor Ce	
Equipment variable	Values
Donut hammer	0.5 - 1.0
Safety hammer	0.7 - 1.2
Auto trip donut hammer	0.8 - 1.3

C2, Code for Sampler Type	Type of Sampler	O.D. of Sampler (in)	I.D. of Sampler shoe (in)	Sampler-Hammer Ratio for CLAY (x10^5)	Sampler-Hammer Ratio for Sand (x10^5)
1	SPT	2	1.375	4.19	0.89
2	2" MC	2.5	1.875	5.43	1.49
3	D&M	3	2.375	6.67	2.25
4	SPT1	2	0	7.94	1.32

N1cs = Blowcount corrected for fines content = alpha + beta*N160

fines content (FC)	alpha	beta
<= 5%	0	1
5% - 35%	exp(1.76-(190/FC^2))	(0.99+FC^1.5/1000)
>35%	5	1.2

Correction Factors to SPT (modified from Skempton 1986)

Factor	Term	Equipment variable	Values
Overburden	Cn	(Pa/Pv')^0.5 <=1.7	
Energy Ratio	Ce	Donut hammer	0.5 - 1.0
		Safety hammer	0.7 - 1.2
		Auto trip donut hammer	0.8 - 1.3
Borehole diameter	Cb	65-115 mm (2.5"-4.5")	1.00
		150 mm (6")	1.05
		200 mm (8")	1.15
Rod length	Cr	< 3 m (10')	0.75
		3-4 m (10'-13')	0.80
		4-6 m (13'-20')	0.85
		6-10 m (20'-33')	0.95
		10-30 m (33'-98')	1.00
Sampling Method	Cs	Standard sampler	1.0
		Sampler w/o liners	1.1-1.3

Reference:

Estimating Liquefaction-induced Lateral Displacement Using the Standard Penetration Test or Cone Penetration Test

G. Zhang, P.K. Robsertson, & R.W. Brachman, 2004

Level Ground with a Free Face (4>L/H<40)

L, horiz dist. free face to site, ft =
H, vert. ht. of free face, ft =
LDI, in. = 0.00
Lateral displacement, LD, in. = #DIV/0!
LD = 6*LDI*(L/H)^-0.8; for 4<L/H<40

Sloping Ground Surface, 0.2%<S<3.5%

S, slope of ground surface, % = 2
LD=(S+02)*LDI, in. = 18.32
Note: displacement below 2*H is ignored

MUST HAVE A LAYER BREAK AT THE GROUNDWATER TABLE

Note: if (N1)60cs is over 30, soil is considered non-liquefiable

Depth below O.G. (ft)	Field blow count, N	Code for Sampler Type, C2	Fines Content (%)	Rod Length, L(rod) (ft)	Cs	Cr	Total Vertical Stress (psf), σ_V	Effective Vertical Stress (psf), $\sigma_{V'}$	N' = N corrected for sampler size	Cn	(N1)60 = N*Cn*Cr*Ce*Cb*Cs	(N1)60cs (corrected for % fines)	Total Vertical Stress w/ Fill (psf)	Effective Vertical Stress @ design GW (psf)	rd	CSR	CRR(7.5) for clean granular soils	High Overburden Correction Factor	FS against liquefaction	Seismic Ground Settlement (in)	Post Liquefaction Strength, psf [NRC 2015]	Post Liquefaction Strength, psf [Caltrans 2020]	USCS	Relative Density, Dr (%)	Ymax (%)	LDI (in), Free Face	LDI (in), Free Face
1.50	4	3	12	4.50	1.0	0.75	172.5	172.5	2	1.70	3	4	172.5	172.5	0.998	0.636	0.065	1.00	Above GW	0.00	n.a.	n.a.	SP	28.0%	0.00	0.00	0.00
3.00	7	3	12	6.00	1.0	0.75	345.0	345.0	4	1.70	5	6	345.0	345.0	0.995	0.634	0.080	1.00	Above GW	0.00	n.a.	n.a.	SP	34.3%	0.00	0.00	0.00
4.50	23	3	12	7.50	1.0	0.75	517.5	517.5	12	1.70	15	17	517.5	517.5	0.991	0.632	0.181	1.00	Above GW	0.00	n.a.	n.a.	SP	57.7%	0.00	0.00	0.00
6.25	26	3	12	9.25	1.0	0.75	718.8	718.8	14	1.67	17	19	718.8	703.2	0.987	0.643	0.203	1.00	0.32	0.25	434.2	360.0	SP	61.0%	21.53	0.00	3.88
7.50	23	3	12	10.50	1.0	0.80	862.5	862.5	12	1.52	15	17	862.5	768.9	0.985	0.704	0.181	1.00	0.26	0.27	345.6	290.6	SP	57.7%	24.74	0.00	4.45
9.00	28	1	12	12.00	1.0	0.80	1035.0	1035.0	28	1.39	31	34	1035.0	847.8	0.981	0.763	N.L.	1.00	2.00	0.00	n.a.	n.a.	SP	81.6%	0.83	0.00	0.00
10.00	100	2	9	13.00	1.0	0.85	1150.0	1150.0	70	1.32	78	80	1150.0	900.4	0.979	0.797	N.L.	1.00	2.00	0.00	n.a.	n.a.	SP	90.7%	0.83	0.00	0.00
11.50	48	2	26	14.50	1.0	0.85	1322.5	1291.3	33	1.24	35	44	1322.5	979.3	0.976	0.840	N.L.	1.00	2.00	0.00	n.a.	n.a.	SP	90.7%	0.83	0.00	0.00
13.00	63	1	26	16.00	1.0	0.85	1495.0	1370.2	63	1.21	65	77	1495.0	1058.2	0.973	0.875	N.L.	1.00	2.00	0.00	n.a.	n.a.	SP	90.7%	0.83	0.00	0.00
14.00	100	1	6	17.00	1.0	0.85	1610.0	1422.8	100	1.19	101	101	1610.0	1110.8	0.971	0.896	N.L.	1.00	2.00	0.00	n.a.	n.a.	SP	90.7%	0.83	0.00	0.00

Estimated liquefaction induced settlement, in = **0.52** **LDI=** **0.00** **8.33**

EXHIBIT G

COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT
701 OCEAN STREET, 4TH FLOOR, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123

July 1, 2019

Tom Thacher
Thacher and Thompson Architects
877 Cedar Street, Suite 248
Santa Cruz, CA 95060

Subject: GEOLOGIC HAZARDS ASSESSMENT
APN: 038-461-18
LOCATION: 753 Las Olas Drive
APPLICATION NUMBER: REV191044
OWNER: Julie and Mark Robson

Dear Mr. Thacher,

We have recently conducted a site inspection of the parcel referenced above where a remodel and addition to an existing single family residence are proposed. This inspection was completed to assess the property for possible flood hazards due to its proximity to the ocean. The purpose of this letter is to briefly describe our site observations, outline permit conditions with respect to geologic planning issues and to complete the hazards assessment for this property.

PROJECT DESIGN DESCRIPTION

Based on the plan provided by Thacher and Thompson Architects (preliminary plan, dated 3/26/19), the project includes a remodel and room additions to both the first and second floors of the 2,172 square foot existing home, with an increase in floor area to 3,179 square feet (44% increase over the original floor area.) The current plans provide an adequate description of the proposed work and indicate that the proposed work will include various small additions throughout the structure as well as remodeling on both floors.

GOALS OF THIS GEOLOGIC HAZARDS ASSESSMENT

- Discuss the National Flood Insurance Program (NFIP) standards for a project of this size in the Coastal High Hazards Zone. Our discussion will outline the project thresholds that, when exceeded, will require compliance with NFIP design standards.

- Discuss the conditions under which the proposed remodel and room addition(s) will be regarded as "development" according to the Santa Cruz County Geologic Hazards

EXHIBIT H

Ordinance (SCCC 16.10.040 (19)). Projects considered to be development will require a full geologic report to support development.

- Make a determination concerning the need for a geotechnical engineering / foundation report for the project.

SITE CONDITIONS

The home is located at 753 Las Olas Drive on the ocean side of the street. Information from a geotechnical report on the adjacent property to the west indicates that the home sits on a 16' to 17' thickness of beach sand overlying firm sandstone bedrock. Aerial photographs from the 1920's and 1930's indicate that the home is located on a stabilized portion of the beach. A review of aerial photographs suggest that a wood seawall has existed at the site for over 40 years, and the seawall does not constitute a coastal bluff.

Coastal Development Permit 97-0837 and several subsequent coastal and grading permits indicate that the old wood seawall has been enhanced with riprap revetment several times, and the wall in its current form (including the riprap revetment) is permitted with a long-term maintenance agreement. The wall and revetment have been designed to resist substantial wave forces. No grading permits for maintenance of the revetment have been issued since the early 2000's.

The seawall is designed to improve the protection of the homes along Las Olas Drive, but is not certified by Federal Emergency Management Agency (hereafter FEMA) as a seawall, nor is the home protected from wave run-up during a National Flood Insurance Program (hereafter NFIP) designated 100 year storm. The home was built prior to the publishing of Flood Insurance Rate Maps (hereafter FIRM), and the County's participation in the NFIP.

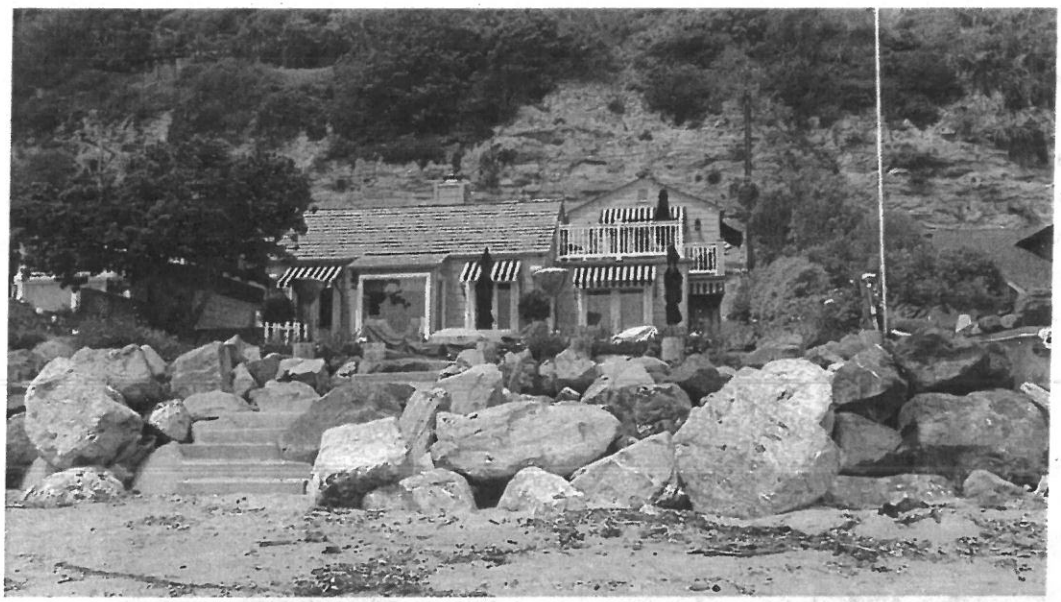
FEMA's FIRM maps show the Base Flood Elevation (hereafter BFE) at 25 feet above mean sea level. The ground surface around the home is currently at approximately 20 feet above mean sea level, with the interior floor of the home somewhat higher, suggesting the home may be subject to both flooding and coastal erosion during the lifespan of the home.

The subject site is situated in an area that is considered highly to very highly susceptible to liquefaction during earthquakes. Liquefaction is the sudden loss of soil strength during strong earthquake shaking, which results in temporary fluid-like behavior of the affected soil materials. Liquefaction typically occurs in areas where groundwater is shallow and materials consist of clean, poorly consolidated fine sands and silts. Liquefaction leads to loss of support for foundations, which can cause buildings to sink or tilt.

Liquefaction can lead to lurch cracking and lateral spreading, where the non-liquefied surficial soils crack or slide laterally over liquefied soils occurring at depth. These processes can damage or destroy buildings. Strong earthquake shaking may also induce the settlement of loose, granular soils (i.e. clean sands and silts) located above the groundwater table.

EXHIBIT H

Also, the home may be affected from slope instability on the coastal bluff located across Las Olas Drive. Shallow failures have occurred on the bluff, some with enough force to reach properties located across Las Olas Drive. Potential large slope failures have also been identified by engineering analysis of the bluff above 775 Las Olas Drive. The road cut along Las Olas Drive and drainage at the top of the bluff has decreased the stability of the bluff, and correspondingly has increased the risk that a large landslide may occur, which may damage the subject property. Several homes have been hit by landslides along Las Olas Drive in the last 25 years.



NFIP REQUIREMENTS

If the proposed improvements to the structure are considered a "substantial improvement" then the project will need to comply with SCCC 16.10.070(H)(5), and the NFIP which also includes provisions in the California Building Code as well (refer to permit conditions below). The applicant will need to demonstrate that the proposed project does not exceed substantial improvement defined as:

> *"Substantial improvement" means any repair, reconstruction, rehabilitation, addition, alteration or improvement to a structure, or the cumulative total of such activities as defined in subsection (SCCC 16.10.040 (18)) of this section, the cost of which equals or exceeds 50 percent of the market value of the structure immediately prior to the issuance of the building permit. This term includes structures that have incurred "substantial damage" regardless of the actual repair work proposed or performed. This term does not include any project or portion of a project to upgrade an existing habitable structure to comply with current State or local health, sanitary, or safety code*

specifications which are the minimum necessary to assure safe living conditions, any alteration of an historic structure; provided, that the alteration will not preclude the structure's continued designation as an historic structure.

A form is attached that provides further information to determine if a project is substantial improvement (refer to the Flood Information Page: (http://www.sccoplanning.com/Portals/2/County/Planning/env/Substantial%20Improvement%20Form.PDF).

Figure 1 indicates the flood hazard zone in this area with blue shading and the approximate parcel location. The NFIP flood hazard zone shown in figure 1 delineates the extent of flooding which is anticipated during a 100-year flood, an event with a one percent chance of occurring in any given year. Flooding to an approximate level of 25 feet above mean sea level is anticipated to occur once every hundred years on the basis of this mapping. The flood analysis for these maps is based on the best available historic data applied to standard statistical models. These are extremely helpful, but still have limitations. Consequently, the flood analysis does not preclude flooding from occurring due to events smaller in magnitude than the 100-year flood or for the "100-year flood" from occurring two years in a row, or a storm that is much greater than the "100-year flood" occurring in any year. No historic flooding event, including the record events of 1955, 1982, 1998 and 2016 has resulted in 100-year flood levels for any of the streams monitored in Santa Cruz County.

Figure 1

The flood hazard maps for the County were recently revised by the federal government due to the County's participation in the National Flood Insurance Program. This program enables property owners to obtain insurance coverage for flood damage to residential and commercial structures and their contents. In return for making flood insurance available, the federal

EXHIBIT H

government requires that the County's land use regulations be consistent with federal standards for construction activities in areas where potential flood hazards are identified on the maps.

Therefore, if the project qualifies as "substantial improvement", the following conditions must be met for the proposed project to receive approval with respect to NFIP and compliance with County Code section 16.10.070:

PERMIT CONDITIONS FOR NFIP and SCCC 16.10.070 (H) (5) COMPLIANCE

Building plans must reflect the following requirements:

1. Demonstration that the potential hazards on the site can be mitigated, over the 100-year lifetime of the structure, as determined by the geologic hazards assessment or full geologic report and any other appropriate technical reports. Mitigations can include but are not limited to building setbacks, elevation of the proposed structure and foundation design.

2. Elevation on pilings and columns so that the bottom of the lowest portion of the lowest structural member of the lower floor (excluding the pilings or columns) and elements that function as part of the structure, such as furnace, hot water heater, etc., are elevated to or above the base flood level.

3. Anchoring of the pile or column foundation and structure attached thereto to prevent flotation, collapse and lateral movement due to the effect of wind and water loads acting simultaneously on all building components. Wind and water loading values shall each have a one percent chance of being equaled or exceeded in any given year (100-year mean recurrence interval).

4. The space below the lowest floor shall either be free of obstruction or constructed with nonsupporting breakaway walls, open wood lattice-work or insect screening intended to collapse under wind and water loads without causing collapse, displacement or other structural damage to the elevated portion of the building or supporting foundation system. For the purposes of this section, a breakaway wall shall be of nonmasonry construction and have a design safe loading resistance of not less than 10 and no more than 20 pounds per square foot. Use of breakaway walls which do not meet the above material and strength criteria may be permitted only if a registered professional engineer or architect certifies that the designs proposed will permit the breakaway wall to collapse under a water load less than that which would occur during the base flood and that the elevated portion of the building or supporting foundation system shall not be subject to collapse, displacement or other structural damage due to the effects of wind and water loads acting simultaneously on all building components. Such enclosed space shall be useable solely for vehicle parking, building access or storage, and shall not be a finished area or habitable area.

EXHIBIT H

5. Utilities shall not be located within breakaway walls. All utilities shall be raised above the base flood elevation and mounted on structural components only.

6. The use of fill for structural support of buildings, including the parking slab, is prohibited. Plans shall show no fill to be placed beneath slabs per Coastal Construction Manual section 6.4.3.3 and County Code section 16.10.070(h) 5. (vii).

7. The parking slab shall be a maximum of 4 inches thick and shall be non-structural. Concrete slab shall be designed to break apart upon impact from storm surges.

8. The Base Flood Elevation shall be shown on all cross-sections and profiles.

9. Include the destination for all excavated material on the plans.

10. Please note that higher National Flood Insurance Program (NFIP) premiums will be assessed for V-Zone structures, such as this one with enclosed areas below the base flood elevation of 300 square feet or more, even if enclosed by compliant breakaway walls. See FEMA Technical Bulletin 5 for more information.

Prior to building permit issuance:

11. The project Surveyor or engineer shall complete and sign the V-Zone Certification provided by the County Planning Department stating that the plans comply with all FEMA and County regulations for V-Zone construction.

12. A plan review letter shall be required, signed by the soils engineer and project geologist, stating that the plans conform to the recommendations in the report.

13. A Declaration of Geologic Hazards shall be recorded, and a copy of the recorded document shall be submitted to Environmental Planning.

Prior to building permit final:

14. A final letter shall be submitted, signed by the soils engineer and project geologist (if needed) stating that the completed project conforms to their recommendations.

15. The surveyor or engineer shall sign a Final V-Zone Certification provided by the County Planning Department stating that the completed project meets all FEMA and County requirements for V-Zone construction.

16. A completed Elevation Certificate shall be prepared by the surveyor or engineer and submitted to Environmental Planning.

EXHIBIT H

Report Requirements for Projects Considered to be "Development" by County Geologic Hazards Ordinance 16.10

The proposed project includes a remodel and room additions to the existing structure. SCCC 16.10.040(19) defines *development* for the purposes of determining when a geologic hazard assessment is required. For the purposes of the current project, the relevant standards for determining whether the project qualifies as development include the following clauses from SCCC 16.10.040(19):

(b) Modification, reconstruction or replacement of 65 percent of the major structural components—consisting of the foundation, floor framing, exterior wall framing, and roof framing—of an existing habitable structure within any consecutive five-year period, or modification, reconstruction or replacement of 50 percent of the major structural components of an existing critical structure or facility, as defined by this chapter, within any consecutive five-year period, whether the work is done at one time or as the sum of multiple projects. For the purpose of this section, the following are not considered major structural components: exterior siding; nonstructural door and window replacement; roofing material; decks; chimneys; and interior elements including but not limited to interior walls and sheetrock, insulation, kitchen and bathroom fixtures, mechanical, electrical and plumbing fixtures. The extent of alterations to major structural components will be calculated in accordance with administrative guidelines adopted by resolution of the Board of Supervisors, found here: http://sccoplanning.com/PlanningHome/ZoningDevelopment/Non-ConformingRegulations.aspx

(c) The addition of habitable square footage to any structure, where the addition increases the habitable square footage by more than 50 percent or 500 square feet, whichever is greater, over the existing habitable space within a consecutive five-year period. This allows a total increase of up to 50 percent of the original habitable space of a structure, whether the additions are constructed at one time or as the sum of multiple additions over a consecutive five-year period;

(d) An addition of any size to a structure that is located on a coastal bluff, dune, or in the coastal hazard area, that extends the existing structure in a seaward direction;

(j) Retaining walls which require a building permit, retaining walls that function as a part of a landslide repair whether or not a building permit is required, sea walls, rip-rap erosion protection or retaining structures, and gabion baskets;

EXHIBIT H

GEOLOGIC AND GEOTECHNICAL ENGINEERING REPORT REQUIREMENTS

If the project qualifies as "development" under the definitions listed above, a full geologic investigation and report will be required. Based on our site review, the project is subject to three potential geologic hazards: 1) coastal flooding with wave runup, 2) slope instability due to steep slopes along Las Olas Drive, and 3) soil liquefaction. Provided that the project does not exceed development thresholds, no geologic report will be required.

However, a geotechnical (soils) investigation performed by a state registered geotechnical engineer is required prior to approval of the proposed project. This investigation must include, but not necessarily be limited to, a thorough evaluation of the following concerns:

1. Development of appropriate foundation design parameters reflecting the seismic shaking, coastal and potential liquefaction hazards.

MISC. CONDITIONS

Permit conditions will be developed for your proposal after the technical report(s) have been reviewed. At a minimum, however, you can expect to be required to follow all the recommendations contained in the report in addition to the following items:

1. Grading activities must be kept to a minimum.

2. Drainage from impermeable surfaces (such as the proposed roof and driveway) must be collected and properly disposed of. Runoff must not be allowed to sheet off these areas in an uncontrolled manner. An engineered drainage plan is required for this project.

If you have any questions concerning the assessment of this property for flood hazards or the permit conditions described above, please call me at 454-3162. Questions regarding insurance coverage under the National Flood Insurance Program should be directed to an insurance agent.

Sincerely,

Jessica Degrassi
Resource Planner IV- staff geologist
Environmental Planning

7/1/19
Date

CERTIFIED ENGINEERING GEOLOGIST
JEFFREY M. NOLAN
2247
STATE OF CALIFORNIA

Jeff Nolan
County Geologist
CEG #2247

7/1/19

FOR: Carolyn Burke PE
Senior Civil Engineer
Environmental Planning

EXHIBIT H

COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT

701 OCEAN STREET, 4TH FLOOR, SANTA CRUZ, CA 95060

(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123

KATHLEEN MOLLOY PREVISICH, PLANNING DIRECTOR

SUBSTANTIAL IMPROVEMENT / DAMAGE REVIEW

If you are renovating, remodeling, repairing, constructing an addition, rebuilding after a storm, or performing other work, here is information you need to know concerning

The 50% Rule

The County of Santa Cruz has flood damage prevention regulations that may affect how you repair, remodel, renovate or add on to your building if it is located in a FEMA flood zone (A, AE, AO, V, or VE). If you plan improvements to a structure or if your structure sustained structural and / or interior and exterior damage, these regulations may affect how you rebuild. These laws are required by the National Flood Insurance Program (NFIP) to protect your lives and investments from future flood damages. Our community has adopted these laws in order for federally-backed flood insurance to be made available to community residents and property owners.

If a building is "substantially improved" or "substantially damaged", it must be brought into compliance with the County of Santa Cruz flood damage protection regulations, including elevating the building above the base or 1% annual chance flood elevation or flood proofing of a non residential structure.

- ✓ **Substantial Improvement** means any repair, reconstruction, rehabilitation, addition, alteration or improvement to a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either immediately prior to the issuance of the building permit.

- ✓ **Substantial Damage** means damage of any origin, sustained by a structure whereby the cost of restoring the structure to it before-damaged condition would equal or exceed 50 percent of the market value of the structure as it existed before the damage occurred.

Required Documentation Prior to Issuance of a Permit

To maintain compliance with the NFIP, and for the County to determine whether the proposed work constitutes "substantial improvement" or "substantial damage", the following completed documentation is required:

- ❒ A market value appraisal of your building that is prepared by a professional appraiser according to standard practices of the profession. The appraisal must exclude the value of the land, detached structures, and landscaping. Alternatively, if requested or if no appraisal is submitted, we will use the tax assessment value of your building as the market value of the building.
- ❒ A "Cost Breakdown" form completed by a licensed contractor. (See attached form)
- ❒ A "Contractor's Affidavit". (See attached form)
- ❒ An "Owner's Affidavit". (See attached form)

EXHIBIT I

IMPROVEMENT COSTS

Contractor Affidavit

Name of Contractor:	SUN LAKES CONSTRUCTION OF CA.
Contractor's Address:	2185 THE ALAMEDA SUITE 150, SJ CA 95126
Phone Number:	408-345-1767
Contractor's License Number:	648735
Property Address:	753 LAS OLAS DR. APTOS CA 95003
Assessor's Parcel Number:	038 46 118

I hereby attest to the fact that I personally inspected the above mentioned property and, at the request of the owner, I have produced the attached "Cost Breakdown" for the proposed repairs, reconstruction and / or remodeling, which is hereby submitted for a Substantial Improvement Review. This estimate represents all costs (including overhead and profit, labor, materials and work by sub-contractors) for all of the improvements and repairs on the subject building. The estimate includes the work shown and related to the current plans submitted as part of my building permit application. I have also reviewed the "Items to be Included" and "Items to be Excluded" list for items to be included / excluded in my cost estimate.

I acknowledge that if, during the course of construction, the owner requests more work or modification of the work, a revised cost estimate must be provided to the County of Santa Cruz, which will re-evaluate its comparison of the cost of work to the value of the building to determine if the work is substantial improvement. Such re-evaluation may require revision of the permit and may subject the property to additional requirements.

I understand that the cost estimate is used to determine compliance with FEMA and County regulations for development within the flood zone. I also understand that if the structure is damaged by flooding, FEMA may audit my records related to the cost of construction.

I also understand that I am subject to enforcement action and or penalties if inspection of the property reveals that I have made repairs or improvements not included in the list of improvements this structure. I understand that any permit issued by the County of Santa Cruz pursuant to this affidavit does not authorize the reconstruction, repair or maintenance of any illegal additions, fences, sheds, or non conforming uses or structures on the property.

Total Labor and Materials:	$ 438,000
Overhead and Profit:	$ 65,700
Contingency:	$ 21,900
Total Cost:	$ 525,600

Contractor's Signature:	
Print Name:	Darren Holland
Title:	Dir. of Operations
Contractor's License #:	648735
Date:	3/19/24

Permit #
Staff Use Only

EXHIBIT I

SUBSTANTIAL IMPROVEMENT/ DAMAGE
ITEMS TO BE INCLUDED IN COST ESTIMATE

Items that are included in the costs of improvements or costs to repair are those that are directly associated with the building. The following list of costs that must be included is not intended to be exhaustive, but characterizes the types of costs that must be included:

- Materials and labor, including the estimated value of donated or discounted materials and owner or volunteered labor
- Site preparation related to the improvement or repair (foundation excavation, filling in basements)
- Demolition and construction debris disposal
- Labor and other costs associated with demolishing, moving, or altering building components to accommodate improvements, additions, and making repairs
- Costs associated with complying with any other regulation or code requirement that is triggered by the work, including costs to comply with the requirements of the Americans with Disabilities Act (ADA)
- Costs Associated with elevating a structure to an elevation that is lower than the BFE
- Construction management and supervision
- Contractor's overhead and profit
- Sales taxes on materials
- Structural elements and exterior finishes, including:
  - Foundations (spread, continuous, pier, etc.)
  - Monolithic or other types of concrete slabs
  - Bearing walls, tie beams, trusses
  - Joists, beams, subflooring, framing, ceilings
  - Interior non-bearing walls
  - Exterior finishes (e.g., brick, stucco, siding, painting, trim)
  - Windows and exterior doors
- Structural elements and exterior finishes (cont.):
  - Roofing, gutters, and downspouts
  - Hardware
  - Attached decks and porches
- Interior Finish Elements, Including:
  - Floor finishes (e.g., hardwood, ceramic, vinyl, linoleum, stone, carpet, etc.)
  - Bathroom tiling and fixtures
  - Wall finishes (drywall, paint, stucco, plaster, paneling, marble, etc.)
  - Built-in cabinets (e.g., kitchen, utility, entertainment, storage and bathroom)
  - Interior doors
  - Interior finish carpentry
  - Built-in bookcases and furniture
  - Hardware
  - Insulation
- Utility and service equipment, including:
  - HVAC equipment
  - Plumbing fixtures and piping
  - Electrical wiring, outlets, and switches
  - Light fixtures and ceiling fans
  - Security systems
  - Built-in appliances
  - Central vacuum systems
  - Water filtration, conditioning, or re-circulation systems
- Permanently installed stereo speakers and systems
- Theater systems

EXHIBIT I

SUBSTANTIAL IMPROVEMENT
ITEMS TO BE EXCLUDED IN COST ESTIMATE

Items that can be excluded are those that are not directly associated with the building. The following list characterizes the types of costs that may be excluded:

- Clean-up and trash removal
- Costs to temporarily stabilize a building so that it is safe to enter to evaluate required repairs
- Costs to obtain or prepare plans and specifications
- Land survey costs
- Permit fees and inspection fees
- Carpeting and re-carpeting installed over finished flooring such as wood or tiling.
- Outside improvements, including landscaping, irrigation, sidewalks, driveways, fences, yard lights, swimming pools, pool enclosures, and detached accessory structures (e.g., garages, sheds, and gazebos)
- Plug-in appliances such as washing machines, dryers, and stoves

EXHIBIT I

NOTE: Additional information may be necessary to substantiate fair cost of repair or improvement	**COST BREAKDOWN** A dollar value is required for both labor and material for each category listed including but not limited to the following: • if a category does not apply, enter 0 • if work is proposed that is not covered in this document, provide additional info to document the cost	**LEGEND** LS – Lump Sum SF – Square Foot LF – Linear Foot SQ – Roof Square SY – Square Yard

Demolition $ 7500 Labor

Description of work: Remove siding for additions. Remove Quantity: ____ LF $ 500 Mat.

(desc. cont.): interior drywall + framing for new floor plan

Labor and Material Total $ 8000

Source of value: ☒ Sub-Contractor Estimate ☐ Sub-Contractor Detailed Bid ☐ Sq. Ft. Method ☐ Detailed Labor and Material Take-Off

Slab on Grade $ ____ Labor

Description of work: See below Quantity: ____ SF $ ____ Mat.

(desc. cont.): ____

Labor and Material Total $ ____

Source of value: ☐ Sub-Contractor Estimate ☐ Sub-Contractor Detailed Bid ☐ Sq. Ft. Method ☐ Detailed Labor and Material Take-Off

Foundation & Structural Steel $ 30,000 Labor

Description of work: Additional pier + grade beam foundation Quantity: 300 LF $ 35,000 Mat.

(desc. cont.): and drilled piers per soils report for addition

Labor and Material Total $ 65,000

Source of value: ☒ Sub-Contractor Estimate ☐ Sub-Contractor Detailed Bid ☐ Sq. Ft. Method ☐ Detailed Labor and Material Take-Off

Masonry Wall $ ____ Labor

Description of work: N/A Quantity: ____ SF $ ____ Mat.

(desc. cont.): ____

Labor and Material Total $ ____

Source of value: ☐ Sub-Contractor Estimate ☐ Sub-Contractor Detailed Bid ☐ Sq. Ft. Method ☐ Detailed Labor and Material Take-Off

Lumber / Framing $ 29,000 Labor

Description of work: Added exterior walls + roofing. Fill in Quantity: ____ LF $ 29,000 Mat.

(desc. cont.): and revise openings. Relocate interior walls + stairs

Labor and Material Total $ 58,000

Source of value: ☐ Sub-Contractor Estimate ☐ Sub-Contractor Detailed Bid ☐ Sq. Ft. Method ☐ Detailed Labor and Material Take-Off

Truss / Rafters ☐ Hip ☐ Gable ☐ Flat $ ____ Labor

# of engineered trusses ____ # of rafters ____ size ____ Quantity: ____ LS $ ____ Mat.

(desc. cont.): Included Above.

Labor and Material Total $ ____

Source of value: ☐ Sub-Contractor Estimate ☐ Sub-Contractor Detailed Bid ☐ Sq. Ft. Method ☐ Detailed Labor and Material Take-Off

Finish Carpentry $ 20,000 Labor

Description of work: New interior doors, trims, baseboard Quantity: ____ LF $ 28,000 Mat.

(desc. cont.): front door, french door, sliding door + installation

Labor and Material Total $ 48,000

Source of value: ☐ Sub-Contractor Estimate ☐ Sub-Contractor Detailed Bid ☐ Sq. Ft. Method ☐ Detailed Labor and Material Take-Off

COST BREAKDOWN (Cont.)

Roofing

☐Tile ☐Flat ☒Addition Only ☐Entire
☒Shingle ☐Gravel ☐Entire House ☐Partial
☐Metal ☐ Existing Structure

Total # of Squares 4 Quantity 350 ~~SQ~~ SF $ 3500 Labor $ 2500 Mat.
Labor and Material Total $ 6000

Source of value: ☐Sub-Contractor Estimate ☐Sub-Contractor Detailed Bid ☐Sq. Ft. Method ☐Detailed Labor and Material Take-Off

Stucco

☐Masonry ☐Frame w/ Wire Lath ☐With Stone / Brick

Description of work N/A Quantity SY $ Labor $ Mat.
(desc. cont.)
Labor and Material Total $

Source of value: ☐Sub-Contractor Estimate ☐Sub-Contractor Detailed Bid ☐Sq. Ft. Method ☐Detailed Labor and Material Take-Off

Siding / Soffit / Fascia

☒Cementitious Siding
☐Wood Soffit
☐Vinyl Fascia
☐Aluminum

Description of work Repair lap siding at relocated openings Quantity SF $ 10,000 Labor $ 9,000 Mat.
(desc. cont.) and at all new exterior walls
Labor and Material Total $ 19,000

Source of value: ☐Sub-Contractor Estimate ☐Sub-Contractor Detailed Bid ☐Sq. Ft. Method ☐Detailed Labor and Material Take-Off

Cabinets

☐Re-Laminate
☐Laminate
☐Modular
☒Wood
☒Custom

Tops

☐Re-laminate
☐Laminate
☐Tile
☐Solid
☐Granite
☒Other Marble + Quartz counters TBD

Description of work New Kitchen + Vanity cabinets Quantity LF $ 14,000 Labor $ 34,000 Mat.
(desc. cont.)
Labor and Material Total $ 48,000

Source of value: ☐Sub-Contractor Estimate ☐Sub-Contractor Detailed Bid ☐Sq. Ft. Method ☐Detailed Labor and Material Take-Off

Appliances Built In (new or replaced)

☐Clothes Dryer ☐Water Heater
☐Dishwasher ☐Wine Cooler
☐Disposal ☐Range
☐Trash Compactor ☐Oven
☐Washing Machine ☐Other

Excluded. Re-use existing.

Description of work Quantity LS $ Labor $ Mat.
(desc. cont.)
Labor and Material Total $ 6

Source of value: ☐Sub-Contractor Estimate ☐Sub-Contractor Detailed Bid ☐Sq. Ft. Method ☐Detailed Labor and Material Take-Off

COST BREAKDOWN (Cont.)

Elevator / Chair Lift

Description of work: N/A Quantity: ____ LS $ ____ Labor $ ____ Mat.

(desc. cont.): ____

Labor and Material Total $ 0

Source of value: ☐Sub-Contractor Estimate ☐Sub-Contractor Detailed Bid ☐Sq. Ft. Method ☐Detailed Labor and Material Take-Off

Gas

☐LP

☐Natural

Description of work: Reroute gas line for range Quantity: 50 LF $ 1000 Labor $ 500 Mat.

(desc. cont.): ____

Labor and Material Total $ 1500

Source of value: ☐Sub-Contractor Estimate ☐Sub-Contractor Detailed Bid ☐Sq. Ft. Method ☐Detailed Labor and Material Take-Off

Plumbing

Number of Baths:

☐New ____

☒Remodeled 4

Description of work: Existing 4 baths to be remodeled or relocated Quantity: ____ LS $ ____ Labor $ ____ Mat.

(desc. cont.): ____

Labor and Material Total $ SEE BELOW

Source of value: ☐Sub-Contractor Estimate ☐Sub-Contractor Detailed Bid ☐Sq. Ft. Method ☐Detailed Labor and Material Take-Off

Plumbing Fixtures

		# of Fixtures	Manufacturer	Detailed Description
Lav.	New			
	Replaced	4	Kohler	New sinks
Toilet	New		↓	
	Replaced	4		New toilets
Shower	New	1		New shower
	Replaced	2		Relocated showers
Tub	New	1		New tub
	Replaced			
Bidet	New			
	Replaced			
Kit. Sink	New	1		New veggie sink
	Replaced	1		New kitchen sink

$ 29,000 Labor

$ 12,000 Mat.

Labor and Material Total $ 41,000

Source of value: ☐Sub-Contractor Estimate ☐Sub-Contractor Detailed Bid ☐Sq. Ft. Method ☐Detailed Labor and Material Take-Off

COST BREAKDOWN (Cont.)

Electrical

of New Circuits

60 AMP _____ New Service Size SAME

50 AMP 1 New Panel Size SAME

40 AMP _____ Sub Panel SAME

30 AMP _____

20 AMP _____

15 AMP _____

Description of work Run new wiring from existing subpanel to new wall/outlet locations. Rewire switches + fixtures $ 12,000 Labor

(desc. cont.) _____ $ 7,000 Mat.

Labor and Material Total $ 19,000

Source of value: ☐Sub-Contractor Estimate ☐Sub-Contractor Detailed Bid ☐Sq. Ft. Method ☐Detailed Labor and Material Take-Off

Electrical Fixtures

# of Fixtures	
Ceiling Fans	
Dimmers	
Duplex Receptacles	
Light Fixtures	~8
Lights Recessed	~32
Satellite Dishes	
Security System	
Smoke Detectors	6
Switches	
Other*	

*Detailed Description _____ $ _____ Labor

(desc. cont.) _____ $ _____ Mat.

Labor and Material Total $ _____

Source of value: ☐Sub-Contractor Estimate ☐Sub-Contractor Detailed Bid ☐Sq. Ft. Method ☐Detailed Labor and Material Take-Off

HVAC

Add Supply R/A No New Equipment

# of Supplies _____

# of Returns _____

New Split A/C for Addition Only

Size Ton _____

Heat _____

Seer Rating _____

New Split A/C Entire House

Size Ton _____

Heat _____

Seer Rating _____

$ 550 Labor

Description Revised ductwork for new layout Quantity _____ LS $ 2560 Mat.

(desc. cont.) Additional sheetmetal fittings

Labor and Material Total $ 3000

Source of value: ☐Sub-Contractor Estimate ☐Sub-Contractor Detailed Bid ☐Sq. Ft. Method ☐Detailed Labor and Material Take-Off

COST BREAKDOWN (Cont.)

Doors

	# of Units
Entry	1
Sliding Glass	1
Garage	
French	3
Interior Doors	

Included with finish carpentry number

Description of work _____ Quantity _____ LS $ _____ Labor $ _____ Mat.

(desc. cont.) _____

Labor and Material Total $ INC.

Source of value: ☐Sub-Contractor Estimate ☐Sub-Contractor Detailed Bid ☐Sq. Ft. Method ☐Detailed Labor and Material Take-Off

Windows

	#	Manufacturer	Type	Impact Resistant
New	6	Milgard		
Replacement	9	Milgard		
Skylights				

Description Remove, Relocate + add new windows Quantity _____ LS $ 14,000 Mat. $ 7,500 Labor

(desc. cont.) _____

Labor and Material Total $ 21,500

Source of value: ☒Sub-Contractor Estimate ☐Sub-Contractor Detailed Bid ☐Sq. Ft. Method ☐Detailed Labor and Material Take-Off

Insulation

Type Batt + Blown insulation per T24 Quantity _____ SF $ 1500 Mat. $ 1500 Labor

Description _____

Labor and Material Total $ 3000

Source of value: ☒Sub-Contractor Estimate ☐Sub-Contractor Detailed Bid ☐Sq. Ft. Method ☐Detailed Labor and Material Take-Off

Dry Wall

of Boards _____ Plaster _____ Quantity _____ LS $ 6500 Mat. $ 8500 Labor

Description Re-sheetrock majority of interior + texture walls

Labor and Material Total $ 15000

Source of value: ☒Sub-Contractor Estimate ☐Sub-Contractor Detailed Bid ☐Sq. Ft. Method ☐Detailed Labor and Material Take-Off

Fireplace

Manufacturer _____ Site _____ $ _____ Labor

☐Gas ☐Wood Burning Quantity _____ LS $ _____ Mat.

Description No Changes

Labor and Material Total $ 0

Source of value: ☐Sub-Contractor Estimate ☐Sub-Contractor Detailed Bid ☐Sq. Ft. Method ☐Detailed Labor and Material Take-Off

Interior

☒Painting ☐Wall Paper

☐Wood Paneling ☐Tile

Description of work Repaint interior + exterior Quantity _____ LS $ 1500 Mat. $ 6,500 Labor

(desc. cont.) addition to home

Labor and Material Total $ 8000

Source of value: ☒Sub-Contractor Estimate ☐Sub-Contractor Detailed Bid ☐Sq. Ft. Method ☐Detailed Labor and Material Take-Off

COST BREAKDOWN (Cont.)

Exterior Painting

Description of work: Repaint Exterior — Quantity: ____ — $ 6500 Labor / $ 1500 Mat.

(desc. cont.): ____

Labor and Material Total $ 8000

Source of value: ☒ Sub-Contractor Estimate ☐ Sub-Contractor Detailed Bid ☐ Sq. Ft. Method ☐ Detailed Labor and Material Take-Off

Floor Covering

Tile	____ SF	$ ____	Cost Subtotal
Wood	2340 SF	$ 58,500	Cost Subtotal
Carpet	____ SF	____	Cost Subtotal
Marble	____ SF	____	Cost Subtotal
Stone	____ SF	____	Cost Subtotal
Other	____ SF	____	Cost Subtotal
Total	____ SF	____	Cost Total

Description: New hardwood floors Throughout home

$ 25,500 Labor / $ 30,000 Mat.

Labor and Material Total $ 58,500

Source of value: ☒ Sub-Contractor Estimate ☐ Sub-Contractor Detailed Bid ☐ Sq. Ft. Method ☐ Detailed Labor and Material Take-Off

Interior

☐ Marble ☐ Concrete ☐ Wood ☐ Carpet

☐ Custom ☐ Pre-manufactured Kit

Description (handrail, treads, risers, newel posts): New handrail + newell posts. All painted — Quantity: ____ LS

$ 1700 Labor / $ 800 Mat.

Labor and Material Total $ 2500

Source of value: ☒ Sub-Contractor Estimate ☐ Sub-Contractor Detailed Bid ☐ Sq. Ft. Method ☐ Detailed Labor and Material Take-Off

Overhead & Profit

Description: 15%. — Quantity: ____ LS $ ____

Contingency per Contract

Or

Contingency of 5% to allow for change orders and unforeseen field conditions.

Description: 5%. — Quantity: ____ LS $ ____

GRAND TOTAL $ ____

List of Plan Sheets for Which These Costs are Based Upon:

Sheet #'s	Plan Prepared By	Last Revision Date
	Sal Caruso Design	

Cost Breakdown Prepared by (Print Name):	Darren Holland
Signature / Date:	Darren Holland, 3/19/24
Parcel #:	03846118

IMPROVEMENT COSTS

Owner Affidavit

Name of Contractor:	SUN LAKES CONSTRUCTION OF CA
Contractor's License Number:	648735
Name of Owner:	MARK ROBSON
Owner's Address:	
Owner's Phone Number:	408 - 345 - 1767
Property Address:	753 LAS OLAS DR. APTOS CA 95003
Assessor's Parcel Number:	038 46 118

I hereby attest to the fact that I requested the above mentioned contractor to prepare the Cost Breakdown for Substantial Improvement Review. I further attest that the Cost Breakdown represents all of the work proposed to be done to the existing building, including all improvements, rehabilitation, remodeling, repairs, additions, finishes and any other form of improvement per the "Items to be Included" list. The estimate includes the work shown and related to the current plans submitted as part of my building permit application. **No other contractor will be performing work to the structure that is not reflected in the Cost Breakdown.**

I acknowledge that if, during the course of construction, I decide to add more work or to modify the work described, that the County of Santa Cruz will re-evaluate its comparison of the cost of work to the value of the building to determine if the work is substantial improvement. Such re-evaluation may require revision of the permit and may subject the property to additional requirements.

I understand that the cost estimate is used to determine compliance with FEMA and County regulations for development within the flood zone. I also understand that if the structure is damaged by flooding, FEMA may audit my records related to the cost of construction.

I also understand that I am subject to enforcement action and / or fines if inspection of the property reveals that I have made or authorized repairs or improvements that were not included in the description of the work and the cost estimate for that work that were the basis for issuance of a permit.

Total Labor and Materials:	$ 438,000
Overhead and Profit:	$ 65,700
Contingency:	$ 21,900
Total Cost:	$ 525,600
Owner's Signature:	
Print Name:	Mark Robson
Date:	3/19/2021

Permit #
Staff Use Only

EXHIBIT I