CALIFORNIA COASTAL COMMISSION
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STAFF REPORT: CONSENT CALENDAR

Application No.:	**5-22-0962**
Applicant:	**Ethan Olson**
Location:	216 16th Street, Seal Beach, Orange County (APN: 199-062-61)
Project Description:	On a vacant lot, construction of a 2-story, 25 ft.-high, 2,850 sq. ft., single-family residence, a detached 3-car garage, and new perimeter fences along rear and side property lines.
Staff Recommendation:	Approval with conditions.

SUMMARY OF STAFF RECOMMENDATION

The proposed project is construction of a 2-story, 25 foot high, 2,850 sq. ft. single-family residence, a detached 3-car garage, and new perimeter fences along rear and side property lines on a vacant 6,850 square foot lot at 216 16th Street in Seal Beach, Orange County.

The lot was formerly part of a rail right-of-way that extends from Electric Avenue Median Park, diagonally through a residential neighborhood, to the Naval Weapons Station in Seal Beach. The subject lot and surrounding vacant lots comprising the former right of way are irregular in shape and orientation with respect to the surrounding pattern of development, and the proposed development would also be oriented at an irregular angle. However, the size, mass, and scale of the proposed units would be consistent with the pattern of development of the neighborhood. The project site is zoned Residential High Density-20 (RHD20), which permits single-family residences and multi-family residences to be developed.

While the proposed project is located on an inland lot, it is located in a highly vulnerable portion of a highly vulnerable region, approximately 650 ft. inland of the Pacific Ocean (specifically Anaheim Bay), and about one mile southeast of the San Gabriel River, where coastal hazards exist and could adversely impact the development. According to the CoSMoS sea level rise model, the project site is susceptible to flooding if 1.6 feet of sea level rise occurs with a 100-year storm scenario, which may occur before the anticipated end of the structure's 75-year expected life. The site could also experience regular flooding with greater sea level rise and no storm scenario. Therefore, to ensure that no shoreline protective device is proposed to protect the development pursuant to this permit, staff recommends the Commission impose **Special Condition 1**, requiring the applicant to agree that no future shoreline protective device may be relied on to protect the development authorized by this permit. In addition, this condition requires that if any part of the proposed development becomes threatened by coastal hazards in the future, the threatened development must be removed rather than protected in place. Staff also recommends the Commission impose **Special Condition 2**, requiring the applicant to assume the potential risk of injury and damage arising from coastal hazards that may threaten the development.

Because the proposed development is located in an area with high potential for the presence of cultural resources, **Special Condition 3** requires the applicant to abide by the mitigation measures to protect archaeological, including tribal cultural resources. During and post-construction, the proposed project has potential for adverse impacts to water quality and marine resources. Therefore, staff recommends the Commission impose **Special Condition 4** which provides standards for the safe storage of construction materials and the safe disposal of construction debris, and **Special Condition 5** which requires the applicant to submit a Final Drainage and Runoff Control Plan that ensures no water quality impacts will result from the proposed project. Staff also recommends the Commission impose **Special Condition 6**, which requires that all vegetated landscaped areas only consist of native plants or non-native drought tolerant plants that are non-invasive, and **Special Condition 7**, which requires the applicant to conduct a pre-construction nesting bird survey if construction activity occurs during the breeding season (February 1 to September 15). To ensure that any prospective future owner(s) of the properties are made aware of the applicability of the conditions of this permit, staff recommends the Commission impose **Special Condition 8** which requires the property owner to record a deed restriction against the property, referencing all of the above special conditions of this permit and imposing them as covenants, conditions and restrictions on the use and enjoyment of the property.

As conditioned, the proposed project conforms with Chapter 3 of the Coastal Act, which is the standard of review because the City of Seal Beach does not have a certified Local Coastal Program. The motion to approve the CDP application is on **Page 4**.

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EXHIBITS

I. MOTION AND RESOLUTION

Motion:

I move that the Commission approve Coastal Development Permit 5-22-0962 pursuant to the staff recommendation.

Staff recommends a **YES** vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of Commissioners present.

Resolution:

The Commission hereby approves the Coastal Development Permit for the proposed project and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS

1. **Notice of Receipt and Acknowledgment**. The permit is not valid and development shall not commence until a copy of the permit, signed by the applicant or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Expiration**. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

3. **Interpretation**. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.

4. **Assignment**. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. **Terms and Conditions Run with the Land**. These terms and conditions shall be perpetual, and it is the intention of the Commission and the applicant to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

1. No Future Shoreline Protective Device.

A. By acceptance of this permit, the permittee agrees, on behalf of themselves and any successors and assigns, that no shoreline protective device(s) shall ever be constructed to protect the development approved pursuant to Coastal Development Permit No. 5-22-0962 including, but not limited to, the residential structures and foundations in the event that the development is threatened with damage or destruction from waves, erosion, storm conditions, liquefaction, flooding, sea level rise, or any other natural hazards in the future. By acceptance of this permit, the permittee hereby waives, on behalf of themselves and all successors and assigns, any rights to construct such devices that may exist under Public Resources Code Section 30235, any similar provision of a certified LCP, or any applicable law.

B. By acceptance of this permit, the permittee further agrees, on behalf of themselves and all successors and assigns, that they are required to remove all or a portion of the development authorized by this permit and restore the site, if:

   i. The City or any government agency with jurisdiction has issued a final order, not overturned through any appeal or writ proceedings, determining that the structures are currently and permanently unsafe for occupancy or use due to damage or destruction from waves, erosion, storm conditions, liquefaction, flooding, sea level rise, or other natural hazards related to coastal processes, and that there are no feasible measures that could make the structure suitable for habitation or use without the use of bluff or shoreline protective devices;

   ii. Essential services to the site (e.g. utilities, roads) can no longer feasibly be maintained due to the coastal hazards listed above;

   iii. Removal is required pursuant to LCP policies for sea level rise adaptation planning; or

   iv. The development requires new or augmented shoreline protective devices that conflict with applicable LCP or Coastal Act policies.

Approval of CDP No. 5-22-0962 does not allow encroachment onto public trust lands. Any future encroachment onto public trust lands shall be removed unless authorized by the Coastal Commission. Additionally, encroachment onto public trust lands is subject to approval by the State Lands Commission or other designated trustee agency.

2. Assumption of Risk, Waiver of Liability and Indemnity. By acceptance of this permit, the permittee acknowledges and agrees (i) that the site may be subject to hazards including but not limited to waves, erosion, storm conditions, liquefaction, flooding, and sea level rise; (ii) to assume the risks to the permittees and the

property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project 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 hazards.

3. **Protection of Archaeological and Tribal Cultural Resources.** The permittee shall undertake development in compliance with the following mitigation measures to protect archaeological, including tribal cultural resources:

   A. AT LEAST ONE MONTH PRIOR TO COMMENCEMENT OF ANY GROUND-DISTURBING CONSTRUCTION ACTIVITIES, the permittee shall (i) notify the representatives of Native American Tribes listed on an updated Native American Heritage Commission (NAHC) contact list; (ii) invite all Tribal representatives on that list to be present and to monitor ground-disturbing activities; and (iii) arrange for any invited Tribal representative that requests to monitor and/or a qualified archaeological monitor to be present to observe project activities with the potential to impact archaeological and/or tribal cultural resources. The monitor(s) shall have experience monitoring for archaeological resources of the local area during excavation projects, be competent to identify significant resource types, and be aware of recommended Tribal procedures for the inadvertent discovery of archaeological resources and human remains.

   B. If an area of archaeological resources is discovered during ground-disturbing activities, all construction shall cease and shall not recommence except as provided in subsection (C) hereof, and the permittee shall retain a qualified archaeologist and/or tribal cultural resource specialist to analyze the significance of the find in consultation with the Native American Tribes listed on the NAHC list. The archaeologist shall immediately notify the Tribes on the NAHC list. An "exclusion zone" where unauthorized equipment and personnel are not permitted shall be established (e.g., taped off) around the discovery area that includes a reasonable buffer zone recommended by the monitor(s). Project activities may continue outside of the exclusion zone.

   C. A permittee seeking to recommence construction within the exclusion zone following discovery of the archaeological resources shall submit a Supplementary Archaeological Plan (SAP) prepared by the project archaeologist in consultation with the Native American Tribes listed on the NAHC list for the review and written approval of the Executive Director. If the Executive Director approves the SAP and determines that the SAP's recommended changes to the proposed development or mitigation measures are de minimis in nature and scope, construction may recommence after this determination is made by the Executive Director in writing. If the Executive Director approves the SAP but determines

that the changes therein are not de minimis, construction may not recommence until after an amendment to this permit is approved by the Commission.

4. Storage of Construction Materials, Mechanized Equipment and Removal of Construction Debris. The permittee shall comply with the following construction-related requirements:

A. No demolition or construction materials, debris, or waste shall be placed or stored where it may enter sensitive habitat, receiving waters or a storm drain, or be subject to wave, wind, rain, or tidal erosion and dispersion;
B. No demolition or construction equipment, materials, or activity shall be placed in or occur in any location that would result in impacts to environmentally sensitive habitat areas, streams, wetlands or their buffers;
C. Any and all debris resulting from demolition or construction activities shall be removed from the project site within 24 hours of completion of the project;
D. Demolition or construction debris and sediment shall be removed from work areas each day that demolition or construction occurs to prevent the accumulation of sediment and other debris that may be discharged into coastal waters;
E. All trash and debris shall be disposed in the proper trash and recycling receptacles at the end of every construction day;
F. The applicant shall provide adequate disposal facilities for solid waste, including excess concrete, produced during demolition or construction;
G. Debris shall be disposed of at a legal disposal site or recycled at a recycling facility. If the disposal site is located in the Coastal Zone, a coastal development permit or an amendment to this permit shall be required before disposal can take place unless the Executive Director determines that no amendment or new permit is legally required;
H. All stock piles and construction materials shall be covered, enclosed on all sides, shall be located as far away as possible from drain inlets and any waterway, and shall not be stored in contact with the soil;
I. Machinery and equipment shall be maintained and washed in confined areas specifically designed to control runoff. Thinners or solvents shall not be discharged into sanitary or storm sewer systems;
J. The discharge of any hazardous materials into any receiving waters shall be prohibited;
K. Spill prevention and control measures shall be implemented to ensure the proper handling and storage of petroleum products and other construction materials. Measures shall include a designated fueling and vehicle maintenance area with appropriate berms and protection to prevent any spillage of gasoline or related petroleum products or contact with runoff. The area shall be located as far away from the receiving waters and storm drain inlets as possible;
L. Best Management Practices (BMPs) and Good Housekeeping Practices (GHPs) designed to prevent spillage and/or runoff of demolition or construction-related materials, and to contain sediment or contaminants associated with

demolition or construction activity, shall be implemented prior to the on-set of such activity; and

M. All BMPs shall be maintained in a functional condition throughout the duration of construction activity.
N. During construction of the project, no runoff, site drainage or dewatering shall be directed from the site into any street, alley or stormdrain, unless specifically authorized by the California Regional Water Quality Control Board.

5. Permanent Drainage and Runoff Control Plan. PRIOR TO ISSUANCE OF THIS COASTAL DEVELOPMENT PERMIT, the applicants shall submit for review and written approval of the Executive Director, two copies of a final Drainage and Runoff Control Plan for the postconstruction project site, prepared by a licensed civil engineer or qualified licensed water quality professional. The plan shall include detailed drainage and runoff control plans with supporting descriptions and calculations. The plan shall incorporate Best Management Practices (BMPs) including site design, source control and treatment control measures designed to reduce, to the maximum extent practicable, the volume, velocity and pollutant load of stormwater and dry weather runoff leaving the developed site. The consulting licensed civil engineer or qualified licensed professional shall certify in writing that the final Drainage and Runoff Control Plan is in substantial conformance with the following minimum requirements:

a. The plan shall incorporate appropriate Best Management Practices (BMPs) into the development, designed to reduce, to the maximum extent practicable, the volume, velocity and pollutant load of stormwater and dry weather flows leaving the developed site. The drainage system shall also be designed to convey and discharge runoff from the developed site in a non-erosive manner into the City's storm drain system;
b. Should any of the project's surface or subsurface drainage/filtration structures or other BMPs fail or result in increased erosion, the permittee or successor-in-interest shall be responsible for any necessary repairs to the drainage/filtration system or BMPs and restoration of the eroded area. Should repairs or restoration become necessary, prior to the commencement of such repair or restoration work, the applicants shall submit a repair and restoration plan to the Executive Director to determine if an amendment or new coastal development permit is required to authorize such work.

The permittees shall undertake development in accordance with the final Drainage and Runoff Control Plan approved by the Executive Director. Any changes to the Commission approved plans required by the consulting licensed civil engineer or engineering geologist shall be reported to the Executive Director. No changes to the Commission approved final site/development plans shall occur without an amendment to the coastal development permit, unless the Executive Director determines that no amendment is required.

6. Landscaping-Drought Tolerant, Non-Invasive Plants.

a. Vegetated landscaped areas shall only consist of native plants or non-native drought tolerant plants that are non-invasive. No plant species listed as problematic and/or invasive by the California Native Plant Society (http://www.CNPS.org/), the California Invasive Plant Council (formerly the California Exotic Pest Plant Council) (http://www.cal-ipc.org/), or as may be identified from time to time by the State of California shall be employed or allowed to naturalize or persist on the site. No plant species listed as a "noxious weed" by the State of California or the U.S. Federal Government shall be utilized within the property. All plants shall be low water use plants as identified by California Department of Water Resources (See: http://ucanr.edu/sites/WUCOLS/files/183488.pdf).
b. Use of reclaimed water for irrigation is encouraged. If using potable water for irrigation, only drip or microspray irrigation systems may be used. Other water conservation measures shall be considered, such as weather based irrigation controllers.

7. Nesting Bird Survey.

a. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall submit, in a form and content acceptable to the Executive Director, a plan for a Breeding/Nesting Bird Survey to be conducted by a qualified biologist prior to construction of the proposed improvements, which shall substantially conform to the following requirements:
    i. Should vegetation or tree removal be planned to occur during the bird nesting season, February 1 to September 15, a qualified biologist with experience in conducting bird surveys shall conduct a bird survey no more than 72 hours prior to construction to detect any protected native birds in the habitat to be disturbed and any other such habitat within 300 feet of the construction area.
    ii. If any active nests are detected, the area shall be flagged and mapped on the construction plans along with a minimum 300-foot buffer and up to a maximum of 500 feet for raptors, as determined by the project biologist, and shall be avoided until the nesting cycle is complete or nests abandoned. Subject to consultation with and the prior written approval of the Executive Director, the project biologist may reduce the avoidance buffer if a reduced buffer maintains protection of the nesting cycle of the avian species.

b. The permittee shall undertake the development in accordance with the approved plans. Any proposed changes to the approved plans shall be reported to the Executive Director. No changes to the plans shall occur without an amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

8. Deed Restriction. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicant shall submit to the Executive Director for review and approval, documentation demonstrating that the landowner has executed and recorded against the parcel governed by this permit a deed restriction, in a form

and content acceptable to the Executive Director: (1) indicating that, pursuant to this permit, the California Coastal Commission has authorized development on the subject property, subject to terms and conditions that restrict the use and enjoyment of that property; and (2) imposing the Special Conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the Property. The deed restriction recorded against title to the property shall include a legal description of that entire parcel. The deed restriction shall also indicate that, in the event of an extinguishment or termination of the deed restriction for any reason, the terms and conditions of this permit shall continue to restrict the use and enjoyment of the subject property so long as either this permit or the development it authorizes, or any part, modification, or amendment thereof, remains in existence on or with respect to the subject property.

IV. FINDINGS AND DECLARATIONS

A. Project Location & Description

The proposed project is construction of a 2-story, 25 foot-high, 2,850 square foot, single-family residence, a detached 3-car garage, and new perimeter fences along rear and side property lines on a vacant 6,850 sq. ft. lot (**Exhibit 2**). The City of Seal Beach, which does not have a certified Local Coastal Program, designates the project site as Residential High Density (RHD20) in its zoning code, which allows for single-family and multi-family residences with a maximum development of 25 dwelling units/acre, or one unit per 2,178 sq. ft. Thus, the proposed single-family residence is an allowable use per the City's uncertified zoning code. The project site is located on the seaward side of Pacific Coast Highway in a residential neighborhood in the Old Town area of Seal Beach.

The existing 6,850 sq. ft. lot is currently undeveloped, and has not been previously developed because the lot was formerly part of a rail right-of-way granted to the Pacific Electric Railway Company by the United States government in 1946. The former rail right-of-way extends approximately 900 feet from Electric Avenue Median Park, diagonally through a residential neighborhood, to the Naval Weapons Station in Seal Beach (**Exhibit 1**). The subject lot and surrounding undeveloped lots comprising the former right-of-way are irregular in shape and orientation with respect to the surrounding pattern of development and the proposed development would also be oriented at an irregular angle of approximately 45 degrees. The predominant character of the surrounding area is one or two-story residential structures and orientated perpendicularly to the street (**Exhibit 2**). However, the size, mass, and scale of the proposed units would be consistent with the pattern of development of the neighborhood. The project site is not located between the first public road and the sea. There are no public coastal views within the vicinity of the project site, so the project will not adversely impact coastal views.

B. Hazards

Section 30251 of the Coastal Act states, in pertinent part:

> …Permitted development shall be cited and designed…to minimize the alteration of natural land forms.

Section 30253 of the Coastal Act states, in pertinent part:

> New development shall do all of the following:
>
> (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
>
> (b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

The property is located within one of the most vulnerable parts of Seal Beach, extending from the San Gabriel River, roughly south of Pacific Coast Highway and north of Electric Avenue, to the Anaheim Bay. This portion of Seal Beach is projected to have the highest vulnerability in the City to multiple coastal hazards due to hydraulic connections to inland inundation and flooding from both the San Gabriel River and Anaheim Bay, wave impacts, and storm flooding. Thus, the subject property is located in a highly vulnerable portion of a highly vulnerable region, approximately 650 feet inland of the Pacific Ocean (specifically Anaheim Bay) and about one mile southeast of the San Gabriel River, and potential hazards issues that must be addressed include the potential for flooding and storm hazards. These hazards may be exacerbated by the sea level rise that is expected to occur over the coming decades.

Sea level has been rising for many years. Several different approaches have been used to analyze the global tide gauge records in order to assess the spatial and temporal variations, and these efforts have yielded sea level rise rates ranging from about 1.2 mm/year to 1.7 mm/year (about 0.5 to 0.7 inches/decade) for the 20th century, but since 1990 the rate has more than doubled, and the rate of sea level rise continues to accelerate. Since the advent of satellite altimetry in 1993, measurements of absolute sea level from space indicate an average global rate of sea level rise of 3.4 mm/year or 1.3 inches/decade – more than twice the average rate over the 20th century and greater than any time over the past one thousand years. Recent observations of sea level along parts of the California coast have shown some anomalous trends; however, there is unequivocal evidence that the climate is warming, and such warming is expected to cause sea levels to rise at an accelerating rate throughout this century.

The State of California has undertaken significant research to understand how much sea level rise to expect over this century and to anticipate the likely impacts of such sea level rise. On November 7, 2018, the Commission adopted a science update to its Sea level Rise Policy Guidance. This document provides interpretive guidelines to ensure that projects are designed and built in a way that minimizes sea level rise risks to the development and avoids related impacts to coastal resources, consistent with Coastal

Act Section 30253. These guidelines state, “to comply with Coastal Act Section 30253 or the equivalent LCP section, projects will need to be planned, located, designed, and engineered for the changing water levels and associated impacts that might occur over the life of the development.” The most recent projections in the statewide sea level rise guidance indicate that sea levels in this area may rise between 3.2 feet and 6.7 feet by the year 2100, though there is a risk of more significant sea level rise depending on various uncertainties, including the dynamics of ice sheet loss. The projection is given in a range largely because researchers cannot know exactly how much greenhouse gases we will continue to emit over the coming decades – large-scale curtailment of greenhouse gas emissions would keep sea level rise towards the lower end of the projections, while business as usual emissions scenarios would result in the higher end of the projections. Because the world has continued along the “business as usual” scenario (and data suggests temperatures and sea level rise are tracking along the higher projections) as well as the inherent uncertainty regarding the exact rate of future sea level rise, the Ocean Protection Council and the Natural Resources Agency have continued to recommend that we avoid relying on the lower projections in planning and decision-making processes.

As our understanding of sea level rise continues to evolve, it is possible that sea level rise projections will continue to change as well (as evidenced by the recent updates to best available science). While uncertainty will remain with regard to exactly how much sea levels will rise and when, the direction of sea level change is clear, and it is critical to continue to assess sea level rise vulnerabilities when planning for future development. Importantly, maintaining a precautionary approach that considers high or even extreme sea level rise rates and includes planning for future adaptation will help ensure that decisions are made that will result in a resilient coastal California.

On the California coast, the effect of a rise in sea level will be the landward migration of the intersection of the ocean with the shore in many locations, which will result in increased flooding, erosion, and storm impacts to coastal areas. Along much of the California coast, the bottom depth controls the nearshore wave heights, with bigger waves occurring in deeper water. Since wave energy increases with the square of the wave height, a small increase in wave height can cause a significant increase in wave energy and wave damage. Combined with the physical increase in water elevation, a small rise in sea level can expose previously protected back shore development to increased wave action, and those areas that are already exposed to wave action will be exposed more frequently, with higher wave forces. Structures that are adequate for current storm conditions may not provide as much protection in the future.

The Coastal Commission, in line with statewide guidance, generally advocates for a precautionary approach to sea level rise adaptation planning, which stems from the overall importance of keeping development safe from coastal hazards and protecting coastal resources, consistent with the Coastal Act. It also derives from the fact that the costs and consequences associated with inadvertently underestimating SLR hazards could be quite high. As explained in the State of California Sea Level Rise Guidance written by the Ocean Protection Council (OPC), the “risk aversion scenario” is a principle of SLR risk analysis that is used to account for variable risk tolerance for

different types of development by establishing SLR probability thresholds for varying degrees of risk aversion. For example, a critical infrastructure asset, such as a hospital, should be analyzed with high risk aversion, and would use a more precautionary range of probabilities of amounts of SLR, while a parking lot or a bike path could be analyzed with lower risk aversion. In this case, the risk aversion scenario recommended by both the Commission and OPC Guidance for residential projects is "medium-high," as it represents a scenario that is relatively high within the range of possible future SLR scenarios and is therefore appropriately precautionary. In other words, the statewide SLR guidance recommends use of the relatively high projection of SLR associated with the medium-high risk aversion scenario, even though it has a lower probability (1-in-200 chance), because of the high consequences to precious coastal resources, valuable development, and life and safety that would occur if SLR were underestimated, and the recognition that many of these impacts cannot be undone once they have occurred.

According to CoSMoS projections of flooding, with 1.6 feet of SLR alone, the subject lot would not be flooded; however, with 1.6 feet of SLR and a 100-year storm scenario, the project site is vulnerable to flooding. In addition, according to CoSMoS, the project site is susceptible to flooding with 3.3 feet of sea level rise and a no storm scenario, which may occur before the anticipated end of the structure's 75-year expected life (**Exhibit 3**). Furthermore, 3.3 feet of SLR is projected to inundate the entirety of the subject lot, as well as an inland hazard area roughly extending from the San Gabriel River, south of Pacific Coast Highway and north of Electric Avenue, to Anaheim Bay. This inland inundation appears to be attributable to hydraulic connections to the San Gabriel River, since the rock revetment on the north edge of Anaheim Bay does not appear to be overtopped in this scenario. Analysis of wave runup and storm surge was done with the same scenarios of SLR plus a projected 100-year storm. In those scenarios, CoSMoS shows that the entire subject site and most of the inland hazard area would be flooded at 1.6 feet, with even wider regional flooding at 3.3 feet. It is important to note that even at this relatively low amount of SLR, key infrastructure (the road network, electrical station, the storm drains, etc.) are vulnerable, which means the services these residential areas rely upon may be at risk. Furthermore, the inland flooding starts to "island" the beach-fronting part of Old Town, which means that even though these parts of the City may not be directly flooded, access and services may still be impacted.

Given the project site's location within a potentially hazardous area, the applicant prepared a coastal hazards study (Sea Level Rise Flood Hazard Discussion for 216 16th Street, Seal Beach, Orange County, California prepared by Geosoils, Inc. dated September 23, 2022) to analyze potential risks to the project site resulting from coastal flooding and other hazards. The applicant's study states that the vulnerability of the proposed residence to flooding will occur with sea level rise greater than 2 ft, and states that there is no need for shore protection over the life of the development.

While the applicant's study has attempted to explain that the proposed residence would be safe from coastal flooding risks, it relied on the City's existing flood control system (levees) and discussed the possibility of increasing the height of the levees as an adaptation measure in the future. However, as shown through CoSMoS, the project site would still be susceptible to flooding if 1.6 feet of sea level rise (with a 100-year storm

scenario) occurs even with these levees in place, because flooding may come from the bay which is not bound by levees, and may seep up through the stormdrain system. So while the project is located inland of the first line of residences and the nearby San Gabriel River, Anaheim Bay and Seal Beach National Wildlife Sanctuary and is not expected to be subject to wave action, flooding may still occur during the lifetime of the development and affect the residences and surrounding streets and utilities.

Because the site-specific hazards study provided by the applicant's coastal engineering consultant maintains that, even with expected future sea level rise, the proposed development is not expected to be threatened by coastal hazards and thus is not expected to need shoreline protection over the life of the development, the project can be found to conform with the hazards policies of the Coastal Act. However, given the dynamic nature of coastal beaches, as well as the Commission's review of data indicating that the property could be impacted by sea level rise at some point in the future, it is important to ensure that the risks of developing on these inland lots are borne by the applicant, not the public at large.

In this case, in an effort to plan for sea level rise adaptation, the applicant has proposed to elevate the first finished floor approximately 2.5 feet above the existing natural lot grade at 9.1 feet NAVD88. All of the walls and/or structure from 9.1 feet NAVD88 and below will be solid concrete. For an additional 3 feet of the structure above 9.1 feet NAVD88, all wood framing will be waterproofed with impermeable bituthene sheeting. Therefore, all of the structures will be waterproofed to approximately 12.1 ft. NAVD88. Generally, for new development in this area of Seal Beach, a minimum of 12 feet NAVD88 is recommended by engineers accounting for future sea level rise over the expected life of a new home, and the Commission has required other new development projects to design the foundation and first finished floor to accommodate the effects of 6.6 feet of sea level rise plus a king tide. Thus, the applicant's proposal to waterproof 3 ft. above the first finished floor (waterproof to 12.1 ft. NAVD88) is generally consistent with the preferred waterproofing measures for development in this area of Seal Beach, although water could reach an elevation greater than the foundation and greater than the lower waterproofed walls.

Despite the applicant's proposal, the elevated foundation and waterproofing may not keep the project safe from flooding during its anticipated lifespan. Coastal Act Section 30253 prohibits new development that would require construction of a protective device that would substantially alter natural landforms along bluffs or cliffs. Here, the applicant has not proposed to construct a shoreline protection device and no shoreline protection would be authorized by this permit; however, the applicant or a successor-in-interest could request a shoreline protection device at some point in the future. Although the project site is not a beachfront site, with expected sea level rise and flooding, the area between the project site and ocean waters is expected to narrow with time. Likewise, flooding from the San Gabriel River, Anaheim Bay and Seal Beach National Wildlife Sanctuary harbor is expected to approach the project site in the future, which in turn raises the question of a possible request for future shoreline protection at the site.

In addition, as sea levels rise, and beaches and bluffs migrate inland, maintaining residential development adjacent to the shoreline will in many cases cause the narrowing and eventual loss of beaches, dunes and other shoreline habitats as well as the loss of offshore recreational areas. This narrowing, often referred to as "coastal squeeze," can occur when shoreline protection or other fixed development prevents the landward migration of the beach that would have otherwise occurred, and it can also occur when the beach migrates up to and underneath elevated structures. Failure to address impacts related to coastal squeeze has the potential to result in significant conflicts with the Coastal Act, which was enacted for the purpose of protecting California's coastal resources. It also presents challenges for upholding the Public Trust Doctrine. Furthermore, coastal squeeze presents a significant environmental justice issue if residents adjacent to the shoreline continue to enjoy shoreline access, while the general public is blocked from accessing the shore.[1]

By substituting hard materials (e.g., rock, concrete) in place of more erodible natural substrates (e.g., sand, soils, terrace deposits, sedimentary rocks), shoreline protection devices can also change wave reflection patterns, cause scour or winnowing of beach sediments along the shoreline, and increase erosion rates at unarmored locations up- and down-coast of the structure ("end effects"). In certain locations, shoreline protection devices may also interrupt or interfere with longshore and cross-shore sediment transport, resulting in deposition of sand in one location at the expense of other locations further "down drift" along the coast. Broader effects of shoreline protection devices include changes to the recreational and beach use experience, impacts to beach and other coastal ecosystems, and impairment of the aesthetic and visual character of the coast.

Because shoreline protection devices, such as seawalls, revetments, and groins, can create adverse impacts on coastal processes, Coastal Act Section 30253 specifically prohibits development that could "create [or] contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs." Section 30235 of the Coastal Act recognizes that existing development may be protected by shoreline protective devices subject to certain conditions. This limitation is particularly important when considering new development, such as in this case, because if it is known that a new development may need shoreline protection in the future, it would be unlikely that such development could be found to be consistent with Section 30253 of the Coastal Act, which requires new development to minimize risks to life and property and assure stability and structural integrity. Additionally, Section 30251 requires that permitted development be sited and designed to minimize the alteration of natural landforms. Therefore, the Commission's action on this project must consider potential future effects of wave uprush, flooding, and storm events (with sea-level rise considerations). The Commission must also consider impacts of coastal squeeze on public access and recreation. In particular, as sea level rises, coastal

[1] California Coastal Commission, Residential Adaptation Policy Guidance, March 2018.

squeeze will eventually result in the loss of not only vulnerable intertidal and low-lying habitats, but also recreational beach areas and surfing resources, if hardened shorelines are constructed and allowed to remain in the future as a way to protect existing development. Therefore, it must be clear that, as new development, the entire development approved by this permit is not entitled to a shoreline protection device now or in the future. **Special Condition 1** is imposed to require the applicant to acknowledge that the applicant has no right to a shoreline protective device for the project and that no future shoreline protective device will be allowed on site to protect the proposed development.

Given that coastal hazards may impact the proposed development before the end of its economic life as a result of sea level rise, the Commission must also find that the project assures stability and structural integrity and minimizes “risks to life and property” in an area of high flood hazard without a shoreline protective device. Here, it is important to note that the site is not currently threatened by coastal hazards and has been designed to be stable and structurally sound under current conditions.

However, as discussed, the best available science indicates that sea level rise is occurring and coastal hazards may threaten the project site to some extent before the end of its economic life, although there are uncertainties inherent in predicting exactly how and when the impacts discussed above will occur. Therefore, **Special Condition 1** also requires that if any part of the proposed development becomes threatened by coastal hazards in the future, the permittees must remove this permitted development if (a) any government agency has ordered that the structures are not to be occupied due to coastal hazards, or if any public agency requires the structures to be removed; (b) essential services to the site can no longer feasibly be maintained (e.g., utilities, roads); (c) the development is no longer located on private property due to the migration of the public trust boundary; (d) removal is required pursuant to LCP policies for sea level rise adaptation planning; or (e) the development would require a shoreline protective device that is inconsistent with the coastal resource protection policies of the Coastal Act or certified LCP. This condition recognizes that predictions of the future cannot be made with certainty, thereby allowing for development that is currently safe and expected to be safe for the life of the development, but ensuring that the future risks of property damage or loss arising from sea level rise or other changed circumstances are borne by the applicant enjoying the benefits of new development, and not the public.

The Commission also finds that due to the possibility of flooding and other coastal hazards, if the applicant chooses to build in this location despite those risks, they should assume the risks of development in a hazardous area as a condition of project approval. Because this risk of harm cannot be completely eliminated, the Commission requires the applicant to waive any claim of liability against the Commission for damage to life or property that may occur as a result of the permitted development. The applicant’s Assumption of Risk, Waiver of Liability and Indemnity, as required by **Special Condition 2**, will show that the applicant is aware of and understands the nature of the hazards which exist on the site, and that may adversely affect the stability or safety of the subject development, and will effectuate the necessary assumption of those risks by the applicant.

The proposed development, as conditioned, is consistent with Sections 30251 and 30253 of the Coastal Act, which require that risks to life and property be minimized, that stability and structural integrity are assured, and that proposed new development neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area. Approval of the project, as conditioned, also is consistent with the Commission's obligation to manage and protect public trust resources.

C. Archeological and Tribal Cultural Resources

Section 30244 of the Coastal Act states:

> Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

Due to the site's history as a former rail right of way, significant ground disturbance associated with previous development is unlikely to have occurred onsite. Geologically, Quaternary old shallow marine deposits of Pleistocene age, quaternary Paralic estuarine deposits, and Quaternary beach deposits underlie the site. Quarternary surface deposits have a high likelihood of producing significant fossil specimens.

In addition, the California coastal zone has been home to native populations for thousands of years. In accordance with the Commission's Tribal Consultation procedures, staff notified all potentially affected tribal entities listed on the Native American Heritage Commission contact list via email on February 10, 2023 and included a narrative description of the proposed project and site. The Commission did not receive any requests for further consultation by any of the contacted entities, and did not receive any responses or comment letters prior to publication of this staff report.

However, the project site is in close proximity to sacred lands and other significant archeological resources. Therefore, the Commission imposes **Special Condition 3**, which requires the applicant to abide by the mitigation measures to protect archaeological, including tribal cultural resources. This condition will ensure that appropriate Native American monitors and archeological professionals are present during all ground-disturbing activities and that any resources found are treated in accordance with best practices, including best practices identified through consultation with the appropriate tribal government(s). As conditioned, the project can be found consistent with Section 30244 of the Coastal Act.

D. Public Access

Section 30210 of the Coastal Act states:

> In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public

safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Section 30250 of the Coastal Act states:

(a) New residential…development…shall be located…where it will not have significant adverse effects, either individually or cumulatively, on coastal resources….

Section 30210 of the Coastal Act requires that public access to the coast be provided and Section 30250 requires that new residential development will be located where it will not have cumulative adverse impacts on coastal resources, including public access.

A detached three-car garage will be provided on-site, which will be accessed through an alleyway parallel to 16th Street. This alleyway is used to access garages along 16th Street and 17th Street, but it does not provide public parking spaces. The project also does not propose any curb cuts along 16th Street, so no public parking spaces will be impacted. The proposed residence adheres to the City's setback requirements and does not encroach onto the public right-of-way along 16th Street.

Therefore, as conditioned, the project is consistent with Sections 30210 and 30250 of the Coastal Act because, as conditioned, it will not have any new adverse impacts on public access to the coast or to nearby recreational facilities or displace any public vehicle parking spaces that are used for coastal access.

E. Water Quality and Biological Resources

Section 30230 of the Coastal Act states:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 of the Coastal Act states:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Section 30240 of the Coastal Act states:

> (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.
>
> (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

The proposed project has the potential to adversely impact the water quality of the nearby Pacific Ocean. Much of the pollutants entering the ocean come from land-based development. The Commission finds that it is necessary to minimize to the extent feasible within its jurisdiction the cumulative adverse impacts on water quality resulting from incremental increases in impervious surface associated with additional development. Thus, to protect water quality and biological productivity, the Commission imposes **Special Condition 4**, which outlines construction-related requirements to provide for the safe storage of construction materials and the safe disposal of construction debris. In addition, to ensure that water quality is maintained post-construction, the Commission imposes **Special Condition 5** which requires the applicant to submit a Final Drainage and Runoff Control Plan that ensures no water quality impacts will result from the proposed project.

While the proposed landscaping consists of non-invasive and drought tolerant plants, future landscaping may not consist of such plants. For water conservation, any plants in the landscape plan should only be drought tolerant to minimize the use of water (and preferably native to coastal Orange County). In order to make sure that any onsite landscaping minimizes the use of water and the spread of invasive vegetation, the Commission imposes **Special Condition 6**, which imposes landscape controls that require that all vegetated landscaped areas consist of native or non-native, drought tolerant plants, which are non-invasive and to implement the proposed drainage plan so that water is captured and filtered on site.

The project site is located south of Pacific Coast Highway and is surrounded by urban development. No sensitive habitat areas exist on or adjacent to the project site and no sensitive bird species were observed; however, several mature non-native trees currently exist on-site that potentially provide cover, foraging, and potential nesting for birds. The applicant proposed to remove these trees to prepare the site for construction. These trees may support active nests for nesting birds species that are protected under the federal Migratory Bird Treaty Act, and removal of the trees during the breeding season could potentially result in adverse impacts to the birds.

Therefore, the Commission imposes **Special Condition 7**, which requires the applicant to conduct a pre-construction nesting bird survey if construction activity occurs during the breeding season (February 1 to September 15). A qualified biologist shall conduct a pre-construction survey no more than 72 hours before the start of construction activities to determine the presence or absence of nesting birds. If any active nests are detected,

the area will be flagged and mapped along with a buffer ranging from 300 to 500 feet, and the area will be avoided until the nesting cycle is complete.

The Commission finds that the proposed development, as conditioned, conforms with Sections 30230, 30231, and 30240 of the Coastal Act regarding the protection of water quality to promote the biological productivity of coastal waters and to protect human health.

F. Deed Restriction

To ensure that any prospective future owner(s) of the property is made aware of the applicability of the conditions of this permit, the Commission imposes **Special Condition 8**, which requires the applicant to record a deed restriction against the property, referencing all of the above special conditions of this permit and imposing them as covenants, conditions and restrictions on the use and enjoyment of the Property. Thus, as conditioned, any prospective future owner(s) will receive actual notice of the restrictions and/or obligations imposed on the use and enjoyment of the land, including the risks of the development and/or hazards to which the site is subject, and the Commission's immunity from liability.

G. Local Coastal Program

Section 30604 of the Coastal Act provides for the issuance of coastal development permits directly by the Commission in regions where the local government having jurisdiction does not have a certified local coastal program. The permit may only be issued if the Commission finds that the proposed development will not prejudice the ability of the local government to prepare a Local Coastal Program that conforms with the Chapter 3 policies of the Coastal Act.

On July 28, 1983, the Commission denied the City of Seal Beach Land Use Plan (LUP) as submitted and certified it with suggested modifications. The City did not act on the suggested modifications within six months from the date of Commission action. Therefore, pursuant to Section 13537(b) of the California Code of Regulations, the Commission's certification of the land use plan with suggested modifications expired. The LUP has not been resubmitted for certification since that time.

The proposed development is consistent with the Chapter 3 policies of the Coastal Act. Therefore, the Commission finds that the proposed development would not prejudice the ability of the City to prepare a certified coastal program consistent with the Chapter 3 policies of the Coastal Act.

H. California Environmental Quality Act

Section 13096 of Title 14 of the California Code of Regulations requires Commission approval of Coastal Development Permit applications to be supported by findings showing the approval, as conditioned, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA

prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment. The Commission's regulatory program for reviewing and granting CDPs has been certified by the Resources Secretary to be the functional equivalent of CEQA. (14 CCR § 15251(c).)

In this case, the City of Seal Beach is the lead agency and the Commission is a responsible agency for the purposes of CEQA. The City of Seal Beach Planning Department determined that the proposed development is categorically exempt on November 2, 2022. As a responsible agency under CEQA, the Commission has determined that the proposed project, as conditioned, is consistent with the hazards, biological resources, water quality, public access and recreation and visual resources policies of the Coastal Act. As conditioned, there are no feasible alternatives or feasible mitigation measures available that would substantially lessen any significant adverse impact that the activity may have on the environment. Therefore, the Commission finds that the proposed project can be found consistent with the requirements of the Coastal Act to conform to CEQA.

APPENDIX A – SUBSTANTIVE FILE DOCUMENTS

Coastal Development Permit Application No. 5-22-0962 and associated file documents.

Sea Level Rise Flood Hazard Discussion for 216 16th Street, Seal Beach, Orange County, California prepared by Geosoils, Inc. dated September 23, 2022.