CITY OF NEWPORT BEACH
ZONING ADMINISTRATOR STAFF REPORT

May 28, 2026
Agenda Item No. 2

SUBJECT:	Boyd Residence (PA2026-0035) ▪ Coastal Development Permit
SITE LOCATION:	426 Via Lido Nord
APPLICANT:	Eric Aust
OWNER:	38 Linda Isle Newport Beach LLC/Patrick Boyd
PLANNER:	Cameron Younger, Planning Technician 949-644-3228, cyounger@newportbeachca.gov

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LAND USE AND ZONING

- **General Plan:** RM (Multiple Residential)
- **Zoning District:** RM (Multiple Residential)
- **Coastal Land Use Category:** RM-E (Multiple Unit Residential) – (30.0 - 39.9 DU/AC)
- **Coastal Zoning District:** RM (Multiple Residential)

PROJECT SUMMARY

A coastal development permit (CDP) request to allow for the demolition of an existing single-unit residence and the construction of a new, two-story, 3,120-square-foot, single-unit residence including a 389-square-foot attached two-car garage. The proposed development also includes additional appurtenances such as walls, fences, hardscape, drainage devices, and landscaping. The project complies with all development standards and no deviations from the Newport Beach Municipal Code (NBMC) are requested.

RECOMMENDATION

1) Conduct a public hearing;

2) Find this project exempt from the California Environmental Quality Act (CEQA) pursuant to Section 15303 under Class 3 (New Construction or Conversion of Small Structures) of the CEQA Guidelines, California Code of Regulations, Title 14, Division 6, Chapter 3, because it has no potential to have a significant effect on the environment; and

3) Adopt Draft Zoning Administrator Resolution No. _ approving the Coastal Development Permit filed as PA2026-0035 (Attachment No. ZA 1).

DISCUSSION

Land Use and Development Standards

- The property is located in the RM Coastal Zoning District, which allows for multi-unit residential, two-unit residential and single-unit residential. A single-unit residence is consistent with the City's Coastal Land Use Plan, General Plan, and Zoning Code.

- The project is not eligible for a waiver for de minimis development because the property is in the Coastal Commission Appeal Area.

- The property currently consists of one beachfront legal lot developed with a single-unit residence. The neighborhood is predominantly developed with two-story, single-unit residences and some two-story multi-unit residences.

- As shown with Figure 1 below. The proposed design, bulk, and scale of the development are consistent with the existing neighborhood pattern of development and expected future development consistent with applicable development standards.

Figure 1 (Aerial Image of Property)

- The proposed development conforms to all applicable development standards, including floor area limit, setbacks, height, and off-street parking as evidenced by the project plans and illustrated in Table 1 below.

Table 1 – Development Standards		
Development Standard	**Standard**	**Proposed**
Setbacks (min.)		
Front	4 feet	9 feet
Sides	3 feet*	3 feet
Rear	0 feet	0 feet
Allowable Floor Area (max.)	3,612 square feet	3,509 square feet
Allowable 3rd Floor Area (max.)	N/A (No third floor proposed)	N/A (No third floor proposed)
Allowable 3rd Floor Area & Covered (max.)	N/A (No third floor proposed)	N/A (No third floor proposed)
Open Space (min.)	310 square feet	439 square feet
Parking (min.)	2-car garage	2-car garage
Height (max.)	28-foot flat roof 33-foot sloped roof	24.5-foot sloped roof

** Pursuant to NBMC Section 20.30.110(A)(1) – Setback Requirements – Access to Dwellings.*

Hazards

- The development fronts the Newport Bay and is separated from the bay by an approximately 1,000-foot-wide sandy beach.
- The finished floor elevation of the proposed single-unit residence is 11.55 feet per the North American Vertical Datum of 1988 (NAVD 88), which complies with the minimum 9.00-foot NAVD 88 elevation standard.
- A Coastal Hazards Report was prepared by PMA Consulting dated November 30, 2025. The report analyzed sea level rise over the 75-year design life of the structure using projections from the State of California Sea-Level Rise Guidance 2024. The current highest high tide elevation is 7.67 feet NAVD 88. Under the Low-Risk Aversion scenario, sea level rise of 2.8 feet would result in a projected high tide of 10.27 feet NAVD 88.
- Under the Medium-High Risk Aversion scenario, a 6.3-foot rise would result in a projected high tide elevation of 14.4 feet NAVD 88. The height of the existing seawall at the property is about 11.24 feet NAVD 88. Based on the data provided, the study provides no recommendations necessary for shoreline protection devices and concludes that coastal hazards will not impact the property over the next 75 years, as the proposed project has minimal risk from flooding.

- Pursuant to NBMC Section 21.30.030(C)(3)(i)(iv) – (Natural Landform and Shoreline Protection), the property owner will be required to agree with the City waiving any potential right to protection to address situations in the future in which the

development is threatened with damage or destruction by coastal hazards (e.g., waves, erosion, and sea level rise). The Waiver of Future Protection is included as a condition of approval that will need to be satisfied before the final building inspection.

- The property owner will also be required to acknowledge any hazards present at the site and unconditionally waive any claim to damage or liability against the decision authority, consistent with NBMC Section 21.30.015(D)(3)(c) - Waterfront Development - Development Standards). The Acknowledgement of Coastal Hazards is included as a condition of approval that will need to be satisfied before the issuance of building permits.

- The property is in an area known for the potential of seismic activity and liquefaction. All projects are required to comply with the California Building Code (CBC) and Building Division standards and policies. Geotechnical investigations specifically addressing liquefaction are required to be reviewed and approved before the issuance of a building permit. Permit issuance is also contingent on the inclusion of design mitigation identified in the investigations. Construction plans are reviewed for compliance with approved investigations and CBC before building permit issuance.

Water Quality

- Under Municipal Code Section 21.35.050 (Water Quality and Hydrology Plan), due to the proximity of the development to the shoreline and the development containing more than 75% of impervious surface area, a preliminary Water Quality Management Plan (WQMP) is required. A preliminary WQMP has been prepared for the project by Core Civil Engineering Inc. dated, March 31, 2026. The WQMP includes a polluted runoff and hydrologic site characterization, a sizing standard for Best Management Practices (BMPs), the use of a Low Impact Development approach to retain the design storm runoff volume on-site, and documentation of the expected effectiveness of the proposed BMPs. Construction plans will be reviewed for compliance with the approved WQMP before building permit issuance.

- The project design addresses water quality with a construction erosion control plan and a post-construction drainage system that includes drainage and percolation features designed to retain dry weather runoff and minor rain event runoff on-site. Any water not retained on-site is directed to the City's storm drain system.

Public Access and Views

- The project site is located between the nearest public road and the sea or shoreline. Implementation Plan Section 21.30A.040 requires that the provision of public access bear a reasonable relationship between the requirement and the project's impact and be proportional to the impact. In this case, the project replaces an existing single-unit residence located on a standard RM lot with a new single-unit residence. Therefore,

the project does not involve a change in land use, density, or intensity that will result in increased demand for public access and recreation opportunities. Furthermore, the project is designed and sited (appropriate height, setbacks, etc.) so as not to block or impede existing public access opportunities.

- The project site is not located adjacent to a coastal view road, public access way, or Coastal Viewpoint as identified in the Coastal Land Use Plan. The nearest coastal viewpoint is approximately located 1,700 feet north at Kings Road Park and is not visible from the site.

- The site is located approximately 320 feet west of a public park intersecting Via Genoa and Via Lido Nord, which is accessible to the public. As is currently developed, the existing property and other residences within the area along Via Lido Nord are not within the view shed of the park. Furthermore, the proposed single-unit residence complies with all applicable Local Coastal Program (LCP) development standards and maintains a building envelope consistent with the existing neighborhood pattern of development. Additionally, the project does not contain any unique features that could degrade the visual quality of the coastal zone.

- Nearby, vertical access to the public beach is provided on Via Lido Nord and Via Genoa intersection with the bay front, approximately 320 feet west to the property. Lateral access to the coast is provided along Via Lido Nord and along the beach. The project does not include any features that would obstruct access along these routes.

ENVIRONMENTAL REVIEW

This project is exempt from the California Environmental Quality Act (CEQA) pursuant to Section 15303 under Class 3 (New Construction or Conversion of Small Structures) of the CEQA Guidelines, California Code of Regulations, Title 14, Chapter 3, because it has no potential to have a significant effect on the environment.

Class 3 exempts the demolition of up to three single-unit residences and construction of one single-unit dwelling. The proposed project will demolish an existing single-unit residence and construct a new single-unit residence within the RM Coastal Zoning District. Therefore, the Class 3 exemption is applicable.

There are no known exceptions listed in CEQA Guidelines Section 15300.2 that would invalidate the use of this exemption. The project location does not impact an environmental resource of hazardous or critical concern, does not result in cumulative impacts, does not have a significant effect on the environment due to unusual circumstances, does not damage scenic resources within a state scenic highway, is not a hazardous waste site, and is not identified as a historical resource.

PUBLIC NOTICE

Notice of this public hearing was published in the Daily Pilot, mailed to all owners and residential occupants of property within 300 feet of the boundaries of the site (excluding intervening rights-of-way and waterways), including the applicant, and posted on the subject property at least 10 days before the scheduled hearing, consistent with the provisions of the Municipal Code. Additionally, the item appeared on the agenda for this meeting, which was posted at City Hall and on the city website.

APPEAL PERIOD:

This action shall become final and effective 14 days following the date the Resolution is adopted unless within such time an appeal or call for review is filed with the Community Development Director by the provisions of Title 21 (Local Coastal Program [LCP] Implementation Plan) of the Newport Beach Municipal Code. Final action taken by the City may be appealed to the Coastal Commission in compliance with Section 21.64.035 (Appeal to the Coastal Commission) of the City's certified LCP and Title 14 California Code of Regulations, Sections 13111 through 13120, and Section 30603 of the Coastal Act. For additional information on filing an appeal, contact the Planning Division at 949-644-3200.

Prepared by:

Cameron Younger

Cameron Younger, Planning Technician

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Attachments:

	ZA 1	Draft Resolution
	ZA 2	Vicinity Map
	ZA 3	Project Plans

Attachment No. ZA 1

Draft Resolution

RESOLUTION NO. ZA2026-###

A RESOLUTION OF THE ZONING ADMINISTRATOR OF THE CITY OF NEWPORT BEACH, CALIFORNIA, APPROVING A COASTAL DEVELOPMENT PERMIT FOR THE DEMOLITION OF A SINGLE-UNIT RESIDENCE AND THE CONSTRUCTION OF A NEW SINGLE-UNIT RESIDENCE LOCATED AT 426 VIA LIDO NORD (PA2026-0035)

THE ZONING ADMINISTRATOR OF THE CITY OF NEWPORT BEACH HEREBY FINDS AS FOLLOWS:

SECTION 1. STATEMENT OF FACTS.

1. An application was filed by Eric Aust (Applicant) on behalf of 38 Linda Isle Newport Beach LLC (Owner) with respect to property located at 426 Via Lido Nord, legally described as Lot 483 of Tract 907 (Property), requesting approval of a coastal development permit (CDP).

2. The Applicant requests a CDP to allow the demolition of an existing single-unit dwelling and the construction of a new two-story, 3,120-square-foot single-unit residence, including a 389-square-foot attached two-car garage. The project includes landscape, hardscape, and subsurface drainage facilities all within the confines of private property. The project complies with all development standards and no deviations from the Newport Beach Municipal Code (NBMC) are requested (Project).

3. The Property is designated Multiple Residential (RM) by the General Plan Land Use Element and is located within the Multiple Residential (RM) Zoning District.

4. The property is located within the Coastal Zone. The Coastal Land Use Plan category is Multiple Unit Residential (RM-E 30.0 – 39.9 DU/AC) and it is located within the Multiple Residential (RM) Coastal Zoning District.

5. A public hearing was held on May 28, 2026, online via Zoom. A notice of the time, place, and purpose of the hearing was given by the NBMC. Evidence, both written and oral, was presented to and considered by the Zoning Administrator at this hearing.

SECTION 2. CALIFORNIA ENVIRONMENTAL QUALITY ACT DETERMINATION.

1. This Project is categorically exempt pursuant to Title 14 of the California Code of Regulations Section 15303, Division 6, Chapter 3, Guidelines for Implementation of the California Environmental Quality Act (CEQA) under Class 3 (New Construction or Conversion of Small Structures) because it has no potential to have a significant effect on the environment.

2. Class 3 exempts the demolition of up to three single-unit residences and construction of one single-unit dwelling. This Project consists of the demolition of an existing single-unit residence and the construction of a new single-unit residence. Therefore, the Project is eligible for the Class 3 exemption.

3. The exceptions to this categorical exemption under Section 15300.2 are not applicable. The Project location does not impact an environmental resource of hazardous or critical concern, does not result in cumulative impacts, does not have a significant effect on the environment due to unusual circumstances, does not damage scenic resources within a state scenic highway, is not a hazardous waste site, and is not identified as a historical resource.

SECTION 3. REQUIRED FINDINGS.

By Section 21.52.015(F) (Coastal Development Permits - Findings and Decision) of the NBMC, the following findings, and facts in support of such findings are set forth:

Finding:

A. Conforms to all applicable sections of the certified Local Coastal Program.

Facts in Support of Finding:

1. The proposed development complies with applicable residential development standards including, but not limited to, floor area limitation, setbacks, height, and parking.

    a. The Project proposes a gross floor area of 3,509 square feet, which complies with the maximum gross floor area of 3,612 square feet allowed for the Property.

    b. The proposed development provides the minimum required setbacks, which are 4 feet along the front property line along Via Lido Nord and 3 feet along each side property line. There is no setback required along the bayfront property line.

    c. The highest guardrail is less than 28 feet from the established grade (11.91 feet per the North American Vertical Datum of 1988 (NAVD88) and the highest ridge is less than 33 feet from the established grade which complies with the height requirements of Section 21.30.060 (Height Limits and Exceptions) in the NBMC.

2. The neighborhood is predominantly developed with two-story single- and multi-unit residences. The proposed design, bulk, and scale of the development are consistent with the existing neighborhood pattern of development.

3. A Coastal Hazards Report was prepared by PMA Consulting dated November 30, 2025. The report analyzed sea level rise over the 75-year design life of the structure using projections from the State of California Sea-Level Rise Guidance 2024. The current highest high tide elevation is 7.67 feet NAVD 88. Under the Low-Risk Aversion scenario, sea level rise of 2.8 feet would result in a projected high tide of 10.27 feet NAVD 88. Under the Medium-High Risk Aversion scenario, a 6.3-foot rise would result in a projected high tide elevation of 14.4 feet NAVD 88. Based on the data provided, the study provides no recommendations necessary for shoreline protection devices and concludes that coastal hazards will not impact the property over the next 75 years, as the proposed project has minimal risk from flooding.

4. The finished floor elevation of the proposed single-unit residence is 11.55 feet NAVD 88, which complies with the minimum 9.00-foot NAVD 88 elevation standard.

5. Pursuant to NBMC Section 21.30.030(C)(3)(i)(iv) – (Natural Landform and Shoreline Protection), the Owner will be required to agree with the City waiving any potential right to protection to address situations in the future in which the development is threatened with damage or destruction by coastal hazards (e.g., waves, erosion, and sea level rise). The Waiver of Future Protection is included as a condition of approval that will need to be recorded prior to a final building permit inspection.

6. The Owner will also be required to acknowledge any hazards present at the site and unconditionally waive any claim to damage or liability against the decision authority, consistent with NBMC Section 21.30.015(D)(3)(c) – (Waterfront Development - Development Standards). An Acknowledgement of Coastal Hazards is included as a condition of approval that will need to be recorded prior to the issuance of building permits.

7. The Property is in an area known for the potential of seismic activity and liquefaction. All projects are required to comply with the California Building Code (CBC) and Building Division standards and policies. Geotechnical investigations specifically addressing liquefaction are required to be reviewed and approved before the issuance of building permits. Permit issuance is also contingent on the inclusion of design mitigation identified in the investigations. Construction plans are reviewed for compliance with approved investigations and CBC before building permit issuance.

8. The Property is not located adjacent to a Coastal View Road, public access way, or Coastal Viewpoint as identified in the Coastal Land Use Plan. The nearest coastal viewpoint is located approximately 1,700 feet north of the Property and is not visible from the site. As it is currently developed, the site is located approximately 320 feet west of a public park intersecting Via Genoa and Via Lido Nord which is accessible to the public, however the Property and other residences within the area along Via Lido Nord are not within the view shed of the park. The proposed single-unit residence complies with all applicable Local Coastal Program (LCP) development standards and maintains a building envelope consistent with the existing neighborhood pattern of development. Additionally, the Project does not contain any unique features that could degrade the visual quality of the coastal zone.

Finding:

B. Conforms with the public access and public recreation policies of Chapter 3 of the Coastal Act if the project is located between the nearest public road and the sea or shoreline of any body of water located within the coastal zone.

Fact in Support of Finding:

1. The Property is located between the nearest public road and the sea or shoreline. Implementation Plan Section 21.30A.040 requires that the provision of public access bear a reasonable relationship between the requirement and the project's impact and be proportional to the impact. In this case, the Project creates a new single-unit residence to

an existing RM zoned lot. Therefore, the Project does not involve a change in land use, density, or intensity that will result in increased demand for public access and recreation opportunities. Furthermore, the Project is designed and sited (appropriate height, setbacks, etc.) so as not to block or impede existing public access opportunities.

2. The Project is not located near a Public Beach Access point as identified in the CLUP. Nearby, vertical access to the public beach along the bay is provided on Via Lido Nord and Via Genoa intersection with the ocean front, approximately 320 feet west to the property. Lateral access to the bay is provided along Via Lido Nord and along the beach. The Project does not include any features that would obstruct access along these routes.

SECTION 4. DECISION.

NOW, THEREFORE, BE IT RESOLVED:

1. The Zoning Administrator of the City of Newport Beach hereby finds this Project is categorically exempt from the California Environmental Quality Act under Section 15303 under Class 3 (New Construction or Conversion of Small Structures) of the CEQA Guidelines, California Code of Regulations, Title 14, Division 6, Chapter 3 because it has no potential to have a significant effect on the environment.

2. The Zoning Administrator of the City of Newport Beach hereby approves Coastal Development Permit filed as PA2026-0035, subject to the conditions outlined in Exhibit "A," which is attached hereto and incorporated by reference.

3. This action shall become final and effective 14 days following the date this Resolution was adopted unless within such time an appeal or call for review is filed with the Community Development Director by the provisions of Title 21 LCP Implementation Plan, of the NBMC. Final action taken by the City may be appealed to the Coastal Commission in compliance with Section 21.64.035 (Appeal to the Coastal Commission) of the City's certified LCP and Title 14 California Code of Regulations, Sections 13111 through 13120, and Section 30603 of the Coastal Act.

PASSED, APPROVED, AND ADOPTED THIS 28TH DAY OF MAY 2026.

_____
Liz Westmoreland, AICP, Zoning Administrator

EXHIBIT "A"

CONDITIONS OF APPROVAL

(Project-specific conditions are in italics)

1. The Project shall be in substantial conformance with the approved site plan, floor plans, and building elevations stamped and dated with the date of this approval (except as modified by applicable conditions of approval).

2. *Prior to final building permit inspection, an agreement in a form approved by the City Attorney between the property owner and the City shall be executed and recorded waiving rights to the construction of future shoreline protection devices to address the threat of damage or destruction from waves, erosion, storm conditions, landslides, seismic activity, bluff retreat, sea level rise, or other natural hazards that may affect the property, or development of the property, today or in the future. The agreement shall be binding against the property owners and successors and assigns.*

3. *Prior to the issuance of a building permit, the property owner shall submit a notarized signed letter acknowledging all hazards present at the site, assuming the risk of injury or damage from such hazards, unconditionally waiving any claims of damage against the City from such hazards, and to indemnify and hold harmless City, its City Council, its boards and commissions, officials, officers, employees, and agents from and against any claims, demands, obligations, damages, actions, causes of action, suits, losses, judgments, fines, penalties, liabilities, costs, and expenses (including without limitation, attorney's fees, disbursements, and court costs) of every kind and nature whatsoever which may arise from or in any manner relate (directly or indirectly) to City's approval of the development. This letter shall be scanned into the plan set before building permit issuance.*

4. No demolition or construction materials, equipment debris, or waste, shall be placed or stored in a location that would enter the sensitive habitat, receiving waters, or storm drains or result in impacts to environmentally sensitive habitat areas, streams, the beach, wetlands or their buffers. No demolition or construction materials shall be stored on public property.

5. Demolition beyond the approved scope of work requires planning division approval before the commencement of work. Approval of revisions to project plans is not guaranteed. Any changes in the current scope of work may require the entire structure to be demolished and redeveloped in conformance with the current Zoning Code Development Standards.

6. The Applicant is responsible for compliance with the Migratory Bird Treaty Act (MBTA). In compliance with the MBTA, grading, brush removal, building demolition, tree trimming, and similar construction activities shall occur between August 16 and January 31, outside of the peak nesting period. If such activities must occur inside the peak nesting season from February 1 to August 15, compliance with the following is required to prevent the taking of native birds under MBTA:

A. The construction area shall be inspected for active nests. If birds are observed flying from a nest or sitting on a nest, it can be assumed that the nest is active. Construction activity within 300 feet of an active nest shall be delayed until the nest is no longer active. Continue to observe the nest until the chicks have left the nest and activity is no longer observed. When the nest is no longer active, construction activity can continue in the nest area.

B. It is a violation of state and federal law to kill or harm a native bird. To ensure compliance, consider hiring a biologist to assist with the survey for nesting birds, and to determine when it is safe to commence construction activities. If an active nest is found, one or two short follow-up surveys will be necessary to check on the nest and determine when the nest is no longer active.

7. Best Management Practices (BMPs) and Good Housekeeping Practices (GHPs) shall be implemented before and throughout the duration of construction activity as designated in the Construction Erosion Control Plan.

8. The discharge of any hazardous materials into storm sewer systems or receiving waters shall be prohibited. Machinery and equipment shall be maintained and washed in confined areas specifically designed to control runoff. A designated fueling and vehicle maintenance area with appropriate berms and protection to prevent spillage shall be provided as far away from storm drain systems or receiving waters as possible.

9. Debris from demolition shall be removed from work areas each day and removed from the project site within 24 hours of the completion of the project. Stockpiles and construction materials shall be covered, enclosed on all sites, not stored in contact with the soil, and located as far away as possible from drain inlets and any waterway.

10. Trash and debris shall be disposed of in proper trash and recycling receptacles at the end of each construction day. Solid waste, including excess concrete, shall be disposed of in adequate disposal facilities at a legal disposal site or recycled at a recycling facility.

11. Revisions to the approved plans may require an amendment to this Coastal Development Permit or the processing of a new coastal development permit.

12. The project is subject to all applicable City ordinances, policies, and standards unless specifically waived or modified by the conditions of approval.

13. The Applicant shall comply with all federal, state, and local laws. A material violation of any of those laws in connection with the use may be caused by the revocation of this CDP.

14. This CDP may be modified or revoked by the Zoning Administrator if determined that the proposed uses or conditions under which it is being operated or maintained are detrimental to the public health, and welfare or materially injurious to property or improvements in the vicinity or if the property is operated or maintained to constitute a public nuisance.

15. *Before the issuance of building permits, the Applicant shall submit a final construction erosion control plan. The plan shall be subject to review and approval by the Building Division.*

16. *Before the issuance of building permits, a copy of the Resolution, including conditions of approval Exhibit "A" shall be incorporated into the Building Division and field sets of plans*.

17. *Before the issuance of building permits, the Applicant shall submit a final landscape and irrigation plan. These plans shall incorporate drought-tolerant plantings, non-invasive plant species, and water-efficient irrigation design. The plans shall be approved by the Planning Division*.

18. All landscape materials and irrigation systems shall be maintained by the approved landscape plan. All landscaped areas shall be maintained in a healthy and growing condition and shall receive regular pruning, fertilizing, mowing, and trimming. All landscaped areas shall be kept free of weeds and debris. All irrigation systems shall be kept operable, including adjustments, replacements, repairs, and cleaning as part of regular maintenance.

19. Construction activities shall comply with Section 10.28.040 (Construction Activity – Noise Regulations) of the NBMC, which restricts hours of noise-generating construction activities that produce noise to between the hours of 7 a.m. and 6:30 p.m., Monday through Friday. Noise-generating construction activities are not allowed on Saturdays, Sundays, or Holidays.

20. All noise generated by the proposed use shall comply with the provisions of Chapter 10.26 (Community Noise Control), under Sections 10.26.025 (Exterior Noise Standards) and 10.26.030 (Interior Noise Standards), and other applicable noise control requirements of the Newport Beach Municipal Code (NBMC).

21. Before the issuance of the building permit, the Applicant shall pay any unpaid administrative costs associated with the processing of this application to the Planning Division.

22. Should the property be sold or otherwise come under different ownership, any future owners or assignees shall be notified of the conditions of this approval by the current property owner or agent.

23. This Coastal Development Permit No. PA2026-0035 shall expire unless exercised within 24 months from the date of approval as specified in Section 21.54.060 (Time Limits and Extensions) of the NBMC, unless an extension is otherwise granted.

24. To the fullest extent permitted by law, the Applicant shall indemnify, defend and hold harmless the City, its City Council, its boards and commissions, officials, officers, employees, and agents from and against any claims, demands, obligations, damages, actions, causes of action, suits, losses, judgments, fines, penalties, liabilities, costs, and

expenses (including without limitation nature whatsoever which may arise from or in any manner relate (directly or indirectly) to City's approval of **Boyd Residence, including but not limited to Coastal Development Permit No. PA2026-0035.** This indemnification shall include, but not be limited to, damages awarded against the City, if any, costs of suit, attorney's fees, and other expenses incurred in connection with such claim, action, causes of action, suit, or proceeding whether incurred by the Applicant, City, and/or the parties initiating or bringing such proceeding. The Applicant shall indemnify the City for all of the City's costs, attorney's fees, and damages that which the City incurs in enforcing the indemnification provisions set forth in provisions outlined in this condition. The Applicant shall pay to the City upon demand any amount owed to the City under the indemnification requirements prescribed in this condition.

Fire Department

25. *The Project shall require the installation of fire sprinklers, complying with the 2022 NFPA 13D standards, unless otherwise directed by the Fire Department.*

26. *At least one unobstructed walk path from the front to the rear of the property at a minimum of 36 inches wide shall be required for emergency access.*

Public Works Department

27. *The Applicant shall construct a new driveway on the Property per City Standard 162.*

28. *The Applicant shall install a new sewer cleanout on the existing sewer lateral per City Standard 406.*

Building Division

29. *The Applicant is required to obtain all applicable permits from the City's Building Division and Fire Department. The construction plans must comply with the most recent City-adopted version of the California Building Code (CBC).*

Attachment No. ZA 2

Vicinity Map

VICINITY MAP

Coastal Development Permit
(PA2026-0035)
426 Via Lido Nord

Attachment No. ZA 3

Project Plans

newport beach, california 92663

426 via lido nord

eric aust architect

01 april 2026

eco hers — energy calculations
contact: roya alamdari
email ecoherstest@gmail.com
tel 949.217.2273

R McCarthy consulting — geotechnical engineer
23 corporate plaza, suite 150
newport beach, california 92660
tel 949.629.2539

core engineering — grading + drainage engineer
201 e. sandpointe avenue, #400
santa ana, california 92707
tel 949.954.7244

esi/fme, inc. — structural engineer
230 commerce, suite 200
irvine, california 92602
tel 714.835.2800
fax 714.835.2819

patrick boyd — client
426 via lido nord
newport beach, california 92663
tel 949.633.6990

LICENSED ARCHITECT
ERIC D. AUST
C-29374
31 MAY 2027
RENEWAL DATE
STATE OF CALIFORNIA

eric aust — architect
architect
62 balboa coves
newport beach, california 92663
tel 949.637.5220

deferred submittals

THE FOLLOWING PLANS WILL BE SUBMITTED BY OTHERS UNDER SEPARATE PERMIT;
ARCHITECT + ENGINEER OF RECORD TO REVIEW, CERTIFY AND APPROVE DRAWINGS PRIOR TO SUBMITTAL:
- FIRE SPRINKLER DRAWINGS (SPRINKLERS SHALL COMPLY WITH NFPA 13D)
  (*OBTAIN FIRE SPRINKLER PERMIT PRIOR TO CALLING FOR ROOF SHEATHING INSPECTION)
- AIR CONDITIONING CONDENSER SOUND ATTENUATION DESIGN; CONTRACTOR SHALL DETERMINE EXACT CONDENSER SPECIFICATION AND PROVIDE SOUND LEVEL DATA PER CITY REQUIREMENTS
  CONDENSERS SHALL BE LOCATED WITHIN THE MECHANICAL ALCOVE AT THE ROOF/3rd FLOOR
- ROOF + FLOOR TRUSS DESIGN AND CALCULATIONS MUST BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO THEIR DELIVERY ON SITE. PROVIDE A KEY PLAN WITHIN THE TRUSS PLANS IDENTIFYING ALL TRUSSES AND DRAG TRUSSES ALONG WITH THE REQUIRED CAPACITY OF THE DRAG ELEMENT. THE PLANS SUBMITTED TO THE BUILDING DIVISION SHALL CONTAIN NO RED LINE REVISIONS OR CORRECTIONS TO THE TRUSS PACKAGE. THE ENGINEER OF RECORD SHALL PROVIDE A NOTE ON THE THE TRUSS PLANS OR A SHOP DRAWING APPROVAL STAMP STATING THAT THE TRUSS PLANS ARE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING
- SOLAR SYSTEM BY OTHERS UNDER SEPARATE PLAN REVIEW AND PERMIT;
  SYSTEM SHALL HAVE MINIMUM CAPACITY OF 2.97 kWdc
  *TOP OF SOLAR PANELS SHALL BE MAXIMUM OF 6" ABOVE THE ROOF MATERIAL AND SHALL LAY PARALLEL TO THE ROOF PLANE. THE ARC MUST AGREE ON THE PROPOSED LOCATION
- A CERTIFIED BUILDING HEIGHT CERTIFICATION MUST BE SUBMITTED TO THE LIDO ISLE H.O.A. AFTER THE ROOF FRAMING AND INSTALLATION OF THE ROOF MATERIAL; ROOF SHALL BE MEASURED FROM THE AVERAGE CURB HEIGHT OF 12.42'

*DEFERRED SUBMITTALS SHALL BE REVIEWED BY PROJECT ARCHITECT OR ENGINEER OF RECORD AND CERTIFIED PRIOR TO SUBMITTAL FOR PLAN CHECK OR APPROVAL BY THE CITY

public works notes

1. AN APPROVED ENCROACHMENT PERMIT IS REQUIRED FOR ALL WORK ACTIVITIES WITHIN THE PUBLIC RIGHT-OF-WAY
2. AN ENCROACHMENT AGREEMENT IS REQUIRED FOR ALL NON-STANDARD PRIVATE IMPROVEMENTS WITHIN THE PUBLIC RIGHT-OF-WAY. ALL NON-STANDARD IMPROVEMENTS SHALL COMPLY WITH CITY COUNCIL POLICY L-6
3. A PUBLIC WORKS DEPARTMENT ENCROACHMENT PERMIT INSPECTION IS REQUIRED BEFORE THE BUILDING DEPARTMENT PERMIT FINAL CAN BE ISSUED. AT THE TIME OF PUBLIC WORKS DEPARTMENT INSPECTION, IF ANY OF THE EXISTING PUBLIC IMPROVEMENTS SURROUNDING THE SITE IS DAMAGED BY THE PRIVATE WORK, NEW CONCRETE SIDEWALK, CURB AND GUTTER, AND ALLEY/STREET PAVEMENT WILL BE REQUIRED. ADDITIONALLY, IF EXISTING UTILITIES INFRASTRUCTURE ARE DEEMED SUBSTANDARD, A NEW 1-INCH WATER SERVICE, WATER METER BOX, SEWER LATERAL AND/OR CLEANOUT WITH BOX AND LID WILL BE REQUIRED. 100% OF THE COST SHALL BE BORNE BY THE PROPERTY OWNER (MUNICIPAL CODES 14.24.020 AND 14.08.030). SAID DETERMINATION AND THE EXTENT OF THE REPAIR WORK SHALL BE MADE AT THE DISCRETION OF THE PUBLIC WORKS INSPECTOR. CONTRACTOR IS RESPONSIBLE TO MAINTAIN THE PUBLIC RIGHT-OF-WAY AT ALL TIMES DURING THE CONSTRUCTION PROJECT. A STOP WORK NOTICE MAY BE ISSUED FOR ANY DAMAGE OR UNMAINTAINED PORTION OF THE PUBLIC RIGHT-OF-WAY.
4. ALL WORK RELATED TO WATER IN THE PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED BY A C-34 LICENSED PIPELINE CONTRACTOR OR AN "A" LICENSED GENERAL ENGINEERING CONTRACTOR.
5. ALL WORK RELATED TO WASTEWATER IN THE PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED BY A C-42 LICENSED SANITATION SEWER CONTRACTOR OR AN 'A' LICENSED GENERAL ENGINEERING CONTRACTOR.

flood hazard zone

-A LICENSED SURVEYOR SHALL COMPLETE A FEMA ELEVATION CERTIFICATE (EC) AND SUBMIT THE EC FOR REVIEW AND APPROVAL FROM THE CITY'S COMMUNITY RATING SYSTEM (CRS) COORDINATOR PRIOR TO REQUESTING FINAL INSPECTION
-AN APPROVED EC MUST BE SUBMITTED TO THE BUILDING DEPARTMENT INSPECTOR DURING FINAL INSPECTION.
-ALL MECHANICAL, GAS AND ELECTRICAL EQUIPMENT SERVICING THE BUILDING (INCLUDING DUCTS) MUST BE AT LEAST ONE FOOT ABOVE THE BFE (NAVD88)

project data

EXISTING HOUSE AREA:
EXISTING TOTAL LIVABLE AREA: 2,889 S.F.
(TO BE DEMOLISHED)

PROPOSED FLOOR AREA:
1st FLOOR 1,268 S.F.
1st FLOOR (COVERED, 2 SIDED) 55 S.F.
PROPOSED 2nd FLOOR 1,797 S.F. +
PROPOSED TOTAL LIVABLE AREA 3,120 S.F.

GARAGE AREA:
PROPOSED TWO CAR GARAGE AREA 389 S.F.

FLOOR AREA LIMIT: *(CITY OF NEWPORT BEACH)
2,064 BUILDABLE LOT AREA:
1.75x BUILDABLE LOT AREA = 3,612 S.F.
3,509 S.F. (3,120 + 389) < 3,612 S.F. ALLOWABLE = O.K.

FLOOR AREA LIMIT: *(LIDO ISLE H.O.A.)
2,064 BUILDABLE LOT AREA:
1.7x BUILDABLE LOT AREA = 3,509 S.F.
3,509 S.F. (3,120 + 389) <= 3,509 S.F. ALLOWABLE = O.K.

OPEN SPACE REQUIREMENT: (CITY OF NEWPORT BEACH)
15% OF BUILDABLE LOT AREA TO BE OPEN SPACE
2,064 S.F. BUILDABLE LOT x 0.15 = 310 S.F. OPEN SPACE REQ'D

248 S.F. (1st FLOOR AT FRONT PATIO AT BAY)
191 S.F. (2nd FLOOR AT FRONT PATIO AT STREET) +
439 S.F. OPEN SPACE

439 S.F. OPEN SPACE >= 310 S.F. = O.K.

OPEN SPACE REQUIREMENT ALONG STREET FRONTAGE: (LIDO ISLE H.O.A.)
2,064 S.F. BUILDABLE LOT AREA
15% OF BUILDABLE LOT ARE TO BE OPEN SPACE ALONG VIA LIDO NORD = 310 S.F.

139 S.F. (1st FLOOR AT ENTRY WALKWAY AT STREET)
191 S.F. (2nd FLOOR AT FRONT PATIO AT STREET) +
330 S.F. OPEN SPACE >= 310 S.F. = O.K.

DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE:
ERIC AUST ARCHITECT SHALL SERVE AS THE DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE FOR THIS PROJECT AND SHALL BE RESPONSIBLE FOR REVIEWING AND COORDINATING SUBMITTAL DOCUMENTS PREPARED BY OTHERS, INCLUDING PHASED AND DEFERRED SUBMITTAL ITEMS, FOR COMPATIBILITY WITH THE DESIGN OF THE BUILDING. (CBC APPENDIX CH. 1, 106.3.4)

COUNTY BENCH MARK / SURVEY:
PER THE SURVEY PREPARED BY RDM SURVEYING (DATED 8/22/2025), SURVEYOR USED BENCH MARK #NBS-21-92; DATUM: NAVD88 ELEVATION = 11.91'

GENERAL NOTES:
ISSUANCE OF A BUILDING PERMIT BY THE CITY OF NEWPORT BEACH DOES NOT RELIEVE APPLICANTS OF THE LEGAL REQUIREMENTS TO OBSERVE COVENANTS, CONDITIONS AND RESTRICTIONS WHICH MAY BE RECORDED AGAINST THE PROPERTY OR TO OBTAIN PLANS. YOU SHOULD CONTACT YOUR COMMUNITY ASSOCIATIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION AUTHORIZED BY THIS PERMIT

A CAL-OSHA PERMIT IS REQUIRED FOR EXCAVATION DEEPER THAN 5' AND FOR SHORING AND UNDERPINNING

CONTRACTOR SHALL USE THE CITY STANDARD FOR "30-DAY NOTICE OF INTENT TO EXCAVATE' TO NOTIFY ADJACENT PROPERTY OWNERS BY CERTIFIED MAIL 30 DAYS PRIOR TO STARTING EXCAVATION OR SHORING
**NOTICES WERE MAILED ON XX/XX/XXXX

POOLS, SPAS, WALLS, FENCES, PATIO COVERS, AND OTHER FREESTANDING STRUCTURES REQUIRE SEPARATE REVIEWS AND PERMITS

CONSTRUCTION COMPLETION:
THE MAXIMUM TIME TO COMPLETE CONSTRUCTION ON A PROJECT IS LIMITED TO THREE YEARS FROM THE DATE OF THE PERMIT FOR ALL PERMITS ISSUED AFTER JUNE 1,2019 AS REQUIRED BY NBMC SECTION 15.02.095

project data

PROJECT NAME:
BOYD RESIDENCE
426 VIA LIDO NORD
NEWPORT BEACH, CALIFORNIA 92663

PROJECT DESCRIPTION:
DEMOLITION OF EXISTING 4 BEDROOM, 3 BATH 2,889 S.F. HOUSE;
PROJECT TO CONSIST OF A NEW 3,120 S.F. SINGLE FAMILY RESIDENCE WITH 389 S.F. ATTACHED, ENCLOSED 2 CAR GARAGE AND CONTAINS 4 BEDROOMS AND 4 BATHROOMS;
PROVIDE FIRE SPRINKLER SYSTEM THROUGHOUT, COMPLIANT WITH NFPA13D

APPLICABLE CODES:
2022 CALIFORNIA RESIDENTIAL CODE
2022 CALIFORNIA BUILDING CODE
2022 CALIFORNIA MECHANICAL CODE
2022 CALIFORNIA PLUMBING CODE
2022 CALIFORNIA ELECTRICAL CODE
2022 CALIFORNIA ENERGY CODE (TITLE-24)
2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
CHAPTER 15 OF THE NEWPORT BEACH MUNICIPAL CODE

CONSTRUCTION TYPE:
TYPE V-B (NFPA-13D)
TWO STORIES

OCCUPANCY GROUP: USE:
R3 SINGLE FAMILY RESIDENTIAL
U (ATTACHED GARAGE)

ZONING: NUMBER OF STORIES:
R-1 SINGLE-UNIT RESIDENTIAL 2 STORIES

ASSESSOR'S PARCEL NO.:
A.P.N.: 423-191-13

PARKING REQUIREMENTS:
2 COVERED PARKING SPACES PROVIDED IN AN ATTACHED, 389 S.F. COVERED GARAGE

SETBACKS:

	ALLOWABLE	PROPOSED
SOUTH PROPERTY LINE (FRONT/STREET):	4'	4'
NORTH PROPERTY LINE (FRONT/BAY):	0'	1'-2"
EAST PROPERTY LINE (SIDE):	3'	3'
WEST PROPERTY LINE (SIDE):	3'	3'

FIRE SPRINKLERS:
FIRE SPRINKLERS ARE REQUIRED WITHIN THIS STRUCTURE AND SHALL BE SUBMITTED AS A DEFERRED SUBMITTAL UNDER A SEPARATE PERMIT

BUILDING HEIGHT: *(CITY OF NEWPORT BEACH)
MAX. ALLOWABLE BUILDING HEIGHT: 29' (TO PEAK OF SLOPED ROOF)
ACTUAL BUILDING HEIGHT: 24'-3 3/4" (FROM ROOF PEAK TO ESTABLISHED GRADE)

BUILDING HEIGHT: *(LIDO ISLE H.O.A.)
MAX. ALLOWABLE BUILDING HEIGHT: 24' (TO PEAK OF ALL STRUCTURES FROM AVG. CURB)
ACTUAL BUILDING HEIGHT: 23'-9 1/2" (FROM ROOF PEAK TO AVERAGE GRADE)

LOT SQUARE FOOTAGE: BUILDABLE LOT AREA:
2,700 S.F. 2,064 S.F.

LANDSCAPE AREA: NON-PERMEABLE AREA:
44 S.F. 2,656 S.F.

ROOF VENTILATION:
ROOF AREA = 1,107 S.F. OF ROOF AREA (ROOFED AREA W/ ATTIC SPACE)
159,408 S.I. / 150 = 1,063 S.I. REQUIRED
(1) POWERED ROOF VENT (AT TOP OF ROOF) @ 1,250 S.I. EACH
TOTAL VENTILATION = 1,250 S.I. > 1,063 S.I. REQUIRED = O.K.

PROJECT INFORMATION SIGN:
PROVIDE A PROJECT INFORMATION SIGN AND CONSTRUCTION FENCING DUE TO LOCATION WITHIN "HIGH DENSITY AREA"; PROJECT SIGN SHALL COMPLY WITH N.B.M.C. SECTION. 15.60.030; SEE SHEET A0.5 FOR REQUIRED FORM

project consultants

PROPERTY OWNER:
PATRICK BOYD
426 VIA LIDO NORD
NEWPORT BEACH, CA 92663
TEL 949.633.6990

STRUCTURAL ENGINEER:
ES/FME, INC.
CONTACT: SCOTT ROSS
230 COMMERCE, SUITE 200
IRVINE, CA 92602
TEL 714.835.2800
FAX 714.835.2819

CIVIL ENGINEER:
CORE ENGINEERING
201 E. SANDPOINTE AVE. #400
SANTA ANA, CA 92707
TEL 949.954.7244

SURVEYOR:
RDM SURVEYING, INC.
23016 LAKE FOREST DRIVE #409
LAGUNA HILLS, CA 92653
TEL 949.858.2924

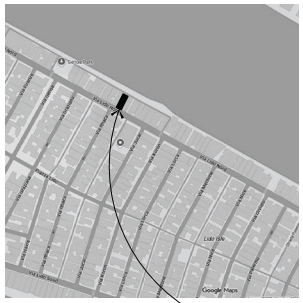
ARCHITECT:
ERIC AUST ARCHITECT
62 BALBOA COVES
NEWPORT BEACH, CA 92663
TEL 949.637.5220

ENERGY CALCULATIONS:
ECO HERS
ECOHERSTEST@GMAIL.COM
TEL 949.217.2273

GEOTECHNICAL ENGINEER:
R McCARTHY CONSULTING, INC.
CONTACT: ROBERT McCARTHY
23 CORPORATE PLAZA, SUITE 150
NEWPORT BEACH, CA 92660
TEL 949.629.2539

sheet index

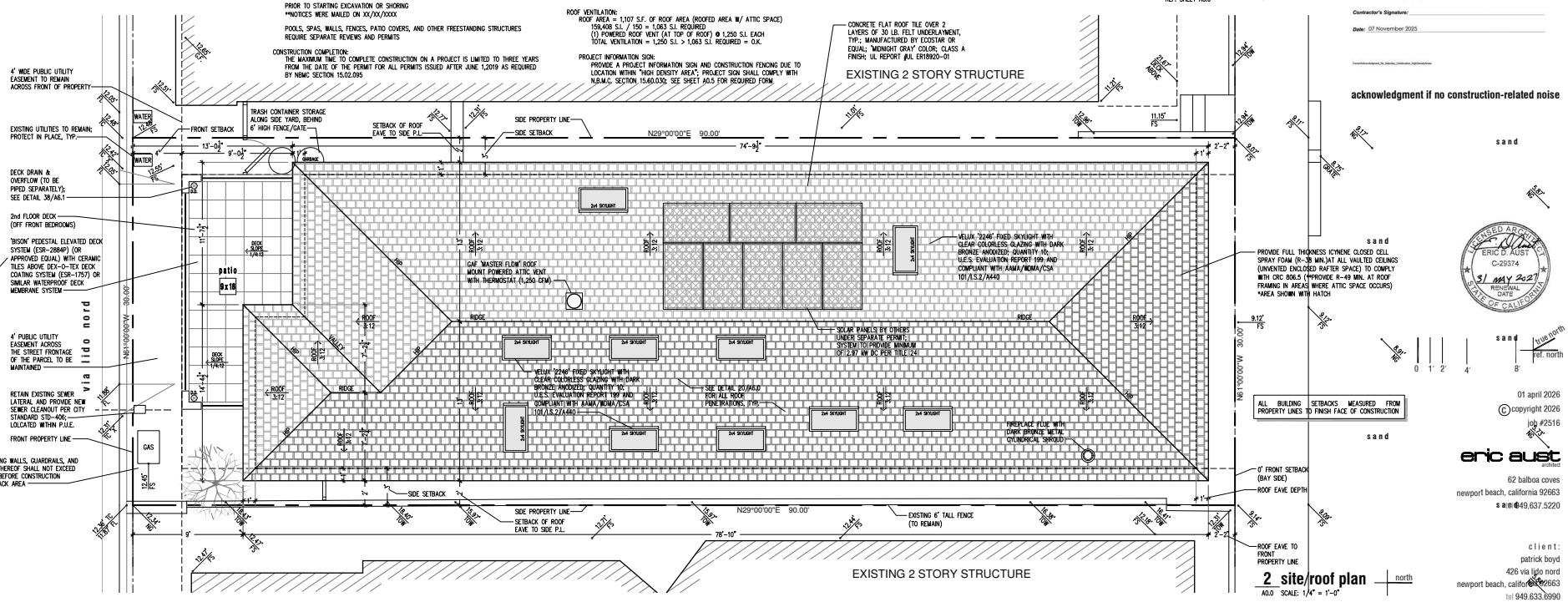
	COVER SHEET
A0.0	SITE/ROOF PLAN + PROJECT DATA
A0.3	FLOOR AREA ANALYSIS
1 of 1	CIVIL SURVEY
C-1	PRECISE GRADING PLAN TITLE SHEET
C-2	PRECISE GRADING PLAN
C-3	GRADING SECTIONS + DETAILS
C-4	EROSION CONTROL PLAN
C-5	SOIL REPORT RECOMMENDATIONS
D1.0	DEMOLITION PLAN
A1.0	1st FLOOR PLAN
A1.1	2nd FLOOR PLAN
A3.0	EXTERIOR ELEVATIONS
A3.1	EXTERIOR ELEVATIONS + SECTION
A4.0	BUILDING SECTIONS
A4.1	EXTERIOR RENDERINGS
A4.2	BUILDING MATERIALS
L1.0	LANDSCAPE PLAN



1 vicinity map
A0.0 NOT TO SCALE

symbols legend

BUILDING ELEVATION REF. SHEET A3.0 — X / A3.0
ELEVATION MARK — ELEVATION INFO
DETAIL MARK — X / A6.0
GLASS ELEVATION REF. SHEET A5.0 — (A)
DOOR NUMBER REF. SHEET A5.0 — (01)



2 site/roof plan
A0.0 SCALE: 1/4" = 1'-0"

a0.0

site plan + project data
1/4"=1'-0"

boyd residence

426 via lido nord
newport beach, california
92663

CITY OF NEWPORT BEACH
COMMUNITY DEVELOPMENT DEPARTMENT
BUILDING DIVISION
100 Civic Center Drive | P.O. Box 1768 | Newport Beach, CA 92658-8915
www.newportbeachca.gov | (949) 644-3200

ACKNOWLEDGMENT OF NO CONSTRUCTION-RELATED NOISE ON SATURDAY OR SUNDAY IN HIGH DENSITY AREAS

On June 11, 2019, the City Council adopted an ordinance restricting construction-related noise on Saturday in High Density Areas effective August 12, 2019.

I acknowledge that any construction-related noise, (including, but not limited to operating power equipment or machinery in a manner that produces noise) is not allowed on Saturday or Sunday in High Density Areas in accordance with Newport Beach Municipal Code 10.28.040. As the owner of the property, I am responsible to ensure all persons working on the property comply with this provision of the Newport Beach Municipal Code.

Project Address: 426 Via Lido Nord
Permit Number:
Owner's Name: Patrick Boyd
Owner's Signature:
Contractor's Signature:
Date: 07 November 2025

acknowledgment if no construction-related noise

LICENSED ARCHITECT
ERIC D. AUST
C-25374
31 MAY 2027
RENEWAL DATE
STATE OF CALIFORNIA

01 april 2026
© copyright 2026
job #2516

eric aust
architect
62 balboa coves
newport beach, california 92663
sand 949.637.5220

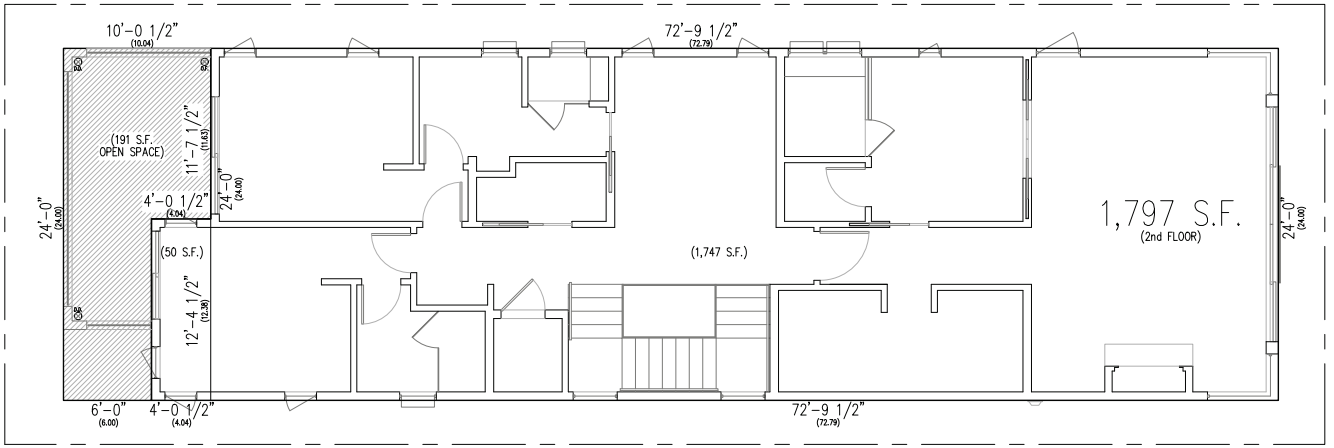
client:
patrick boyd
426 via lido nord
newport beach, california 92663
tel 949.633.6990

a0.3

floor area analysis plans
1/4"=1'-0"

boyd residence

426 via lido nord
newport beach, california
92663



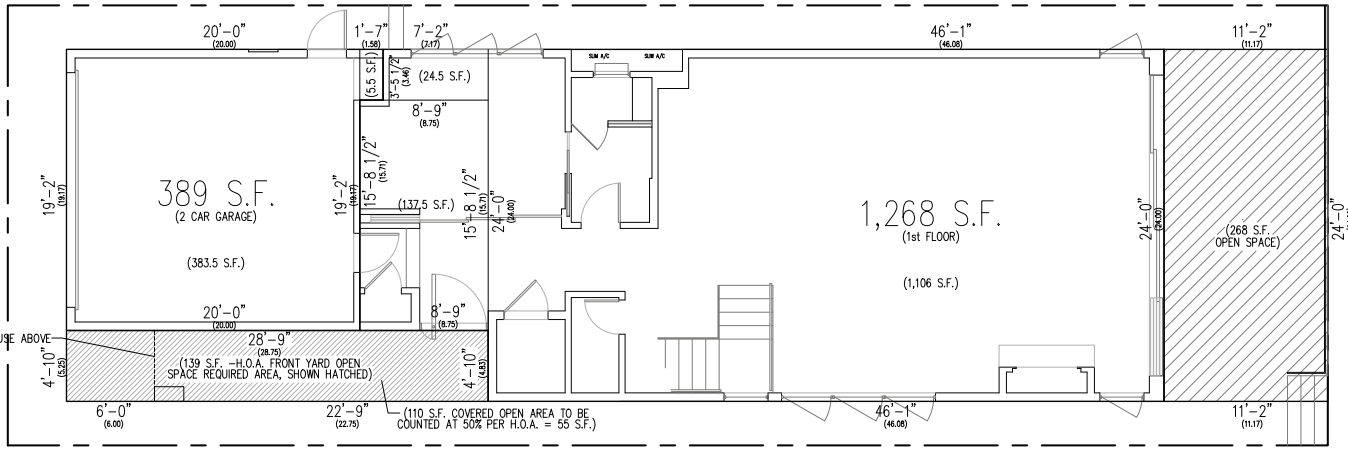
2 2nd floor area analysis
A0.3 SCALE: 1/4" = 1'-0"

project area analysis
2,700 s.f. lot area
2,064 s.f. buildable lot area
1.7 x 2,064=3,509 s.f. allowable (PER LIDO ISLE H.O.A.)
1.75 x 2,064=3,612 s.f. allowable (PER CITY OF NEWPORT BEACH)

project area analysis
1,268 s.f. 1st floor (livable)
55 s.f. 1st floor (covered exterior)
+1,797 s.f. 2nd floor (livable)
3,120 s.f. total livable
389 s.f. garage
3,509 s.f. total floor area
(0 S.F. UNDER ALLOWABLE FOR H.O.A.)

open space provided (per City of NB)
248 s.f. 1st floor (bayside patio)
+ 191 s.f. 2nd floor (street patio)
439 s.f. total open space (310 req'd)

open space provided along street frontage (per HOA)
139 s.f. 1st floor (bayside patio)
+ 191 s.f. 2nd floor (street patio)
330 s.f. total open space (310 req'd)



1 1st floor area analysis
A0.3 SCALE: 1/4" = 1'-0"

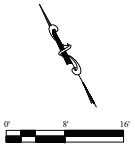
LICENSED ARCHITECT
ERIC D. AUST
C-29374
RENEWAL DATE
31 MAY 2027
STATE OF CALIFORNIA

0 1' 2' 4' 8'
true north
ref. north

01 april 2026
© copyright 2026
job #2516

eric aust architect
62 balboa coves
newport beach, california 92663
tel 949.637.5220

client:
patrick boyd
426 via lido nord
newport beach, california 92663
tel 949.633.6990

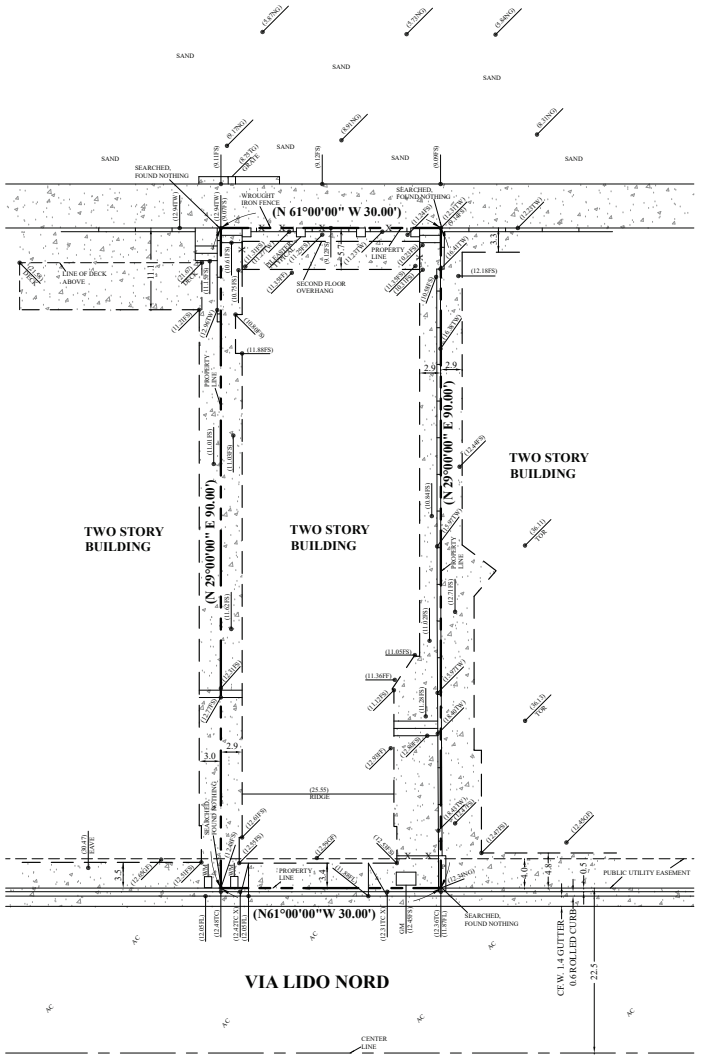


SURVEY NOTES

1. ALL MEASUREMENTS SHOWN HEREON ARE TO EXISTING EXTERIOR FINISHED SURFACE.
2. THE ONLY EASEMENTS SHOWN, IF ANY, ARE PER THE TRACT MAP OF SUBJECT PROPERTY. THE PLAT FOR THIS SURVEY WAS PREPARED WITHOUT A TITLE REPORT. UNPLOTTED EASEMENTS MAY EXIST ON THE SUBJECT PROPERTY.
3. SURVEYOR OR ENGINEER SHALL PERMANENTLY MONUMENT PROPERTY CORNERS OR OFFSETS BEFORE STARTING GRADING.

LEGEND

	DESCRIPTION
(123.45)	MEASURED ELEVATIONS
( )	RECORD BERING & DISTANCE
	BRICK
	CONCRETE
	DECK
	WALL
	BUILDING
	CENTER LINE
	PROPERTY LINE
X X X	FENCE
	BENCH MARK
AC	ASPHALT
CF	CURB FACE
FF	FINISH FLOOR
FH	FIRE HYDRANT
FL	FLOW LINE
FS	FINISHED SURFACE
GF	GARAGE FLOOR
GM	GAS METER
L&T	LEAD & TAG
MH	MAN HOLE
NG	NATURAL GRADE
P	PLANTER
PP	POWER POLE
TC	TOP OF CURB
TW	TOP OF WALL
TG	TOP OF GRADE
TOR	TOP OF ROOF
S&W	SPIKE & WASHER
WM	WATER METER
WV	WATER VALVE



VICINITY MAP
NOT TO SCALE

ADDRESS OF PROJECT

426 VIA LIDO NORD
NEWPORT BEACH, CA

OWNER

PATRICK BOYD

LEGAL DESCRIPTION

THE SOUTHEASTERLY 5 FEET OF LOT 483, AND THE NORTHWESTERLY 25 FEET OF LOT 484, OF TRACT NO. 907, IN THE CITY OF NEWPORT BEACH, COUNTY OF ORANGE, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 28, PAGES 25 THROUGH 36 OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

APN 423-191-13

BENCH MARK

BENCH MARK #NBS-21-92
DATUM: NAVD88
ELEVATION: 11.91

TOPOGRAPHIC SURVEY

JOB: 76-94 DATE: 8/22/2025

RDM
SURVEYING INC.
RON MIEDEMA L.S. 4653
23016 LAKE FOREST DRIVE #409
LAGUNA HILLS, CA 92653
(949) 858-2924 OFFICE
(949) 422-1869 CELL
RDMSURVEYING@COX.NET

LICENSED LAND SURVEYOR
RON MIEDEMA
No. 4653
EXP. 9/30/25
STATE OF CALIFORNIA

PRECISE GRADING PLAN

FOR

SINGLE FAMILY RESIDENCE

426 VIA LIDO NORD, NEWPORT BEACH, CA 92663

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO CHAPTER 15 OF THE NEWPORT BEACH MUNICIPAL CODE (NBMC), THE PROJECT SOILS REPORT AND SPECIAL REQUIREMENTS OF THE PERMIT.
2. DUST SHALL BE CONTROLLED BY WATERING AND/OR DUST PALLIATIVE.
3. SANITARY FACILITIES SHALL BE MAINTAINED ON THE SITE DURING THE CONSTRUCTION PERIOD.
4. WORK HOURS ARE LIMITED FROM 7:00 AM TO 6:30 PM MONDAY THROUGH FRIDAY; 8:00 AM TO 6:00 PM SATURDAYS; AND NO WORK ON SUNDAYS AND HOLIDAYS PER SECTION 10-28 OF THE NBMC.
5. NOISE, EXCAVATION, DELIVERY AND REMOVAL SHALL BE CONTROLLED PER SECTION 10-28 OF THE NBMC.
6. THE STAMPED SET OF APPROVED PLANS SHALL BE ON THE JOB SITE AT ALL TIMES.
7. PERMITTEE AND CONTRACTOR ARE RESPONSIBLE FOR LOCATING AND PROTECTING UTILITIES.
8. APPROVED SHORING, DRAINAGE PROVISIONS AND PROTECTIVE MEASURES MUST BE USED TO PROTECT ADJOINING PROPERTIES DURING THE GRADING OPERATION.
9. CESSPOOLS AND SEPTIC TANKS SHALL BE ABANDONED IN COMPLIANCE WITH THE UNIFORM PLUMBING CODE AND APPROVED BY THE BUILDING OFFICIAL.
10. HAUL ROUTES FOR IMPORT OR EXPORT OF MATERIALS SHALL BE APPROVED BY THE CITY TRAFFIC ENGINEER AND PROCEDURES SHALL CONFORM WITH CHAPTER 15 OF THE NBMC.
11. POSITIVE DRAINAGE SHALL BE MAINTAINED AWAY FROM ALL BUILDING AND SLOPE AREAS.
12. FAILURE TO REQUEST INSPECTIONS AND/OR HAVE REMOVABLE EROSION CONTROL DEVICES ON-SITE AT THE APPROPRIATE TIMES SHALL RESULT IN A "STOP WORK" ORDER.
13. ALL PLASTIC DRAINAGE PIPES SHALL CONSIST OF PVC OR ABS PLASTIC SCHEDULE 40 OR SDR 35 OR ADS 3000 WITH GLUED JOINTS.
14. NO PAINT, PLASTER, CEMENT, SOIL, MORTAR OR OTHER RESIDUE SHALL BE ALLOWED TO ENTER STREETS, CURBS, GUTTERS OR STORM DRAINS. ALL MATERIAL AND WASTE SHALL BE REMOVED FROM THE SITE.

EROSION CONTROL

1. TEMPORARY EROSION CONTROL PLANS ARE REQUIRED FROM OCTOBER 15 TO MAY 15.
2. EROSION CONTROL DEVICES SHALL BE AVAILABLE ON-SITE BETWEEN OCTOBER 15 AND MAY 15.
3. BETWEEN OCTOBER 15 AND MAY 15, EROSION CONTROL MEASURES SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHENEVER THE FIVE-DAY PROBABILITY OF RAIN EXCEEDS 30 PERCENT. DURING THE REMAINDER OF THE YEAR, THEY SHALL BE IN PLACE AT THE END OF THE WORKING DAY, WHENEVER THE DAILY RAINFALL PROBABILITY EXCEEDS 50 PERCENT.
4. TEMPORARY DESILTING BASINS, WHEN REQUIRED, SHALL BE INSTALLED AND MAINTAINED FOR THE DURATION OF THE PROJECT.

REQUIRED INSPECTIONS

1. A PRE-GRADING MEETING SHALL BE SCHEDULED 48 HOURS PRIOR TO START OF GRADING WITH THE FOLLOWING PEOPLE PRESENT: OWNER, GRADING CONTRACTOR, DESIGN CIVIL ENGINEER, SOILS ENGINEER, GEOLOGIST, CITY BUILDING INSPECTOR OR THEIR REPRESENTATIVES. REQUIRED FIELD INSPECTIONS WILL BE OUTLINED AT THE MEETING.
2. A PRE-PAVING MEETING SHALL BE SCHEDULED 48 HOURS PRIOR TO START OF THE SUB-GRADE PREPARATION FOR THE PAVING WITH THE FOLLOWING PEOPLE PRESENT: OWNER, PAVING CONTRACTORS, DESIGN CIVIL ENGINEER, SOILS ENGINEER, CITY BUILDING INSPECTOR OR THEIR REPRESENTATIVES. REQUIRED FIELD INSPECTIONS WILL BE OUTLINED AT THE MEETING.

GRADING FILLS/CUTS

1. GRADED SLOPES SHALL BE NO STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL.
2. FILL SLOPES SHALL BE COMPACTED TO NO LESS THAN 90 PERCENT RELATIVE COMPACTION OUT TO THE FINISHED SURFACE.
3. ALL FILLS SHALL BE COMPACTED THROUGHOUT TO A MINIMUM OF 90 PERCENT RELATIVE COMPACTION AS DETERMINED BY ASTM TEST METHOD 1557, AND APPROVED BY THE SOILS ENGINEER. COMPACTION TESTS SHALL BE PERFORMED APPROXIMATELY EVERY TWO FEET IN VERTICAL HEIGHT AND OF SUFFICIENT QUANTITY TO ATTEST TO THE OVERALL COMPACTION EFFORT APPLIED TO THE FILL AREAS.
4. AREAS TO RECEIVE FILL SHALL BE CLEARED OF ALL VEGETATION AND DEBRIS, SCARIFIED AND APPROVED BY THE SOILS ENGINEER PRIOR TO PLACING OF THE FILL.
5. FILLS SHALL BE KEYED OR BENCHED INTO COMPETENT MATERIAL.
6. ALL EXISTING FILLS SHALL BE APPROVED BY THE SOILS ENGINEER OR REMOVED BEFORE ANY ADDITIONAL FILLS ARE ADDED.
7. ANY EXISTING IRRIGATION LINES AND CISTERNS SHALL BE REMOVED OR CRUSHED IN PLACE AND BACKFILLED AND APPROVED BY THE SOILS ENGINEER.
8. THE ENGINEERING GEOLOGIST AND SOILS ENGINEER SHALL, AFTER CLEARING AND PRIOR TO THE PLACEMENT OF FILL IN CANYONS, INSPECT EACH CANYON FOR AREAS OF ADVERSE STABILITY AND DETERMINE THE PRESENCE OF, OR POSSIBILITY OF FUTURE ACCUMULATION OF, SUBSURFACE WATER OR SPRING FLOW. IF NEEDED, DRAINS WILL BE DESIGNED AND CONSTRUCTED PRIOR TO THE PLACEMENT OF FILL IN EACH RESPECTIVE CANYON.
9. THE EXACT LOCATION OF THE SUBDRAINS SHALL BE SURVEYED IN THE FIELD FOR LINE AND GRADE.
10. ALL TRENCH BACKFILLS SHALL BE COMPACTED THROUGHOUT TO A MINIMUM OF 90 PERCENT RELATIVE COMPACTION, AND APPROVED BY THE SOILS ENGINEER. THE BUILDING DEPARTMENT MAY REQUIRE CORING OF CONCRETE FLAT WORK PLACED OVER UNTESTED BACKFILLS TO FACILITATE TESTING.
11. THE STOCKPILING OF EXCESS MATERIAL SHALL BE APPROVED BY THE BUILDING DEPARTMENT.
12. LANDSCAPING OF ALL SLOPES AND PADS SHALL BE IN ACCORDANCE WITH CHAPTER 15 OF THE NBMC.
13. ALL CUT SLOPES SHALL BE INVESTIGATED BOTH DURING AND AFTER GRADING BY AN ENGINEERING GEOLOGIST TO DETERMINE IF ANY STABILITY PROBLEM EXISTS. SHOULD EXCAVATION DISCLOSE ANY GEOLOGICAL HAZARDS OR POTENTIAL GEOLOGICAL HAZARDS, THE ENGINEERING GEOLOGIST SHALL RECOMMEND AND SUBMIT NECESSARY TREATMENT TO THE BUILDING DEPARTMENT FOR APPROVAL.
14. WHERE SUPPORT OR BUTTRESSING OF CUT AND NATURAL SLOPES IS DETERMINED TO BE NECESSARY BY THE ENGINEERING GEOLOGIST AND SOILS ENGINEER, THE SOILS ENGINEER WILL OBTAIN APPROVAL OF DESIGN, LOCATION AND CALCULATIONS FROM THE BUILDING DEPARTMENT PRIOR TO CONSTRUCTION.
15. THE ENGINEERING GEOLOGIST AND SOILS ENGINEER SHALL INSPECT AND TEST THE CONSTRUCTION OF ALL BUTTRESS FILLS AND ATTEST TO THE STABILITY OF THE SLOPE AND ADJACENT STRUCTURES UPON COMPLETION.
16. WHEN CUT PADS ARE BROUGHT TO NEAR GRADE THE ENGINEERING GEOLOGIST SHALL DETERMINE IF THE BEDROCK IS EXTENSIVELY FRACTURED OR FAULTED AND WILL READILY TRANSMIT WATER. IF CONSIDERED NECESSARY BY THE ENGINEERING GEOLOGIST AND SOILS ENGINEER, A COMPACTED FILL BLANKET WILL BE PLACED.
17. THE ENGINEERING GEOLOGIST SHALL PERFORM PERIODIC INSPECTIONS DURING GRADING.
18. NOTIFICATION OF NONCOMPLIANCE: IF, IN THE COURSE OF FULFILLING THEIR RESPONSIBILITY, THE CIVIL ENGINEER, THE SOILS ENGINEER, THE ENGINEERING GEOLOGIST OR THE TESTING AGENCY FINDS THAT THE WORK IS NOT BEING DONE IN CONFORMANCE WITH THE APPROVED GRADING PLANS, THE DISCREPANCIES SHALL BE REPORTED IMMEDIATELY IN WRITING TO THE PERSON IN CHARGE OF THE GRADING WORK AND TO THE BUILDING INSPECTOR. RECOMMENDATIONS FOR CORRECTIVE MEASURES, IF NECESSARY, SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT FOR APPROVAL.

DOCUMENTATION

1. AN AS-BUILT GRADING PLAN SHALL BE PREPARED BY THE CIVIL ENGINEER INCLUDING ORIGINAL GROUND SURFACE ELEVATIONS, AS GRADED GROUND SURFACE ELEVATIONS, LOT DRAINAGE PATTERNS AND LOCATIONS, AND ELEVATIONS OF ALL SURFACE AND SUBSURFACE DRAINAGE FACILITIES. HE/SHE SHALL PROVIDE WRITTEN APPROVAL THAT THE WORK WAS DONE IN ACCORDANCE WITH THE FINAL APPROVED GRADING PLAN AND STATE THE NUMBER OF YARDS OF CUT AND/OR FILL MOVED DURING THE OPERATION.
2. A SOILS GRADING REPORT PREPARED BY THE SOILS ENGINEER, INCLUDING LOCATIONS AND ELEVATION OF FIELD DENSITY TESTS, SUMMARIES OF FIELD AND LABORATORY RESULTS AND OTHER SUBSTANTIATED DATA AND COMMENTS ON ANY CHANGES MADE DURING GRADING AND THEIR EFFECT ON THE RECOMMENDATIONS MADE IN THE SOILS ENGINEERING INVESTIGATION REPORT. HE SHALL PROVIDE WRITTEN APPROVAL AS TO THE ADEQUACY OF THE SITE FOR THE INTENDED USE AND COMPLETION OF WORK IN ACCORDANCE WITH THE JOB SPECIFICATIONS.
3. A GEOLOGIC GRADING REPORT PREPARED BY THE ENGINEERING GEOLOGIST, INCLUDING A FINAL DESCRIPTION OF THE GEOLOGY OF THE SITE, INCLUDING ANY NEW INFORMATION DISCLOSED DURING THE GRADING AND THE EFFECT OF SAME ON RECOMMENDATIONS INCORPORATED IN THE APPROVED GRADING PLAN. HE/SHE SHALL PROVIDE WRITTEN APPROVAL AS TO THE ADEQUACY OF THE SITE FOR THE INTENDED USE AS AFFECTED BY GEOLOGIC FACTORS.

ISSUANCE OF A BUILDING PERMIT BY THE CITY OF NEWPORT BEACH DOES NOT RELIEVE APPLICANTS OF THE LEGAL REQUIREMENTS TO OBSERVE COVENANTS, CONDITIONS, AND RESTRICTIONS WHICH MAY BE RECORDED AGAINST THE PROPERTY OR TO OBTAIN PLANS. YOU SHOULD CONTACT YOUR COMMUNITY ASSOCIATIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION AUTHORIZED BY THIS PERMIT.

PRIOR TO PERFORMING ANY WORK IN THE CITY RIGHT-OF-WAY, AN ENCROACHMENT PERMIT MUST BE OBTAINED FROM THE PUBLIC WORK DEPARTMENT.

NOTICE TO CONTRACTOR

1. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITION DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONSTRUCTION CONTRACTOR FURTHER AGREES 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, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.
2. IF THIS PROJECT IS STAKED BY SURVEY CREWS OTHER THAN THOSE CREWS UNDER THE DIRECT SUPERVISION OF THE SIGNATORY ENGINEER, THE SIGNATORY ENGINEER WILL NO LONGER BE THE ENGINEER OF RECORD AND WILL HAVE NO RESPONSIBILITY AS TO THE FINAL CONSTRUCTED PROJECT. THE SIGNATORY ENGINEER WILL NOT BE RESPONSIBLE FOR ERRORS OR OMISSIONS THAT COULD HAVE BEEN CORRECTED DURING THE CONSTRUCTION OF THIS PROJECT, IF THE STAKING HAD BEEN DONE BY THE SURVEY CREW UNDER HIS DIRECT SUPERVISION.
3. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF AVAILABLE RECORDS TO THE BEST OF OUR KNOWLEDGE. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN, AND ANY OTHER LINES OR STRUCTURES NOT SHOWN ON THESE PLANS, AND IS RESPONSIBLE FOR THE PROTECTION OF, AND ANY DAMAGE TO THESE LINES OR STRUCTURES.

NOTE TO SURVEYOR

SURVEYOR TO FILE A CORNER RECORD OR RECORD OF SURVEY WITH THE OFFICE OF COUNTY SURVEYOR. EVIDENCE OF FILING SHALL BE SUBMITTED TO BUILDING INSPECTOR PRIOR TO FOUNDATION INSPECTION.

SURVEYOR OR ENGINEER SHALL PERMANENTLY MONUMENT PROPERTY CORNERS OR OFFSET BEFORE STARTING GRADING.

ADDITIONAL NOTE

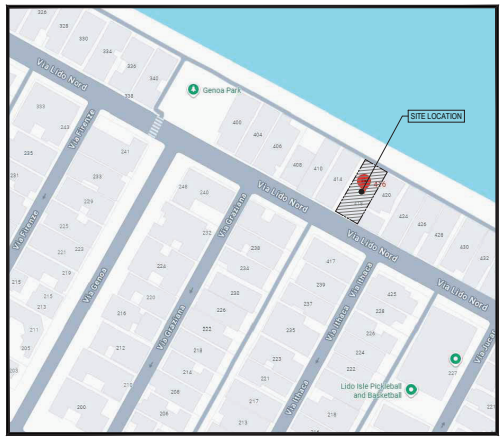
1. LICENSED SURVEYOR TO PROVIDE MONITORING OF SHORING AND IMPROVEMENTS ON THE ADJACENT PROPERTIES AND SUBMIT RESULTS WITH A REPORT TO THE SHORING DESIGN ENGINEER AND TO THE BUILDING INSPECTOR ON A DAILY BASIS DURING EXCAVATION AND SHORING AND WEEKLY BASIS THEREAFTER. WHERE DEWATERING IS REQUIRED, MONITORING SHALL CONTINUE UNTIL DEWATERING IS STOPPED.
2. IN LIEU OF SPECIAL INSPECTION BY DEPUTY BUILDING INSPECTOR, GEOTECHNICAL ENGINEER SHALL PROVIDE CONTINUOUS INSPECTIONS DURING SHORING AND EXCAVATION OPERATIONS AND DURING REMOVAL OF SHORING.
3. CONTRACTOR SHALL NOTIFY ADJACENT PROPERTY OWNER BY CERTIFIED MAIL 10 DAYS PRIOR TO STARTING THE SHORING OR EXCAVATION WORK.

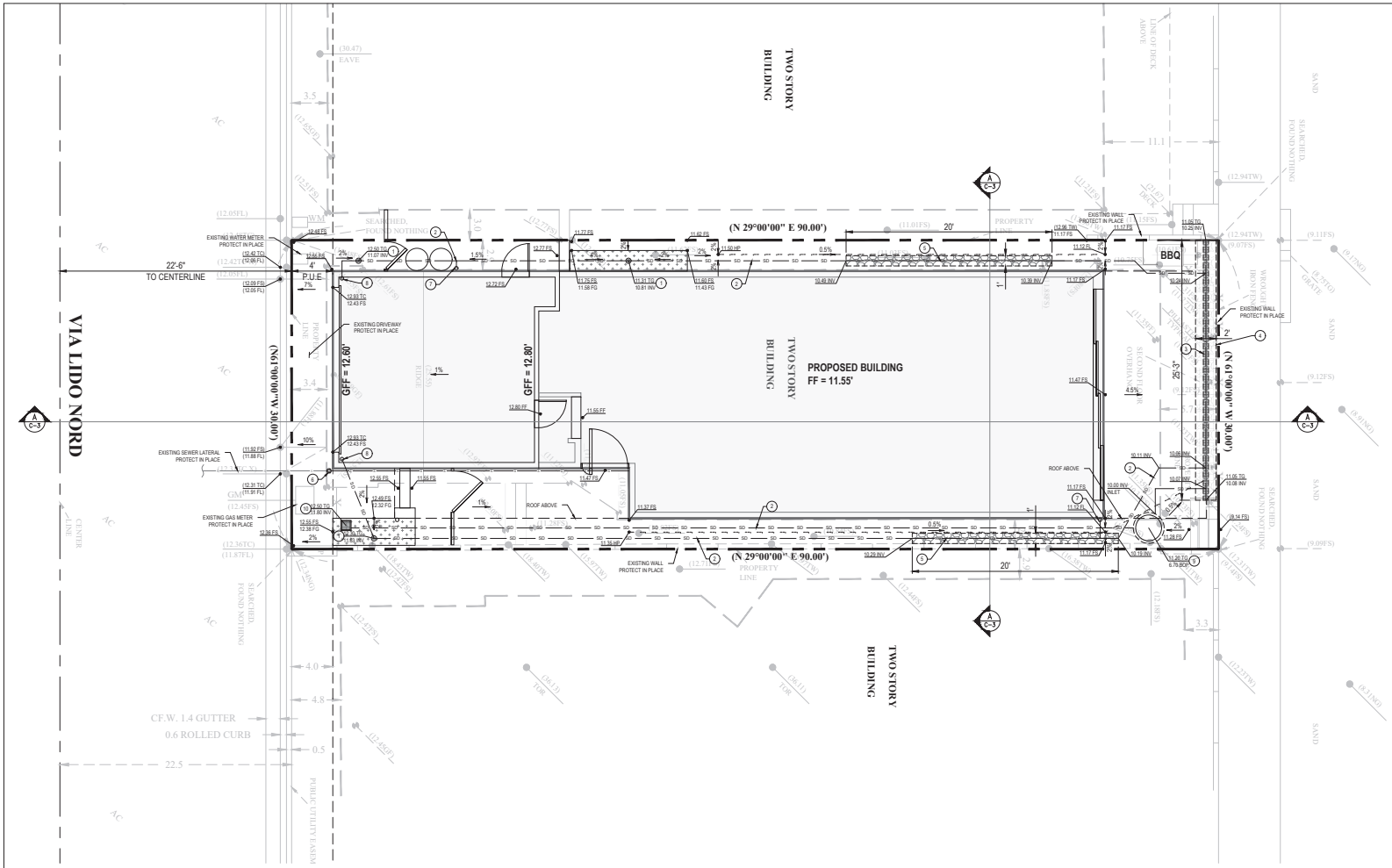
PUBLIC WORKS NOTE

1. AN APPROVED ENCROACHMENT PERMIT IS REQUIRED FOR ALL WORK ACTIVITIES WITHIN THE PUBLIC RIGHT-OF-WAY.
2. A PUBLIC WORKS DEPARTMENT ENCROACHMENT PERMIT INSPECTION IS REQUIRED BEFORE THE BUILDING PERMIT FINAL CAN BE ISSUED. AT THE TIME OF PUBLIC WORKS DEPARTMENT INSPECTION, IF ANY OF THE EXISTING PUBLIC IMPROVEMENTS SURROUNDING THE SITE IS DAMAGED, NEW CONCRETE SIDEWALK, CURB AND GUTTER, AND ALLEY/STREET PAVEMENT WILL BE REQUIRED. ADDITIONALLY, IF EXISTING UTILITIES INFRASTRUCTURE ARE DEEMED SUBSTANDARD, A NEW 1-INCH WATER SERVICE, WATER METER BOX, SEWER LATERAL AND/OR CLEANOUT WITH BOX AND LID WILL BE REQUIRED. 100% OF THE COST SHALL BE BORNE BY THE PROPERTY OWNER (MUNICIPAL CODES 14.24.020 AND 14.08.030). SAID DETERMINATION AND THE EXTENT OF THE REPAIR WORK SHALL BE MADE AT THE DISCRETION OF THE PUBLIC WORK INSPECTOR. CONTRACTOR IS RESPONSIBLE TO MAINTAIN THE PUBLIC RIGHT OF WAY AT ALL TIMES DURING THE CONSTRUCTION PROJECT. A STOP WORK NOTICE MAY BE ISSUED FOR ANY DAMAGE OR UNMAINTAINED PORTION OF THE PUBLIC RIGHT OF WAY.
3. AN ENCROACHMENT AGREEMENT IS REQUIRED FOR ALL NON-STANDARD IMPROVEMENTS WITHIN THE PUBLIC RIGHT-OF-WAY. ALL NON-STANDARD IMPROVEMENTS SHALL COMPLY WITH CITY COUNCIL POLICY L-6.
4. ALL WORK RELATED TO WASTEWATER IN THE PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED BY A C-42 LICENSED SANITATION SEWER CONTRACTOR OR AN "A" LICENSED GENERAL ENGINEERING CONTRACTOR.
5. ALL WORK RELATED TO WATER IN THE PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED BY A C-34 LICENSED PIPELINE CONTRACTOR OR AN "A" LICENSED GENERAL ENGINEERING CONTRACTOR.

SHORING NOTES

1. SHEET PILES ARE NOT PERMITTED FOR SHORING DUE TO POTENTIAL DAMAGE TO ADJACENT PROPERTIES.
2. EXCAVATIONS AND SHORING SHALL BE MADE ENTIRELY WITHIN THE PROPERTY LINES.
3. A CAL-OSHA PERMIT IS REQUIRED FOR EXCAVATION DEEPER THAN 5' AND FOR SHORING AND/OR UNDERPINNING.
4. LICENSED SURVEYOR TO PROVIDE MONITORING OF SHORING AND IMPROVEMENTS ON ADJACENT PROPERTIES AND SUBMIT RESULTS WITH A REPORT TO THE SHORING DESIGN ENGINEER AND TO THE BUILDING INSPECTOR ON A DAILY BASIS DURING EXCAVATION AND SHORING AND WEEKLY BASIS THEREAFTER. WHERE DEWATERING IS REQUIRED, MONITORING SHALL CONTINUE UNTIL DEWATERING IS STOPPED.
5. IN LIEU OF SPECIAL INSPECTION BY DEPUTY BUILDING INSPECTOR, GEOTECHNICAL ENGINEER SHALL PROVIDE CONTINUOUS INSPECTIONS DURING SHORING AND EXCAVATION OPERATIONS AND DURING REMOVAL OF SHORING
6. CONTRACTOR SHALL NOTIFY ADJACENT PROPERTY OWNERS BY CERTIFIED MAIL 30 DAYS PRIOR TO STARTING ANY EXCAVATION WORK (CIVIL CODE SECTION 832). PROOF OF CERTIFIED MAIL SHALL BE PROVIDED PRIOR TO ISSUANCE OF GRADING PERMIT.
7. NON-CANTILEVERED RETAINING WALLS MUST BE SHORED UNTIL THE BRACING ELEMENT(S) IS IN PLACE.


SITE LOCATION
Genoa Park
Via Lido Nord
Via Lido Nord
Via Lido Nord
Via Lido Nord
Via Lido Nord
Via Genoa
Via Genoa
Via Genoa



PRECISE GRADING AND DRAINAGE PLAN

SCALE 1"=5'

CONSTRUCTION KEY NOTES

1. INSTALL 6" DIA. DRAIN NDS 40 W/RISER AND ADAPTOR OR EQUAL.
2. INSTALL 4" DIA. PVC SCHEDULE 40 OR SDR 35 PIPE DRAIN SYSTEM.
3. INSTALL BOTTOMLESS TRENCH DRAIN TRENCH.
4. CONSTRUCT 42" GUARDRAIL ABOVE FINISH SURFACE, PER ARCHITECTURAL PLAN.
5. 4" PERFORATED PIPE WITHIN TRENCH DRAIN PER DETAIL ON SHEET C-3.
6. INSTALL NEW SEWER LATERAL WITH CLEANOUT PER CITY STD-406.
7. INSTALL DOWNSPOUT PER ARCHITECTURAL PLAN.
8. INSTALL DECK DRAIN FOR DECK ABOVE PER ARCHITECTURAL PLAN. CONNECT TO DRAINAGE SYSTEM
9. INSTALL SUMP PUMP PER DETAIL ON SHEET C-3
10. INSTALL 12" x 12" OVERFLOW CATCH BASIN

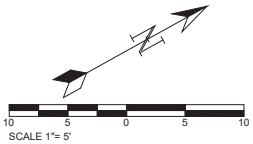
EXISTING UTILITIES INFORMATION NEED CONTRACTOR TO VERIFY ON FIELD.

LEGEND

(100)	EXISTING CONTOUR
100	PROPOSED CONTOUR
100FS	SPOT ELEVATION
	PROPOSED HARDSCAPE
	PROPOSED PLANTER AREA
SD	PROPOSED STORM DRAIN
	PROPERTY LINE
X.X%	SURFACE SLOPE
S=X.X%	STORM DRAIN SLOPE
PAD	PROPOSED PAD ELEVATION
FS	PROPOSED FINISHED SURFACE
FG	PROPOSED FINISHED GROUND
FF	PROPOSED FINISHED FLOOR
INV	INVERT OF PIPE
TG	TOP OF GRATE
PL	PROPERTY LINE
TW	TOP OF WALL
HP	HIGH POINT
EXIST	EXISTING
BOP	BOTTOM OF PIT

NOTE:

NO PORTION OF THE PROPOSED HOME FOUNDATION SHALL ENCROACH INTO THE UTILITY EASEMENT. ALL CONSTRUCTION SHALL BE CONFINED OUTSIDE OF THE EASEMENT LIMITS.



SCALE 1"= 5'

OWNER/SUBDIVIDER:
PATRICK BOYD
426 VIA LIDO NORD,
NEWPORT BEACH, CA 92663
TEL: 949.633.6990

NO.	DATE	REVISIONS	APPROVED BY
			DESIGNER
			DESIGNED BY:
			DRAFTED BY:
			CHECKED BY:

REGISTERED PROFESSIONAL ENGINEER — AMIR DEHIMI — No. C78194 — CIVIL — STATE OF CALIFORNIA

PLANS PREPARED BY:
CORE
FROM THE GROUND UP

Core Structure, Inc.
201 E Sandpointe Ave., #400
Santa Ana, CA 92707
Phone: 949-954-7244
info@corestructure.com
www.corestructure.com

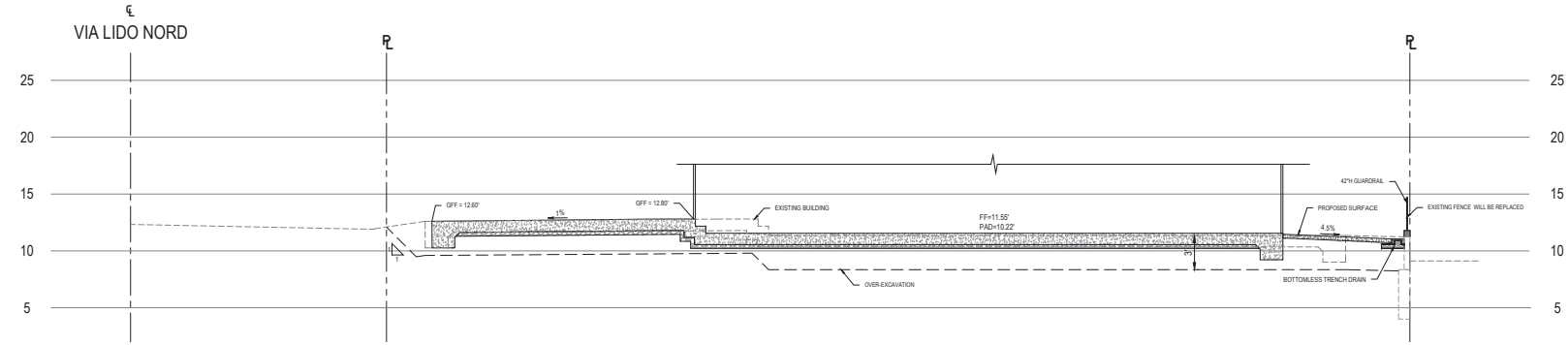
AMIR DEHIMI
R.C.E. C78194 EXP. 09/30/2027

2026-03-31
DATE

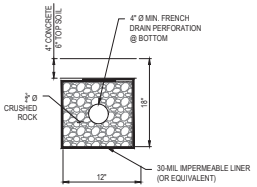
SINGLE FAMILY RESIDENCE
PRELIMINARY GRADING AND DRAINAGE PLAN
PROJECT ADDRESS
426 VIA LIDO NORD
NEWPORT BEACH, CA 92663

PROJECT NO.: 26013

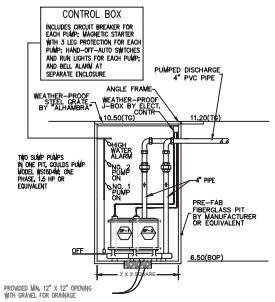
SHEET NO.: C-2



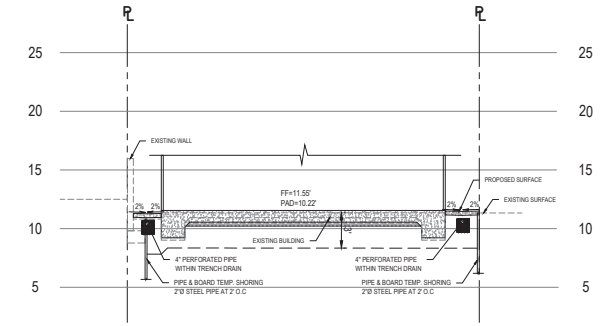
SECTION A-A
SCALE 1"=5'



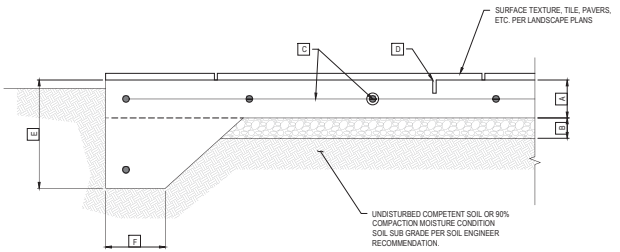
DETAIL
PERFORATED DRAIN TRENCH
NOT TO SCALE



DETAIL
SUMP PUMP (RAINWATER)
NOT TO SCALE



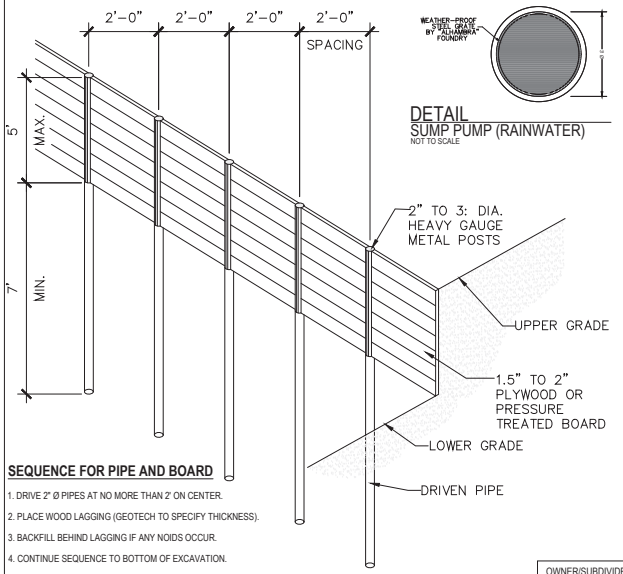
SECTION B-B
SCALE 1"=5'



NOTES:
1. THIS DETAIL IS FOR REFERENCE ONLY TO ILLUSTRATE SOILS REPORT REQUIREMENTS. HARDSCAPE DESIGN BY OTHERS.
2. SEE SOILS REPORT FOR OVEREXCAVATION AND SUBGRADE PREPARATION REQUIREMENTS.

		DRIVEWAYS	HARDSCAPE
A	MIN. SLAB THICKNESS	6"	4"
B	MIN. AGG. BASE THICKNESS	6"	4"
C	MIN. REINFORCEMENT (O.C.E.W.)	#4@12"	#4@12"
D	MAX. SAWCUT OR COLD JT. SPACING	6"	6"
E	THICKENED EDGE DEPTH	12"	12"
F	THICKENED EDGE WIDTH	8"	8"

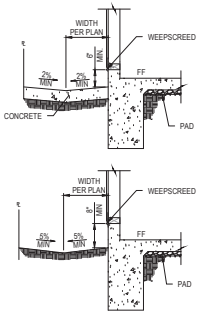
DETAIL
TYPICAL DRIVEWAY / HARDSCAPE SECTION
NOT TO SCALE



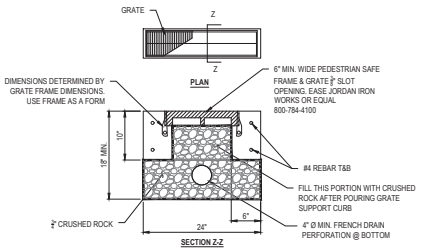
SEQUENCE FOR PIPE AND BOARD

1. DRIVE 2" Ø PIPES AT NO MORE THAN 2' ON CENTER.
2. PLACE WOOD LAGGING (GEOTECH TO SPECIFY THICKNESS).
3. BACKFILL BEHIND LAGGING IF ANY NOIDS OCCUR.
4. CONTINUE SEQUENCE TO BOTTOM OF EXCAVATION.

DETAIL
PIPE AND BOARD TEMPORARY SHORING WALL
NOT TO SCALE

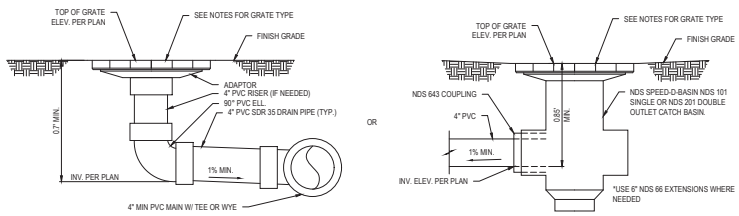


DETAIL
BUILDING DRAINAGE
NOT TO SCALE



NOTE:
a. DIG A 24" WIDE X 18" MIN. DEPTH TRENCH
b. PLACE FILTER CLOTH IN THE TRENCH LAP 12" @ TOP
c. FILL BOTTOM OF THE TRENCH W/ 3/4" CRUSHED ROCK
d. FORM AND POUR PERIMETER CONC. CURB
e. FILL THE REST OF THE TRENCH WITH CRUSHED ROCK TO 4" FROM TOP OF TRENCH

DETAIL
BOTTOMLESS TRENCH DRAIN
NOT TO SCALE



NOTE:
1. ALL FITTINGS BY: NDS, INC. (OR EQUAL) PHONE: 1-800-726-1994
2. REFER TO GRADING PLAN FOR FINISH GRADING.
3. DO NOT GLUE GRATE OR RISER TO PIPE.
4. GLUE "I.P.S. WELD ON" #773 SOLVENT (MEDIUM BODIED FAST SET) FOR PIPE THRU 6" Ø.
5. ALL PIPES TO BE 4" Ø PVC SDR 35 OR SCHEDULE 40.

DETAIL
INLET DRAIN
NOT TO SCALE

OWNER/SUBDIVIDER:
PATRICK BOYD
426 VIA LIDO NORD,
NEWPORT BEACH, CA 92663
TEL: 949.633.6990

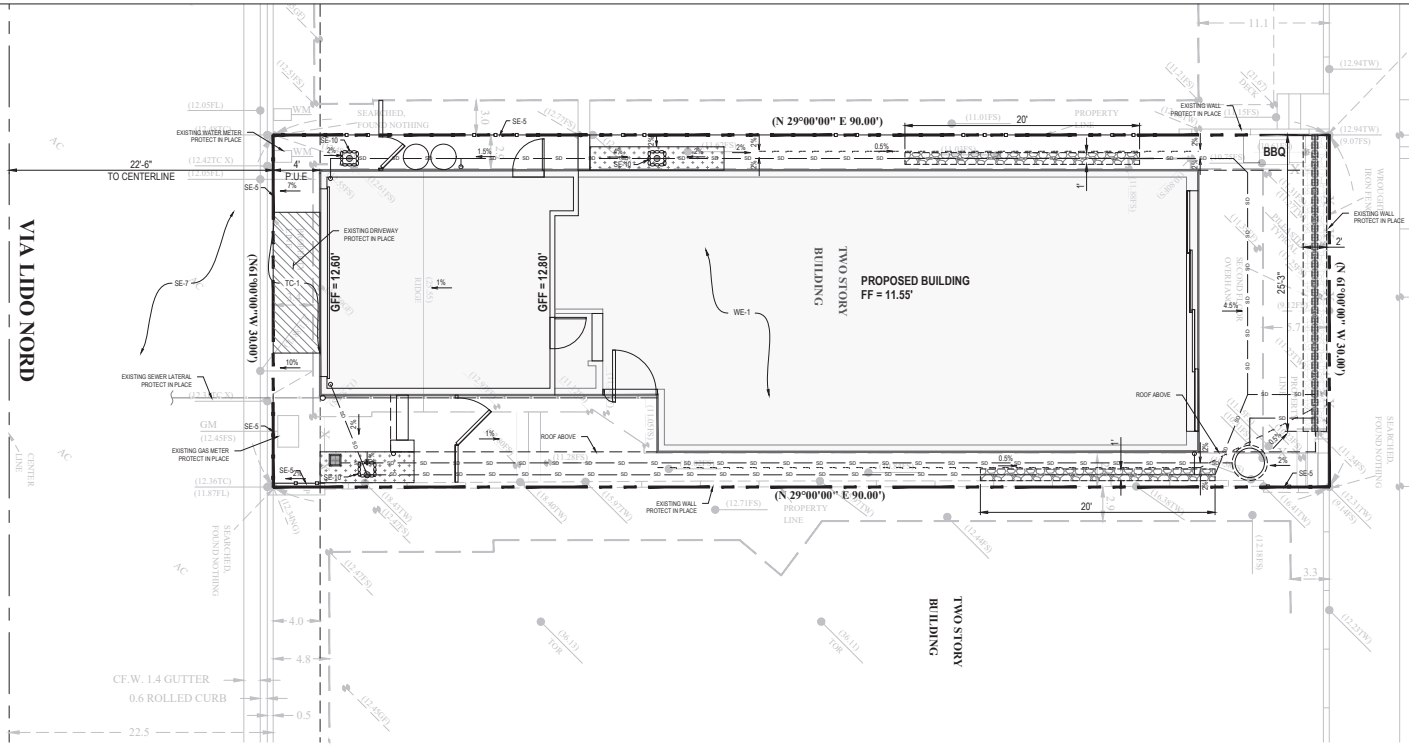
NO.	DATE	REVISIONS	APPROVED BY
			DESIGNER
			DESIGNED BY:
			DRAFTED BY:
			CHECKED BY:

REGISTERED PROFESSIONAL ENGINEER AMIR DEHIMI No. C78194 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:
CORE
FROM THE GROUND UP
Core Structure, Inc.
201 E Sandpointe Ave., #400
Santa Ana, CA 92707
Phone: 949-954-7244
info@corestructure.com
www.corestructure.com
AMIR DEHIMI
R.C.E. C78194 EXP. 09/30/2027
2026-03-31
DATE

SINGLE FAMILY RESIDENCE
SECTIONS AND DETAILS
PROJECT ADDRESS
426 VIA LIDO NORD
NEWPORT BEACH, CA 92663

PROJECT NO.: 26013
SHEET NO.: C-3



EROSION CONTROL PLAN
SCALE 1"=5

EROSION CONTROL BMPS

EC-1	SCHEDULING	SCHEDULE PREPARED BY CONTRACTOR SHALL BE ON-SITE DURING CONSTRUCTION.

TEMPORARY SEDIMENT CONTROL

SE-5	FIBER ROLLS	INSTALL WHERE SHOWN ON PLAN.
SE-7	STREET SWEEPING AND VACUUMING	STREET SHALL BE SWEEPED, SEDIMENT COLLECTED, AND DISPOSED OF OFF-SITE ON A DAILY BASIS.
SE-10	STORM WATER INLET PROTECTION	ONCE INLET RISERS ARE CONSTRUCTED, SURROUND RISERS WITH GRAVEL BAGS OR CAP THE RISER TO REDUCE SEDIMENT INTRODUCTION TO THE AREA DRAIN SYSTEM.

WIND EROSION CONTROL BMPS

WE-1	WIND EROSION CONTROL	WATER OR COVER MATERIAL SHALL BE USED TO ALLEVIATE DUST NUISANCE ON THE ROUGH GRADED PADS AND ANY STOCKPILE AREAS.

TRACKING CONTROL

TC-1	STABILIZED CONSTRUCTION EXIT	RUMBLE RACK SHALL BE PLACED ON THE DRIVEWAY TO ENSURE THAT ALL VEHICLES LEAVING THE SITE PASS OVER THE DEVICES BEFORE ENTERING THE PUBLIC STREET.

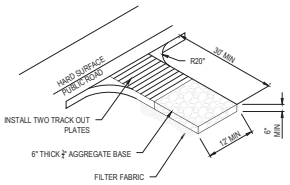
NON-STORMWATER MANAGEMENT

NS-1	WATER CONSERVATION PRACTICES	MAINTAIN WATER EQUIPMENT TO PREVENT NON-STORMWATER DISCHARGES.
NS-3	PAVING AND GRADING OPERATIONS	APPLY PARAMETER CONTROLS AND VACUUMING TO PREVENT NON-STORMWATER DISCHARGE.
NS-6	ILLICIT CONNECTION / ILLEGAL DISCHARGE	CONTRACTOR SHALL REPORT ILLICIT CONNECTIONS OR ILLEGALLY DUMPED MATERIALS ON SITE TO THE RESIDENT ENGINEER IMMEDIATELY AND CONTRACTOR SHALL TAKE NO FURTHER ACTION UNTIL THE RESIDENT ENGINEER PROVIDE A RESPONSE/
NS-7	POTABLE WATER / IRRIGATION	EXCISE CARE DURING CONSTRUCTION TO PREVENT NON-STORMWATER DISCHARGES.
NS-8	VEHICLE AND EQUIPMENT CLEANING	ALL VEHICLES AND EQUIPMENT WILL BE CLEANED OFF-SITE.
NS-9	VEHICLE AND EQUIPMENT FUELING	ALL VEHICLES AND EQUIPMENT WILL BE FUELED OFF-SITE.
NS-10	VEHICLE AND EQUIPMENT MAINTENANCE	ALL VEHICLES AND EQUIPMENT WILL BE MAINTAINED OFF-SITE.
NS-12	CONCRETE CURING	APPLIES TO ALL CONCRETE CONSTRUCTION.
NS-13	CONCRETE FINISHING	APPLIES TO ALL CONCRETE CONSTRUCTION.

WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL

WM-1	MATERIAL DELIVERY AND STORAGE	MATERIALS SHALL BE STORED ON-SITE IN ORIGINAL MARKED CONTAINERS AND COVERED FROM RAIN AND WIND. MATERIAL INVENTORY SHALL CONSIST OF SUPPLY REQUIRED FOR A FEW DAYS.
WM-2	MATERIAL USE	MATERIALS FOR CONSTRUCTION SHALL BE USED IN ACCORDANCE WITH PRODUCT DIRECTION.
WM-3	STOCKPILE MANAGEMENT	MATERIALS STOCKPILES SHALL BE SURROUNDED BY A TEMPORARY SEDIMENT BARRIER AND COVERED TO MAINTAIN DUST CONTROL.
WM-4	SPILL PREVENTION AND CONTROL	AMPLE CLEAN-UP SUPPLIES FOR STORED MATERIALS SHALL BE KEPT ON-SITE. EMPLOYEE SHALL BE EDUCATED ON THE CLASSIFICATION OF SPILLS AND APPROPRIATE RESPONSES.
WM-5	SOLID WASTE MANAGEMENT	SOLID WASTE FROM CONSTRUCTION ACTIVITIES SHALL BE STORED IN APPROPRIATE CONTAINERS. FULL CONTAINERS SHALL BE DISPOSED OF PROPERLY.
WM-8	CONCRETE WASTE MANAGEMENT	AN ON-SITE CONCRETE WASHOUT AREA SHALL BE CONSTRUCTED, USED, AND DISPOSED OF IN A MANNER WHICH MEETS THE REQUIREMENT OF THE CITY.
WM-9	SANITARY / SEPTIC WASTE MANAGEMENT	ON-SITE FACILITY SHALL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF THE PROJECT.

LEGEND
- STORM WATER INLET PROTECTION GRAVEL BAG
- FIBER ROLL
- STABILIZED CONSTRUCTION ENTRANCE



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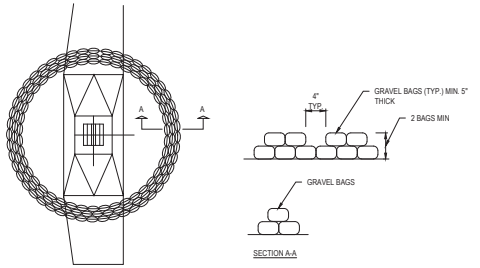
NOT TO SCALE



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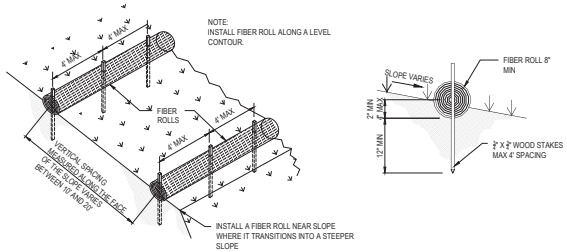
NOT TO SCALE



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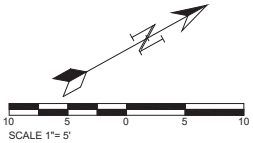
FIBER ROLLS
NOT TO SCALE



SCALE 1"= 5'

OWNER/SUBDIVIDER:
PATRICK BOYD
426 VIA LIDO NORD,
NEWPORT BEACH, CA 92663
TEL: 949.633.6990

NO.	DATE	REVISIONS	APPROVED BY	
				DESIGNER
				DESIGNED BY:
				DRAFTED BY:
				CHECKED BY:

REGISTERED PROFESSIONAL ENGINEER — AMIR DEHIMI — No. C78194 — CIVIL — STATE OF CALIFORNIA

PLANS PREPARED BY:
CORE
FROM THE GROUND UP
Core Structure, Inc.
201 E Sandpointe Ave., #400
Santa Ana, CA 92707
Phone: 949-954-7244
info@corestructure.com
www.corestructure.com
AMIR DEHIMI
R.C.E. C78194 EXP. 09/30/2027
2026-03-31
DATE

SINGLE FAMILY RESIDENCE
EROSION CONTROL PLAN
PROJECT ADDRESS
426 VIA LIDO NORD
NEWPORT BEACH, CA 92663

PROJECT NO.: 26013
SHEET NO.: C-4

26

R McCarthy Consulting, Inc.

December 30, 2025
(Updated January 31, 2026)

38 Linda Isle Newport Beach, LLC
c/o Patrick Boyd
426 Via Lido Nord
Newport Beach, California 92663

File No: 9087-00
Report No: R2-9087

Subject: **Geotechnical Investigation**
Proposed Residential Construction
426 Via Lido Nord
Lido Isle
Newport Beach, California

APN: 423-191-13

INTRODUCTION

This report presents the results of our geotechnical investigation for the project site located at 426 Via Lido Nord in the City of Newport Beach, California, which was performed to determine various site and regional geologic and geotechnical conditions pertinent to the construction currently proposed for the subject property. Analyses for this investigation are based upon a description of the project as a two-story, slab-on-grade, single-family residence. The purpose of our review and investigation was to evaluate the subsurface conditions, determine the compatibility of the proposed development with respect to the site-specific geotechnical features, and provide preliminary geotechnical recommendations and design parameters for site precise grading and planned improvements. Specific information and recommendations for site development are provided herein.

The conclusions and recommendations of this report are considered preliminary due to the absence of specific foundation and grading plans, the preparation of which are partially dependent upon recommendations presented herein. This report is updated herein in keeping with the 2025 California Building Code (CBC), which is now implemented for new permits by the governing agencies starting on January 1, 2026.

Project Authorization

The work performed was based on our Proposal No: P1-9087, dated July 29, 2025, and subsequent authorization.

Geologic Hazard

The potential geologic hazards at the site are primarily from liquefaction, flooding and shaking due to movement of nearby or distant faults during earthquake events. These are discussed in greater detail below.

Groundwater

Groundwater was encountered at depths of 5.5- and 7.5-feet in our exploratory borings. On-site groundwater conditions may additionally be affected by tidal conditions and fluctuate periodically in conjunction with the ingoing and outgoing tides.

Water Infiltration

From a geotechnical standpoint, on-site water infiltration above the usual tidal water elevations is allowable. Setback from the foundations is recommended for large volume runoff. Simple trench drains and permeable pavement surfaces may be allowable with appropriate setback with agency and geotechnical review and approvals. Proposed water infiltration features should be reviewed and approved by the Geotechnical Consultant.

Surficial Runoff

Proposed development should incorporate engineering and landscape drainage designed to transmit surface and subsurface flow to the street and/or storm drain system via non-erosive pathways.

Faulting/Seismic Considerations

The major concern relating to geologic faults is ground shaking that affects many properties over a wide area. Direct hazards from faulting are essentially due to surface rupture along fault lines that could occur during an earthquake. Therefore, geologists have mapped fault locations and established criteria for determining the risks of potential surface rupture based on the likelihood of renewed movement on faults that could be located under a site.

Based on criteria established by the California Division of Mines and Geology (CDMG), now referred to as the California Geological Survey (CGS), faults are generally categorized as active, potentially active or inactive (Jennings, 1994). The basic principle of faulting concern is that existing faults could move again, and that faults which have moved more recently are the most likely faults to move again and affect us. As such, faults have been divided into categories based on their age of last movement. Although the likelihood of an earthquake or movement to occur on a given fault significantly decreases with inactivity over geologic time, the potential for such events to occur on any fault cannot be eliminated within the current level of understanding.

By definition, faults with no evidence of surface displacement within the last 1.6 million years are considered inactive and generally pose no concern for earthquakes due to renewed movement. Potentially active faults are those with the surface displacement within the last 1.6

million years. Further refinements of potentially active faults are sometimes described based on the age of the last known movement such as late Quaternary (last 700,000 years) implying a greater potential for renewed movement. In fact, most potentially active faults have little likelihood of moving within the time frame of construction life, but the degree of understanding of fault age and activity is sometimes not well understood due to absence of geologic data or surface information, so geologists have acknowledged this doubt by using the term "potentially active." A few faults that were once thought to be potentially active, have later been found to be active based on new findings and mapping. Active faults are those with a surface displacement within the last 11,000 years and, therefore, most likely to move again. The State of California has, additionally, mapped known areas of active faulting as designated Alquist-Priolo "Special Studies Zones," which requires special investigations for fault rupture to limit construction over active faults.

Based on our review of various published and unpublished reports, maps and documents, the site is located approximately 1 kilometer northeast of the Newport-Inglewood Fault Zone. This fault consists of a series of parallel and en echelon, northwest-trending faults and folds extending from the southern edge of the Santa Monica Mountains to Huntington Beach and then offshore along Newport Beach. This fault zone has historically experienced moderate to high seismic activity. No active or potentially active faults are known to project through the site. In addition, the Newport-Inglewood Fault is not sufficiently well-defined in the area of the subject site to be placed within the boundaries of an "earthquake fault zone," as defined by the State of California in the Alquist-Priolo Earthquake Fault Zoning Act.

A potential seismic source near the site is the San Joaquin Hills Blind Thrust Fault (SJHBT), which is approximately 2 to 8 kilometers beneath the site at its closest point, based on the reported fault structure. The SJHBT is a postulated fault that is suspected to be responsible for uplift of the San Joaquin Hills. This fault is a blind thrust fault that does not intercept the ground surface and, therefore, presents no known potential for ground rupture at the property.

The potential for surface rupture at the site is considered to be low and the property is not located within a special study zone for fault rupture. The site will experience shaking during earthquake events on nearby or distant faults. Site improvements should take into consideration the seismic design parameters outlined herein.

Site Classification for Seismic Design

Seismic design parameters are provided in a later section of this report for use by the Structural Engineer. The soil underlying the subject site has been classified in accordance with Chapter 21 of ASCE 7, per Section 1613 of the 2025 CBC.

The results of our on-site field investigation, as well as nearby investigations by us and others, indicate that the site is directly underlain by loose to very dense fill, beach and marine deposits overlying a bedrock shelf. In the absence of site-specific shear wave velocity determinations, and in consideration of the absence of significant soft soils within the materials encountered at the site, we recommend using a characterization of this property as a Class D, "Default" Site Classification.

Secondary Seismic Hazards

Review of the Seismic Hazard Zones Map (CDMG, 1998) for the Newport Beach Quadrangle, 1997/1998 and the City of Newport Beach Seismic Safety Element (2008) indicates the site is located within a zone of required investigation for earthquake-induced liquefaction.

Liquefaction Considerations

The area along Newport Harbor and its channels is in a Zone of Required Investigation for liquefaction on the State of California Seismic Hazard Zones Map, Newport Beach Quadrangle. Requirements for investigation are included in several documents including the City of Newport Beach Building Code Policy (Revised 7/3/2014), the CBC, Section 1803.5, and the *Guidelines for Evaluating and Mitigating Seismic Hazards in California*, Special Publication 117A.

The factors known to promote liquefaction potential include high groundwater level, degree of saturation, relative density, grain size, soil type, depth below the surface, and the magnitude and distance to the causative fault or seismic source. The subject site is in an area of high liquefaction potential (Morton and others, 1976; Toppozada and others, 1988).

In order to address liquefaction potential in accordance with the City of Newport Beach Building Code Policy for single-family residential structures, a liquefaction analysis was performed to evaluate seismic settlement. Results are included in Appendix F.

Based on the results of our analysis, some layers of the soils below the site, in the locations tested, below the water table and to depths of about 16.5 feet, have safety factors of less than 1.0, assuming groundwater is present to those levels at the time of a design magnitude earthquake. This indicates risk of liquefaction during a seismic event strong enough to induce liquefaction. The site was evaluated for the existing conditions. Layers exhibiting safety factors of 1.3 and less based on Boulanger and Idriss (2010-16) were evaluated for potential seismic settlement. Seismically-induced settlements were estimated by the procedures developed by Boulanger and Idriss (2010-16) and Tokimatsu and Seed (1987). Additionally, seismically-induced settlements were estimated by the procedures developed by Yi (2022) for dry sand within materials above the assumed water table elevation. The GeoAdvanced GeoSuite Software Version 4.2.0.6, developed by Fred Yi, was utilized for the analyses (Appendix F). The resultant potential total seismic settlement within the upper 10 feet of soil was determined to be less than 1-inch within Boring B-1. Additional seismic settlement on the order of 3-inches should be assumed for depths between 10 and 50 feet during a design magnitude earthquake event. It is our opinion that this settlement potential may be mitigated by the recommended remedial grading and foundation system for support of the proposed structure.

Lateral Impacts of Liquefaction

Lateral spread is a hazard that sometimes occurs when there is sloping ground and weak lateral restraint for soil undergoing liquefaction. Spread of soil into the bay would primarily affect areas outside of the development limits since these areas are partially submerged with tidal fluctuations. The soil beyond the seawall is flat for approximately 5 feet and then slopes into the bay at gradients flatter than 5:1 (H:V). Lateral impacts of liquefaction at the subject site such as

RECOMMENDATIONS

Site Preparation and Grading

1. General

   Site grading should be performed in accordance with the requirements of the City of Newport Beach, the recommendations of this report, and the Standard Grading Guidelines of Appendix D. All excavations should be supervised and approved in writing by a representative of this firm.

2. Demolition and Clearing

   Deleterious materials, including those from the demolition of the existing concrete, vegetation, organic matter and trash, should be removed and disposed of off-site. Subsurface elements of demolished structures should be completely removed, including any trench backfills, abandoned foundations, cisterns, utility lines, etc.

3. Subgrade Preparation

   Excavations should be made to remove any soils disturbed by demolition, unsuitable fill and surficial materials where encountered within the planned building areas. A minimum removal depth of 3 feet is recommended to remove the existing upper sand deposits and provide uniform bearing conditions below foundation and slab areas. Removals should be followed by 6-inches of scarification and recompaction. These remedial excavations should be made within the planned building footprint and the influence zone of footings. Deeper excavations may be necessary to remove unsuitable materials, if encountered.

   Soil cement may be considered to stabilize and strengthen the compacted fill. Existing walls and retaining walls may be suitable locally for excavation support; however, structures must be supported laterally during grading operations. Although not anticipated at this time, lateral support may sometimes be achieved by the use of bracing, slot cutting, or trenching where wall footings are shallow relative to excavation depths.

   Dewatering is not expected to be necessary at planned removal depths but this may be somewhat dependent on tide levels and depths of foundations.

   Excavations should be replaced with compacted engineered fill. The horizontal limits of overexcavation should be outlined by the Geotechnical Engineer based on grading and foundation plans when these are available for review; however, the overexcavation need not extend beyond the planned building footprint.

   Removals below significant hardscape improvements such as driveway aprons, patios, and sidewalks should be sufficient to provide a 1.5-feet-thick compacted fill zone. Removal depths of 18-inches are expected to be adequate in exterior areas; however,

boundary conditions for removals under exterior improvements may be better addressed subsequent to demolition when equipment can expose the site materials for evaluation and when improvement limits are identified on the plan.

Light track propelled mini-loader type equipment should be used for the grading. Rubber tire equipment shall not be used until a stable subgrade is achieved.

The depths of overexcavation should be reviewed by the Geotechnical Engineer or Geologist during the actual construction. Any surface or subsurface obstructions, or questionable material encountered during grading, should be brought immediately to the attention of the Geotechnical Engineer for recommendations.

4. Fill Soils

   The on-site soils are anticipated to be suitable for use as compacted fill; however, cement treatment using Portland Cement may be considered within the graded building pad to provide additional soil strength, aid in the foundation construction and reduce collapse potential of vertical footing cuts. Fill soils should be free of debris, organic matter, cobbles and concrete fragments greater than 6-inches in diameter.

   Soils imported to the site for use as fill below foundation and slab areas should be predominantly granular, non-expansive, non-plastic and approved by the Geotechnical Engineer prior to importing.

5. Shrinkage

   Shrinkage losses are expected to be about 2 percent overall. This does not include clearing losses from demolition that could result in volume reductions for available fill soils. Addition of cement will also influence the grading volumes. These are preliminary estimates and actual field results may vary.

6. Expansive Soils

   On-site surface soils encountered during our investigation were determined to be non-plastic, non-expansive sands.

7. Compaction Standard

   The on-site soils are anticipated to be generally suitable for use as compacted fill. Highly organic and oversize materials must be removed prior to compaction. Fill materials should be placed at above optimum moisture content and compacted under the observation and testing of the Soil Engineer. The recommended minimum density for compacted material is 90 percent of the maximum density as determined by ASTM D1557.

8. Temporary Construction Slopes

   Temporary slopes exposing on-site materials should be cut in accordance with Cal/OSHA Regulations. It is anticipated that the exposed on-site earth materials may be classified as Type C soil, and temporary cuts of 1:1 (horizontal:vertical) or flatter may be appropriate to heights of 3 feet or less; however, the material exposed in temporary excavations should be evaluated by the Contractor during construction. Dry or running sands may require flatter laybacks. Temporary construction slopes should not be left exposed overnight unless approved in writing by the Geotechnical Consultant.

   Excavations should proceed in a manner so as not to remove lateral or bearing support of adjacent properties or structures. Along property lines, cuts of 1:1 or flatter are typically prudent and are required by the City of Newport Beach. Care will be needed along the property lines. The soils exposed in the excavation cuts should be observed by the Geotechnical Consultant during excavation.

   The safety and stability of temporary construction slopes and cuts is deferred to the General Contractor, who should implement the safety practices as defined in Section 1541, Subchapter 4, of Cal/OSHA T8 Regulations (2006). The Geotechnical Consultant makes no warranties as to the stability of temporary cuts. Soil conditions may vary locally and the Contractor(s) should be prepared to remedy local instability if necessary. Contract Documents should be written in a manner that places the Contractor in the position of responsibility for the stability of all temporary excavations. Stability of excavations is also time dependent.

   If unsupported property line cuts are made, the Contractor should monitor the performance of adjacent structures and improvements during construction. If movement or distress is noted, appropriate remedial measures should be immediately implemented.

9. Adjacent Property Assessments and Monitoring

   The following measures may be considered in order to reduce the potential risks of damage, and perceived damage, to adjoining improvements:

   - Visual inspections and walk-throughs of each of the adjacent properties should be arranged in order to document pre-existing conditions and damages.
   - Measurements of all existing damages observed, including crack lengths, widths and precise locations should be made.
   - Photographs should be taken to accompany written notes that refer to damages or even lack of damages. Video may also be considered; however, videos that attempt to show these types of damages are often lacking in detail.
   - Floor level surveys of nearby structures may be considered especially if pre-existing damage is evident.
   - Vibrations from construction equipment may be monitored with portable seismographs during excavation.
   - Surveys to monitor lateral and vertical position of adjacent improvements and shoring elements is recommended.

Flatwork elements should be a minimum 4-inches thick (actual) and reinforced with No. 4 bars at 18-inches on center both ways. Subgrade soils should be well moistened prior to placement of concrete.

Concrete Construction Components in Contact with Soil

The results of our laboratory testing indicate a low soluble sulfate content; however, due to shallow sea water levels in the area, a moderate exposure to sulfate can be expected for concrete placed in contact with on-site soils. Various components within the concrete may be subject to corrosion over time when exposed to soluble sulfates. To help mitigate corrosion, sulfate resistant cement should be used in concrete that may be in contact with on-site soils or ground source water. Attention to maximum water-cement ratio and the minimum compressive strength may also help mitigate deterioration of concrete components. The results of the sulfate test of the on-site soil are provided in Appendix C.

Type V cement is, therefore, recommended with a maximum water-cement ratio of 0.45 percent. The minimum concrete compressive strength should be at least 4,500 pounds per square inch.

It is recommended that a Concrete Expert be retained to design an appropriate concrete mix to address the structural requirements. In lieu of retaining a Concrete Expert, it is recommended that the 2025 CBC, Section 1904 and 1905, be utilized, which refers to ACI 318. Testing should be performed during grading when fill materials are identified to confirm the sulfate concentration.

Metal Construction Components in Contact with Soil

Metal rebar encased in concrete, iron pipes, copper pipes, elevator shafts, air conditioner units, etc., that are in contact with soil or water that permeates the soil should be protected from corrosion that may result from salts contained in the soil. Recommendations to mitigate damage due to corrosive soils, if needed, should be provided by a qualified Corrosion Specialist.

Foundation Excavations

All excavations should be observed by the Geotechnical Engineer prior to placement of forms, reinforcement, and concrete for verification of conformance with the intention of these recommendations. All excavations should be trimmed neat, level, and square. All loose or sloughed material should be removed prior to the placement of concrete. Materials from footing excavations should not be spread in slab subgrade areas unless compacted per the requirements for fill soils as stated herein.

Finished Grade and Surface Drainage

Finished grades should be designed and constructed so that no water ponds in the vicinity of footings. Drainage design in accordance with the 2019 CBC, Section 1804.4, is recommended or per local City requirements. Roof gutters should be provided and outflow directed away from the house in a non-erosive manner as specified by the Project Civil Engineer or Landscape

Architect. Surface and subsurface water should be directed away from building areas. Proper interception and disposal of on-site surface discharge is presumed to be a matter of civil engineering or landscape architectural design.

Infiltration

Simple trench drains and permeable pavement surfaces may be allowable with appropriate agency and geotechnical review and approvals. Proposed water infiltration features should be reviewed and approved by the Geotechnical Consultant. It is our opinion that typical gravel trenches and permeable hardscape for periodic water infiltration into the on-site soil is acceptable from a geologic and geotechnical standpoint. The water levels are expected to be at a depth of approximately 7.5 feet below the building pad grade based on our borings. The water table is ultimately tidal in nature and introduction of the infiltration water is not expected to raise the water level or create new perched water zones due to lateral permeability. These types of infiltration will, therefore, not be expected to create any geohazards due to modification of groundwater levels. Planned infiltration design and BMP devices should be reviewed by our office prior to construction.

Foundation and Grading Plan Review

The undersigned should review final foundation and grading plans and specifications prior to their submission to the building official for issuance of permits. The review is to be performed only for the limited purpose of checking for conformance with design concepts and the information provided herein. Review shall not include evaluation of the accuracy or completeness of details, such as quantities, dimensions, weights or gauges, fabrication processes, construction means or methods, coordination of the work with other trades or construction safety precautions, all of which are the sole responsibility of the Contractor. The R McCarthy Consulting, Inc. (RMC) review shall be conducted with reasonable promptness while allowing sufficient time in our judgment to permit adequate review. Review of a specific item shall not indicate that RMC has reviewed the entire system of which the item is a component. RMC shall not be responsible for any deviation from the Contract Documents not brought to our attention in writing by the Contractor. RMC shall not be required to review partial submissions or those for which submissions of correlated items have not been received.

Utility Trench Backfill

Utility trench backfill should be placed in accordance with Appendix D, Standard Grading Guidelines. It is the Owner's and Contractor's responsibility to inform Subcontractors of these requirements and to notify RMC when backfill placement is to begin. It has been our experience that trench backfill requirements are rigorously enforced by the local agencies.

Fill materials should be placed at near optimum moisture content and compacted under the observation and testing of the Soil Engineer. The minimum dry density required for compacted backfill material is 90 percent of the maximum dry density as determined by ASTM D1557.

If utility contractors indicate that it is undesirable to use compaction equipment in close proximity to a buried conduit, we recommend the utilization of lightweight mechanical

equipment and/or shading of the conduit with clean granular material, which could be thoroughly jetted in place above the conduit prior to initiating mechanical compaction procedures. Bedding materials should have a Sand Equivalent not less than 30. Other methods of utility trench compaction may also be appropriate as approved by the Geotechnical Engineer at the time of construction.

The walls of temporary construction trenches are expected to be stable when cut into soils, with only minor sloughing, provided the total depth does not exceed about 3 feet. Shoring of excavation walls or flattening of slopes may be required, if greater depths are necessary. All work associated with trench shoring must conform to the State of California Safety Code. The depth of the site utilities is unknown at this time. Excavation exceeding 3 feet below site grades should be reviewed by the Geotechnical Consultant to provide recommendations prior to digging.

Trenches should be located so as not to impair the bearing capacity or cause settlement under foundations. As a guide, trenches subparallel to foundations should be clear of a 45-degree plane extending outward and downward from the edge of the foundations.

Pre-Grade Meeting

A pre-job conference should be held with representative of the Owner, Contractor, Architect, Civil Engineer, Geotechnical Engineer, and Building Official prior to commencement of construction to clarify any questions relating to the intent of these recommendations or additional recommendations.

Observation and Testing

Geotechnical observation and testing during construction are required to verify proper removal of unsuitable materials, check that foundation excavations are clean and founded in competent material, to test for proper moisture content and proper degree of compaction of fill, to test and observe placement of wall and trench backfill materials, and to confirm design assumptions. It is noted that the CBC requires continuous verification and testing during placement of fill, pile driving, and pier/caisson drilling.

An RMC representative shall observe the site at intervals appropriate to the phase of construction, as notified by the Contractor, in order to observe the work completed by the Contractor. Such visits and observation are not intended to be an exhaustive check or a detailed inspection of the Contractor's work but rather are to allow RMC as an experienced professional, to become generally familiar with the work in progress and to determine, in general, if the grading and construction is in accordance with the recommendations of this report.

RMC shall not supervise, direct, or control the Contractor's work. RMC shall have no responsibility for the construction means, methods, techniques, sequences, or procedures selected by the Contractor, the Contractor's safety precautions or programs in connection with the work. These rights and responsibilities are solely those of the Contractor. RMC shall not be responsible for any acts or omission of any entity performing any portion of the work, including the Contractor, Subcontractor, or any agents or employees of any of them. RMC does not

NO.	DATE	REVISIONS	APPROVED BY	CHECKED BY:
				DESIGNER
				DESIGNED BY:
				DRAFTED BY:

OWNER/SUBDIVIDER:
PATRICK BOYD
426 VIA LIDO NORD,
NEWPORT BEACH, CA 92663
TEL: 949.633.6990

REGISTERED PROFESSIONAL ENGINEER — AMIR DEHMI — No. C78194 — CIVIL — STATE OF CALIFORNIA

PLANS PREPARED BY:
CORE FROM THE GROUND UP
Core Structure, Inc.
201 E Sandpointe Ave., #400
Santa Ana, CA 92707
Phone: 949-954-7244
info@corestructure.com
www.corestructure.com
AMIR DEHMI — R.C.E. C78194 EXP. 09/30/2027 — 2026-03-31 DATE

SINGLE FAMILY RESIDENCE
SOIL RECOMMENDATIONS
PROJECT ADDRESS
426 VIA LIDO NORD
NEWPORT BEACH, CA 92663

PROJECT NO.: 26013
SHEET NO.: C-5

Housing Crisis Act Compliance for Demolitions

Community Development Department
Planning Division
100 Civic Center Drive / P.O. Box 1768 / Newport Beach, CA 92658-8915
(949) 644-3204 Telephone / (949) 644-3229 Facsimile
www.newportbeachca.gov

General Information

The Housing Crisis Act of 2019 [SB 330 (Chapter 654, Statutes of 2019) and SB 8 (Chapter 161, Statues of 2021)] set a temporary 10-year prohibition on reducing residential density when associated with the approval of a "housing development project", beginning January 1, 2020 and concluding on January 1, 2030. A "housing development project" is defined as: a residential project of one or more units; a mixed-use project with two-thirds of the floor area designated for residential use; or a transitional or supportive housing project. In addition, existing units that are defined as "protected"[1] under the law (see below for qualifications) must be replaced with units that have an equivalent number of bedrooms, rents affordable at the same income category as the displaced tenant(s) (or if incomes are unknown, according to the proportion of lower income renter households in the jurisdiction), and displaced tenants must be provided relocation benefits. Assembly Bill No. 1218 (Chapter 754, Statutes of 2023) also prohibits the loss of protected units associated with the approval of a non-housing development project that requires the demolition of occupied or vacant protected units. Therefore, concurrent with the application of any development project that involves the demolition of any residential unit(s), or the application of a non-housing development project, the property owner shall answer the questions below for Housing Crisis Act compliance.

Site Address: 426 Via Lido Nord **Legal Description:** APN 423-191-13

1) **Units proposed for demolition:** 1 **Units proposed for construction:** 1

2) **Are you proposing to redevelop the site with a "housing development project"?** ☑ Yes ☐ No

For housing development projects, reductions in density are prohibited whether or not units are deemed "protected" and a demolition permit cannot be issued.

3) **If you answer yes to any of the following questions, the unit(s) are considered "protected" and must be replaced:**

a. Currently, or within the last 5 years, are any of the units subject to a recorded covenant, ordinance, or law restricting rents to levels affordable to low- or very low-income households? ☐ Yes ☑ No

b. Currently, or within the last 5 years, are any of the units occupied by low- or very-low income households (see attachment for current income limits)? ☐ Yes ☑ No

If any of the units proposed for demolition meet the "protected" criteria, please provide a summary of units (i.e., apartment number, size, number of bedrooms, household size, and income level of tenant) and schedule a meeting with a planner to discuss replacement requirements. A demolition permit cannot be issued until an agreement is executed with the City guaranteeing the replacement of the protected units and tenant relocation benefits.

Property Owner Certification (required):

I Patrick Boyd, hereby certify that I am the property owner of the above described property. I declare under the penalty of perjury, the facts, statements and information presented in this document are true and correct to the best of my knowledge and belief.

Signature | 12/15/2025 Date | 949.633.6990 Phone Number

[1] The City of Newport Beach does not have a local rent control ordinance. As such, the categories of "protected units" are limited to those stated above. Updated 05/15/2024

demo compliance

CITY OF NEWPORT BEACH

COMMUNITY DEVELOPMENT DEPARTMENT
BUILDING DIVISION
100 Civic Center Drive | P.O. Box 1768 | Newport Beach, CA 92658-8915
www.newportbeachca.gov | (949) 644-3200

ACKNOWLEDGMENT OF NO CONSTRUCTION-RELATED NOISE ON SATURDAY OR SUNDAY IN HIGH DENSITY AREAS

On June 11, 2019, the City Council adopted an ordinance restricting construction-related noise on Saturday in High Density Areas effective August 12, 2019.

I acknowledge that any construction-related noise, (including, but not limited to operating power equipment or machinery in a manner that produces noise) is not allowed on Saturday or Sunday in High Density Areas in accordance with Newport Beach Municipal Code 10.28.040. As the owner of the property, I am responsible to ensure all persons working on the property comply with this provision of the Newport Beach Municipal Code.

Project Address: 426 Via Lido Nord

Permit Number:

Owner's Name: Patrick Boyd

Owner's Signature:

Contractor's Signature:

Date: 07 November 2025

Forms\Acknowledgment_No_Saturday_Construction_HighDensityAreas

no construction on saturday

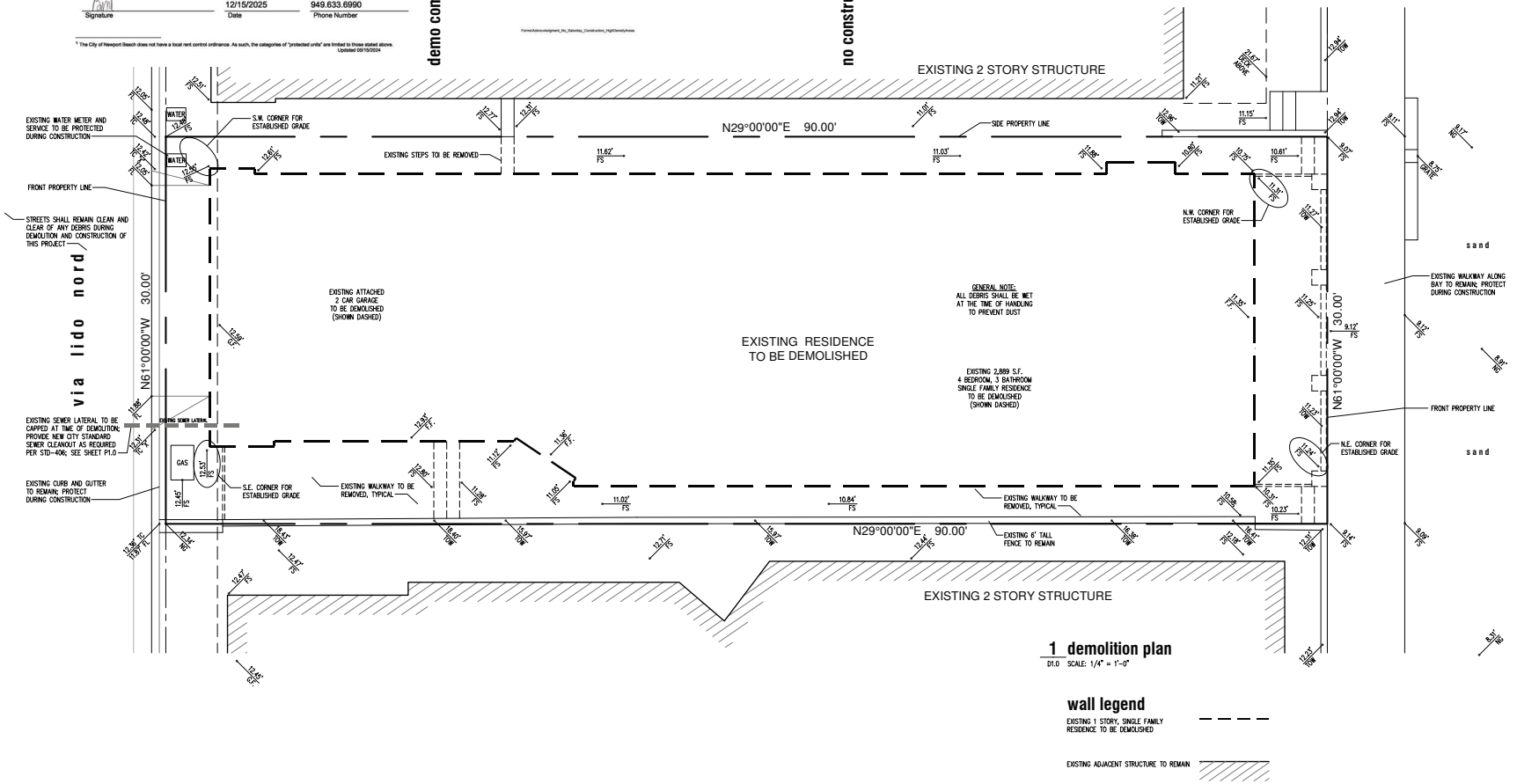
GENERAL NOTE:
RECYCLE AND/OR SALVAGE FOR REUSE A MINIMUM OF 65% OF THE NONHAZARDOUS CONSTRUCTION AND DEMOLITION WASTE IN ACCORDANCE WITH SECTION 4.408.1 CALGREEN CODE

established grade and overall height

ESTABLISHED GRADES:
SW CORNER 12.55'
SE CORNER 12.53'
NW CORNER 11.31'
NE CORNER 11.24'
AVERAGE:
12.55 + 12.53 + 11.31 + 11.24 = 47.63
47.63/4 = 11.91' ESTABLISHED AVERAGE GRADE

lido isle height determination

ESTABLISHED GRADES:
S.W. TOP OF CURB 12.48'
S.E. TOP OF CURB 12.36'
AVERAGE:
12.48 + 12.36 = 24.84
24.84/2 = 12.42' ESTABLISHED TOP OF CURB
24" MAX. HEIGHT (12.42 + 24) = 36.42'



1 demolition plan
D1.0 SCALE: 1/4" = 1'-0"

wall legend

EXISTING 1 STORY, SINGLE FAMILY RESIDENCE TO BE DEMOLISHED

EXISTING ADJACENT STRUCTURE TO REMAIN

d1.0

site plan
1/4"=1'-0"

boyd residence

426 via lido nord
newport beach, california
92663

LICENSED ARCHITECT ERIC D. AUST C-29374 31 MAY 2027 RENEWAL DATE STATE OF CALIFORNIA

0 1' 2' 4' 8'

true north
ref. north

01 april 2026
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job #2516

eric aust architect
62 balboa coves
newport beach, california 92663
tel 949.637.5220

client:
patrick boyd
426 via lido nord
newport beach, california 92663
tel 949.633.6990

fireplace notes:

1. FACTORY-BUILT FIREPLACES, CHIMNEYS AND ALL OF THEIR COMPONENTS SHALL BE LISTED AND INSTALLED IN ACCORDANCE WITH THEIR LISTING AND MANUFACTURER'S INSTALLATION INSTRUCTIONS
2. DECORATIVE SHROUDS SHALL NOT BE INSTALLED AT THE TERMINATION OF FACTORY-BUILT CHIMNEYS EXCEPT WHERE SUCH SHROUDS ARE LISTED AND LABELED FOR USE WITH THE SPECIFIC FACTORY-BUILT CHIMNEY SYSTEM AND ARE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. CMC (802.5.2.4)
3. DIRECT VENT GAS APPLIANCE FIREPLACE MUST COMPLY WITH ANSI Z21.50 OR ANSI Z21.88

a1.0

1st floor plan
1/4"=1'-0"

boyd residence

426 via lido nord
newport beach, california
92663

project area analysis

389 s.f. garage
1,268 s.f. 1st floor (livable)
55 s.f. 1st floor (covered exterior)
+1,797 s.f. 2nd floor (livable)
3,120 s.f. total livable

wall legend

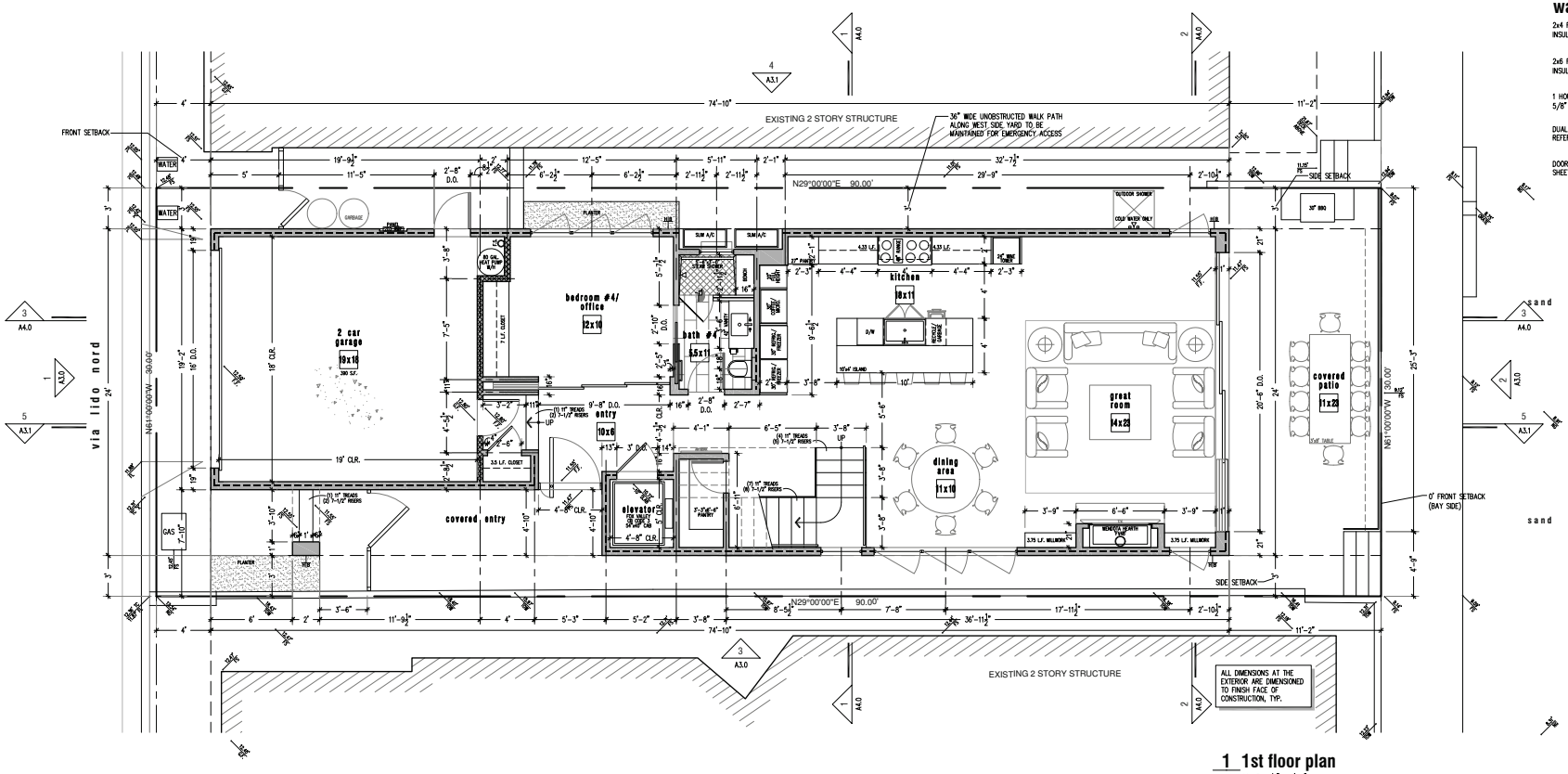
2x4 FRAMING AT 16" o.c. W/ R-13 BATT INSULATION THROUGHOUT; 5/8" GYP. BD.

2x6 FRAMING AT 16" o.c. W/ R-21 BATT INSULATION THROUGHOUT; 5/8" GYP. BD.

1 HOUR RATED INTERIOR PARTITION: 5/8" TYPE-X GYP. BD. AT BOTH SIDES, TYP.

DUAL GLAZED WINDOWS, TYP. THROUGHOUT; REFERENCE WINDOW SCHEDULE, SHEET A5.1

DOOR; REFERENCE DOOR SCHEDULE, SHEET A5.0



1 1st floor plan
A1.0 SCALE: 1/4" = 1'-0"

LICENSED ARCHITECT
ERIC D. AUST
C-29374
31 MAY 2027
RENEWAL DATE
STATE OF CALIFORNIA

0 1' 2' 4' 8'
true north
ref. north

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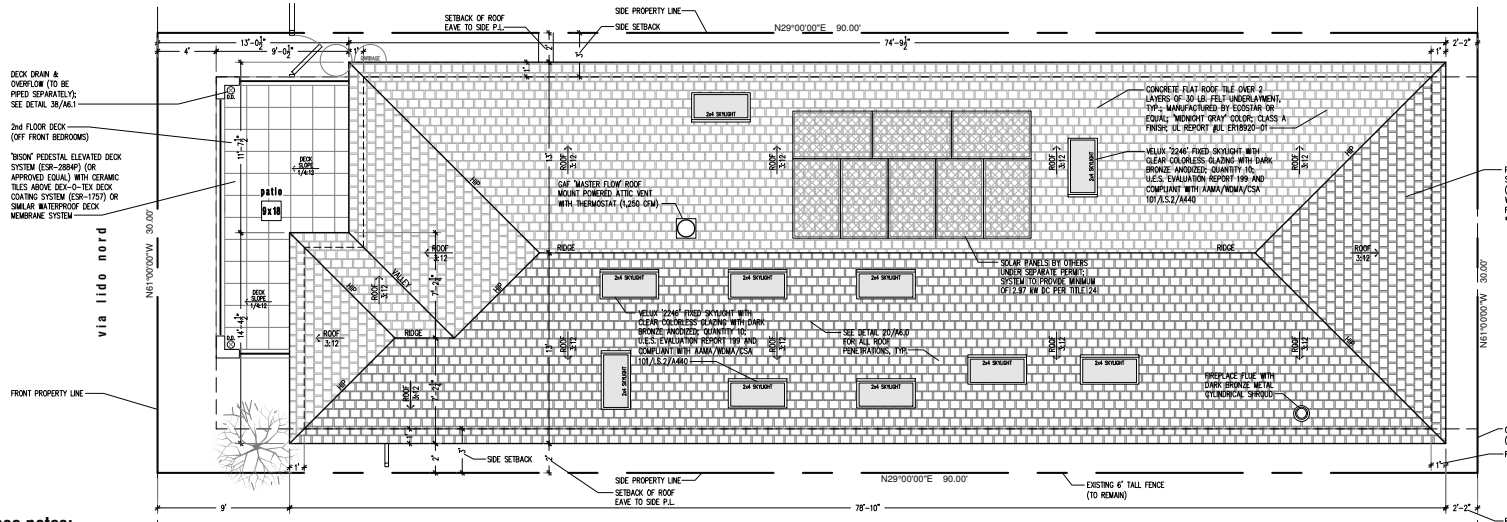
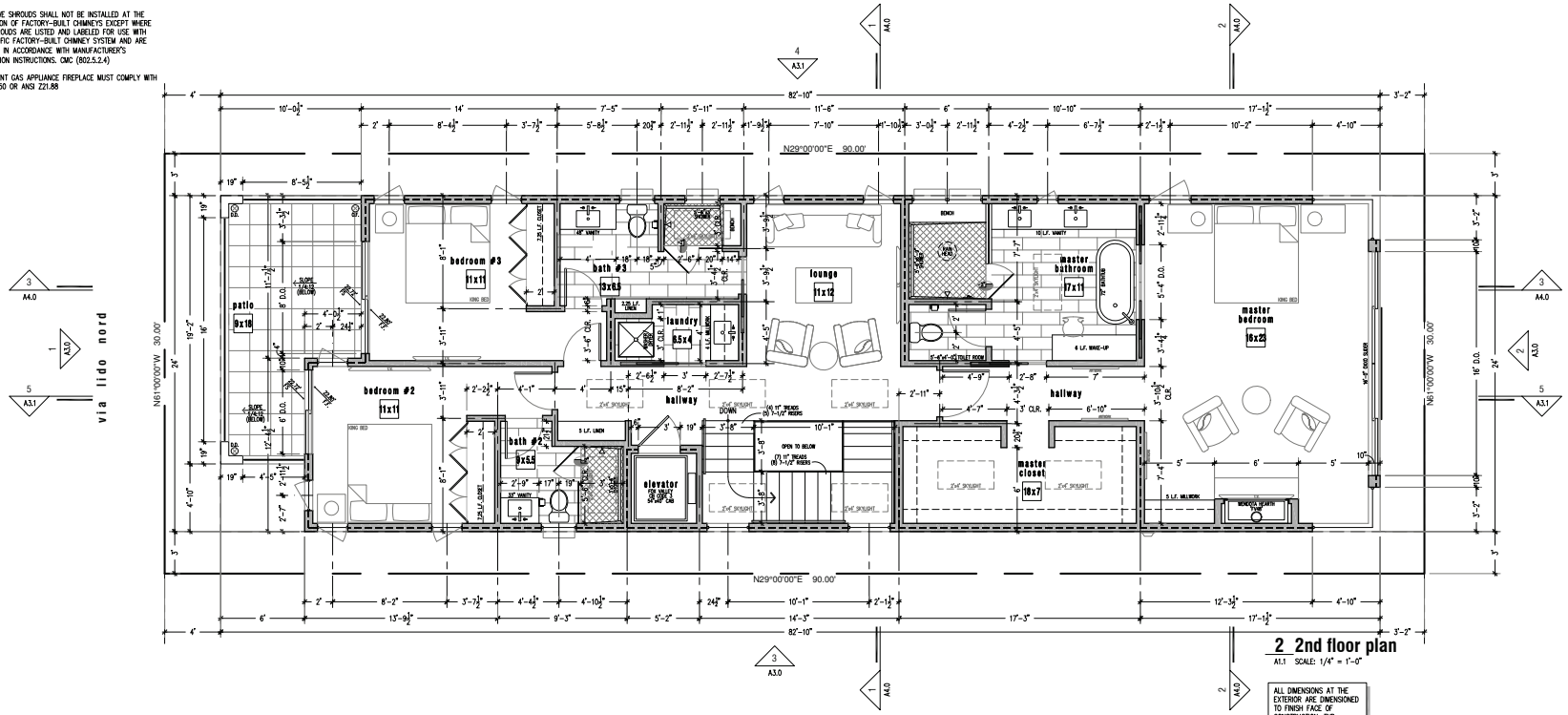


3 roof plan

A1.1 SCALE: 1/4" = 1'-0"

fireplace notes:

1. FACTORY-BUILT FIREPLACES, CHIMNEYS AND ALL OF THEIR COMPONENTS SHALL BE LISTED AND INSTALLED IN ACCORDANCE WITH THEIR LISTING AND MANUFACTURER'S INSTALLATION INSTRUCTIONS
2. DECORATIVE SHROUDS SHALL NOT BE INSTALLED AT THE TERMINATION OF FACTORY-BUILT CHIMNEYS EXCEPT WHERE SUCH SHROUDS ARE LISTED AND LABELED FOR USE WITH THE SPECIFIC FACTORY-BUILT CHIMNEY SYSTEM AND ARE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. CMC (802.5.2.4)
3. DIRECT VENT GAS APPLIANCE FIREPLACE MUST COMPLY WITH ANSI Z21.50 OR ANSI Z21.88



2 2nd floor plan

A1.1 SCALE: 1/4" = 1'-0"

a1.1

2nd floor plan
1/4"=1'-0"

boyd residence

426 via lido nord
newport beach, california
92663

project area analysis

389 s.f. garage
1,268 s.f. 1st floor (livable)
55 s.f. 1st floor (covered exterior)
+1,797 s.f. 2nd floor (livable)
3,120 s.f. total livable

wall legend

2x4 FRAMING AT 16" o.c. W/ R-13 BATT INSULATION THROUGHOUT; 5/8" GYP. BD.

2x6 FRAMING AT 16" o.c. W/ R-21 BATT INSULATION THROUGHOUT; 5/8" GYP. BD.

1 HOUR RATED INTERIOR PARTITION: 5/8" TYPE-X GYP. BD. AT BOTH SIDES, TYP.

DUAL GLAZED WINDOWS, TYP. THROUGHOUT; REFERENCE WINDOW SCHEDULE, SHEET A5.1

DOOR; REFERENCE DOOR SCHEDULE, SHEET A5.0

LICENSED ARCHITECT ERIC D. AUST C-29374 31 MAY 2027 RENEWAL DATE STATE OF CALIFORNIA

0 1' 2' 4' 8'

true north
ref. north

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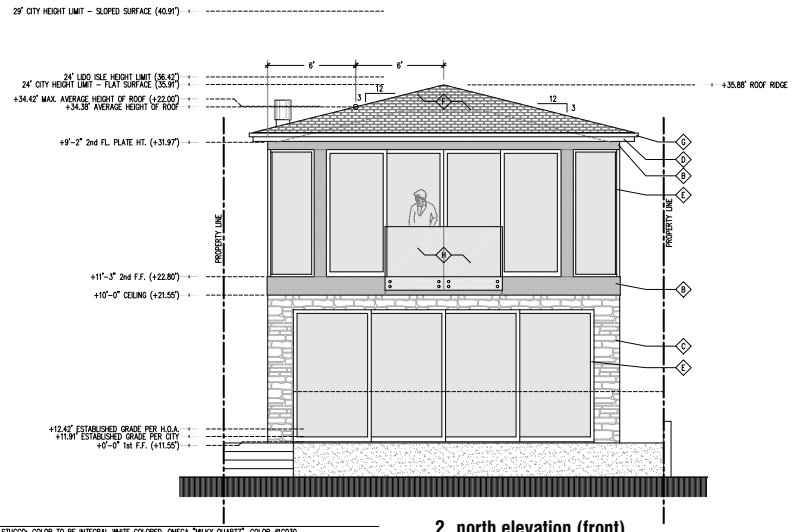
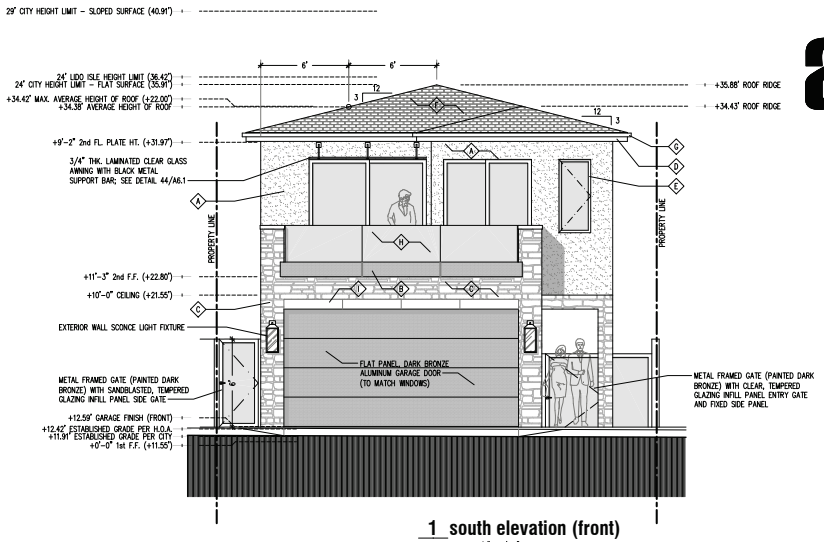


2 north elevation (front)

A3.0 SCALE: 1/4" = 1'-0"



1 south elevation (front)

A3.0 SCALE: 1/4" = 1'-0"

a3.0

exterior elevations
1/4"=1'-0"

boyd residence

426 via lido nord
newport beach, california
92663

materials

SYMBOL	MATERIAL	DESCRIPTION
A	STUCCO	3 COAT SMOOTH STUCCO; COLOR TO BE INTEGRAL WHITE COLORED, OMEGA "MILKY QUARTZ", COLOR #1C030 PROVIDE MERLEX 'BASEX' POLYMER-MODIFIED BASE COAT ANTI-FRACTURE MEMBRANE OVER BROWN COAT
B	METAL	DARK BRONZE COLORED ACM METAL PANELS
C	STONE VENEER	1"-1.5" THICK (MAX.) DIMENSIONAL CUT "LONE PINE CREAM" SPLIT FACE LIMESTONE VENEER, SAWN TOP & BOTTOM (LESS THAN 15 LBS./S.F.) INSTALLED O/ SCRATCH & BROWN COAT OVER WIRE LATH O/ TYVEK STUCCOWRAP O/ 1/2" A.P.A. RATED PLYWOOD SHEATHING
D	EAVE	WINDSORONE 5/4 TRIM BOARD AT ALL EAVES; PAINT COLOR, BENJAMIN MOORE 'MIDNIGHT GRAY' #2131-20 (OR APPROVED) UNDERSIDE OF EAVE TO BE 1x6 WINDSORONE T&G 'PLANTATION' SIDING; PAINT TO MATCH EAVE
E	WINDOW/DOOR	'WESTERN WINDOW SYSTEMS' VANTAGE LINE OF WINDOWS/DOORS WITH BRONZE ANODIZED ALUMINUM FINISH
F	ROOF TILE	CONCRETE FLAT ROOF TILE OVER 2 LAYERS OF 30 LB. FELT UNDERLAYMENT, TYP.; MANUFACTURED BY ECOSTAR OR EQUAL; 'MIDNIGHT GRAY' COLOR; CLASS A FINISH; UL REPORT #UL ER18920-01
G	GUTTER	4" BOX CONTINUOUS METAL GUTTER AND DOWNSPOUTS; COLOR: DARK GRAY
H	GLASS RAILING	42" HIGH, 9/16" THK. LAMINATED, FRAMELESS GLASS GUARDRAIL WITH STAINLESS STEEL SHOE (ESR-3842)
I	PRECAST CONC.	ADVANCED ARCHITECTURAL STONE WITH "SMOOTH VENEER" FINISH; COLOR TO BE "CLASSIC WHITE"

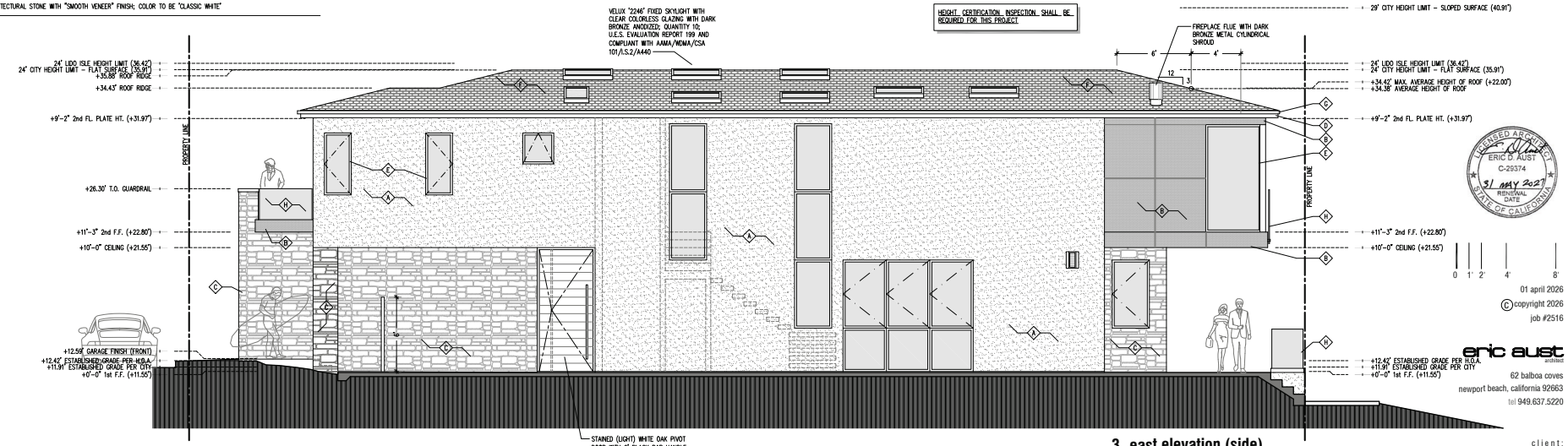
established grade and overall height

ESTABLISHED GRADES:
SW CORNER 12.55'
SE CORNER 12.53'
NW CORNER 11.31'
NE CORNER 11.24'
AVERAGE:
12.55 + 12.53 + 11.31 + 11.24 = 47.63
47.63/4 = 11.91' ESTABLISHED AVERAGE GRADE

lido isle height determination

ESTABLISHED GRADES:
S.W. TOP OF CURB 12.48'
S.E. TOP OF CURB 12.36'
AVERAGE:
12.48 + 12.36 = 24.84
24.84/2 = 12.42' ESTABLISHED TOP OF CURB
24' MAX. HEIGHT (12.42 + 24) = 36.42'

HEIGHT CERTIFICATION INSPECTION SHALL BE REQUIRED FOR THIS PROJECT



3 east elevation (side)

A3.0 SCALE: 1/4" = 1'-0"

LICENSED ARCHITECT
ERIC D. AUST
C-29374
31 MAY 2027
RENEWAL DATE
STATE OF CALIFORNIA

0 1' 2' 4' 8'

01 april 2026

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job #2516

eric aust
architect
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newport beach, california 92663
tel 949.637.5220

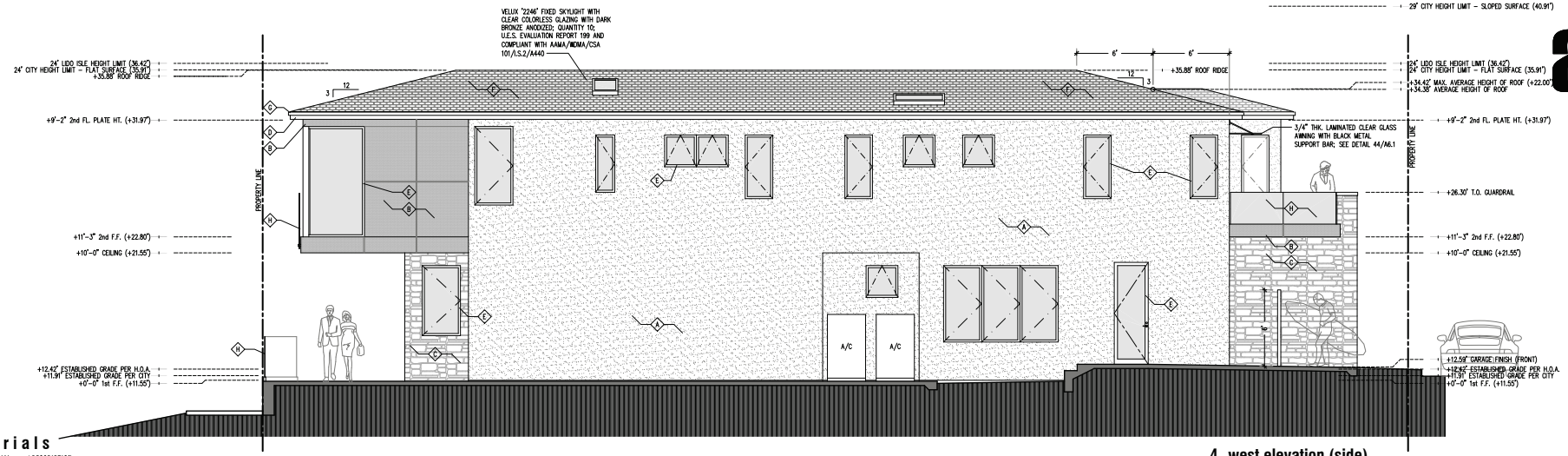
client:
patrick boyd
426 via lido nord
newport beach, california 92663
tel 949.633.6990

a3.1

exterior elevation/section
1/4"=1'-0"

boyd residence

426 via lido nord
newport beach, california
92663



4 west elevation (side)
A3.1 SCALE: 1/4" = 1'-0"

materials

SYMBOL	MATERIAL	DESCRIPTION
A	STUCCO	3 COAT SMOOTH STUCCO; COLOR TO BE INTEGRAL WHITE COLORED, OMEGA "MILKY QUARTZ", COLOR #OC030 PROVIDE MERLEX 'BASEX' POLYMER-MODIFIED BASE COAT ANTI-FRACTURE MEMBRANE OVER BROWN COAT
B	METAL	DARK BRONZE COLORED ACM METAL PANELS
C	STONE VENEER	1"-1.5" THICK (MAX.) DIMENSIONAL CUT "LONE PINE CREAM" SPLIT FACE LIMESTONE VENEER, SAWN TOP & BOTTOM (LESS THAN 15 LBS./S.F.) INSTALLED O/ SCRATCH & BROWN COAT OVER WIRE LATH O/ TYVEK STUCCOWRAP O/ 1/2" A.P.A. RATED PLYWOOD SHEATHING
D	EAVE	WINDSORONE 5/4 TRIM BOARD AT ALL EAVES; PAINT COLOR, BENJAMIN MOORE 'MIDNIGHT GRAY' #2131-20 (OR APPROVED) UNDERSIDE OF EAVE TO BE 1x6 WINDSORONE T&G 'PLANTATION' SIDING; PAINT TO MATCH EAVE
E	WINDOW/DOOR	'WESTERN WINDOW SYSTEMS' VANTAGE LINE OF WINDOWS/DOORS WITH BRONZE ANODIZED ALUMINUM FINISH
F	ROOF TILE	CONCRETE FLAT ROOF TILE OVER 2 LAYERS OF 30 LB. FELT UNDERLAYMENT, TYP.; MANUFACTURED BY ECOSTAR OR EQUAL; 'MIDNIGHT GRAY' COLOR; CLASS A FINISH; UL REPORT #UL ER18920-01
G	GUTTER	4" BOX CONTINUOUS METAL GUTTER AND DOWNSPOUTS; COLOR: DARK GRAY
H	GLASS RAILING	42" HIGH, 9/16" THK. LAMINATED, FRAMELESS GLASS GUARDRAIL WITH STAINLESS STEEL SHOE (ESR-3842)
I	PRECAST CONC.	ADVANCED ARCHITECTURAL STONE WITH "SMOOTH VENEER" FINISH; COLOR TO BE 'CLASSIC WHITE'

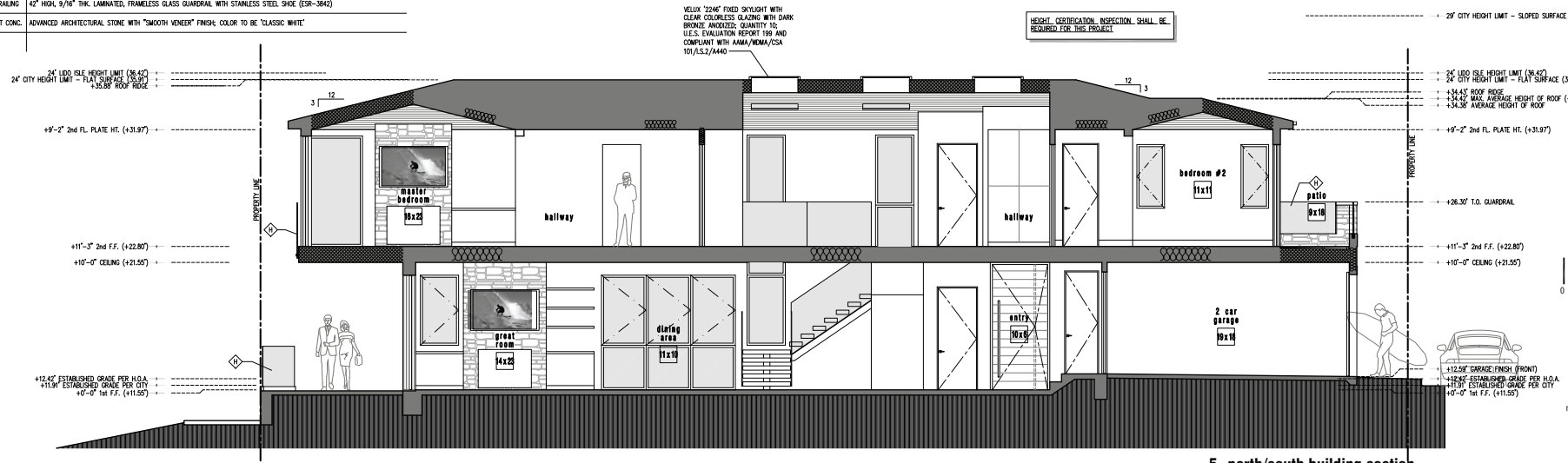
established grade and overall height

ESTABLISHED GRADES:
SW CORNER 12.55'
SE CORNER 12.53'
NW CORNER 11.31'
NE CORNER 11.24'
AVERAGE:
12.55 + 12.53 + 11.31 + 11.24 = 47.63
47.63/4 = 11.91' ESTABLISHED AVERAGE GRADE

HEIGHT CERTIFICATION INSPECTION SHALL BE REQUIRED FOR THIS PROJECT

lido isle height determination

ESTABLISHED GRADES:
S.W. TOP OF CURB 12.48'
S.E. TOP OF CURB 12.36'
AVERAGE:
12.48 + 12.36 = 24.84
24.84/2 = 12.42' ESTABLISHED TOP OF CURB
24' MAX. HEIGHT (12.42 + 24) = 36.42'



5 north/south building section
A3.1 SCALE: 1/4" = 1'-0"

LICENSED ARCHITECT
ERIC D. AUST
C-29374
31 MAY 2027
RENEWAL DATE
STATE OF CALIFORNIA

0 1' 2' 4' 8'

01 april 2026
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job #2516

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newport beach, california 92663
tel 949.637.5220

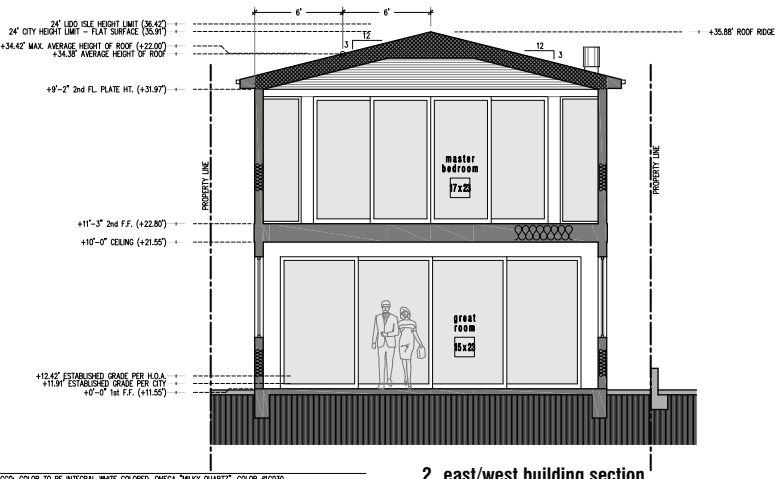
client:
patrick boyd
426 via lido nord
newport beach, california 92663
tel 949.633.6990

a4.0

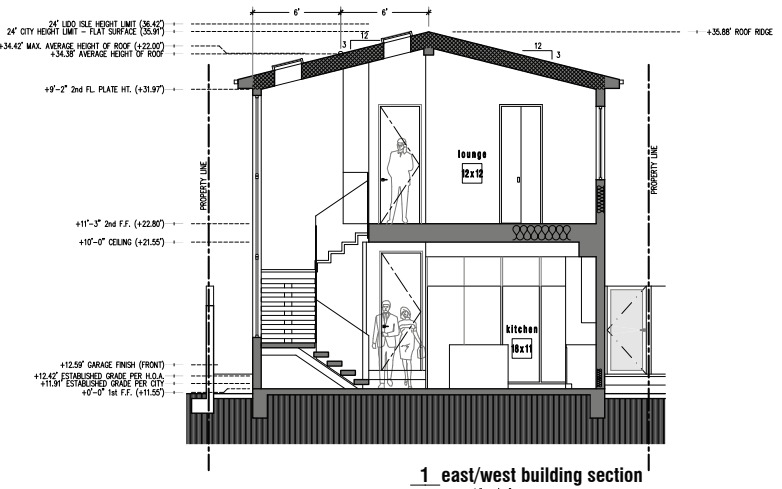
building sections
1/4"=1'-0"

boyd residence

426 via lido nord
newport beach, california
92663



2 east/west building section
A4.0 SCALE: 1/4" = 1'-0"



1 east/west building section
A4.0 SCALE: 1/4" = 1'-0"

materials

SYMBOL	MATERIAL	DESCRIPTION
A	STUCCO	3 COAT SMOOTH STUCCO; COLOR TO BE INTEGRAL WHITE COLORED, OMEGA "MILKY QUARTZ", COLOR #1C030 PROVIDE MERLEX "BASEX" POLYMER-MODIFIED BASE COAT ANTI-FRACTURE MEMBRANE OVER BROWN COAT
B	METAL	DARK BRONZE COLORED ACM METAL PANELS
C	STONE VENEER	1"-1.5" THICK (MAX.) DIMENSIONAL CUT "LONE PINE CREAM" SPLIT FACE LIMESTONE VENEER, SAWN TOP & BOTTOM (LESS THAN 15 LBS./S.F.) INSTALLED O/ SCRATCH & BROWN COAT OVER WIRE LATH O/ TYVEK STUCCOWRAP O/ 1/2" A.P.A. RATED PLYWOOD SHEATHING
D	EAVE	WINDSORONE 5/4 TRIM BOARD AT ALL EAVES; PAINT COLOR, BENJAMIN MOORE "MIDNIGHT GRAY" #2131-20 (OR APPROVED) UNDERSIDE OF EAVE TO BE 1x6 WINDSORONE T&G "PLANTATION" SIDING; PAINT TO MATCH EAVE
E	WINDOW/DOOR	"WESTERN WINDOW SYSTEMS" VANTAGE LINE OF WINDOWS/DOORS WITH BRONZE ANODIZED ALUMINUM FINISH
F	ROOF TILE	CONCRETE FLAT ROOF TILE OVER 2 LAYERS OF 30 LB. FELT UNDERLAYMENT, TYP.; MANUFACTURED BY ECOSTAR OR EQUAL; "MIDNIGHT GRAY" COLOR; CLASS A FINISH; UL REPORT #UL ER18920-01
G	GUTTER	4" BOX CONTINUOUS METAL GUTTER AND DOWNSPOUTS; COLOR: DARK GRAY
H	GLASS RAILING	42" HIGH, 9/16" THK. LAMINATED, FRAMELESS GLASS GUARDRAIL WITH STAINLESS STEEL SHOE (ESR-3842)
I	PRECAST CONC.	ADVANCED ARCHITECTURAL STONE WITH "SMOOTH VENEER" FINISH; COLOR TO BE "CLASSIC WHITE"

established grade and overall height

ESTABLISHED GRADES:
SW CORNER 12.55'
SE CORNER 12.53'
NW CORNER 11.31'
NE CORNER 11.24'
AVERAGE:
12.55 + 12.53 + 11.31 + 11.24 = 47.63
47.63/4 = 11.91' ESTABLISHED AVERAGE GRADE

HEIGHT CERTIFICATION INSPECTION SHALL BE REQUIRED FOR THIS PROJECT

lido isle height determination

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S.W. TOP OF CURB 12.48'
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24' MAX. HEIGHT (12.42 + 24) = 36.42'

3 north/south building section
A4.0 SCALE: 1/4" = 1'-0"

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a4.1

exterior renderings

boyd residence

426 via lido nord
newport beach, california
92663

2 rendering at front of house (bayfront)
A4.1

1 rendering at front of house (street)
A4.1

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a4.2

building materials
1/4"=1'-0"

boyd residence

426 via lido nord
newport beach, california
92663

materials

SYMBOL	MATERIAL	DESCRIPTION
A	STUCCO	3 COAT SMOOTH STUCCO; COLOR TO BE INTEGRAL WHITE COLORED, OMEGA "MILKY QUARTZ", COLOR #1C030 PROVIDE MERLEX 'BASEX' POLYMER-MODIFIED BASE COAT ANTI-FRACTURE MEMBRANE OVER BROWN COAT
B	METAL	DARK BRONZE COLORED ACM METAL PANELS
C	STONE VENEER	1"-1.5" THICK (MAX.) DIMENSIONAL CUT "LONE PINE CREAM" SPLIT FACE LIMESTONE VENEER, SAWN TOP & BOTTOM (LESS THAN 15 LBS./S.F.) INSTALLED O/ SCRATCH & BROWN COAT OVER WIRE LATH O/ TYVEK STUCCOWRAP O/ 1/2" A.P.A. RATED PLYWOOD SHEATHING
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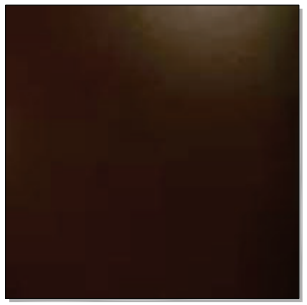
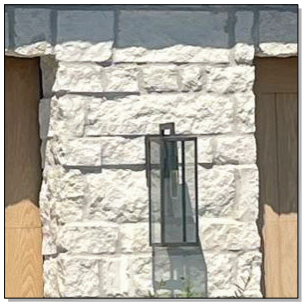
G	GUTTER	4" BOX CONTINUOUS METAL GUTTER AND DOWNSPOUTS; COLOR: DARK GRAY
H	GLASS RAILING	42" HIGH, 9/16" THK. LAMINATED, FRAMELESS GLASS GUARDRAIL WITH STAINLESS STEEL SHOE (ESR-3842)
I	PRECAST CONC.	ADVANCED ARCHITECTURAL STONE WITH "SMOOTH VENEER" FINISH; COLOR TO BE 'CLASSIC WHITE'

A smooth stucco
A4.2 3 COAT SMOOTH STUCCO; COLOR TO BE INTEGRAL WHITE COLORED, OMEGA "MILKY QUARTZ", COLOR #1C030; PROVIDE MERLEX 'BASEX' POLYMER-MODIFIED BASE COAT ANTI-FRACTURE MEMBRANE OVER BROWN COAT

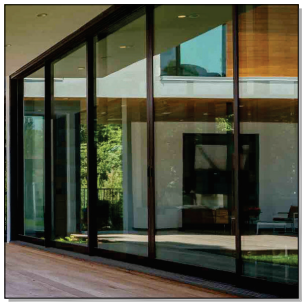


B metal
A4.2 DARK BRONZE COLORED ACM METAL PANELS

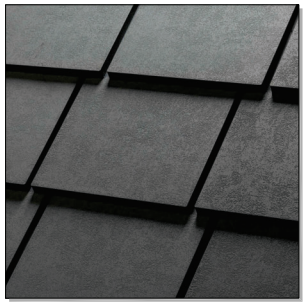


C stone veneer
A4.2 1"-1.5" THICK (MAX.) DIMENSIONAL CUT "LONE PINE CREAM" SPLIT FACE LIMESTONE VENEER, SAWN TOP & BOTTOM (LESS THAN 15 LBS./S.F.) INSTALLED O/ SCRATCH & BROWN COAT OVER WIRE LATH O/ TYVEK STUCCOWRAP O/ 1/2" A.P.A. RATED PLYWOOD SHEATHING

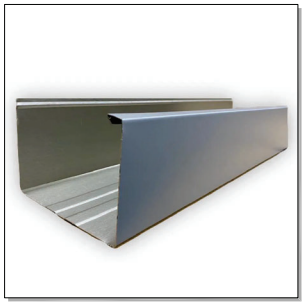
D eave
A4.2 WINDSORONE 5/4 TRIM BOARD AT ALL EAVES; PAINT COLOR, BENJAMIN MOORE 'MIDNIGHT GRAY' #2131-20 (OR APPROVED); UNDERSIDE OF EAVE TO BE 1x6 WINDSORONE T&G 'PLANTATION'; PAINT TO MATCH EAVE



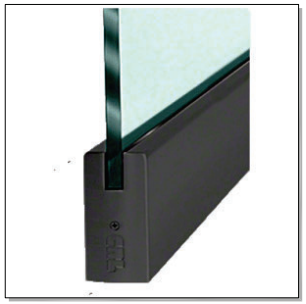
E windows and doors
A4.2 'WESTERN WINDOW SYSTEMS' VANTAGE LINE OF WINDOWS/DOORS WITH BRONZE ANODIZED ALUMINUM FINISH



F roof tile
A4.2 CONCRETE FLAT ROOF TILE OVER 2 LAYERS OF 30 LB. FELT UNDERLAYMENT, TYP.; MANUFACTURED BY ECOSTAR OR EQUAL; 'MIDNIGHT GRAY' COLOR; CLASS A FINISH; UL REPORT #UL ER18920-01



G gutter/downspout
A4.2 DARK GRAY CONTINUOUS METAL ROOF SCUPPER AND DOWNSPOUTS



H glass railing
A4.2 42" HIGH, 9/16" THK. LAMINATED, FRAMELESS GLASS GUARDRAIL WITH STAINLESS STEEL SHOE (ESR-3842)

I precast concrete
A4.2 ADVANCED ARCHITECTURAL STONE WITH "SMOOTH VENEER" FINISH; COLOR TO BE 'CLASSIC WHITE'

1 exteroir light fixture
A4.2 'PUMA LARGE' WALL SCONCE WITH BLACK FINISH; 13" WIDE, 10-1/2" DEEP, 29" HEIGHT

01 april 2026
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job #2516

eric aust
architect
62 balboa coves
newport beach, california 92663
tel 949.637.5220

client:
patrick boyd
426 via lido nord
newport beach, california 92663
tel 949.633.6990

landscape general notes

1. PLANTING SCHEDULE (1 WEEK)
2. 90% COVERAGE IN 90 DAYS; REPEAT AS NECESSARY
3. MAINTAIN PLANTS & REPLACE AS REQUIRED TO ENSURE CONTINUES COMPLIANCE WITH LANDSCAPE PLAN
4. ALL LIGHTING TO BE DOWNWARD, NOT IMPACTING ADJACENT WETLANDS
5. WATER SUPPLY FOR ALL LANDSCAPING SHALL BE PROVIDED BY EXISTING WATER SERVICE FROM CITY OF NEWPORT BEACH
6. ALL LANDSCAPE AREA SHALL HAVE SOIL WITH COMPOST RATE OF AT LEAST FOUR CUBIC YARDS PER 1,000 SQUARE FEET TO A DEPTH OF SIX INCHES (UNLESS CONTRA-INDICATED BY A SOIL TEST)
7. ALL PLANTS INDICATED ARE DROUGHT TOLERANT AND COMPLIANT WITH CALIFORNIA COASTAL COMMISSION REQUIREMENTS. IF SUBSTITUTES ARE PROPOSED, INSTALL CLIMATE ADAPTED PLANTS THAT REQUIRE OCCASIONAL, LITTLE OR NO SUMMER WATER (AVERAGE WUCOLS PLAN FACTOR 0.3) FOR 75% OF THE PLANT AREA EXCLUDING EDIBLES AND AREAS USING RECYCLED WATER.
8. A MINIMUM THREE INCH (3") LAYER OF MULCH SHALL BE APPLIED ON ALL EXPOSED SOIL SURFACES OF PLANTING AREAS EXCEPT IN TURF AREAS, CREEPING OR ROOTING GROUNDCOVERS, OR DIRECT SEEDING APPLICATIONS WHERE MULCH IS CONTRAINDICATED.
9. NO TURF TO BE INSTALLED AS PART OF THIS PROJECT.
10. IRRIGATION SYSTEM:
    a. AUTOMATIC IRRIGATION CONTROLLERS ARE REQUIRED AND MUST USE EVAPOTRANSPIRATION OR SOIL MOISTURE SENSOR DATA.
    b. IRRIGATION CONTROLLERS SHALL BE OF A TYPE WHICH DOES NOT LOSE PROGRAMMING DATA IN THE EVENT THE PRIMARY POWER SOURCE IS INTERRUPTED.
    c. PRESSURE REGULATORS SHALL BE INSTALLED ON THE IRRIGATION SYSTEM TO ENSURE THE DYNAMIC PRESSURE OF THE SYSTEM IS WITHIN THE MANUFACTURER'S RECOMMENDED PRESSURE RANGE.
    d. MANUAL SHUT-OFF VALVES (SUCH AS A GATE VALVE, BALL VALVE, OR BUTTERFLY VALVE) SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO THE POINT OF CONNECTION OF THE WATER SUPPLY.
    e. ALL IRRIGATION EMISSION DEVICES MUST MEET THE REQUIREMENTS SET IN THE ANSI STANDARD, ASABE/ICC802-2014, "LANDSCAPE IRRIGATION SPRINKLER AND EMITTER STANDARD". ALL SPRINKLER HEADS INSTALLED IN THE LANDSCAPE MUST DOCUMENT A DISTRIBUTION UNIFORMITY LOW QUARTER OF 0.65 OR HIGHER USING THE PROTOCOL DEFINED IN ASABE/ICC 802-2014.
11. AT THE TIME OF FINAL INSPECTION, THE PERMIT APPLICANT MUST PROVIDE THE OWNER OF THE PROPERTY WITH A CERTIFICATE OF COMPLETION, CERTIFICATE OF INSTALLATION, IRRIGATION SCHEDULE AND A SCHEDULE OF LANDSCAPE AND IRRIGATION MAINTENANCE.
12. LANDSCAPING FOR THIS PROJECT SHALL COMPLY WITH THE CITY OF NEWPORT BEACH PRESCRIPTIVE COMPLIANCE OPTION (APPENDIX H OF DESIGN STANDARDS)

I AGREE TO COMPLY WITH REQUIREMENTS OF THE PRESCRIPTIVE COMPLIANCE OPTION TO THE WMELO

ERIC AUST

plant list

*ALL PLANTS TO BE NON-INVASIVE SPECIES

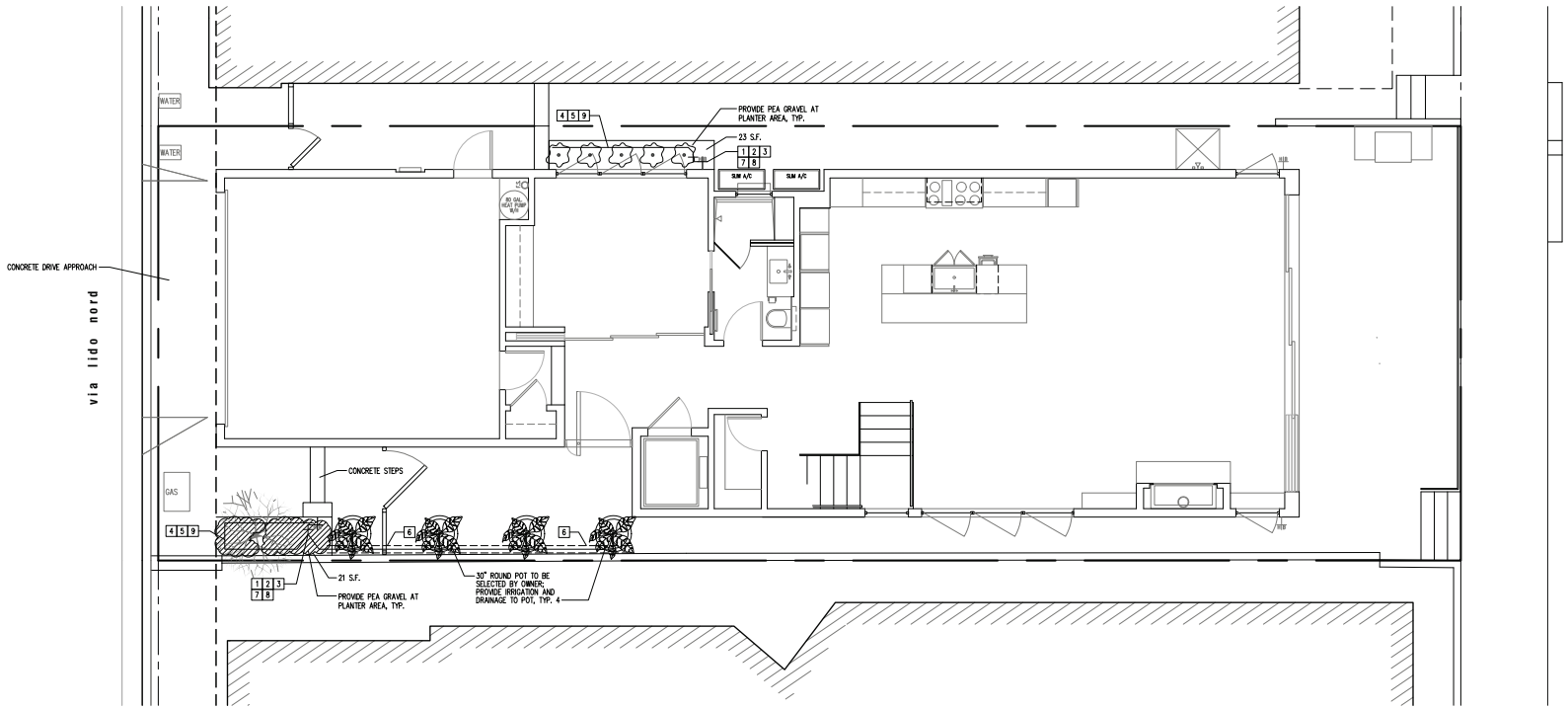
	FRUITLESS MULTI-TRUCK OLIVE TREE 'OLEA EURPAEA WILSONII'	24" BOX
	JUNIPERUS COMMUNIS 'COMPRESSA' 'COMMON JUNIPER' (120" MAX. HEIGHT AT MATURITY)	5 GAL.
	PYGMY DATE PALM 'PHOENIX ROEBELENII *INSTALLED IN POTS (84" MAX. HEIGHT AT MATURITY)	3 GAL.
	MISCELLANEOUS SUCCULENTS -KOM AEONIUM -SUNBURST AEONIUM -CRASSULA OVATA -CRASSULA DELTOIDEA -DUDLEYA BRITTONI -DUDLEYA EDULIS -ECHEVERIA ELEGANS -ECHEVERIA IMBRICATA -ECHEVERIA PULVINATA -GRAPTOPETALUM PARAGUAYENSE -GRAPTOPETALUM AMETHYSTINUM -KALANCHOE THYRSIFLORA -SENECIO MANDRELISCAE (*SUCCULENTS TO HAVE 12" MAX. HEIGHT AT MATURITY)	FLATS

landscape irrigation notes

1. IRRITROL ELECTRIC ANTI-SIPHON 3/4" VALVE, TYP. (TIE INTO HOSE BIB)
2. IRRITROL RAIN DIAL IRRIGATION TIMER
3. RAINBIRD PRO-075-RBY 3/4" PRESSURE REGULATING FILTER
4. DRIP NETAFIM 12 TECHLINE 1/2" TUBING 0.9 G.P.H. WITH 12" SPACING
5. ALL DRIP FITTINGS TO BE NETAFIM (END CAPS, TEES AND ELBOWS, FLUSH VALVES, COUPLINGS, ADAPTERS, ETC.)
6. = = = INDICATES 3" P.V.C. SLEEVE UNDERNEATH CONCRETE SLAB ON GRADE TO PROVIDE ACCESS FOR IRRIGATION TUBING
7. PROVIDE VALVE BOX AT IRRIGATION VALVES
8. ALL P.V.C. PIPE AND FITTINGS TO BE SCHEDULE 40
9. ALL DRIP TUBING TO BE APPLIED TO PLANT DRIP LINES AND ROOT BALLS OF PLANTS

landscape area

44 S.F. TOTAL LANDSCAPED AREA
(ALL PLANT MATERIAL AREA; NO TURF)



1 landscape / irrigation plan
L1.0 SCALE: 1/4" = 1'-0"

L1.0

landscape / irrigation plan
1/4"=1'-0"

boyd residence

426 via lido nord
newport beach, california
92663

LICENSED ARCHITECT
ERIC D. AUST
C-29374
31 MAY 2027
RENEWAL DATE
STATE OF CALIFORNIA

0 1' 2' 4' 8'
true north
ref. north

01 april 2026
© copyright 2026
job #2516

eric aust architect
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newport beach, california 92663
tel 949.637.5220

client:
patrick boyd
426 via lido nord
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tel 949.633.6990

Attachment No. ZA 4

Coastal Hazards Report

P M A C O N S U L T I N G , I N C .
CONSULTING STRUCTURAL ENGINEERS
28161 Casitas Ct. PH. (714) 717-7542
Laguna Niguel, CA 92677
e-mail: consulting@pma-bg.com

November 30, 2025

Eric Aust
62 Balboa Coves
Newport Beach, CA 92663

COASTAL HAZARDS ANALYSIS REPORT

Patrick Boyd; Applicant
426 Via Lido Nord
City of Newport Beach, County of Orange

PMA Job #66925

Dear Mr. Aust,

PMA Consulting, Inc. is pleased to provide this report regarding Coastal Hazards Analysis for the proposed development at the subject site. The site is adjacent to Newport Bay; thus, it may be subject to Coastal Hazards such as flooding, wave runup, and erosion. This study investigates the potential for the Coastal Hazards to impact the proposed development on the site over the next 75 years and addresses compliance with Coastal Hazards Analysis Report requirements and standards of NBMC Section 21.30.15.E.2.

STATEMENT OF THE PREPARER'S QUALIFICATIONS

Plamen Petrov, P.E., the preparer of the Coastal Hazards Analysis Report on this project, holds a Master of Science in Structural Engineering from University of Architecture, Structural Engineering & Geodesy of Sofia, Bulgaria, and is a Licensed Civil Engineer by the State of California Certificate No. C66947. For the last 25 years of his professional career, he has been actively involved in the design and entitlement of many Waterfront Developments such as custom homes, seawalls, piers, platforms, floating docks and marinas. A great number of Coastal Hazards Analysis Reports prepared by him have been reviewed and accepted/approved by California Coastal Commission.

All the above being said, Plamen Petrov, P.E. shall be considered a qualified preparer for the Coastal Hazards Analysis Report on this project.

Requirements in Appendix A for Step 1:

Establish the project sea level rise range for the proposed project's planning horizon (life of project) using the current best available science.

The State of California Sea-Level Rise Guidance 2024 Science & Policy Update developed by the California Ocean Protection Council (OPC), in partnership with the California Ocean Science Trust (OST) and a scientific Task Force updates and replaces the previous 2018 "State of California Sea Level Rise Guidance" and marks the fourth iteration of the statewide guidance since 2010 for state and local decision-makers to incorporate **best available science** on sea level rise into planning, design, permitting, investments, and other decisions.

As reflected in the clouded area of the enclosed Table F-12, the Projected Intermediate Sea-Level Rise Amount (SLR) for year 2100 shall be approximately 2.80', which is the Sea-Level Rise for the proposed project. Based on the highest high tide of +7.67'MLLW (+7.47'NAVD88) recorded in the project area, the above established Sea-Level Rise will account for bay water level of +10.27'NAVD88.

As of March 23, 2021, City Council of City of Newport Beach has adopted new standards establishing a minimum top of bulkhead/seawall elevation based on 5-year increments, reflected in Table 2 below from City of Newport Beach Waterfront Projects Guidelines and Standards Harbor Design Criteria for Commercial and Residential Facilities 2021 Edition.

Table No. 2

Year Structure Permitted	Adopted NB Standard Elevation (feet) [1]		Design for Adaptability Elevation (feet) [2]	
	NAVD88	MLLW	NAVD88	MLLW
2020	10.7	10.9	13.7	13.9
2021-2025	10.9	11.1	14.4	14.6
2026-2030	11.0	11.1	14.6	14.8
2031-2035	11.0	11.2	14.8	15.0

1. Derived using the Upper Limit of the Low Risk Aversion probabilistic sea level rise protection scenario for the Los Angeles tidal gauge, estimated 75 years into the future based on the State of California Sea Level Rise Guidance, 2018 Update. This scenario accounts for the upper range of what is "likely to occur" with approximately an 83 percent probability that sea level rise falls below the elevations shown.

2. Derived using the Medium-High Risk Aversion probabilistic sea level rise protection scenario for the Los Angeles tidal gauge, estimated 75 years into the future based on the State of California Sea Level Rise Guidance, 2018 Update. This scenario accounts for increased sea level with approximately a 1-in-200 or 0.5 percent probability that sea level rise exceeds the elevations shown.

The top of the existing seawall is at +11.24'NAVD88 which is above the minimum required +10.90'NAVD88, and it can be raised to elevation of +14.40'NAVD88 in compliance with the City of Newport Beach waterfront Project Design Guidelines and Standards, Harbor Design Criteria Commercial & Residential.

<u>Requirements in Appendix A for Step 2:</u>

<u>Determine how physical impacts from sea level rise may constrain the project site, including erosion, structural and geologic stability, flooding, and inundation.</u>

According to the enclosed 1st Floor Plan, finished floor of the proposed development is at +11.55' NAVD88=+11.75'MLLW which is above the Base Flood Elevation established for the area. Based on the SLR established in Step 1 above, 1st floor of the proposed structure will remain above High Tide Sea Level until after year 2100. As we well know, majority of the public streets in Newport Bay area are currently at much lower elevations than the subject site and they will flood due to SLR way before the development on this site becomes subject to flooding.

FLOODING HAZARD

The primary hazard due to flooding from the ocean waters for this site, like majority of the sites located adjacent to Newport Bay, would be due to long term Sea-Level Rise. The current water levels in Newport Bay are reflected in the enclosed Datums for Newport Bay Entrance.

While Sea-Levels have been Rising for decades, higher rates of raise are forecast for the coming century because of climate change – see enclosed table F-12. Increases can be attributed to warmer temperatures, which cause water to expand, as well as more liquid mass caused by melting ice caps. Current estimates of future SLR generally fall in the range of 2.8-6.3 ft for the year 2100. Global warming may impact flooding in other ways as well. Warmer water could intensify North Pacific storms, bringing greater wind and wave energy to shoreline in winter and higher intensity precipitation.

The Newport Beach Peninsula portion of the Pacific Institute California Flood Risk Map is shown herein as OE S Quadrangle. The dark blue colored areas show where a 100-year Sea-Level Rise of 55 inches is added to the existing FEMA coastal flood elevation shown in light blue. Obviously, the entire Newport Bay area will be affected if sea level rises 55 inches by the year 2100.

If the sea level rises in the next several decades as currently estimated, regional measures to mitigate the potential flooding hazard shall be taken. As determined in Step 2 above, 1st floor elevation of the proposed structure will remain above High Tide Sea Level until after year 2100. If SLR prediction of 6.30' (Medium High-Risk Aversion) for year 2100 holds true, the existing seawall can be raised to elevation of +14.40'NAVD88.

The USGS has developed a model called the Coastal Storm Modeling System (CoSMoS) for assessment of the vulnerability of coastal areas to SLR and the 100-year storm. (https://ourcoastourfuture.org/hazard-map/).

Using the modeling program, the vulnerability of Newport Harbor area to different SLR scenarios and the 100-year storm can be assessed. Figure 1 is the output from the CoSMoS for Newport Harbor area for 100 cm (3.15 feet) SLR under which some buildings will be flooded.

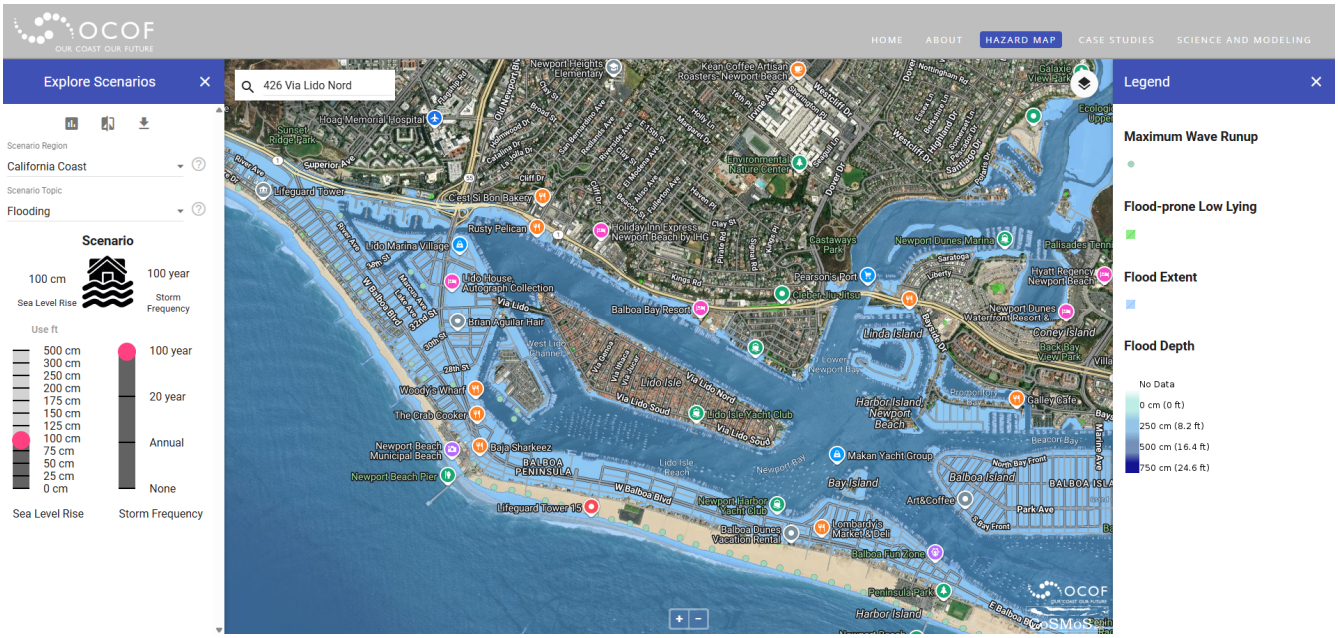


Figure 1 – Output graphic from USGS CoSMoS analysis for 100 cm SLR & 100-year storm.

The structure on the lot will be built of wood and concrete materials on which above grade waterproofing can be added if needed. The community will most likely adopt SLR adaptation strategies that are currently being considered in other coastal communities. To the best of our knowledge, the City of Newport Beach has prepared a sea level rise vulnerability assessment utilizing CoSMoS modeling tool. The assessment report states that assets in low lying areas up to 8 ft NAVD88 are vulnerable to flooding. The CoSMoS output for 6.6 ft SLR reflected on Figure 2 below shows that the majority of Newport Harbor is in the flooding zone.

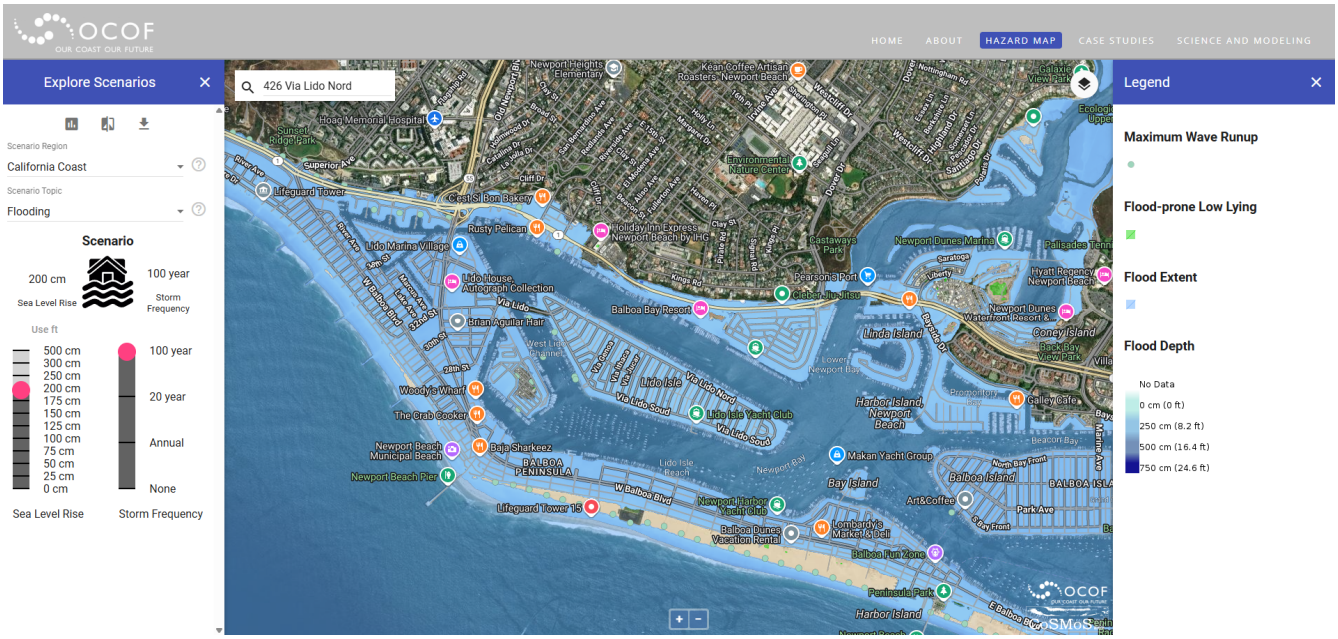
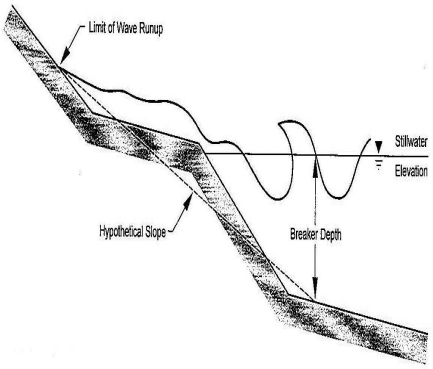


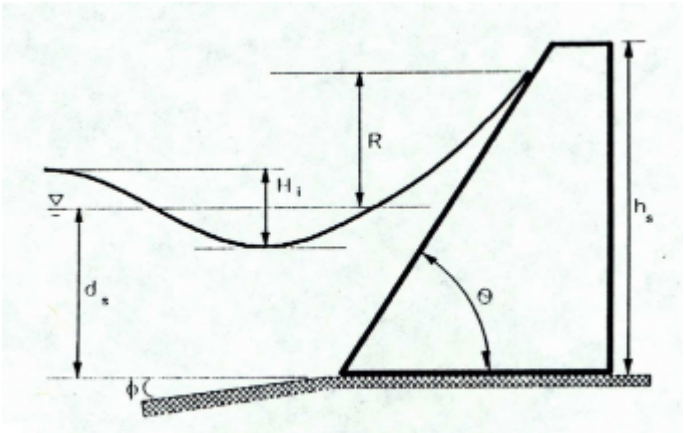
Figure 2 – Output graphic from USGS CoSMoS analysis for 200 cm SLR & 100-year storm.

WAVE RUNUP AND TSUNAMI

Wave runup is the uprush of water from wave action on a shore barrier intercepting Stillwater level. On steeply sloped shorelines, the rush of water up the surface of the natural beach, including dunes and bluffs, or the surface of a manmade structure, such as revetment or vertical wall can result in flood elevations higher than those of the crest of wind-driven waves. See Wave Runup Sketch & ACSE Diagram below.



Wave Runup Sketch



Wave runup terms from ACES analysis.

Due to its location, this site is not a subject to typical ocean waves and the associated waves

runup. Bay generated waves that may arrive at this site are very small wind waves and boat wakes. These types of waves are generally dampened by the moored vessels and dock systems located in front of the site and have no significant energy and runup effect. Tsunami type waves that approach from the ocean shoreline will likely not reach the site for several reasons. There is no significant near field source of a tsunami like the geologic conditions of some other places on Earth such as Japan, for example. A far field tsunami reaching the ocean shoreline will likely not reach the site because of the distance and developments between the shoreline and this site. A near or far field tsunami propagating into Newport Bay would likely cause a seiche or standing wave on the order of 1.3 feet traveling within the bay. At the highest anticipated tide in Newport Beach of +10.27'NAVD88, this shall result in slight overtopping of the bulkhead/seawall. **Due to its very infrequent occurrence – 500-year recurrence interval – tsunami should not be considered a significant impact over the life of the proposed structure -75 years.**

EROSION HAZARD

Erosion refers to the wearing or washing away of coastal lands. Beach erosion is a chronic problem along many open ocean shores of the United States. To meet the needs for comprehensive analysis of shoreline movement, the United States Geological Survey has conducted analysis of historical shoreline changes along open ocean sandy shores of the conterminous United States and has produced an Open-File Report 2006-1219 entitled "National Assessment of Shoreline Change Part 3: Historical Shoreline Change and Associated Coastal land Loss Along Sandy Shorelines of the California Coast". The report looks at survey data of the following periods: 1800s, 1920s-1930s, and 1950s-1970s, whereas the lidar shoreline is from 1998-2002. The report looks at both long-term and short-term changes. According to the report, the average rate of long-term shoreline changes for the State of California was 0.2±0.1 m/yr., and accretional trend. The average rate of short-term shoreline change for the state was erosional; with an average rate of -0.2±0.4 m/yr. The beach footprint of this site is stabilized and not subject to significant long-term erosion. Review and analysis of historical aerial photographs and field measurements for seawall repairs in the area show no change in the position of the shoreline over the last several decades. The future shoreline changes over the next 75 years are assumed to be the same as in the previous several decades.

However, there is a rapid rate of SLR predicted in the next 75 years. If that prediction holds true, the rapid SLR may accelerate shoreline erosion, but it shall not impact the structure on the subject lot over its economic life.

CONCLUSION

In conclusion, flooding, wave runup and erosion will not significantly impact this property over the economic life of the proposed development. The existing seawall/bulkhead is required to protect the proposed structure on the lot, the adjacent properties, public facilities and infrastructure; thus, it can't be removed. Removal of the seawall/bulkhead will result in erosion and undermine the foundations of the structures and site walls at the subject site and the adjacent sites. Need for a new shoreline protective device shall not be anticipated over the economic life of the proposed development to protect it from flooding, wave runup and erosion. If during this period the seawall/bulkhead displays any sign of distress that requires immediate attention, due to some unforeseen catastrophic or disastrous events, it should be repaired or replaced at that time accordingly, without seaward encroachment from its current location.

The above conclusion was prepared based on the existing conditions, proposed drawings, current projection of future Sea-Level Rise, and within the inherent limitations of this study, in accordance with generally acceptable engineering principles and practices. We make no further warranty, either expressed or implied.

PMA Consulting, Inc. appreciates the opportunity to work with you towards the successful completion of your project. Should you have any questions regarding this report, please contact us.

Respectfully submitted,

Plamen Petrov, P.E.
Principal

Enclosures:

Location Map
Aerial View
Topographic Survey
1st Floor Plan
Table F-12: Projected Sea-Level Rise (in feet) for Los Angeles 2100
Datums for Newport Bay Entrance
Newport Beach OE S Quadrangle

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Phone: (714) 717-7542
E-Mail: P.Petrov@PMA-BG.com

426 VIA LIDO NORD
NEWPORT BEACH, CA 92663

JOB. 66925
SHT.
DES. PBP
DATE 11/24/25

LOCATION MAP

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426 VIA LIDO NORD
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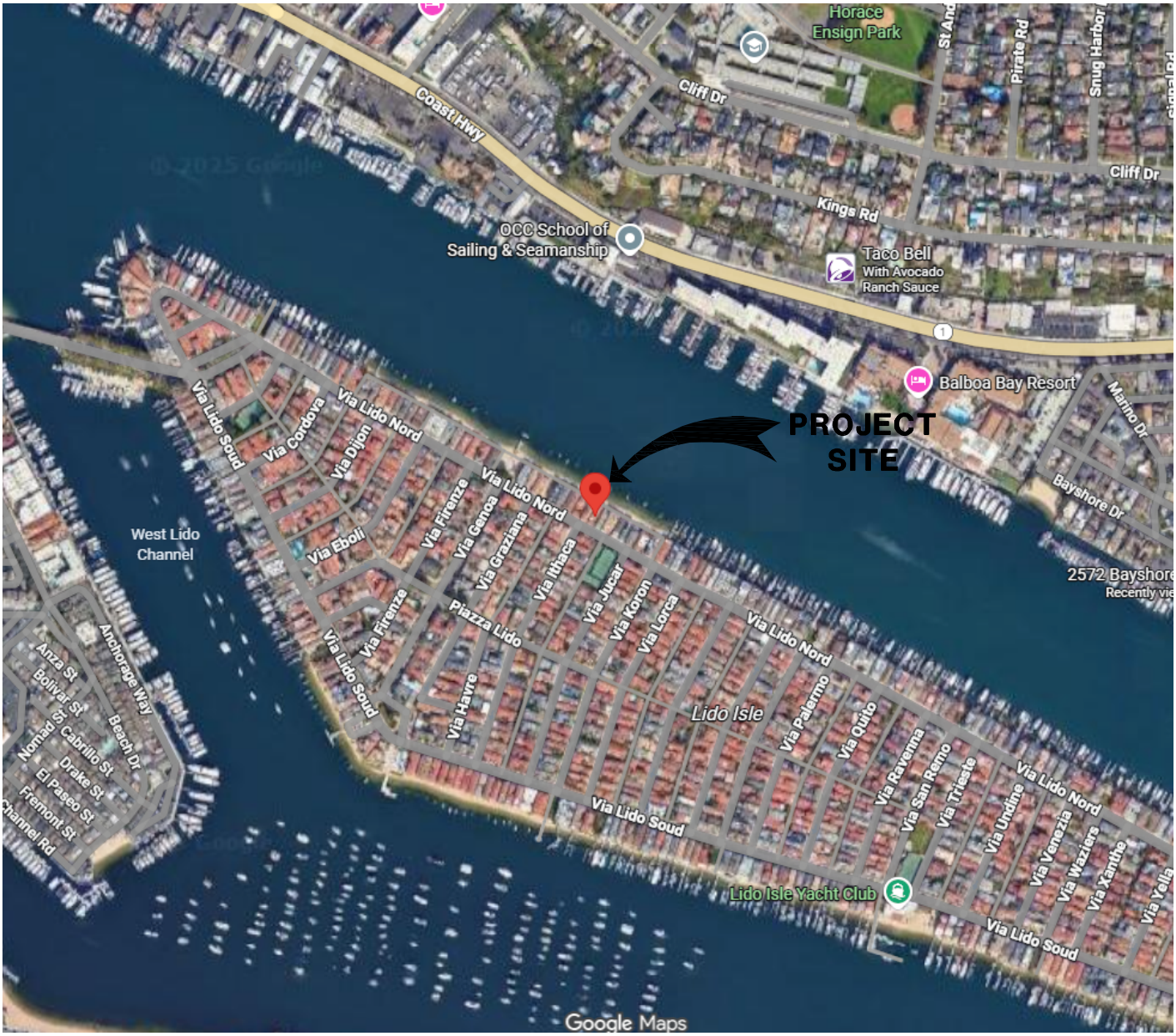
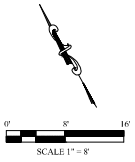
DES. PBP
DATE 11/24/25



AERIAL VIEW

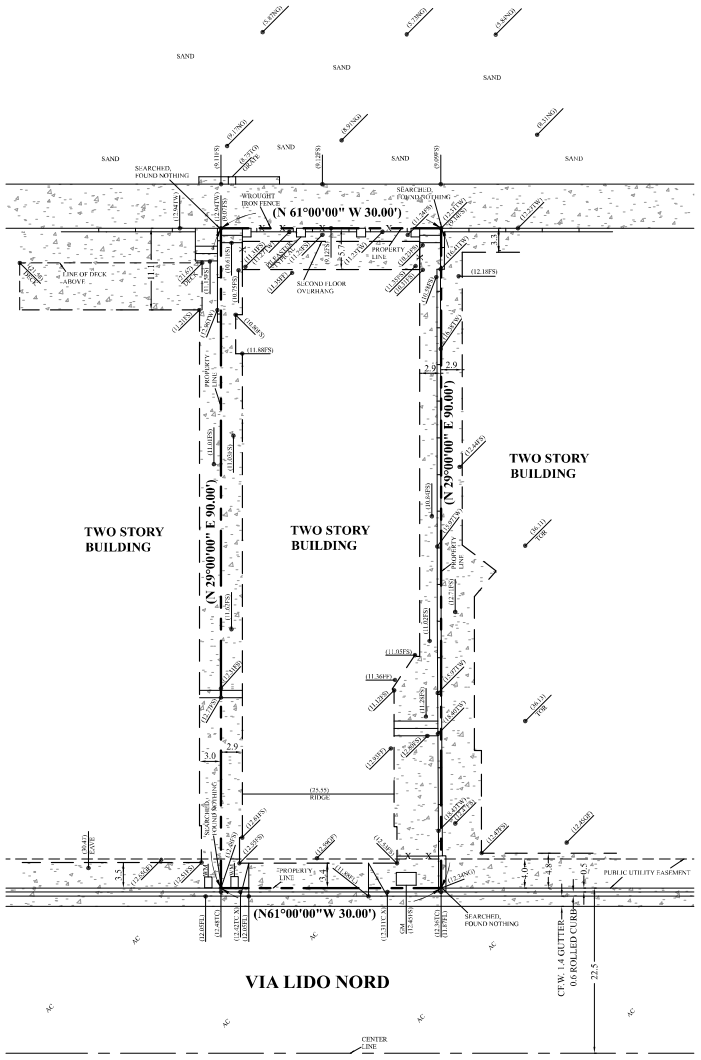


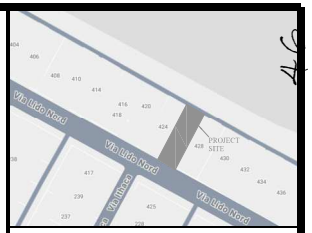
SURVEY NOTES

1. ALL MEASUREMENTS SHOWN HEREON ARE TO EXISTING EXTERIOR FINISHED SURFACE.
2. THE ONLY EASEMENTS SHOWN, IF ANY, ARE PER THE TRACT MAP OF SUBJECT PROPERTY. THE PLAT FOR THIS SURVEY WAS PREPARED WITHOUT A TITLE REPORT. UNPLOTTED EASEMENTS MAY EXIST ON THE SUBJECT PROPERTY.
3. SURVEYOR OR ENGINEER SHALL PERMANENTLY MONUMENT PROPERTY CORNERS OR OFFSETS BEFORE STARTING GRADING.

LEGEND

	DESCRIPTION
(123.45)	MEASURED ELEVATIONS
( )	RECORD BERING & DISTANCE
	BRICK
	CONCRETE
	DECK
	WALL
	BUILDING
	CENTER LINE
	PROPERTY LINE
X X X	FENCE
	BENCH MARK
AC	ASPHALT
CF	CURB FACE
FF	FINISH FLOOR
FH	FIRE HYDRANT
FL	FLOW LINE
FS	FINISHED SURFACE
GF	GARAGE FLOOR
GM	GAS METER
L&T	LEAD & TAG
MH	MAN HOLE
NG	NATURAL GRADE
P	PLANTER
PP	POWER POLE
TC	TOP OF CURB
TW	TOP OF WALL
TG	TOP OF GRATE
TOR	TOP OF ROOF
S&W	SPIKE & WASHER
WM	WATER METER
WV	WATER VALVE





VICINITY MAP
NOT TO SCALE

ADDRESS OF PROJECT
426 VIA LIDO NORD
NEWPORT BEACH, CA

OWNER
PATRICK BOYD

LEGAL DESCRIPTION
THE SOUTHEASTERLY 5 FEET OF LOT 483, AND THE NORTHWESTERLY 25 FEET OF LOT 484, OF TRACT NO. 907, IN THE CITY OF NEWPORT BEACH, COUNTY OF ORANGE, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 28, PAGES 25 THROUGH 36 OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

APN 423-191-13

BENCH MARK
BENCH MARK #NBS-21-92
DATUM: NAVD88
ELEVATION: 11.91

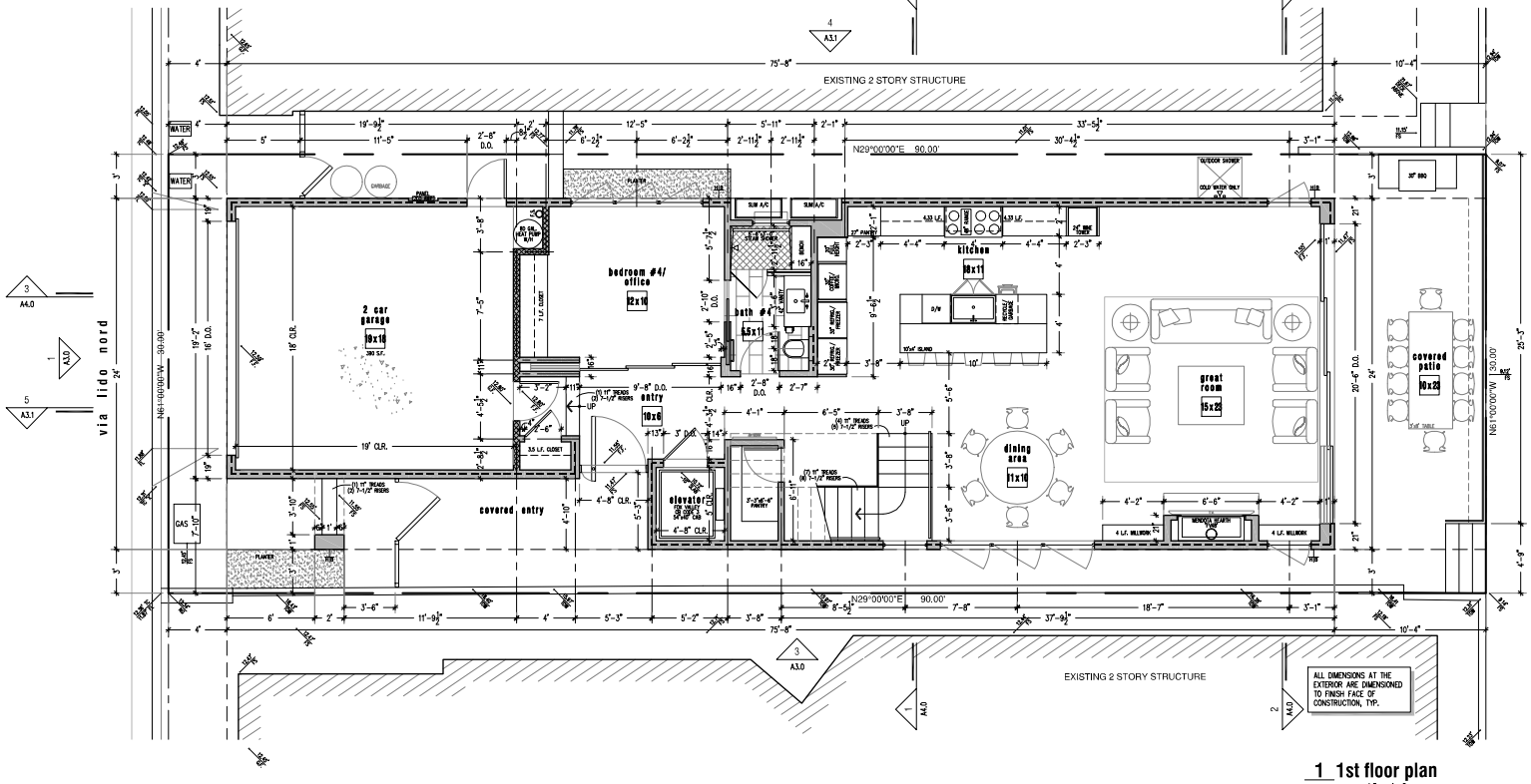
TOPOGRAPHIC SURVEY
JOB: 76-94 DATE: 8/22/2025

RDM
SURVEYING INC.
RON MIEDEMA L.S. 4653
23016 LAKE FOREST DRIVE #409
LAGUNA HILLS, CA 92653
(949) 858-2924 OFFICE
(949) 422-1869 CELL
RDMSURVEYING@COX.NET

LICENSED LAND SURVEYOR
RON MIEDEMA
No. 4653
EXP. 9/30/25
STATE OF CALIFORNIA

fireplace notes:

1. FACTORY-BUILT FIREPLACES, CHIMNEYS AND ALL OF THEIR COMPONENTS SHALL BE LISTED AND INSTALLED IN ACCORDANCE WITH THEIR LISTING AND MANUFACTURER'S INSTALLATION INSTRUCTIONS
2. DECORATIVE SHROUDS SHALL NOT BE INSTALLED AT THE TERMINATION OF FACTORY-BUILT CHIMNEYS EXCEPT WHERE SUCH SHROUDS ARE LISTED AND LABELED FOR USE WITH THE SPECIFIC FACTORY-BUILT CHIMNEY SYSTEM AND ARE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS. CMC (802.5.2.4)
3. DIRECT VENT GAS APPLIANCE FIREPLACE MUST COMPLY WITH ANSI Z21.50 OR ANSI Z21.88



1 1st floor plan
A1.0 SCALE: 1/4" = 1'-0"

a1.0

1st floor plan
1/4"=1'-0"

boyd residence

426 via lido nord
newport beach, california
92663

project area analysis

389 s.f. garage
1,275 s.f. 1st floor
+ 1,845 s.f. 2nd floor
3,120 s.f. livable area

wall legend

- 2x4 FRAMING AT 16" o.c. W/ R-13 BATT INSULATION THROUGHOUT; 5/8" GYP. BD.
- 2x6 FRAMING AT 16" o.c. W/ R-21 BATT INSULATION THROUGHOUT; 5/8" GYP. BD.
- 1 HOUR RATED INTERIOR PARTITION: 5/8" TYPE-X GYP. BD. AT BOTH SIDES, TYP.
- DUAL GLAZED WINDOWS, TYP. THROUGHOUT; REFERENCE WINDOW SCHEDULE, SHEET A5.1
- DOOR; REFERENCE DOOR SCHEDULE, SHEET A5.0

LICENSED ARCHITECT
ERIC D. AUST
C-25374
31 MAY 2027
RENEWAL DATE
STATE OF CALIFORNIA

0 1' 2' 4' 8'
true north
ref. north

17 november 2025
© copyright 2025
job #2516

eric aust
architect
62 balboa coves
newport beach, california 92663
tel 949.637.5220

client:
patrick boyd
426 via lido nord
newport beach, california 92663
tel 949.633.6990

Table F-12. Sea Level Scenarios for Los Angeles

Projected SLR Amounts (in feet)					
	Low	**Intermediate-Low**	**Intermediate**	**Intermediate-High**	**High**
2030	0.2	0.3	0.3	0.4	0.4
2040	0.3	0.4	0.5	0.6	0.7
2050	0.4	0.5	0.7	0.9	1.1
2060	0.4	0.6	0.9	1.4	1.8
2070	0.5	0.8	1.2	2.1	2.7
2080	0.5	0.9	1.6	2.8	3.8
2090	0.6	1.1	2.2	3.6	5.0
2100	0.6	1.3	2.8	4.5	6.3
2110	0.7	1.4	3.5	5.3	7.6
2120	0.7	1.6	4.0	6.0	8.6
2130	0.8	1.8	4.5	6.6	9.5
2140	0.8	1.9	5.0	7.1	10.4
2150	0.8	2.1	5.5	7.7	11.3

Median values of Sea Level Scenarios, in feet, for each decade from 2020 to 2150, with a baseline of 2000. All median scenario values incorporate the local estimate of vertical land motion. The red box highlights the three scenarios that the *State Sea Level Rise Guidance* (OPC 2024) and this guidance recommend for use in various planning and project contexts.

9410580 NEWPORT BEACH, NEWPORT BAY ENTRANCE, CA

Datums for 9410580, NEWPORT BEACH, NEWPORT BAY ENTRANCE CA

NOTICE: All data values are relative to the MLLW.

Elevations on Mean Lower Low Water

Station: 9410580, NEWPORT BEACH, NEWPORT BAY ENTRANCE, CA
Status: Accepted (Apr 17 2003)
Units: Feet
T.M.: 120
Epoch: (/datum_options.html#NTDE) 1983-2001
Datum: MLLW

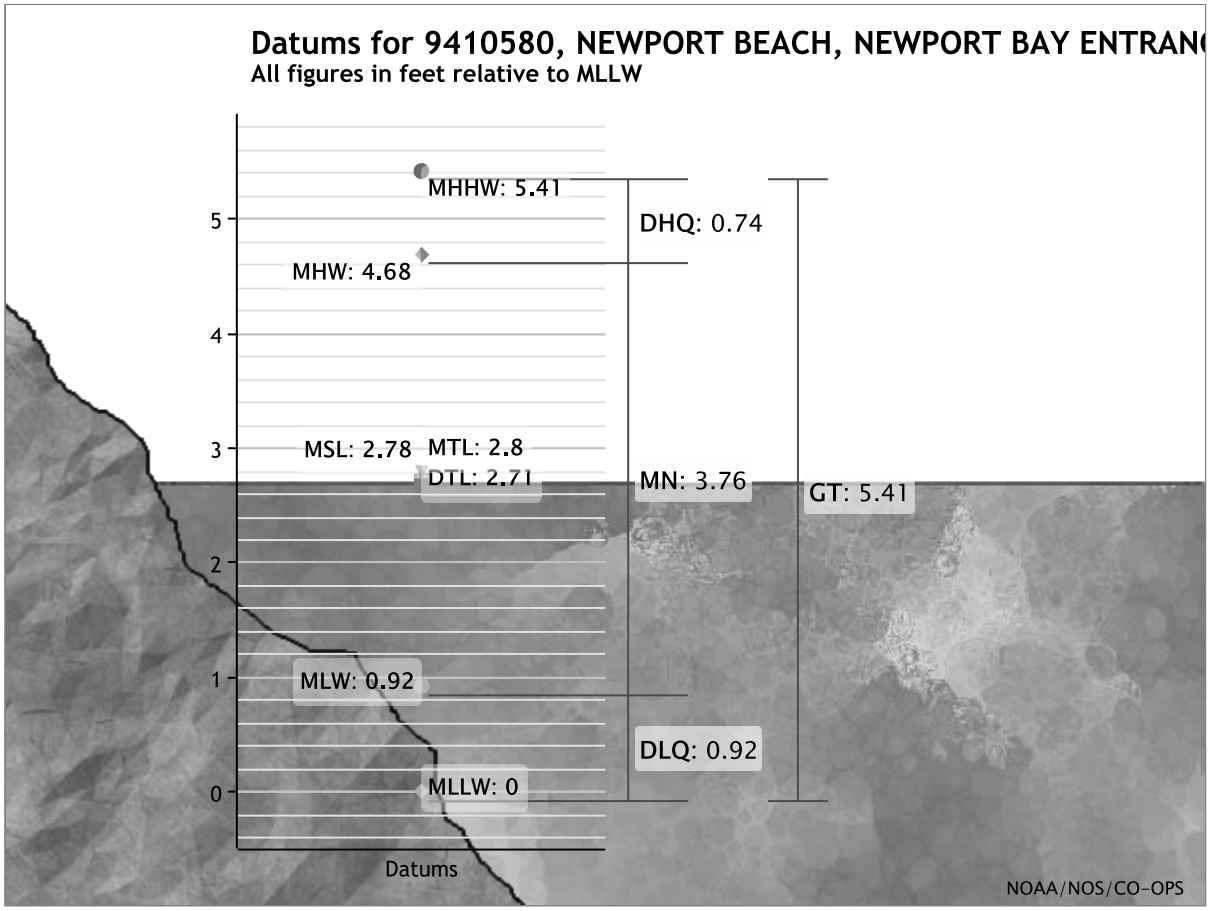
Datum	Value	Description
MHHW (/datum_options.html#MHHW)	5.41	Mean Higher-High Water
MHW (/datum_options.html#MHW)	4.68	Mean High Water
MTL (/datum_options.html#MTL)	2.80	Mean Tide Level
MSL (/datum_options.html#MSL)	2.78	Mean Sea Level
DTL (/datum_options.html#DTL)	2.71	Mean Diurnal Tide Level
MLW (/datum_options.html#MLW)	0.92	Mean Low Water
MLLW (/datum_options.html#MLLW)	0.00	Mean Lower-Low Water
NAVD88 (/datum_options.html)	0.18	North American Vertical Datum of 1988
STND (/datum_options.html#STND)	-3.33	Station Datum
GT (/datum_options.html#GT)	5.41	Great Diurnal Range
MN (/datum_options.html#MN)	3.76	Mean Range of Tide
DHQ (/datum_options.html#DHQ)	0.74	Mean Diurnal High Water Inequality

Datum	Value	Description
DLQ (/datum_options.html#DLQ)	0.92	Mean Diurnal Low Water Inequality
HWI (/datum_options.html#HWI)	5.08	Greenwich High Water Interval (in hours)
LWI (/datum_options.html#LWI)	11.15	Greenwich Low Water Interval (in hours)
Max Tide (/datum_options.html#MAXTIDE)	7.67	Highest Observed Tide
Max Tide Date & Time (/datum_options.html#MAXTIDEDT)	01/28/1983 08:06	Highest Observed Tide Date & Time
Min Tide (/datum_options.html#MINTIDE)	-2.35	Lowest Observed Tide
Min Tide Date & Time (/datum_options.html#MINTIDEDT)	01/20/1988 16:30	Lowest Observed Tide Date & Time
HAT (/datum_options.html#HAT)	7.18	Highest Astronomical Tide
HAT Date & Time	12/02/1990 16:06	HAT Date and Time
LAT (/datum_options.html#LAT)	-1.92	Lowest Astronomical Tide
LAT Date & Time	01/01/1987 00:00	LAT Date and Time

Tidal Datum Analysis Periods

01/01/1980 - 12/31/1993

To refer water level heights to NAVD88 (North American Vertical Datum of 1988), apply the values located at National Geodetic Survey (http://www.ngs.noaa.gov/Tidal_Elevation/diagram.jsp?PID=DX1968&EPOCH=1983-2001).



PACIFIC INSTITUTE

California Flood Risk: Sea Level Rise
Newport Beach OE S Quadrangle

Interstate
US Highway
State Highway
County Highway

Current Coastal Base Flood (approximate 100-year flood extent)
Sea Level Rise Scenario Coastal Base Flood + 1.4 meters (55 inches)
Landward Limit of Erosion High Hazard Zone in 2100
Coastal Zone Boundary

0 0.25 0.5 1 1.5 2
Miles
0 0.5 1 2 3
Kilometers

Adjoining Quadrangles:

1	2	3
4		5
6	7	8

1: Seal Beach
2: Newport Beach
3: Tustin
4: *not printed*
5: Laguna Beach
6: *not printed*
7: *not printed*
8: *not printed*

Map extents match USGS 7.5 minute topographic maps

This information is being made available for informational purposes only. Users of this information agree by their use to hold blameless the State of California, and its respective officers, employees, agents, contractors, and subcontractors for any liability associated with its use in any form. This work shall not be used to assess actual coastal hazards, insurance requirements, or property values and specifically shall not be used in lieu of Flood Insurance Studies and Flood Insurance Rate Maps issued by the Federal Emergency Management Agency (FEMA).

Data Sources: US Geological Survey, Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), Coastal ServicesCenter (CSC), Scripps Institution of Oceanography, Philip Williams and Associates, Inc. (PWA), US Department of Agriculture (USDA), California Coastal Commission, and National Aeronautics and Space Administration (NASA). Imagery from ESRI and i-cubed.

Created by the Pacific Institute, Oakland, California, 2009.
Project funded by the California Energy Commission's Public Interest Energy Research Program, CalTrans, and the California Ocean Protection Council

Grid coordinates:
UTM Zone 11N meters
NAD83 GCS degrees

Attachment No. ZA 5

Bulkhead Conditions Report

P M A C O N S U L T I N G , I N C .
CONSULTING STRUCTURAL ENGINEERS
28161 Casitas Ct. PH. (714) 717-7542
Laguna Niguel, CA 92677
e-mail: consulting@pma-bg.com

November 30, 2025

Eric Aust
62 Balboa Coves
Newport Beach, CA 92663

BULKHEAD CONDITIONS REPORT

Patrick Boyd; Applicant
426 Via Lido Nord
City of Newport Beach, County of Orange

PMA Job #66925

Dear Mr. Aust,

PMA Consulting, Inc. is pleased to provide this report in accordance with Section 21.30.15.E.3 of City of Newport Beach Municipal Code.

STATEMENT OF THE PREPARER'S QUALIFICATIONS

Plamen Petrov, P.E., the preparer of this report, holds a Master of Science in Structural Engineering from University of Architecture, Structural Engineering & Geodesy of Sofia, Bulgaria, and is a Licensed Civil Engineer by the State of California Certificate No. C66947. For the last 25 years of his professional career, he has been actively involved in the design and entitlement of many Waterfront Developments such as custom homes, seawalls, piers, platforms, floating docks and marinas. A great number of Bulkhead Condition Reports prepared by him have been reviewed and accepted/approved by California Coastal Commission.

All the above being said, Plamen Petrov, P.E. shall be considered a qualified preparer for the Bulkhead Conditions Report on this project.

OBSERVATION

A cursory observation of the existing seawall was conducted by a representative of our office on November 18, 2025. Observed was the visible/exposed portion of the waterfront face of the seawall.

FINDINGS

The seawall, which is a typical retaining wall consisting of continuous concrete footing and CMU stem wall, was found in a good condition without any noticeable evidence of distress.

CONCLUSION

Based on our site observation, we conclude that the existing seawall is required to protect the proposed principal structure on the lot and the adjacent homes, streets, utilities, etc. Due to its current good condition, no repair or replacement of the seawall shall be anticipated in the next 75 years. If during this period though, the seawall displays any sign of distress that requires immediate attention, it should be repaired or replaced at that time accordingly, without seaward encroachment from its current location.

The above conclusion was prepared based on the existing conditions, proposed drawings, and within the inherent limitations of this study, in accordance with generally acceptable engineering principles and practices. We make no further warranty, either expressed or implied.

PMA Consulting, Inc. appreciates the opportunity to work with you towards the successful completion of your project. Should you have any questions regarding this report, please contact us.

Respectfully submitted,

Plamen Petrov, P.E.
Principal

Attachment No. ZA 6

WQMP Report

County of Orange/Santa Ana Region Priority Project Water Quality Management Plan (WQMP)

Project Name:

BOYD RESIDENCE

426 VIA LIDO NORD, NEWPORT BEACH, CA 92663

APN: 423-191-13

Prepared for:

Patrick Boyd

426 Via Lido Nord, Newport Beach, CA 92663

Tel: 949.633.6990

Prepared by:

Core Civil Engineering, Inc

201 E Sandpointe Ave., #400

Santa Ana, CA 92707

Phone: 949-954-7244

amir@corestructure.com

March 31, 2026

Project Owner's Certification			
Planning Application No. (If applicable)		Grading Permit No.	
Tract/Parcel Map and Lot(s) No.	Lot 483 in tract No.907	Building Permit No.	
Address of Project Site and APN (If no address, specify Tract/Parcel Map and Lot Numbers)			426 Via Lido Nord Newport Beach, CA APN 423-191-13

This Water Quality Management Plan (WQMP) has been prepared for Anna and Herman Berger by Core Civil Engineering. The WQMP is intended to comply with the requirements of the County of Orange NPDES Stormwater Program requiring the preparation of the plan.

The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan , including the ongoing operation and maintenance of all best management practices (BMPs), and will ensure that this plan is amended as appropriate to reflect up-to-date conditions on the site consistent with the current Orange County Drainage Area Management Plan (DAMP) and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated Cities of Orange County within the Santa Ana Region. Once the undersigned transfers its interest in the property, its successors-in-interest shall bear the aforementioned responsibility to implement and amend the WQMP. An appropriate number of approved and signed copies of this document shall be available on the subject site in perpetuity.

Owner: Patrick Boyd			
Title	Owner		
Company			
Address	426 Via Lido Nord, Newport Beach, CA 92663		
Email	patrickrobertsboyd@gmail.com		
Telephone #	949.633.6990		
I understand my responsibility to implement the provisions of this WQMP including the ongoing operation and maintenance of the best management practices (BMPs) described herein.			
Owner Signature		Date	31 March 2026

Preparer (Engineer):			
Title	Civil Engineer	PE Registration #	C78194
Company	Core Civil Engineering		
Address	201 E Sandpointe Ave., #400 Santa Ana, CA 92707		
Email	amir@corestructure.com		
Telephone #	(949) 954-7244		

I hereby certify that this Water Quality Management Plan is in compliance with, and meets the requirements set forth in, Order No. R8-2009-0030/NPDES No. CAS618030, of the Santa Ana Regional Water Quality Control Board.

Preparer Signature		Date	
Place Stamp Here			

Contents

Page No.

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Section III Site Description 7
Section IV Best Management Practices (BMPs).....11
Section V Inspection/Maintenance Responsibility for BMPs.....5
Section VI BMP Exhibit (Site Plan) 6
Section VII Educational Materials.....7

Attachments

Attachment A . .....Educational Materials
Attachment B . .....Hydrology Study
Attachment C . .....Soils Report
Attachment D . ..... Technical Guidance DocumentExhibits
Attachment E . ..... Operations and Maintenance (O&M) Plan
Attachment F . ..... Worksheets from Orange County TGD
Attachment G . .....Grading Plans and Topographic Survey Map

Section I Permit(s) and Water Quality Conditions of Approval or Issuance

Provide discretionary or grading/building permit information and water quality conditions of approval, or permit issuance, applied to the project. If conditions are unknown, please request applicable conditions from staff. *Refer to Section 2.1 in the Technical Guidance Document (TGD) available on the OC Planning website (ocplanning.net).*

Project Information			
Permit/Application No. (If applicable)		Grading or Building Permit No. (If applicable)	
Address of Project Site (or Tract Map and Lot Number if no address) and APN	426 Via Lido Nord, Newport Beach, CA 92663 (Lot 483, Tract 907) APN 423-191-13		
Water Quality Conditions of Approval or Issuance			
Water Quality Conditions of Approval or Issuance applied to this project. (Please list verbatim.)	Impervious surface of 2,700 square feet or more located within or directly adjacent to (within 200 ft.) or discharging directly to receiving water within environmentally sensitive areas (San Diego Creek, Upper and lower Newport Bay, Buck Gully, Los Trankos, Little Corona del Mar Beach, Crystal Cove State Beach)		
Conceptual WQMP			
Was a Conceptual Water Quality Management Plan previously approved for this project?	No		

Watershed-Based Plan Conditions	
Provide applicable conditions from watershed - based plans including WIHMPs and TMDLS.	There are currently no approved WIHMPS

Section II Project Description

II.1 Project Description

Provide a detailed project description including:

- Project areas;
- Land uses;
- Land cover;
- Design elements;
- A general description not broken down by drainage management areas (DMAs).

Include attributes relevant to determining applicable source controls. *Refer to Section 2.2 in the Technical Guidance Document (TGD) for information that must be included in the project description.*

Description of Proposed Project				
Development Category (From Model WQMP, Table 7.11-2; or -3):	Impervious surface of 2,700 square feet or more located within or directly adjacent to (within 200 ft.) or discharging directly to receiving water within environmentally sensitive areas (San Diego Creek, Upper and lower Newport Bay, Buck Gully, Los Trankos, Little Corona del Mar Beach, Crystall Cove State Beach)			
Project Area (ft^2): 2,700	Number of Dwelling Units: 1		SIC Code: 1521	
Project Area	Pervious		Impervious	
	Area (acres or sq ft)	Percentage	Area (acres or sq ft)	Percentage
Pre-Project Conditions	0 sq ft	0%	2,700 sq ft	100%
Post-Project Conditions	44 sq ft	1.63%	2,656 sq ft	98.37%
Drainage Patterns/Connections	<u>Pre-Development:</u> The subject site is located at 426 Via Lido Nord, Lido Island, Newport Beach, California. Based on the topographic plan, the lot area is approximately 30 feet by 90 feet, about 2,700 square feet. Exterior lot elevations vary from approximately 10.2 to 12.8 feet (NAVD88). The adjoining property to the northwest is roughly level with the subject site. The adjoining property to the southeast is level with the subject property at the front, but is approximately 1.5 to 2.5 feet higher along most of the boundary.			

	Under pre-development conditions, stormwater flows as sheet flow from frontyard toward backyard, runoff from driveway sheet flow to street gutter Post-Development: Under post-development conditions, the existing drainage pattern will remain consistent with pre-development conditions. Roof runoff will be directed to landscaped planters, where area drains will be installed to collect stormwater. Surface runoff will flow along both sides of the sidewalk and be conveyed toward the patio area. A bottomless trench drain will be installed to collect runoff from the sidewalks and planters. Collected stormwater will be infiltrated on-site.
Narrative Project Description: (Use as much space as necessary.)	Grading is expected to consist of reprocessing surface soils following removal of existing foundation elements, unsuitable fill, weathered soil, planter soils, and materials disturbed by demolition. Overexcavation and replacement of soil as densified engineered fill will be required to provide uniform conditions below the structure and for seismic considerations. The existing rear retaining/ seawall may be reinforced as part of the planned construction. The seawall reinforcement may require new deadman anchors and/or caisson support. Structural loads were not provided. We anticipate slab-on-grade floors, with wood-frame and light steel construction that is typical of the area and relatively light construction loads. We assume that maximum column loads will be less than 25 kip and wall loads of 2 kip/foot. Our office should be notified when the structural design loads for foundation elements are available to check these preliminary assumptions.

II.2 Potential Stormwater Pollutants

Determine and list expected stormwater pollutants based on land uses and site activities. *Refer to Section 2.2.2 and Table 2.1 in the Technical Guidance Document (TGD) for guidance.*

Pollutants of Concern			
Pollutant	Check One for each: E=Expected to be of concern N=Not Expected to be of concern		Additional Information and Comments
Suspended-Solid/ Sediment	E ☒	N ☐	
Nutrients	E ☒	N ☐	
Heavy Metals	E ☐	N ☒	
Pathogens (Bacteria/Virus)	E ☒	N ☐	
Pesticides	E ☒	N ☐	
Oil and Grease	E ☒	N ☐	
Toxic Organic Compounds	E ☐	N ☒	
Trash and Debris	E ☒	N ☐	

II.3 Hydrologic Conditions of Concern

Determine if streams located downstream from the project area are potentially susceptible to hydromodification impacts. *Refer to Section 2.2.3.1 in the Technical Guidance Document (TGD) for North Orange County or Section 2.2.3.2 for South Orange County.*

X No – Show map

☐ Yes – Describe applicable hydrologic conditions of concern below. *Refer to Section 2.2.3 in the Technical Guidance Document (TGD).*

Figure XVI-3d is included in Attachment D

II.4 Post Development Drainage Characteristics

Describe post development drainage characteristics. *Refer to Section 2.2.4 in the Technical Guidance Document (TGD).*

Under post-development conditions, onsite surface runoff will be collected via 6-inch diameter drainage inlets and conveyed by a 4-inch diameter Schedule 40 PVC or SDR 35 subsurface drainage pipe system. Surface runoff will flow along both sides of the sidewalk and be conveyed toward the patio area will be directed to two 20' long, 12"(W) x 18" (D) trench drains and one, 25.25' long, 24" (W) x 18" (D) bottomless trench drain located in the backyard. All collected runoff will infiltrate onsite.

II.5 Property Ownership/Management

Describe property ownership/management. *Refer to Section 2.2.5 in the Technical Guidance Document (TGD).*

Patrick Boyd

426 Via Lido Nord, Newport Beach, CA 92663

Section III Site Description

III.1 Physical Setting

Fill out table with relevant information. *Refer to Section 2.3.1 in the Technical Guidance Document (TGD).*

Name of Planned Community/Planning Area (if applicable)	Boyd Residence
Location/Address	426 Via Lido Nord, Newport Beach, CA 92663
	APN 423-191-13
General Plan Land Use Designation	Single-Family Residence
Zoning	R-1
Acreage of Project Site	0.062 Acre
Predominant Soil Type	Soil Type D per Orange County Infiltration Study Map, Figure XVI-2a in TGD.

III.2 Site Characteristics

Fill out table with relevant information and include information regarding BMP sizing, suitability, and feasibility, as applicable. *Refer to Section 2.3.2 in the Technical Guidance Document (TGD).*

Site Characteristics	
Precipitation Zone	*0.67" per Orange County Rainfall Zones Map, Figure XVI-1 of the Technical Guidance Document*

Topography	*The lot area is approximately 30 feet by 90 feet, about 2,700 square feet. Exterior lot elevations vary from approximately 10.2 to 12.8 feet (NAVD88). The adjoining property to the northwest is roughly level with the subject site. The adjoining property to the southeast is level with the subject property at the front, but is approximately 1.5 to 2.5 feet higher along most of the boundary.* *The rear retaining/seawall is approximately 2 feet higher than the*
Drainage Patterns/Connections	*Under post-development conditions, onsite surface runoff will be collected via 6-inch diameter drainage inlets and conveyed by a 4-inch diameter Schedule 40 PVC or SDR 35 subsurface drainage pipe system. Surface runoff will flow along both sides of the sidewalk and be conveyed toward the patio area will be directed to two 20' long, 12"(W) x 18" (D) trench drains and one, 25.25' long, 24" (W) x 18" (D) bottomless trench drain located in the backyard. All collected runoff will infiltrate onsite.* *The site belongs to Newport Bay Watershed.*
Soil Type, Geology, and Infiltration Properties	*Soil Type D per Orange County Infiltration Study Map, XVI-2a in TGD.* *Per the Geotechnical Investigation by R MCCARTHY CONSULTING, INC. dated January 31, 2026,* *The bedrock underlying the bay at significant depth is assigned to strata of the Monterey Formation on the basis of regional mapping. This stratum consists of weakly cemented sequences of siltstone and claystone forming a laminated to thinly bedded shale. This material was not observed during our exploration and is not anticipated to be encountered during construction on the site.*
Hydrogeologic (Groundwater) Conditions	*Per the Geotechnical Investigation by R MCCARTHY CONSULTING, INC. dated January 31, 2026,* *Groundwater was encountered at depths of 5.5- and 7.5-feet in our exploratory borings. On-site groundwater conditions may additionally be affected by tidal conditions and fluctuate periodically in conjunction with the ingoing and outgoing tides.*
Geotechnical Conditions (relevant to infiltration)	*Per the Geotechnical Investigation by R MCCARTHY CONSULTING, INC. dated January 31, 2026,* *The property is situated within the southeasterly edge of the Los Angeles Basin on an island within Newport Bay. This area is generally underlain by recent marine deposits consisting predominantly of silty sands, sands and occasional silt layers. The Pacific Ocean is about 3,500 feet southwest of the site. Historical topographic maps and accounts indicate that the Lido Isle areas were formerly low-lying, intertidal sand bars and island areas of the*

	natural bay. Dredge fill was placed in some areas to raise the site grades. The site is thought to be resting on a regionally extensive, relatively flat bench scoured by wave activity into bedrock. The bedrock lies below successive layers of beach and bay deposits.

Off-Site Drainage	*There are no off-site areas that drain onto the project site.*
Utility and Infrastructure Information	*There are existing subsurface utility lines on the property including water, sewer, gas, and electrical lines.*

III.3 Watershed Description

Fill out table with relevant information and include information regarding BMP sizing, suitability, and feasibility, as applicable. *Refer to Section 2.3.3 in the Technical Guidance Document (TGD).*

Receiving Waters	Newport Bay, Lower
303(d) Listed Impairments	Chlordane, Copper, DDT, Indicator Bacteria, Nutrients, PCBs, Pesticides, Sediment Toxicity.
Applicable TMDLs	Copper, Indicator Bacteria, Nutrients, Pesticides, Turbidity/Siltation
Pollutants of Concern for the Project	Copper, Indicator Bacteria, Nutrients, Pesticides, Suspended Soils, Heavy Metals, Pathogens, Oil and Grease, Toxic Organic compounds, Trash and Debris.
Environmentally Sensitive and Special Biological Significant Areas	The project is not within, adjacent to, nor discharges directly to an ESA.

Section IV Best Management Practices (BMPs)

IV. 1 Project Performance Criteria

Describe project performance criteria. Several steps must be followed in order to determine what performance criteria will apply to a project. These steps include:

- If the project has an approved WIHMP or equivalent, then any watershed specific criteria must be used and the project can evaluate participation in the approved regional or sub-regional opportunities. (Please ask your assigned planner or plan checker regarding whether your project is part of an approved WIHMP or equivalent.)
- Determine applicable hydromodification control performance criteria. *Refer to Section 7.II-2.4.2.2 of the Model WQMP.*
- Determine applicable LID performance criteria. *Refer to Section 7.II-2.4.3 of the Model WQMP.*
- Determine applicable treatment control BMP performance criteria. *Refer to Section 7.II-*3.2.2 *of the Model WQMP.*
- Calculate the LID design storm capture volume for the project. *Refer to Section 7.II-2.4.3 of the Model WQMP.*

(NOC Permit Area only) Is there an approved WIHMP or equivalent for the project area that includes more stringent LID feasibility criteria or if there are opportunities identified for implementing LID on regional or sub-regional basis?	YES ☐	NO ☒
If yes, describe WIHMP feasibility criteria or regional/sub-regional LID opportunities.		

Project Performance Criteria	
If HCOC exists, list applicable hydromodification control performance criteria (Section 7.II-2.4.2.2 in MWQMP)	According to Orange County Model WQMP, 7.II–2.4.2.2, a project does not have an HCOC if either of the following conditions is met: • The volumes and time of concentration of stormwater runoff for the post-development condition do not significantly exceed those of the pre-development condition for a two-year frequency storm event (a difference of five percent or less is considered insignificant). • The site infiltrates at least the runoff from a two-year storm event. For this project, time of concentration of stormwater runoff for the post-development condition and the pre-development condition are difference of five percent or less is considered insignificant. Therefore, HCOC does not exist. A copy of the hydrology calculations for a two-year frequency storm event is included in Appendix B.
List applicable LID performance criteria (Section 7.II-2.4.3 from MWQMP)	Per 7.II-2.4.2.3 of the Model WQMP, the available LID Treatment BMPs to be utilized in reducing the post-development impacts include shallow infiltration, harvest and use, evapotranspiration, or bio-treat/bio-filter, of the 85th percentile of a 24-hour storm event.
List applicable treatment control BMP performance criteria (Section 7.II-3.2.2 from MWQMP)	Per 7.II-3.2.2 of the Model WQMP, if the LID performance criteria are not feasibly met by retention and/or bio-treatment, then sizing of onsite treatment control BMPs is required. Sizing of these treatment control BMPs will include, if applicable, any Water Quality credits as calculated per the Technical Guidance Document. If the additional required volume cannot be met but has a medium to high effectiveness for reducing the primary POCs, the project is considered to be in compliance, and a waiver application and participation in an alternative program may not be required. If the cost of providing treatment control BMPs greatly outweighs the pollution control benefits, a waiver of treatment control and LID requirements can be requested.
Calculate LID design storm capture volume for Project.	Using the Capture Efficiency Method for Volume-Based BMP Sizing to calculate the runoff volume associated with LID and water quality design storms. DCV = C* d * A * 43560/12 = (0.75*0.9837+0.15) * 0.67 * 0.062 * 43560/12 = 133.87 c.f.

There is no HCOC based on hydrology calculations attached.

IV.2. Site Design and Drainage

Describe site design and drainage including

- A narrative of site design practices utilized or rationale for not using practices;
- A narrative of how site is designed to allow BMPs to be incorporated to the MEP
- A table of DMA characteristics and list of LID BMPs proposed in each DMA.
- Reference to the WQMP "BMP Exhibit."
- Calculation of Design Capture Volume (DCV) for each drainage area.
- A listing of GIS coordinates for LID and Treatment Control BMPs.

Refer to Section 2.4.2 in the Technical Guidance Document (TGD).

The site consists of one (1) Drainage Management Area (DMA #1) as noted below.

Under post-development conditions, onsite surface runoff will be collected via 6-inch diameter drainage inlets and conveyed by a 4-inch diameter Schedule 40 PVC or SDR 35 subsurface drainage pipe system. Surface runoff will flow along both sides of the sidewalk and be conveyed toward the patio area will be directed to two 20' long, 12"(W) x 18" (D) trench drains and one, 25.25' long, 24" (W) x 18" (D) bottomless trench drain located in the backyard. All collected runoff will infiltrate onsite.The site design practices utilized on the project include the following:

Minimize Impervious Area:
Impervious areas are minimized by the use of minimum allowable driveway and parking requirements, as well as landscaping planters.

Maximize Natural Infiltration Capacity:

Two 20' long, 12"(W) x 18" (D) trench drains and one, 25.25' long, 24" (W) x 18" (D) bottomless trench drain will be utilized to infiltrate runoff water at the site.

Disconnect Impervious Areas:

Surface runoff water from impervious areas will be directed to the proposed trench drains at front and rear ends at both side yards and bottomless trench drain at rear yard deck area.

Protect existing vegetation or sensitive areas:
None on site.

Re-vegetate Disturbed Areas:

The disturbed areas will be planted with ground cover and a combination of native or drought tolerant plants and trees.

IV.3 LID BMP Selection and Project Conformance Analysis

Each sub-section below documents that the proposed design features conform to the applicable project performance criteria via check boxes, tables, calculations, narratives, and/or references to worksheets. *Refer to Section 2.4.2.3 in the Technical Guidance Document (TGD) for selecting LID BMPs and Section 2.4.3 in the Technical Guidance Document (TGD) for conducting conformance analysis with project performance criteria.*

IV.3.1 Hydrologic Source Controls (HSCs)

If required HSCs are included, fill out applicable check box forms. If the retention criteria are otherwise met with other LID BMPs, include a statement indicating HSCs not required.

Name	Included?
Localized on-lot infiltration	☐
Impervious area dispersion (e.g. roof top disconnection)	☐
Street trees (canopy interception)	☐
Residential rain barrels (not actively managed)	☐
Green roofs/Brown roofs	☐
Blue roofs	☐
Impervious area reduction (e.g. permeable pavers, site design)	☐
Other:	☐
Other:	☐
Other:	☐
Other:	☐
Other:	☐
Other:	☐
Other:	☐
Other:	☐

Hydrologic Source Controls (HSCs) are not proposed, i.e. post-construction runoff is not greater than or within 5% of pre-construction runoff based on the Hydrology Study provided.

IV.3.2 Infiltration BMPs

Identify infiltration BMPs to be used in project. If design volume cannot be met, state why.

Name	Included?
Bioretention without underdrains	☐
Rain gardens	☐
Porous landscaping	☐
Infiltration planters	☐
Retention swales	☐
Infiltration trenches	☐
Infiltration basins	☐
Drywells	☐
Subsurface infiltration galleries	☐
French drains	☐
Permeable asphalt	☐
Permeable concrete	☐
Permeable concrete pavers	☐
Other: Trench drains	X
Other: Bottomless trench drain	X

Show calculations below to demonstrate if the LID Design Strom Capture Volume can be met with infiltration BMPs. If not, document how much can be met with infiltration and document why it is not feasible to meet the full volume with infiltration BMPs.

See Table 2.7: Infiltration BMP Worksheet from TGD in Attachment E for infiltration feasibility study.

Under post-development conditions, onsite surface runoff will be collected via 6-inch diameter drainage inlets and conveyed by a 4-inch diameter Schedule 40 PVC or SDR 35 subsurface drainage pipe system. Surface runoff will flow along both sides of the sidewalk and be conveyed toward the patio area will be directed to two 20′ long, 12"(W) x 18" (D) trench drains and one, 25.25′ long, 24" (W) x 18" (D) bottomless trench drain located in the backyard. All collected runoff will infiltrate onsite.

Using Worksheet C from TGD and presented in Attachment E, the storage volume with 48 hour draw down time calculated per Worksheet C is 135.75 cu.ft which exceeds DCV of 133.87 cu.ft. Design infiltration BMPs using two 20' long, 12"(W) x 18" (D) trench drains and one, 25.25' long, 24" (W) x 18" (D) bottomless trench drain.

Total areas of trench drains and bottomless trench drain provided is

2x(20'x1') + 1x(25.25'x2') = 90.5 sq. ft.

$\mathbf{V_{proposed}}$ = A*Ponding depth (dp) → 90.5 sq. ft. * (18"/12) ft = 135.75 cu. ft. > V_{design} = 133.87 cu-ft., OK

Thus, the two 20' long, 12"(W) x 18" (D) trench drains and one, 25.25' long, 24" (W) x 18" (D) bottomless trench drain at the site are sized to fully treat the calculated construction drawdown volume of 135.75 cu-ft which exceeds the design volume of 133.87 cu-ft. and DCV of 133.87 cu-ft.

IV.3.3 Evapotranspiration, Rainwater Harvesting BMPs

If the full Design Storm Capture Volume cannot be met with infiltration BMPs, describe any evapotranspiration and/or rainwater harvesting BMPs included.

Name	Included?
All HSCs; *See Section IV.3.1*	☐
Surface-based infiltration BMPs	☐
Bio-treatment BMPs	☐
Above-ground cisterns and basins	☐
Underground detention	☐
Other:	☐
Other:	☐
Other:	☐

Show calculations below to demonstrate if the LID Design Storm Capture Volume can be met with evapotranspiration and/or rainwater harvesting BMPs in combination with infiltration BMPs. If not, document below how much can be met with either infiltration BMPs, evapotranspiration, rainwater harvesting BMPs, or a combination, and document why it is not feasible to meet the full volume with these BMP categories.

The project site does not have an irrigation demand large enough to justify partial capture for irrigation demand. See Worksheet J from Section X of the TGD in Attachment E.

IV.3.4 Biotreatment BMPs

If the full Design Storm Capture Volume cannot be met with infiltration BMPs, and/or evapotranspiration and rainwater harvesting BMPs, describe biotreatment BMPs included. Include sections for selection, suitability, sizing, and infeasibility, as applicable.

Name	Included?
Bioretention with underdrains	☐
Stormwater planter boxes with underdrains	☐
Rain gardens with underdrains	☐
Constructed wetlands	☐
Vegetated swales	☐
Vegetated filter strips	☐
Proprietary vegetated biotreatment systems	☐
Wet extended detention basin	☐
Dry extended detention basins	☐
Other:	☐
Other:	☐

Show calculations below to demonstrate if the LID Design Storm Capture Volume can be met with infiltration, evapotranspiration, rainwater harvesting and/or biotreatment BMPs. If not, document how much can be met with either infiltration BMPs, evapotranspiration, rainwater harvesting BMPs, or a combination, and document why it is not feasible to meet the full volume with these BMP categories.

Biotreatment BMPs were not used for this project.

IV.3.5 Hydromodification Control BMPs

Describe hydromodification control BMPs. *See Section 5 of the Technical Guidance Document (TGD).* Include sections for selection, suitability, sizing, and infeasibility, as applicable. Detail compliance with Prior Conditions of Approval (if applicable).

Hydromodification Control BMPs	
BMP Name	**BMP Description**

Hydromodification Control BMPs were not used for this project.

IV.3.6 Regional/Sub-Regional LID BMPs

Describe regional/sub-regional LID BMPs in which the project will participate. *Refer to Section 7.II-2.4.3.2 of the Model WQMP*.

Regional/Sub-Regional LID BMPs
N/A

IV.3.7 Treatment Control BMPs

Treatment control BMPs can only be considered if the project conformance analysis indicates that it is not feasible to retain the full design capture volume with LID BMPs. Describe treatment control BMPs including sections for selection, sizing, and infeasibility, as applicable.

Treatment Control BMPs	
BMP Name	**BMP Description**

Treatment Control BMPs are not used for this project.

V.3.8 Non-structural Source Control BMPs

Fill out non-structural source control check box forms or provide a brief narrative explaining if non-structural source controls were not used.

Non-Structural Source Control BMPs

Identifier	Name	Check One		If not applicable, state brief reason
		Included	Not Applicable	
N1	Education for Property Owners, Tenants and Occupants	X	☐	
N2	Activity Restrictions	☐	X	No POA to enforce restrictions
N3	Common Area Landscape Management	☐	X	No common area
N4	BMP Maintenance	X	☐	
N5	Title 22 CCR Compliance (How development will comply)	☐	X	No CCR
N6	Local Industrial Permit Compliance	☐	X	N/A, The site is residential
N7	Spill Contingency Plan	☐	X	No hazardous storage
N8	Underground Storage Tank Compliance	☐	☐	No underground storage tanks
N9	Hazardous Materials Disclosure Compliance	☐	X	No hazardous materials
N10	Uniform Fire Code Implementation	X	☐	
N11	Common Area Litter Control	☐	X	No common area
N12	Employee Training	☐	X	No employee
N13	Housekeeping of Loading Docks	☐	X	No loading dock
N14	Common Area Catch Basin Inspection	☐	X	No common area catch basin
N15	Street Sweeping Private Streets and Parking Lots	☐	X	No private street
N16	Retail Gasoline Outlets	☐	X	No retail gasoline outlets

IV.3.9 Structural Source Control BMPs

Fill out structural source control check box forms or provide a brief narrative explaining if structural source controls were not used.

Structural Source Control BMPs				
Identifier	**Name**	**Check One**		**If not applicable, state brief reason**
		Included	**Not Applicable**	
S1	Provide storm drain system stenciling and signage	X	☐	
S2	Design and construct outdoor material storage areas to reduce pollution introduction	☐	X	No outdoor material storage areas
S3	Design and construct trash and waste storage areas to reduce pollution introduction	☐	X	
S4	Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control	X	☐	
S5	Protect slopes and channels and provide energy dissipation	☐	X	No slopes and channels
	Incorporate requirements applicable to individual priority project categories (from SDRWQCB NPDES Permit)	X	☐	
S6	Dock areas	☐	X	None on site
S7	Maintenance bays	☐	X	None on site
S8	Vehicle wash areas	☐	X	None on site
S9	Outdoor processing areas	☐	X	None on site
S10	Equipment wash areas	☐	X	None on site
S11	Fueling areas	☐	X	None on site
S12	Hillside landscaping	☐	X	None on site
S13	Wash water control for food preparation areas	☐	X	None on site
S14	Community car wash racks	☐	X	None on site

IV.4 Alternative Compliance Plan (If Applicable)

Describe an alternative compliance plan (if applicable). Include alternative compliance obligations (i.e., gallons, pounds) and describe proposed alternative compliance measures. *Refer to Section 7.II 3.0 in the WQMP.*

IV.4.1 Water Quality Credits

Determine if water quality credits are applicable for the project. *Refer to Section 3.1 of the Model WQMP for description of credits and Appendix VI of the Technical Guidance Document (TGD) for calculation methods for applying water quality credits.*

Description of Proposed Project				
Project Types that Qualify for Water Quality Credits (Select all that apply):				
☐ Redevelopment projects that reduce the overall impervious footprint of the project site.	☐ Brownfield redevelopment, meaning redevelopment, expansion, or reuse of real property which may be complicated by the presence or potential presence of hazardous substances, pollutants or contaminants, and which have the potential to contribute to adverse ground or surface WQ if not redeveloped.	☐ Higher density development projects which include two distinct categories (credits can only be taken for one category): those with more than seven units per acre of development (lower credit allowance); vertical density developments, for example, those with a Floor to Area Ratio (FAR) of 2 or those having more than 18 units per acre (greater credit allowance).		
☐ Mixed use development, such as a combination of residential, commercial, industrial, office, institutional, or other land uses which incorporate design principles that can demonstrate environmental benefits that would not be realized through single use projects (e.g. reduced vehicle trip traffic with the potential to reduce sources of water or air pollution).	☐ Transit-oriented developments, such as a mixed use residential or commercial area designed to maximize access to public transportation; similar to above criterion, but where the development center is within one half mile of a mass transit center (e.g. bus, rail, light rail or commuter train station). Such projects would not be able to take credit for both categories, but may have greater credit assigned		☐ Redevelopment projects in an established historic district, historic preservation area, or similar significant city area including core City Center areas (to be defined through mapping).	
☐ Developments with dedication of undeveloped portions to parks, preservation areas and other pervious uses.	☐ Developments in a city center area.	☐ Developments in historic districts or historic preservation areas.	☐ Live-work developments, a variety of developments designed to support residential and vocational needs together – similar to criteria to mixed use development; would not be able to take credit for both categories.	☐ In-fill projects, the conversion of empty lots and other underused spaces into more beneficially used spaces, such as residential or commercial areas.

Calculation of Water Quality Credits (if applicable)	

IV.4.2 Alternative Compliance Plan Information

Describe an alternative compliance plan (if applicable). Include alternative compliance obligations (i.e., gallons, pounds) and describe proposed alternative compliance measures. *Refer to Section 7.II 3.0 in the Model WQMP.*

N/A

Section V Inspection/Maintenance Responsibility for BMPs

Fill out information in table below. Prepare and attach an Operation and Maintenance Plan. Identify the funding mechanism through which BMPs will be maintained. Inspection and maintenance records must be kept for a minimum of five years for inspection by the regulatory agencies. *Refer to Section 7.II 4.0 in the Model WQMP.*

BMP Inspection/Maintenance			
BMP	**Reponsible Party(s)**	**Inspection/ Maintenance Activities Required**	**Minimum Frequency of Activities**
Trench Drains	Owner	Removal of debris, sediments, trash	Semi-Annually
Bottomless Trench Drain	Owner	Removal of debris, sediments, trash	Semi-Annually
Roof Downspout Filter Box	Owner	Service, Replacement & Disposal	Service: Three Times a Year; Replacement & Disposal: Annually

Section VI BMP Exhibit (Site Plan)

VI.1 BMP Exhibit (Site Plan)

Include a BMP Exhibit (Site Plan), at a size no less than 24" by 36," which includes the following minimum information:

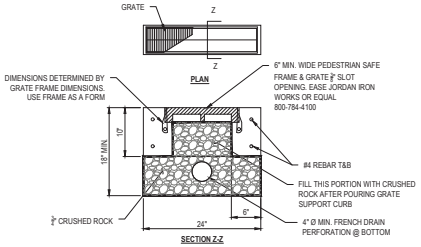
- Insert in the title block (lower right hand corner) of BMP Exhibit: the WQMP Number (assigned by staff) and the grading/building or Planning Application permit numbers
- Project location (address, tract/lot number(s), etc.)
- Site boundary
- Land uses and land covers, as applicable
- Suitability/feasibility constraints
- Structural BMP locations
- Drainage delineations and flow information
- Delineate the area being treated by each structural BMP
- GIS coordinates for LID and Treatment Control BMPs
- Drainage connections
- BMP details
- Preparer name and stamp

Please do not include any areas outside of the project area or any information not related to drainage or water quality. The approved BMP Exhibit (Site Plan) shall be submitted as a plan sheet on all grading and building plan sets submitted for plan check review and approval. The BMP Exhibit shall be at the same size as the rest of the plan sheets in the submittal and shall have an approval stamp and signature prior to plan check submittal.

VI.2 Submittal and Recordation of Water Quality Management Plan

Following approval of the Final Project-Specific WQMP, three copies of the approved WQMP (including BMP Exhibit, Operations and Maintenance (O&M) Plan, and Appendices) shall be submitted. In addition, these documents shall be submitted in a PDF format.

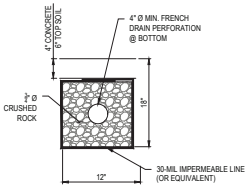
Each approved WQMP (including BMP Exhibit, Operations and Maintenance (O&M) Plan, and Appendices) shall be recorded in the Orange County Clerk-Recorder's Office, prior to close-out of grading and/or building permit. Educational Materials are not required to be included.



NOTE:

a. DIG A 24" WIDE X 18" MIN. DEPTH TRENCH
b. PLACE FILTER CLOTH IN THE TRENCH LAP 12" @ TOP
c. FILL BOTTOM OF THE TRENCH W/ 3/4" CRUSHED ROCK
d. FORM AND POUR PERIMETER CONC. CURB
e. FILL THE REST OF THE TRENCH WITH CRUSHED ROCK TO 4" FROM TOP OF TRENCH

DETAIL
BOTTOMLESS TRENCH DRAIN
NOT TO SCALE



DETAIL
PERFORATED DRAIN TRENCH
NOT TO SCALE

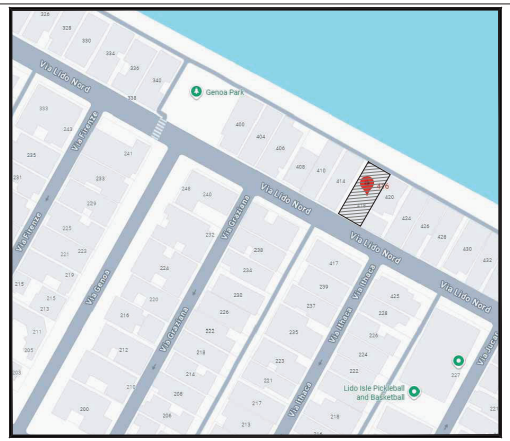
CONSTRUCTION KEY NOTES

1. INSTALL 6" DIA. DRAIN NDS 40 W/RISER AND ADAPTOR OR EQUAL.
2. INSTALL 4" DIA. PVC SCHEDULE 40 OR SDR 35 PIPE DRAIN SYSTEM.
3. INSTALL BOTTOMLESS TRENCH DRAIN TRENCH.
4. CONSTRUCT 42" GUARDRAIL ABOVE FINISH SURFACE, PER ARCHITECTURAL PLAN.
5. 4" PERFORATED PIPE WITHIN TRENCH DRAIN PER DETAIL ON SHEET C-3.
6. INSTALL NEW SEWER LATERAL WITH CLEANOUT PER CITY STD-406.
7. INSTALL DOWNSPOUT PER ARCHITECTURAL PLAN.
8. INSTALL DECK DRAIN FOR DECK ABOVE PER ARCHITECTURAL PLAN. CONNECT TO DRAINAGE SYSTEM
9. INSTALL SUMP PUMP PER DETAIL ON SHEET C-3
10. INSTALL 12" x 12" OVERFLOW CATCH BASIN

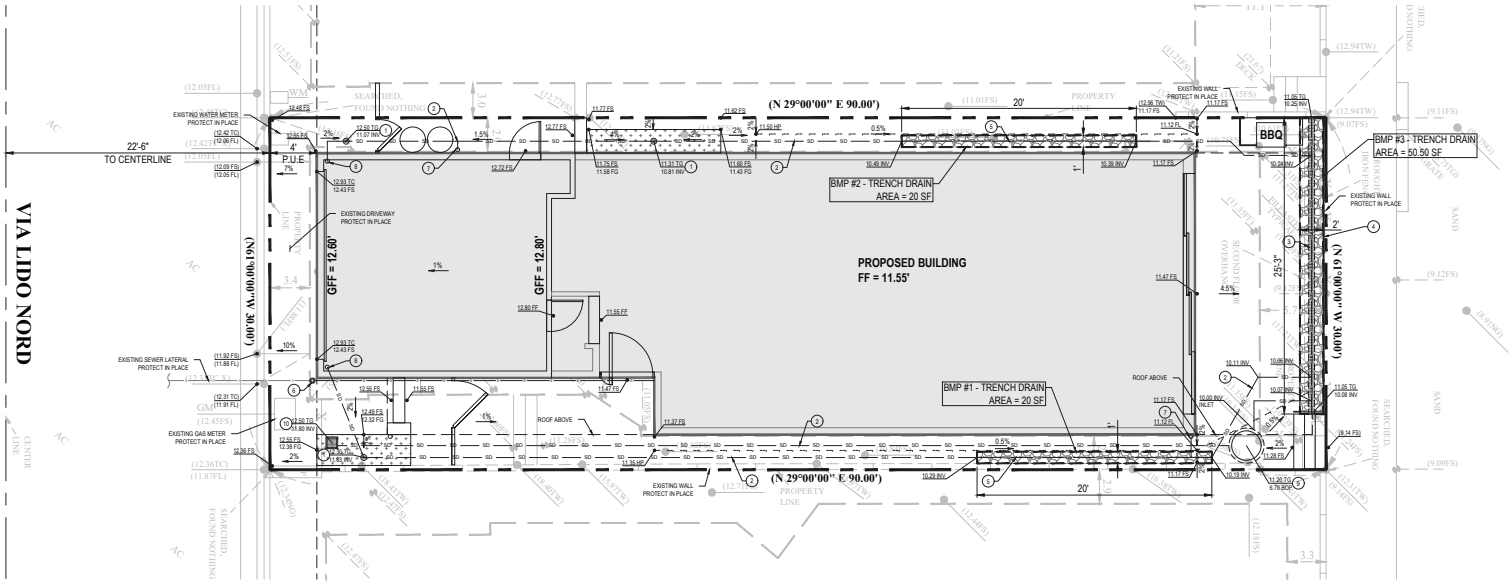
EXISTING UTILITIES INFORMATION NEED CONTRACTOR TO VERIFY ON FIELD.

LEGEND

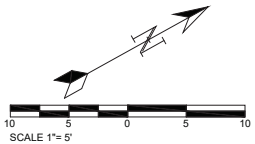
(100)	EXISTING CONTOUR
100	PROPOSED CONTOUR
100FS	SPOT ELEVATION
	PROPOSED HARDSCAPE
	PROPOSED PLANTER AREA
	PROPOSED STORM DRAIN
	PROPERTY LINE
X.X%	SURFACE SLOPE
S=X.X%	STORM DRAIN SLOPE
PAD	PROPOSED PAD ELEVATION
FS	PROPOSED FINISHED SURFACE
FG	PROPOSED FINISHED GROUND
FF	PROPOSED FINISHED FLOOR
INV	INVERT OF PIPE
TG	TOP OF GRATE
PL	PROPERTY LINE
TW	TOP OF WALL
HP	HIGH POINT
EXIST	EXISTING



VICINITY MAP
NOT TO SCALE



WQMP PLAN
SCALE 1"=5'



SCALE 1"= 5'

NO.	DATE	REVISIONS	APPROVED BY
			DESIGNER
			DESIGNED BY:
			DRAFTED BY:
			CHECKED BY:

OWNER/SUBDIVIDER:
PATRICK BOYD
426 VIA LIDO NORD,
NEWPORT BEACH, CA 92663
TEL: 949.633.6990

REGISTERED PROFESSIONAL ENGINEER AMIR DEHIMI No. C78194 CIVIL STATE OF CALIFORNIA

PLANS PREPARED BY:
CORE
FROM THE GROUND UP
Core Structure, Inc.
201 E Sandpointe Ave., #400
Santa Ana, CA 92707
Phone: 949-954-7244
info@corestructure.com
www.corestructure.com
AMIR DEHIMI
R.C.E. C78194 EXP. 09/30/2027
2026-03-31
DATE

SINGLE FAMILY RESIDENCE
WQMP EXHIBIT PLAN
PROJECT ADDRESS
426 VIA LIDO NORD
NEWPORT BEACH, CA 92663

PROJECT NO.: 26013
SHEET NO.: WQMP

Section VII Educational Materials

Refer to the Orange County Stormwater Program (ocwatersheds.com) for a library of materials available. Please only attach the educational materials specifically applicable to this project. Other materials specific to the project may be included as well and must be attached.

Education Materials			
Residential Material (http://www.ocwatersheds.com)	**Check If Applicable**	**Business Material (http://www.ocwatersheds.com)**	**Check If Applicable**
The Ocean Begins at Your Front Door	X	Tips for the Automotive Industry	☐
Tips for Car Wash Fund-raisers	☐	Tips for Using Concrete and Mortar	☐
Tips for the Home Mechanic	X	Tips for the Food Service Industry	☐
Homeowners Guide for Sustainable Water Use	X	Proper Maintenance Practices for Your Business	☐
Household Tips	X	**Other Material**	**Check If Attached**
Proper Disposal of Household Hazardous Waste	X		
Recycle at Your Local Used Oil Collection Center (North County)	☐		☐
Recycle at Your Local Used Oil Collection Center (Central County)	☐		☐
Recycle at Your Local Used Oil Collection Center (South County)	☐		☐
Tips for Maintaining a Septic Tank System	☐		☐
Responsible Pest Control	X		☐
Sewer Spill	☐		☐
Tips for the Home Improvement Projects	X		☐
Tips for Horse Care	☐		☐
Tips for Landscaping and Gardening	X		☐
Tips for Pet Care	X		☐
Tips for Pool Maintenance	☐		☐
Tips for Residential Pool, Landscape and Hardscape Drains	☐		☐
Tips for Projects Using Paint	X		☐

ATTACHMENT A

EDUCATIONAL MATERIALS

Clean beaches and healthy creeks, rivers, bays and ocean are important to Orange County. However, many common activities such as painting can lead to water pollution if you're not careful. Paint must be used, stored and disposed of properly to ensure that it does not enter the street, gutter or storm drain. Unlike water in sanitary sewers (from sinks and toilets), water in storm drains is not treated before entering our waterways.

You would never dump paint into the ocean, so don't let it enter the storm drains. Follow these easy tips to help prevent water pollution.

For more information, please call the **Orange County Stormwater Program** at **1-877-89-SPILL** (1-877-897-7455) or visit **www.ocwatersheds.com**

To report a spill, call the **Orange County 24-Hour Water Pollution Problem Reporting Hotline** at **1-877-89-SPILL** (1-877-897-7455).

For emergencies, dial 911.

The tips contained in this brochure provide useful information to help prevent water pollution while using, storing and disposing of paint. If you have other suggestions, please contact your city's stormwater representatives or call the Orange County Stormwater Program.

Printed on Recycled Paper

Help Prevent Ocean Pollution:

Tips for Projects Using Paint

89

Tips for Projects Using Paint

Paint can cause significant damage to our environment. Whether you hire a contractor or do it yourself, it is important to follow these simple tips when purchasing, using, cleaning, storing and disposing of paint.

Purchasing Paint

- Measure the room or object to be painted, then buy only the amount needed.
- Whenever possible, use water-based paint since it usually does not require hazardous solvents such as paint thinner for cleanup.

Painting

- Use only one brush or roller per color of paint to reduce the amount of water needed for cleaning.
- Place open paint containers or trays on a stable surface and in a position that is unlikely to spill.
- Always use a tarp under the area or object being painted to collect paint drips and contain spills.

Cleaning

- Never clean brushes or rinse paint containers in the street, gutter or storm drain.
- For oil-based products, use as much of the paint on the brushes as possible. Clean brushes with thinner. To reuse thinner, pour it through a fine filter (e.g. nylon, metal gauze or filter paper) to remove solids such as leftover traces of paint.
- For water-based products, use as much of the paint on the brushes as possible, then rinse in the sink.
- Collect all paint chips and dust. Chips and dust from marine paints or paints containing lead, mercury or tributyl tin are hazardous waste. Sweep up and dispose of at a Household Hazardous Waste Collection Center (HHWCC).

Storing Paint

- Store paint in a dry location away from the elements.
- Store leftover water-based paint, oil-based paint and solvents separately in original or clearly marked containers.
- Avoid storing paint cans directly on cement floors. The bottom of the can will rust much faster on cement.
- Place the lid on firmly and store the paint can upside-down to prevent air from entering. This will keep the paint usable longer. Oil-based paint is usable for up to 15 years. Water-based paint remains usable for up to 10 years.

Alternatives to Disposal

- Use excess paint to apply another coat, for touch-ups, or to paint a closet, garage, basement or attic.
- Give extra paint to friends or family. Extra paint can also be donated to a local theatre group, low-income housing program or school.
- Take extra paint to an exchange program such as the **"Stop & Swap"** that allows you to drop off or pick up partially used home care products free of charge. **"Stop & Swap"** programs are available at most HHWCCs.
- For HHWCC locations and hours, call **(714) 834-6752** or visit **www.oclandfills.com**.

Disposing of Paint

- Never put wet paint in the trash.

For water-based paint:

- If possible, brush the leftover paint on cardboard or newspaper. Otherwise, allow the paint to dry in the can with the lid off in a well-ventilated area protected from the elements, children and pets. Stirring the paint every few days will speed up the drying.
- Large quantities of extra paint should be taken to a HHWCC.
- Once dried, paint and painted surfaces may be disposed of in the trash. When setting a dried paint can out for trash collection, leave the lid off so the collector will see that the paint has dried.

For oil-based paint:

- Oil-based paint is a household hazardous waste. All leftover paint should be taken to a HHWCC.

Aerosol paint:

- Dispose of aerosol paint cans at a HHWCC.

Spills

- Never hose down pavement or other impermeable surfaces where paint has spilled.
- Clean up spills immediately by using an absorbent material such as cat litter. Cat litter used to clean water-based paint spills can be disposed of in the trash. When cleaning oil-based paint spills with cat litter, it must be taken to a HHWCC.
- Immediately report spills that have entered the street, gutter or storm drain to the County's 24-Hour Water Pollution Problem Reporting Hotline at **(714) 567-6363** or visit **www.ocwatersheds.com** to fill out an incident reporting form.

PROJECT Pollution PREVENTION

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conserves water for drinking and reuse. Reducing
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District of Southern California for the use of the California-
e Habitat photos

PROJECT Pollution PREVENTION

UCCE University of California Cooperative Extension

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

Homeowners Guide for Sustainable Water Use

Low Impact Development, Water Conservation & Pollution Prevention

The Ocean Begins at Your Front Door

PROJECT Pollution PREVENTION

UCCE University of California Cooperative Extension

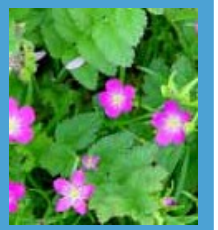
MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

Rain Gardens

Rain gardens allow runoff to be directed from your roof downspout into a landscaped area. Vegetation and rocks in the garden will slow the flow of water to allow for infiltration into the soil. Plants and soil particles will absorb pollutants from the roof runoff. By utilizing a native plant palate, rain gardens can be maintained all year with minimal additional irrigation. These plants are adapted to the semi-arid climate of Southern California, require less water and can reduce your water bill.

Before modifying your yard to install a rain garden, please consult your local building and/or planning departments to ensure your garden plan follows pertinent building codes and ordinances. Besides codes and ordinances, some home owner associations also have guidelines for yard modifications. If your property is in hill areas or includes engineered slopes, please seek professional advice before proceeding with changes.

For information on how to disconnect a downspout or to install and maintain a rain barrel or rain garden at your home, please see the Los Angeles Rainwater Harvesting Program, A Homeowner's "How-To" Guide, November 2009 at www.larainwaterharvesting.org/



OTHER WATER CONSERvATION AND POLLUTION PREvENTION TECHNIqUES

Native Vegetation and Maintenance

"California Friendly" plants or native vegetation can significantly reduce water use. These plants often require far less fertilizers and pesticides, which are two significant pollutants found in Orange County waterways. Replacing water "thirsty" plants and grass types with water efficient natives is a great way to save water and reduce the need for potentially harmful pesticides and fertilizer.

Please see the California Friendly Garden Guide produced by the Metropolitan Water District of Southern California and associated Southern California Water Agencies for a catalog of California friendly plants and other garden resources at www.bewaterwise.com/Gardensoft.

Weed Free Yards

Weeds are water thieves. They often reproduce quickly and rob your yard of both water and nutrients. Weed your yard by hand if possible. If you use herbicides to control the weeds, use only the amount recommended on the label and never use it if rain is forecast within the next 48 hours.

Soil Amendments

Soil amendments such as green waste (e.g. grass clippings, compost, etc.) can be a significant source of nutrients and can help keep the soil near the roots of plants moist. However, they can cause algal booms if they get into our waterways, which reduces the amount of oxygen in the water and impacts most aquatic organisms. It is important to apply soil amendments more than 48 hours prior to predicted rainfall.

IRRIgATE EFFICIENTLY

Smart Irrigation Controllers

Water runoff from sprinklers left on too long will carry pollutants into our waterways.

Smart Irrigation Controllers have internal clocks as well as sensors that will turn off the sprinklers in response to environmental changes. If it is raining, too windy or too cold, the smart irrigation control sprinklers will automatically shut off.

Check with your local water agency for available rebates on irrigation controllers and smart timers.

- Aim your sprinklers at your lawn, not the sidewalk – By simply adjusting the direction of your sprinklers you can save water, prevent water pollution from runoff, keep your lawn healthy and save money.
- **Set a timer for your sprinklers** – lawns absorb the water they need to stay healthy within a few minutes of turning on the sprinklers. Time your sprinklers; when water begins running off your lawn, you can turn them off. Your timer can be set to water your lawn for this duration every time.
- **Water at Sunrise** – Watering early in the morning will reduce water loss due to evaporation. Additionally, winds tend to die down in the early morning so the water will get to the lawn as intended.
- **Water by hand** – Instead of using sprinklers, consider watering your yard by hand. Hand-watering ensures that all plants get the proper amount of water and you will prevent any water runoff, which wastes water and carries pollutants into our waterways.
- **Fix leaks** - Nationwide, households waste one trillion gallons of water a year to leaks – that is enough water to serve the entire state of Texas for a year. If your garden hose is leaking, replace the nylon or rubber hose washer and ensure a tight connection. Fix broken sprinklers immediately.

Do your part to prevent water pollution in our creeks, rivers, bays and ocean.

Clean beaches and healthy creeks, rivers, bays and ocean are important to Orange County. However, not properly disposing of household hazardous waste can lead to water pollution. Batteries, electronics, paint, oil, gardening chemicals, cleaners and other hazardous materials cannot be thrown in the trash. They also must never be poured or thrown into yards, sidewalks, driveways, gutters or streets. Rain or other water could wash the materials into the storm drain and eventually into our waterways and the ocean. In addition, hazardous waste must not be poured in the sanitary sewers (sinks and toilets).

NEVER DISPOSE OF HOUSEHOLD HAZARDOUS WASTE IN THE TRASH, STREET, GUTTER, STORM DRAIN OR SEWER.

For more information, please call the **Orange County Stormwater Program** at **1-877-89-SPILL** (1-877-897-7455) or visit **www.ocwatersheds.com**

To Report Illegal Dumping of Household Hazardous Waste call 1-800-69-TOXIC

To report a spill, call the **Orange County 24-Hour Water Pollution Problem Reporting Hotline 1-877-89-SPILL** (1-877-897-7455).

For emergencies, dial 911.

RECYCLE USED OIL

Printed on Recycled Paper

Help Prevent Ocean Pollution:

Proper Disposal of Household Hazardous Waste

The Ocean Begins at Your Front Door

PROJECT Pollution PREVENTION

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ORANGE COUNTY

Pollution Prevention

Leftover household products that contain corrosive, toxic, ignitable, or reactive ingredients are considered to be "household hazardous waste" or "HHW." HHW can be found throughout your home, including the bathroom, kitchen, laundry room and garage.

WHEN POSSIBLE, USE NON-HAZARDOUS OR LESS-HAZARDOUS PRODUCTS.

Disposal of HHW down the drain, on the ground, into storm drains, or in the trash is illegal and unsafe.

Proper disposal of HHW is actually easy. Simply drop them off at a Household Hazardous Waste Collection Center (HHWCC) for free disposal and recycling. Many materials including anti-freeze, latex-based paint, motor oil and batteries can be recycled. Some centers have a "Stop & Swap" program that lets you take partially used home, garden, and automobile products free of charge. There are four HHWCCs in Orange County:

Anaheim:.....1071 N. Blue Gum St
Huntington Beach:.....17121 Nichols St
Irvine:..... 6411 Oak Canyon
San Juan Capistrano:....32250 La Pata Ave

Centers are open Tuesday-Saturday, 9 a.m.-3 p.m. Centers are closed on rainy days and major holidays. For more information, call **(714) 834-6752** or visit **www.oclandfills.com.**

Common household hazardous wastes

- Batteries
- Paint and paint products
- Adhesives
- Drain openers
- Household cleaning products
- Wood and metal cleaners and polishes
- Pesticides
- Fungicides/wood preservatives
- Automotive products (antifreeze, motor oil, fluids)
- Grease and rust solvents
- Fluorescent lamps
- Mercury (thermometers & thermostats)
- All forms of electronic waste including computers and microwaves
- Pool & spa chemicals
- Cleaners
- Medications
- Propane (camping & BBQ)
- Mercury-containing lamps
- Television & monitors (CRTs, flatscreens)

Tips for household hazardous waste

- Never dispose of HHW in the trash, street, gutter, storm drain or sewer.
- Keep these materials in closed, labeled containers and store materials indoors or under a cover.
- When possible, use non-hazardous products.
- Reuse products whenever possible or share with family and friends.
- Purchase only as much of a product as you'll need. Empty containers may be disposed of in the trash.
- HHW can be harmful to humans, pets and the environment. Report emergencies to 911.

Preventing water pollution at your commercial/industrial site

Clean beaches and healthy creeks, rivers, bays and ocean are important to Orange County. However, many landscape and building maintenance activities can lead to water pollution if you're not careful. Paint, chemicals, plant clippings and other materials can be blown or washed into storm drains that flow to the ocean. Unlike water in sanitary sewers (from sinks and toilets), water in storm drains is not treated before entering our waterways.

You would never pour soap or fertilizers into the ocean, so why would you let them enter the storm drains? Follow these easy tips to help prevent water pollution.

Some types of industrial facilities are required to obtain coverage under the State General Industrial Permit. For more information visit: **www.swrcb.ca.gov/stormwater/industrial.html**

For more information, please call the **Orange County Stormwater Program** at **1-877-89-SPILL** (1-877-897-7455) or visit **www.ocwatersheds.com**

To report a spill, call the **Orange County 24-Hour Water Pollution Problem Reporting Hotline** at **1-877-89-SPILL** (1-877-897-7455).

For emergencies, dial 911.

RECYCLE USED OIL

Printed on Recycled Paper

Help Prevent Ocean Pollution:

Proper Maintenance Practices for Your Business

The Ocean Begins at Your Front Door

PROJECT Pollution PREVENTION

Proper Maintenance Practices for your Business

Landscape Maintenance

- Compost grass clippings, leaves, sticks and other vegetation, or dispose of it at a permitted landfill or in green waste containers. Do not dispose of these materials in the street, gutter or storm drain.
- Irrigate slowly and inspect the system for leaks, overspraying and runoff. Adjust automatic timers to avoid overwatering.
- Follow label directions for the use and disposal of fertilizers and pesticides.
- Do not apply pesticides or fertilizers if rain is expected within 48 hours or if wind speeds are above 5 mph.
- Do not spray pesticides within 100 feet of waterways.
- Fertilizers should be worked into the soil rather than dumped onto the surface.
- If fertilizer is spilled on the pavement or sidewalk, sweep it up immediately and place it back in the container.

Building Maintenance

- Never allow washwater, sweepings or sediment to enter the storm drain.
- Sweep up dry spills and use cat litter, towels or similar materials to absorb wet spills. Dispose of it in the trash.
- If you wash your building, sidewalk or parking lot, you **must** contain the water. Use a shop vac to collect the water and contact your city or sanitation agency for proper disposal information. Do not let water enter the street, gutter or storm drain.
- Use drop cloths underneath outdoor painting, scraping, and sandblasting work, and properly dispose of materials in the trash.
- Use a ground cloth or oversized tub for mixing paint and cleaning tools.
- Use a damp mop or broom to clean floors.
- Cover dumpsters to keep insects, animals, rainwater and sand from entering. Keep the area around the dumpster clear of trash and debris. Do not overfill the dumpster.
- Call your trash hauler to replace leaking dumpsters.
- Do not dump any toxic substance or liquid waste on the pavement, the ground, or near a storm drain. Even materials that seem harmless such as latex paint or biodegradable cleaners can damage the environment.

Never Dispose of Anything in the Storm Drain.

- Recycle paints, solvents and other materials. For more information about recycling and collection centers, visit **www.oclandfills.com**.
- Store materials indoors or under cover and away from storm drains.
- Use a construction and demolition recycling company to recycle lumber, paper, cardboard, metals, masonry, carpet, plastic, pipes, drywall, rocks, dirt, and green waste. For a listing of construction and demolition recycling locations in your area, visit **www.ciwmb.ca.gov/recycle.**
- Properly label materials. Familiarize employees with Material Safety Data Sheets.

PROJECT Pollution PREVENTION

HOMEOWNER TIPS

PROTECTING WATER

Before Buying Pest Control Products

- Identify the pest.
- Decide if pest control products are the best control measure or if there are alternatives available.
- Are integrated pest management guidelines available for this pest?
- Read the product label:
  - Is the pest listed on the label?
  - Is it the best product for the pest?

Before Mixing Your Sprayer

- Read the label carefully.
- Buy only enough pesticide to treat the area affected by the pest.
- Check the weather and don't apply if it's windy or about to rain
- Measure the area you're treating.
- Calculate how much spray to mix.
- Wear long sleeve shirt, long pants, shoes and any other protective equipment listed on the label and follow all the label precautions.
- Be prepared for spills and know how to clean them up.

When You're Ready To Spray

- Mix and load spray in an area where any spilled pesticide will not be able to drain or be washed away into storm drains, ditches, streams, ponds or other bodies of water.
- Mix sprayer on grass, not the sidewalk or driveway.
- Mix only as much as needed.

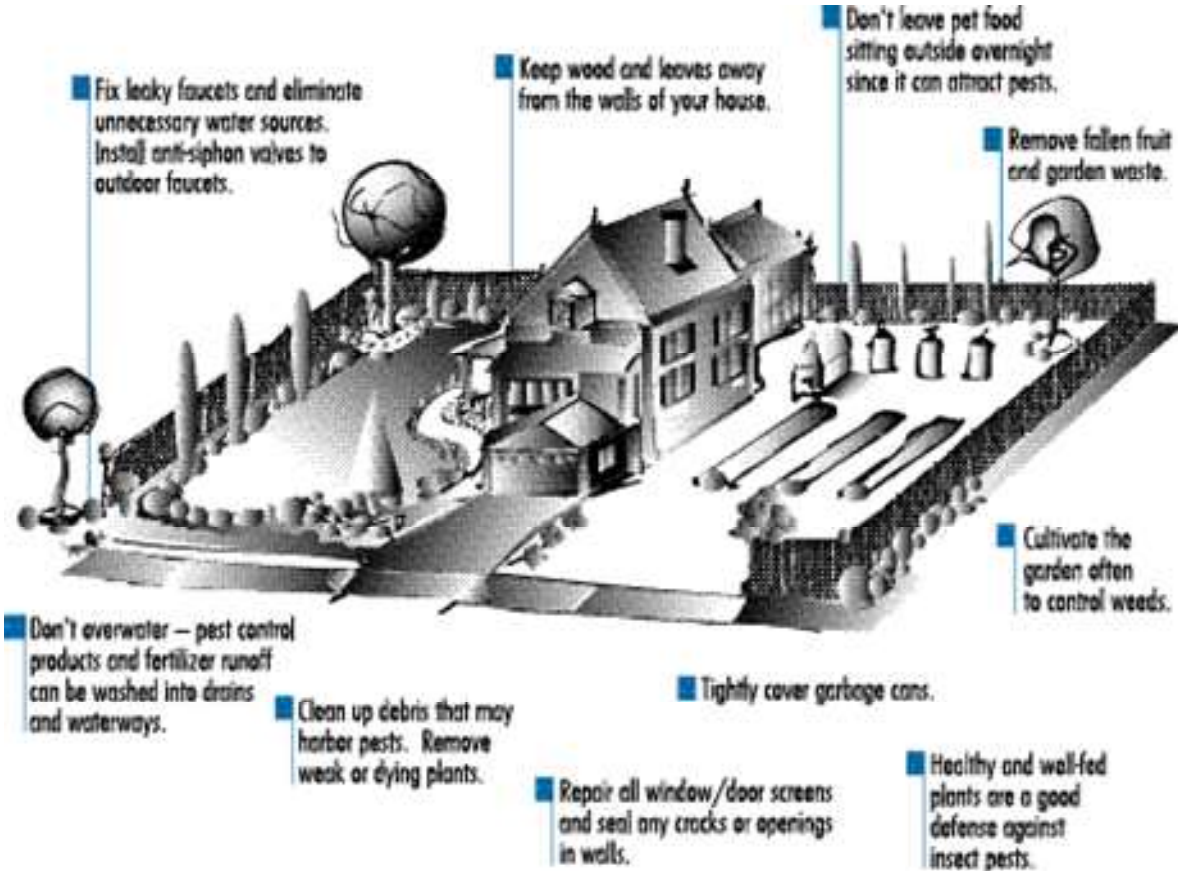
When You're Spraying

- AVOID spraying in or near storm drains, ditches, streams, and ponds!
- Leave an untreated strip around these areas to protect the water.

When You're done

- Never dump leftovers down any drain; Save for a future application.
- Triple-rinse sprayer and apply rinsewater to treated area.
- Take any old or unwanted pesticides to a Household Hazardous Waste Collection Center (714) 834-6752.

Using Pest Control Products. It's Your Responsibility To Do It Right

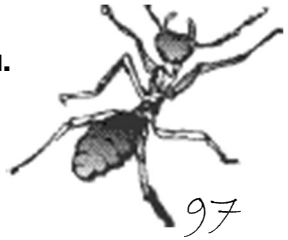


IPM... OUTSMARTING PESTS WHILE PROTECTING WATER

With Integrated Pest Management (IPM), homeowners use common sense and nature to make it difficult for pests to survive. IPM techniques include cultural practices (such as mulching to prevent weeds), encouraging natural enemies (good bugs), and judicious use of pest control products.

- First, identify your pest problem. To find the best solution, you need to pin down the problem. Consult gardening books, your county cooperative extension office or your local nursery.
- Decide how much pest control is necessary. If you can live with some pest damage, you can avoid intensive pest control product treatments.
- Choose an effective option. Try various types of controls first: washing bugs off plants, pruning diseased parts of plants. If you need to use pest control products, choose one that targets the problem and poses the least hazard.
- Finally, it's easier to prevent pests than to control them.

Think ahead.



This brochure is being distributed in order to reduce the impacts of pesticides on water quality. It was produced with support from the Orange County Storm Water Program, the Coalition for Urban/Rural Environmental Stewardship (CURES) and a 319(h) grant from the State Water Resources Control Board.

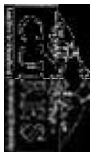
Orange County Storm Water Program Participants:

Anaheim Public Works/Engineering	(714) 765-5176
Brea Engineering	(714) 990-7666
Buena Park Public Works	(714) 562-3655
Costa Mesa Public Services	(714) 754-5248
Cypress Engineering	(714) 229-6752
Dana Point Public Works	(949) 248-3562
Fountain Valley Public Works	(714) 593-4400 x347
Fullerton Engineering Dept	(714) 738-6853
Garden Grove Development Services	(714) 741-5554
Huntington Beach Public Works	(714) 536-5432
Irvine Public Works	(949) 724-6515
La Habra Public Services	(562) 905-9792
La Palma Public Works	(714) 523-1140 x102
Laguna Beach Municipal Services	(949) 497-0711
Laguna Hills Engineering	(949) 707-2600
Laguna Niguel Public Works	(949) 362-4337
Lake Forest Public Works	(949) 461-3480
Los Alamitos Community Dev	(562) 431-3538 x301
Mission Viejo Public Works	(949) 470-3095
Newport Beach Public works	(949) 644-3311
Orange Public Works	(714) 744-5551
Placentia Engineering	(714) 993-8131
San Clemente Engineering	(949) 361-6100
San Juan Capistrano Engineering	(949) 493-1171
Santa Ana Public Works	(714) 647-3380
Seal Beach Engineering	(562) 431-2527 x318
Stanton Public Works	(714) 379-9222 x204
Tustin Public Works Engineering	(714) 573-3150
Villa Park Engineering	(714) 998-1500
Westminster Public Works Eng.	(714) 898-3311 x215
Yorba Linda Engineering	(714) 961-7170 x174
O.C. Storm Water Program	1-877-89-SPILL (1-877-897-7455)
24 Hour Water Pollution Hotline	(714) 567-6363 or ashbyk@pfrd.co.orange.ca.us
Chemical and Hazardous Material Spill Emergencies	911

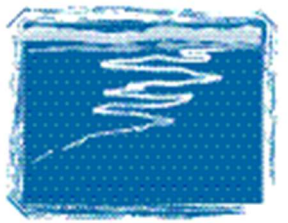
Other Important Phone Numbers:

For Additional Brochures	1-877-89-SPILL (1-877-897-7455)
UC Masters & Coop Extension	(714) 708-1646 ucmastergardeners@yahoo.com
O.C. Household Hazardous Waste Information	(714) 834-6752 or www.oc.ca.gov/IWMD
Information on agriculture chemicals, pesticides and possible alternatives, O.C. Agriculture Commissioner	(714) 447-7115

Original graphics developed with support from:
Coalition For Urban/Rural Environmental Stewardship (CURES)
Western Crop Protection Association (WCPA)
Responsible Industry for a Sound Environment (RISE)



Keeping Pest Control Products Out of Creeks, Rivers and The Ocean



HOMEOWNER TIPS

PROTECTING WATER

Clean beaches and healthy creeks, rivers, bays and ocean are important to Orange County. However, many common activities such as pest control can lead to water pollution if you're not careful. Pesticide treatments must be planned and applied properly to ensure that pesticides do not enter the street, gutter or storm drain. Unlike water in sanitary sewers (from sinks and toilets), water in storm drains is not treated before entering our waterways.

You would never dump pesticides into the ocean, so don't let it enter the storm drains. Pesticides can cause significant damage to our environment if used improperly. If you are thinking of using a pesticide to control a pest, there are some important things to consider.

For more information, please call University of California Cooperative Extension Master Gardeners at (714) 708-1646 or visit these Web sites: www.uccemg.org www.ipm.ucdavis.edu

For instructions on collecting a specimen sample visit the Orange County Agriculture Commissioner's website at: http://www.ocagcomm.com/ser_lab.asp

To report a spill, call the **Orange County 24-Hour Water Pollution Problem Reporting Hotline at 1-877-89-SPILL (1-877-897-7455).**

For emergencies, dial 911.

Information From: Cheryl Wilen, Area IPM Advisor; Darren Haver, Watershed Management Advisor; Mary Louise Flint, IPM Education and Publication Director; Pamela M. Geisel, Environmental Horticulture Advisor; Carolyn L. Unruh, University of California Cooperative Extension staff writer. Photos courtesy of the UC Statewide IPM Program and Darren Haver.

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Help Prevent Ocean Pollution:

Responsible Pest Control

Tips for Pest Control

Key Steps to Follow:

Step 1: Correctly identify the pest (insect, weed, rodent, or disease) and verify that it is actually causing the problem.

Three life stages of the common lady beetle, a beneficial insect.

This is important because beneficial insects are often mistaken for pests and sprayed with pesticides needlessly.

Consult with a Certified Nursery Professional at a local nursery or garden center or send a sample of the pest to the Orange County Agricultural Commissioner's Office.

Determine if the pest is still present – even though you see damage, the pest may have left.

Step 2: Determine how many pests are present and causing damage.

Small pest populations may be controlled more safely using non-pesticide techniques. These include removing food sources, washing off leaves with a strong stream of water, blocking entry into the home using caulking and replacing problem plants with ones less susceptible to pests.

Integrated Pest Management (IPM) usually combines several least toxic pest control methods for long-term prevention and management of pest problems without harming you, your family, or the environment.

UC CE University of California Cooperative Extension

Step 3: If a pesticide must be used, choose the least toxic chemical.

Obtain information on the least toxic pesticides that are effective at controlling the target pest from the UC Statewide Integrated Pest Management (IPM) Program's Web site at www.ipm.ucdavis.edu.

Seek out the assistance of a Certified Nursery Professional at a local nursery or garden center when selecting a pesticide. Purchase the smallest amount of pesticide available.

Apply the pesticide to the pest during its most vulnerable life stage. This information can be found on the pesticide label.

Step 4: Wear appropriate protective clothing.

Follow pesticide labels regarding specific types of protective equipment you should wear. Protective clothing should always be washed separately from other clothing.

Step 5: Continuously monitor external conditions when applying pesticides such as weather, irrigation, and the presence of children and animals.

Never apply pesticides when rain is predicted within the next 48 hours. Also, do not water after applying pesticides unless the directions say it is necessary.

Apply pesticides when the air is still; breezy conditions may cause the spray or dust to drift away from your targeted area.

In case of an emergency call 911 and/or the regional poison control number at (714) 634-5988 or (800) 544-4404 (CA only).

For general questions you may also visit www.calpoison.org.

Step 6: In the event of accidental spills, sweep up or use an absorbent agent to remove any excess pesticides. Avoid the use of water.

Be prepared. Have a broom, dust pan, or dry absorbent material, such as cat litter, newspapers or paper towels, ready to assist in cleaning up spills.

Contain and clean up the spill right away. Place contaminated materials in a doubled plastic bag. All materials used to clean up the spill should be properly disposed of according to your local Household Hazardous Waste Disposal site.

Step 7: Properly store and dispose of unused pesticides.

Purchase Ready-To-Use (RTU) products to avoid storing large concentrated quantities of pesticides.

Store unused chemicals in a locked cabinet.

Unused pesticide chemicals may be disposed of at a Household Hazardous Waste Collection Center.

Empty pesticide containers should be triple rinsed prior to disposing of them in the trash.

Household Hazardous Waste Collection Center
(714) 834-6752
www.oclandfills.com

PROJECT Pollution PREVENTION

Did you know that just one quart of oil can pollute 250,000 gallons of w ater?

A clean ocean and healthy cr eeks, rivers, bays and beaches are important to Orange County. However, not properly disposing of used oil can lead to water pollution. If you pour or drain oil onto driveways, sidewalks or streets, it can be washed into the storm drain. Unlike water in sanitary sewers (from sinks and toilets), water in stor m drains is not tr eated befor e entering the ocean. Help prevent water pollution by taking your used oil to a used oil collection center.

Included in this brochure is a list of locations that will accept up to five gallons of used motor oil at no cost. Many also accept used oil filters. Please contact the facility befor e delivering your used oil. This listing of companies is for your reference and does not constitute a r ecommendation or endorsement of the company.

Please note that used oil filters may not be disposed of with regular household trash. They must be taken to a household hazar dous waste collection or recycling center in Anaheim, Huntington Beach, Irvine or San Juan Capistrano. For information about these centers, visit www.oclandfills.com.

Please do not mix your oil with other substances!

For more information, please call the Orange Coun ty Stormwater P rogram at 1 - 877 - 89 - S P ILL (1-877-897-7455) **or visit www . w atersheds.com.**

For information abou t the pro per disp o sal of household hazar d ou s w aste, call the Ho usehold Waste Ho tline at (714) 834 - 6752 or visit www . oclandfills.com.

RECYCLE USED OIL

For additional information abou t the nearest oil recycling center, call the U sed Oil P rogram at 1 - 800 - CLEA NUP or visit www .cleanup. or g.

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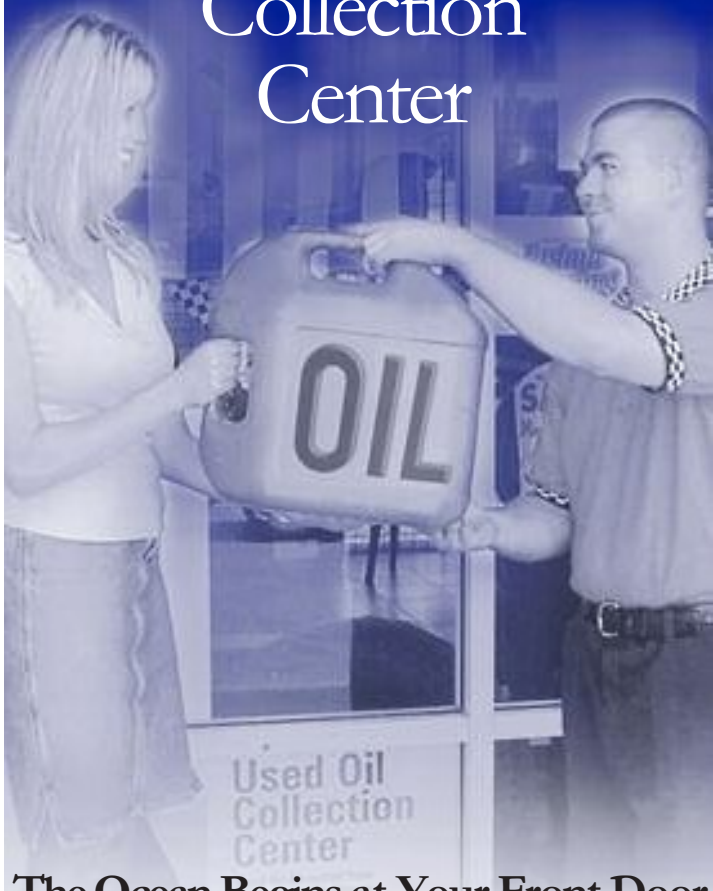
Help Prevent Ocean Pollution:

Recycle at Your Local Used Oil Collection Center



The Ocean Begins at Your Front Door

PROJECT Pollution PREVENTION

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NORTH COUNTY

Used Oil Collection Centers

Anaheim

All Seasons Tire and Auto Center, Inc.
817 S Brookhurst St., Anaheim, CA 92804
(714)772-6090( )
CIWMB#: 30-C-03177

AutoZone #3317
423 N Anaheim Blvd., Anaheim, CA 92805
(714)776-0787( )
CIWMB#: 30-C-05263

AutoZone #5226
2145 W Lincoln Ave., Anaheim, CA 92801
(714)533-6599( )
CIWMB#: 30-C-04604

Bedard Automotive
3601 E Miraloma Ave., Anaheim, CA 92806
(714)528-1380( )
CIWMB#: 30-C-02205

Classic Chevrolet
1001 Weir Canyon Rd., Anaheim, CA 92807
(714)283-5400( )
CIWMB#: 30-C-05223

Econo Lube N' Tune #4
3201 W Lincoln Ave., Anaheim, CA 92801
(714)821-0128( )
CIWMB#: 30-C-01485

EZ Lube Inc - Savi Ranch #43
985 N Weir Canyon Rd., Anaheim, CA 92807
(714)556-1312( )
CIWMB#: 30-C-06011

Firestone Store #71C7
1200 S Magnolia Ave., Anaheim, CA 92804
(949)598-5520( )
CIWMB#: 30-C-05743

Great Western Lube Express
125 N Brookhurst St., Anaheim, CA 92801
(714)254-1300( )
CIWMB#: 30-C-05542

HR Pro Auto Service Center
3180 W Lincoln Ave., Anaheim, CA 92801
(714)761-4343( )
CIWMB#: 30-C-05927

Ira Newman Automotive Services
1507 N State College Blvd., Anaheim, CA 92806
(714)635-2392( )
CIWMB#: 30-C-01482

Jiffy Lube #1028
2400 W Ball Rd., Anaheim, CA 92804
(714)761-5211( )
CIWMB#: 30-C-00870

Jiffy Lube #1903
2505 E Lincoln Ave., Anaheim, CA 92806
(714)772-4000( )
CIWMB#: 30-C-05511

Jiffy Lube #2340
2181 W Lincoln Ave., Anaheim, CA 92801
(714)533-1000( )
CIWMB#: 30-C-04647

Kragen Auto Parts #1303
1088 N State College Blvd., Anaheim, CA 92806
(714)956-7351( )
CIWMB#: 30-C-03438

Kragen Auto Parts #1399
2245 W Ball Rd., Anaheim, CA 92804
(714)490-1274( )
CIWMB#: 30-C-04094

Kragen Auto Parts #1565
2072 Lincoln Ave., Anaheim, CA 92806
(714)502-6992( )
CIWMB#: 30-C-04078

Kragen Auto Parts #1582
3420 W Lincoln Ave., Anaheim, CA 92801
(714)828-7977( )
CIWMB#: 30-C-04103

Pep Boys #613
10912 Katella Ave., Anaheim, CA 92804
(714)638-0863( )
CIWMB#: 30-C-01756

Pep Boys #663
3030 W Lincoln Anaheim, CA 92801
(714)826-4810( )
CIWMB#: 30-C-03417

Pep Boys #809
8205 E Santa Ana Cyn Rd., Anaheim, CA 92808
(714)974-0105( )
CIWMB#: 30-C-03443

Pick Your Part
1235 S Beach Blvd., Anaheim, CA 92804
(714)527-1645( )
CIWMB#: 30-C-03744

PK Auto Performance
3106 W. Lincoln Ave., Anaheim, CA 92801
(714)826-2141( )
CIWMB#: 30-C-05628

Quick Change Lube and Oil
2731 W Lincoln Ave., Anaheim, CA 92801
(714)821-4464( )
CIWMB#: 30-C-04363

Saturn of Anaheim
1380 S Auto Center Dr., Anaheim, CA 92806
(714)648-2444( )
CIWMB#: 30-C-06332

Sun Tech Auto Service
105 S State College Blvd., Anaheim, CA 92806
(714)956-1389( )
CIWMB#: 30-C-06455

VonicTruck Services
515 S Rose St., Anaheim, CA 92805
(714)533-3333( )
CIWMB#: 30-C-01142

Anaheim Hills

Anaheim Hills Car Wash & Lube
5810 E La Palma Ave., Anaheim Hills, CA 92807
(714)777-6605( )
CIWMB#: 30-C-01387

Brea

Firestone Store #27A9
891 E Imperial Hwy., Brea, CA 92821
(714)529-8404( )
CIWMB#: 30-C-01221

Oil Can Henry's
230 N Brea Blvd., Brea, CA 92821
(714)990-1900( )
CIWMB#: 30-C-04273

Buena Park

Firestone Store #71F7
6011 Orangethorpe Buena Park, CA 90620
(714)670-7912( )
CIWMB#: 30-C-01218

Firestone Store #71T8
8600 Beach Blvd., Buena Park, CA 90620
(714)827-5300( )
CIWMB#: 30-C-02121

Kragen Auto Parts #1204
5303 Beach Blvd., Buena Park, CA 90621
(714)994-1320( )
CIWMB#: 30-C-02623

Cypress

AutoZone #5521
5471 Lincoln Ave., Cypress, CA 90630
(714)995-4644( )
CIWMB#: 30-C-00836

Big O Tires
6052 Cerritos Ave., Cypress, CA 90630
(714)826-6334( )
CIWMB#: 30-C-04245

Econo Lube N' Tune #213
5497 Cerritos Ave., Cypress, CA 90630
(714)761-0456( )
CIWMB#: 30-C-06240

Jiffy Lube #851
4942 Lincoln Ave., Cypress, CA 90630
(626)965-9689( )
CIWMB#: 30-C-06182

M & N Coastline Auto & Tire Service
4005 Ball Rd., Cypress, CA 90630
(714)826-1001( )
CIWMB#: 30-C-04387

Masterlube #103
5904 Lincoln Cypress, CA 90630
(714)826-2323( )
CIWMB#: 30-C-01071

Masterlube #104
5971 Ball Rd., Cypress, CA 90630
(714)220-1555( )
CIWMB#: 30-C-04682

Metric Motors of Cypress
6042 Cerritos Ave., Cypress, CA 90630
(714)821-4702( )
CIWMB#: 30-C-05157

Fuller ton

AutoZone #2898
146 N. Raymond Ave., Fullerton, CA 92831
(714)870-9772( )
CIWMB#: 30-C-04488

AutoZone #5522
1801 Orangethorpe W. Fullerton, CA 92833
(714)870-8286( )
CIWMB#: 30-C-06062

AutoZone #5523
102 N Euclid Fullerton, CA 92832
(714)870-8286( )
CIWMB#: 30-C-04755

EZ Lube #17
4002 N Harbor Blvd., Fullerton, CA 92835
(714)871-9980( )
CIWMB#: 30-C-03741

Firestone Store #27EH
1933 N Placentia Ave., Fullerton, CA 92831
(714)993-7100( )
CIWMB#: 30-C-02122

Fox Service Center
1018 W Orangethorpe Fullerton, CA 92833
(714)879-1430( )
CIWMB#: 30-C-02318

Fullerton College Automotive Technology
321 E Chapman Ave., Fullerton, CA 92832
(714)992-7275( )
CIWMB#: 30-C-03165

Kragen Auto Parts #0731
2978 Yorba Linda Fullerton, CA 92831
(714)996-4780( )
CIWMB#: 30-C-02628

Kragen Auto Parts #4133
904 W Orangethorpe Ave., Fullerton, CA 92832
(714)526-3570( )
CIWMB#: 30-C-06256

Pep Boys #642
1530 S Harbor Blvd., Fullerton, CA 92832
(714)870-0700( )
CIWMB#: 30-C-01755

Sunnyside 76 Car Care Center
2701 N Brea Blvd., Fullerton, CA 92835
(714)256-0773( )
CIWMB#: 30-C-01381

Garden Grove

76 Pro Lube Plus
9001 Trask Ave., Garden Grove, CA 92844
(714)393-0590( )
CIWMB#: 30-C-05276

AutoZone #5527
13190 Harbor Blvd., Garden Grove, CA 92843
(714)636-5665( )
CIWMB#: 30-C-04760

David Murray Shell
12571 Vly View St., Garden Grove, CA 92845
(714)898-0170( )
CIWMB#: 30-C-00547

Express Lube & Wash
8100 Lampson Ave., Garden Grove, CA 92841
(909)316-8261( )
CIWMB#: 30-C-06544

Firestone Store #7180
10081 Chapman Ave., Garden Grove, CA 92840
(714)530-4630( )
CIWMB#: 30-C-01224

Firestone Store #71W3
13961 Brookhurst St., Garden Grove, CA 92843
(714)590-2741( )
CIWMB#: 30-C-03690

Jiffy Lube #1991
13970 Harbor Blvd., Garden Grove, CA 92843
(714)554-0610( )
CIWMB#: 30-C-05400

Kragen Auto Parts #1251
13933 N Harbor Blvd., Garden Grove, CA 92843
(714)554-3780( )
CIWMB#: 30-C-02663

Kragen Auto Parts #1555
9851 Chapman Ave., Garden Grove, CA 92841
(714)741-8030( )
CIWMB#: 30-C-04079

Nissan of Grarden Grove
9670 Trask Ave., Garden Grove, CA 92884
(714)537-0900( )
CIWMB#: 30-C-06553

Toyota of Garden Grove
9444 Trask Ave., Garden Grove, CA 92844
(714)895-5595( )
CIWMB#: 30-C-06555

La Habra

AutoZone #5532
1200 W Imperial Hwy., La Habra, CA 90631
(562)694-5337( )
CIWMB#: 30-C-04784

Burch Ford
201 N Harbor Blvd., La Habra, CA 90631
(562)691-3225( )
CIWMB#: 30-C-05179

Firestone Store #2736
1071 S Beach Blvd., La Habra, CA 90631
(562)691-1731( )
CIWMB#: 30-C-01169

Kragen Auto Parts #1569
1621 W Whittier Blvd., La Habra, CA 90631
(562)905-2538( )
CIWMB#: 30-C-04076

Pep Boys #997
125 W Imperial Hwy., La Habra, CA 90631
(714)447-0601( )
CIWMB#: 30-C-04026

SpeeDee Oil Change & Tune-Up
1580 W Imperial Hwy., La Habra, CA 90631
(562)697-3513( )

Los Alamitos

Jiffy Lube #1740
3311 Katella Ave., Los Alamitos, CA 90720
(562)596-1827( )
CIWMB#: 30-C-03529

Midway City

Bolsa Transmission
8331 Bolsa Ave., Midway City, CA 92655
(714)799-6158( )
CIWMB#: 30-C-05768

Placentia

Advanced Auto & Diesel
144 S Bradford Placentia, CA 92870
(714)996-8222( )
CIWMB#: 30-C-06242

Castner's Auto Service
214 S. Bradford Ave., Placentia, CA 92870
(714)528-1311( )
CIWMB#: 30-C-06452

Econo Lube N' Tune
100 W Chapman Ave., Placentia, CA 92870
(714)524-0424( )
CIWMB#: 30-C-06454

Fairway Ford
1350 E Yorba Linda Blvd., Placentia, CA 92870
(714)524-1200( )
CIWMB#: 30-C-01863

Seal Beach

M & N Coastline Auto & Tire Service
12239 Seal Beach Blvd., Seal Beach, CA 90740
(714)826-1001( )
CIWMB#: 30-C-04433

Seal Beach Chevron
12541 Seal Beach Blvd., Seal Beach, CA 90740
(949)495-0774(14)
CIWMB#: 30-C-06425

Stanton

AutoZone #2806
11320 Beach Blvd., Stanton, CA 90680
(714)895-7665( )
CIWMB#: 30-C-04563

Joe's Auto Clinic
11763 Beach Blvd., Stanton, CA 90680
(714)891-7715( )
CIWMB#: 30-C-03253

Kragen Auto Parts #1742
11951 Beach Blvd., Stanton, CA 90680
(714)799-7574( )
CIWMB#: 30-C-05231

Scher Tire #20
7000 Katella Ave., Stanton, CA 90680
(714)892-9924( )
CIWMB#: 30-C-05907

USA 10 Minute Oil Change
8100 Lampson Ave., Stanton, CA 92841
(714)373-4432( )
CIWMB#: 30-C-05909

Westminster

AutoZone #5543
6611 Westminster Blvd., Westminster, CA 92683
(714)898-2898( )
CIWMB#: 30-C-04964

AutoZone #5544
8481 Westminster Blvd., Westminster, CA 92683
(714)891-3511( )
CIWMB#: 30-C-04966

City of Westminster Corporate Yard
14381 Olive St., Westminster, CA 92683
(714)895-2876(292)
CIWMB#: 30-C-02008

Honda World
13600 Beach Blvd., Westminster, CA 92683
(714)890-8900( )
CIWMB#: 30-C-03639

Jiffy Lube #1579
6011 Westminster Blvd., Westminster, CA 92683
(714)899-2727( )
CIWMB#: 30-C-02745

John's Brake & Auto Repair
13050 Hoover St., Westminster, CA 92683
(714)379-2088( )
CIWMB#: 30-C-05617

Kragen Auto Parts #0762
6562 Westminster Blvd., Westminster, CA 92683
(714)898-0810( )
CIWMB#: 30-C-02590

Midway City Sanitary District
14451 Cedarwood St., Westminster, CA 92683
(714)893-3553( )
CIWMB#: 30-C-01626

Pep Boys #653
15221 Beach Blvd., Westminster, CA 92683
(714)893-8544( )
CIWMB#: 30-C-03415

Yorba Linda

AutoZone #5545
18528 Yorba Linda Blvd., Yorba Linda, CA 92886
(714)970-8933( )
CIWMB#: 30-C-04971

Econo Lube N' Tune
22270 La Palma Ave., Yorba Linda, CA 92887
(714)692-8394( )
CIWMB#: 30-C-06513

EZ Lube Inc. #41
17511 Yorba Linda Blvd., Yorba Linda, CA 92886
(714)556-1312( )
CIWMB#: 30-C-05739

Firestone Store #27T3
18500 Yorba Linda Blvd., Yorba Linda, CA 92886
(714)779-1966( )
CIWMB#: 30-C-01222

Jiffy Lube #1532
16751 Yorba Linda Blvd., Yorba Linda, CA 92886
(714)528-2800( )
CIWMB#: 30-C-03777

Mike Schultz Import Service
4832 Eureka Ave., Yorba Linda, CA 92886
(714)528-4411( )
CIWMB#: 30-C-04313

This information was provided by the County of Orange Integrated Waste Management Department and the California Integrated Waste Management Board (CIWMB).

Sewage Spill

Reference Guide

Your Responsibilities as a Private Property Owner

Residences
Businesses
Homeowner/Condominium Associations
Federal and State Complexes
Military Facilities

Orange County Sanitation District

Health Care Agency
Environmental Health

PROJECT Pollution PREVENTION

www.ocwatersheds.com

This brochure was designed courtesy of the Orange County Sanitation District (OCSD). For additional information, call (714) 962-2411, or visit their website at www.ocsd.com

What is a Sewage Spill?

Sewage spills occur when the wastewater being transported via underground pipes overflows through a manhole, cleanout or broken pipe. Sewage spills can cause health hazards, damage to homes and businesses, and threaten the environment, local waterways and beaches.

Overflowing cleanout pipe located on private property

Common Causes of Sewage Spills

Grease builds up inside and eventually blocks sewer pipes. Grease gets into the sewer from food establishments, household drains, as well as from poorly maintained commercial grease traps and interceptors.

Structure problems caused by tree roots in the lines, broken/cracked pipes, missing or broken cleanout caps or undersized sewers can cause blockages.

Infiltration and inflow (I/I) impacts pipe capacity and is caused when groundwater or rainwater enters the sewer system through pipe defects and illegal connections.

You Are Responsible for a Sewage Spill Caused by a Blockage or Break in Your Sewer Lines!

Time is of the essence in dealing with sewage spills. You are required to **immediately**:

Control and minimize the spill. Keep spills contained on private property and out of gutters, storm drains and public waterways by shutting off or not using the water.

Use sandbags, dirt and/or plastic sheeting to prevent sewage from entering the storm drain system.

Clear the sewer blockage. Always wear gloves and wash your hands. It is recommended that a plumbing professional be called for clearing blockages and making necessary repairs.

Always notify your city sewer/public works department or public sewer district of sewage spills. If the spill enters the storm drains also notify the Health Care Agency. In addition, if it exceeds 1,000 gallons notify the Office of Emergency Services. Refer to the numbers listed in this brochure.

You Could Be Liable

Allowing sewage from your home, business or property to discharge to a gutter or storm drain may subject you to penalties and/or out-of-pocket costs to reimburse cities or public agencies for clean-up and enforcement efforts. See Regulatory Codes & Fines section for pertinent codes and fines that apply.

What to Look For

Sewage spills can be a very noticeable gushing of water from a manhole or a slow water leak that may take time to be noticed. Don't dismiss unaccounted-for wet areas.

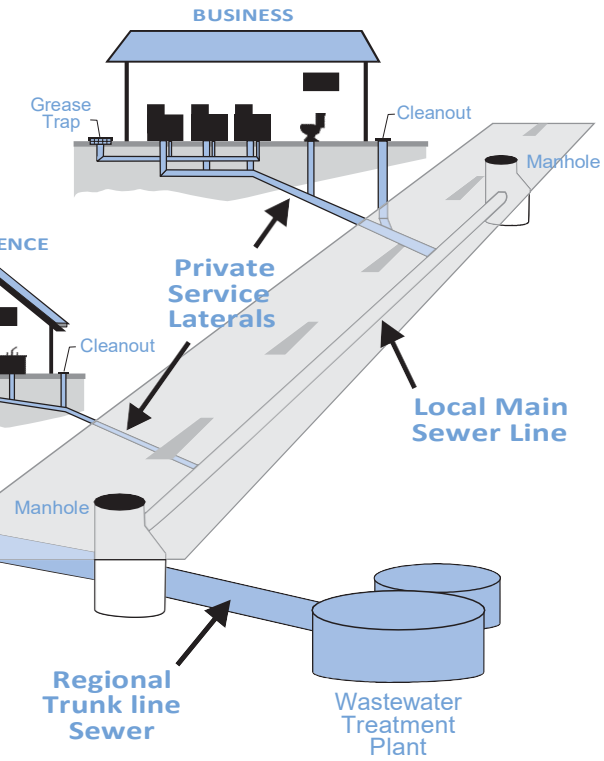
Look for:

- Drain backups inside the building.
- Wet ground and water leaking around manhole lids onto your street.
- Leaking water from cleanouts or outside drains.
- Unusual odorous wet areas: sidewalks, external walls or ground/landscape around a building.

Caution

Keep people and pets away from the affected area. Untreated sewage has high levels of disease-causing viruses and bacteria. Call your local health care agency listed on the back for more information.

If You See a Sewage Spill Occurring, Notify Your City Sewer/Public Works Department or Public Sewer District IMMEDIATELY!



Preventing Grease Blockages

drain is not a dump! Recycle or dispose of grease erly and never pour grease down the drain.

eowners should mix fats, oils and grease with absor- waste materials such as paper, coffee grounds, or kitty and place it in the trash. Wipe food scraps from plates pans and dump them in the trash.

taurants and commercial food service establishments uld always use “Kitchen Best Management Practices.” se include:

llecting all cooking grease and liquid oil from pots, pans nd fryers in covered grease containers for recycling.

raping or dry-wiping excess food and grease from ishes, pots, pans and fryers into the trash.

talling drain screens on all kitchen drains.

ving spill kits readily available for cleaning up spills.

perly maintaining grease traps or interceptors by having hem serviced regularly. Check your local city codes.

Orange County Agency Responsibilites

- **City Sewer/Public Works Departments—** Responsible for protecting city property and streets, the local storm drain system, sewage collection system and other public areas.
- **Public Sewer/Sanitation District—** Responsible for collecting, treating and disposing of wastewater.
- **County of Orange Health Care Agency—** Responsible for protecting public health by closing ocean/bay waters and may close food-service businesses if a spill poses a threat to public health.
- **Regional Water Quality Control Boards—** Responsible for protecting State waters.
- **Orange County Stormwater Program—** Responsible for preventing harmful pollutants from being discharged or washed by stormwater runoff into the municipal storm drain system, creeks, bays and the ocean.

You Could Be Liable for Not Protecting the Environment

Local and state agencies have legal jurisdiction and enforcement authority to ensure that sewage spills are remedied.

They may respond and assist with containment, relieving pipe blockages, and/or clean-up of the sewage spill, especially if the spill is flowing into storm drains or onto public property.

A property owner may be charged for costs incurred by these agencies responding to spills from private properties .

Report Sewage Spills!

City Sewer/Public Works Departments

Aliso Viejo	(949) 425-2500
Anaheim	(714) 765-6860
Brea	(714) 990-7691
Buena Park	(714) 562-3655
Costa Mesa	(949) 645-8400
Cypress	(714) 229-6760
Dana Point	(949) 248-3562
Fountain Valley	(714) 593-4600
Fullerton	(714) 738-6897
Garden Grove	(714) 741-5375
Huntington Beach	(714) 536-5921
Irvine	(949) 453-5300
Laguna Beach	(949) 497-0765
Laguna Hills	(949) 707-2650
Laguna Niguel	(949) 362-4337
Laguna Woods	(949) 639-0500
La Habra	(562) 905-9792
Lake Forest	(949) 461-3480
La Palma	(714) 690-3310
Los Alamitos	(562) 431-3538
Mission Viejo	(949) 831-2500
Newport Beach	(949) 644-3011
Orange	(714) 532-6480
Orange County	(714) 567-6363
Placentia	(714) 993-8245
Rancho Santa Margarita	(949) 635-1800
San Clemente	(949) 366-1553
San Juan Capistrano	(949) 443-6363
Santa Ana	(714) 647-3380
Seal Beach	(562) 431-2527
Stanton	(714) 379-9222
Tustin	(714) 962-2411
Villa Park	(714) 998-1500
Westminster	(714) 893-3553
Yorba Linda	(714) 961-7170

Public Sewer/Water Districts

Costa Mesa Sanitary District	(714) 393-4433/ (949) 645-8400
El Toro Water District	(949) 837-0660
Emerald Bay Service District	(949) 494-8571
Garden Grove Sanitary District	(714) 741-5375
Irvine Ranch Water District	(949) 453-5300
Los Alamitos/Rossmoor Sewer District	(562) 431-2223
Midway City Sanitary District (Westminster)	(714) 893-3553
Moulton Niguel Water District	(949) 831-2500
Orange County Sanitation District	(714) 962-2411
Santa Margarita Water District	(949) 459-6420
South Coast Water District	(949) 499-4555
South Orange County Wastewater Authority	(949) 234-5400
Sunset Beach Sanitary District	(562) 493-9932
Trabuco Canyon Sanitary District	(949) 858-0277
Yorba Linda Water District	(714) 777-3018

Other Agencies

Orange County Health Care Agency	(714) 433-6419
Office of Emergency Services	(800) 852-7550

Clean beaches and healthy creeks, rivers, bays and ocean are important to Orange County. However, many common activities can lead to water pollution if you're not careful. Home improvement projects and work sites must be maintained to ensure that building materials do not enter the street, gutter or storm drain. Unlike water in sanitary sewers (from sinks and toilets), water in storm drains is not treated before entering our waterways.

You would never dump building materials into the ocean, so don't let them enter the storm drains. Follow these tips to help prevent water pollution.

For more information, please call the **Orange County Stormwater Program** at **1-877-89-SPILL** (1-877-897-7455) or visit **www.ocwatersheds.com**

To report a spill, call the **Orange County 24-Hour Water Pollution Problem Reporting Hotline** at **1-877-89-SPILL** (1-877-897-7455).

For emergencies, dial 911.

The tips contained in this brochure provide useful information to help prevent water pollution while performing home improvement projects. If you have other suggestions, please contact your city's stormwater representatives or call the Orange County Stormwater Program.

Printed on Recycled Paper

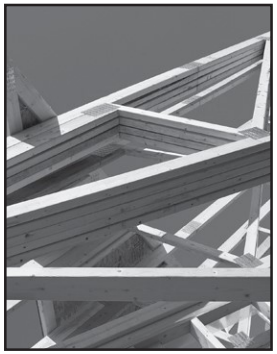
Help Prevent Ocean Pollution:

Tips for Home Improvement Projects

Tips for Home Improvement Projects

Home improvement projects can cause significant damage to the environment. Whether you hire a contractor or work on the house yourself, it is important to follow these simple tips while renovating, remodeling or improving your home:

General Construction



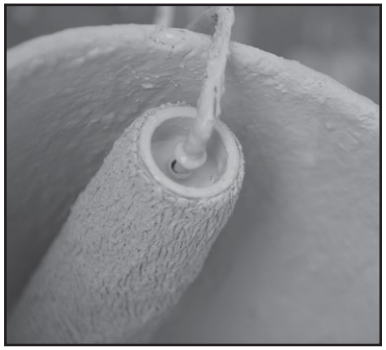
- Schedule projects for dry weather.
- Keep all construction debris away from the street, gutter and storm drain.
- Store materials under cover with temporary roofs or plastic sheets to eliminate or reduce the possibility that rainfall, runoff or wind will carry materials from the project site to the street, storm drain or adjacent properties.

Building Materials

- Never hose materials into a street, gutter or storm drain.
- Exposed piles of construction material should not be stored on the street or sidewalk.
- Minimize waste by ordering only the amount of materials needed to complete the job.
- Do not mix more fresh concrete than is needed for each project.
- Wash concrete mixers and equipment in a designated washout area where the water can flow into a containment area or onto dirt.
- Dispose of small amounts of dry excess materials in the trash. Powdery waste, such as dry concrete, must be properly contained within a box or bag prior to disposal. Call your local trash hauler for weight and size limits.

Paint

- Measure the room or object to be painted, then buy only the amount needed.
- Place the lid on firmly and store the paint can upside-down in a dry location away from the elements.
- Tools such as brushes, buckets and rags should never be washed where excess water can drain into the street, gutter or storm drain. All tools should be rinsed in a sink connected to the sanitary sewer.
- When disposing of paint, never put wet paint in the trash.
- Dispose of water-based paint by removing the lid and letting it dry in the can. Large amounts must be taken to a Household Hazardous Waste Collection Center (HHWCC).



- Oil-based paint is a household hazardous waste. All leftover paint should be taken to a HHWCC.
- For HHWCC locations and hours, call **(714) 834-6752** or visit **www.oclandfills.com**.

Erosion Control

- Schedule grading and excavation projects for dry weather.
- When temporarily removing soil, pile it in a contained, covered area where it cannot spill into the street, or obtain the required temporary encroachment or street closure permit and follow the conditions instructed by the permit.
- When permanently removing large quantities of soil, a disposal location must be found prior to excavation. Numerous businesses are available to handle disposal needs. For disposal options, visit **www.ciwmb.ca.gov/SWIS**.
- Prevent erosion by planting fast-growing annual and perennial grasses. They will shield and bind the soil.

Recycle

- Use a construction and demolition recycling company to recycle lumber, paper, cardboard, metals, masonry (bricks, concrete, etc.), carpet, plastic, pipes (plastic, metal and clay), drywall, rocks, dirt and green waste.
- For a listing of construction and demolition recycling locations in your area, visit **www.ciwmb.ca.gov/recycle.**

Spills

- Clean up spills immediately by using an absorbent material such as cat litter, then sweep it up and dispose of it in the trash.
- Immediately report spills that have entered the street, gutter or storm drain to the County's 24-Hour Water Pollution Problem Reporting Hotline at **(714) 567-6363** or visit **www.ocwatersheds.com** to fill out an incident reporting form.

PROJECT Pollution PREVENTION

Clean beaches and healthy creeks, rivers, bays and ocean are important to Orange County. However, many common activities can lead to water pollution if you're not careful. Fertilizers, pesticides and other chemicals that are left on yards or driveways can be blown or washed into storm drains that flow to the ocean. Overwatering lawns can also send materials into storm drains. Unlike water in sanitary sewers (from sinks and toilets), water in storm drains is not treated before entering our waterways.

You would never pour gardening products into the ocean, so don't let them enter the storm drains. Follow these easy tips to help prevent water pollution.

For more information, please call the **Orange County Stormwater Program** at **1-877-89-SPILL** (1-877-897-7455) or visit **www.ocwatersheds.com**

UCCE Master Gardener Hotline: (714) 708-1646

To report a spill, call the **Orange County 24-Hour Water Pollution Problem Reporting Hotline 1-877-89-SPILL** (1-877-897-7455).

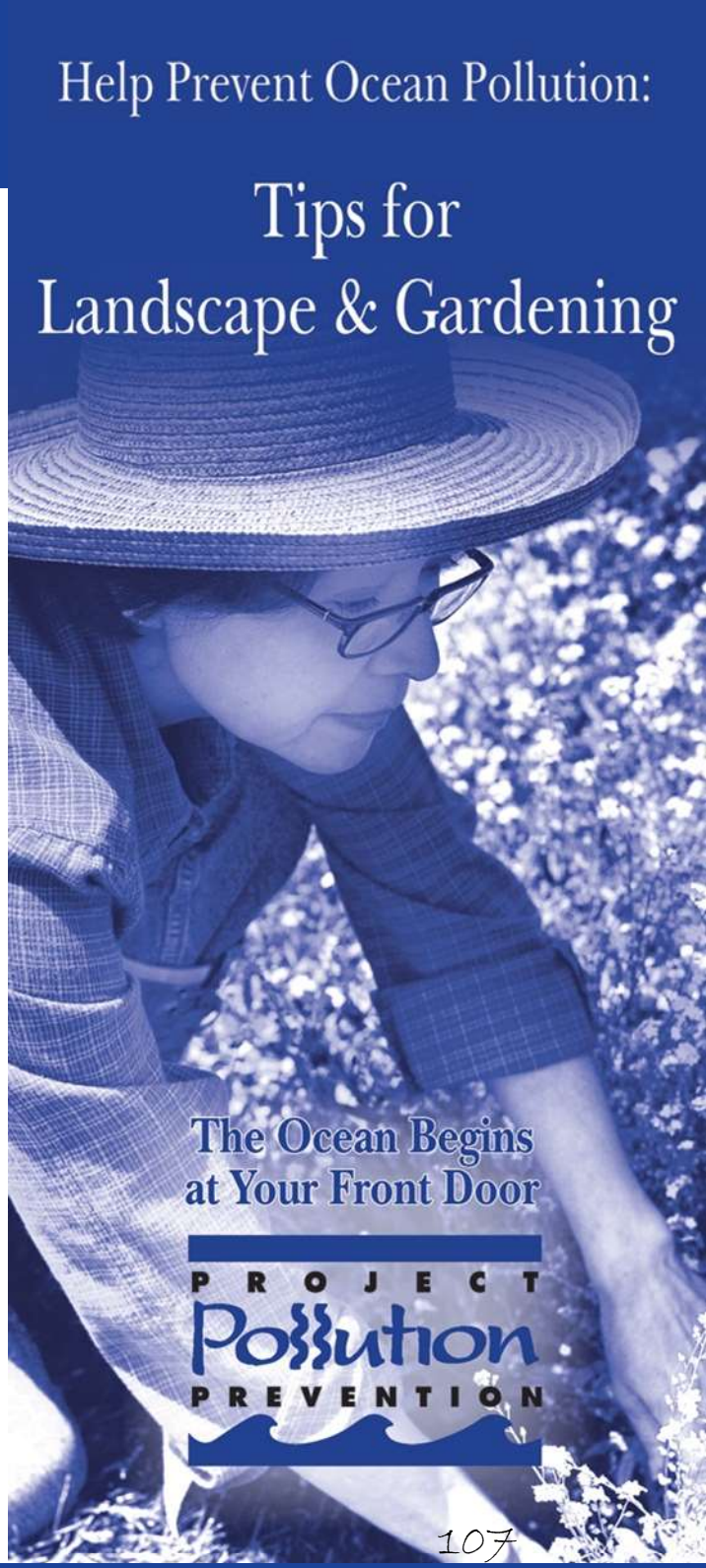
For emergencies, dial 911.

The tips contained in this brochure provide useful information to help prevent water pollution while landscaping or gardening. If you have other suggestions, please contact your city's stormwater representatives or call the Orange County Stormwater Program.

Printed on Recycled Paper

Help Prevent Ocean Pollution:

Tips for Landscape & Gardening



Tips for Landscape & Gardening

Never allow gardening products or polluted water to enter the street, gutter or storm drain.

General Landscaping Tips

- Protect stockpiles and materials from wind and rain by storing them under tarps or secured plastic sheeting.
- Prevent erosion of slopes by planting fast-growing, dense ground covering plants. These will shield and bind the soil.
- Plant native vegetation to reduce the amount of water, fertilizers, and pesticide applied to the landscape.

- Never apply pesticides or fertilizers when rain is predicted within the next 48 hours.

Garden & Lawn Maintenance

- Do not overwater. Use irrigation practices such as drip irrigation, soaker hoses or micro spray systems. Periodically inspect and fix leaks and misdirected sprinklers.
- Do not rake or blow leaves, clippings or pruning waste into the street, gutter or storm drain. Instead, dispose of green waste by composting, hauling it to a permitted landfill, or recycling it through your city's program.

- Use slow-release fertilizers to minimize leaching, and use organic fertilizers.
- Read labels and use only as directed. Do not over-apply pesticides or fertilizers. Apply to spots as needed, rather than blanketing an entire area.
- Store pesticides, fertilizers and other chemicals in a dry covered area to prevent exposure that may result in the deterioration of containers and packaging.

- Rinse empty pesticide containers and re-use rinse water as you would use the product. Do not dump rinse water down storm drains. Dispose of empty containers in the trash.
- When available, use non-toxic alternatives to traditional pesticides, and use pesticides specifically designed to control the pest you are targeting. For more information, visit **www.ipm.ucdavis.edu**.
- If fertilizer is spilled, sweep up the spill before irrigating. If the spill is liquid, apply an absorbent material such as cat litter, and then sweep it up and dispose of it in the trash.
- Take unwanted pesticides to a Household Hazardous Waste Collection Center to be recycled. Locations are provided below.

Household Hazardous Waste Collection Centers

Anaheim: 1071 N. Blue Gum St.
Huntington Beach: 17121 Nichols St.
Irvine: 6411 Oak Canyon
San Juan Capistrano: 32250 La Pata Ave.

For more information, call (714) 834-6752 or visit www.oclandfills.com

Clean beaches and healthy creeks, rivers, bays and ocean are important to Orange County. However, many common activities can lead to water pollution if you're not careful. Pet waste and pet care products can be washed into the storm drains that flow to the ocean. Unlike water in sanitary sewers (from sinks and toilets), water in storm drains is not treated before entering our waterways.

You would never put pet waste or pet care products into the ocean, so don't let them enter the storm drains. Follow these easy tips to help prevent water pollution.

For more information, please call the **Orange County Stormwater Program** at **1-877-89-SPILL** (1-877-897-7455) or visit **www.ocwatersheds.com**

To report a spill, call the **Orange County 24-Hour Water Pollution Problem Reporting Hotline 1-877-89-SPILL** (1-877-897-7455).

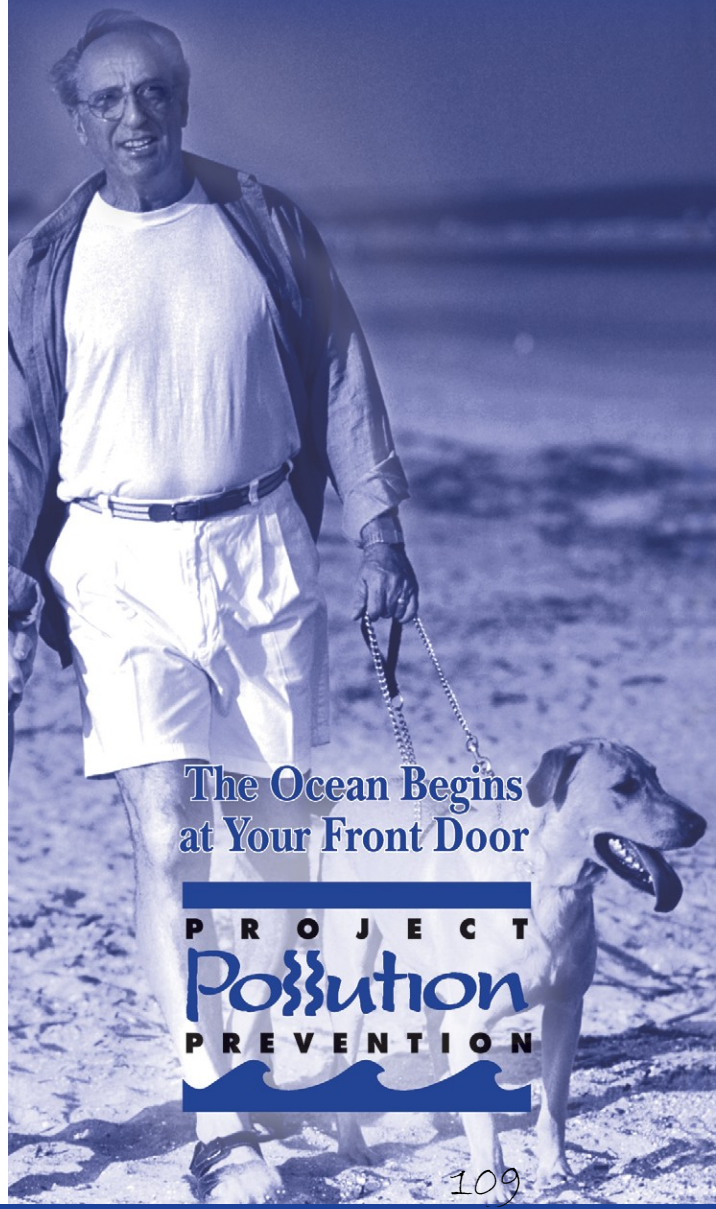
For emergencies, dial 911.

The tips contained in this brochure provide useful information to help prevent water pollution while caring for your pet. If you have other suggestions, please contact your city's stormwater representatives or call the Orange County Stormwater Program.

Printed on Recycled Paper

Help Prevent Ocean Pollution:

Tips for Pet Care



Tips for Pet Care

Never let any pet care products or washwater run off your yard and into the street, gutter or storm drain.

Washing Your Pets

Even biodegradable soaps and shampoos can be harmful to marine life and the environment.

- If possible, bathe your pets indoors using less-toxic shampoos or have your pet professionally groomed. Follow instructions on the products and clean up spills.

- If you bathe your pet outside, wash it on your lawn or another absorbent/permeable surface to keep the washwater from running into the street, gutter or storm drain.

Flea Control

- Consider using oral or topical flea control products.

- If you use flea control products such as shampoos, sprays or collars, make sure to dispose of any unused products at a Household Hazardous Waste Collection Center. For location information, call **(714) 834-6752**.

Why You Should Pick Up After Your Pet

It's the law! Every city has an ordinance requiring you to pick up after your pet. Besides being a nuisance, pet waste can lead to water pollution, even if you live inland. During rainfall, pet waste left outdoors can wash into storm drains. This waste flows directly into our waterways and the ocean where it can harm human health, marine life and the environment.

As it decomposes, pet waste demands a high level of oxygen from water. This decomposition can contribute to killing marine life by reducing the amount of dissolved oxygen available to them.

Have fun with your pets, but please be a responsible pet owner by taking care of them and the environment.

- Take a bag with you on walks to pick up after your pet.

- Dispose of the waste in the trash or in a toilet.

PROJECT Pollution PREVENTION

The Ocean Begins at Your Front Door

ow pollutants to enter the

Follow these simple steps to help reduce water pollution:

Household Activities

- Do not rinse spills with water Use dry cleanup methods such as applying cat litter or another absorbent material, sweep and dispose of in the trash Take items such as used or excess batteries, oven cleaners, automotive fluids, painting products and cathode ray tubes, like TVs and computer monitors, to a Household Hazardous Waste Collection Center (HHWCC)
- For a HHWCC near you call (714) 834-6752 or visit www oclandfills com
- Do not hose down your driveway, sidewalk or patio to the street, gutter or storm drain Sweep up debris and dispose of it in the trash

Automotive

- Take your vehicle to a commercial car wash whenever possible If you wash your vehicle at home, choose soaps, cleaners, or detergents labeled non-toxic, phosphate- free or biodegradable Vegetable and citrus-based products are typically safest for the environment
- Do not allow washwater from vehicle washing to drain into the street, gutter or storm drain Excess washwater should be disposed of in the sanitary sewer (through a sink or toilet) or onto an absorbent surface like your lawn
- Monitor your vehicles for leaks and place a pan under leaks Keep your vehicles well maintained to stop and prevent leaks
- Never pour oil or antifreeze in the street, gutter or storm drain Recycle these substances at a service station, a waste oil collection center or used oil recycling center For the nearest Used Oil Collection Center call 1-800-CLEANUP or visit www 1800cleanup org

Pool Maintenance

- Pool and spa water must be dechlorinated and free of excess acid, alkali or color to be allowed in the street, gutter or storm drain
- When it is not raining, drain dechlorinated pool and spa water directly into the sanitary sewer
- Some cities may have ordinances that do not allow pool water to be disposed of in the storm drain Check with your city

Landscape and Gardening

- Do not over-water Water your lawn and garden by hand to control the amount of water you use or set irrigation systems to reflect seasonal water needs If water flows off your yard onto your driveway or sidewalk, your system is over-watering Periodically inspect and fix leaks and misdirected sprinklers
- Do not rake or blow leaves, clippings or pruning waste into the street, gutter or storm drain Instead, dispose of waste by composting, hauling it to a permitted landfill, or as green waste through your city's recycling program
- Follow directions on pesticides and fertilizer, (measure, do not estimate amounts) and do not use if rain is predicted within 48 hours
- Take unwanted pesticides to a HHWCC to be recycled For locations and hours of HHWCC, call (714) 834-6752 or visit www oclandfills com

Trash

- Place trash and litter that cannot be recycled in securely covered trash cans
- Whenever possible, buy recycled products
- Remember: Reduce, Reuse, Recycle

Pet Care

- Always pick up after your pet Flush waste down the toilet or dispose of it in the trash Pet waste, if left outdoors, can wash into the street, gutter or storm drain
- If possible, bathe your pets indoors If you must bathe your pet outside, wash it on your lawn or another absorbent/permeable surface to keep the washwater from entering the street, gutter or storm drain
- Follow directions for use of pet care products and dispose of any unused products at a HHWCC

Common Pollutants

Home Maintenance

- Detergents, cleaners and solvents
- Oil and latex paint
- Swimming pool chemicals
- Outdoor trash and litter

Lawn and Garden

- Pet and animal waste
- Pesticides
- Clippings, leaves and soil
- Fertilizer

Automobile

- Oil and grease
- Radiator fluids and antifreeze
- Cleaning chemicals
- Brake pad dust

Even if you live miles from the Pacific Ocean, you may be unknowingly polluting it.

Dumping one quart of motor oil into a storm drain can contaminate 250,000 gallons of water.

Did You Know?

- Most people believe that the largest source of water pollution in urban areas comes from specific sources such as factories and sewage treatment plants In fact, the largest source of water pollution comes from city streets, neighborhoods, construction sites and parking lots This type of pollution is sometimes called “non-point source” pollution
- There are two types of non-point source pollution: stormwater and urban runoff pollution
- Stormwater runoff results from rainfall When rainstorms cause large volumes of water to rinse the urban landscape, picking up pollutants along the way
- Urban runoff can happen any time of the year when excessive water use from irrigation, vehicle washing and other sources carries trash, lawn clippings and other urban pollutants into storm drains

Where Does It Go?

- Anything we use outside homes, vehicles and businesses–like motor oil, paint, pesticides, fertilizers and cleaners–can be blown or washed into storm drains
- A little water from a garden hose or rain can also send materials into storm drains
- Storm drains are separate from our sanitary sewer systems; unlike water in sanitary sewers (from sinks or toilets), water in storm drains is not treated before entering our waterways

Sources of Non-Point Source Pollution

- Automotive leaks and spills
- Improper disposal of used oil and other engine fluids
- Metals found in vehicle exhaust, weathered paint, rust, metal plating and tires
- Pesticides and fertilizers from lawns, gardens and farms
- Improper disposal of cleaners, paint and paint removers
- Soil erosion and dust debris from landscape and construction activities
- Litter, lawn clippings, animal waste, and other organic matter
- Oil stains on parking lots and paved surfaces

The Effect on the Ocean

Non-point source pollution can have a serious impact on water quality in Orange County Pollutants from the storm drain system can harm marine life as well as coastal and wetland habitats They can also degrade recreation areas such as beaches, harbors and bays

Stormwater quality management programs have been developed throughout Orange County to educate and encourage the public to protect water quality, monitor runoff in the storm drain system, investigate illegal dumping and maintain storm drains

Support from Orange County residents and businesses is needed to improve water quality and reduce urban runoff pollution Proper use and disposal of materials will help stop pollution before it reaches the storm drain and the ocean

For More Information

California Environmental Protection Agency
www calepa ca gov

- **Air Resources Board**
  www arb ca gov
- **Department of Pesticide Regulation**
  www cdprca gov
- **Department of Toxic Substances Control**
  www dtsc ca gov
- **Integrated Waste Management Board**
  www ciwmb ca gov
- **Office of Environmental Health Hazard Assessment**
  www oenna ca gov
- **State Water Resources Control Board**
  www waterboards ca gov

Earth 911 - Community-Specific Environmental Information 1-800-cleanup or visit www 1800cleanup org

Health Care Agency's Ocean and Bay Water Closure and Posting Hotline
(714) 433-6400 or visit www ocbeachinfo com

Integrated Waste Management Dept. of Orange County (714) 834-6752 or visit www oclandfills com for information on household hazardous waste collection centers, recycling centers and solid waste collection

O.C. Agriculture Commissioner
(714) 447-7100 or visit www ocagcomm com

Stormwater Best Management Practice Handbook
Visit www cabmphandbooks com

UC Master Gardener Hotline
(714) 708-1646 or visit www uccemg com

The Orange County Stormwater Program has created and moderates an electronic mailing list to facilitate communications, take questions and exchange ideas among its users about issues and topics related to stormwater and urban runoff and the implementation of program elements To join the list, please send an email to ocstormwaterinfo-join@list ocwatersheds com

Orange County Stormwater Program

Aliso Viejo	(949)	425-2535
Anaheim Public Works Operations	(714)	765-6860
Brea Engineering	(714)	990-7666
Buena Park Public Works	(714)	562-3655
Costa Mesa Public Services	(714)	754-5323
Cypress Public Works	(714)	229-6740
Dana Point Public Works	(949)	248-3584
Fountain Valley Public Works	(714)	593-4441
Fullerton Engineering Dept	(714)	738-6853
Garden Grove Public Works	(714)	741-5956
Huntington Beach Public Works	(714)	536-5431
Irvine Public Works	(949)	724-6315
La Habra Public Services	(562)	905-9792
La Palma Public Works	(714)	690-3310
Laguna Beach Water Quality	(949)	497-0378
Laguna Niguel Public Works	(949)	707-2650
Laguna Woods Public Works	(949)	362-4337
Lake Forest Public Works	(949)	639-0500
Los Alamitos Community Dev	(562)	461-3480
Mission Viejo Public Works	(949)	431-3538
Newport Beach, Code & Water Quality Enforcement	(949)	470-3056
Orange Public Works	(714)	644-3215
Placentia Public Works	(714)	532-6480
Rancho Santa Margarita	(949)	993-8245
San Clemente Environmental Programs	(949)	635-1800
San Juan Capistrano Engineering	(949)	361-6143
Santa Ana Public Works	(714)	234-4413
Seal Beach Engineering	(714)	647-3380
Stanton Public Works	(562)	431-2527 x317
Tustin Public Works / Engineering	(714)	379-9222 x204
Villa Park Engineering	(714)	573-3150
Westminster Public Works / Engineering	(714)	998-1500
Yorba Linda Engineering	(714)	898-3311 x446
Orange County Stormwater Program	(714)	961-7138
Orange County 24-Hour Water Pollution Problem Reporting Hotline 1-877-89-SPILL (1-877-897-7455)	(877)	897-7455

On-line Water Pollution Problem Reporting Form
www ocwatersheds com

Printed on Recycled Paper

The Ocean Begins at Your Front Door

ATTACHMENT B

SOILS REPORT

R McCarthy Consulting, Inc

December 30, 2025
(Updated January 31, 2026)

38 Linda Isle Newport Beach, LLC
c/o Patrick Boyd
426 Via Lido Nord
Newport Beach, California 92663

File No: 9087-00
Report No: R2-9087

Subject: **Geotechnical Investigation**
Proposed Residential Construction
426 Via Lido Nord
Lido Isle
Newport Beach, California

APN: 423-191-13

INTRODUCTION

This report presents the results of our geotechnical investigation for the project site located at 426 Via Lido Nord in the City of Newport Beach, California, which was performed to determine various site and regional geologic and geotechnical conditions pertinent to the construction currently proposed for the subject property. Analyses for this investigation are based upon a description of the project as a two-story, slab-on-grade, single-family residence. The purpose of our review and investigation was to evaluate the subsurface conditions, determine the compatibility of the proposed development with respect to the site-specific geotechnical features, and provide preliminary geotechnical recommendations and design parameters for site precise grading and planned improvements. Specific information and recommendations for site development are provided herein.

The conclusions and recommendations of this report are considered preliminary due to the absence of specific foundation and grading plans, the preparation of which are partially dependent upon recommendations presented herein. This report is updated herein in keeping with the 2025 California Building Code (CBC), which is now implemented for new permits by the governing agencies starting on January 1, 2026.

Project Authorization

The work performed was based on our Proposal No: P1-9087, dated July 29, 2025, and subsequent authorization.

Scope of Investigation

The investigation included the following:

1. Review of collected geologic, geotechnical engineering and seismological reports and maps pertinent to the subject site. A reference list is included in Appendix A.

2. Subsurface exploration consisted of two (2) auger borings, to a maximum depth of 16.5 feet. The locations are shown on the Geotechnical Plot Plan, Figure 1.

3. Logging and sampling of the exploratory borings, including collection of soil samples for laboratory testing. The Logs of the exploration are included in Appendix B.

4. Laboratory testing of soil samples representative of subsurface conditions. The results are presented in Appendix C.

5. Geotechnical engineering and geologic analyses of collected data, including shallow liquefaction and seismic settlement analyses.

6. Preparation of this report containing our geotechnical recommendations for the design and construction in accordance with the current 2025 California Building Code (CBC) and for use by your design professionals and contractors.

Site Description

The subject property is located on the north side of Lido Isle along Lido Channel as shown on the Location Map, Figure 2. The property is located near the intersection of Via Ithaca and Via Lido Nord. The lot is bordered on the northwest and southeast by similar residential properties. Via Lido Nord fronts the house on the southwest side and Lido Channel is on the northeast side. The lot includes a sea wall near the northeast property line. There is a narrow planter area, sidewalk easement and beach area which extends northeasterly into the Lido Channel. There are boat moorings in the water but no dock or pier.

The Topographic Map prepared by RDM Surveying Inc. (Reference 1) was used as a base map for our Geotechnical Plot Plan, Figure 1. Based on the topographic plan, the lot area is approximately 30 feet by 90 feet, about 2,700 square feet. Exterior lot elevations vary from approximately 10.2 to 12.8 feet (NAVD88). The adjoining property to the northwest is roughly level with the subject site. The adjoining property to the southeast is level with the subject property at the front, but is approximately 1.5 to 2.5 feet higher along most of the boundary. The rear retaining/seawall is approximately 2 feet higher than the

The site presently contains a two-story residence with an attached garage. The structure is wood framed with stucco walls and is assumed to have a slab-on-grade foundation. According to Zillow.com the existing house was constructed circa 1955. The house is generally surrounded by hardscape. Vegetation is sparse with a few potted plants and limited planter areas. The back deck is raised slightly above the top of the seawall. The deck is tile-covered. Most of the hardscape around the house is surfaced with similar terra cotta tile or exposed bare concrete.

Site drainage is generally by surface sheet flow toward the street and sidewalk easement. Roof gutters were observed along the sides of the structure. They were observed to outlet onto the side yard hardscape.

The exterior improvements, including the hardscape, appear to be in generally good repair. Minor cracks were observed in the terracotta tiles and concrete; however, there were no damages noted that would suggest significant soil movement.

Proposed Development

We understand that the proposed development will consist of the demolition of the existing structure to build a new, slab-on-grade, two-story residence. Grading is expected to consist of reprocessing surface soils following removal of existing foundation elements, unsuitable fill, weathered soil, planter soils, and materials disturbed by demolition. Overexcavation and replacement of soil as densified engineered fill will be required to provide uniform conditions below the structure and for seismic considerations.

The existing rear retaining/ seawall may be reinforced as part of the planned construction. The seawall reinforcement may require new deadman anchors and/or caisson support.

Structural loads were not provided. We anticipate slab-on-grade floors, with wood-frame and light steel construction that is typical of the area and relatively light construction loads. We assume that maximum column loads will be less than 25 kip and wall loads of 2 kip/foot. Our office should be notified when the structural design loads for foundation elements are available to check these preliminary assumptions.

GEOTECHNICAL CONDITIONS

Geologic Setting

The property is situated within the southeasterly edge of the Los Angeles Basin on an island within Newport Bay. This area is generally underlain by recent marine deposits consisting predominantly of silty sands, sands and occasional silt layers. The Pacific Ocean is about 3,500 feet southwest of the site. Historical topographic maps and accounts indicate that the Lido Isle areas were formerly low-lying, intertidal sand bars and island areas of the natural bay. Dredge fill was placed in some areas to raise the site grades. The site is thought to be resting on a regionally extensive, relatively flat bench scoured by wave activity into bedrock. The bedrock lies below successive layers of beach and bay deposits.

Earth Materials

The site near-surface soils consist of artificial fill (Af) underlain by estuarine, beach and marine deposits (Qm/Qe) consisting of brown to gray sand and silty sand with shell fragments. The sand deposits were loose to very dense. The sands encountered in the borings were saturated below depths of 5.5 and 7.5 feet (approximate elevation +3.5 and +4.5 feet). Laboratory testing indicates that the on-site near surface sands are non-plastic and non-expansive.

Geologic Hazard

The potential geologic hazards at the site are primarily from liquefaction, flooding and shaking due to movement of nearby or distant faults during earthquake events. These are discussed in greater detail below.

Groundwater

Groundwater was encountered at depths of 5.5- and 7.5-feet in our exploratory borings. On-site groundwater conditions may additionally be affected by tidal conditions and fluctuate periodically in conjunction with the ingoing and outgoing tides.

Water Infiltration

From a geotechnical standpoint, on-site water infiltration above the usual tidal water elevations is allowable. Setback from the foundations is recommended for large volume runoff. Simple trench drains and permeable pavement surfaces may be allowable with appropriate setback with agency and geotechnical review and approvals. Proposed water infiltration features should be reviewed and approved by the Geotechnical Consultant.

Surficial Runoff

Proposed development should incorporate engineering and landscape drainage designed to transmit surface and subsurface flow to the street and/or storm drain system via non-erosive pathways.

Faulting/Seismic Considerations

The major concern relating to geologic faults is ground shaking that affects many properties over a wide area. Direct hazards from faulting are essentially due to surface rupture along fault lines that could occur during an earthquake. Therefore, geologists have mapped fault locations and established criteria for determining the risks of potential surface rupture based on the likelihood of renewed movement on faults that could be located under a site.

Based on criteria established by the California Division of Mines and Geology (CDMG), now referred to as the California Geological Survey (CGS), faults are generally categorized as active, potentially active or inactive (Jennings, 1994). The basic principle of faulting concern is that existing faults could move again, and that faults which have moved more recently are the most likely faults to move again and affect us. As such, faults have been divided into categories based on their age of last movement. Although the likelihood of an earthquake or movement to occur on a given fault significantly decreases with inactivity over geologic time, the potential for such events to occur on any fault cannot be eliminated within the current level of understanding.

By definition, faults with no evidence of surface displacement within the last 1.6 million years are considered inactive and generally pose no concern for earthquakes due to renewed movement. Potentially active faults are those with the surface displacement within the last 1.6

million years. Further refinements of potentially active faults are sometimes described based on the age of the last known movement such as late Quaternary (last 700,000 years) implying a greater potential for renewed movement. In fact, most potentially active faults have little likelihood of moving within the time frame of construction life, but the degree of understanding of fault age and activity is sometimes not well understood due to absence of geologic data or surface information, so geologists have acknowledged this doubt by using the term "potentially active." A few faults that were once thought to be potentially active, have later been found to be active based on new findings and mapping. Active faults are those with a surface displacement within the last 11,000 years and, therefore, most likely to move again. The State of California has, additionally, mapped known areas of active faulting as designated Alquist-Priolo "Special Studies Zones," which requires special investigations for fault rupture to limit construction over active faults.

Based on our review of various published and unpublished reports, maps and documents, the site is located approximately 1 kilometer northeast of the Newport-Inglewood Fault Zone. This fault consists of a series of parallel and en echelon, northwest-trending faults and folds extending from the southern edge of the Santa Monica Mountains to Huntington Beach and then offshore along Newport Beach. This fault zone has historically experienced moderate to high seismic activity. No active or potentially active faults are known to project through the site. In addition, the Newport-Inglewood Fault is not sufficiently well-defined in the area of the subject site to be placed within the boundaries of an "earthquake fault zone," as defined by the State of California in the Alquist-Priolo Earthquake Fault Zoning Act.

A potential seismic source near the site is the San Joaquin Hills Blind Thrust Fault (SJHBT), which is approximately 2 to 8 kilometers beneath the site at its closest point, based on the reported fault structure. The SJHBT is a postulated fault that is suspected to be responsible for uplift of the San Joaquin Hills. This fault is a blind thrust fault that does not intercept the ground surface and, therefore, presents no known potential for ground rupture at the property.

The potential for surface rupture at the site is considered to be low and the property is not located within a special study zone for fault rupture. The site will experience shaking during earthquake events on nearby or distant faults. Site improvements should take into consideration the seismic design parameters outlined herein.

Site Classification for Seismic Design

Seismic design parameters are provided in a later section of this report for use by the Structural Engineer. The soil underlying the subject site has been classified in accordance with Chapter 21 of ASCE 7, per Section 1613 of the 2025 CBC.

The results of our on-site field investigation, as well as nearby investigations by us and others, indicate that the site is directly underlain by loose to very dense fill, beach and marine deposits overlying a bedrock shelf. In the absence of site-specific shear wave velocity determinations, and in consideration of the absence of significant soft soils within the materials encountered at the site, we recommend using a characterization of this property as a Class D, "Default" Site Classification.

Secondary Seismic Hazards

Review of the Seismic Hazard Zones Map (CDMG, 1998) for the Newport Beach Quadrangle, 1997/1998 and the City of Newport Beach Seismic Safety Element (2008) indicates the site is located within a zone of required investigation for earthquake-induced liquefaction.

Liquefaction Considerations

The area along Newport Harbor and its channels is in a Zone of Required Investigation for liquefaction on the State of California Seismic Hazard Zones Map, Newport Beach Quadrangle. Requirements for investigation are included in several documents including the City of Newport Beach Building Code Policy (Revised 7/3/2014), the CBC, Section 1803.5, and the *Guidelines for Evaluating and Mitigating Seismic Hazards in California,* Special Publication 117A.

The factors known to promote liquefaction potential include high groundwater level, degree of saturation, relative density, grain size, soil type, depth below the surface, and the magnitude and distance to the causative fault or seismic source. The subject site is in an area of high liquefaction potential (Morton and others, 1976; Toppozada and others, 1988).

In order to address liquefaction potential in accordance with the City of Newport Beach Building Code Policy for single-family residential structures, a liquefaction analysis was performed to evaluate seismic settlement. Results are included in Appendix F.

Based on the results of our analysis, some layers of the soils below the site, in the locations tested, below the water table and to depths of about 16.5 feet, have safety factors of less than 1.0, assuming groundwater is present to those levels at the time of a design magnitude earthquake. This indicates risk of liquefaction during a seismic event strong enough to induce liquefaction. The site was evaluated for the existing conditions. Layers exhibiting safety factors of 1.3 and less based on Boulanger and Idriss (2010-16) were evaluated for potential seismic settlement. Seismically-induced settlements were estimated by the procedures developed by Boulanger and Idriss (2010-16) and Tokimatsu and Seed (1987). Additionally, seismically-induced settlements were estimated by the procedures developed by Yi (2022) for dry sand within materials above the assumed water table elevation. The GeoAdvanced GeoSuite Software Version 4.2.0.6, developed by Fred Yi, was utilized for the analyses (Appendix F). The resultant potential total seismic settlement within the upper 10 feet of soil was determined to be less than 1-inch within Boring B-1. Additional seismic settlement on the order of 3-inches should be assumed for depths between 10 and 50 feet during a design magnitude earthquake event. It is our opinion that this settlement potential may be mitigated by the recommended remedial grading and foundation system for support of the proposed structure.

Lateral Impacts of Liquefaction

Lateral spread is a hazard that sometimes occurs when there is sloping ground and weak lateral restraint for soil undergoing liquefaction. Spread of soil into the bay would primarily affect areas outside of the development limits since these areas are partially submerged with tidal fluctuations. The soil beyond the seawall is flat for approximately 5 feet and then slopes into the bay at gradients flatter than 5:1 (H:V). Lateral impacts of liquefaction at the subject site such as

lateral spreading and lateral loads on the new house foundations are expected to be negligible due to the presence of the existing seawall along the back yard to confine the soil. This assumes that the seawall is stable with regard to such effects. Assessment of the integrity of the seawall is beyond the scope of our investigation. Given these assumptions, the house foundations are not expected to be impacted by seismically induced lateral spread due to the seawall and setback of the structure from the bay. The risk of lateral spread is therefore considered to be low.

Flooding

Seismically-induced flooding normally includes flooding from inland waters, which is not likely, flooding of low-lying areas during storm surges and high tides, and tsunami run-up from tidal wave energy. Tidal fluctuations and storm surge effects are relatively well-known phenomena on Lido Isle and we anticipate that potential for these periodic events will be addressed as part of the civil engineering design. No specific tsunami analysis has been undertaken in this investigation. However, the "Evaluation of Tsunami Risk to Southern California Coastal Cities" (EERI, 2003) provides discussion of the impacts of locally seismic and/or landslide generated tsunamis. The typical maximum run-up heights were estimated from 1 to 2 meters in the Newport Beach area. Because of limited compiled data sources for ocean floor depth measurements, wave field interactions and irregular coastal configurations, actual maximum run-up heights could range from 2 to 4 meters, or more. The City of Newport Beach, in their Seismic Safety Element, describes Newport Beach as somewhat protected from most distantly generated tsunamis by the Channel Islands and Point Arguello, except for those generated in the Aleutian Islands, those off the coast of Chile, and possibly off the coast of Central America. The publication also states that there may generally be adequate warning given within the time frames from such distant events. The warnings would allow for public safety but would not necessarily protect property improvements.

Other Secondary Seismic Hazards

Review of the Seismic Hazard Zones Map (CDMG, 1998) for the Newport Beach Quadrangle, 1997/1998 and the City of Newport Beach Seismic Safety Element (2008) indicates the site is not located within a zone of required investigation for earthquake-induced landsliding. This finding is in keeping with the results of our study. Landsliding is not a known hazard at the site due to the absence of significant sloping ground.

Other secondary seismic hazards to the site include deep rupture and shallow ground cracking. With the absence of active faulting on-site, the potential for deep fault rupture is low. The potential for shallow ground cracking to occur during an earthquake is a possibility at any site but does not pose a significant hazard to site development.

CONCLUSIONS

1. Proposed development is considered feasible from a geotechnical viewpoint provided the recommendations of this report are followed during design, construction, and maintenance of the subject property. Proposed development should not adversely affect, or be adversely affected by, adjacent properties, providing appropriate engineering design, construction methods and care are utilized during construction.

2. Within the areas explored, artificial fill and marine deposits were encountered. On-site materials generally consisted of sands and silty sands.

3. Seismically-induced liquefaction has not historically been observed in the vicinity of the site; however, the liquefaction of soils in the general area is considered to be a possibility due to the presence of groundwater, underlying soil conditions and proximity of nearby earthquake faults.

4. Our calculations indicate that potential seismic settlement due to both liquefaction and consolidation of dry sand layers within the upper 10 feet is less than 1-inch. Some additional seismic settlement is possible below this depth. Potential settlement should be considered in the design of the foundation and slab.

5. Groundwater has been encountered at depths of 5.5 and 7.5 feet (approximate elevations +4.5 and +3.5 feet) below existing site grades and is not expected to be a significant factor during construction for the planned house. The seawall rehabilitation may be impacted by groundwater conditions.

6. The near surface materials that were encountered were determined to have a very low expansion potential.

7. The existing near surface soils may be disturbed by excavation or demolition. Removal, scarification and recompaction to provide a uniform compacted fill cap within the upper 3 feet is recommended.

8. Grading and construction methods will need to consider lateral and subjacent support of adjacent structures and property improvements.

9. Although the probability of fault rupture across the property is low, ground shaking may be strong during a major earthquake.

10. Tsunami potential for this site is considered moderate; although historically such effects have been subdued in southern California due to topographic protection from distant seismic events and the rarity of significant offshore earthquakes.

11. Adverse surface discharge onto or off the site is not anticipated provided proper civil engineering design and post-construction site grading are implemented.

12. The proposed structure should be supported by a mat slab foundation supported entirely within recompacted fill materials.

RECOMMENDATIONS

Site Preparation and Grading

1. General

Site grading should be performed in accordance with the requirements of the City of Newport Beach, the recommendations of this report, and the Standard Grading Guidelines of Appendix D. All excavations should be supervised and approved in writing by a representative of this firm.

2. Demolition and Clearing

Deleterious materials, including those from the demolition of the existing concrete, vegetation, organic matter and trash, should be removed and disposed of off-site. Subsurface elements of demolished structures should be completely removed, including any trench backfills, abandoned foundations, cisterns, utility lines, etc.

3. Subgrade Preparation

Excavations should be made to remove any soils disturbed by demolition, unsuitable fill and surficial materials where encountered within the planned building areas. A minimum removal depth of 3 feet is recommended to remove the existing upper sand deposits and provide uniform bearing conditions below foundation and slab areas. Removals should be followed by 6-inches of scarification and recompaction. These remedial excavations should be made within the planned building footprint and the influence zone of footings. Deeper excavations may be necessary to remove unsuitable materials, if encountered.

Soil cement may be considered to stabilize and strengthen the compacted fill. Existing walls and retaining walls may be suitable locally for excavation support; however, structures must be supported laterally during grading operations. Although not anticipated at this time, lateral support may sometimes be achieved by the use of bracing, slot cutting, or trenching where wall footings are shallow relative to excavation depths.

Dewatering is not expected to be necessary at planned removal depths but this may be somewhat dependent on tide levels and depths of foundations.

Excavations should be replaced with compacted engineered fill. The horizontal limits of overexcavation should be outlined by the Geotechnical Engineer based on grading and foundation plans when these are available for review; however, the overexcavation need not extend beyond the planned building footprint.

Removals below significant hardscape improvements such as driveway aprons, patios, and sidewalks should be sufficient to provide a 1.5-feet-thick compacted fill zone. Removal depths of 18-inches are expected to be adequate in exterior areas; however,

boundary conditions for removals under exterior improvements may be better addressed subsequent to demolition when equipment can expose the site materials for evaluation and when improvement limits are identified on the plan.

Light track propelled mini-loader type equipment should be used for the grading. Rubber tire equipment shall not be used until a stable subgrade is achieved.

The depths of overexcavation should be reviewed by the Geotechnical Engineer or Geologist during the actual construction. Any surface or subsurface obstructions, or questionable material encountered during grading, should be brought immediately to the attention of the Geotechnical Engineer for recommendations.

4. Fill Soils

The on-site soils are anticipated to be suitable for use as compacted fill; however, cement treatment using Portland Cement may be considered within the graded building pad to provide additional soil strength, aid in the foundation construction and reduce collapse potential of vertical footing cuts. Fill soils should be free of debris, organic matter, cobbles and concrete fragments greater than 6-inches in diameter.

Soils imported to the site for use as fill below foundation and slab areas should be predominantly granular, non-expansive, non-plastic and approved by the Geotechnical Engineer prior to importing.

5. Shrinkage

Shrinkage losses are expected to be about 2 percent overall. This does not include clearing losses from demolition that could result in volume reductions for available fill soils. Addition of cement will also influence the grading volumes. These are preliminary estimates and actual field results may vary.

6. Expansive Soils

On-site surface soils encountered during our investigation were determined to be non-plastic, non-expansive sands.

7. Compaction Standard

The on-site soils are anticipated to be generally suitable for use as compacted fill. Highly organic and oversize materials must be removed prior to compaction. Fill materials should be placed at above optimum moisture content and compacted under the observation and testing of the Soil Engineer. The recommended minimum density for compacted material is 90 percent of the maximum density as determined by ASTM D1557.

8. Temporary Construction Slopes

Temporary slopes exposing on-site materials should be cut in accordance with Cal/OSHA Regulations. It is anticipated that the exposed on-site earth materials may be classified as Type C soil, and temporary cuts of 1:1 (horizontal:vertical) or flatter may be appropriate to heights of 3 feet or less; however, the material exposed in temporary excavations should be evaluated by the Contractor during construction. Dry or running sands may require flatter laybacks. Temporary construction slopes should not be left exposed overnight unless approved in writing by the Geotechnical Consultant.

Excavations should proceed in a manner so as not to remove lateral or bearing support of adjacent properties or structures. Along property lines, cuts of 1:1 or flatter are typically prudent and are required by the City of Newport Beach. Care will be needed along the property lines. The soils exposed in the excavation cuts should be observed by the Geotechnical Consultant during excavation.

The safety and stability of temporary construction slopes and cuts is deferred to the General Contractor, who should implement the safety practices as defined in Section 1541, Subchapter 4, of Cal/OSHA T8 Regulations (2006). The Geotechnical Consultant makes no warranties as to the stability of temporary cuts. Soil conditions may vary locally and the Contractor(s) should be prepared to remedy local instability if necessary. Contract Documents should be written in a manner that places the Contractor in the position of responsibility for the stability of all temporary excavations. Stability of excavations is also time dependent.

If unsupported property line cuts are made, the Contractor should monitor the performance of adjacent structures and improvements during construction. If movement or distress is noted, appropriate remedial measures should be immediately implemented.

9. Adjacent Property Assessments and Monitoring

The following measures may be considered in order to reduce the potential risks of damage, and perceived damage, to adjoining improvements:

- Visual inspections and walk-throughs of each of the adjacent properties should be arranged in order to document pre-existing conditions and damages.
- Measurements of all existing damages observed, including crack lengths, widths and precise locations should be made.
- Photographs should be taken to accompany written notes that refer to damages or even lack of damages. Video may also be considered; however, videos that attempt to show these types of damages are often lacking in detail.
- Floor level surveys of nearby structures may be considered especially if pre-existing damage is evident.
- Vibrations from construction equipment may be monitored with portable seismographs during excavation.
- Surveys to monitor lateral and vertical position of adjacent improvements and shoring elements is recommended.

- It is recommended that the Project Geologist be on-site during excavation in order to evaluate conditions as the project advances.
- These activities and monitoring are generally outside of our normal scope of services. Our office may be contacted to coordinate various monitoring activities with your general contractor, if needed.

Construction activities, particularly excavation equipment, produce vibrations that can be felt by occupants of adjoining properties. People will often be annoyed by the noise and vibration caused by construction activities, which prompts them to personally perform detailed inspections of their property for damage. Pre-existing damage, that previously went unnoticed, can be unfairly attributed to current construction activities, particularly when pre-construction property inspections are not performed. At that point it may be difficult to determine what caused the damage, especially damages such as wall separations, cracks in drywall, stucco and masonry. Other common problems that may be scrutinized can include uneven doors, sticking windows, tile cracks, leaning patio posts, fences, gates, etc. Implementation of measures such as those listed above can help avoid conflicts by monitoring construction activities that may be problematic as well as provide valuable data to defend against unwarranted claims.

Foundation Design

1. General

It is anticipated that foundation elements for the planned residential structure will bear in compacted fill and will utilize a mat slab foundation.

The near surface materials are expected to exhibit a very low expansion potential. The following recommendations are based on the geotechnical data available and are subject to revision based on conditions actually encountered in the field.

Foundations and slabs should be designed for the intended use and loading by the Structural Engineer. Our recommendations are considered to be generally consistent with the standards of practice. They are based on both analytical methods and empirical methods derived from experience with similar geotechnical conditions. These recommendations are considered the minimum necessary for the likely soil conditions and are not intended to supersede the design of the Structural Engineer or criteria of governing agencies.

2. Bearing Capacity for Foundations

A mat slab foundation system may be utilized to support the proposed structure. The purpose of the mat slab system is to help mitigate potential earthquake effects, static and seismic settlement and to provide an appropriate foundation in the local marine environment. The allowable bearing capacity for a mat slab type system founded in re-compacted fill should not exceed 1,800 pounds per square foot. Per the 2025 CBC, Section 1806.1, this value may be increased by one-third where used with the alternative allowable stress design load combinations of the CBC, Section 1605.2 that

include wind or earthquake loads. The allowable stress design load combinations specified in the 2025 CBC Section 1605 should be applied by the structural engineer as applicable. A minimum slab thickness of 14-inches is recommended. A thickened edge deeper than the planned capillary break should also be constructed at the slab perimeter. For design of a mat foundation system, a modulus of subgrade reaction of 100 pounds per cubic inch may be considered. The subgrade is expected to consist of sand. Actual thickness, depths and widths of the foundation and slab system should be governed by the 2025 CBC requirements and the structural engineering design.

3. Settlement

Static

Static settlement due to potential consolidation of was calculated based on consolidation testing. Static settlement is anticipated to be on the order of 0.5-inch total and 0.25-inch differential between adjacent similarly loaded columns (approximately 30 feet assumed horizontal distance), provided that the recommended site grading is implemented first and that the bearing capacity values given above are not exceeded. Sand layer settlement due to static loads is expected to be negligible utilizing a mat slab with an allowable bearing pressure of 1,800 psf. These estimates should be confirmed when structural engineering plans are prepared and foundation load conditions are determined.

Dynamic

Potential dry sand and liquefaction-induced settlement based on current estimates of peak ground accelerations during an earthquake was calculated to be about 0.39-inch total within the upper 10 feet (see Appendix F). Additional seismic settlement is possible below that depth. In the absence of site-specific information for materials at depths of 10 to 50 feet below the foundation level it is conservatively assumed that an additional 3-inches of seismic settlement potential may occur during a design earthquake event. The underlying stratigraphy is fairly uniform below the planned development area; therefore, differential seismic settlement can be estimated as approximately one-half of the total estimated settlement, or on the order of 1.7-inches across a span of about 30 feet (Martin and Lew, 1999). Seismically-induced settlements were estimated by using the procedure of Boulanger and Idriss (2010-16) and Tokimatsu and Seed (1987, Reference 33). These methods are based on empirical data from past seismic events that have been studied and are, therefore, approximate.

4. Lateral Resistance

Lateral loads for foundation and slab design may be resisted by passive pressure forces developed in front of footings and by lateral sliding resistance acting at the base of foundation elements. An allowable lateral bearing pressure of 175 pounds per square foot per foot of depth equivalent fluid pressure may be assumed to a maximum of 1,800 psf.. Resistance to sliding can be calculated using a coefficient of friction of 0.35.

These values may be used in combination per CBC 2025 Section 1806.1, which states that the values for lateral load resistance may be increased by one-third where used with the alternative allowable stress design load combinations of CBC, Section 1605.2 that include wind or earthquake loads. The allowable stress design load combinations specified in the 2025 CBC Section 1605 should be applied by the structural engineer as applicable.

5. Footing Reinforcement

Two No. 5 bars should be placed at the top and two at the bottom of continuous footings or grade beams in order to resist potential movement due to various factors such as subsurface imperfections and seismic shaking. Dowelled connections between the slab and footings should be provided and should consist of No. 4 bars at 24-inches on center maximum spacing. Quantity and placement of reinforcing steel should be determined by the Structural Engineer.

Slab-On-Grade Construction

Slabs should be designed in accordance with the 2025 CBC and the City of Newport Beach Building Code requirements. Static and dynamic settlements are the governing concerns with regard to slab design and soil expansion is not an issue on this site. Engineered, rigid slabs should be at least 14-inches thick (actual). Slab design and reinforcement should be determined by the Structural Engineer; however, the minimum slab reinforcement should consist of No. 4 bars at 12-inches on-center in each direction placed at the top and bottom of the slab (or approved equivalent). These recommendations assume that the subsurface soils have first been densified as recommended above.

Slabs should be underlain by 4-inches of open-graded gravel. Slab underlayment is deferred to the Project Architect; however, in accordance with the American Concrete Institute, we suggest that slabs be underlain by a 15-mil thick vapor retarder/barrier (Stego Wrap or equivalent) placed over the gravel in accordance with the requirements of ASTM E1745 and E1643. Slab subgrade soils should be well moistened prior to placement of the vapor retarder. All subgrade materials should be geotechnically approved prior to placing the gravel for the slab underlayment. The above recommendations are provided for vapor transmission considerations but do not provide for waterproofing of the slab in the local marine environment. If flooding is a concern, additional underlayment measures may be appropriate and should be addressed by the Civil Engineer and/or Project Architect.

Seismic Design

Based on the geotechnical data and site parameters, the following table is provided based on ASCE/SEI 7-22 using the ASCE Hazard Tool to satisfy the 2025 CBC design criteria. A site-specific Ground-Motion Hazard Analysis (GMHA) was not performed for the site.

Site and Seismic Design Criteria
For 2025 CBC

Design Parameters	**Recommended Values per ASCE/SEI 7-16**
Site Class	Default
Site Longitude (degrees)	-117.9185018 W
Site Latitude (degrees)	33.6142216 N
Ss Mapped Spectral Response Acceleration at 0.2s Period for Site Class BC (g)	1.57
S1 Mapped Spectral Response Acceleration at 1s Period for Site Class BC (g)	0.51
SMs Adjusted Spectral Response Acceleration at 0.2s (g)	1.73
SM1 Adjusted Spectral Response Acceleration at 1s Period (g)	1.21
SDs Design Spectral Response Acceleration at 0.2s Period (g)	1.15
SD1 Design Spectral Response Acceleration at 1s Period (g)	0.8
Seismic Design Category	D

A Site-Specific Ground Motion Hazard Analysis (GMHA) to determine shear wave velocity may be beneficial for this project as part of the structural design. A Site-Specific GMHA can be performed at an additional cost if requested.

Supporting documentation is also included in a previous section of this report, Site Classification for Seismic Design, and in Appendix E.

Structural Design of Retaining Walls

1. Lateral Loads

Active pressure forces acting on backfilled retaining walls which support level ground may be computed based on an equivalent fluid pressure of 40 pounds per cubic foot. Restrained retaining walls should add an additional 6H pounds per cubic foot for at-rest loading, where H is the retained height of the soil.

Other topographic and structural surcharges should be addressed by the Structural Engineer. Some minor wall rotation should be anticipated for walls that are free to rotate at the top and considered in design of walls and adjacent improvements.

2. Earthquake Loads on Retaining Walls

The Structural Engineer should determine if there are retaining walls at the site within their purview that will be subject to design lateral loads due to earthquake events. Section 1803.5.12 of the 2025 CBC states that the geotechnical investigation shall include the determination of dynamic seismic lateral earth pressures on foundation walls and retaining walls supporting more than 6 feet (1.83 m) of backfill height due to design earthquake ground motions. No walls are planned to this height and, therefore, the site development is not subject to the design requirements of Section 1803.5.12.

A seismic load of 30 pounds per cubic foot (inverted triangle) may be assumed, if needed, for the existing sea wall retaining structure.

3. Foundation Bearing Values for Walls

Footings for retaining walls should be embedded in compacted fill at a minimum depth of 18-inches below the lowest adjacent grade. Reinforcement should consist of two No. 5 bars top and bottom, as a minimum.

4. Wall Backfill

The on-site soils are suitable for use as retaining wall backfill. Imported backfill, if needed, should consist of select, non-expansive soil or gravel. Gravel may consist of pea gravel or crushed rock. Where space for compaction equipment is adequate, on-site or imported granular, non-expansive sand materials may be compacted into place in thin lifts per the compaction requirements provided herein. Imported pea gravel or crushed rock should be placed in lifts and tamped or vibrated into place. The lift thickness for gravel is dependent on the type of material and method of compaction. Gravel lifts of 18- to 24-inches or less are recommended. The Geotechnical Engineer should observe the backfill placement of soil or gravel behind each wall following approval of wall backdrains. Gravel wall backfill material should be covered with a suitable filter fabric such as Mirafi 140N and capped with on-site soil or concrete.

5. Subdrains

An approved exterior foundation subdrain system should be used to achieve control of seepage forces behind retaining walls. The details of such subdrain systems are deferred to the Wall Designer, Builder or Waterproofing Consultant. The subdrain is not a substitute for waterproofing. Water in subdrain systems should be collected and delivered to suitable disposal locations or facilities. Additional recommendations may be provided when plans are available.

6. Dampproofing and Waterproofing

Waterproofing should be installed in accordance with the architectural specifications or those of a waterproofing consultant. The criteria in Section 1805 of the 2025 CBC should be followed as a minimum.

Seawall

The following preliminary values may be used in the design if seawall rehabilitation is planned:

1.	Active soils pressure above ground water level	= 40 pcf
2.	Active soils pressure below ground water level	= 85 pcf
3.	Active soils pressure submerged	= 22 pcf
4.	Passive soils pressure submerged	= 175 pcf (FS=1.5 included)
5.	Passive soils pressure wet	= 220 pcf (FS=1.5 included)
6.	Soil seismic earth pressure	= 30 pcf
7.	Friction coefficient	= 0.35
8.	Phi angle	= 30 deg

Seawall structural plans should be provided to us for review prior to construction.

Hardscape Design and Construction

Hardscape improvements may utilize conventional foundations in compacted fill. Cracking and offsets at joints are possible; however, occurrence may be minimized by appropriate drainage and the use of thickened edge beams to limit moisture transfer below slabs.

Concrete flatwork should be divided into as nearly square panels as possible. Joints should be provided at maximum 8 feet intervals to give articulation to the concrete panels (shorter spacing is recommended if needed to square the panels).

Landscaping and planters adjacent to concrete flatwork should be designed in such a manner as to direct drainage away from concrete areas to approved outlets. Planters located adjacent to principal foundation elements should be sealed and drained; this is especially important if they are near retaining wall backfills.

Flatwork elements should be a minimum 4-inches thick (actual) and reinforced with No. 4 bars at 18-inches on center both ways. Subgrade soils should be well moistened prior to placement of concrete.

Concrete Construction Components in Contact with Soil

The results of our laboratory testing indicate a low soluble sulfate content; however, due to shallow sea water levels in the area, a moderate exposure to sulfate can be expected for concrete placed in contact with on-site soils. Various components within the concrete may be subject to corrosion over time when exposed to soluble sulfates. To help mitigate corrosion, sulfate resistant cement should be used in concrete that may be in contact with on-site soils or ground source water. Attention to maximum water-cement ratio and the minimum compressive strength may also help mitigate deterioration of concrete components. The results of the sulfate test of the on-site soil are provided in Appendix C.

Type V cement is, therefore, recommended with a maximum water-cement ratio of 0.45 percent. The minimum concrete compressive strength should be at least 4,500 pounds per square inch.

It is recommended that a Concrete Expert be retained to design an appropriate concrete mix to address the structural requirements. In lieu of retaining a Concrete Expert, it is recommended that the 2025 CBC, Section 1904 and 1905, be utilized, which refers to ACI 318. Testing should be performed during grading when fill materials are identified to confirm the sulfate concentration.

Metal Construction Components in Contact with Soil

Metal rebar encased in concrete, iron pipes, copper pipes, elevator shafts, air conditioner units, etc., that are in contact with soil or water that permeates the soil should be protected from corrosion that may result from salts contained in the soil. Recommendations to mitigate damage due to corrosive soils, if needed, should be provided by a qualified Corrosion Specialist.

Foundation Excavations

All excavations should be observed by the Geotechnical Engineer prior to placement of forms, reinforcement, and concrete for verification of conformance with the intention of these recommendations. All excavations should be trimmed neat, level, and square. All loose or sloughed material should be removed prior to the placement of concrete. Materials from footing excavations should not be spread in slab subgrade areas unless compacted per the requirements for fill soils as stated herein.

Finished Grade and Surface Drainage

Finished grades should be designed and constructed so that no water ponds in the vicinity of footings. Drainage design in accordance with the 2019 CBC, Section 1804.4, is recommended or per local City requirements. Roof gutters should be provided and outflow directed away from the house in a non-erosive manner as specified by the Project Civil Engineer or Landscape

Architect. Surface and subsurface water should be directed away from building areas. Proper interception and disposal of on-site surface discharge is presumed to be a matter of civil engineering or landscape architectural design.

Infiltration

Simple trench drains and permeable pavement surfaces may be allowable with appropriate agency and geotechnical review and approvals. Proposed water infiltration features should be reviewed and approved by the Geotechnical Consultant. It is our opinion that typical gravel trenches and permeable hardscape for periodic water infiltration into the on-site soil is acceptable from a geologic and geotechnical standpoint. The water levels are expected to be at a depth of approximately 7.5 feet below the building pad grade based on our borings. The water table is ultimately tidal in nature and introduction of the infiltration water is not expected to raise the water level or create new perched water zones due to lateral permeability. These types of infiltration will, therefore, not be expected to create any geohazards due to modification of groundwater levels. Planned infiltration design and BMP devices should be reviewed by our office prior to construction.

Foundation and Grading Plan Review

The undersigned should review final foundation and grading plans and specifications prior to their submission to the building official for issuance of permits. The review is to be performed only for the limited purpose of checking for conformance with design concepts and the information provided herein. Review shall not include evaluation of the accuracy or completeness of details, such as quantities, dimensions, weights or gauges, fabrication processes, construction means or methods, coordination of the work with other trades or construction safety precautions, all of which are the sole responsibility of the Contractor. The R McCarthy Consulting, Inc. (RMC) review shall be conducted with reasonable promptness while allowing sufficient time in our judgment to permit adequate review. Review of a specific item shall not indicate that RMC has reviewed the entire system of which the item is a component. RMC shall not be responsible for any deviation from the Contract Documents not brought to our attention in writing by the Contractor. RMC shall not be required to review partial submissions or those for which submissions of correlated items have not been received.

Utility Trench Backfill

Utility trench backfill should be placed in accordance with Appendix D, Standard Grading Guidelines. It is the Owner's and Contractor's responsibility to inform Subcontractors of these requirements and to notify RMC when backfill placement is to begin. It has been our experience that trench backfill requirements are rigorously enforced by the local agencies.

Fill materials should be placed at near optimum moisture content and compacted under the observation and testing of the Soil Engineer. The minimum dry density required for compacted backfill material is 90 percent of the maximum dry density as determined by ASTM D1557.

If utility contractors indicate that it is undesirable to use compaction equipment in close proximity to a buried conduit, we recommend the utilization of lightweight mechanical

equipment and/or shading of the conduit with clean granular material, which could be thoroughly jetted in place above the conduit prior to initiating mechanical compaction procedures. Bedding materials should have a Sand Equivalent not less than 30. Other methods of utility trench compaction may also be appropriate as approved by the Geotechnical Engineer at the time of construction.

The walls of temporary construction trenches are expected to be stable when cut into soils, with only minor sloughing, provided the total depth does not exceed about 3 feet. Shoring of excavation walls or flattening of slopes may be required, if greater depths are necessary. All work associated with trench shoring must conform to the State of California Safety Code. The depth of the site utilities is unknown at this time. Excavation exceeding 3 feet below site grades should be reviewed by the Geotechnical Consultant to provide recommendations prior to digging.

Trenches should be located so as not to impair the bearing capacity or cause settlement under foundations. As a guide, trenches subparallel to foundations should be clear of a 45-degree plane extending outward and downward from the edge of the foundations.

Pre-Grade Meeting

A pre-job conference should be held with representative of the Owner, Contractor, Architect, Civil Engineer, Geotechnical Engineer, and Building Official prior to commencement of construction to clarify any questions relating to the intent of these recommendations or additional recommendations.

Observation and Testing

Geotechnical observation and testing during construction are required to verify proper removal of unsuitable materials, check that foundation excavations are clean and founded in competent material, to test for proper moisture content and proper degree of compaction of fill, to test and observe placement of wall and trench backfill materials, and to confirm design assumptions. It is noted that the CBC requires continuous verification and testing during placement of fill, pile driving, and pier/caisson drilling.

An RMC representative shall observe the site at intervals appropriate to the phase of construction, as notified by the Contractor, in order to observe the work completed by the Contractor. Such visits and observation are not intended to be an exhaustive check or a detailed inspection of the Contractor's work but rather are to allow RMC as an experienced professional, to become generally familiar with the work in progress and to determine, in general, if the grading and construction is in accordance with the recommendations of this report.

RMC shall not supervise, direct, or control the Contractor's work. RMC shall have no responsibility for the construction means, methods, techniques, sequences, or procedures selected by the Contractor, the Contractor's safety precautions or programs in connection with the work. These rights and responsibilities are solely those of the Contractor. RMC shall not be responsible for any acts or omission of any entity performing any portion of the work, including the Contractor, Subcontractor, or any agents or employees of any of them. RMC does not

guarantee the performance of any other parties on the project site, including the Contractor, and shall not be responsible for the Contractor's failure to perform its work in accordance with the Construction Documents or any applicable law, Codes, rules or regulations.

Construction-phase observations are beyond the scope of this investigation and budget and are conducted on a time and material basis. The responsibility for timely notification of the start of construction and ongoing geotechnically-involved phases of construction is that of the Owner and his Contractor. We request at least 48 hours' notice when such services are required.

List of Guidelines

The Geotechnical Consultant should be notified to observe and test the following activities during grading and construction:

- to observe proper removal of unsuitable materials;
- to observe the bottom of removals for all excavations for the building pad grading, trenching, exterior site improvements, etc.;
- To observe side cut excavations for retaining walls, trenches, etc.;
- to test for proper moisture content and proper degree of compaction of fill;
- during CIDH Pile/Caisson drilling, if used for shoring and/or deepened foundation support;
- To check that foundation excavations are clean and founded in competent material;
- to check that foundation excavations are clean and founded in competent material;
- to check the slab subgrade materials prior to placing the gravel, vapor barrier and concrete;
- to check retaining wall subdrain installation when the pipe is exposed and before it is covered by the gravel and fabric; and again after the gravel and fabric have been placed;
- to test and observe placement of wall backfill materials;
- to test and observe placement of trench backfill materials;
- to test and observe patio, pool deck and sidewalk subgrade materials;
- to observe any other fills or backfills that may be constructed at the site.

It is noted that this list should be used as a guideline. Additional observations and testing may be required per local agency and code requirements at the time of the actual construction. The 2025 CBC requires continuous verification and testing during placement of fill materials and during pile/caisson drilling.

LIMITATIONS

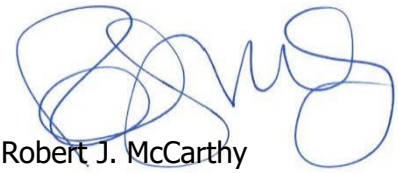
This investigation has been conducted in accordance with, and limited to, generally accepted practice in the engineering geologic and soils engineering field, and in accordance with services provided by geotechnical consultants practicing in the same or similar locality under the same or similar circumstances. No further warranty, expressed or implied, is made as to the conclusions and professional advice included in this report. Conclusions and recommendations presented are based on subsurface conditions encountered and are not meant to imply that we have control over the natural site conditions. The samples taken and used for testing, the

observations made and the field testing performed are believed representative of the general project area; however, soil and geologic conditions can vary significantly between tested or observed locations.

Site geotechnical conditions may change with time due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur as a result of the broadening of knowledge, new legislation, or agency requirements. The recommendations presented herein are, therefore, arbitrarily set as valid for one year from the report date. The recommendations are also specific to the current proposed development. Changes in proposed land use or development may require supplemental investigation or recommendations. Also, independent use of this report without appropriate geotechnical consultation is not approved or recommended.

Thank you for this opportunity to be of service. If you have any questions, please contact this office.

Respectfully submitted,
R MCCARTHY CONSULTING, INC.



Robert J. McCarthy
Principal Engineer, G.E. 2490
Registration Expires 3-31-26
Date Signed: 02/02/2026

Accompanying Illustrations and Appendices

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Figure 2 – Location Map
Figure 3 - Regional Geology
Figure 4 - Fault Location Map
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Figure 6 - Newport Beach Hazards Map
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Appendix E - Seismicity
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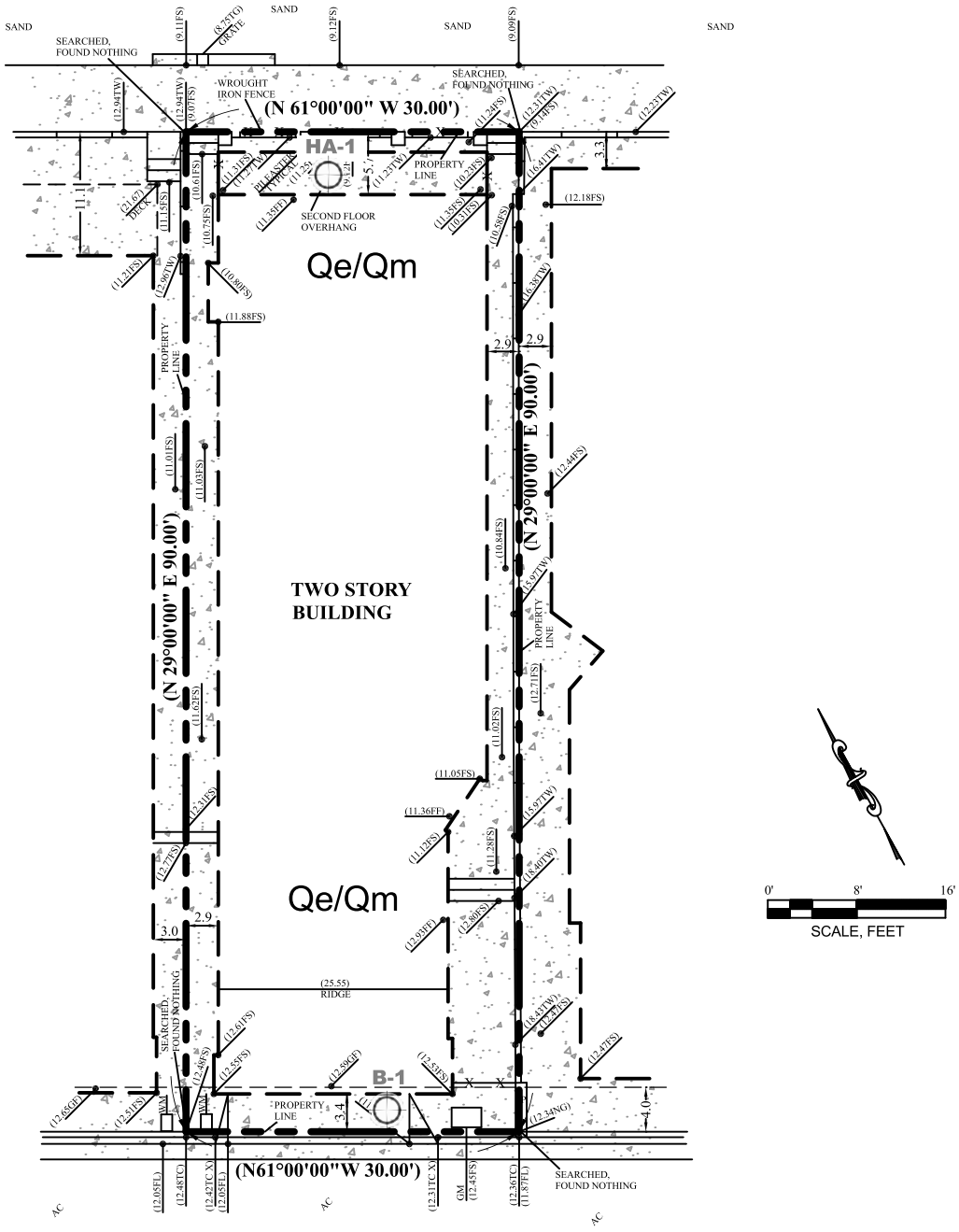
Data Interpretations



VIA LIDO NORD

EXPLANATION

B-1 Estimated Location of Exploratory Boring

Qe/Qm Beach/ Marine Deposits

Base Map Source: Topographic Survey for 426 Via Lido Nord, Newport Beach, CA, by RDM Surveying, Inc., Dated 8/22/2025

Figure 1 - Geotechnical Plot Plan

426 Via Lido Nord
Newport Beach, CA
File No: 9087-00 Report No: R1-9087
December 2025

R McCarthy Consulting, Inc

NBGIS NEWPORT BEACH

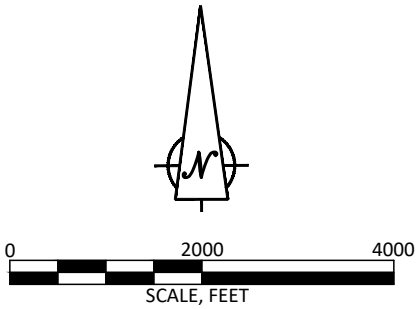
CITY OF NEWPORT BEACH CALIFORNIA

0 417 833

Feet

Disclaimer:
Every reasonable effort has been made to assure the accuracy of the data provided, however, The City of Newport Beach and its employees and agents disclaim any and all responsibility from or relating to any results obtained in its use.

FILE NO: 9087-00 REPORT NO: R1-9087 DECEMBER 2025 FIGURE 2 - LOCATION MAP



Base map sources:

Portion of: PRELIMINARY DIGITAL GEOLOGICAL MAP OF THE 30' X 60' SANTA ANA QUADRANGLE, SOUTHERN CALIFORNIA, VERSION 2.0
U.S. Geological Survey, Open File Report 99-172
Compiled by Douglas M. Morton, Kelly R. Bovard, and Rachel M. Alvarez 2004

Figure 3 - Regional Geology Map

426 Via Lido Nord
Newport Beach, CA
File No: 9087-00 Report No: R1-9087
December 2025

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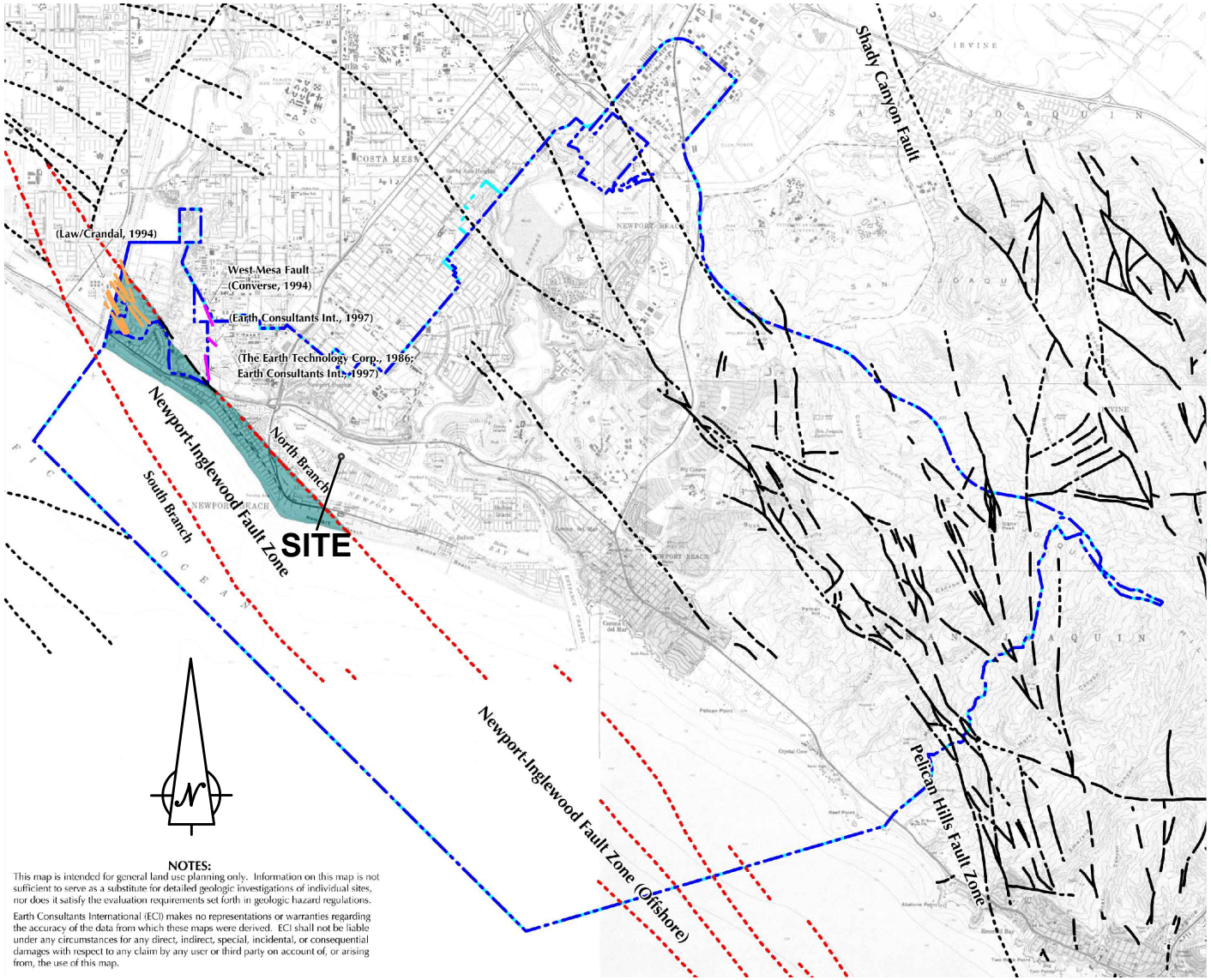

EXPLANATION

Fault: solid where location known, long dashed where approximate, dotted where inferred.

- Major fault traces as mapped by Morton, 1999. Presumed active, except where shown otherwise based on geological studies.
- Southward projection of active fault traces based on a subsurface study on the west bank of the Santa Ana River.
- Secondary fault traces that have been shown to have moved at least once during the Holocene.
- Faults that are not active.
- Fault Hazard Management Zone for real-estate disclosure purposes (refer to text).
- Newport Beach City Boundary
- Sphere of Influence

Base Map: USGS Topographic Map from Sure!MAPS RASTER

Source: Earth Technology Corp., 1986; Converse,1994; Law/Crandall, 1994; Earth Consultants Int., 1997; Morton, 1999.

Earth Consultants International

CITY OF NEWPORT BEACH CALIFORNIA

0 1 2 3 4 5 6
SCALE, MILES

0 1 2 3 4 5 6 7 8 9 10
SCALE, KILOMETERS

Figure 4 - Fault Location Map

426 Via Lido Nord
Newport Beach, CA
File No: 9087-00 Report No: R1-9087
December 2025

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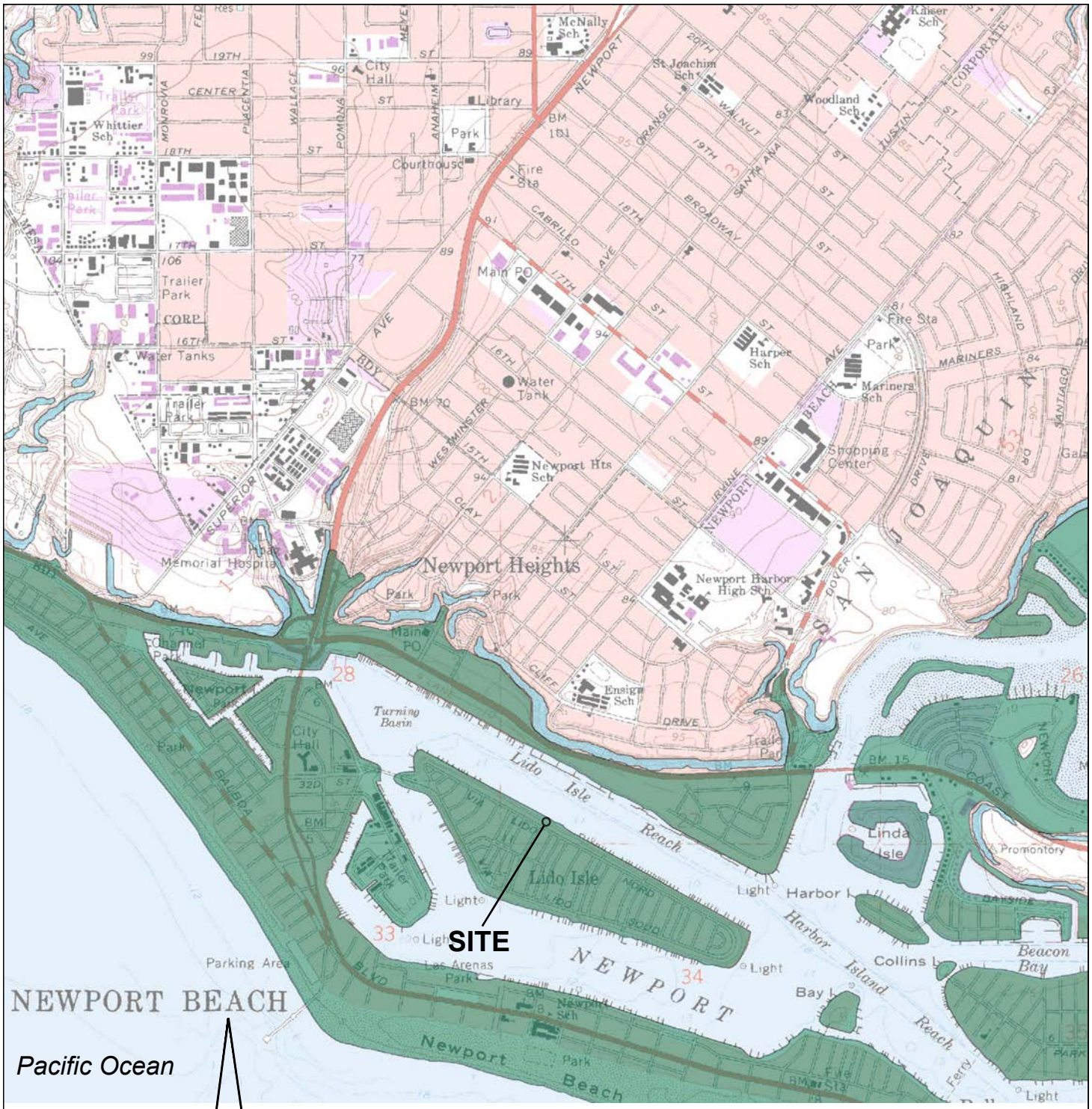


Base map source: California Department of Conservation, Division of Mines and Geology,

Newport Beach Quadrangle
Seismic Hazard Zone Report for the Newport Beach 7.5-Minute Quadrangle, Orange County, California. California Geological Survey, Seismic Hazard Zone Report 03.
Liquefaction Released: April 17, 1997
Landslide Released: April 15, 1998

EXPLANATION

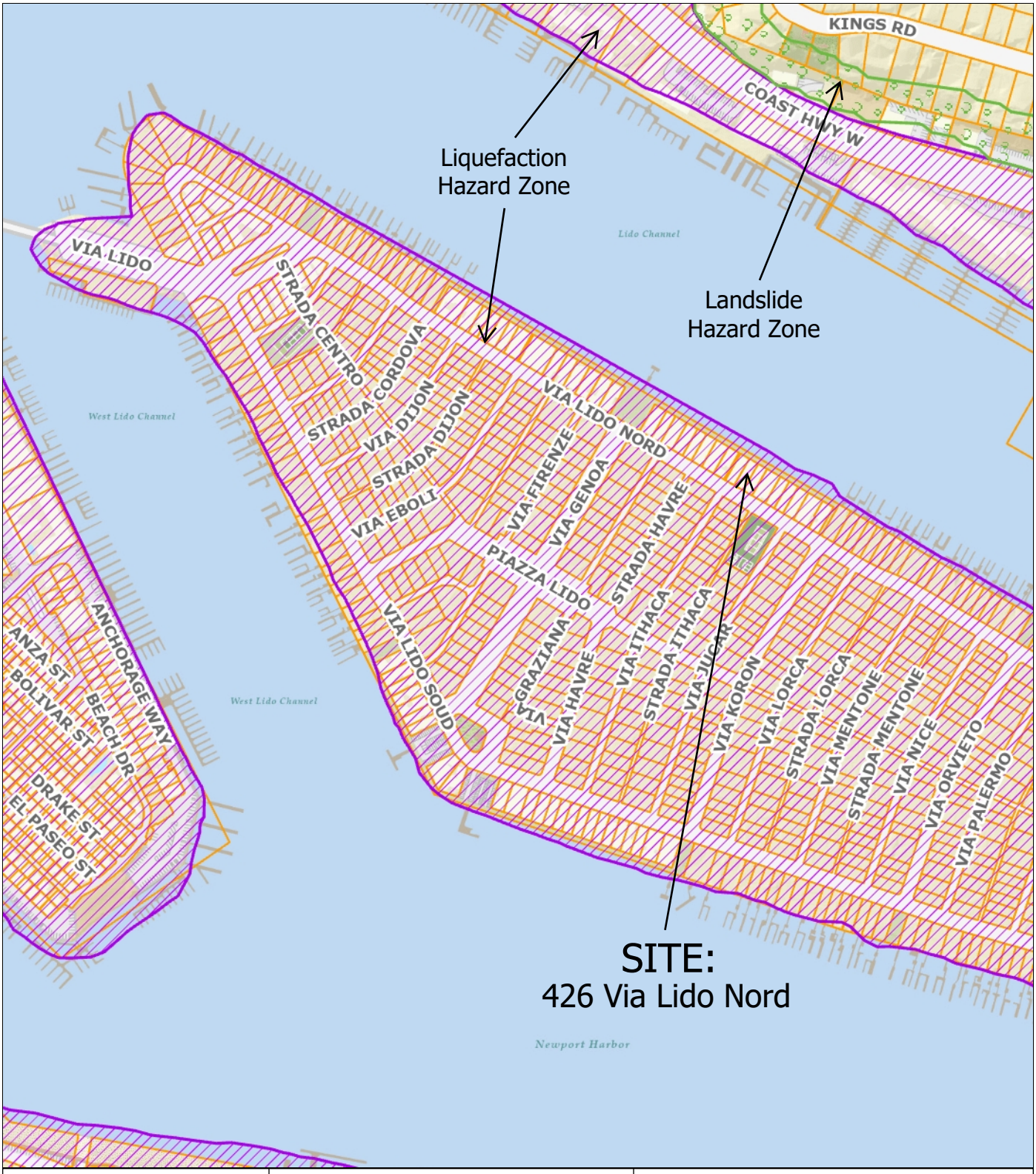
EARTHQUAKE-INDUCED LANDSLIDES
Areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

LIQUEFACTION
Areas where historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

Figure 5 - Geologic Hazards Map

426 Via Lido Nord
Newport Beach, CA
File No: 9087-00 Report No: R1-9087
December 2025

R McCarthy Consulting, Inc



NBGIS NEWPORT BEACH

CITY OF NEWPORT BEACH CALIFORNIA

0 417 833

Feet

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FILE NO: 9087-00 REPORT NO: R1-9087 DECEMBER 2025 FIGURE 6 - HAZARDS MAP

NBGIS NEWPORT BEACH

CITY OF NEWPORT BEACH CALIFORNIA

0 40 80

Feet

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APPENDIX A

REFERENCES

APPENDIX A
REFERENCES

(426 Via Lido Nord)

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APPENDIX B

FIELD EXPLORATION

APPENDIX B
FIELD EXPLORATION PROGRAM

(426 Via Lido Nord)

Subsurface conditions were explored by excavating two exploratory borings at the site on November 18, 2025. Boring B-1 was excavated at the site with Pacific Drilling Company to a depth of 16.5 feet using a limited access 5.5 inch diameter flight auger drill rig. Boring HA-1 was drilled to a depth of 6.5 feet using a 4-inch diameter hand auger. The approximate locations of the borings are shown on the Geotechnical Plot Plan, Figure 1. The Boring Logs are included as Figures B-2 and B-3. A Key to the Logs is included as Figure B-1. Excavation of the borings was observed by our Field Geologist who logged the subsurface materials and obtained samples for identification and laboratory testing.

The exploratory excavations were located in the field by pacing from known landmarks. The locations as shown are, therefore, within the accuracy of such measurements. Elevations were determined by interpolation between points on the Topographic Survey prepared by RDM Surveying, Inc., Reference 1.

Sample Program

1. Drill Rig - Standard Penetration Tests (SPT) were performed to determine the in-place relative densities and consistencies of the underlying soils. The test involves the number of blows it takes for a 140-pound hammer falling 30-inches to drive a 2-inch (outer diameter)/ 1 3/8-inch inner diameter) split spoon sampler (ASTM D1586). These blow counts are given in blows per 6-inch driving interval for a sample with a length of 18-inches. SPT samples were immediately sealed in individual plastic bags.

2. Hand Augers - Relatively undisturbed drive samples were obtained by utilizing a sampler lined on the inside with brass rings, each 1-inch long and 2.5-inches outside diameter. The sample was typically driven for a total length of about 6-inches. The number of blows per 6-inches of driving were recorded on the boring logs. The slide hammer used to drive the samples has a weight of 10.3 pounds with effort. The slide hammer drop height was 18-inches. The hammer weight alone was not sufficient to drive the sample; additional energy was applied by the drilling operator by thrust force on the hammer from the topmost position.* The brass rings were removed from the sampler and transferred into a plastic tube and sealed.

3. Bulk samples representative of subsurface conditions were collected from the excavations and sealed in plastic bags.

APPENDIX B
FIELD EXPLORATION PROGRAM

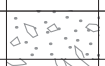
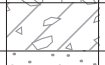
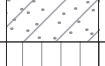
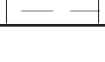
(426 Via Lido Nord)

Summary

The soils were classified based on field observations and laboratory tests. The classification is in accordance with ASTM D2487 (the Unified Soil Classification System). Collected samples were transported to the laboratory for testing. Groundwater was observed at depths of approximately 5.5 and 7.5 feet below the ground surface (approx. elev. 3.5 and 4.5 ft).

* Note: Based on correlations on similar sites the blow counts with the slide hammer are generally about 1/3 of the blow count energy of the SPT test; and 1/2 of the blow count of the Cal Sampler. Sample blow counts can be used as an indicator of soil density. Blow counts may be affected by various additional factors including soil type, moisture content and/or presence of rocks at the sample level.

UNIFIED SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			GROUP SYMBOLS	SYMBOL	TYPICAL NAMES
COARSE-GRAINED SOILS: more than 50% retained on No. 200 sieve (based on the material passing the 3-inch [75mm] sieve)	GRAVELS: 50% or more of coarse fraction retained on No. 4 sieve	CLEAN GRAVELS	GW		Well graded gravels and gravel-sand mixtures, little or no fines
			GP		Poorly graded gravels and gravel-sand mixtures, little or no fines
		GRAVEL WITH FINES	GM		Silty gravels, gravel-sand-silt mixtures
			GC		Clayey gravels, gravel-sand-clay mixtures
	SANDS: more than 50% of coarse fraction passes No. 4 sieve	CLEAN SANDS	SW		Well graded sands and gravelly sand, little or no fines
			SP		Poorly graded sands and gravelly sands, little or no fines
		SANDS WITH FINES	SM		Silty sands, sand-silt mixtures
			SC		Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS: 50% or more passes No. 200 sieve*	SILTS AND CLAYS: Liquid Limit 50% or less		ML		Inorganic silts, very fine sands, rock flour, silty or clayey fine sands
			CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
			OL		Organic silts and organic silty clays of low plasticity
	SILTS AND CLAYS: Liquid Limit greater than 50%		MH		Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic clays
			CH		Inorganic clays of high plasticity, fat clays
			OH		Organic clays of medium to high plasticity
HIGHLY ORGANIC SOILS			PT		Peat, muck, and other highly organic soils

KEY TO LOGS

NOTATION	SAMPLER TYPE
C	Core barrel
CA	California split-barrel sampler with 2.5-inch outside diameter and a 1.93-inch inside diameter
D&M	Dames & Moore piston sampler using 2.5-inch outside diameter, thin-walled tube
SPT	Standard Penetration Test (SPT) split-barrel sampler with a 2.0-inch outside diameter and a 1.5-inch inside diameter
ST	Shelby Tube (3.0-inch outside diameter, thin-walled tube) advanced with hydraulic pressure
NR	No Recovery

SYMBOL	DESCRIPTION
	Modified California sampler (3" O.D.)
	Modified California sampler, no recovery
	Standard Penetration Test, ASTM D 1586
	Standard Penetration Test, no recovery
	Thin-walled tube sample using Shelby Tube
	Disaggregated (bulk) sample
	Water level

Cohesive (Silts and Clays)		
Consistency	SPT/Blow Counts	UCC (TSF)
Very soft	0 - 2	0 - 0.25
Soft	3 - 4	0.25 - 0.50
Firm/medium stiff	5 - 8	0.50 - 1.00
Stiff	9 -16	1.00 - 2.00
Very stiff	17 - 32	2.00 - 4.00
Hard	32+	>4.00
UCC = Unconfined Compressive Strength TSF = Tons per Square Foot		

Non-Cohesive (Sands and Gravels)		
Relative Density	SPT/Blow Counts	Phi (φ)
Very loose	0 - 4	18 - 28
Loose	5 - 10	28 - 30
Medium dense	11 - 30	30 - 36
Dense	31 - 50	36 - 41
Very dense	50+	41
Phi (φ) = Angle of Internal Friction		

Figure B-1:
Unified Soil Classification Chart / Key To Logs

R McCarthy Consulting, Inc

LOGGED BY: GM
ELEVATION: 12' +/-
EQUIPMENT: Mini-Mole, 5.5" Diam. Flight Auger

BORING NO: B-1

SITE LOCATION:
426 Via Lido Nord, Newport Beach

NOTES: East Side of Garage Apron

DATE: 11/18/2025

Depth (ft)	USCS	Symbol	Lithologic Description	Sample Type	Blow Count	Moisture (%)	Dry Density	Depth (ft)
			Upper 5": Concrete					
0	SP		MARINE DEPOSITS (Qm):					0
1			At 5"-24": Pale brown SAND, moist, shell fragments					1
2								2
3			SPT1 at 3': Pale brown SAND, moist, loose, shell fragments					3
4					2/3/5	3.7		4
5			SPT2 at 5': Pale brown SAND, moist, loose, shell fragments					5
6					1/3/4	8.8		6
7			SPT3 at 7': Pale to medium brown SAND, wet, medium dense, shell fragments					7
8					2/5/8	20		8
9			SPT4 at 9': Medium grey SAND, wet, very dense, mica					9
10					10/20/35	22.3		10
11			SPT5 at 11': Medium grey SAND, wet, dense, micaceous					11
12					9/20/26	24.7		12
13			SPT6 at 13': Dark grey SAND, wet, dense, micaceous, shell fragments					13
14					10/21/25	25.3		14
15			SPT7 at 15': Dark grey SAND, wet, very dense, micaceous, shell fragments					15
16					7/20/35	24		16
17			Test Hole B-1 Terminated at 16.5 ft					17
18			Groundwater at 7.5 ft					18
19			Caving at water level upon auger removal					19
20								20
21								21
22								22
23								23
24								24
25								25
26								26
27								27
28								28
29								29
30								30

RSLog / Wider Blow count column / r-mccarthy-consulting-inc / admin / November 26, 2025 03:46 PM

R McCarthy Consulting, Inc

LOG OF BORING

PROJECT NO.: 9087-00
Figure B-2

LOGGED BY: GM
ELEVATION: 9' +/-
EQUIPMENT: 4" Diam. Hand Auger

BORING NO: HA-1

SITE LOCATION:
426 Via Lido Nord, Newport Beach

NOTES: Middle of Rear Planter

DATE: 11/18/2025

Depth (ft)	USCS	Symbol	Lithologic Description	Sample Type	Blow Count	Moisture (%)	Dry Density	Depth (ft)
0	SM SP		RESIDUAL SOIL (Af):					0
1			Upper 2": Medium brown silty SAND, moist, planter soil					1
2			MARINE DEPOSITS (Qm):					2
3			At 2"-18": Pale brown SAND, moist, shell fragments					3
			D1 at 2': Pale brown SAND, moist, loose, shell fragments		30/6"	8.6	94	
4			D2 at 4': Pale brown SAND, moist, loose to medium dense, shell fragments		32/6"	8.9	101	4
5								5
6			D3 at 6': Pale brown SAND, wet, loose, shell fragments, disturbed sample		31/6"	27.5		6
7			Test Hole HA-1 Terminated at 6.5 ft (Due to caving)					7
8			Groundwater at 5.5 ft					8
9			Caved to 6 ft When Sampler Removed					9
10								10
11								11
12								12
13								13
14								14
15								15
16								16
17								17
18								18
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20								20
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26								26
27								27
28								28
29								29
30								30

RSLog / Wider Blow count column / r-mccarthy-consulting-inc / admin / November 26, 2025 03:46 PM

R McCarthy Consulting, Inc

LOG OF BORING

PROJECT NO.: 9087-00
Figure B-3

APPENDIX C

LABORATORY TESTING

APPENDIX C
LABORATORY TESTING

(426 Via Lido Nord)

The laboratory testing program was designed to fit the specific needs of this project and was limited to testing the soil samples collected during the on-site exploration. The test program was performed by our laboratory and supplemented with testing by Project X Corrosion Engineering. A recapitulation of results from laboratory testing is presented below in Table C-6.

Soils were classified visually and per the results of laboratory testing according to ASTM D2487, the Unified Soil Classification System (USCS). The field moisture content and dry densities of the soils encountered were determined by performing laboratory tests on the collected samples. The results of the moisture tests, density determinations and soil classifications are shown on the Boring Logs, Figures B-2 through B-3.

Maximum Density

The maximum dry density and optimum moisture content relationships were determined for representative samples of the on-site soil. The laboratory standard used was ASTM D1557. The test results are presented below in Table C-1 and on Figure C-1.

TABLE C-1
RESULTS OF MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT
ASTM D1557

Test Location	Soil Classification	Soil Description	Maximum Dry Density (pcf)	Optimum Moisture Content (%)
B-1 @ 0-5’	SP	Brown SAND	103.0	14.5

Expansion Index Test

Expansion index tests were performed in accordance with ASTM D4829. The results are summarized in Table C-2 below.

TABLE C-2
RESULTS OF EXPANSION INDEX
ASTM D4829

Test Location	Soil Classification	Expansion Index	Expansion Potential	Moisture Content %	Saturation %
B-1 @ 0-5’	SP	0	Very Low	12.2 Initial 21.5 Final	44 Initial 75 Final

APPENDIX C
LABORATORY TESTING

(426 Via Lido Nord)

Gradation

Particle size analysis consisting of mechanical sieve analysis were performed on representative samples of the on-site soils in accordance with ASTM D1140 and C-136. The test results are presented graphically herein on Figures C-2 through C-7. The percentage of particles passing the No. 200 (75µm) sieve are tabulated in Table C-3 below:

TABLE C-3
GRAIN SIZE – FINES CONTENT

Location	Classification	Percent Fines (Passing #200)	Figure No.
B-1 @ 0-5′	SP	1.5	C-2
B-1 @ 3′	SP	1.2	C-3
B-1 @ 5′	SP	3.5	C-4
B-1 @ 7′	SP	5.6	C-5
B-1 @ 9′	SP	4.5	C-6
B-1 @ 11′	SP	1.6	C-7

Direct Shear - Remolded

Direct shear tests were performed on selected samples that were remolded to approximately 90 percent of the pre-determined maximum density of the test soil. The samples were then saturated under a surcharge equal to the applied normal force during testing. The apparatus used is in conformance with the requirements outlined in ASTM D3080. The test specimens, approximately 2.5-inches in diameter and 1-inch in height, were subjected to simple shear along a plane at mid-height after allowing time for pore pressure dissipation prior to application of shearing force. The samples were tested under various normal loads, a different specimen being used for each normal load. The samples were sheared at a constant rate of strain of 0.005-inches per minute. Shearing of the specimens was continued until the shear stress became essentially constant or until a deformation of approximately 10 percent of the original diameter was reached. The peak and ultimate shear stress values were plotted versus applied normal stress, and a best-fit straight line through the plotted points was determined to arrive at the cohesion and the angle of internal friction parameters of the soil samples. The direct shear test results are presented in Figures C-8.

APPENDIX C
LABORATORY TESTING

(426 Via Lido Nord)

Sulfate Test

Sulfate test results indicated negligible soluble sulfates as shown in Table C-4 below:

TABLE C-4
Results of Sulfate Tests
ASTM D4327

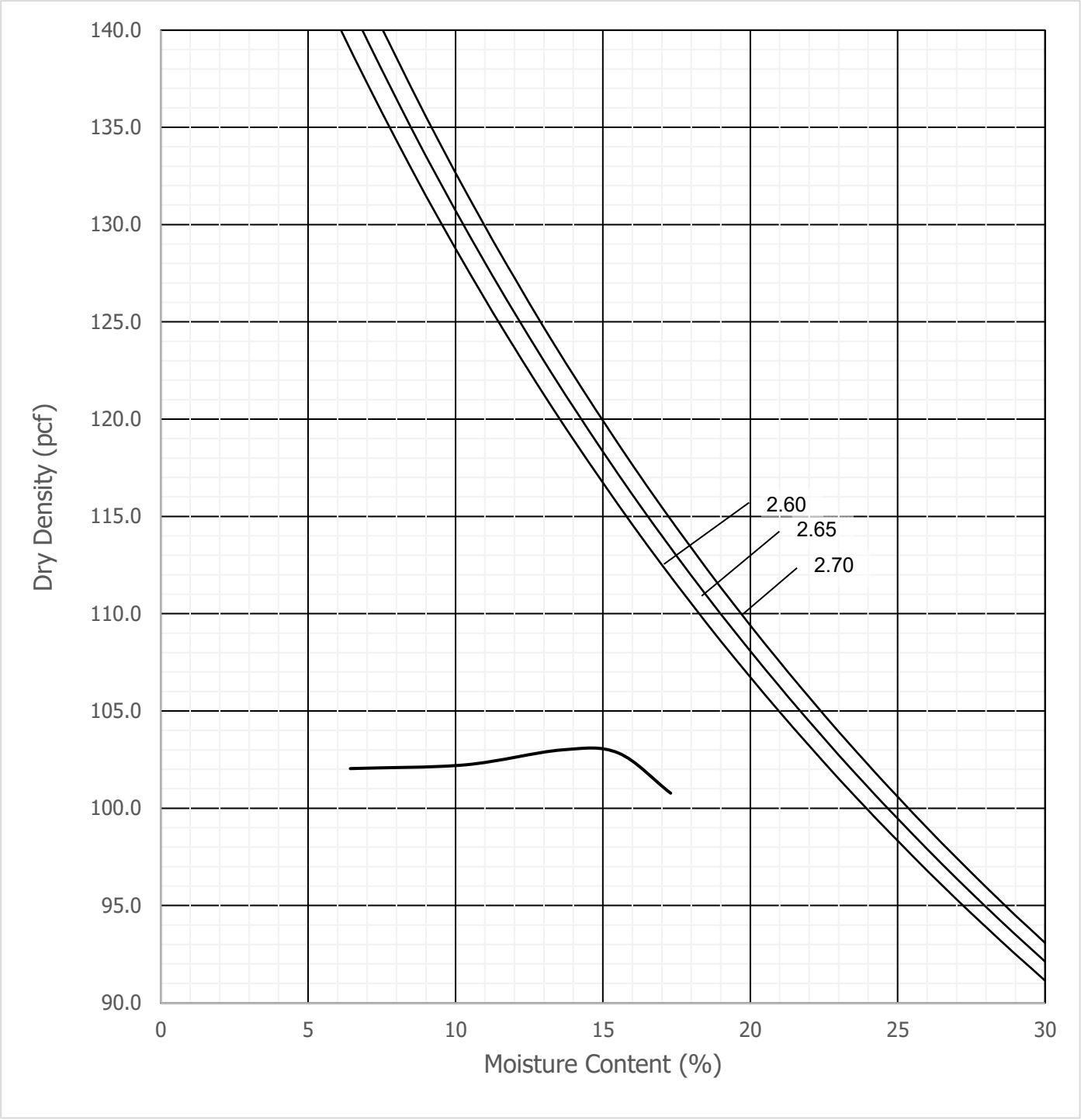
Test Location	Soil Classification	Soluble Sulfates (mg/kg) ASTM D4327	Sulfate Exposure
B-1 @ 0-5'	SP	19.1	S0 (Low)

Chemical Testing

A series of chemical tests were performed on the sample B-1 @ 0-5 feet. The test results are presented in Table C-5 below:

TABLE C-5
Results of Sulfate Tests

Test Location	Soil Classification	pH	Soluble Sulfates (mg/kg) ASTM D4327	Soluble Chlorides (mg/kg) ASTM D4327	Min. Resistivity (ohm-cm) ASTM G187
B-1 @ 0-5'	SP	9.0	19.1	12.3	16,080



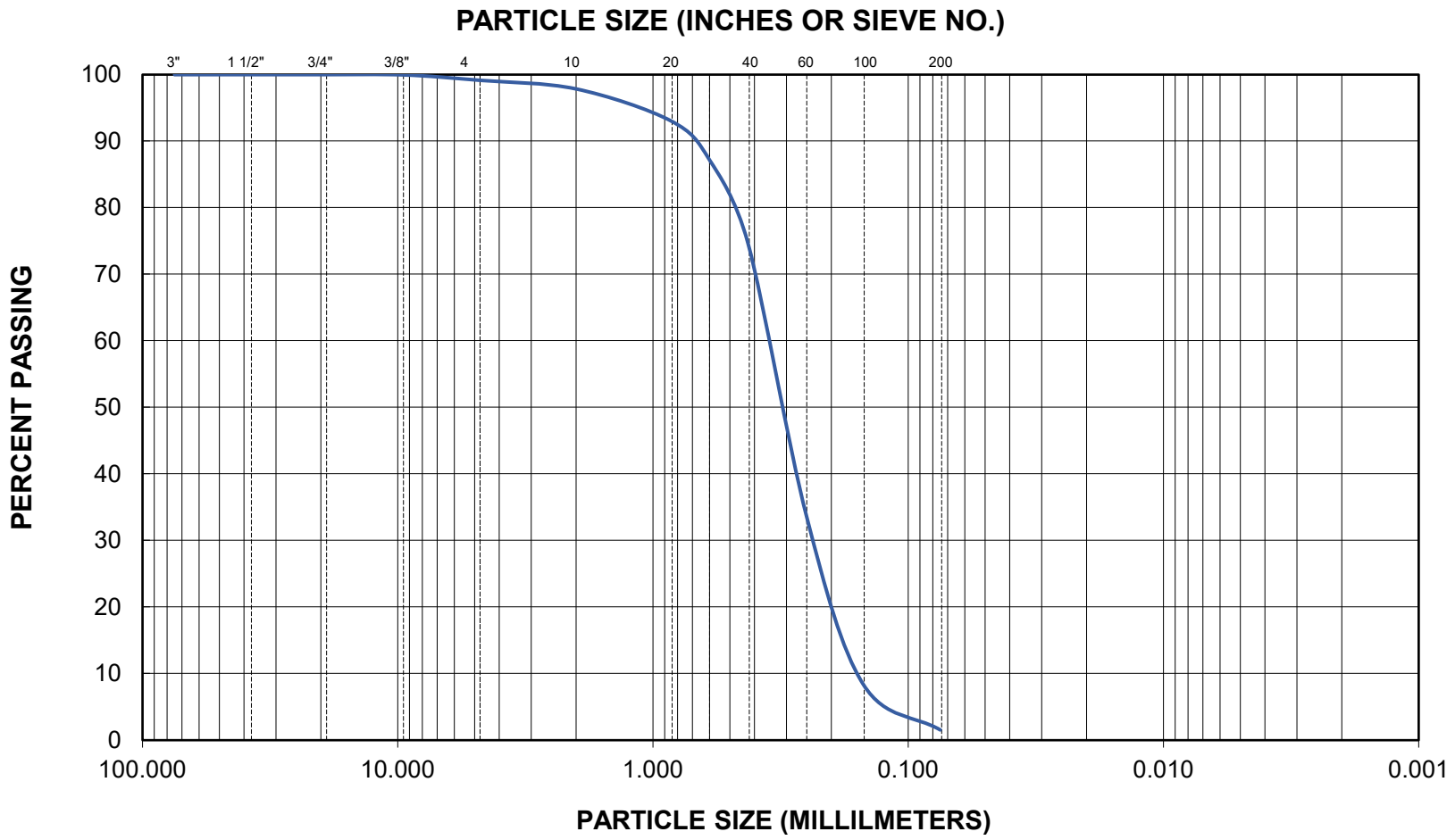
Sample Identification	B-1 @ 0-5'
Sample Description	Brown Sand
Maximum Dry Density (pcf)	103.0
Optimum Moisture Content (%)	14.5

R McCarthy Consulting, Inc

MAXIMUM DENSITY & OPTIMUM MOISTURE CONTENT DETERMINATION

File No.: 9087-00	Date: December - 2025	Figure: C-1

COBBLE	GRAVEL	SAND			SILT	CLAY
		Coarse	Medium	Fine		



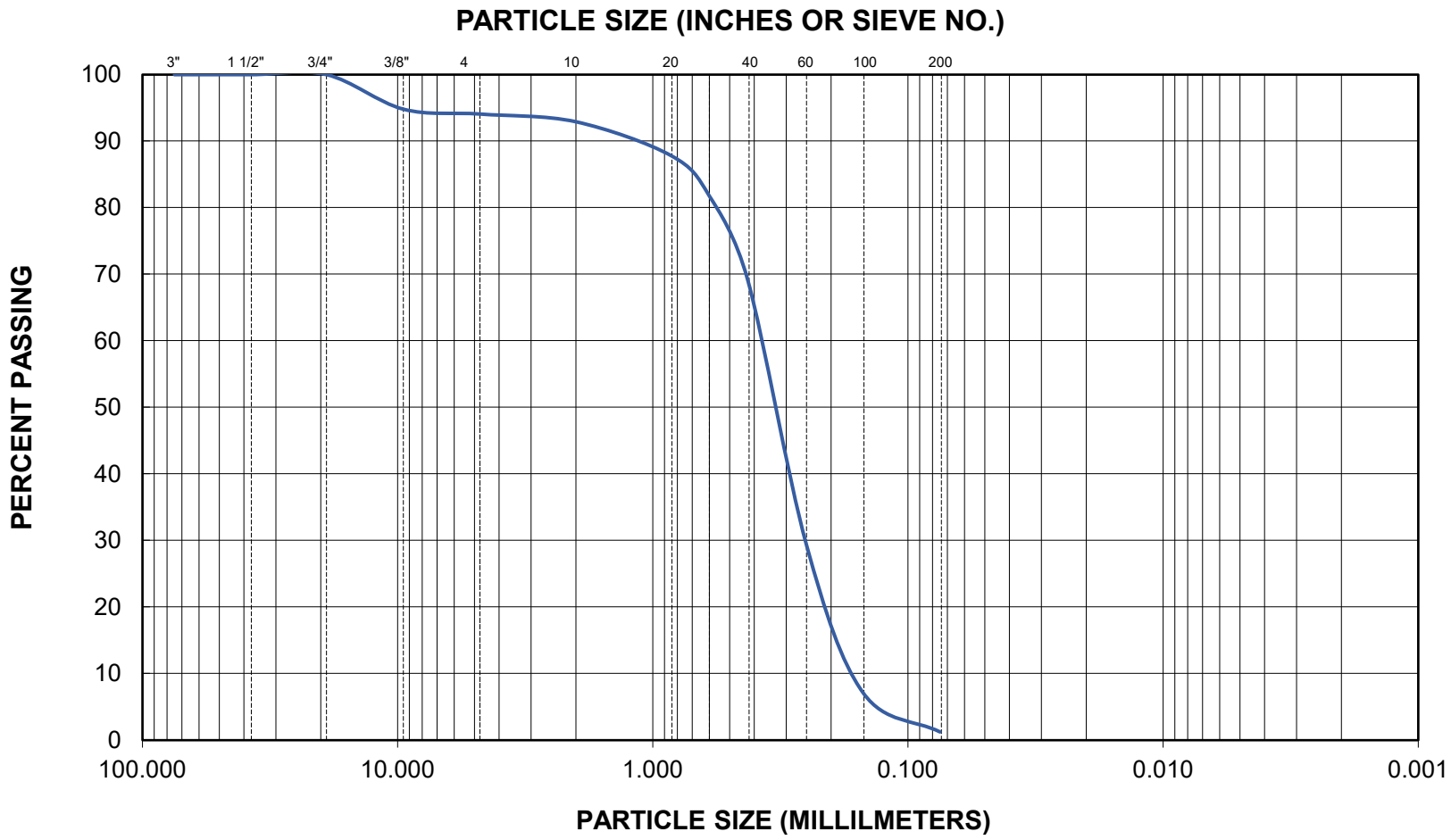
SAMPLE IDENTIFICATION		SOIL DESCRIPTION	C_U	C_C	PASSING NO. 200 (%)	USCS
LOCATION	DEPTH (FT)					
B-1	0-5'	Brown SAND	2.2	1.0	1.5	SP

R McCarthy Consulting, Inc

PARTICLE SIZE ANALYSIS COMPARISON

File No.:	9087-00	Date:	December 2025	Figure No.:	C-2

COBBLE	GRAVEL	SAND			SILT	CLAY
		Coarse	Medium	Fine		



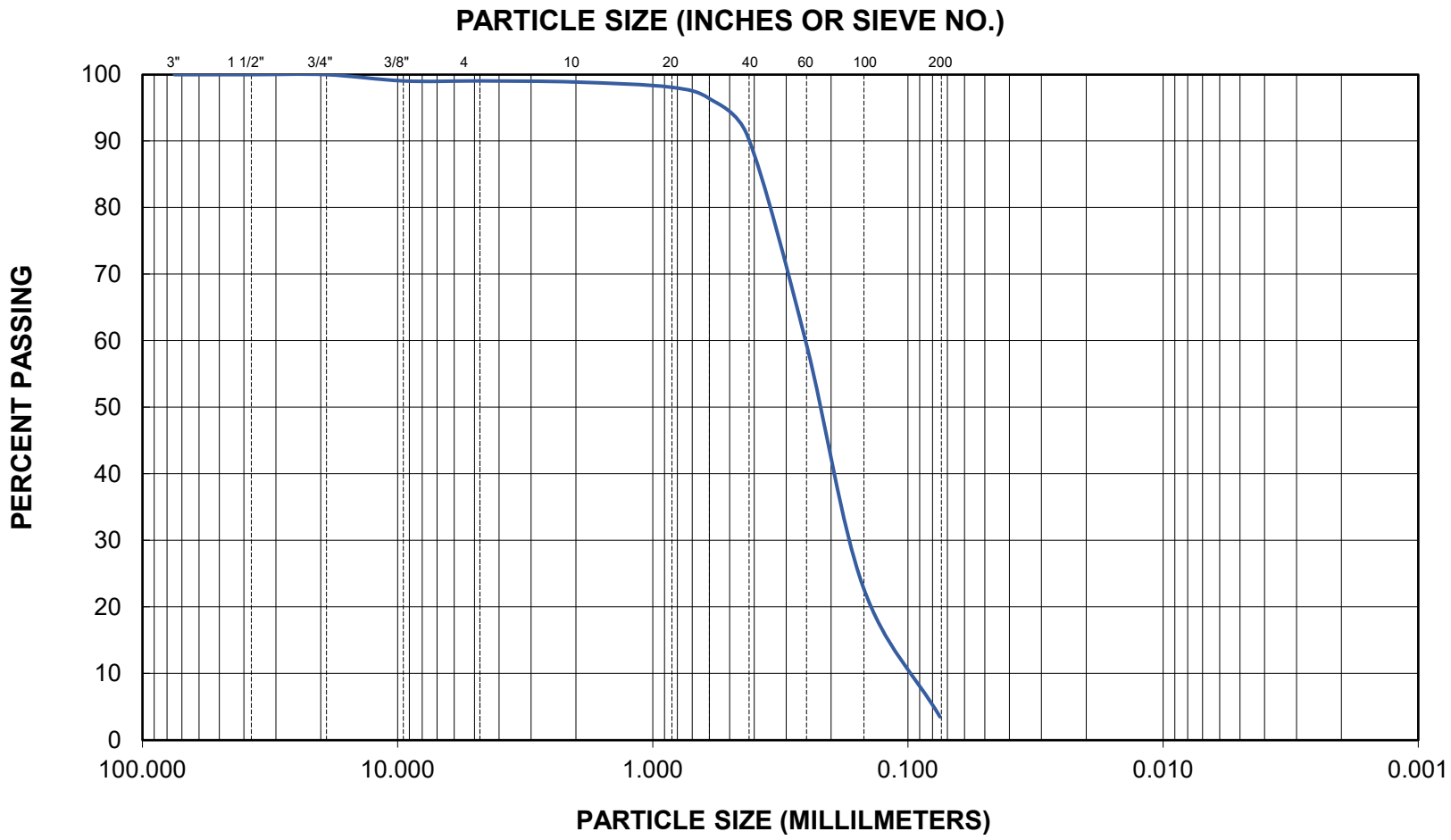
SAMPLE IDENTIFICATION		SOIL DESCRIPTION	C_U	C_C	PASSING NO. 200 (%)	USCS
LOCATION	DEPTH (FT)					
B-1	3'	Brown SAND	2.2	1.0	1.2	SP

R McCarthy Consulting, Inc

PARTICLE SIZE ANALYSIS COMPARISON

File No.:	9087-00	Date:	December 2025	Figure No.:	C-3

COBBLE	GRAVEL	SAND			SILT	CLAY
		Coarse	Medium	Fine		



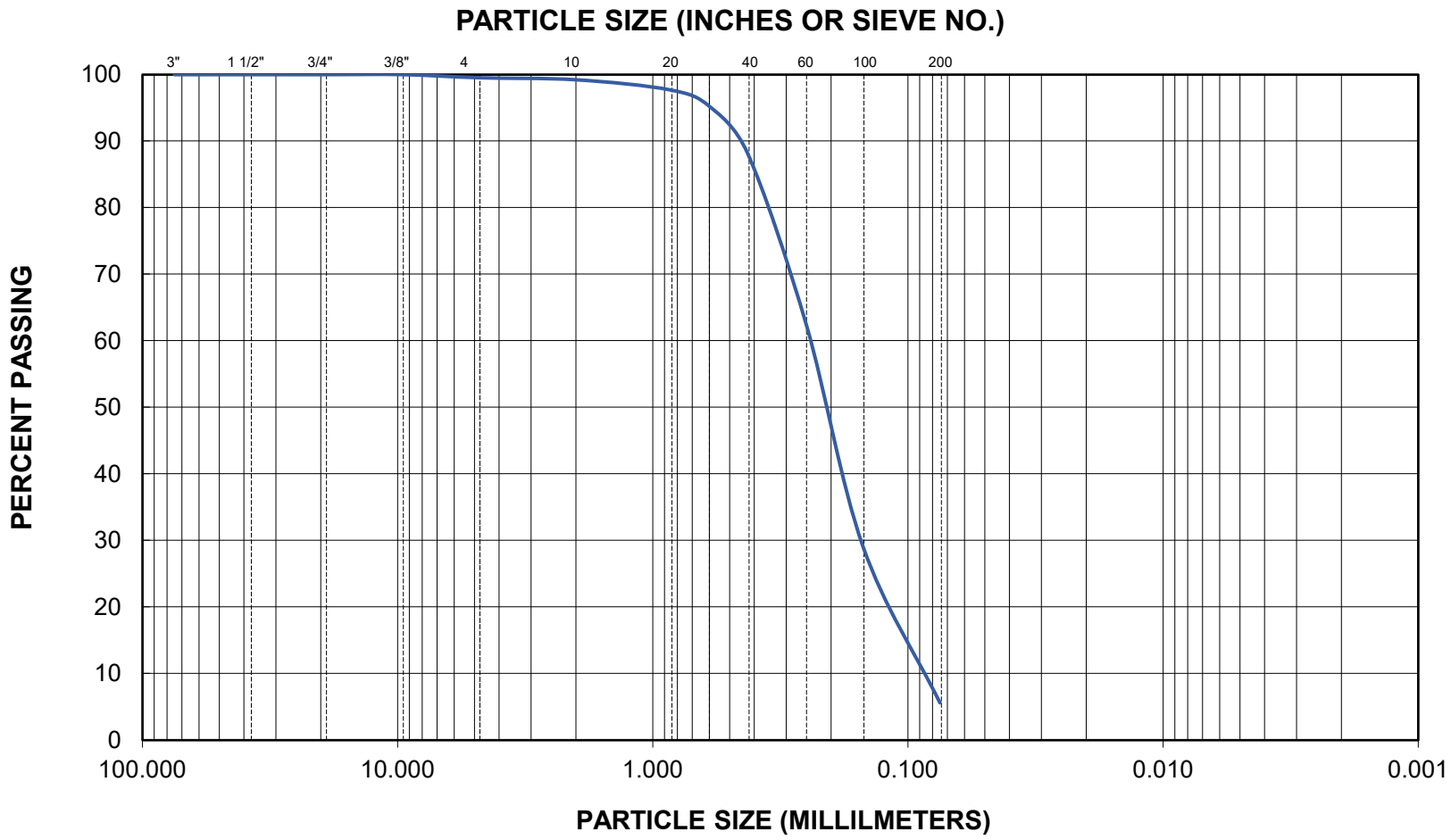
SAMPLE IDENTIFICATION		SOIL DESCRIPTION	C_U	C_C	PASSING NO. 200 (%)	USCS
LOCATION	DEPTH (FT)					
B-1	5'	Brown SAND	2.6	1.1	3.5	SP

R McCarthy Consulting, Inc

PARTICLE SIZE ANALYSIS COMPARISON

File No.:	9087-00	Date:	December 2025	Figure No.:	C-4

COBBLE	GRAVEL	SAND			SILT	CLAY
		Coarse	Medium	Fine		



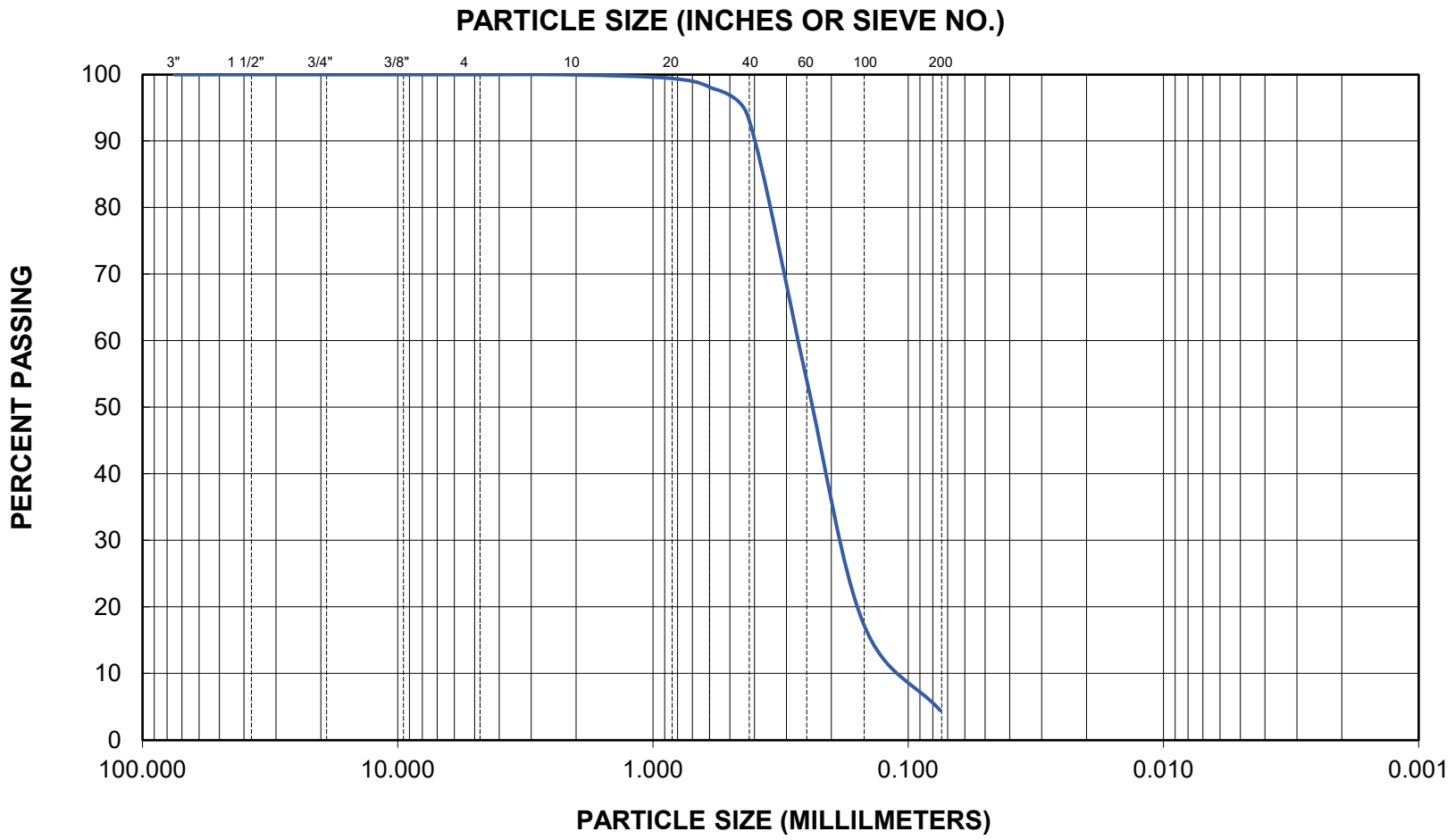
SAMPLE IDENTIFICATION		SOIL DESCRIPTION	C_U	C_C	PASSING NO. 200 (%)	USCS
LOCATION	DEPTH (FT)					
B-1	7'	Brown SAND	2.8	1.1	5.6	SP

R McCarthy Consulting, Inc

PARTICLE SIZE ANALYSIS COMPARISON

File No.:	9087-00	Date:	December 2025	Figure No.:	C-5

COBBLE	GRAVEL	SAND			SILT	CLAY
		Coarse	Medium	Fine		



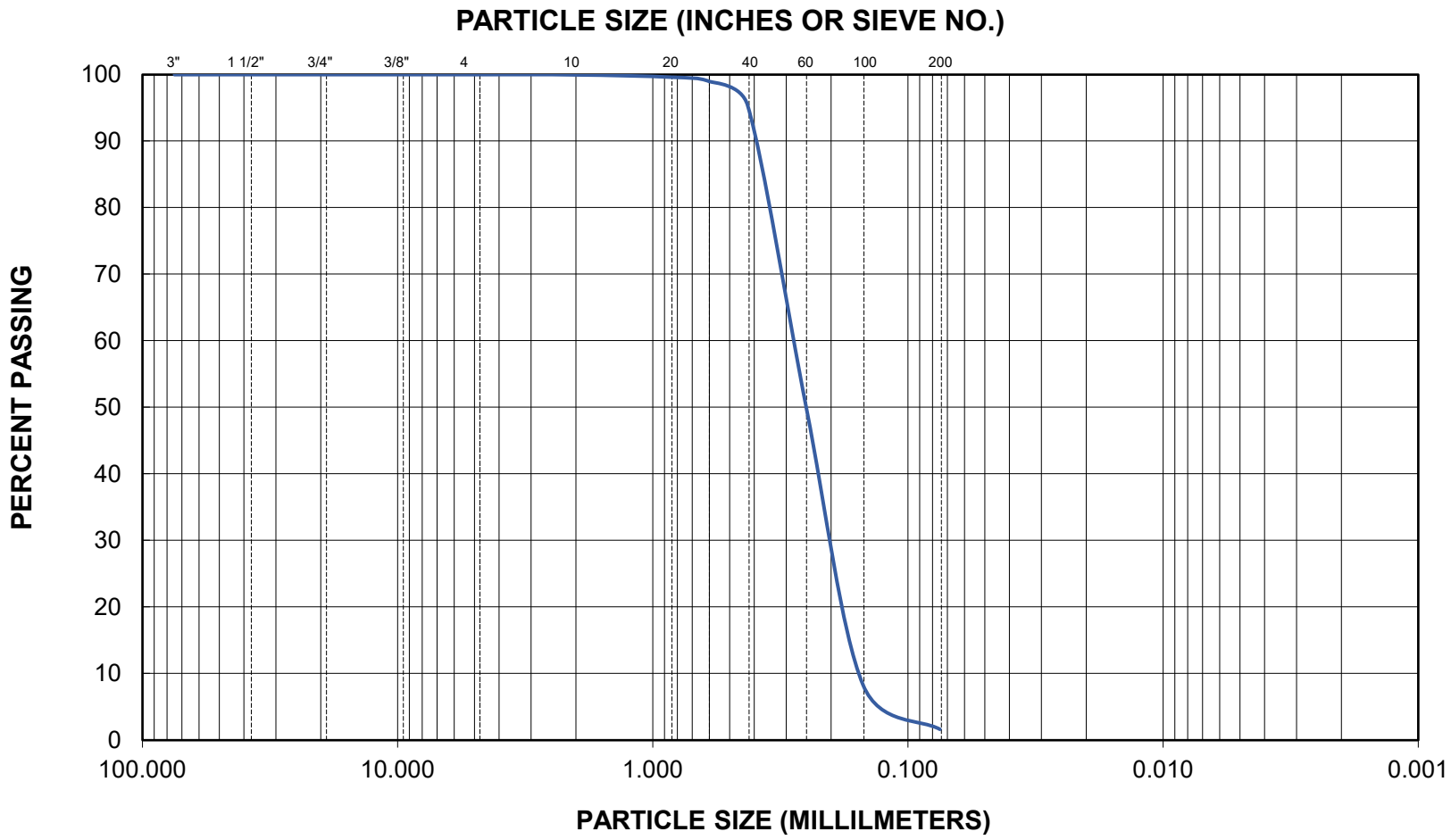
SAMPLE IDENTIFICATION		SOIL DESCRIPTION	C_U	C_C	PASSING NO. 200 (%)	USCS
LOCATION	DEPTH (FT)					
B-1	9'	Brown SAND	2.3	1.1	4.5	SP

R McCarthy Consulting, Inc

PARTICLE SIZE ANALYSIS COMPARISON

File No.:	9087-00	Date:	December 2025	Figure No.:	C-6

COBBLE	GRAVEL	SAND			SILT	CLAY
		Coarse	Medium	Fine		

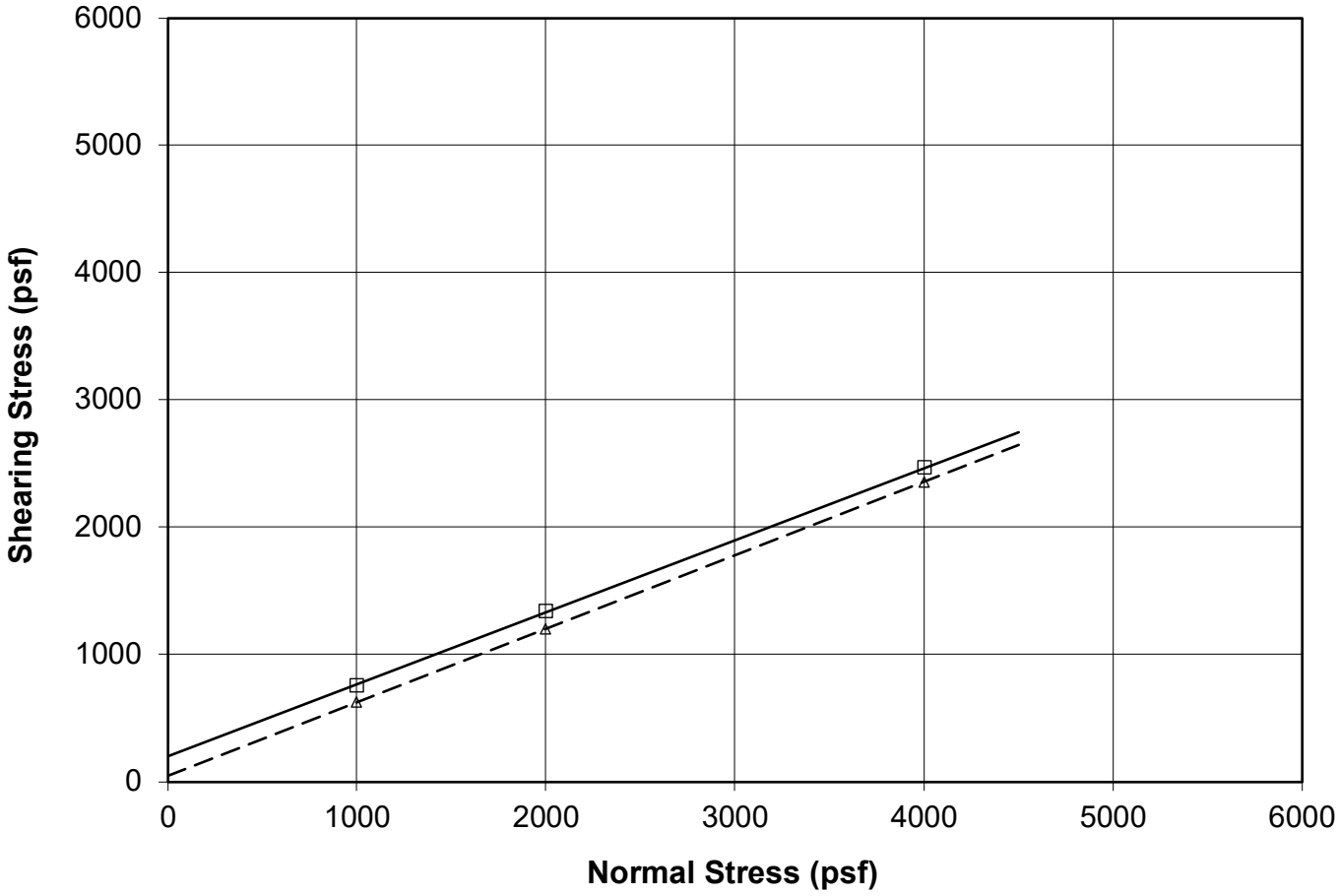


SAMPLE IDENTIFICATION		SOIL DESCRIPTION	C_U	C_C	PASSING NO. 200 (%)	USCS
LOCATION	DEPTH (FT)					
B-1	11'	Brown SAND	1.8	1.0	1.6	SP

R McCarthy Consulting, Inc

PARTICLE SIZE ANALYSIS COMPARISON

File No.:	9087-00	Date:	December 2025	Figure No.:	C-7



Sample Identification	B-1 @ 0-5'

Rate of Shear	0.005	in/min	Sample Type	Remolded

Characteristics		Shear Strength			
Dry Density (pcf)	92.3	Angle of Friction - degrees (Ultimate)	30.0	Angle of Friction - degrees (Peak)	29.5
Moisture Content (%)	21.5	Cohesion - psf (Ultimate)	50	Cohesion - psf (Peak)	200

R McCarthy Consulting, Inc

DIRECT SHEAR TEST

File No.: 9087-00	Date: December - 2025	Figure No.: C-8

TABLE C-6 LABORATORY RECAPITULATION

Sample Identification	Dry Density (pcf)	Moisture Content (%)	Expansion Index	Maximum Dry Density (pcf)	Optimum Moisture Content (%)	Atterberg Limits (LL/PI)	Sieve Analysis				Shear Strength		Consolidation/ Hydrocollapse (%)	Chemical Testing			
							Gravel %	Sand %	Silt %	Clay %	Peak Cohesion (psf)	Peak Friction Angle (deg)		Sulfate Content (%)	Chloride Content %	pH	Resistivity
B-1 @ 0-5'			0	103	14.5		0.9	97.6	1.5		200	29.5		0.0019	0.0012	9.0	16,080
B-1 @ 3'		3.7					5.9	92.9	1.2								
B-1 @ 5'		8.8					1.0	95.5	3.5								
B-1 @ 7'		20.0					0.5	93.9	5.6								
B-1 @ 9'		22.3					0.0	95.5	4.5								
B-1 @ 11'		24.7					0.0	98.4	1.6								
B-1 @ 13'		25.3															
B-1 @ 15'		24.0															
B-2 @ 2'	94	8.6															
B-2 @ 4'	101	8.9															
B-2 @ 6'		27.5															

Results Only Soil Testing for 426 Via Lido Nord

November 24, 2025

Prepared for:

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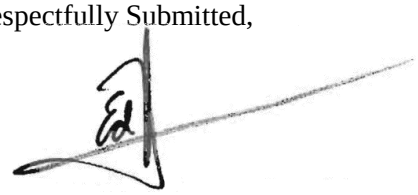
Project X Job#: S251124B
Client Job or PO#: 9087-00

Prepared by:
M. Williams

Respectfully Submitted,



Eduardo Hernandez, M.Sc., P.E.
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NACE Corrosion Technologist #16592
Professional Engineer
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Soil Analysis Lab Results

Client: R. McCarthy Consulting, Inc.
Job Name: 426 Via Lido Nord
Client Job Number: 9087-00
Project X Job Number: S251124B
November 24, 2025

	Method	ASTM D4327		ASTM D4327		ASTM G187		ASTM G51
Bore# / Description	**Depth**	**Sulfates** SO_4^{2-}		**Chlorides** Cl^-		**Resistivity** As Rec'd | Minimum		**pH**
	(ft)	**(mg/kg)**	**(wt%)**	**(mg/kg)**	**(wt%)**	**(Ω-cm)**	**(Ω-cm)**	
9087-00 B-1	0-5	19.1	0.0019	12.3	0.0012	120,600	16,080	9.0

Cations and Anions, except Sulfide and Bicarbonate, tested with Ion Chromatography
mg/kg = milligrams per kilogram (parts per million) of dry soil weight
ND = 0 = Not Detected | NT = Not Tested | Unk = Unknown
Chemical Analysis performed on 1:3 Soil-To-Water extract
PPM = mg/kg (soil) = mg/L (Liquid)

For AWWA 105C: 0-3mg/kg sulfide = Negative; 3-6mg/kg = trace; >6mg/kg = Positive

Note: Sometimes a bad sulfate hit is a contaminated spot. Typical fertilizers are Potassium chloride, ammonium sulfate or ammonium sulfate nitrate (ASN). So this is another reason why testing full corrosion series is good because we then have the data to see if those other ingredients are present meaning the soil sample is just fertilizer-contaminated soil. This can happen often when the soil samples collected are simply surface scoops. This is why it's best to dig in a foot, throw away the top and test the deeper stuff. Dairy farms are also notorious for these items.

If one sample pops up much more corrosive than all others, we would recommend collecting more samples surrounding the problem sample location to determine if the peak is isolated to it. This allows us to conclude it was a contaminated sample and able to declare it an outlier.

Try out our new online forms: SOIL CORROSIVITY & THERMAL RESISTIVITY LAB REQUEST FORM & IN-SITU WENNER 4 PIN QUOTE REQUEST FORM

APPENDIX D

STANDARD GRADING GUIDELINES

APPENDIX D
STANDARD GRADING GUIDELINES

(426 Via Lido Nord)

GENERAL

These Guidelines present the usual and minimum requirements for grading operations observed by R McCarthy Consulting, Inc., or its designated representative. No deviation from these guidelines will be allowed, except where specifically superseded in the geotechnical report signed by a registered geotechnical engineer.

The placement, spreading, mixing, watering, and compaction of the fills in strict accordance with these guidelines shall be the sole responsibility of the contractor. The construction, excavation, and placement of fill shall be under the direct observation of the geotechnical engineer or any person or persons employed by the licensed geotechnical engineer signing the soils report. If unsatisfactory soil-related conditions exist, the geotechnical engineer shall have the authority to reject the compacted fill ground and, if necessary, excavation equipment will be shut down to permit completion of compaction. Conformance with these specifications will be discussed in the final report issued by the geotechnical engineer.

SITE PREPARATION

All brush, vegetation and other deleterious material such as rubbish shall be collected, piled and removed from the site prior to placing fill, leaving the site clear and free from objectionable material.

Soil, alluvium, or rock materials determined by the geotechnical engineer as being unsuitable for placement in compacted fills shall be removed from the site. Any material incorporated as part of a compacted fill must be approved by the geotechnical engineer.

The surface shall then be plowed or scarified to a minimum depth of 6 inches until the surface is free from uneven features that would tend to prevent uniform compaction by the equipment used. After the area to receive fill has been cleared and scarified, it shall be disced or bladed by the contractor until it is uniform and free from large clods, brought to the proper moisture content and compacted to minimum requirements. If the scarified zone is greater than 12 inches in depth, the excess shall be removed and placed in lifts restricted to 6 inches.

Any underground structures such as cesspools, cisterns, mining shafts, tunnels, septic tanks, wells, pipe lines or others not located prior to grading are to be removed or treated in a manner prescribed by the geotechnical engineer.

MATERIALS

Materials for compacted fill shall consist of materials previously approved by the geotechnical engineer. Fill materials may be excavated from the cut area or imported from other approved sources, and soils from one or more sources may be blended. Fill soils shall be free from organic (vegetation) materials and other unsuitable substances. Normally, the material shall contain no rocks or hard lumps greater than 6 inches in size and shall contain at least 50 percent of material smaller than 1/4-inch in size. Materials greater than 4-inches in size shall be placed so that they are completely surrounded by compacted fines; no nesting of rocks shall be

permitted. No material of a perishable, spongy, or otherwise of an unsuitable nature shall be used in the fill soils.

Representative samples of materials to be utilized, as compacted fill shall be analyzed in the laboratory by the geotechnical engineer to determine their physical properties. If any material other than that previously tested is encountered during grading, the appropriate analysis of this material shall be conducted by the geotechnical engineer in a timely manner.

PLACING, SPREADING, AND COMPACTING FILL MATERIAL

Soil materials shall be uniformly and evenly processed, spread, watered, and compacted in thin lifts not to exceed 6-inches in thickness. Achievement of a uniformly dense and uniformly moisture conditioned compacted soil layer should be the objective of the equipment operators performing the work for the Owner and Contractor.

When the moisture content of the fill material is below that specified by the geotechnical engineer, water shall be added by the contractor until the moisture content is near optimum as specified. Moisture levels should generally be at optimum moisture content or greater.

When the moisture content of the fill material is above that specified by the geotechnical engineer, the fill material shall be aerated by the contractor by blading, mixing, or other satisfactory methods until the moisture content is near the specified level.

After each layer has been placed, mixed, and spread evenly, it shall be thoroughly compacted to 90 percent of the maximum laboratory density in compliance with ASTM D: 1557 (five layers). Compaction shall be accomplished by sheepsfoot rollers, vibratory rollers, multiple-wheel pneumatic-tired rollers, or other types of acceptable compacting equipment. Equipment shall be of such design that it will be able to compact the fill to the specified density. Compaction shall be continuous over the entire area and the equipment shall make sufficient passes to obtain the desired density uniformly.

A minimum relative compaction of 90 percent out to the finished slope face of all fill slopes will be required. Compacting of the slopes shall be accomplished by backrolling the slopes in increments of 2 to 5 feet in elevation gain or by overbuilding and cutting back to the compacted inner core, or by any other procedure, which produces the required compaction.

GRADING OBSERVATIONS

The geotechnical engineer shall observe the fill placement during the course of the grading process and will prepare a written report upon completion of grading. The compaction report shall make a statement as to compliance with these guidelines.

As a minimum, one density test shall be required for each 2 vertical feet of fill placed, or one for each 1,000 cubic yards of fill, whichever requires the greater number of tests; however, testing should not be limited based on these guidelines and more testing is generally preferable.

APPENDIX D
STANDARD GRADING GUIDELINES

(426 Via Lido Nord)

Processed ground to receive fill, including removal areas such as canyon or swale cleanouts, must be observed by the geotechnical engineer and/or engineering geologist prior to fill placement. The contractor shall notify the geotechnical engineer when these areas are ready for observation.

UTILITY LINE BACKFILL

Utility line backfill beneath and adjacent to structures; beneath pavements; adjacent and parallel to the toe of a slope; and in sloping surfaces steeper than ten horizontal to one vertical (10:1), shall be compacted and tested in accordance with the criteria given in the text of this report. Alternately, relatively self-compacting material may be used. The material specification and method of placement shall be recommended and observed by the soil engineer, and approved by the geotechnical engineer and Building Official before use and prior to backfilling.

Utility line backfill in areas other than those stated above are generally subject to similar compaction standards and will require approval by the soil engineer.

The final utility line backfill report from the project soil engineer shall include an approval statement that the backfill is suitable for the intended use.

PROTECTION OF WORK

During the grading process and prior to the complete construction of permanent drainage controls, it shall be the responsibility of the contractor to provide good drainage and prevent ponding of water and damage to adjoining properties or to finished work on the site.

After the geotechnical engineer has finished observations of the completed grading, no further excavations and/or filling shall be performed without the approval of the geotechnical engineer.

APPENDIX E

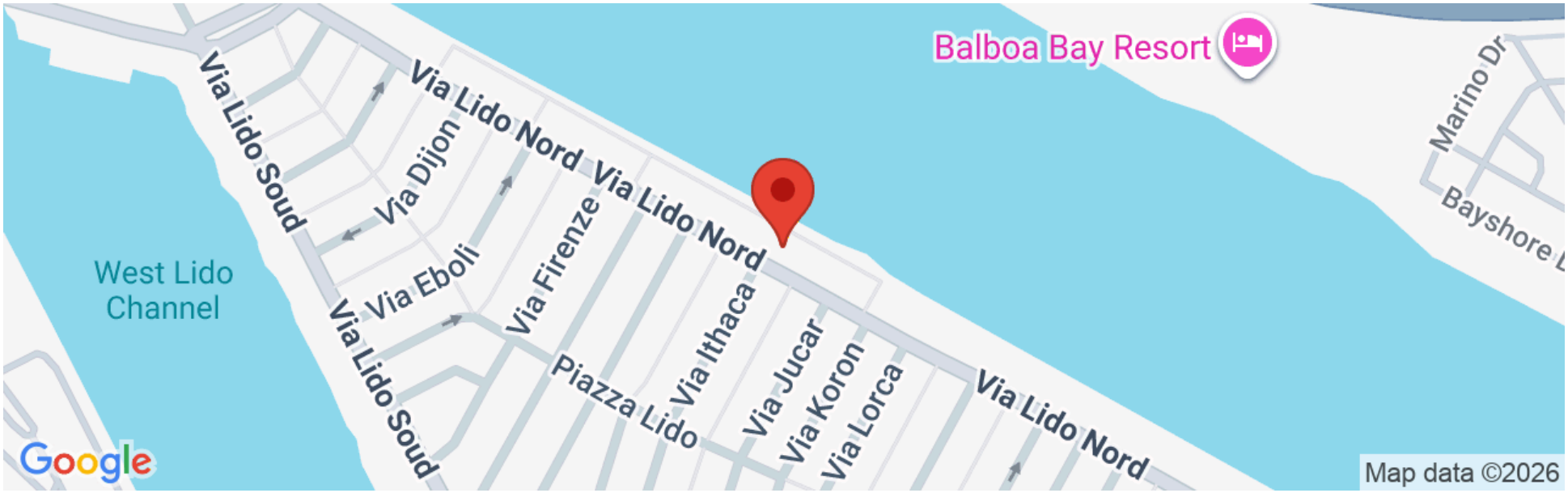
SEISMICITY DATA

Announcement
ASCE 7-22 is now available.

Boyd

426 Via Lido Nord, Newport Beach, CA 92663, USA

Latitude, Longitude: 33.6142216, -117.9185018



Date	2/2/2026, 3:23:09 PM
Design Code Reference Document	ASCE7-22
Risk Category	II
Site Class	Default

Type	Value	Description (Data)
S_S	1.57	The MCE_R spectral response acceleration at 0.2 seconds for Site Class BC, in units of g.
S_1	0.51	The MCE_R spectral response acceleration at 1 second for Site Class BC, in units of g.
S_{MS}	1.73	$S_{MS} = 1.5 \times S_{DS}$, the Risk-Targeted Maximum Considered Earthquake (MCE_R) spectral response acceleration for short periods (of the two-period spectrum) and the user-specified Site Class.
S_{M1}	1.21	$S_{M1} = 1.5 \times S_{D1}$, the MCE_R spectral response acceleration for 1 second (of the two-period spectrum) and the user-specified Site Class.

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Type	Value	Description (Data)
S_{DS}	1.15	The design spectral response acceleration for short periods (of the two-period spectrum) and the user-specified Site Class, in units of g.
S_{D1}	0.8	The design spectral response acceleration for 1 second (of the two-period spectrum) and the user-specified Site Class, in units of g

Type	Value	Description (Data Contd.)
SDC	D	Seismic design category
PGA_M	0.7	PGA_M, the Geometric-Mean Maximum Considered Earthquake (MCE_G) peak ground acceleration for the user-specified Site Class, in units of g
T_S	0.697	$T_S = S_{D1}/S_{DS}$, in seconds, for construction of the two-period design spectrum
T_0	0.139	$T_0 = 0.2 \times T_S$, in seconds, for construction of the two-period design response spectrum
T_L	8	T_L, the long-period transition period, in seconds, for construction of the two-period design response spectrum

Type	Value	Description (Underlying Data and Metadata)
PGA_{uh}	See underlying data for Site Classes C, CD, and D	Probabilistic uniform-hazard (2%-in-50-years), geometric-mean peak ground acceleration, in units of g.
PGA_{84th}	See underlying data for Site Classes C, CD, and D	Deterministic 84th-percentile, geometric-mean peak ground acceleration (without deterministic lower limit), in units of g.
V_{S30}	260	The shear-wave velocity used for the user-specified Site Class, in units of m/s
Spatial Interpolation Method	linearloglinear	Identifier for spatial interpolation method used to obtain values for location of interest from underlying gridded values: "linearloglinear" for bilinear of natural logarithm of values.
PGA_{dFloor}		Deterministic lower limit peak ground acceleration (PGA_G) for the user-specified Site Class, in units of g.
riskTargetedSpectrum		Probabilistic risk-targeted, maximum direction response spectrum (for 1%-in-50-years collapse risk)
eightyFourthSpectrum		Deterministic 84^{th}-percentile, maximum-direction response spectrum (without deterministic lower limit)

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Multi Period

Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
0	0.52	0.78
0.01	0.52	0.78
0.02	0.53	0.79
0.03	0.55	0.83
0.05	0.68	1.02
0.075	0.87	1.31
0.1	1.01	1.52
0.15	1.17	1.75
0.2	1.24	1.86
0.25	1.28	1.91
0.3	1.28	1.92
0.4	1.26	1.9
0.5	1.2	1.8
0.75	0.97	1.46
1	0.8	1.21
1.5	0.56	0.85
2	0.42	0.63
3	0.27	0.4
4	0.19	0.28
5	0.14	0.21
7.5	0.082	0.12
10	0.054	0.082

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Two Period

Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
0	0.46	0.69
0.025	0.59	0.88
0.05	0.71	1.06
0.1	0.96	1.44
0.14	1.15	1.73
0.15	1.15	1.73
0.2	1.15	1.73
0.25	1.15	1.73
0.3	1.15	1.73
0.35	1.15	1.73
0.4	1.15	1.73

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Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
0.45	1.15	1.73
0.5	1.15	1.73
0.55	1.15	1.73
0.6	1.15	1.73
0.65	1.15	1.73
0.7	1.15	1.73
0.7	1.15	1.72
0.75	1.07	1.61
0.8	1	1.51
0.85	0.95	1.42
0.9	0.89	1.34
0.95	0.85	1.27
1	0.8	1.21
1.05	0.77	1.15
1.1	0.73	1.1
1.15	0.7	1.05
1.2	0.67	1
1.25	0.64	0.96
1.3	0.62	0.93
1.35	0.6	0.89
1.4	0.57	0.86
1.45	0.55	0.83
1.5	0.54	0.8
1.55	0.52	0.78
1.6	0.5	0.75
1.65	0.49	0.73
1.7	0.47	0.71
1.75	0.46	0.69
1.8	0.45	0.67
1.85	0.43	0.65
1.9	0.42	0.63
1.95	0.41	0.62
2	0.4	0.6
2.05	0.39	0.59
2.1	0.38	0.57
2.15	0.37	0.56
2.2	0.37	0.55
2.25	0.36	0.54

Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
2.3	0.35	0.52
2.35	0.34	0.51
2.4	0.33	0.5
2.45	0.33	0.49
2.5	0.32	0.48
2.55	0.32	0.47
2.6	0.31	0.46
2.65	0.3	0.45
2.7	0.3	0.45
2.75	0.29	0.44
2.8	0.29	0.43
2.85	0.28	0.42
2.9	0.28	0.42
2.95	0.27	0.41
3	0.27	0.4
3.05	0.26	0.4
3.1	0.26	0.39
3.15	0.26	0.38
3.2	0.25	0.38
3.25	0.25	0.37
3.3	0.24	0.37
3.35	0.24	0.36
3.4	0.24	0.35
3.45	0.23	0.35
3.5	0.23	0.34
3.55	0.23	0.34
3.6	0.22	0.33
3.65	0.22	0.33
3.7	0.22	0.33
3.75	0.21	0.32
3.8	0.21	0.32
3.85	0.21	0.31
3.9	0.21	0.31
3.95	0.2	0.31
4	0.2	0.3
4.05	0.2	0.3
4.1	0.2	0.29
4.15	0.19	0.29

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Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
4.2	0.19	0.29
4.25	0.19	0.28
4.3	0.19	0.28
4.35	0.18	0.28
4.4	0.18	0.27
4.45	0.18	0.27
4.5	0.18	0.27
4.55	0.18	0.26
4.6	0.17	0.26
4.65	0.17	0.26
4.7	0.17	0.26
4.75	0.17	0.25
4.8	0.17	0.25
4.85	0.17	0.25
4.9	0.16	0.25
4.95	0.16	0.24
5	0.16	0.24
5.05	0.16	0.24
5.1	0.16	0.24
5.15	0.16	0.23
5.2	0.15	0.23
5.25	0.15	0.23
5.3	0.15	0.23
5.35	0.15	0.23
5.4	0.15	0.22
5.45	0.15	0.22
5.5	0.15	0.22
5.55	0.14	0.22
5.6	0.14	0.22
5.65	0.14	0.21
5.7	0.14	0.21
5.75	0.14	0.21
5.8	0.14	0.21
5.85	0.14	0.21
5.9	0.14	0.2
5.95	0.14	0.2
6	0.13	0.2
6.05	0.13	0.2

Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
6.1	0.13	0.2
6.15	0.13	0.2
6.2	0.13	0.19
6.25	0.13	0.19
6.3	0.13	0.19
6.35	0.13	0.19
6.4	0.13	0.19
6.45	0.12	0.19
6.5	0.12	0.19
6.55	0.12	0.18
6.6	0.12	0.18
6.65	0.12	0.18
6.7	0.12	0.18
6.75	0.12	0.18
6.8	0.12	0.18
6.85	0.12	0.18
6.9	0.12	0.17
6.95	0.12	0.17
7	0.11	0.17
7.05	0.11	0.17
7.1	0.11	0.17
7.15	0.11	0.17
7.2	0.11	0.17
7.25	0.11	0.17
7.3	0.11	0.17
7.35	0.11	0.16
7.4	0.11	0.16
7.45	0.11	0.16
7.5	0.11	0.16
7.55	0.11	0.16
7.6	0.11	0.16
7.65	0.11	0.16
7.7	0.1	0.16
7.75	0.1	0.16
7.8	0.1	0.15
7.85	0.1	0.15
7.9	0.1	0.15
7.95	0.1	0.15

Period T(s)	Design Spectrum Ordinates (g)	MCE_R Spectrum Ordinates (g)
8	0.1	0.15
8.05	0.099	0.15
8.1	0.098	0.15
8.15	0.097	0.15
8.2	0.096	0.14
8.25	0.094	0.14
8.3	0.093	0.14
8.35	0.092	0.14
8.4	0.091	0.14
8.45	0.09	0.14
8.5	0.089	0.13
8.55	0.088	0.13
8.6	0.087	0.13
8.65	0.086	0.13
8.7	0.085	0.13
8.75	0.084	0.13
8.8	0.083	0.12
8.85	0.082	0.12
8.9	0.081	0.12
8.95	0.08	0.12
9	0.079	0.12

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Period T(s)	Risk Targeted Spectrum Ordinates (g)	84^{th} Spectrum Ordinates(g)

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APPENDIX F

RESULTS OF LIQUEFACTION ANALYSES

Table F-1

File No: 9087-00
Results of Liquefaction & Seismic Settlement Analyses

Summary

426 Via Lido Nord

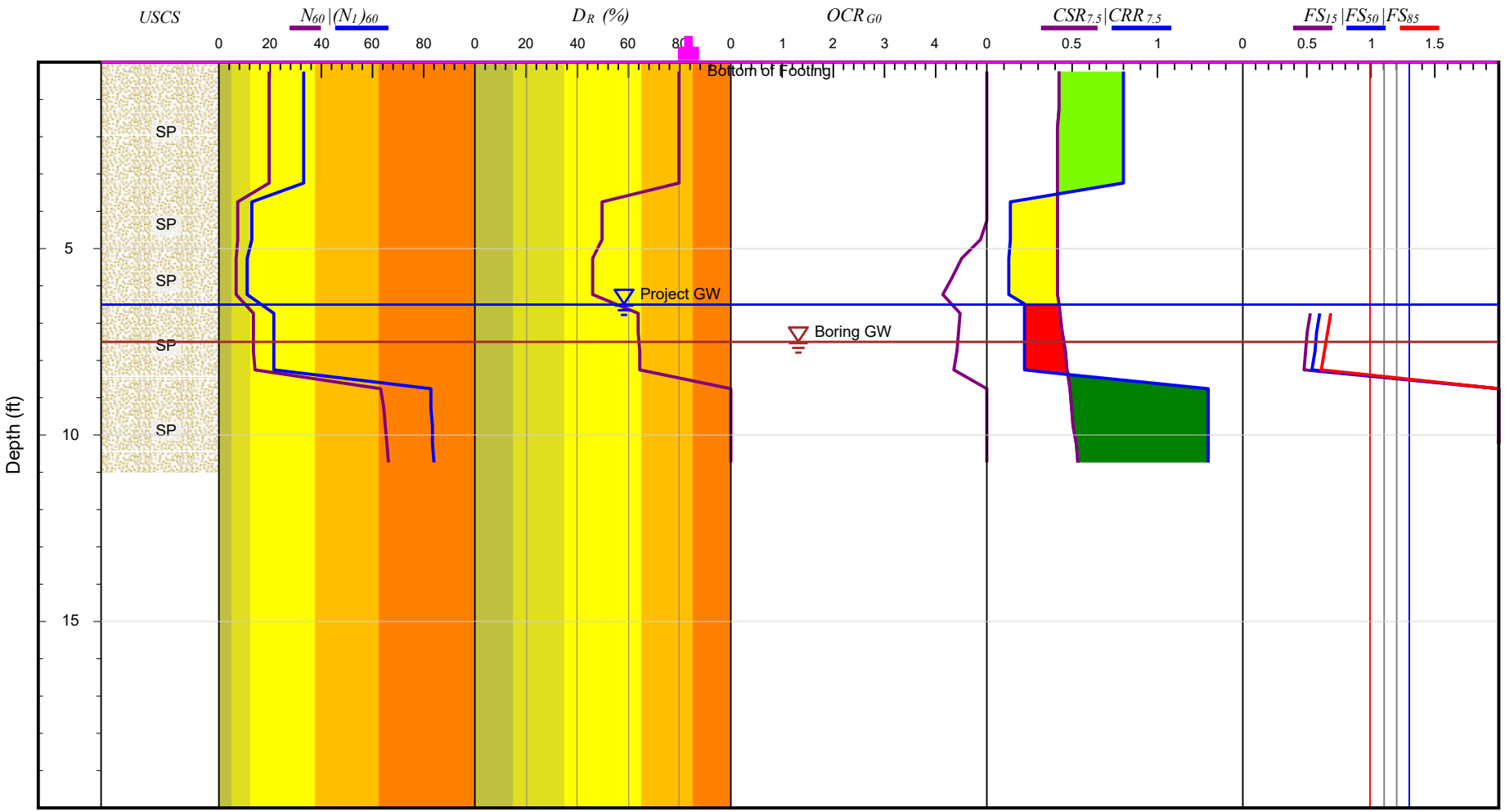
Liquefaction and Seismic Settlement Potential

Figures	Condition	Boring #	S_{max} (inches)
F-1/F-2	Existing	B-1	0.39

Smax = Calculated seismically induced settlement of potential liquefiable and dry sand layers in the upper 10 feet

Please see the associated figures and spreadsheet for additional details.

Computation: GeoAdvanced GeoSuite Software Version 4.2.0.6, developed by Fred Yi, PhD, PE, GE
www.geoadvanced.com



SP

Silt Correction:
UCLA method

Earthquake & Groundwater Information:
Magnitude = 7.5
Max. Acceleration = 0.71 g
Project GW = 6.5 ft
Max. Seismic Settlement = 0.39 in
Settl. @ Bottom of Footing = 0.39 in

Liquefaction: Boulanger & Idriss (2010-16)
Settl.: [dry] Yi (2022)[CPT]; [sat] Tokimatsu & Seed (1987)
Lateral spreading: Idriss & Boulanger (2008)
M correction: [Sand] Boulanger & Idriss(2004)
σv correction: Idriss & Boulanger (2008)
Stress reduction: Idriss & Boulanger (2008)

R McCarthy Consulting, Inc

Liquefaction Potential - SPT Data

Project:	Boyd				
Location:	426 Via Lido Nord				
Project No.:	9087-00	Boring No.:	B-1	Figure:	F-1

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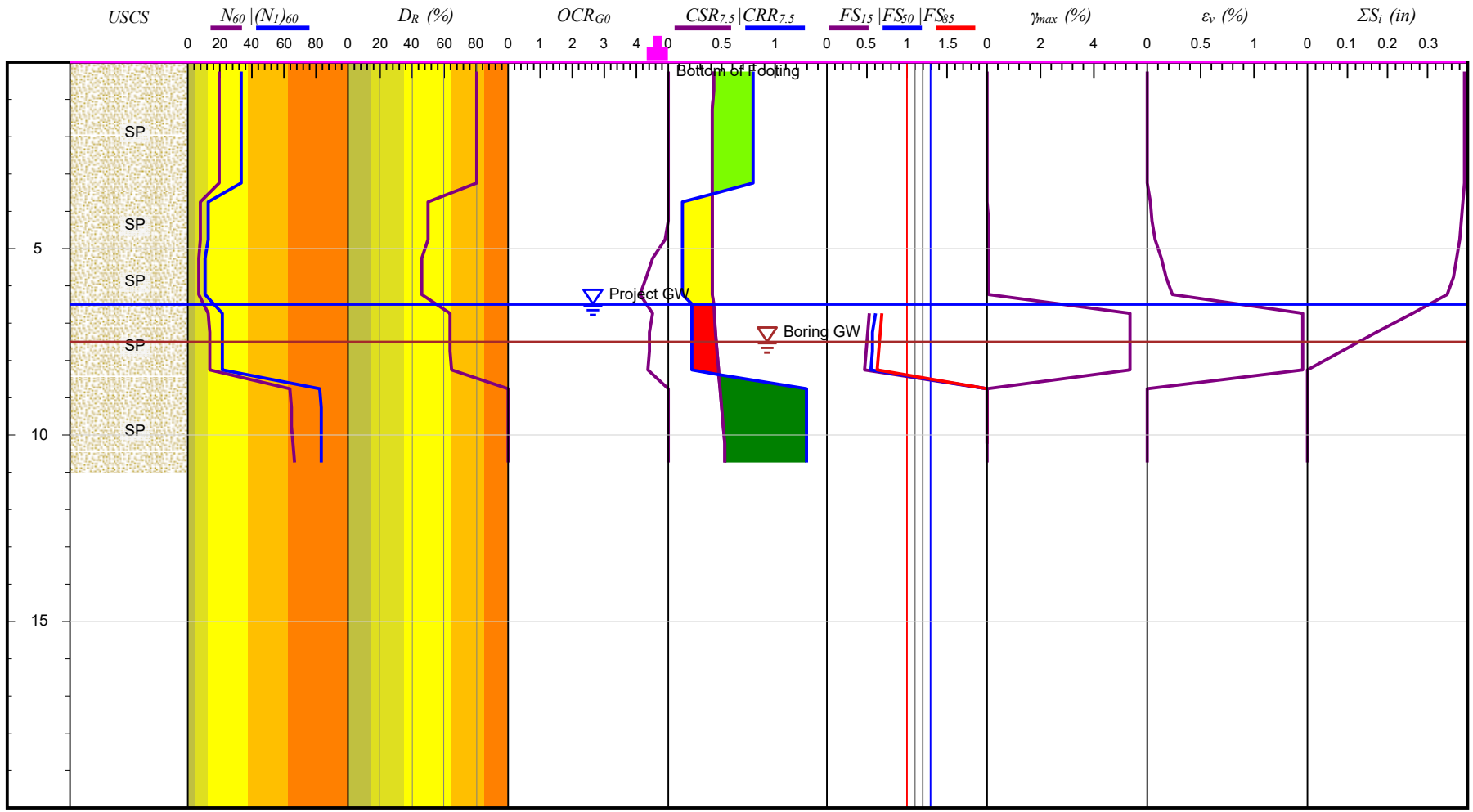

SP

Silt Correction:
UCLA method

Earthquake & Groundwater Information:
Magnitude = 7.5
Max. Acceleration = 0.71 g
Project GW = 6.5 ft
Max. Seismic Settlement = 0.39 in
Settl. @ Bottom of Footing = 0.39 in

Liquefaction: Boulanger & Idriss (2010-16)
Settl.: [dry] Yi (2022)[CPT]; [sat] Tokimatsu & Seed (1987)
Lateral spreading: Idriss & Boulanger (2008)
M correction: [Sand] Boulanger & Idriss(2004)
σv correction: Idriss & Boulanger (2008)
Stress reduction: Idriss & Boulanger (2008)

R McCarthy Consulting, Inc

Seismic Settlement Potential - SPT Data

Project:	Boyd				
Location:	426 Via Lido Nord				
Project No.:	9087-00	Boring No.:	B-1	Figure:	F-2

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Z_b (ft)	Z_m (ft)	γ (pcf)	N_{60}	FC(%)	CC(%)	USCS	φ (°)	C' (tsf)	σ_{v0} (tsf)	σ_{v0}' (tsf)	C_N	C_s	$(N_1)_{60}$	$(N_1)_{60cs}$	D_R (%)	V_s (m/s)	V_s (ft/s)	G_0 (kPa)
0.50	0.25	105.0	19.6	1.0	0.0	17	33.8	0.0	0.01	0.01	1.7	1.3	33.3	33.3	80.0	238.9	783.8	95,994.6
1.00	0.75	105.0	19.6	1.0	0.0	17	33.8	0.0	0.04	0.04	1.7	1.3	33.3	33.3	80.0	237.5	779.1	94,844.8
1.50	1.25	105.0	19.6	1.0	0.0	17	33.8	0.0	0.07	0.07	1.7	1.3	33.3	33.3	80.0	236.1	774.6	93,748.3
2.00	1.75	105.0	19.6	1.0	0.0	17	33.8	0.0	0.09	0.09	1.7	1.3	33.3	33.3	80.0	234.8	770.2	92,700.7
2.50	2.25	105.0	19.6	1.0	0.0	17	33.8	0.0	0.12	0.12	1.7	1.3	33.3	33.3	80.0	233.5	766.1	91,698.5
3.00	2.75	105.0	19.6	1.0	0.0	17	33.8	0.0	0.14	0.14	1.7	1.3	33.3	33.3	80.0	232.3	762.0	90,738.2
3.50	3.25	105.0	19.6	1.0	0.0	17	33.8	0.0	0.17	0.17	1.7	1.3	33.3	33.3	80.0	231.1	758.2	89,816.9
4.00	3.75	105.0	7.6	3.0	0.0	17	27.0	0.0	0.20	0.20	1.7	1.1	12.9	12.9	49.7	196.2	643.7	64,746.9
4.50	4.25	105.0	7.6	3.0	0.0	17	27.0	0.0	0.22	0.22	1.7	1.1	12.9	12.9	49.7	195.3	640.6	64,123.0
5.00	4.75	105.0	7.6	3.0	0.0	17	27.0	0.0	0.25	0.25	1.7	1.1	12.9	12.9	49.7	194.3	637.6	63,526.0
5.50	5.25	105.0	6.5	5.0	0.0	17	26.2	0.0	0.28	0.28	1.7	1.1	11.1	11.1	46.1	188.7	619.1	59,894.6
6.00	5.75	105.0	6.5	5.0	0.0	17	26.2	0.0	0.30	0.30	1.7	1.1	11.1	11.1	46.1	187.9	616.4	59,364.0
6.50	6.25	105.0	6.5	5.0	0.0	17	26.2	0.0	0.33	0.33	1.7	1.1	11.1	11.1	46.1	187.1	613.7	58,854.2
7.00	6.75	105.0	13.2	4.0	0.0	17	30.2	0.0	0.35	0.35	1.6	1.2	21.3	21.3	64.0	209.9	688.5	74,067.8
7.50	7.25	105.0	13.4	4.0	0.0	17	30.2	0.0	0.38	0.36	1.6	1.2	21.3	21.3	64.0	210.4	690.2	74,431.7
8.00	7.75	105.0	13.6	4.0	0.0	17	30.3	0.0	0.41	0.37	1.6	1.2	21.4	21.4	64.1	212.0	695.7	75,624.8
8.50	8.25	105.0	13.8	4.0	0.0	17	30.3	0.0	0.43	0.38	1.6	1.2	21.5	21.5	64.2	213.6	700.8	76,731.5
9.00	8.75	110.0	63.5	2.0	0.0	17	37.7	0.0	0.46	0.39	1.3	1.3	82.5	82.5	100.0	270.4	887.2	128,863.0
9.50	9.25	110.0	64.3	2.0	0.0	17	37.7	0.0	0.49	0.40	1.3	1.3	82.9	82.9	100.0	272.6	894.2	130,902.2
10.00	9.75	110.0	65.0	2.0	0.0	17	37.7	0.0	0.52	0.41	1.3	1.3	83.3	83.3	100.0	274.6	901.0	132,877.3
10.50	10.25	110.0	65.8	2.0	0.0	17	37.7	0.0	0.54	0.43	1.3	1.3	83.6	83.6	100.0	276.6	907.4	134,792.2
11.00	10.75	110.0	66.4	2.0	0.0	17	37.7	0.0	0.57	0.44	1.3	1.3	83.8	83.8	100.0	278.5	913.7	136,650.8

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Z_b (ft)	Z_m (ft)	G_0 (tsf)	σ_p' (tsf)	OCR_{G0}	S_u/σ_{v0}'	K_0	r_d	MSF	K_σ	K_α	$CSR_{7.5}$	$CRR_{7.5}$	FS	τ_{av} (tsf)	p (tsf)	G/G_0	γ_{max} (%)	ε_v (%)
0.50	0.25	1,002.4	0.07	5.0		1.1	1.00	1.00	1.10	1.00	0.42	0.80		0.01	0.01	0.6266	0.001	0.0000
1.00	0.75	990.4	0.20	5.0		1.1	1.00	1.00	1.10	1.00	0.42	0.80		0.02	0.04	0.3493	0.002	0.0000
1.50	1.25	979.0	0.33	5.0		1.1	1.00	1.00	1.10	1.00	0.42	0.80		0.03	0.07	0.2134	0.004	0.0000
2.00	1.75	968.0	0.46	5.0		1.1	1.00	1.00	1.10	1.00	0.42	0.80		0.04	0.10	0.1386	0.005	0.0000
2.50	2.25	957.6	0.59	5.0		1.1	1.00	1.00	1.10	1.00	0.42	0.80		0.05	0.12	0.0880	0.007	0.0000
3.00	2.75	947.6	0.72	5.0		1.1	1.00	1.00	1.10	1.00	0.42	0.80		0.07	0.15	0.0559	0.010	0.0000
3.50	3.25	937.9	0.85	5.0		1.1	0.99	1.00	1.10	1.00	0.42	0.80		0.08	0.18	0.0367	0.012	0.0000
4.00	3.75	676.1	0.98	5.0		1.1	0.99	1.00	1.10	1.00	0.42	0.14		0.09	0.21	0.0333	0.026	0.0337
4.50	4.25	669.6	1.12	5.0		1.1	0.99	1.00	1.10	1.00	0.42	0.14		0.10	0.24	0.0354	0.032	0.0497
5.00	4.75	663.4	1.22	4.9		1.1	0.99	1.00	1.10	1.00	0.42	0.14		0.11	0.27	0.0395	0.040	0.0700
5.50	5.25	625.5	1.25	4.5		1.1	0.99	1.00	1.10	1.00	0.42	0.13		0.13	0.29	0.0400	0.057	0.1294
6.00	5.75	619.9	1.30	4.3		1.1	0.99	1.00	1.10	1.00	0.41	0.13		0.14	0.31	0.0409	0.070	0.1739
6.50	6.25	614.6	1.35	4.1		1.0	0.99	1.00	1.10	1.00	0.41	0.13		0.15	0.34	0.0418	0.085	0.2294
7.00	6.75	773.5	1.56	4.5		1.1	0.99	1.00	1.10	1.00	0.42	0.22	0.53	0.16	0.36		5.357	1.4620
7.50	7.25	777.3	1.58	4.4		1.1	0.98	1.00	1.10	1.00	0.44	0.22	0.51	0.17	0.37		5.355	1.4624
8.00	7.75	789.7	1.62	4.4		1.0	0.98	1.00	1.10	1.00	0.46	0.22	0.49	0.18	0.38		5.352	1.4564
8.50	8.25	801.3	1.65	4.4		1.0	0.98	1.00	1.10	1.00	0.47	0.23	0.48	0.20	0.39		5.346	1.4514
9.00	8.75	1,345.7	1.95	5.0		1.0	0.98	1.00	1.10	1.00	0.49	1.30	2.00	0.21	0.40		0.000	0.0000
9.50	9.25	1,367.0	2.01	5.0		1.0	0.98	1.00	1.10	1.00	0.50	1.30	2.00	0.22	0.41		0.000	0.0000
10.00	9.75	1,387.6	2.07	5.0		1.0	0.98	1.00	1.10	1.00	0.51	1.30	2.00	0.23	0.42		0.000	0.0000
10.50	10.25	1,407.6	2.13	5.0		1.0	0.98	1.00	1.10	1.00	0.52	1.30	2.00	0.24	0.44		0.000	0.0000
11.00	10.75	1,427.0	2.19	5.0		1.0	0.97	1.00	1.10	1.00	0.53	1.30	2.00	0.26	0.45		0.000	0.0000

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Z_b (ft)	Z_m (ft)	ΔS_i	ΣS_i (in)	ΔD_i	ΣD_i (in)	G_0 (tsf) $_{Pd}$	G/G_{0Pd}	γ_{max} (%) $_{Pd}$	ε_v (%) $_{Pd}$	ΔS_i	ΣS_i (in) $_{Pd}$	γ_{max} (%) $_{TS}$	ε_v (%) $_{TS}$	ΔS_i	ΣS_i (in) $_{TS}$
0.50	0.25	0.00	0.39			1,002.4	0.9295	0.001	0.0000	0.00	0.42	0.001	0.0000	0.00	0.44
1.00	0.75	0.00	0.39			990.4	0.8762	0.002	0.0000	0.00	0.42	0.002	0.0000	0.00	0.44
1.50	1.25	0.00	0.39			979.0	0.8350	0.004	0.0000	0.00	0.42	0.004	0.0000	0.00	0.44
2.00	1.75	0.00	0.39			968.0	0.7985	0.005	0.0000	0.00	0.42	0.006	0.0000	0.00	0.44
2.50	2.25	0.00	0.39			957.6	0.7645	0.007	0.0000	0.00	0.42	0.008	0.0000	0.00	0.44
3.00	2.75	0.00	0.39			947.6	0.7322	0.010	0.0000	0.00	0.42	0.010	0.0000	0.00	0.44
3.50	3.25	0.00	0.39			937.9	0.7012	0.012	0.0000	0.00	0.42	0.013	0.0000	0.00	0.44
4.00	3.75	0.00	0.39			676.1	0.5092	0.026	0.0785	0.00	0.42	0.026	0.1116	0.01	0.43
4.50	4.25	0.00	0.39			669.6	0.4701	0.032	0.1007	0.01	0.41	0.033	0.1391	0.01	0.42
5.00	4.75	0.00	0.38			663.4	0.4308	0.040	0.1280	0.01	0.40	0.040	0.1688	0.01	0.41
5.50	5.25	0.01	0.37			625.5	0.3549	0.057	0.2249	0.01	0.39	0.054	0.2813	0.02	0.39
6.00	5.75	0.01	0.36			619.9	0.3179	0.070	0.2861	0.02	0.37	0.065	0.3363	0.02	0.37
6.50	6.25	0.01	0.35			614.6	0.2844	0.086	0.3613	0.02	0.35	0.077	0.3993	0.02	0.35
7.00	6.75	0.09	0.26			773.5		5.357	1.4620	0.09	0.26	5.357	1.4620	0.09	0.26
7.50	7.25	0.09	0.17			777.3		5.355	1.4624	0.09	0.17	5.355	1.4624	0.09	0.17
8.00	7.75	0.09	0.09			789.7		5.352	1.4564	0.09	0.09	5.352	1.4564	0.09	0.09
8.50	8.25	0.09	0.00			801.3		5.346	1.4514	0.09	0.00	5.346	1.4514	0.09	0.00
9.00	8.75	0.00	0.00			1,345.7		0.000	0.0000	0.00	0.00	0.000	0.0000	0.00	0.00
9.50	9.25	0.00	0.00			1,367.0		0.000	0.0000	0.00	0.00	0.000	0.0000	0.00	0.00
10.00	9.75	0.00	0.00			1,387.6		0.000	0.0000	0.00	0.00	0.000	0.0000	0.00	0.00
10.50	10.25	0.00	0.00			1,407.6		0.000	0.0000	0.00	0.00	0.000	0.0000	0.00	0.00
11.00	10.75	0.00	0.00			1,427.0		0.000	0.0000	0.00	0.00	0.000	0.0000	0.00	0.00

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Z_b (ft)	Z_m (ft)	γ_{max} (%) $_{Yi}$	ε_v (%) $_{Yi}$	ΔS_i	ΣS_i (in) $_{Yi}$	γ_{max} (%) $_{UC}$	ε_v (%) $_{UC}$	ΔS_i	ΣS_i (in) $_{UC}$	σ_p' (tsf)	OCR_{Dr}	σ_p' (tsf)	OCR_{N60}	N_{1jpcs}	V_s (m/s) $_{Ad}$	V_s (m/s) $_{UC}$
0.50	0.25	0.003	0.0000	0.00	1.16	0.001	0.0000	0.00	0.39	0.07	5.0	0.11	8.1	46.7	163.3	80.3
1.00	0.75	0.018	0.0000	0.00	1.16	0.002	0.0000	0.00	0.39	0.20	5.0	0.32	8.1	45.1	163.3	104.4
1.50	1.25	0.050	0.0000	0.00	1.16	0.004	0.0000	0.00	0.39	0.33	5.0	0.53	8.1	43.5	163.3	117.9
2.00	1.75	0.108	0.0000	0.00	1.16	0.005	0.0000	0.00	0.39	0.46	5.0	0.74	8.1	42.1	163.3	127.8
2.50	2.25	0.219	0.0000	0.00	1.16	0.007	0.0000	0.00	0.39	0.59	5.0	0.96	8.1	40.7	163.3	135.7
3.00	2.75	0.420	0.0000	0.00	1.16	0.010	0.0000	0.00	0.39	0.72	5.0	1.17	8.1	39.5	163.3	142.4
3.50	3.25	0.757	0.0000	0.00	1.16	0.012	0.0000	0.00	0.39	0.85	5.0	1.38	8.1	38.3	163.3	148.2
4.00	3.75	0.939	2.1272	0.13	1.03	0.026	0.0337	0.00	0.39	0.45	2.3	0.90	4.6	14.3	128.3	139.9
4.50	4.25	1.000	2.1275	0.13	0.90	0.032	0.0497	0.00	0.39	0.51	2.3	1.02	4.6	13.9	128.3	144.2
5.00	4.75	1.000	2.1275	0.13	0.77	0.040	0.0700	0.00	0.38	0.57	2.3	1.14	4.6	13.5	128.3	148.1
5.50	5.25	1.000	2.3464	0.14	0.63	0.057	0.1294	0.01	0.37	0.52	1.9	1.15	4.2	11.3	123.6	149.5
6.00	5.75	1.000	2.3466	0.14	0.49	0.070	0.1739	0.01	0.36	0.57	1.9	1.26	4.2	11.0	123.6	152.8
6.50	6.25	1.000	2.3466	0.14	0.35	0.085	0.2294	0.01	0.35	0.62	1.9	1.37	4.2	10.8	123.6	155.8
7.00	6.75	5.357	1.4620	0.09	0.26	5.357	1.4620	0.09	0.26	1.37	3.9	2.21	6.4	21.5	145.9	169.0
7.50	7.25	5.355	1.4624	0.09	0.17	5.355	1.4624	0.09	0.17	1.41	3.9	2.30	6.4	21.5	145.9	170.4
8.00	7.75	5.352	1.4564	0.09	0.09	5.352	1.4564	0.09	0.09	1.45	3.9	2.38	6.5	21.7	146.2	171.9
8.50	8.25	5.346	1.4514	0.09	0.00	5.346	1.4514	0.09	0.00	1.46	3.9	2.40	6.4	21.8	147.3	173.3
9.00	8.75	0.000	0.0000	0.00	0.00	0.000	0.0000	0.00	0.00	1.95	5.0	6.00	15.4	99.0	208.7	202.1
9.50	9.25	0.000	0.0000	0.00	0.00	0.000	0.0000	0.00	0.00	2.01	5.0	6.05	15.1	99.2	210.5	203.8
10.00	9.75	0.000	0.0000	0.00	0.00	0.000	0.0000	0.00	0.00	2.07	5.0	6.09	14.7	99.3	212.3	205.4
10.50	10.25	0.000	0.0000	0.00	0.00	0.000	0.0000	0.00	0.00	2.13	5.0	6.13	14.4	99.3	214.0	207.0
11.00	10.75	0.000	0.0000	0.00	0.00	0.000	0.0000	0.00	0.00	2.19	5.0	6.17	14.1	99.3	215.6	208.6

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Z_b (ft)	Z_m (ft)	V_s (m/s) $_{UCSa}$	V_s (m/s) $_{UCSi}$	V_s (m/s) $_{UCCly}$	V_s (m/s) $_{WDall}$	V_s (m/s) $_{WDSa}$	V_s (m/s) $_{WDSiC}$	p/p_a	V_{sp} (m/s) $_{Yi}$	V_{sv} (m/s) $_{Yi}$	σ_m' (tsf) $_{Yi}$	OCR_{Yi}	G_0 (tsf) $_{Yi}$	LDI (in)
0.50	0.25	80.3	79.2	111.9	60.57	62.68	46.39	0.013	126.70	156.08	0.014	5.00	281.94	
1.00	0.75	104.4	101.9	134.0	81.93	80.70	65.93	0.039	126.70	156.08	0.042	5.00	281.94	
1.50	1.25	117.9	114.6	145.7	94.29	90.76	77.64	0.066	126.70	156.08	0.069	5.00	281.94	
2.00	1.75	127.8	123.8	154.0	103.43	98.07	86.47	0.092	126.70	156.08	0.097	5.00	281.94	
2.50	2.25	135.7	131.1	160.5	110.83	103.90	93.71	0.118	126.70	156.08	0.121	4.63	281.94	
3.00	2.75	142.4	137.3	165.8	117.12	108.81	99.92	0.144	126.70	156.08	0.143	4.21	281.94	
3.50	3.25	148.2	142.7	170.5	122.62	113.07	105.41	0.171	126.70	156.08	0.164	3.89	281.94	
4.00	3.75	139.9	124.4	140.2	103.93	93.87	93.86	0.203	128.14	153.68	0.195	3.67	288.39	
4.50	4.25	144.2	128.0	143.1	107.57	96.61	97.69	0.230	128.14	153.67	0.217	3.46	288.39	
5.00	4.75	148.1	131.3	145.7	110.91	99.11	101.23	0.255	128.14	153.67	0.239	3.28	288.39	
5.50	5.25	149.5	130.8	143.1	110.40	98.00	101.90	0.276	133.81	156.34	0.265	3.26	314.49	
6.00	5.75	152.8	133.6	145.3	113.20	100.07	104.91	0.298	138.40	156.33	0.289	3.22	336.44	
6.50	6.25	155.8	136.2	147.3	115.82	102.00	107.75	0.319	142.75	156.33	0.313	3.19	357.91	
7.00	6.75	169.0	156.5	174.9	136.89	121.55	123.66	0.340	145.06	163.67	0.320	3.15	369.57	
7.50	7.25	170.4	157.9	176.2	138.39	122.73	125.12	0.349	146.73	163.83	0.329	3.14	378.13	
8.00	7.75	171.9	159.5	177.8	140.03	124.06	126.67	0.359	148.36	164.26	0.339	3.13	386.58	
8.50	8.25	173.3	161.0	179.3	141.62	125.33	128.18	0.368	149.91	165.60	0.348	3.11	394.70	
9.00	8.75	202.1	214.7	255.7	198.13	179.16	167.66	0.378	148.77	181.84	0.332	3.10	407.27	
9.50	9.25	203.8	216.7	257.8	200.33	180.94	169.65	0.390	150.39	183.34	0.341	3.08	416.16	
10.00	9.75	205.4	218.6	259.7	202.46	182.66	171.59	0.401	151.97	184.80	0.350	3.06	424.96	
10.50	10.25	207.0	220.5	261.6	204.53	184.32	173.48	0.413	153.52	186.23	0.359	3.04	433.69	
11.00	10.75	208.6	222.3	263.4	206.54	185.93	175.32	0.424	155.05	187.62	0.368	3.02	442.34	

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Liquefaction: Boulanger Idriss (2010-16)
Settl.: [dry] Yi (2022)[CPT]; [sat] Tokimatsu Seed (1987)

Z_b (ft)	Z_m (ft)	FS_{50}	FS_{85}	D_E	C_{ri}	N_i
0.50	0.25			1.00	0.75	18.0
1.00	0.75			1.00	0.75	18.0
1.50	1.25			1.00	0.75	18.0
2.00	1.75			1.00	0.75	18.0
2.50	2.25			1.00	0.75	18.0
3.00	2.75			1.00	0.75	18.0
3.50	3.25			1.00	0.75	18.0
4.00	3.75			1.00	0.75	8.0
4.50	4.25			1.00	0.75	8.0
5.00	4.75			1.00	0.75	8.0
5.50	5.25			1.00	0.75	7.0
6.00	5.75			1.00	0.75	7.0
6.50	6.25			1.00	0.75	7.0
7.00	6.75	0.60	0.68	0.33	0.75	13.0
7.50	7.25	0.58	0.66	0.33	0.76	13.0
8.00	7.75	0.56	0.64	0.33	0.77	13.0
8.50	8.25	0.54	0.62	0.33	0.78	13.0
9.00	8.75	2.00	2.00	1.00	0.79	55.0
9.50	9.25	2.00	2.00	1.00	0.81	55.0
10.00	9.75	2.00	2.00	1.00	0.81	55.0
10.50	10.25	2.00	2.00	1.00	0.82	55.0
11.00	10.75	2.00	2.00	1.00	0.83	55.0

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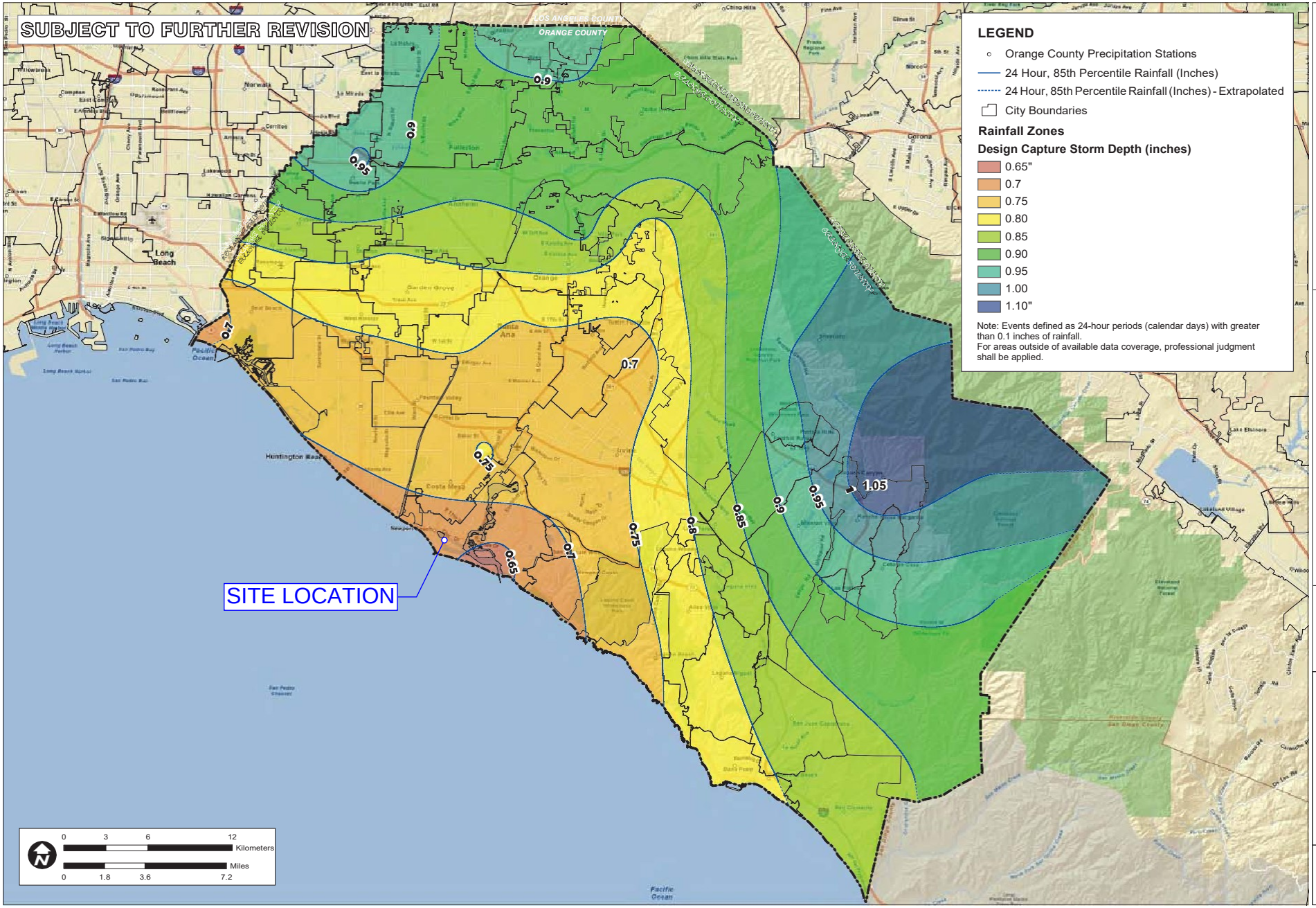
ATTACHMENT C

TECHNICAL GUIDANCE DOCUMENT EXHIBITS



RAINFALL ZONES

ORANGE COUNTY TECHNICAL GUIDANCE DOCUMENT

ORANGE CO., CA

SCALE	1" = 6 miles
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	04/22/10
JOB NO.	9526-E

PACE Advanced Water Engineering

FIGURE XVI-1

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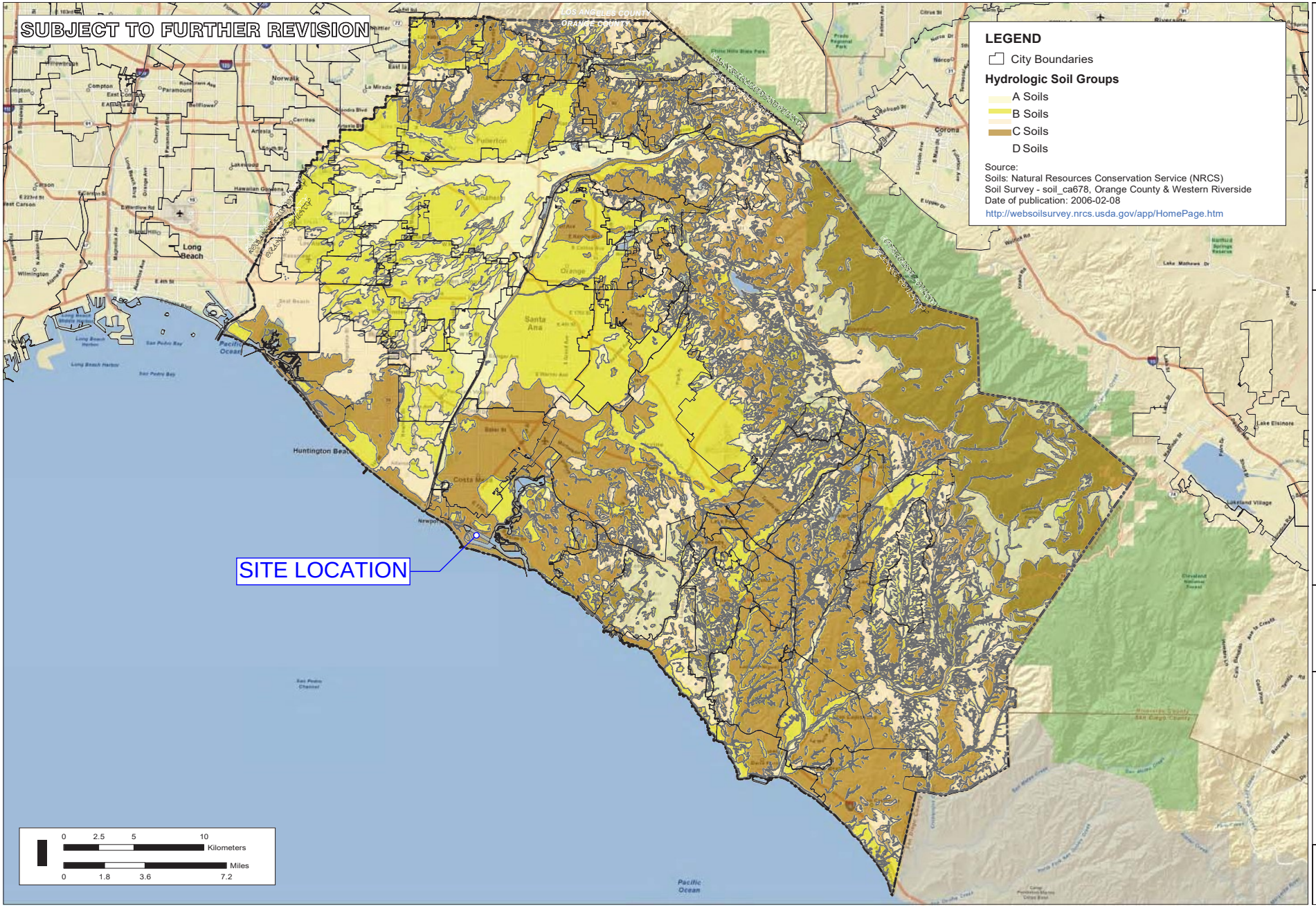

TITLE
NRCS HYDROLOGIC SOILS GROUPS

JOB
ORANGE COUNTY INFILTRATION STUDY
CA
ORANGE CO.

SCALE	1" = 1.8 miles
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	02/09/11
JOB NO.	9526-E

PACE
Advanced Water Engineering

FIGURE
XVI-2a

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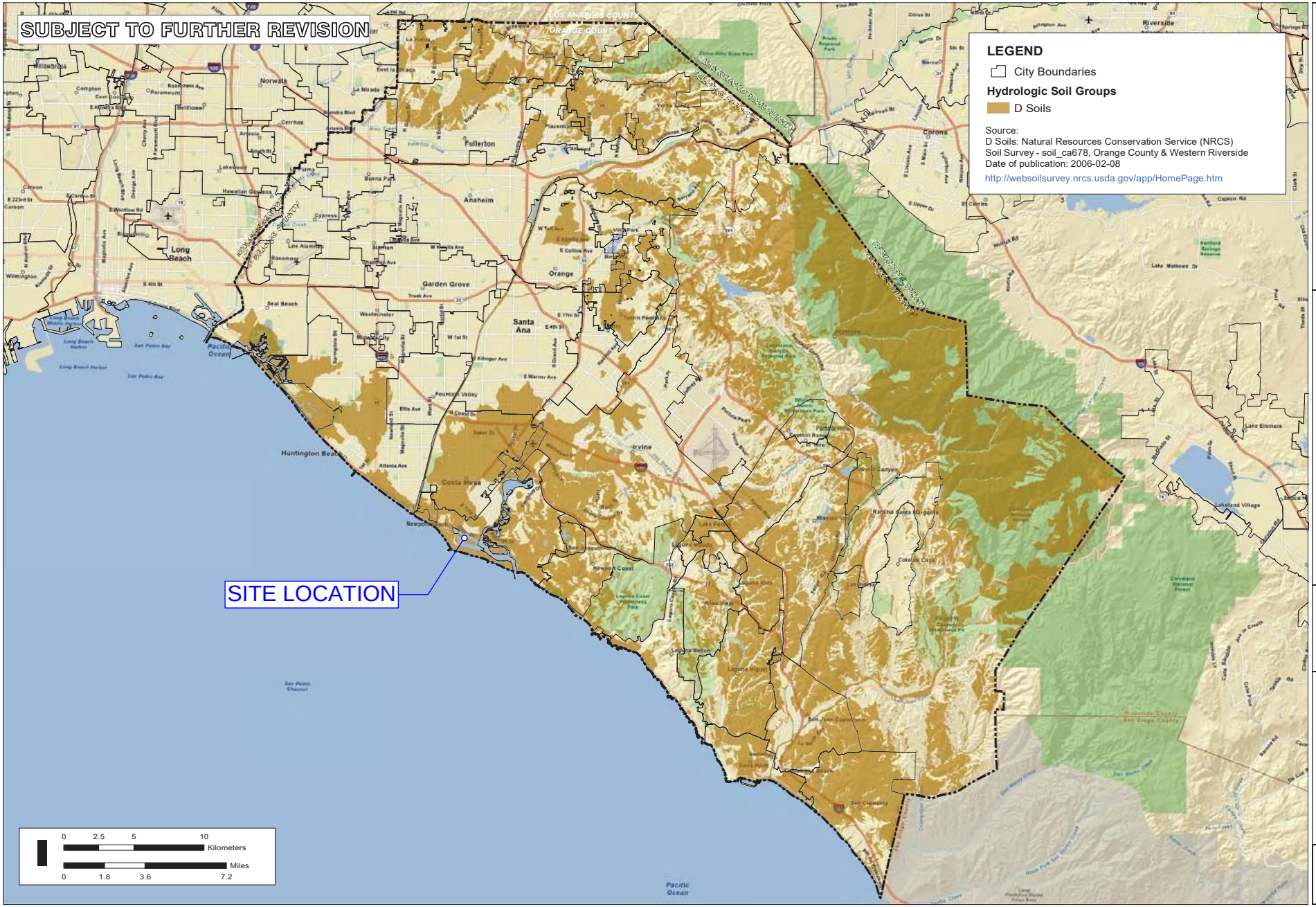

HYDROLOGIC SOIL GROUP
TYPE D NRCS SOIL SURVEY

ORANGE COUNTY
INFILTRATION STUDY

ORANGE CO., CA

SCALE	1" = 1.8 miles
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	02/09/11
JOB NO.	9526-E

PACE
Advanced Water Engineering

FIGURE
XVI-2b

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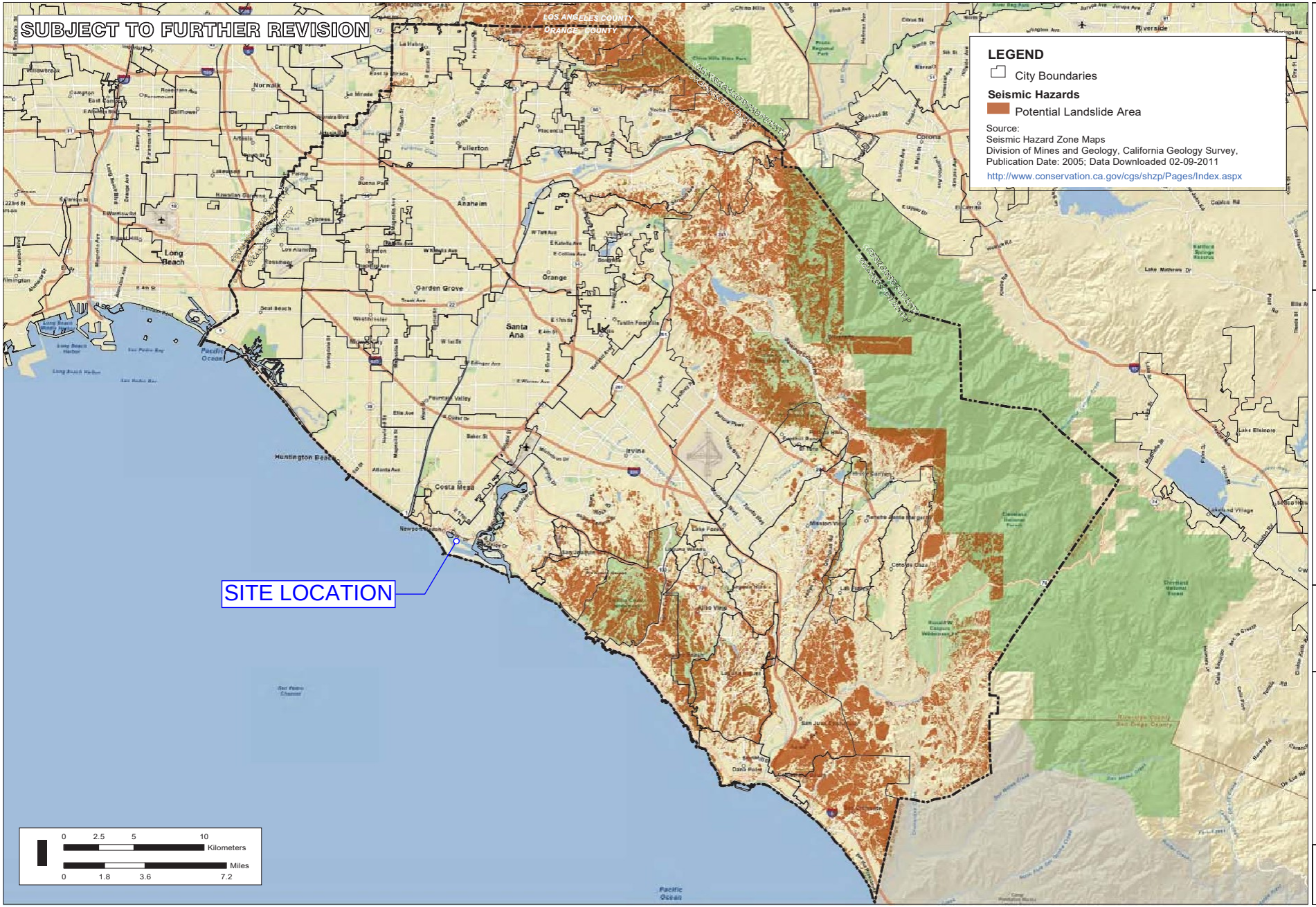


HYDROLOGIC SOIL GROUP
TYPE D NRCS SOIL SURVEY

ORANGE COUNTY
INFILTRATION STUDY

ORANGE CO., CA

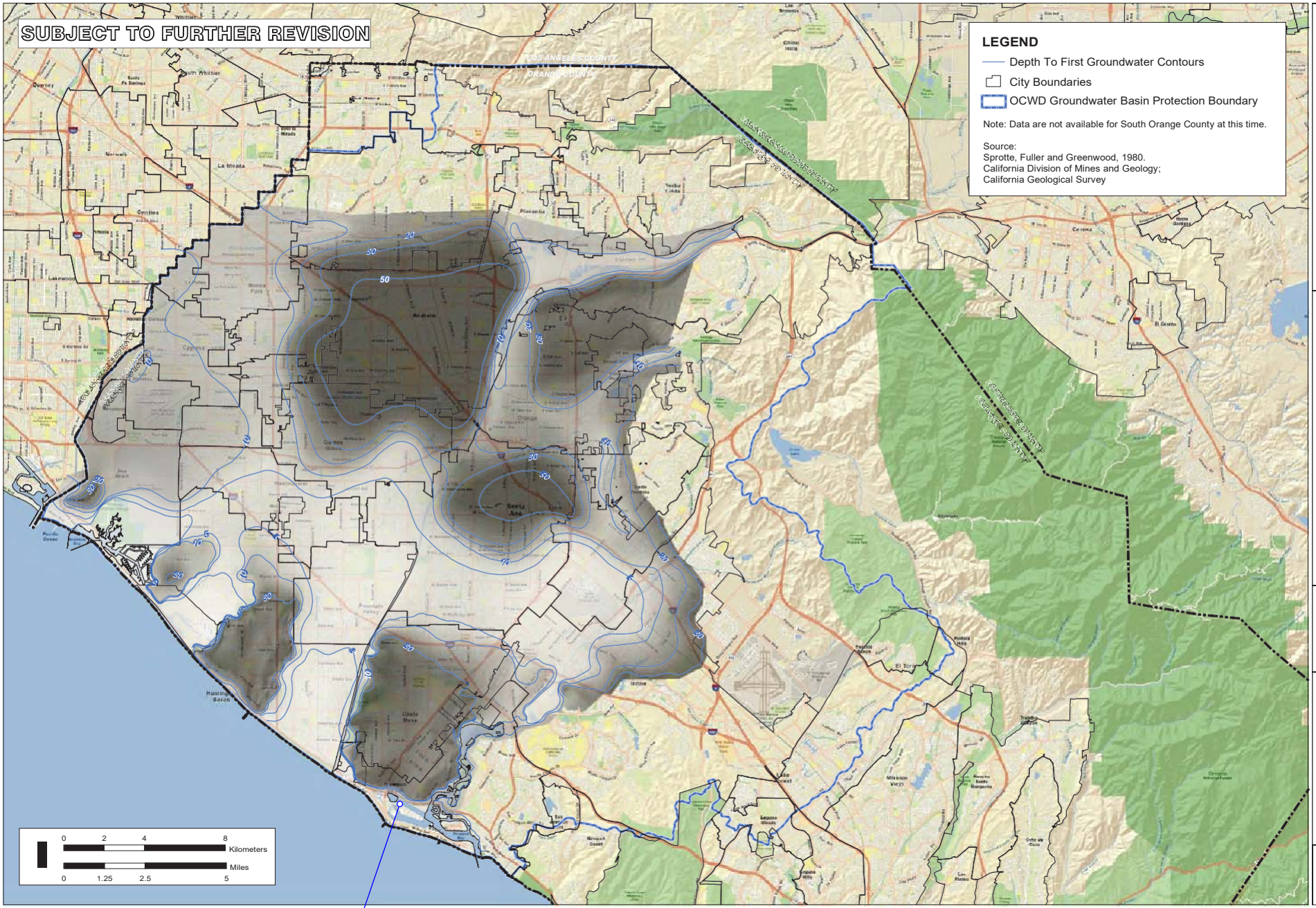
JOB

SCALE	1" = 1.25 miles
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	02/09/11
JOB NO.	9526-E

PACE
Advanced Water Engineering

FIGURE
XVI-2c

P:\9526\EV\6-GIS\Mxds\Reports\InfiltrationFeasability_20110215\9526E_FigureXVI-2c_Landslides_20110215.mxd



NORTH ORANGE COUNTY
MAPPED DEPTH TO FIRST
GROUNDWATER

TITLE

ORANGE COUNTY
INFILTRATION STUDY

JOB

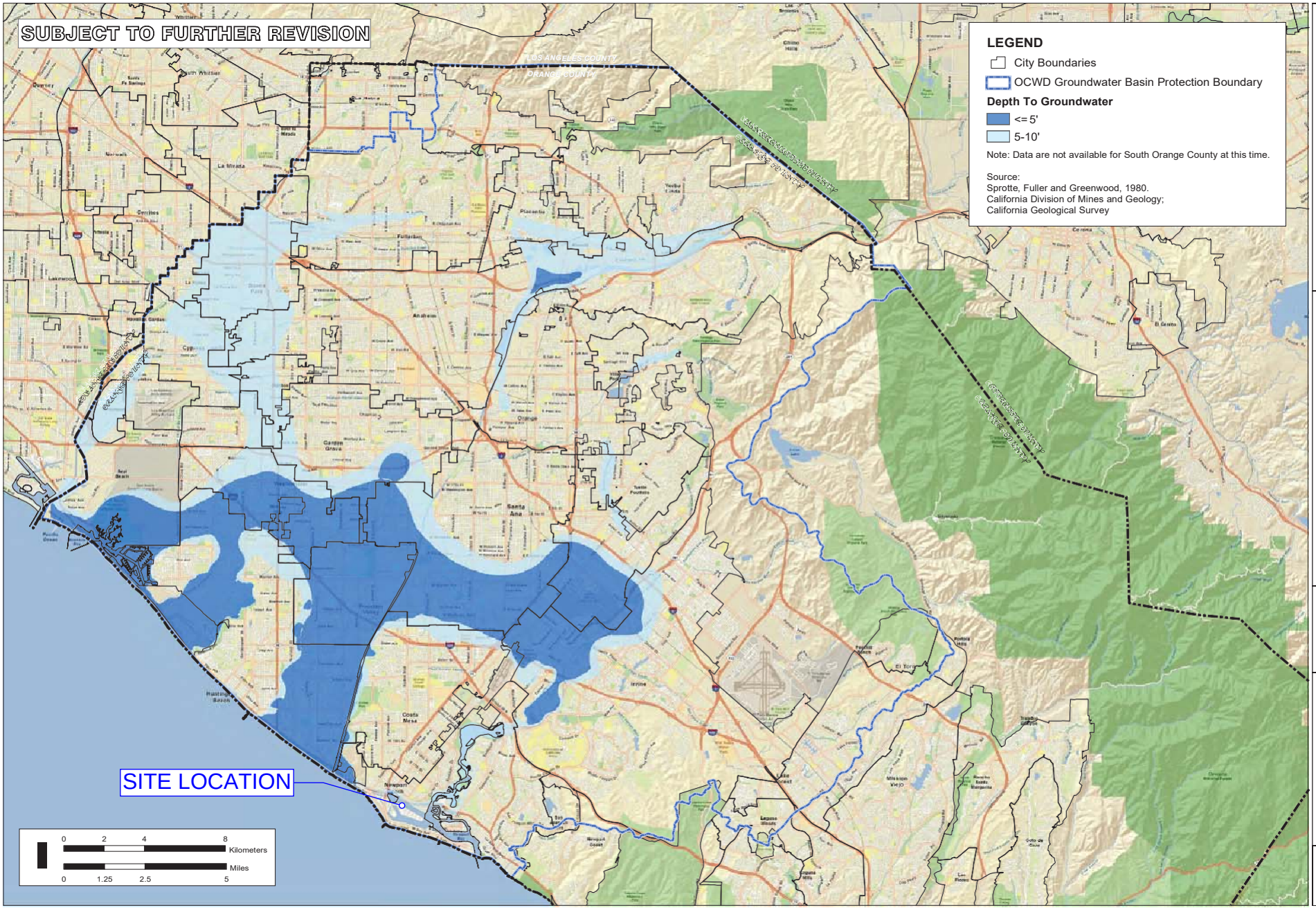
ORANGE CO. CA

SCALE	1" = 1.25 miles
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	02/28/11
JOB NO.	9526-E

PACE
Advanced Water Engineering

FIGURE
XVI-2d

P:\9526E\6-GIS\Mxds\Reports\InfiltrationFeasibility_20110215\9526E_FigureXVI-2d_DepthToGroundwaterOverview_20110215.mxd



NORTH ORANGE COUNTY
MAPPED SHALLOW GROUNDWATER

ORANGE COUNTY
INFILTRATION STUDY

ORANGE CO. CA

SCALE	1" = 1.25 miles
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	02/28/11
JOB NO.	9526-E

PACE
Advanced Water Engineering

FIGURE
XVI-2e

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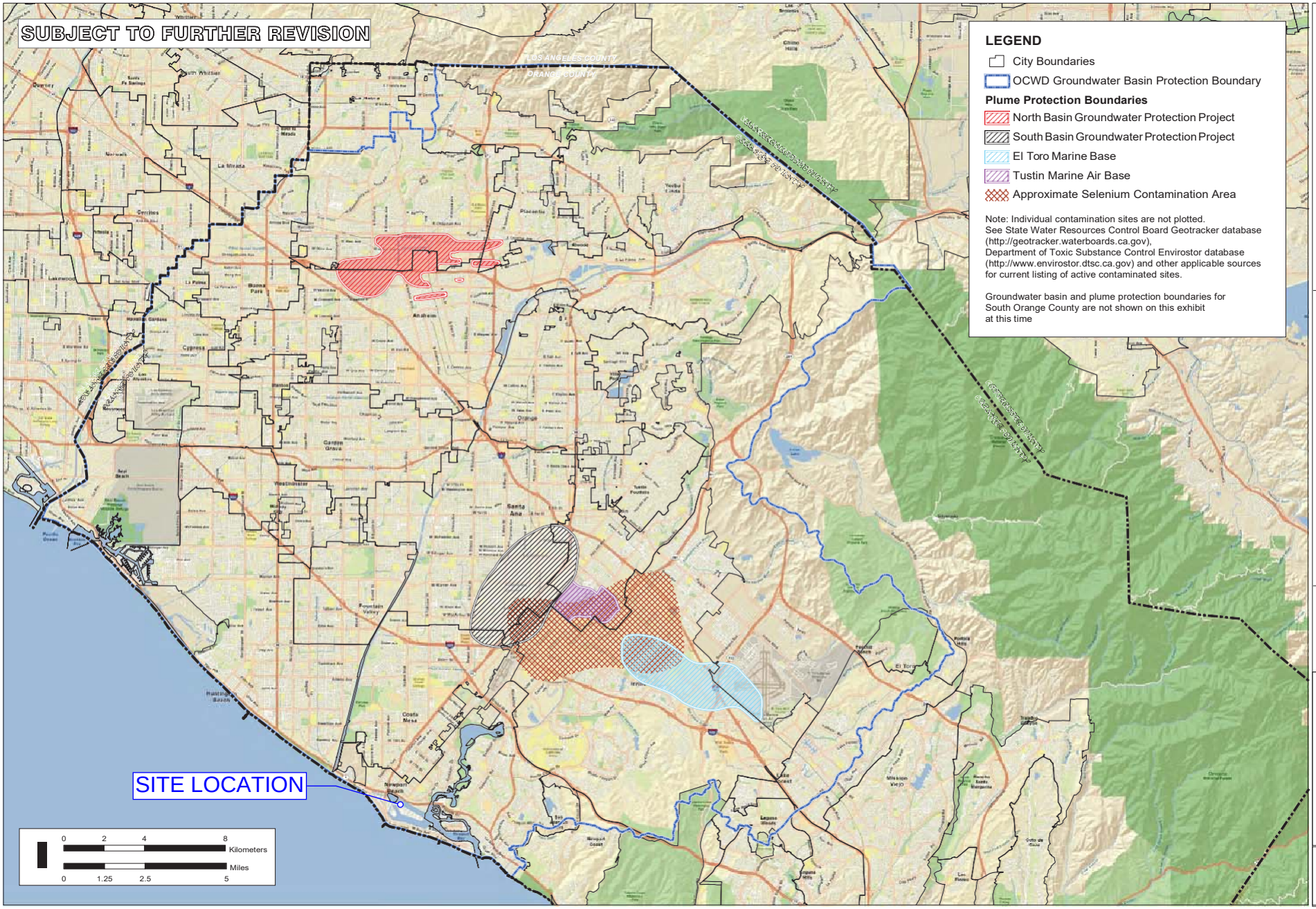


NORTH ORANGE COUNTY GROUNDWATER PROTECTION AREAS

TITLE

ORANGE COUNTY INFILTRATION STUDY

JOB

ORANGE CO. CA

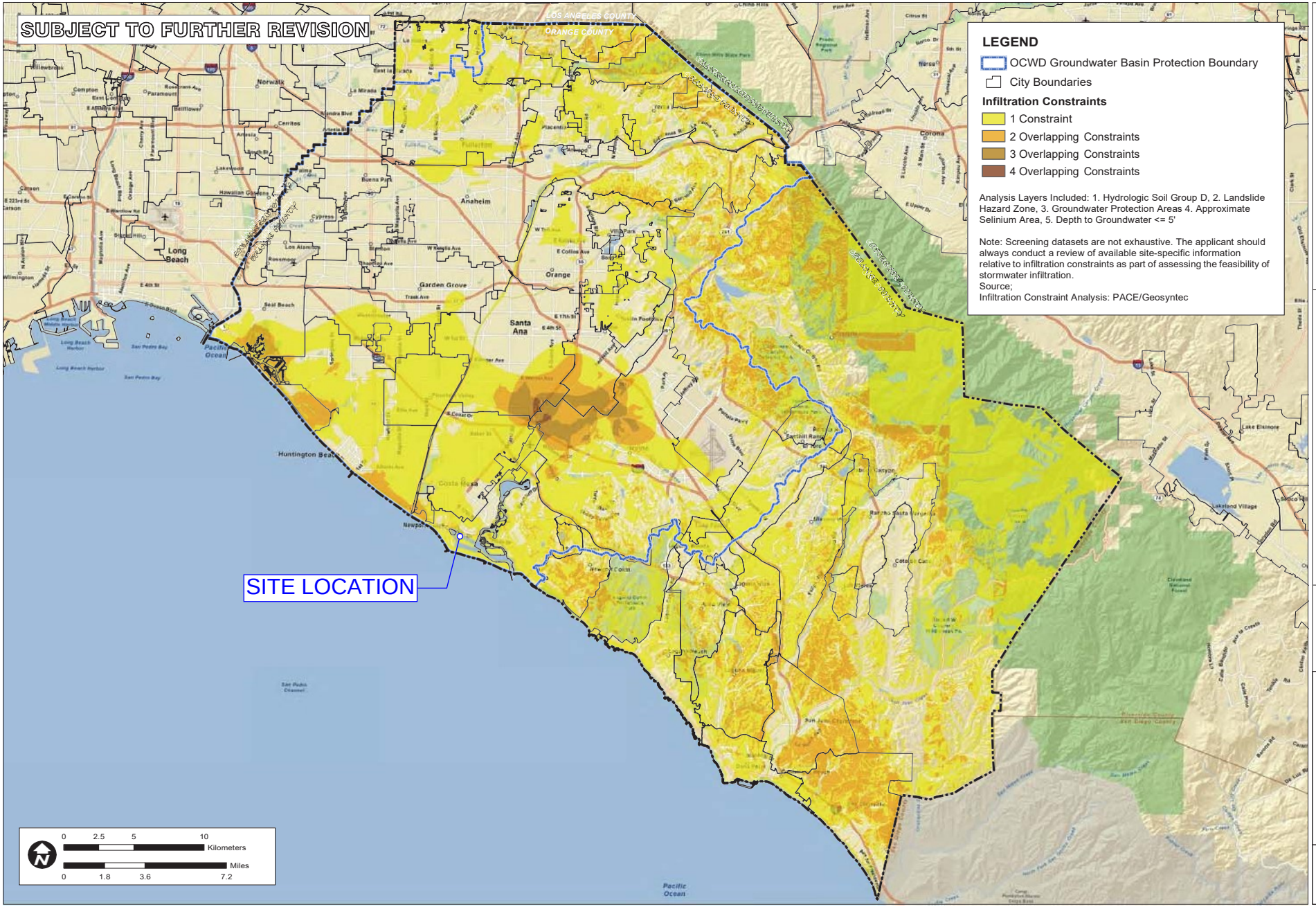
SCALE	1" = 1.25 miles
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	04/22/10
JOB NO.	9526-E

PACE Advanced Water Engineering

FIGURE

XVI-2f

P:\9526E\6-GIS\Mxds\Reports\InfiltrationFeasibility_20110215\9526E_FigureXVI-2f_NorthOCGroundwaterProtectionAreasStreetMap_20110215.mxd



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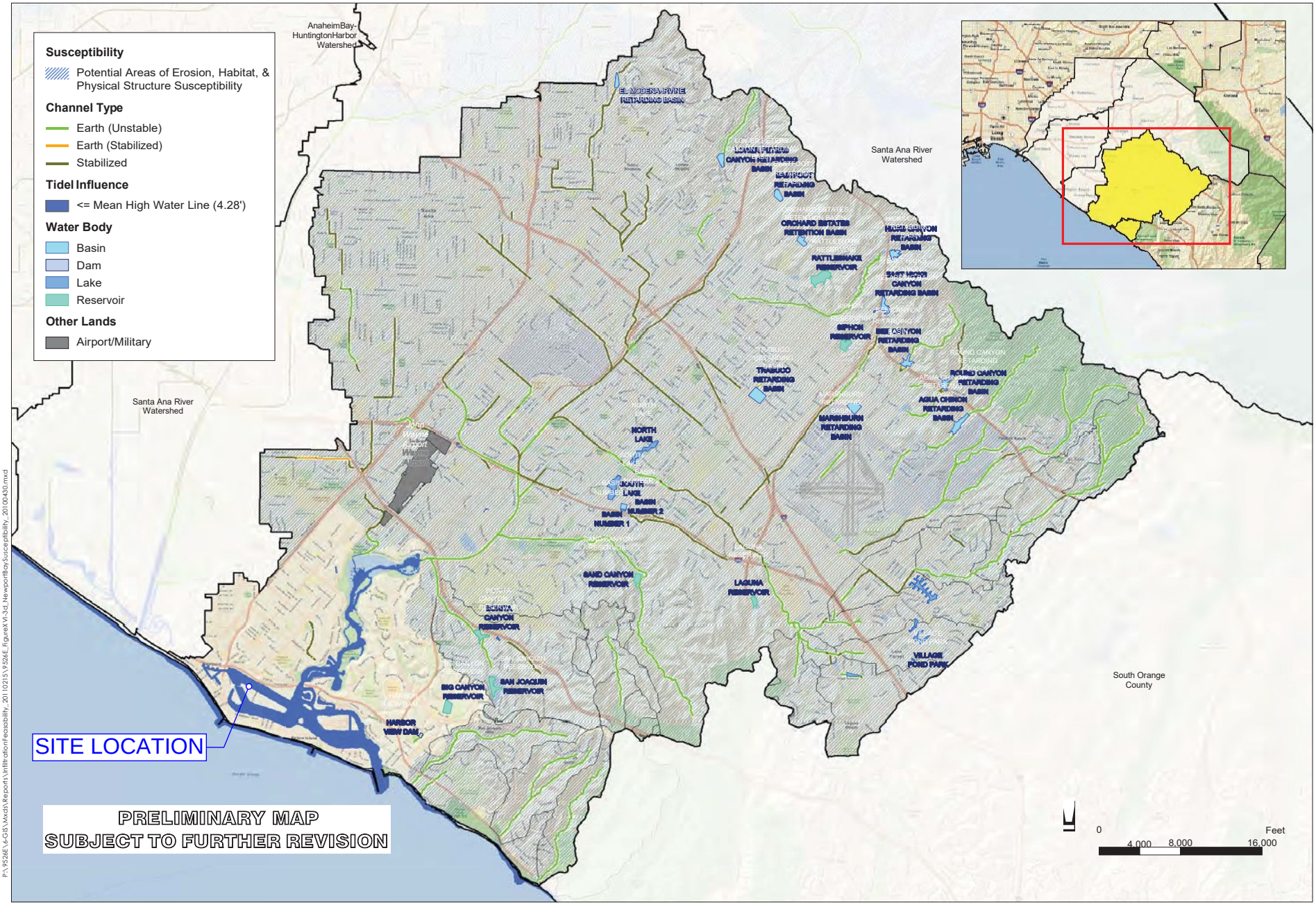

SUSCEPTIBILITY ANALYIS
NEWPORT BAY-
NEWPORT COASTAL STREAMS

TITLE

ORANGE COUNTY
WATERSHED
MASTER PLANNING

JOB

CA
ORANGE CO.

SCALE	1" = 4000'
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	04/30/10
JOB NO.	9526-E

PACE
Advanced Water Engineering

FIGURE
XVI-3d

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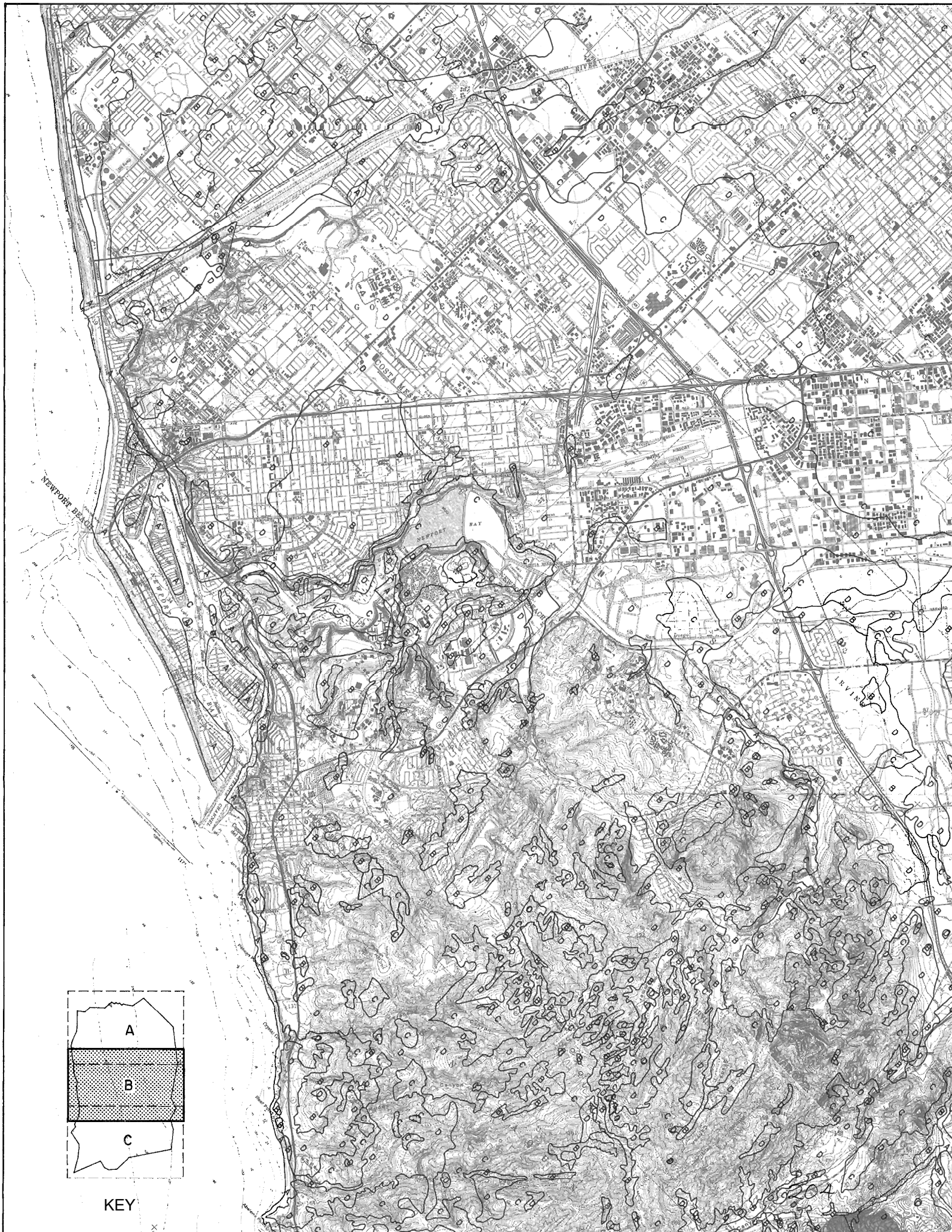

A
B
C
KEY
NEWPORT BEACH
NEWPORT BAY
SANTIAGO
COSTA MESA
IRVINE

ATTACHMENT D

OPERATIONS AND MAINTENANCE (O&M) PLAN

BMP Inspection/Maintenance			
BMP	**Reponsible Party(s)**	**Inspection/ Maintenance Activities Required**	**Minimum Frequency of Activities**
Trench Drains	Owner	Removal of debris, sediments, trash	Semi-Annually
Bottomless Trench Drain	Owner	Removal of debris, sediments, trash	Semi-Annually
Roof Downspout Filter Box	Owner	Service, Replacement & Disposal	Service: Three Times a Year; Replacement & Disposal: Annually

Source Control BMP	Activity	Frequency
N1. Education for Property Owner's Tenants and Occupants	Distribute appropriate materials to owners, tenants, and/or occupants via contract language, mailings, website, or meetings.	Information provided to owners and tenants upon sale or lease. Reminders sent or posted as needed.
	Check www.ocwatersheds.com and/or City website for updated educational materials.	Annually
N3/S4. Common Area Landscape Management, Efficient Landscape Design, and Efficient Irrigation	Check that fertilizer and pesticide usage is in accordance wiN1th the Integrated Pest Management Program. Adjust, if needed.	Annually
N2. Activity Restrictions	Check the irrigation system water budget to ensure efficiency targets are being met and the system is in good condition. Adjust/repair irrigation system and controllers, if needed.	Annually prior to irrigation system activation
N3/S4. Common Area Landscape Management, Efficient Landscape Design, and Efficient Irrigation N11. Common Area Litter Control	Check landscaping for presence of invasive species and remove, if needed.	Annually
	Remove trash from around trash enclosure, inspect to ensure lids closed, structurally sound, and not overflowing. Repair or replace, as needed.	Monthly
	Inspect common area for litter and trash disposal violations by homeowners and reporting to the HOA or responsible party for investigation. Remove litter, as needed.	Weekly
N14. Common Area Catch Basin Inspection N15. Street Sweeping Private Streets and Parking Lots	If spills of hazardous materials occur, clean up spill, but prevent wash water from entering storm drain system.	As needed
	Remove trash and debris from catch basins and grates. Check for damage, clogging, and standing water. Repair or mitigate clogging/standing water, as needed.	Four times per year during wet season, including inspection just before the wet season and within 24 hours after at least two storm events >0.5 inches

Source Control BMP	Activity	Frequency
	Sweep curb and gutter areas using a vacuum street sweeper. Report any significant or illicit debris in curb/gutter to HOA or responsible party, as needed.	Weekly
S1. Provide Storm Drain System Stenciling and Signage	Check that all catch basins in paved areas marked or stenciled with "No dumping-Drains to Ocean; No Descargue Basura" language. Replace/repaint markings if faded, damaged, removed, or otherwise illegible.	Annually
S2. Design and Construct Outdoor Material Storage Areas	Check outdoor material storage structure to ensure structural stability is sound and that no contact of the stored materials with rainfall or runoff is occurring. Check secondary containment for leaks. Repair leaks or damage, as needed and mitigate, if coming into contact with stormwater.	Twice per year
S3. Design and Construct Trash and Waste Storage Areas	Check that outdoor waste storage structure is consistently covered, that structural stability is sound, and that no run-on or contact of the trash with runoff is occurring. Repair leaks or damage and mitigate if trash coming into contact with stormwater, as needed.	Twice per year
S2. Design and Construct Outdoor Material Storage Areas	Check that trash is removed by local waste management contractor on at least a weekly basis for proper disposal.	Weekly

Infiltration Facility Operations and Maintenance

General Requirements

Infiltration facility maintenance should include frequent inspections to ensure that water infiltrates into the subsurface completely within the recommended infiltration time of 72 hours or less after a storm (see Appendix E for guidance on facility inspection and Appendix F for an infiltration inspection and maintenance checklist).

Maintenance and regular inspections are of primary importance if infiltration basins and trenches are to continue to function as originally designed. A specific maintenance plan shall be developed specific to each facility outlining the schedule and scope of maintenance operations, as well as the documentation and reporting requirements. The following are general maintenance requirements:

1. Regular inspection should determine if the sediment pretreatment structures require routine maintenance.

2. If water is noticed in the basin more than 72 hours after a major storm or in the observation well of the infiltration trench more than 48 hours after a major storm, the infiltration facility may be clogged. Maintenance activities triggered by a potentially clogged facility include:

    - Check for debris/sediment accumulation, rake surface and remove sediment (if any) and evaluate potential sources of sediment and vegetative or other debris (e.g., embankment erosion, channel scour, overhanging trees, etc). If suspected upland sources are outside of the County's jurisdiction, additional pretreatment operations (e.g., trash racks, vegetated swales, etc.) may be necessary.

    - For basins, removal of the top layer of native soil may be required to restore infiltrative capacity.

    - For trenches, assess the condition of the top aggregate layer for sediment buildup and crusting. Remove top layer of pea gravel and replace. If slow draining conditions persist, entire trench may need to be excavated and replaced.

3. Any debris or algae growth located on top of the infiltration facility should be removed and disposed of properly.

4. Facilities should be inspected annually. Trash and debris should be removed as needed, but at least annually prior to the beginning of the wet season.

5. Site vegetation should be maintained as frequently as necessary to maintain the aesthetic appearance of the site, and as follows:

    - Vegetation, large shrubs, or trees that limit access or interfere with basin operation should be pruned or removed.

- Slope areas that have become bare should be revegetated and eroded areas should be regraded prior to being revegetated.
- Grass should be mowed to 4"-9" high and grass clippings should be removed.
- Fallen leaves and debris from deciduous plant foliage should be raked and removed.
- Invasive vegetation, such as Alligatorweed (*Alternanthera philoxeroides*), Halogeton (*Halogeton glomeratus*), Spotted Knapweed (*Centaurea maculosa*), Giant Reed (*Arundo donax*), Castor Bean (*Ricinus communis*), Perennial Pepperweed (*Lepidium latifolium*), and Yellow Starthistle (*Centaurea solstitalis*) must be removed and replaced with non-invasive species. Invasive species should never contribute more than 25% of the vegetated area. For more information on invasive weeds, including biology and control of listed weeds, look at the "encycloweedia" located at the California Department of Food and Agriculture website at http://www.cdfa.ca.gov/wma or the California Invasive Plant Council website at http://portal.cal-ipc.org/weedlist. .
- Dead vegetation should be removed if it exceeds 10% of area coverage. Vegetation should be replaced immediately to maintain cover density and control erosion where soils are exposed.

6. For infiltration basins, sediment buildup exceeding 50% of the forebay sediment storage capacity, as indicated by the steel markers, should be removed. Sediment from the remainder of the basin should be removed when 6 inches of sediment accumulates. Sediments should be tested for toxic substance accumulation in compliance with current disposal requirements if visual or olfactory indications of pollution are noticed. If toxic substances are encountered at concentrations exceeding thresholds of Title 22, Section 66261 of the California Code of Regulations, the sediment must be disposed of in a hazardous waste landfill and the source of the contaminated sediments should be investigated and mitigated to the extent possible.

7. Following sediment removal activities, replanting and/or reseeding of vegetation may be required for reestablishment.

Maintenance Standards

A summary of the routine and major maintenance activities recommended for infiltration facilities is shown in Table 6-1. Detailed routine and major maintenance standards are listed in Tables 6-2 and 6-3.

Table 6-1: Infiltration Facility Routine and Major Maintenance Quick Guide

Inspection and Maintenance Activities Summary	
Routine Maintenance	• Remove trash and debris as required • Repair and reseed erosion near inlet if necessary • Remove any visual evidence of contamination from floatables such as oil and grease • Clean under-drain (if present) and outlet piping to alleviate ponding and restore infiltrative capacity. • Remove minor sediment accumulation, debris and obstructions near inlet and outlet structures as needed • Mow routinely to maintain ideal grass height and to suppress weeds • Periodically observe function under wet weather conditions • Take photographs before and after maintenance (encouraged)
Major Maintenance	• Clean out under-drains if present to alleviate ponding. Replace media if ponding or loss of infiltrative capacity persists and revegetate • Repair structural damage to flow control structures including inlet, outlet and overflow structures • De-thatch grass to remove accumulated sediment and aerate compacted areas to promote infiltration

Table 6-2: Routine Maintenance – Infiltration Facilities

Defect	**Conditions When Maintenance Is Needed**	**Results Expected When Maintenance Is Performed**	**Frequency**
Trash & Debris	Any trash and debris which exceed 5 cubic feet per 1,000 square feet (one standard garbage can). In general, there should be no visual evidence of dumping. If less than threshold, all trash and debris will be removed as part of next scheduled maintenance.	Trash and debris cleared from site.	Annually prior to wet season. After major storm events (>0.75 in/24 hrs) if spot checks indicate widespread damage/ maintenance needs. Litter removal is dependent on site conditions and desired aesthetics and should be done at a frequency to meet those objectives.
Inlet Erosion	Visible evidence of erosion occurring near inlet structures.	Eroded areas repaired/reseeded	
Visual Contaminants and Pollution	Any evidence of oil, gasoline, contaminants or other pollutants.	No contaminants or pollutants present.	
Slow Drain Time	Standing water long after storm has passed (after 48 to 72 hours), or visual inspection of wells (if available) indicates that design drain times are not being achieved.	Water drains within 48 to 72 hours. Drainage pipe is cleared, accumulated litter on surface is removed, and top 1-2" of soil is raked or replaced.	
Inlets Blocked	Trash and debris or sediment blocking inlet structures.	Inlets clear and free of trash and debris.	
Appearance of Poisonous, Noxious or Nuisance Vegetation	Excessive grass and weed growth. Noxious weeds, woody vegetation establishing, Turf growing over rock filter.	Vegetation is mowed or trimmed to restore function. Weeds are removed to prevent noxious and nuisance plants from becoming established.	Monthly (or as dictated by agreement between County and landscape contractor).

Table 6-3: Major Maintenance – Infiltration Facilities

Defect	**Conditions When Maintenance Is Needed**	**Results Expected When Maintenance Is Performed**	**Frequency**
Standing Water	Standing water long after storm has passed (after 24 to 48 hours), or visual inspection of wells (if available) indicates that design drain times are not being achieved	Design infiltration rate restored, either through excavation and filter media replacement or surface sediment removal. If applicable, underdrain cleaned, reset or replaced.	As needed

ATTACHMENT E

WORK SHEETS FROM ORANGE COUNTY TGD

Table 2.7: Infiltration BMP Feasibility Worksheet

	Infeasibility Criteria	***Yes***	***No***
1	**Would Infiltration BMPs pose significant risk for groundwater related concerns?** Refer to Appendix VII (Worksheet I) for guidance on groundwater-related infiltration feasibility criteria.		X
Provide basis: *Depth to groundwater at the site is greater than 7 feet per TGD Figure XVI-2e.* *Per the Preliminary Geotechnical Engineering Investigation Report by Costal Geotechnical, Inc dated March 10, 2022, groundwater was encountered at a depth of 7 feet below existing ground. This groundwater level is subject to minor fluctuation due to tidal changes.* Summarize findings of studies provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			
2	Would Infiltration BMPs **pose significant risk of increasing risk of geotechnical hazards that cannot be mitigated to an acceptable level**? (Yes if the answer to any of the following questions is yes, as established by a geotechnical expert): • The BMP can only be located less than 50 feet away from slopes steeper than 15 percent • The BMP can only be located less than eight feet from building foundations or an alternative setback. • A study prepared by a geotechnical professional or an available watershed study substantiates that stormwater infiltration would potentially result in significantly increased risks of geotechnical hazards that cannot be mitigated to an acceptable level.		X
Provide basis: *Per the Preliminary Geotechnical Engineering Investigation Report by Costal Geotechnical, Inc dated March 10, 2022, the site is generally rectangular shaped lot and is elongated in a north to south direction with topography of the property descending gradually from front to rear on the order of a few feet. groundwater was encountered at a depth of 7 feet below existing ground. This groundwater level is subject to minor fluctuation due to tidal changes.* Summarize findings of studies provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			
3	Would infiltration of the DCV from drainage area **violate downstream water rights**?		X

Provide basis:

Per TGD, Figure XVI-3d, the project site is not located within a watershed with impaired bodies.

Summarize findings of studies provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.

Table 2.7: Infiltration BMP Feasibility Worksheet (continued)

	Partial Infeasibility Criteria	***Yes***	***No***
4	Is proposed infiltration facility **located on HSG D soils** or the site geotechnical investigation identifies presence of soil characteristics which support categorization as D soils?		X
Provide basis: *The site is located on HSG D Soils per TDG Figure XVI-2a and XVI-2b.* *Per Orange County Hydrology Manual, Plate 2B, Hydrological Classifications of Soils, the site is characterized as Soil Type A.* *Per the Preliminary Geotechnical Engineering Investigation Report by Costal Geotechnical, Inc dated March 10, 2022, The earth materials encountered were classified as artificial fill underlain by native soils to the maximum depth explored. Artificial fills encountered consisted of slightly silty, fine to medium-grained sand, tan in color, damp and generally loose to medium dense. The fills were encountered to a depth of about 1.5 to 2 feet existing grade in the borings. Native soils encountered consisted of clean, fine to medium-grained sand, light gray tan and dark gray in color, damp to wet and generally medium dense, to maximum depth explored of 12.5 feet.* *Based on OC Hydrology Manual, Plate 2B, Hydrological Classifications of Soils Map and the Preliminary Geotechnical Engineering Investigation Report by Costal Geotechnical, Inc dated March 10, 2022, presence of soil characteristics does not support categorization as D soils.* Summarize findings of studies provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			
5	Is **measured infiltration rate below proposed facility less than 0.3 inches per hour**? This calculation shall be based on the methods described in Appendix VII.		X

Table 2.7: Infiltration BMP Feasibility Worksheet (continued)

<table>
<tr><td colspan="4">Provide basis:
The project will disturb less than 10 acres and less than 30 DU for residential project. The project is considered a “small project” in accordance with the 2013 Model WQMP. The 2013 Countywide Model WQMP allows the use of regional maps and other available site data in lieu of infiltration testing for “small projects”.

Per the Preliminary Geotechnical Engineering Investigation Report by Costal Geotechnical, Inc dated March 10, 2022, The earth materials encountered were classified as artificial fill underlain by native soils to the maximum depth explored. Artificial fills encountered consisted of slightly silty, fine to medium-grained sand, tan in color, damp and generally loose to medium dense. The fills were encountered to a depth of about 1.5 to 2 feet existing grade in the borings. Native soils encountered consisted of clean, fine to medium-grained sand, light gray tan and dark gray in color, damp to wet and generally medium dense, to maximum depth explored of 12.5 feet.

Summarize findings of studies provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.</td></tr>
<tr><td>6</td><td>Would reduction of over predeveloped conditions cause impairments to downstream beneficial uses, such as change of seasonality of ephemeral washes or increased discharge of contaminated groundwater to surface waters?</td><td></td><td>X</td></tr>
<tr><td colspan="4">Provide citation to applicable study and summarize findings relative to the amount of infiltration that is permissible:

Summarize findings of studies provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.</td></tr>
<tr><td>7</td><td>Would an increase in infiltration over predeveloped conditions cause impairments to downstream beneficial uses, such as change of seasonality of ephemeral washes or increased discharge of contaminated groundwater to surface waters?</td><td></td><td>X</td></tr>
<tr><td colspan="4">Provide citation to applicable study and summarize findings relative to the amount of infiltration that is permissible:

Summarize findings of studies provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.</td></tr>
</table>

Table 2.7: Infiltration BMP Feasibility Worksheet (continued)

Infiltration Screening Results (check box corresponding to result):		
8	Is there substantial evidence that infiltration from the project would result in a significant increase in I&I to the sanitary sewer that cannot be sufficiently mitigated? (See Appendix XVII) Provide narrative discussion and supporting evidence: Summarize findings of studies provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.	*No*
9	If any answer from row 1-3 is yes: infiltration of any volume is **not feasible** within the DMA or equivalent. Provide basis: *See Rows 1 – 3.* Summarize findings of infeasibility screening	*Feasible*
10	If any answer from row 4-8 is yes, infiltration is **permissible but is not presumed to be feasible for the entire DCV.** Criteria for designing biotreatment BMPs to achieve the maximum feasible infiltration and ET shall apply. Provide basis: See Rows 4 – 7. Summarize findings of infeasibility screening	*Feasible*
11	If all answers to rows 1 through 10 are no, infiltration of the full DCV is potentially feasible, BMPs must be designed to infiltrate the full DCV to the maximum extent practicable.	*Feasible*

Worksheet C: Capture Efficiency Method for Volume-Based, Constant Drawdown BMPs

Step 1: Determine the design capture storm depth used for calculating volume				
1	Enter design capture storm depth from Figure III.1, *d* (inches)	d=	0.67	inches
2	Enter calculated drawdown time of the proposed BMP based on equation provided in applicable BMP Fact Sheet, *T* (hours)	T=	48	hours
3	Using Figure III.2, determine the "fraction of design capture storm depth" at which the BMP drawdown time (T) line achieves 80% capture efficiency, X_1	X_1=	1.04	
4	Enter the effect depth of provided HSCs upstream, d_{HSC} (inches) (Worksheet A)	d_{HSC}=	-	inches
5	Enter capture efficiency corresponding to d_{HSC}, Y_2 (Worksheet A)	Y_2=	-	%
6	Using Figure III.2, determine the fraction of "design capture storm depth" at which the drawdown time (T) achieves the equivalent of the upstream capture efficiency(Y_2), X_2	X_2=	-	
7	Calculate the fraction of design volume that must be provided by BMP, *fraction* = $X_1 - X_2$	fraction=	1.04	
8	Calculate the resultant design capture storm depth (inches), $d_{fraction}$= *fraction* × *d*	$d_{fraction}$=	0.67	inches
9	SOC Only: When using this method for biofiltration sizing, check that the resulting volume in ponding plus pore spaces is at least 0.75× the remaining DCV (after accounting for upstream HSC/retention BMPs). (See Worksheet SOC-1)		Y / N / NA	
Step 2: Calculate the DCV				
1	Enter Project area tributary to BMP (s), *A* (acres)	A=	0.062	acres
2	Enter Project Imperviousness, *imp* (unitless)	imp=	0.9837	
3	Calculate runoff coefficient, *C= (0.75 x imp) + 0.15*	C=	0.888	
4	Calculate runoff volume, V_{design}= *(C x* $d_{rfraction}$ *x A x 43560 x (1/12))*	V_{design}=	133.87	cu-ft
Supporting Calculations				

Describe system: Design infiltration BMPs using two 20′ long, 12"(W) x 18" (D) trench drains and one, 25.25′ long, 24" (W) x 18" (D) bottomless trench drain.

Total areas of trench drains and bottomless trench drain provided is

2x(20′x1′) + 1x(25.25'x2') = 90.5 sq. ft.

Vproposed = A*Ponding depth (dp) → 90.5 sq. ft. * (18"/12) ft = 135.75 cu. ft. > Vdesign = 133.87 cu-ft., OK

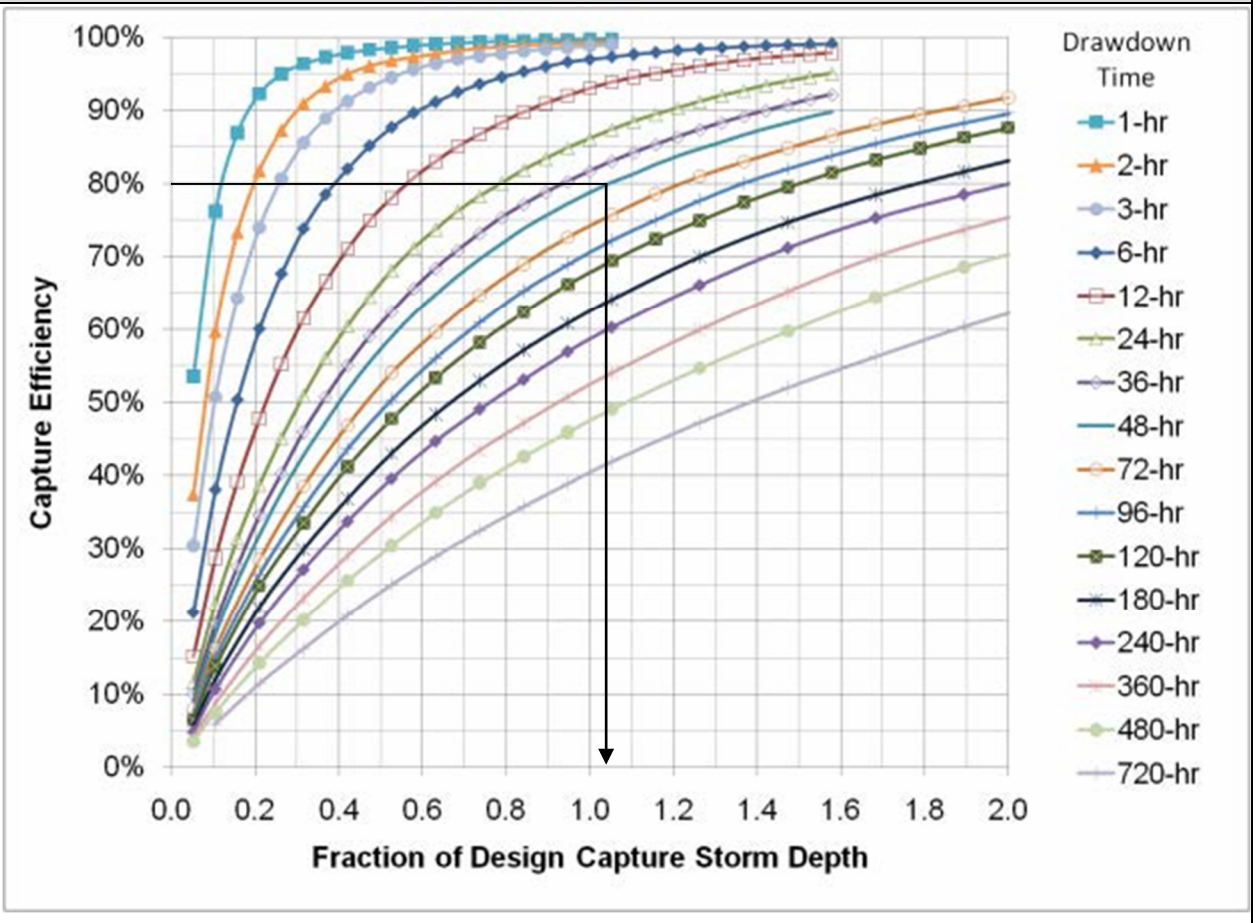
Thus, the proposed four trench drains and one bottomless trench drain at the site are sized to fully treat the calculated construction drawdown volume of 133.75 cu-ft which exceeds the design volume of 133.87 cu-ft. and DCV of 133.87 cu-ft.

Provide drawdown time calculations per applicable BMP Fact Sheet:

DD = (d_p/K_{MEDIA}) * 12 in./ft. → DD = ((18"/12) ft./2.5) * 12 → DD = 7.2 hours

Where K_{MEDIA} = 2.5 in./hr (per TGD Appendix XIV-53. Capture Efficiency Method for Biotreatment)

Graphical Operations



Provide supporting graphical operations. See Example III.6.

Worksheet J: Summary of Harvested Water Demand and Feasibility

1	What demands for harvested water exist in the tributary area (check all that apply):			
2	Toilet and urinal flushing		□	
3	Landscape irrigation		□	
4	Other:_____		□	
5	What is the design capture storm depth? (Figure III.1)	d	0.67	inches
6	What is the project size?	A	0.164	ac
7	What is the acreage of impervious area?	IA	0.158	ac
	For projects with multiple types of demand (toilet flushing, irrigation demand, and/or other demand)			
8	What is the minimum use required for partial capture? (Table X.6)			gpd
9	What is the project estimated wet season total daily use (Section X.2)?			gpd
10	Is partial capture potentially feasible? (Line 9 > Line 8?)			
	For projects with only toilet flushing demand			
11	What is the minimum TUTIA for partial capture? (Table X.7)			
12	What is the project estimated TUTIA?			
13	Is partial capture potentially feasible? (Line 12 > Line 11?)			
	For projects with only irrigation demand			
14	What is the minimum irrigation area required based on conservation landscape design? (Table X.8)			ac
15	What is the proposed project irrigated area? (multiply conservation landscaping by 1; multiply active turf by 2)			ac
16	Is partial capture potentially feasible? (Line 15 > Line 14?)			
Provide supporting assumptions and citations for controlling demand calculation:				

ATTACHMENT F

GRADING PLANS AND TOPOGRAPHIC SURVEY MAP

0' 8' 16'

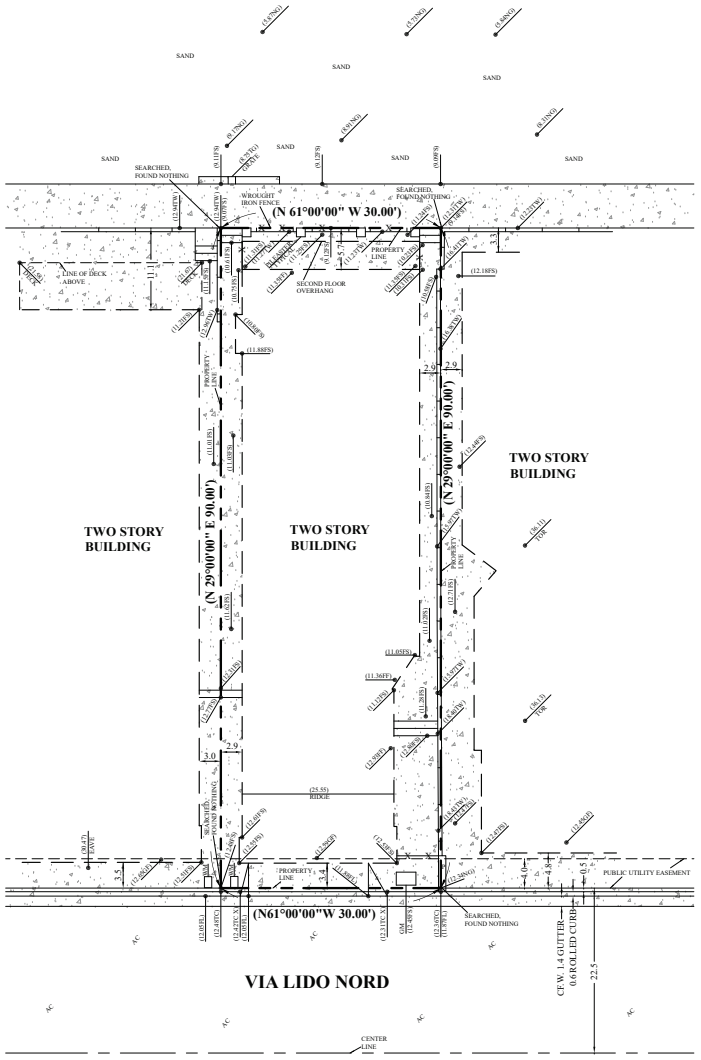
SCALE 1" = 8'

SURVEY NOTES

1. ALL MEASUREMENTS SHOWN HEREON ARE TO EXISTING EXTERIOR FINISHED SURFACE.
2. THE ONLY EASEMENTS SHOWN, IF ANY, ARE PER THE TRACT MAP OF SUBJECT PROPERTY. THE PLAT FOR THIS SURVEY WAS PREPARED WITHOUT A TITLE REPORT. UNPLOTTED EASEMENTS MAY EXIST ON THE SUBJECT PROPERTY.
3. SURVEYOR OR ENGINEER SHALL PERMANENTLY MONUMENT PROPERTY CORNERS OR OFFSETS BEFORE STARTING GRADING.

LEGEND

	DESCRIPTION
(123.45)	MEASURED ELEVATIONS
( )	RECORD BERING & DISTANCE
	BRICK
	CONCRETE
	DECK
	WALL
	BUILDING
	CENTER LINE
	PROPERTY LINE
X X X	FENCE
	BENCH MARK
AC	ASPHALT
CF	CURB FACE
FF	FINISH FLOOR
FH	FIRE HYDRANT
FL	FLOW LINE
FS	FINISHED SURFACE
GF	GARAGE FLOOR
GM	GAS METER
L&T	LEAD & TAG
MH	MAN HOLE
NG	NATURAL GRADE
P	PLANTER
PP	POWER POLE
TC	TOP OF CURB
TW	TOP OF WALL
TG	TOP OF GRADE
TOR	TOP OF ROOF
S&W	SPIKE & WASHER
WM	WATER METER
WV	WATER VALVE



VICINITY MAP

NOT TO SCALE

ADDRESS OF PROJECT

426 VIA LIDO NORD
NEWPORT BEACH, CA

OWNER

PATRICK BOYD

LEGAL DESCRIPTION

THE SOUTHEASTERLY 5 FEET OF LOT 483, AND THE NORTHWESTERLY 25 FEET OF LOT 484, OF TRACT NO. 907, IN THE CITY OF NEWPORT BEACH, COUNTY OF ORANGE, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 28, PAGES 25 THROUGH 36 OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

APN 423-191-13

BENCH MARK

BENCH MARK #NBS-21-92
DATUM: NAVD88
ELEVATION: 11.91

TOPOGRAPHIC SURVEY

JOB: 76-94 DATE: 8/22/2025

RDM
SURVEYING INC.
RON MIEDEMA L.S. 4653
23016 LAKE FOREST DRIVE #409
LAGUNA HILLS, CA 92653
(949) 858-2924 OFFICE
(949) 422-1869 CELL
RDMSURVEYING@COX.NET

LICENSED LAND SURVEYOR
RON MIEDEMA
No. 4653
EXP. 9/30/25
STATE OF CALIFORNIA

PRECISE GRADING PLAN

FOR

SINGLE FAMILY RESIDENCE

426 VIA LIDO NORD, NEWPORT BEACH, CA 92663

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO CHAPTER 15 OF THE NEWPORT BEACH MUNICIPAL CODE (NBMC), THE PROJECT SOILS REPORT AND SPECIAL REQUIREMENTS OF THE PERMIT.
2. DUST SHALL BE CONTROLLED BY WATERING AND/OR DUST PALLIATIVE.
3. SANITARY FACILITIES SHALL BE MAINTAINED ON THE SITE DURING THE CONSTRUCTION PERIOD.
4. WORK HOURS ARE LIMITED FROM 7:00 AM TO 6:30 PM MONDAY THROUGH FRIDAY; 8:00 AM TO 6:00 PM SATURDAYS; AND NO WORK ON SUNDAYS AND HOLIDAYS PER SECTION 10-28 OF THE NBMC.
5. NOISE, EXCAVATION, DELIVERY AND REMOVAL SHALL BE CONTROLLED PER SECTION 10-28 OF THE NBMC.
6. THE STAMPED SET OF APPROVED PLANS SHALL BE ON THE JOB SITE AT ALL TIMES.
7. PERMITTEE AND CONTRACTOR ARE RESPONSIBLE FOR LOCATING AND PROTECTING UTILITIES.
8. APPROVED SHORING, DRAINAGE PROVISIONS AND PROTECTIVE MEASURES MUST BE USED TO PROTECT ADJOINING PROPERTIES DURING THE GRADING OPERATION.
9. CESSPOOLS AND SEPTIC TANKS SHALL BE ABANDONED IN COMPLIANCE WITH THE UNIFORM PLUMBING CODE AND APPROVED BY THE BUILDING OFFICIAL.
10. HAUL ROUTES FOR IMPORT OR EXPORT OF MATERIALS SHALL BE APPROVED BY THE CITY TRAFFIC ENGINEER AND PROCEDURES SHALL CONFORM WITH CHAPTER 15 OF THE NBMC.
11. POSITIVE DRAINAGE SHALL BE MAINTAINED AWAY FROM ALL BUILDING AND SLOPE AREAS.
12. FAILURE TO REQUEST INSPECTIONS AND/OR HAVE REMOVABLE EROSION CONTROL DEVICES ON-SITE AT THE APPROPRIATE TIMES SHALL RESULT IN A "STOP WORK" ORDER.
13. ALL PLASTIC DRAINAGE PIPES SHALL CONSIST OF PVC OR ABS PLASTIC SCHEDULE 40 OR SDR 35 OR ADS 3000 WITH GLUED JOINTS.
14. NO PAINT, PLASTER, CEMENT, SOIL, MORTAR OR OTHER RESIDUE SHALL BE ALLOWED TO ENTER STREETS, CURBS, GUTTERS OR STORM DRAINS. ALL MATERIAL AND WASTE SHALL BE REMOVED FROM THE SITE.

EROSION CONTROL

1. TEMPORARY EROSION CONTROL PLANS ARE REQUIRED FROM OCTOBER 15 TO MAY 15.
2. EROSION CONTROL DEVICES SHALL BE AVAILABLE ON-SITE BETWEEN OCTOBER 15 AND MAY 15.
3. BETWEEN OCTOBER 15 AND MAY 15, EROSION CONTROL MEASURES SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHENEVER THE FIVE-DAY PROBABILITY OF RAIN EXCEEDS 30 PERCENT. DURING THE REMAINDER OF THE YEAR, THEY SHALL BE IN PLACE AT THE END OF THE WORKING DAY, WHENEVER THE DAILY RAINFALL PROBABILITY EXCEEDS 50 PERCENT.
4. TEMPORARY DESILTING BASINS, WHEN REQUIRED, SHALL BE INSTALLED AND MAINTAINED FOR THE DURATION OF THE PROJECT.

REQUIRED INSPECTIONS

1. A PRE-GRADING MEETING SHALL BE SCHEDULED 48 HOURS PRIOR TO START OF GRADING WITH THE FOLLOWING PEOPLE PRESENT: OWNER, GRADING CONTRACTOR, DESIGN CIVIL ENGINEER, SOILS ENGINEER, GEOLOGIST, CITY BUILDING INSPECTOR OR THEIR REPRESENTATIVES. REQUIRED FIELD INSPECTIONS WILL BE OUTLINED AT THE MEETING.
2. A PRE-PAVING MEETING SHALL BE SCHEDULED 48 HOURS PRIOR TO START OF THE SUB-GRADE PREPARATION FOR THE PAVING WITH THE FOLLOWING PEOPLE PRESENT: OWNER, PAVING CONTRACTORS, DESIGN CIVIL ENGINEER, SOILS ENGINEER, CITY BUILDING INSPECTOR OR THEIR REPRESENTATIVES. REQUIRED FIELD INSPECTIONS WILL BE OUTLINED AT THE MEETING.

GRADING FILLS/CUTS

1. GRADED SLOPES SHALL BE NO STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL.
2. FILL SLOPES SHALL BE COMPACTED TO NO LESS THAN 90 PERCENT RELATIVE COMPACTION OUT TO THE FINISHED SURFACE.
3. ALL FILLS SHALL BE COMPACTED THROUGHOUT TO A MINIMUM OF 90 PERCENT RELATIVE COMPACTION AS DETERMINED BY ASTM TEST METHOD 1557, AND APPROVED BY THE SOILS ENGINEER. COMPACTION TESTS SHALL BE PERFORMED APPROXIMATELY EVERY TWO FEET IN VERTICAL HEIGHT AND OF SUFFICIENT QUANTITY TO ATTEST TO THE OVERALL COMPACTION EFFORT APPLIED TO THE FILL AREAS.
4. AREAS TO RECEIVE FILL SHALL BE CLEARED OF ALL VEGETATION AND DEBRIS, SCARIFIED AND APPROVED BY THE SOILS ENGINEER PRIOR TO PLACING OF THE FILL.
5. FILLS SHALL BE KEYED OR BENCHED INTO COMPETENT MATERIAL.
6. ALL EXISTING FILLS SHALL BE APPROVED BY THE SOILS ENGINEER OR REMOVED BEFORE ANY ADDITIONAL FILLS ARE ADDED.
7. ANY EXISTING IRRIGATION LINES AND CISTERNS SHALL BE REMOVED OR CRUSHED IN PLACE AND BACKFILLED AND APPROVED BY THE SOILS ENGINEER.
8. THE ENGINEERING GEOLOGIST AND SOILS ENGINEER SHALL, AFTER CLEARING AND PRIOR TO THE PLACEMENT OF FILL IN CANYONS, INSPECT EACH CANYON FOR AREAS OF ADVERSE STABILITY AND DETERMINE THE PRESENCE OF, OR POSSIBILITY OF FUTURE ACCUMULATION OF, SUBSURFACE WATER OR SPRING FLOW. IF NEEDED, DRAINS WILL BE DESIGNED AND CONSTRUCTED PRIOR TO THE PLACEMENT OF FILL IN EACH RESPECTIVE CANYON.
9. THE EXACT LOCATION OF THE SUBDRAINS SHALL BE SURVEYED IN THE FIELD FOR LINE AND GRADE.
10. ALL TRENCH BACKFILLS SHALL BE COMPACTED THROUGHOUT TO A MINIMUM OF 90 PERCENT RELATIVE COMPACTION, AND APPROVED BY THE SOILS ENGINEER. THE BUILDING DEPARTMENT MAY REQUIRE CORING OF CONCRETE FLAT WORK PLACED OVER UNTESTED BACKFILLS TO FACILITATE TESTING.
11. THE STOCKPILING OF EXCESS MATERIAL SHALL BE APPROVED BY THE BUILDING DEPARTMENT.
12. LANDSCAPING OF ALL SLOPES AND PADS SHALL BE IN ACCORDANCE WITH CHAPTER 15 OF THE NBMC.
13. ALL CUT SLOPES SHALL BE INVESTIGATED BOTH DURING AND AFTER GRADING BY AN ENGINEERING GEOLOGIST TO DETERMINE IF ANY STABILITY PROBLEM EXISTS. SHOULD EXCAVATION DISCLOSE ANY GEOLOGICAL HAZARDS OR POTENTIAL GEOLOGICAL HAZARDS, THE ENGINEERING GEOLOGIST SHALL RECOMMEND AND SUBMIT NECESSARY TREATMENT TO THE BUILDING DEPARTMENT FOR APPROVAL.
14. WHERE SUPPORT OR BUTTRESSING OF CUT AND NATURAL SLOPES IS DETERMINED TO BE NECESSARY BY THE ENGINEERING GEOLOGIST AND SOILS ENGINEER, THE SOILS ENGINEER WILL OBTAIN APPROVAL OF DESIGN, LOCATION AND CALCULATIONS FROM THE BUILDING DEPARTMENT PRIOR TO CONSTRUCTION.
15. THE ENGINEERING GEOLOGIST AND SOILS ENGINEER SHALL INSPECT AND TEST THE CONSTRUCTION OF ALL BUTTRESS FILLS AND ATTEST TO THE STABILITY OF THE SLOPE AND ADJACENT STRUCTURES UPON COMPLETION.
16. WHEN CUT PADS ARE BROUGHT TO NEAR GRADE THE ENGINEERING GEOLOGIST SHALL DETERMINE IF THE BEDROCK IS EXTENSIVELY FRACTURED OR FAULTED AND WILL READILY TRANSMIT WATER. IF CONSIDERED NECESSARY BY THE ENGINEERING GEOLOGIST AND SOILS ENGINEER, A COMPACTED FILL BLANKET WILL BE PLACED.
17. THE ENGINEERING GEOLOGIST SHALL PERFORM PERIODIC INSPECTIONS DURING GRADING.
18. NOTIFICATION OF NONCOMPLIANCE: IF, IN THE COURSE OF FULFILLING THEIR RESPONSIBILITY, THE CIVIL ENGINEER, THE SOILS ENGINEER, THE ENGINEERING GEOLOGIST OR THE TESTING AGENCY FINDS THAT THE WORK IS NOT BEING DONE IN CONFORMANCE WITH THE APPROVED GRADING PLANS, THE DISCREPANCIES SHALL BE REPORTED IMMEDIATELY IN WRITING TO THE PERSON IN CHARGE OF THE GRADING WORK AND TO THE BUILDING INSPECTOR. RECOMMENDATIONS FOR CORRECTIVE MEASURES, IF NECESSARY, SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT FOR APPROVAL.

DOCUMENTATION

1. AN AS-BUILT GRADING PLAN SHALL BE PREPARED BY THE CIVIL ENGINEER INCLUDING ORIGINAL GROUND SURFACE ELEVATIONS, AS GRADED GROUND SURFACE ELEVATIONS, LOT DRAINAGE PATTERNS AND LOCATIONS, AND ELEVATIONS OF ALL SURFACE AND SUBSURFACE DRAINAGE FACILITIES. HE/SHE SHALL PROVIDE WRITTEN APPROVAL THAT THE WORK WAS DONE IN ACCORDANCE WITH THE FINAL APPROVED GRADING PLAN AND STATE THE NUMBER OF YARDS OF CUT AND/OR FILL MOVED DURING THE OPERATION.
2. A SOILS GRADING REPORT PREPARED BY THE SOILS ENGINEER, INCLUDING LOCATIONS AND ELEVATION OF FIELD DENSITY TESTS, SUMMARIES OF FIELD AND LABORATORY RESULTS AND OTHER SUBSTANTIATED DATA AND COMMENTS ON ANY CHANGES MADE DURING GRADING AND THEIR EFFECT ON THE RECOMMENDATIONS MADE IN THE SOILS ENGINEERING INVESTIGATION REPORT. HE SHALL PROVIDE WRITTEN APPROVAL AS TO THE ADEQUACY OF THE SITE FOR THE INTENDED USE AND COMPLETION OF WORK IN ACCORDANCE WITH THE JOB SPECIFICATIONS.
3. A GEOLOGIC GRADING REPORT PREPARED BY THE ENGINEERING GEOLOGIST, INCLUDING A FINAL DESCRIPTION OF THE GEOLOGY OF THE SITE, INCLUDING ANY NEW INFORMATION DISCLOSED DURING THE GRADING AND THE EFFECT OF SAME ON RECOMMENDATIONS INCORPORATED IN THE APPROVED GRADING PLAN. HE/SHE SHALL PROVIDE WRITTEN APPROVAL AS TO THE ADEQUACY OF THE SITE FOR THE INTENDED USE AS AFFECTED BY GEOLOGIC FACTORS.

ISSUANCE OF A BUILDING PERMIT BY THE CITY OF NEWPORT BEACH DOES NOT RELIEVE APPLICANTS OF THE LEGAL REQUIREMENTS TO OBSERVE COVENANTS, CONDITIONS, AND RESTRICTIONS WHICH MAY BE RECORDED AGAINST THE PROPERTY OR TO OBTAIN PLANS. YOU SHOULD CONTACT YOUR COMMUNITY ASSOCIATIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION AUTHORIZED BY THIS PERMIT.

PRIOR TO PERFORMING ANY WORK IN THE CITY RIGHT-OF-WAY, AN ENCROACHMENT PERMIT MUST BE OBTAINED FROM THE PUBLIC WORK DEPARTMENT.

NOTICE TO CONTRACTOR

1. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITION DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONSTRUCTION CONTRACTOR FURTHER AGREES 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, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.
2. IF THIS PROJECT IS STAKED BY SURVEY CREWS OTHER THAN THOSE CREWS UNDER THE DIRECT SUPERVISION OF THE SIGNATORY ENGINEER, THE SIGNATORY ENGINEER WILL NO LONGER BE THE ENGINEER OF RECORD AND WILL HAVE NO RESPONSIBILITY AS TO THE FINAL CONSTRUCTED PROJECT. THE SIGNATORY ENGINEER WILL NOT BE RESPONSIBLE FOR ERRORS OR OMISSIONS THAT COULD HAVE BEEN CORRECTED DURING THE CONSTRUCTION OF THIS PROJECT, IF THE STAKING HAD BEEN DONE BY THE SURVEY CREW UNDER HIS DIRECT SUPERVISION.
3. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF AVAILABLE RECORDS TO THE BEST OF OUR KNOWLEDGE. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN, AND ANY OTHER LINES OR STRUCTURES NOT SHOWN ON THESE PLANS, AND IS RESPONSIBLE FOR THE PROTECTION OF, AND ANY DAMAGE TO THESE LINES OR STRUCTURES.

NOTE TO SURVEYOR

SURVEYOR TO FILE A CORNER RECORD OR RECORD OF SURVEY WITH THE OFFICE OF COUNTY SURVEYOR. EVIDENCE OF FILING SHALL BE SUBMITTED TO BUILDING INSPECTOR PRIOR TO FOUNDATION INSPECTION.

SURVEYOR OR ENGINEER SHALL PERMANENTLY MONUMENT PROPERTY CORNERS OR OFFSET BEFORE STARTING GRADING.

ADDITIONAL NOTE

1. LICENSED SURVEYOR TO PROVIDE MONITORING OF SHORING AND IMPROVEMENTS ON THE ADJACENT PROPERTIES AND SUBMIT RESULTS WITH A REPORT TO THE SHORING DESIGN ENGINEER AND TO THE BUILDING INSPECTOR ON A DAILY BASIS DURING EXCAVATION AND SHORING AND WEEKLY BASIS THEREAFTER. WHERE DEWATERING IS REQUIRED, MONITORING SHALL CONTINUE UNTIL DEWATERING IS STOPPED.
2. IN LIEU OF SPECIAL INSPECTION BY DEPUTY BUILDING INSPECTOR, GEOTECHNICAL ENGINEER SHALL PROVIDE CONTINUOUS INSPECTIONS DURING SHORING AND EXCAVATION OPERATIONS AND DURING REMOVAL OF SHORING.
3. CONTRACTOR SHALL NOTIFY ADJACENT PROPERTY OWNER BY CERTIFIED MAIL 10 DAYS PRIOR TO STARTING THE SHORING OR EXCAVATION WORK.

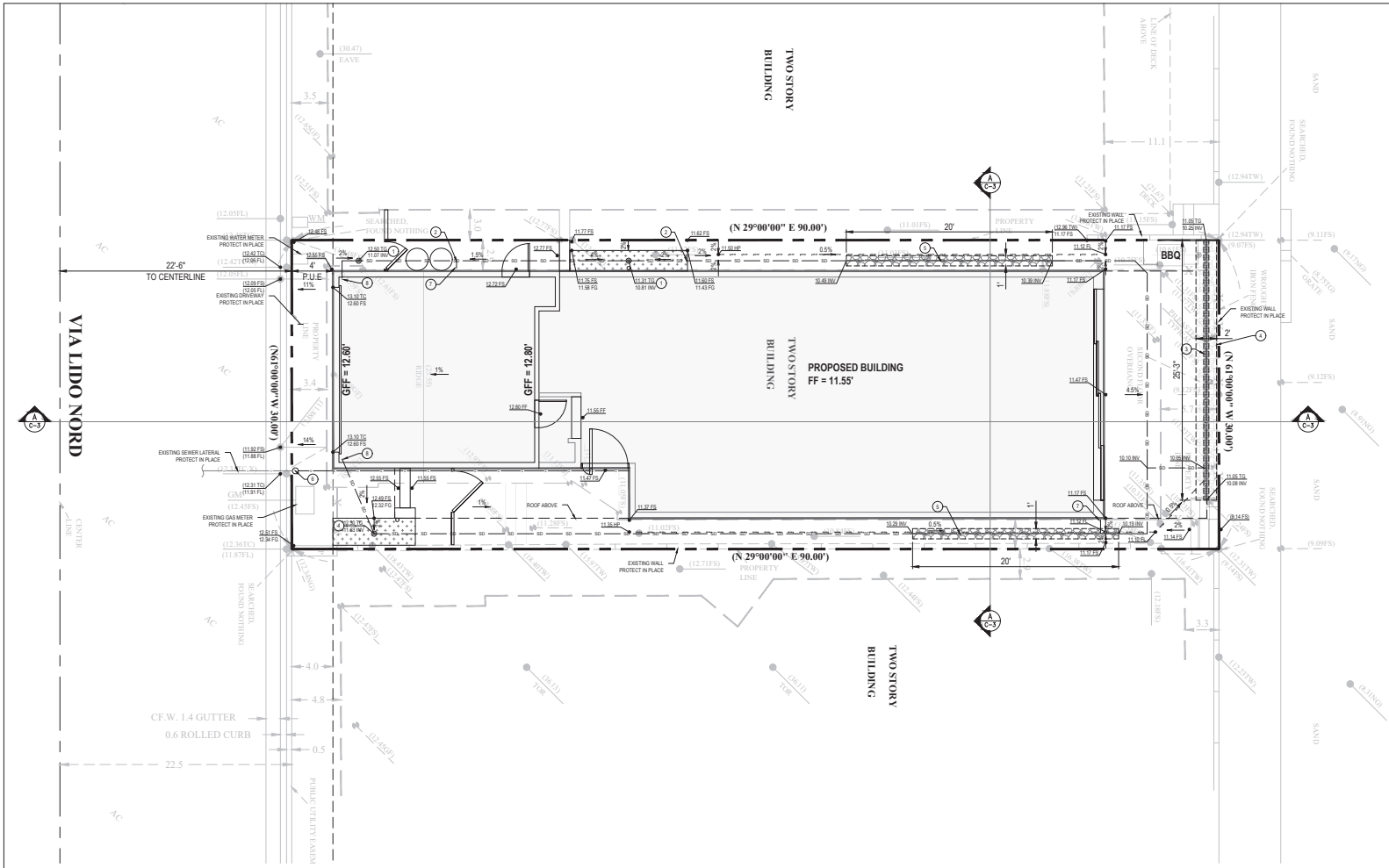
PUBLIC WORKS NOTE

1. AN APPROVED ENCROACHMENT PERMIT IS REQUIRED FOR ALL WORK ACTIVITIES WITHIN THE PUBLIC RIGHT-OF-WAY.
2. A PUBLIC WORKS DEPARTMENT ENCROACHMENT PERMIT INSPECTION IS REQUIRED BEFORE THE BUILDING PERMIT FINAL CAN BE ISSUED. AT THE TIME OF PUBLIC WORKS DEPARTMENT INSPECTION, IF ANY OF THE EXISTING PUBLIC IMPROVEMENTS SURROUNDING THE SITE IS DAMAGED, NEW CONCRETE SIDEWALK, CURB AND GUTTER, AND ALLEY/STREET PAVEMENT WILL BE REQUIRED. ADDITIONALLY, IF EXISTING UTILITIES INFRASTRUCTURE ARE DEEMED SUBSTANDARD, A NEW 1-INCH WATER SERVICE, WATER METER BOX, SEWER LATERAL AND/OR CLEANOUT WITH BOX AND LID WILL BE REQUIRED. 100% OF THE COST SHALL BE BORNE BY THE PROPERTY OWNER (MUNICIPAL CODES 14.24.020 AND 14.08.030). SAID DETERMINATION AND THE EXTENT OF THE REPAIR WORK SHALL BE MADE AT THE DISCRETION OF THE PUBLIC WORK INSPECTOR. CONTRACTOR IS RESPONSIBLE TO MAINTAIN THE PUBLIC RIGHT OF WAY AT ALL TIMES DURING THE CONSTRUCTION PROJECT. A STOP WORK NOTICE MAY BE ISSUED FOR ANY DAMAGE OR UNMAINTAINED PORTION OF THE PUBLIC RIGHT OF WAY.
3. AN ENCROACHMENT AGREEMENT IS REQUIRED FOR ALL NON-STANDARD IMPROVEMENTS WITHIN THE PUBLIC RIGHT-OF-WAY. ALL NON-STANDARD IMPROVEMENTS SHALL COMPLY WITH CITY COUNCIL POLICY L-6.
4. ALL WORK RELATED TO WASTEWATER IN THE PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED BY A C-42 LICENSED SANITATION SEWER CONTRACTOR OR AN "A" LICENSED GENERAL ENGINEERING CONTRACTOR.
5. ALL WORK RELATED TO WATER IN THE PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED BY A C-34 LICENSED PIPELINE CONTRACTOR OR AN "A" LICENSED GENERAL ENGINEERING CONTRACTOR.

SHORING NOTES

1. SHEET PILES ARE NOT PERMITTED FOR SHORING DUE TO POTENTIAL DAMAGE TO ADJACENT PROPERTIES.
2. EXCAVATIONS AND SHORING SHALL BE MADE ENTIRELY WITHIN THE PROPERTY LINES.
3. A CAL-OSHA PERMIT IS REQUIRED FOR EXCAVATION DEEPER THAN 5' AND FOR SHORING AND/OR UNDERPINNING.
4. LICENSED SURVEYOR TO PROVIDE MONITORING OF SHORING AND IMPROVEMENTS ON ADJACENT PROPERTIES AND SUBMIT RESULTS WITH A REPORT TO THE SHORING DESIGN ENGINEER AND TO THE BUILDING INSPECTOR ON A DAILY BASIS DURING EXCAVATION AND SHORING AND WEEKLY BASIS THEREAFTER. WHERE DEWATERING IS REQUIRED, MONITORING SHALL CONTINUE UNTIL DEWATERING IS STOPPED.
5. IN LIEU OF SPECIAL INSPECTION BY DEPUTY BUILDING INSPECTOR, GEOTECHNICAL ENGINEER SHALL PROVIDE CONTINUOUS INSPECTIONS DURING SHORING AND EXCAVATION OPERATIONS AND DURING REMOVAL OF SHORING
6. CONTRACTOR SHALL NOTIFY ADJACENT PROPERTY OWNERS BY CERTIFIED MAIL 30 DAYS PRIOR TO STARTING ANY EXCAVATION WORK (CIVIL CODE SECTION 832). PROOF OF CERTIFIED MAIL SHALL BE PROVIDED PRIOR TO ISSUANCE OF GRADING PERMIT.
7. NON-CANTILEVERED RETAINING WALLS MUST BE SHORED UNTIL THE BRACING ELEMENT(S) IS IN PLACE.

SITE LOCATION
Via Lido Nord
Via Lido Nord
Via Lido Nord



PRECISE GRADING AND DRAINAGE PLAN

SCALE 1"=5'

CONSTRUCTION KEY NOTES

1. INSTALL 6" DIA. DRAIN NDS 40 W/RISER AND ADAPTOR OR EQUAL.
2. INSTALL 4" DIA. PVC SCHEDULE 40 OR SDR 35 PIPE DRAIN SYSTEM.
3. INSTALL BOTTOMLESS TRENCH DRAIN TRENCH.
4. CONSTRUCT 42" GUARDRAIL ABOVE FINISH SURFACE, PER ARCHITECTURAL PLAN.
5. 4" PERFORATED PIPE WITHIN TRENCH DRAIN PER DETAIL ON SHEET C-3.
6. INSTALL NEW SEWER LATERAL WITH CLEANOUT PER CITY STD-406.
7. INSTALL DOWNSPOUT PER ARCHITECTURAL PLAN.
8. INSTALL DECK DRAIN FOR DECK ABOVE PER ARCHITECTURAL PLAN. CONNECT TO DRAINAGE SYSTEM

EXISTING UTILITIES INFORMATION NEED CONTRACTOR TO VERIFY ON FIELD.

LEGEND

(100)	EXISTING CONTOUR
100	PROPOSED CONTOUR
100FS	SPOT ELEVATION
	PROPOSED HARDSCAPE
	PROPOSED PLANTER AREA
	PROPOSED STORM DRAIN
	PROPERTY LINE
X.X%	SURFACE SLOPE
S=X.X%	STORM DRAIN SLOPE
PAD	PROPOSED PAD ELEVATION
FS	PROPOSED FINISHED SURFACE
FG	PROPOSED FINISHED GROUND
FF	PROPOSED FINISHED FLOOR
INV	INVERT OF PIPE
TG	TOP OF GRATE
PL	PROPERTY LINE
TW	TOP OF WALL
HP	HIGH POINT
EXIST	EXISTING

SCALE 1"= 5'

OWNER/SUBDIVIDER:
PATRICK BOYD
426 VIA LIDO NORD,
NEWPORT BEACH, CA 92663
TEL: 949.633.6990

NO.	DATE	REVISIONS	APPROVED BY

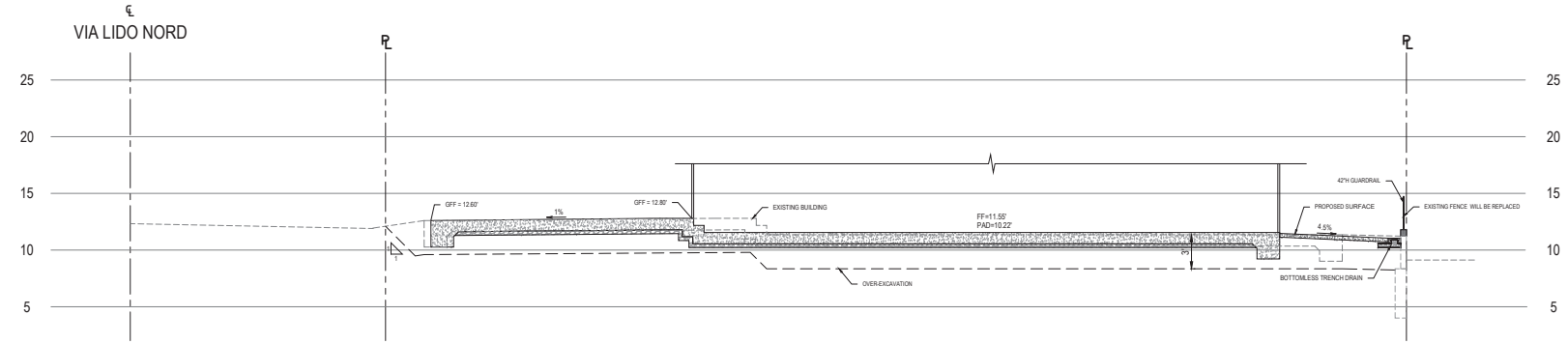
DESIGNER
DESIGNED BY:
DRAFTED BY:
CHECKED BY:

REGISTERED PROFESSIONAL ENGINEER — AMIR DEHIMI — No. C78194 — CIVIL — STATE OF CALIFORNIA

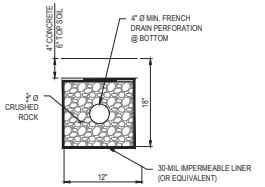
PLANS PREPARED BY:
CORE — FROM THE GROUND UP
Core Civil Engineering, Inc.
201 E Sandpointe Ave., #400
Santa Ana, CA 92707
Phone: 949-954-7244
info@corestructure.com
www.corestructure.com
AMIR DEHIMI
R.C.E. C78194 EXP. 09/30/2027
2026-02-12
DATE

SINGLE FAMILY RESIDENCE
PRELIMINARY GRADING AND DRAINAGE PLAN
PROJECT ADDRESS
426 VIA LIDO NORD
NEWPORT BEACH, CA 92663

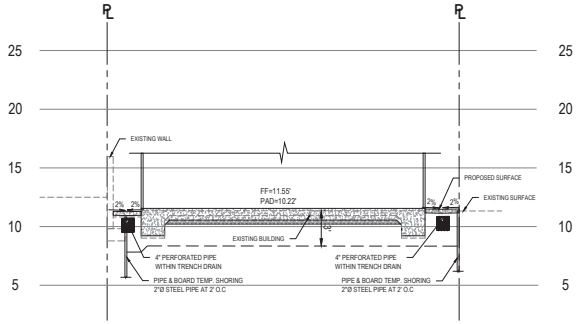
PROJECT NO.: 26013
SHEET NO.: C-2



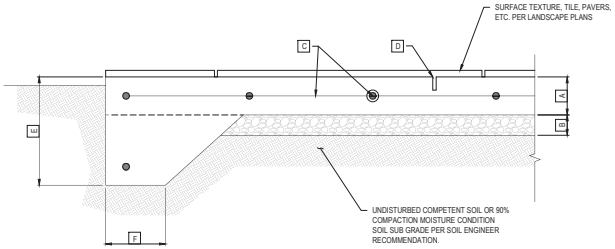
SECTION A-A
SCALE 1"=5'



DETAIL
PERFORATED DRAIN TRENCH
NOT TO SCALE



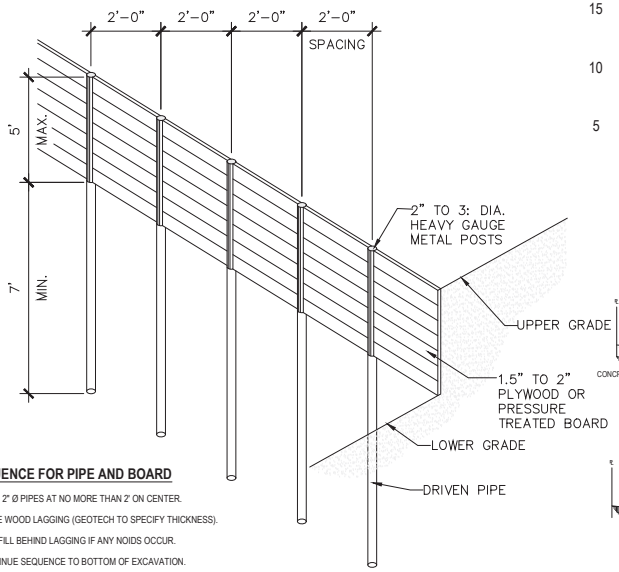
SECTION B-B
SCALE 1"=5'



NOTES:
1. THIS DETAIL IS FOR REFERENCE ONLY TO ILLUSTRATE SOILS REPORT REQUIREMENTS. HARDSCAPE DESIGN BY OTHERS.
2. SEE SOILS REPORT FOR OVEREXCAVATION AND SUBGRADE PREPARATION REQUIREMENTS.

		DRIVEWAYS	HARDSCAPE
A	MIN. SLAB THICKNESS	6"	4"
B	MIN. AGG. BASE THICKNESS	6"	4"
C	MIN. REINFORCEMENT (O.C.E.W.)	#4@12"	#4@12"
D	MAX. SAWCUT OR COLD JT. SPACING	6"	6"
E	THICKENED EDGE DEPTH	12"	12"
F	THICKENED EDGE WIDTH	8"	8"

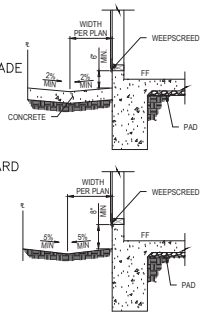
DETAIL
TYPICAL DRIVEWAY / HARDSCAPE SECTION
NOT TO SCALE



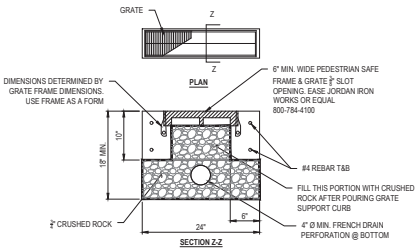
SEQUENCE FOR PIPE AND BOARD

1. DRIVE 2" Ø PIPES AT NO MORE THAN 2' ON CENTER.
2. PLACE WOOD LAGGING (GEOTECH TO SPECIFY THICKNESS).
3. BACKFILL BEHIND LAGGING IF ANY NOIDS OCCUR.
4. CONTINUE SEQUENCE TO BOTTOM OF EXCAVATION.

DETAIL
PIPE AND BOARD TEMPORARY SHORING WALL
NOT TO SCALE

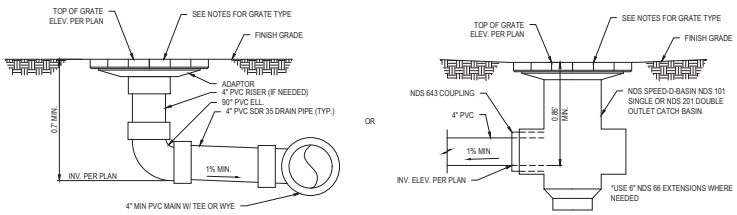


DETAIL
BUILDING DRAINAGE
NOT TO SCALE



NOTE:
a. DIG A 24" WIDE X 18" MIN. DEPTH TRENCH
b. PLACE FILTER CLOTH IN THE TRENCH LAP 12" @ TOP
c. FILL BOTTOM OF THE TRENCH W/ 3/4" CRUSHED ROCK
d. FORM AND POUR PERIMETER CONC. CURB
e. FILL THE REST OF THE TRENCH WITH CRUSHED ROCK TO 4" FROM TOP OF TRENCH

DETAIL
BOTTOMLESS TRENCH DRAIN
NOT TO SCALE



NOTE:
1. ALL FITTINGS BY: NDS, INC. (OR EQUAL) PHONE: 1-800-726-1994
2. REFER TO GRADING PLAN FOR FINISH GRADING.
3. DO NOT GLUE GRATE OR RISER TO PIPE.
4. GLUE "I.P.S. WELD ON" #773 SOLVENT (MEDIUM BODIED FAST SET) FOR PIPE THRU 6" Ø.
5. ALL PIPES TO BE 4" Ø PVC SDR 35 OR SCHEDULE 40.

DETAIL
INLET DRAIN
NOT TO SCALE

OWNER/SUBDIVIDER:
PATRICK BOYD
426 VIA LIDO NORD,
NEWPORT BEACH, CA 92663
TEL: 949.633.6990

NO.	DATE	REVISIONS	APPROVED BY	CHECKED BY:
				DESIGNER
				DESIGNED BY:
				DRAFTED BY:

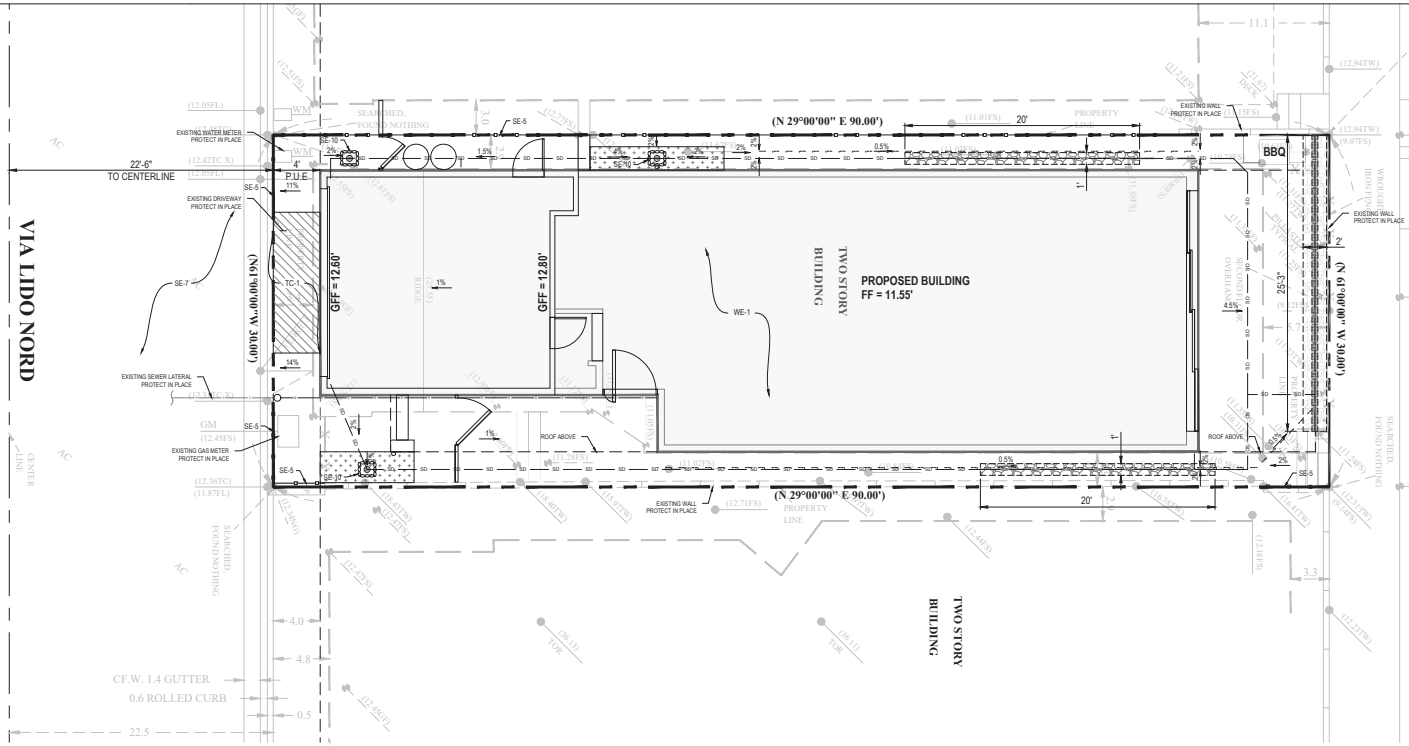
REGISTERED PROFESSIONAL ENGINEER — AMIR DEHIMI — No. C78194 — CIVIL — STATE OF CALIFORNIA

PLANS PREPARED BY:
CORE — FROM THE GROUND UP
Core Civil Engineering, Inc.
201 E. Sandpointe Ave., #400
Santa Ana, CA 92707
Phone: 949-954-7244
info@corestructure.com
www.corestructure.com
AMIR DEHIMI R.C.E. C78194 EXP. 09/30/2027
2026-02-12 DATE

SINGLE FAMILY RESIDENCE
SECTIONS AND DETAILS
PROJECT ADDRESS
426 VIA LIDO NORD
NEWPORT BEACH, CA 92663

PROJECT NO.: 26013
SHEET NO.: C-3

226



EROSION CONTROL PLAN

SCALE 1"=5

EROSION CONTROL BMPS

EC-1	SCHEDULING	SCHEDULE PREPARED BY CONTRACTOR SHALL BE ON-SITE DURING CONSTRUCTION.

TEMPORARY SEDIMENT CONTROL

SE-5	FIBER ROLLS	INSTALL WHERE SHOWN ON PLAN.
SE-7	STREET SWEEPING AND VACUUMING	STREET SHALL BE SWEEPED, SEDIMENT COLLECTED, AND DISPOSED OF OFF-SITE ON A DAILY BASIS.
SE-10	STORM WATER INLET PROTECTION	ONCE INLET RISERS ARE CONSTRUCTED, SURROUND RISERS WITH GRAVEL BAGS OR CAP THE RISER TO REDUCE SEDIMENT INTRODUCTION TO THE AREA DRAIN SYSTEM.

WIND EROSION CONTROL BMPS

WE-1	WIND EROSION CONTROL	WATER OR COVER MATERIAL SHALL BE USED TO ALLEVIATE DUST NUISANCE ON THE ROUGH GRADED PADS AND ANY STOCKPILE AREAS.

TRACKING CONTROL

TC-1	STABILIZED CONSTRUCTION EXIT	RUMBLE RACK SHALL BE PLACED ON THE DRIVEWAY TO ENSURE THAT ALL VEHICLES LEAVING THE SITE PASS OVER THE DEVICES BEFORE ENTERING THE PUBLIC STREET.

NON-STORMWATER MANAGEMENT

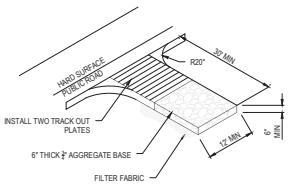
NS-1	WATER CONSERVATION PRACTICES	MAINTAIN WATER EQUIPMENT TO PREVENT NON-STORMWATER DISCHARGES.
NS-3	PAVING AND GRADING OPERATIONS	APPLY PARAMETER CONTROLS AND VACUUMING TO PREVENT NON-STORMWATER DISCHARGE.
NS-6	ILLICIT CONNECTION / ILLEGAL DISCHARGE	CONTRACTOR SHALL REPORT ILLICIT CONNECTIONS OR ILLEGALLY DUMPED MATERIALS ON SITE TO THE RESIDENT ENGINEER IMMEDIATELY AND CONTRACTOR SHALL TAKE NO FURTHER ACTION UNTIL THE RESIDENT ENGINEER PROVIDE A RESPONSE/
NS-7	POTABLE WATER / IRRIGATION	EXCISE CARE DURING CONSTRUCTION TO PREVENT NON-STORMWATER DISCHARGES.
NS-8	VEHICLE AND EQUIPMENT CLEANING	ALL VEHICLES AND EQUIPMENT WILL BE CLEANED OFF-SITE.
NS-9	VEHICLE AND EQUIPMENT FUELING	ALL VEHICLES AND EQUIPMENT WILL BE FUELED OFF-SITE.
NS-10	VEHICLE AND EQUIPMENT MAINTENANCE	ALL VEHICLES AND EQUIPMENT WILL BE MAINTAINED OFF-SITE.
NS-12	CONCRETE CURING	APPLIES TO ALL CONCRETE CONSTRUCTION.
NS-13	CONCRETE FINISHING	APPLIES TO ALL CONCRETE CONSTRUCTION.

WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL

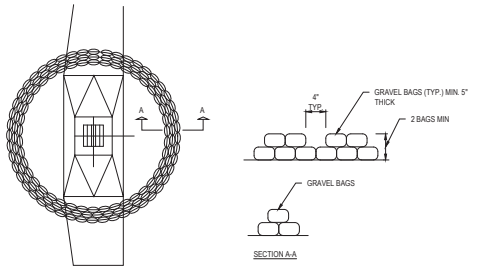
WM-1	MATERIAL DELIVERY AND STORAGE	MATERIALS SHALL BE STORED ON-SITE IN ORIGINAL MARKED CONTAINERS AND COVERED FROM RAIN AND WIND. MATERIAL INVENTORY SHALL CONSIST OF SUPPLY REQUIRED FOR A FEW DAYS.
WM-2	MATERIAL USE	MATERIALS FOR CONSTRUCTION SHALL BE USED IN ACCORDANCE WITH PRODUCT DIRECTION.
WM-3	STOCKPILE MANAGEMENT	MATERIALS STOCKPILES SHALL BE SURROUNDED BY A TEMPORARY SEDIMENT BARRIER AND COVERED TO MAINTAIN DUST CONTROL.
WM-4	SPILL PREVENTION AND CONTROL	AMPLE CLEAN-UP SUPPLIES FOR STORED MATERIALS SHALL BE KEPT ON-SITE. EMPLOYEE SHALL BE EDUCATED ON THE CLASSIFICATION OF SPILLS AND APPROPRIATE RESPONSES.
WM-5	SOLID WASTE MANAGEMENT	SOLID WASTE FROM CONSTRUCTION ACTIVITIES SHALL BE STORED IN APPROPRIATE CONTAINERS. FULL CONTAINERS SHALL BE DISPOSED OF PROPERLY.
WM-8	CONCRETE WASTE MANAGEMENT	AN ON-SITE CONCRETE WASHOUT AREA SHALL BE CONSTRUCTED, USED, AND DISPOSED OF IN A MANNER WHICH MEETS THE REQUIREMENT OF THE CITY.
WM-9	SANITARY / SEPTIC WASTE MANAGEMENT	ON-SITE FACILITY SHALL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF THE PROJECT.

LEGEND

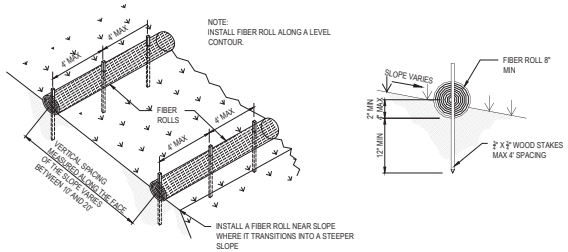
- STORM WATER INLET PROTECTION GRAVEL BAG
- FIBER ROLL
- STABILIZED CONSTRUCTION ENTRANCE



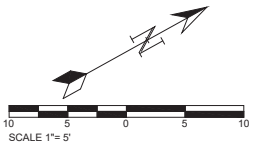
DETAIL
STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



DETAIL
GRAVEL BAG FOR INLETS
NOT TO SCALE



DETAIL
FIBER ROLLS
NOT TO SCALE



SCALE 1"= 5'

OWNER/SUBDIVIDER:
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426 VIA LIDO NORD,
NEWPORT BEACH, CA 92663
TEL: 949.633.6990

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			DESIGNED BY:
			DRAFTED BY:
			CHECKED BY:

REGISTERED PROFESSIONAL ENGINEER — AMIR DEHIMI — No. C78194 — CIVIL — STATE OF CALIFORNIA

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SINGLE FAMILY RESIDENCE
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PROJECT ADDRESS
426 VIA LIDO NORD
NEWPORT BEACH, CA 92663

PROJECT NO.: 26013
SHEET NO.: C-4

227

R McCARTHY CONSULTING, INC

December 30, 2025
(Updated January 31, 2026)

38 Linda Isle Newport Beach, LLC
c/o Patrick Boyd
426 Via Lido Nord
Newport Beach, California 92663

File No: 9087-00
Report No: R2-9087

Subject: **Geotechnical Investigation**
Proposed Residential Construction
426 Via Lido Nord
Lido Isle
Newport Beach, California

APN: 423-191-13

INTRODUCTION

This report presents the results of our geotechnical investigation for the project site located at 426 Via Lido Nord in the City of Newport Beach, California, which was performed to determine various site and regional geologic and geotechnical conditions pertinent to the construction currently proposed for the subject property. Analyses for this investigation are based upon a description of the project as a two-story, slab-on-grade, single-family residence. The purpose of our review and investigation was to evaluate the subsurface conditions, determine the compatibility of the proposed development with respect to the site-specific geotechnical features, and provide preliminary geotechnical recommendations and design parameters for site precise grading and planned improvements. Specific information and recommendations for site development are provided herein.

The conclusions and recommendations of this report are considered preliminary due to the absence of specific foundation and grading plans, the preparation of which are partially dependent upon recommendations presented herein. This report is updated herein in keeping with the 2025 California Building Code (CBC), which is now implemented for new permits by the governing agencies starting on January 1, 2026.

Project Authorization

The work performed was based on our Proposal No: P1-9087, dated July 29, 2025, and subsequent authorization.

Geologic Hazard

The potential geologic hazards at the site are primarily from liquefaction, flooding and shaking due to movement of nearby or distant faults during earthquake events. These are discussed in greater detail below.

Groundwater

Groundwater was encountered at depths of 5.5- and 7.5-feet in our exploratory borings. On-site groundwater conditions may additionally be affected by tidal conditions and fluctuate periodically in conjunction with the ingoing and outgoing tides.

Water Infiltration

From a geotechnical standpoint, on-site water infiltration above the usual tidal water elevations is allowable. Setback from the foundations is recommended for large volume runoff. Simple trench drains and permeable pavement surfaces may be allowable with appropriate setback with agency and geotechnical review and approvals. Proposed water infiltration features should be reviewed and approved by the Geotechnical Consultant.

Surficial Runoff

Proposed development should incorporate engineering and landscape drainage designed to transmit surface and subsurface flow to the street and/or storm drain system via non-erosive pathways.

Faulting/Seismic Considerations

The major concern relating to geologic faults is ground shaking that affects many properties over a wide area. Direct hazards from faulting are essentially due to surface rupture along fault lines that could occur during an earthquake. Therefore, geologists have mapped fault locations and established criteria for determining the risks of potential surface rupture based on the likelihood of renewed movement on faults that could be located under a site.

Based on criteria established by the California Division of Mines and Geology (CDMG), now referred to as the California Geological Survey (CGS), faults are generally categorized as active, potentially active or inactive (Jennings, 1994). The basic principle of faulting concern is that existing faults could move again, and that faults which have moved more recently are the most likely faults to move again and affect us. As such, faults have been divided into categories based on their age of last movement. Although the likelihood of an earthquake or movement to occur on a given fault significantly decreases with inactivity over geologic time, the potential for such events to occur on any fault cannot be eliminated within the current level of understanding.

By definition, faults with no evidence of surface displacement within the last 1.6 million years are considered inactive and generally pose no concern for earthquakes due to renewed movement. Potentially active faults are those with the surface displacement within the last 1.6

million years. Further refinements of potentially active faults are sometimes described based on the age of the last known movement such as late Quaternary (last 700,000 years) implying a greater potential for renewed movement. In fact, most potentially active faults have little likelihood of moving within the time frame of construction life, but the degree of understanding of fault age and activity is sometimes not well understood due to absence of geologic data or surface information, so geologists have acknowledged this doubt by using the term "potentially active." A few faults that were once thought to be potentially active, have later been found to be active based on new findings and mapping. Active faults are those with a surface displacement within the last 11,000 years and, therefore, most likely to move again. The State of California has, additionally, mapped known areas of active faulting as designated Alquist-Priolo "Special Studies Zones," which requires special investigations for fault rupture to limit construction over active faults.

Based on our review of various published and unpublished reports, maps and documents, the site is located approximately 1 kilometer northeast of the Newport-Inglewood Fault Zone. This fault consists of a series of parallel and en echelon, northwest-trending faults and folds extending from the southern edge of the Santa Monica Mountains to Huntington Beach and then offshore along Newport Beach. This fault zone has historically experienced moderate to high seismic activity. No active or potentially active faults are known to project through the site. In addition, the Newport-Inglewood Fault is not sufficiently well-defined in the area of the subject site to be placed within the boundaries of an "earthquake fault zone," as defined by the State of California in the Alquist-Priolo Earthquake Fault Zoning Act.

A potential seismic source near the site is the San Joaquin Hills Blind Thrust Fault (SJHBT), which is approximately 2 to 8 kilometers beneath the site at its closest point, based on the reported fault structure. The SJHBT is a postulated fault that is suspected to be responsible for uplift of the San Joaquin Hills. This fault is a blind thrust fault that does not intercept the ground surface and, therefore, presents no known potential for ground rupture at the property.

The potential for surface rupture at the site is considered to be low and the property is not located within a special study zone for fault rupture. The site will experience shaking during earthquake events on nearby or distant faults. Site improvements should take into consideration the seismic design parameters outlined herein.

Site Classification for Seismic Design

Seismic design parameters are provided in a later section of this report for use by the Structural Engineer. The soil underlying the subject site has been classified in accordance with Chapter 21 of ASCE 7, per Section 1613 of the 2025 CBC.

The results of our on-site field investigation, as well as nearby investigations by us and others, indicate that the site is directly underlain by loose to very dense fill, beach and marine deposits overlying a bedrock shelf. In the absence of site-specific shear wave velocity determinations, and in consideration of the absence of significant soft soils within the materials encountered at the site, we recommend using a characterization of this property as a Class D, "Default" Site Classification.

Secondary Seismic Hazards

Review of the Seismic Hazard Zones Map (CDMG, 1998) for the Newport Beach Quadrangle, 1997/1998 and the City of Newport Beach Seismic Safety Element (2008) indicates the site is located within a zone of required investigation for earthquake-induced liquefaction.

Liquefaction Considerations

The area along Newport Harbor and its channels is in a Zone of Required Investigation for liquefaction on the State of California Seismic Hazard Zones Map, Newport Beach Quadrangle. Requirements for investigation are included in several documents including the City of Newport Beach Building Code Policy (Revised 7/3/2014), the CBC, Section 1803.5, and the *Guidelines for Evaluating and Mitigating Seismic Hazards in California*, Special Publication 117A.

The factors known to promote liquefaction potential include high groundwater level, degree of saturation, relative density, grain size, soil type, depth below the surface, and the magnitude and distance to the causative fault or seismic source. The subject site is in an area of high liquefaction potential (Morton and others, 1976; Toppozada and others, 1988).

In order to address liquefaction potential in accordance with the City of Newport Beach Building Code Policy for single-family residential structures, a liquefaction analysis was performed to evaluate seismic settlement. Results are included in Appendix F.

Based on the results of our analysis, some layers of the soils below the site, in the locations tested, below the water table and to depths of about 16.5 feet, have safety factors of less than 1.0, assuming groundwater is present to those levels at the time of a design magnitude earthquake. This indicates risk of liquefaction during a seismic event strong enough to induce liquefaction. The site was evaluated for the existing conditions. Layers exhibiting safety factors of 1.3 and less based on Boulanger and Idriss (2010-16) were evaluated for potential seismic settlement. Seismically-induced settlements were estimated by the procedures developed by Boulanger and Idriss (2010-16) and Tokimatsu and Seed (1987). Additionally, seismically-induced settlements were estimated by the procedures developed by Yi (2022) for dry sand within materials above the assumed water table elevation. The GeoAdvanced GeoSuite Software Version 4.2.0.6, developed by Fred Yi, was utilized for the analyses (Appendix F). The resultant potential total seismic settlement within the upper 10 feet of soil was determined to be less than 1-inch within Boring B-1. Additional seismic settlement on the order of 3-inches should be assumed for depths between 10 and 50 feet during a design magnitude earthquake event. It is our opinion that this settlement potential may be mitigated by the recommended remedial grading and foundation system for support of the proposed structure.

Lateral Impacts of Liquefaction

Lateral spread is a hazard that sometimes occurs when there is sloping ground and weak lateral restraint for soil undergoing liquefaction. Spread of soil into the bay would primarily affect areas outside of the development limits since these areas are partially submerged with tidal fluctuations. The soil beyond the seawall is flat for approximately 5 feet and then slopes into the bay at gradients flatter than 5:1 (H:V). Lateral impacts of liquefaction at the subject site such as

RECOMMENDATIONS

Site Preparation and Grading

1. General

   Site grading should be performed in accordance with the requirements of the City of Newport Beach, the recommendations of this report, and the Standard Grading Guidelines of Appendix D. All excavations should be supervised and approved in writing by a representative of this firm.

2. Demolition and Clearing

   Deleterious materials, including those from the demolition of the existing concrete, vegetation, organic matter and trash, should be removed and disposed of off-site. Subsurface elements of demolished structures should be completely removed, including any trench backfills, abandoned foundations, cisterns, utility lines, etc.

3. Subgrade Preparation

   Excavations should be made to remove any soils disturbed by demolition, unsuitable fill and surficial materials where encountered within the planned building areas. A minimum removal depth of 3 feet is recommended to remove the existing upper sand deposits and provide uniform bearing conditions below foundation and slab areas. Removals should be followed by 6-inches of scarification and recompaction. These remedial excavations should be made within the planned building footprint and the influence zone of footings. Deeper excavations may be necessary to remove unsuitable materials, if encountered.

   Soil cement may be considered to stabilize and strengthen the compacted fill. Existing walls and retaining walls may be suitable locally for excavation support; however, structures must be supported laterally during grading operations. Although not anticipated at this time, lateral support may sometimes be achieved by the use of bracing, slot cutting, or trenching where wall footings are shallow relative to excavation depths.

   Dewatering is not expected to be necessary at planned removal depths but this may be somewhat dependent on tide levels and depths of foundations.

   Excavations should be replaced with compacted engineered fill. The horizontal limits of overexcavation should be outlined by the Geotechnical Engineer based on grading and foundation plans when these are available for review; however, the overexcavation need not extend beyond the planned building footprint.

   Removals below significant hardscape improvements such as driveway aprons, patios, and sidewalks should be sufficient to provide a 1.5-feet-thick compacted fill zone. Removal depths of 18-inches are expected to be adequate in exterior areas; however,

boundary conditions for removals under exterior improvements may be better addressed subsequent to demolition when equipment can expose the site materials for evaluation and when improvement limits are identified on the plan.

Light track propelled mini-loader type equipment should be used for the grading. Rubber tire equipment shall not be used until a stable subgrade is achieved.

The depths of overexcavation should be reviewed by the Geotechnical Engineer or Geologist during the actual construction. Any surface or subsurface obstructions, or questionable material encountered during grading, should be brought immediately to the attention of the Geotechnical Engineer for recommendations.

4. Fill Soils

   The on-site soils are anticipated to be suitable for use as compacted fill; however, cement treatment using Portland Cement may be considered within the graded building pad to provide additional soil strength, aid in the foundation construction and reduce collapse potential of vertical footing cuts. Fill soils should be free of debris, organic matter, cobbles and concrete fragments greater than 6-inches in diameter.

   Soils imported to the site for use as fill below foundation and slab areas should be predominantly granular, non-expansive, non-plastic and approved by the Geotechnical Engineer prior to importing.

5. Shrinkage

   Shrinkage losses are expected to be about 2 percent overall. This does not include clearing losses from demolition that could result in volume reductions for available fill soils. Addition of cement will also influence the grading volumes. These are preliminary estimates and actual field results may vary.

6. Expansive Soils

   On-site surface soils encountered during our investigation were determined to be non-plastic, non-expansive sands.

7. Compaction Standard

   The on-site soils are anticipated to be generally suitable for use as compacted fill. Highly organic and oversize materials must be removed prior to compaction. Fill materials should be placed at above optimum moisture content and compacted under the observation and testing of the Soil Engineer. The recommended minimum density for compacted material is 90 percent of the maximum density as determined by ASTM D1557.

8. Temporary Construction Slopes

   Temporary slopes exposing on-site materials should be cut in accordance with Cal/OSHA Regulations. It is anticipated that the exposed on-site earth materials may be classified as Type C soil, and temporary cuts of 1:1 (horizontal:vertical) or flatter may be appropriate to heights of 3 feet or less; however, the material exposed in temporary excavations should be evaluated by the Contractor during construction. Dry or running sands may require flatter laybacks. Temporary construction slopes should not be left exposed overnight unless approved in writing by the Geotechnical Consultant.

   Excavations should proceed in a manner so as not to remove lateral or bearing support of adjacent properties or structures. Along property lines, cuts of 1:1 or flatter are typically prudent and are required by the City of Newport Beach. Care will be needed along the property lines. The soils exposed in the excavation cuts should be observed by the Geotechnical Consultant during excavation.

   The safety and stability of temporary construction slopes and cuts is deferred to the General Contractor, who should implement the safety practices as defined in Section 1541, Subchapter 4, of Cal/OSHA T8 Regulations (2006). The Geotechnical Consultant makes no warranties as to the stability of temporary cuts. Soil conditions may vary locally and the Contractor(s) should be prepared to remedy local instability if necessary. Contract Documents should be written in a manner that places the Contractor in the position of responsibility for the stability of all temporary excavations. Stability of excavations is also time dependent.

   If unsupported property line cuts are made, the Contractor should monitor the performance of adjacent structures and improvements during construction. If movement or distress is noted, appropriate remedial measures should be immediately implemented.

9. Adjacent Property Assessments and Monitoring

   The following measures may be considered in order to reduce the potential risks of damage, and perceived damage, to adjoining improvements:

   - Visual inspections and walk-throughs of each of the adjacent properties should be arranged in order to document pre-existing conditions and damages.
   - Measurements of all existing damages observed, including crack lengths, widths and precise locations should be made.
   - Photographs should be taken to accompany written notes that refer to damages or even lack of damages. Video may also be considered; however, videos that attempt to show these types of damages are often lacking in detail.
   - Floor level surveys of nearby structures may be considered especially if pre-existing damage is evident.
   - Vibrations from construction equipment may be monitored with portable seismographs during excavation.
   - Surveys to monitor lateral and vertical position of adjacent improvements and shoring elements is recommended.

Flatwork elements should be a minimum 4-inches thick (actual) and reinforced with No. 4 bars at 18-inches on center both ways. Subgrade soils should be well moistened prior to placement of concrete.

Concrete Construction Components in Contact with Soil

The results of our laboratory testing indicate a low soluble sulfate content; however, due to shallow sea water levels in the area, a moderate exposure to sulfate can be expected for concrete placed in contact with on-site soils. Various components within the concrete may be subject to corrosion over time when exposed to soluble sulfates. To help mitigate corrosion, sulfate resistant cement should be used in concrete that may be in contact with on-site soils or ground source water. Attention to maximum water-cement ratio and the minimum compressive strength may also help mitigate deterioration of concrete components. The results of the sulfate test of the on-site soil are provided in Appendix C.

Type V cement is, therefore, recommended with a maximum water-cement ratio of 0.45 percent. The minimum concrete compressive strength should be at least 4,500 pounds per square inch.

It is recommended that a Concrete Expert be retained to design an appropriate concrete mix to address the structural requirements. In lieu of retaining a Concrete Expert, it is recommended that the 2025 CBC, Section 1904 and 1905, be utilized, which refers to ACI 318. Testing should be performed during grading when fill materials are identified to confirm the sulfate concentration.

Metal Construction Components in Contact with Soil

Metal rebar encased in concrete, iron pipes, copper pipes, elevator shafts, air conditioner units, etc., that are in contact with soil or water that permeates the soil should be protected from corrosion that may result from salts contained in the soil. Recommendations to mitigate damage due to corrosive soils, if needed, should be provided by a qualified Corrosion Specialist.

Foundation Excavations

All excavations should be observed by the Geotechnical Engineer prior to placement of forms, reinforcement, and concrete for verification of conformance with the intention of these recommendations. All excavations should be trimmed neat, level, and square. All loose or sloughed material should be removed prior to the placement of concrete. Materials from footing excavations should not be spread in slab subgrade areas unless compacted per the requirements for fill soils as stated herein.

Finished Grade and Surface Drainage

Finished grades should be designed and constructed so that no water ponds in the vicinity of footings. Drainage design in accordance with the 2019 CBC, Section 1804.4, is recommended or per local City requirements. Roof gutters should be provided and outflow directed away from the house in a non-erosive manner as specified by the Project Civil Engineer or Landscape

Architect. Surface and subsurface water should be directed away from building areas. Proper interception and disposal of on-site surface discharge is presumed to be a matter of civil engineering or landscape architectural design.

Infiltration

Simple trench drains and permeable pavement surfaces may be allowable with appropriate agency and geotechnical review and approvals. Proposed water infiltration features should be reviewed and approved by the Geotechnical Consultant. It is our opinion that typical gravel trenches and permeable hardscape for periodic water infiltration into the on-site soil is acceptable from a geologic and geotechnical standpoint. The water levels are expected to be at a depth of approximately 7.5 feet below the building pad grade based on our borings. The water table is ultimately tidal in nature and introduction of the infiltration water is not expected to raise the water level or create new perched water zones due to lateral permeability. These types of infiltration will, therefore, not be expected to create any geohazards due to modification of groundwater levels. Planned infiltration design and BMP devices should be reviewed by our office prior to construction.

Foundation and Grading Plan Review

The undersigned should review final foundation and grading plans and specifications prior to their submission to the building official for issuance of permits. The review is to be performed only for the limited purpose of checking for conformance with design concepts and the information provided herein. Review shall not include evaluation of the accuracy or completeness of details, such as quantities, dimensions, weights or gauges, fabrication processes, construction means or methods, coordination of the work with other trades or construction safety precautions, all of which are the sole responsibility of the Contractor. The R McCarthy Consulting, Inc. (RMC) review shall be conducted with reasonable promptness while allowing sufficient time in our judgment to permit adequate review. Review of a specific item shall not indicate that RMC has reviewed the entire system of which the item is a component. RMC shall not be responsible for any deviation from the Contract Documents not brought to our attention in writing by the Contractor. RMC shall not be required to review partial submissions or those for which submissions of correlated items have not been received.

Utility Trench Backfill

Utility trench backfill should be placed in accordance with Appendix D, Standard Grading Guidelines. It is the Owner's and Contractor's responsibility to inform Subcontractors of these requirements and to notify RMC when backfill placement is to begin. It has been our experience that trench backfill requirements are rigorously enforced by the local agencies.

Fill materials should be placed at near optimum moisture content and compacted under the observation and testing of the Soil Engineer. The minimum dry density required for compacted backfill material is 90 percent of the maximum dry density as determined by ASTM D1557.

If utility contractors indicate that it is undesirable to use compaction equipment in close proximity to a buried conduit, we recommend the utilization of lightweight mechanical

equipment and/or shading of the conduit with clean granular material, which could be thoroughly jetted in place above the conduit prior to initiating mechanical compaction procedures. Bedding materials should have a Sand Equivalent not less than 30. Other methods of utility trench compaction may also be appropriate as approved by the Geotechnical Engineer at the time of construction.

The walls of temporary construction trenches are expected to be stable when cut into soils, with only minor sloughing, provided the total depth does not exceed about 3 feet. Shoring of excavation walls or flattening of slopes may be required, if greater depths are necessary. All work associated with trench shoring must conform to the State of California Safety Code. The depth of the site utilities is unknown at this time. Excavation exceeding 3 feet below site grades should be reviewed by the Geotechnical Consultant to provide recommendations prior to digging.

Trenches should be located so as not to impair the bearing capacity or cause settlement under foundations. As a guide, trenches subparallel to foundations should be clear of a 45-degree plane extending outward and downward from the edge of the foundations.

Pre-Grade Meeting

A pre-job conference should be held with representative of the Owner, Contractor, Architect, Civil Engineer, Geotechnical Engineer, and Building Official prior to commencement of construction to clarify any questions relating to the intent of these recommendations or additional recommendations.

Observation and Testing

Geotechnical observation and testing during construction are required to verify proper removal of unsuitable materials, check that foundation excavations are clean and founded in competent material, to test for proper moisture content and proper degree of compaction of fill, to test and observe placement of wall and trench backfill materials, and to confirm design assumptions. It is noted that the CBC requires continuous verification and testing during placement of fill, pile driving, and pier/caisson drilling.

An RMC representative shall observe the site at intervals appropriate to the phase of construction, as notified by the Contractor, in order to observe the work completed by the Contractor. Such visits and observation are not intended to be an exhaustive check or a detailed inspection of the Contractor's work but rather are to allow RMC as an experienced professional, to become generally familiar with the work in progress and to determine, in general, if the grading and construction is in accordance with the recommendations of this report.

RMC shall not supervise, direct, or control the Contractor's work. RMC shall have no responsibility for the construction means, methods, techniques, sequences, or procedures selected by the Contractor, the Contractor's safety precautions or programs in connection with the work. These rights and responsibilities are solely those of the Contractor. RMC shall not be responsible for any acts or omission of any entity performing any portion of the work, including the Contractor, Subcontractor, or any agents or employees of any of them. RMC does not

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NO.	DATE	REVISIONS	APPROVED BY

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DRAFTED BY:
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