


Notice of Exemption

To: County Clerk County of Orange Public Services Division Santa Ana, CA 92702	From: City of Newport Planning Division 100 Civic Center Drive P.O. Box 1768 Newport Beach, CA 92658-8915 (949) 644-3200	
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Project Title: Office and Parking Structure (PA2019-023)

Project Applicant: Laidlaw Schultz Architects, 3111 Second Avenue #1, Newport Beach, CA 92625

Attention: Jonathan Yee, jyee@lsarchitect.com, 949-645-9982

Project Location – Specific: 215 Riverside Avenue, Newport Beach, CA (corner of Riverside Avenue and Avon Street)

Project Location – City: Newport Beach **Project Location – County:** Orange

Description of Nature, Purpose and Beneficiaries of Project: The Project proposes to demolish an existing 8,056-square-foot restaurant/office building and associated 18-space surface parking lot and construct a new 40-space, two-level parking structure and a 2,744-square-foot office building. A coastal development permit was approved for the Project development within the coastal zone and a conditional use permit was approved to authorize the construction of the parking structure adjacent to the residentially zoned property. The project includes hardscape, drainage, and landscape improvements. The proposed development complies with all applicable development standards including height, setbacks, and floor area limits.

Name of Public Agency Approving Project: City of Newport Beach

Name of Person or Agency Carrying out Project: Laidlaw Schultz Architects

Exempt Status: (check one):

- ☐ Ministerial (Sec. 21080(b)(1); 15268);
- ☐ Declared Emergency (Sec. 21080(b)(3); 15269(a));
- ☐ Emergency Project (Sec. 21080(b)(4); 15269(b)(c));
- ☒ **Categorical Exemption. State type and section number:** Class 32 (Section 15332) - Infill Development
- ☐ **Statutory Exemptions. State code number:** _____

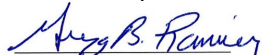
Reasons why project is exempt: See attached pages and site plan.

Lead Agency

Contact Person/Title: Gregg Ramirez, Principal Planner **Contact Phone No./Ext:** 949-644-3219

If filed by applicant:

1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project? ☐ Yes ☐ No

Signature:  **Title:** Gregg Ramirez, Principal Planner **Date:** 05-21-2020

☒ Signed by Lead Agency ☐ Signed by Applicant

EXHIBIT A

California Environmental Quality Act ("CEQA") Determination

The Garden Office and Parking Structure 215 Riverside Avenue Newport Beach, CA

CEQA Section 15332. In-Fill Development Projects

The Project is categorically exempt under Section 15332, of the California Environmental Quality Act (CEQA) Class 32 (In-Fill Development Projects) set forth in Title 14, Division 6, Chapter 3 ("CEQA Guidelines"). This exemption applies to in-fill development projects in urban areas that are consistent with the General Plan and applicable development standards. In addition, the proposed development must occur on a site of no more than five (5) acres, have no value as habitat for endangered, rare or threatened species, be adequately served by all utilities and public services, and must not result in any significant effects relating to traffic, air quality, water quality, or any other significant effect on the environment due to an unusual circumstance.

Class 32 exemptions for in-fill development projects are required to meet the following conditions:

- (a) The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with the applicable zoning designation and regulations.**

The General Plan Land Use Element designates the site as General Commercial (CG) which is intended to provide for a wide variety of commercial activities oriented primarily to serve citywide or regional needs. Development of the site will be consistent with General Plan policies as indicated below. The Project is consistent with the 0.5 FAR limit for the Property.

Land Use Policies

- Policy LU2.1** **Resident-Serving Land Uses.** *Accommodate uses that support the needs of Newport Beach's residents including housing, retail, services, employment, recreation, education, culture, entertainment, civic engagement, and social and spiritual activity that are in balance with community natural resources and open spaces.*
- Policy LU2.2** **Sustainable and Complete Community.** *Emphasize the development of uses that enable Newport Beach to continue as a self-sustaining community and minimize the need for residents to travel outside of the community for retail, goods and services, and employment.*
- Policy LU 2.8** **Adequate Infrastructure.** *Accommodate the types, densities, and mix of land uses that can be adequately supported by transportation and utility infrastructure (water, sewer, storm drainage, energy, and*

so on) and public services (schools, parks, libraries, seniors, youth, police, fire, and so on).

Policy LU3.2

Growth and Change. *Enhance existing neighborhoods, districts and corridors, allowing for re-use and infill with uses that are complementary in type, form, scale, and character. Changes in use and/or density/intensity should be considered only in those areas that are economically underperforming, are necessary to accommodate Newport Beach's share of projected regional population growth, improve the relationship and reduce commuting distance between home and jobs, or enhance the values that distinguish Newport Beach as a special place to live for its residents. The scale of growth and new development shall be coordinated with the provision of adequate infrastructure and public services, including standards for acceptable traffic level of service.*

Policy LU 4.1

Land Use Diagram. *Accommodate land use development consistent with the Land Use Plan. Figure LU1 depicts the general distribution of uses throughout the City and Figure LU2 through Figure LU15 depict specific use categories for each parcel within defined Statistical Areas. Table LU1 (Land Use Plan Categories) specifies the primary land use categories, types of uses, and, for certain categories, the densities/intensities to be permitted. The permitted densities/intensities or amount of development for land use categories for which this is not included in Table LU1, are specified on the Land Use Plan, Figure LU4 through Figure LU15. These are intended to convey maximum and, in some cases, minimums that may be permitted on any parcel within the designation or as otherwise specified by Table LU2 (Anomaly Locations).*

The office use is intended to serve local residents and the parking structure will serve the Project while also providing additional spaces to serve surrounding businesses and uses in the Mariners' Mile community on a lease basis. The use complements the existing type and character of the nearby development, which includes a variety of commercial and residential development. As further discussed in part (e) of this analysis, there is adequate capacity in the sewer and water facilities, circulation, and other public services and facilities to provide an adequate level of service to the Project. The Project (i.e., office and parking structure) represents "in-fill" development that can be served by the existing infrastructure.

The Property is located within the Commercial General (CG) Zoning District, which is intended to provide for a range of neighborhood-serving retail and service uses along street frontages that are located and designed to foster pedestrian activity. Pursuant to Section 20.20.020 (Commercial Zoning Districts Land Uses and Permit Requirements), office uses are a permitted use within the Commercial General Zoning District.

Project Design Policies

Policy 5.2.1

Architecture and Site Design. *Require that new development within existing commercial districts and corridors complement existing uses and exhibit a high level of architectural and site design in consideration of the following principals:*

- *Seamless connections and transitions with existing buildings, except where developed as a free-standing building,*
- *modulation of building masses, elevations and rooflines to promote visual interest,*
- *architectural treatment of all building elevations, including ancillary facilities such as storage, truck loading and unloading, and trash enclosures,*
- *treatment of the ground floor of buildings to promote pedestrian activity by avoiding long continuous blank walls, incorporating extensive glazing for transparency, and modulating and articulating elevations to promote visual interest,*
- *clear identification of storefront entries,*
- *incorporation of signage that is integrated with the buildings' architectural character,*
- *architectural treatment of parking structures consistent with commercial buildings, including the incorporation of retail in the ground floors where the parking structure faces a public street or pedestrian way,*
- *extensive on-site landscaping, including mature vegetation to provide a tree canopy to provide shade for customers,*
- *incorporation of plazas and expanded sidewalks to accommodate pedestrian, outdoor dining, and other activities,*
- *clearly delineated pedestrian connections between business areas, parking, and to adjoining neighborhoods and districts (paving treatment, landscape, wayfinding signage, and so on),*
- *integration of building design and site planning elements that reduce the consumption of water, energy, and other renewable resources.*

The Project includes a 2,744-square-foot office building and a 41 space parking structure. The building provides a flat parapet roofline and brick façade with the primary pedestrian entrance located along the street frontage. The architectural style of the building is designed to complement the adjacent retail shopping center to the south, with a brick façade, fabric awnings, and arched window and entryways. The parking structure is accessible from Avon Street and Riverside Avenue and accommodates visitors, employees, and surplus parking to serve the surrounding area. Appropriate pedestrian connections are maintained along the adjacent sidewalks of Riverside Avenue and Avon Street.

Neighborhood Compatibility Policies

- Policy LU5.2.2 Buffering Residential Areas.** *Require that commercial uses adjoining residential neighborhoods be designed to be compatible and minimize impacts through such techniques as:*
- *Incorporation of landscape, decorative walls, enclosed trash containers, downward focused lighting fixtures, and/or comparable buffering elements;*
 - *Attractive architectural treatment of elevations facing the residential neighborhood;*
 - *Location of automobile and truck access to prevent impacts on neighborhood traffic and privacy.*
- Policy LU6.16.5 Compatibility of Business Operations with Adjoining Residential Neighborhoods.** *Work with local businesses to ensure that retail, office, and other uses do not adversely impact adjoining residential neighborhoods. This may include strategies addressing hours of operation, employee loitering, trash pickup, truck delivery hours, customer arrivals and departures, and other activities.*
- Policy LU6.16.6 Design Compatibility with Adjoining Residential Neighborhoods.** *Require that building elevations facing adjoining residential units be designed to convey a high-quality character and ensure privacy of the residents, and that properties be developed to mitigate to the maximum extent feasible impacts of lighting, noise, odor, trash storage, truck deliveries, and other business related activities. Building elevations shall be architecturally treated and walls, if used as buffers, shall be well-designed and landscaped to reflect the areas residential village character.*

The Project incorporates a variety of features to ensure neighborhood compatibility, including landscaping at the rear adjacent to residential properties and Cliff Drive Park, attractive architectural treatments including a trellis at the second level of the proposed parking structure. The majority of the parking structure is built into the slope on site to maintain views for surrounding residents and public park areas. Additionally, the Applicant has reduced the height of the parking structure to the height of the existing building. Parking structure access is specifically designed with first level access from Avon Street and second level access from Riverside Avenue to maximize the efficiency of parking and circulation on the Property. The location of vehicle access will ensure existing neighborhood traffic and privacy patterns are maintained. A trash enclosure is located at the southwest portion of the parking structure to minimize odors and noise to the nearby properties. Project lighting will be reviewed with a photometric study at plan check to ensure exterior lighting is compatible with surrounding residential development.

Adequate setbacks are incorporated into the Project's design to ensure that the office building and parking structure will be compatible with the adjoining residential properties. A minimum five (5) foot setback is provided between the nearest residences.

Mariners' Mile Policies

- LU 6.19.11 Pedestrian-Oriented Village.** *Require that inland properties that front onto internal streets within the Community/Neighborhood Village locate buildings along and forming a semi continuous building wall along the sidewalk, with parking to the rear in structures or in shared facilities and be designed to promote pedestrian activity.*
- LU 6.19.12 Properties Abutting Bluff Faces.** *Require that development projects locate and design buildings to maintain the visual quality and maintain the structural integrity of the bluff faces.*

The Property is located on an inland portion of Mariners' Mile. The proposed office building and parking structure is designed for pedestrian access fronting the intersection of Riverside Avenue and Avon Street to improve the pedestrian oriented quality of the Village area. The site is a steeply sloping lot that was previously developed with a surface level parking area of 18-parking spaces, and 8,056-square-foot, three-story, commercial building encompassing office space and a former restaurant. The existing commercial building continues to include office uses and would be demolished. When redeveloped, the new parking structure will make use of an existing retaining wall on the site to maintain the visual quality and integrity of the bluff area at the rear portion of the Property.

(b) The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses.

The Project site is within the Newport Beach city limits, and consists of 16,246 square feet or 0.37-acres of land area. The Project site is surrounded by other urban uses including retail, restaurant, and office uses to the south and southwest, residential uses to the north and east of the site, and Cliff Drive Park to the northwest and northeast.

(c) The project site has no value, as habitat for endangered, rare or threatened species.

The Property is vacant and has no native vegetation and/or habitat. As noted above, the site is currently developed with a restaurant and office building with an 18-space surface parking lot. There is no potential for special-status plants or animals to exist on the vacant lot.

A biological resources analysis (Exhibit 5) has confirmed the offsite presence of a wetland resource area, located on the northerly edge of Avon Street to the west of the Property. The memorandum explains that this wetland is a slope wetland or groundwater fed wetland that has been documented at this location since at least 1989. The biological analysis included mapping of the wetland and inventory of the species occupying the area. This indicates the wetland is three (3) to six (6) feet wide directly adjacent to Avon Street and includes a mix of native and non-native species. The source of water is fed by a spring and/or runoff, which drains toward the west, discharging into a drainage culvert west of the Property across from the BMW dealership property.

Even though the wetland is not on the Project site and no diking dredging or filling is proposed, the following analysis is provided to demonstrate the Project's consistency with the certified Local Coastal Program pursuant to the California Coastal Act. Coastal Land Use Policy 4.2.2.3 and Section 21.30B.040 (Wetlands, Deepwater Areas, and Other Water Areas) of the Local Coastal Program requires a 100 foot buffer between development and wetlands unless:

- a. One hundred (100) foot wide buffer is not possible due to site-specific constraints; and*
- b. The proposed narrower buffer would be amply protective of the biological integrity of the wetland given the site-specific characteristics of the resource and of the type and intensity of disturbance.*

Existing site wall and driveway encroachments over the Property line would be removed and increase the buffer distance from 29 feet to 39 feet from the wetland. Further, the proposed erosion control plan demonstrates that adequate measures such as a silt fence, straw wattle, and other necessary protections will be taken to protect surrounding properties from erosion and discharge of pollutants during construction. The biologist's analysis concluded that there would be no significant impacts to wetland ESHA associated with the re-development of the Property and that 39 foot buffer is sufficient for the long-term maintenance and health of the wetland resource.

Additionally, since the Project would not affect the wetland directly through dredging, filling, or other alteration, notification and/or permitting under California Department of Fish and Wildlife Section 1602 is not required. Thus, there would be no significant impacts to wetland ESHA associated with the Project. For these reasons, the Project site has no value as habitat for endangered, rare or threatened species. Given the urban character of the surrounding area, no significant impacts to biological resources would occur.

(d) Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.

With respect to traffic, an analysis of traffic trips for the Project concluded that the generated trips would not result in a significant traffic impact. Construction of the Project is anticipated to be completed in 2020. The Project is expected to generate 46 trips on a typical weekday, with five (5) morning peak hour trips and seven (7) evening peak hour trips. This represents a 248 trip reduction in average daily trips for the Property when compared to the existing occupied and operating uses. The restaurant is vacant and the office uses are operating at this time and the existing office uses generate 50 average daily trips with 6 AM trips and 6 PM trips. As such, the project-related traffic would not cause or contribute to an unacceptable level of service with the circulation network adjacent to the Project. The Project will provide adequate, convenient parking for employees and customers or visitors based upon the review of the City's Traffic Engineer. Approval of the Project would not result in any significant effect related to traffic or circulation.

With respect to noise, an acoustical report prepared March 4, 2019 and updated in February 2020 by Urban Crossroads (Exhibit 2) confirms that sound levels will remain in

compliance with the noise standards in Section 10.26.025 of the NBMC. The unmitigated Project operational noise levels were estimated to range from 26.7 to 48.2 db(A)¹ Leq² in the worst case. No significant noise impacts will occur and the exterior noise levels would comply with the City's more conservative residential exterior noise standard of 55 dBA Leq for daytime and 50 dBA Leq for nighttime. Therefore, no additional exterior noise abatement measures are required. Additionally, a supplemental noise assessment was provided, which compares the projected project noise to the ambient nighttime noise of four commercial parking areas in the City. The results of the supplemental assessment found similar noise levels to that of the initial analysis and concludes that the initial analysis adequately describes the potential project parking lot noise levels.

The Project will comply with all applicable provisions of the City's Noise Ordinance, which allows for construction between specific hours as set forth in Chapter 10.28 of the NBMC. The Project must also be consistent with the City's interior noise standards established in the General Plan Noise Element, including Policy N1.1, N1.2, and N1.5.

With respect to air quality, neither short-term nor long-term air pollutant emissions will exceed significance thresholds established by the SCAQMD³. Nonetheless, the Project is required to comply with applicable SCAQMD regulations. Therefore, approval of the Project would not result in any significant effects relating to air quality.

With respect to water quality, a preliminary Water Quality Management Plan (Exhibit 3) has been reviewed by the City of Newport Beach and implementation of the Project would not result in potentially significant impacts to the drainage patterns on-site. The Project results in a reduction of impervious surfaces on-site. Water quality objectives will be achieved through the incorporation of Best Management Practices (BMPs) identified in the preliminary Water Quality Management Plan (Exhibit 3) during construction and post-project implementation. Project implementation will not change the general drainage pattern of the Property. Current on-site drainage patterns consist of runoff from the front portion of the Property, which is directed into a gravel bed for infiltration prior to discharge to the street. Runoff from the remaining portion of the site will be collected in an area drain system and discharged through a bio-retention planter box at the sides of the property and then pumped to the street for discharge. Under the Project, hardscape, parking structure, and landscape area runoff will be collected in proposed bioretention planter boxes and filter inserts prior to discharge into the underground storm drain system. Approval of the project would not result in any significant effect related to water quality. Furthermore, the existing drainage facilities have adequate capacity to accommodate the increase in surface runoff generated by the proposed project based upon the review by the Project's engineer.

(e) The site can be adequately served by all required utilities and public services.

All required utilities, including sewer, water, energy, telephone, etc., exist within the project site. A domestic water service and meter and fire water service and meter are located toward the southwest property line along Avon Street and Riverside Avenue. A

¹ dB(A) Weights a sound spectrum relative to the sensitivity of the human ear.

² Leq Steady-state "average" sound level over a stated time period (15 minute time period per the NBMC).

³ <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>

sewer line is located along the southern property line in Avon Street, which drains to a line in Riverside Avenue. A water/waste water calculation has been prepared for the proposed development (Exhibit 4). Project implementation is estimated to utilize less water and waste water than the existing restaurant and office building on-site. Development of a new office and parking structure is estimated to result in a decrease of 3,689 GPD of waste water generation and a decrease of 339 GPD of water demand. No backbone facilities (i.e., master-planned roads and/or utilities) will be required to accommodate the Project. The nearest fire station is one (1) mile south of the Project at 475 32nd Street on the Balboa Peninsula. Furthermore, all of the public services, including police and fire protection, schools and parks and recreation, etc., are adequate to accommodate the proposed project. Thus, the site can be adequately served by all required utilities and public services.

Determination

CEQA Class 32 consists of projects characterized as in-fill development meeting the conditions described above. The Project consists of the demolition of the existing building and development of a new office building and parking structure with required off-street parking and is consistent with the City's General Plan land use designation General Commercial (GC) and Zoning designations Commercial General (CG) as it provides a resident-serving service use (office tenants) in close proximity to nearby residences and nonresidential uses in the area. The Project is consistent with the General Plan designations and policies, and can be found consistent with all applicable zoning regulations upon approval of the requested applications.

The Property is 0.37 acres in size, is located within an urban area, and can be adequately served by all required utilities and public services. An acoustical analysis, preliminary Water Quality Management Plan, and water/waste-water generation memorandum have been prepared. An analysis of the Property indicates that the Property and adjacent areas have no value as habitat for endangered, rare, or threatened species. The Project is expected to have a less than significant impacts related to traffic, noise, air quality, and water quality. As described above, implementation of the Project will not result in any adverse effects on sensitive biological resources, traffic, air quality, noise, or water quality.

There is no reasonable probability that the Project will have a significant effect on the environment due to unusual circumstances, nor will the Project result in any short-term or long-term impacts that were not previously considered in the Newport Beach General Plan and General Plan EIR. Therefore, the Project meets all of the conditions described above for in-fill development and qualifies for a Class 32 exemption.

Piecemealing

As identified in the staff report prepared for the City Council hearing, some commenters claim the "whole of the project" under CEQA should be deemed by the City to include the preliminary application received for the adjacent 2902 West Coast Highway Project for the Garden Restaurant. The Project may, however, be reviewed independent of the Garden Restaurant (PA2019-006) located at 2902 West Coast Highway.

Under CEQA, generally, the lead agency must consider the “whole of an action” when determining whether it will have significant environmental effects. (CEQA Guidelines, §§ 15003, subd. (h), 15378, subd. (a).) This rule is designed to prevent an agency from “chopping a large project into many little ones” that may be individually insignificant but have cumulatively significant environmental effects. Breaking a single project into smaller parts and analyzing those parts separately is often referred to as “piecemealing” or “segmentation.” (See also, CEQA Guidelines, §§15165, 15168.)

The California Supreme Court has adopted the following test for determining whether unlawful piecemealing has occurred. An agency must analyze a future expansion or other action as part of the initial project “if: (1) it is a reasonably foreseeable consequence of the initial project; and (2) the future expansion or action will be significant in that it will likely change the scope or nature of the initial project or its environmental effects.” (*Laurel Heights Improvement Assn. v. Regents of Univ. of Cal.* (1988) 47 Cal.3d 376, 396; see also Pub. Resources Code, § 21065 [defining “project”].) Absent these two circumstances, the two proposals are not the same “project” and the lead agency may analyze them separately.

There is, therefore, no piecemealing where, as here, two projects serve different purposes, can be implemented independently and/or have different project proponents. In short, the Project and Garden Restaurant demonstrate “independent utility” under CEQA for the following reasons:

1. The City has not received a complete application for the Garden Restaurant;
2. The proposals lack a causal link that makes them part of an overarching scheme, in that the Project does not cause the need for the Garden Restaurant, and the Garden Restaurant does not cause the need for the Project; and
3. The Project for consideration also does not rely upon the Garden Restaurant in order for its approval and/or implementation. The approval of the Project, for example, would not make approval of the Garden Restaurant proposal either more or less likely.

Also, at the October 3, 2019 meeting, the Planning Commission was provided with a Parking Agreement Memorandum of Understanding by the Applicant’s attorney entered into between the owner of 2902 West Coast Highway and an adjacent property owner that agreed to provide parking to 2902 West Coast Highway should the project be approved by the City in the future.

In the event the City receives a complete application for the Garden Restaurant (PA2019-006), the City would evaluate the project for full compliance with the City’s General Plan, NBMC and CEQA. No substantial evidence in the record demonstrates that consideration of the two proposals independently constitutes improper piecemealing. This is not, for example, a project wherein a developer proposes to consider the potential effects of an infrastructure improvement (i.e. water or sewer) separate from the project itself (i.e. a housing project). If, new substantial evidence is introduced or the Council feels differently, it may refer both applications back to the Planning Commission for concurrent review if deemed appropriate.

Exhibit 1

Traffic Trip Generation Calculations

215 Riverside Ave

Trip Generation Calculations - 7/11/19 (DRAFT)

Trip Generation Rates - ITE 10th Ed

Land Use	Rate Type	Size	Unit	AM Peak Hour			PM Peak Hour			Daily Total
				In	Out	Total	In	Out	Total	
Quality Restaurant (*)	ITE 931	GFA	TSF	0.58	0.15	0.73	5.23	2.57	7.80	83.84
General Office Building	ITE 710	GFA	TSF	1.00	0.16	1.16	0.18	0.97	1.15	9.74
Small Office Building	ITE 712	GFA	TSF	1.59	0.33	1.92	0.78	1.67	2.45	16.19

* - AM split from AM peak hour of generator.

Existing Uses

Land Use	Rate Type	Size	Unit
215 Riverside Office	ITE 710	5,146	TSF
215 Riverside Quality Restaurant	ITE 931	2,910	TSF

Existing Uses

Land Use	Rate Type	Size	Unit	AM Peak Hour			PM Peak Hour			Daily Total
				In	Out	Total	In	Out	Total	
General Office Building	ITE 710	5,146	TSF	5	1	6	1	5	6	50
Quality Restaurant	ITE 931	2,910	TSF	2	0	2	15	8	23	244

Proposed Uses

Land Use	Rate Type	Size	Unit	AM Peak Hour			PM Peak Hour			Daily Total
				In	Out	Total	In	Out	Total	
Small Office Building	ITE 712	2,83	TSF	4	1	5	2	5	7	46

Exhibit 2

Acoustical Study



Susan K. Hori
Manatt, Phelps & Phillips, LLP
Direct Dial: (714) 371-2528
E-mail: shori@manatt.com

March 9, 2020

Client-Matter: 63060-030

Via U.S. Mail and E-Mail: gramirez@newportbeachca.gov
Gregg Ramirez
City of Newport Beach
100 Civic Center Drive
Newport Beach, CA 92660

**Re: Appeal of Coastal Development Permit No. CD2019-003, Conditional Use
Permit No. UP2019-003, and Modification Permit No. MD2019-003**

Dear Mr. Ramirez:

This letter is sent on behalf of Laidlaw Schultz (Applicant), the applicant for the 215 Riverside Avenue project (Project), and 215 Riverside Drive, LLC (Owner), the owner of the building and parking lot at 215 Riverside. Enclosed please find a Supplemental Noise Assessment, dated February 4, 2020, prepared by Urban Crossroads for the Project that will be heard by the City Council on March 24, 2020.

One of the allegations raised in the appeal filed by Berding & Weil on behalf of the four adjacent residents was that the Noise Impact Analysis (NIA) prepared by Urban Crossroads, dated April 3, 2019, did not accurately reflect the noise levels anticipated to be generated by the proposed Project. Although the NIA included 24-hour noise measurements taken from an office building in Lake Forest that housed a company that operated 24 hours a day with employees coming and going throughout that 24 hour period, the comment was made that because the parking at 215 Riverside could be used by off-site restaurants or retail uses, the noise from those patrons' cars would be different than the noise from the employees' cars in Lake Forest.

In response to that comment, Urban Crossroads took noise measurements from four commercial uses (including two restaurants and two commercial centers with retail and restaurant uses) in the City. The noise measurements from these uses demonstrate that the original NIA's noise measurements provided an accurate assessment of the noise environment at 215 Riverside. We would appreciate it if you would provide this report to the City Council, and include it in the record of proceedings for the 215 Riverside Project.

Very truly yours,

Susan K. Hori

manatt

Gregg Ramirez
March 9, 2020
Page 2

Enclosure

Cc with enclosure via email:

James Campbell, Deputy Director
Yolanda Summerhill, Esq., Ass't City Attorney
Scott Laidlaw
Kaitlin Crowley

325961550.1



February 4, 2020

Susan Hori
Manatt, Phelps & Phillips, LLP
695 Town Center Drive, 14th Floor
Costa Mesa, CA 92626

SUBJECT: 215 RIVERSIDE SUPPLEMENTAL NOISE ASSESSMENT

Dear Susan Hori:

Urban Crossroads, Inc. is pleased to submit this Supplemental Noise Assessment for the 215 Riverside ("Project"), which is located north of Avon Street and west of Riverside Avenue in the City of Newport Beach. The purpose of the Supplemental Noise Assessment is to describe the existing noise levels associated with the planned parking lot for the Project. This assessment expands on the previous parking lot reference noise level measurements found in the April 3rd, 2019 *215 Riverside Avenue Noise Impact Analysis* ("NIA") prepared by Urban Crossroads, Inc. (1)

PREVIOUS FINDINGS OF THE 215 RIVERSIDE AVENUE NOISE IMPACT ANALYSIS

The results of the original April 3rd, 2019 NIA indicated that the highest noise levels that would affect the adjacent noise-sensitive residential receiver locations are expected to approach 38.2 dBA L_{eq} from parking lot vehicle movements and 57.2 dBA L_{eq} from HVAC units when measured at a distance of 50 feet. The NIA demonstrated that the noise generated from the expected Project operational noise sources (roof-top air conditioning and parking lot vehicle movements) will satisfy the City of Newport Beach Municipal Code daytime 55 dBA L_{eq} and nighttime 50 dBA L_{eq} exterior noise level standards at the neighboring residential uses. Based on the findings in the NIA, no additional exterior noise abatement measures (e.g., noise barriers or operational mitigation measures) are required. The reference noise level measurements from the original NIA used to describe the Project noise levels are shown in Table 1 below.

TABLE1: REFERENCE NOISE LEVEL MEASUREMENTS

Noise Source	Total Duration (hh:mm:ss)	Ref. Distance (Feet)	Source Height (Feet)	Reference Noise Levels (dBA L_{eq})	
				@ Ref. Distance	@ 50 Feet ³
Roof-Top Air Conditioning Units ¹	96:00:00	5'	4'	77.2	57.2
Parking Lot Vehicle Movements ²	01:00:00	10'	5'	52.2	38.2

¹ As measured by Urban Crossroads, Inc. on 7/27/2015 at the Santee Walmart located at 170 Town Center Parkway.

² As measured by Urban Crossroads, Inc. on 5/17/2017 at the Panasonic Avionics Corporation in the City of Lake Forest.

³ Reference noise levels at 50 feet represent the normalized noise source levels for comparison at a common distance.

It is important to note that the Project operational noise levels provided in the study assumed a conservative estimation of the future noise environment, with the roof-top air conditioning units and parking lot vehicle movements all operating continuously, and simultaneously. Moreover, the analysis assumed that the highest reference noise source activity for all noise sources operate every minute of every hour in each day. Therefore, the analysis includes no periods of inactivity, and describes the continuous operation of operational noise source activities across both daytime and nighttime hours. In reality the noise level impacts will likely vary throughout the day. For example, rooftop air conditioning will not be operating at night for the 215 Riverside Avenue building.

In addition, at the October 17, 2019 Planning Commission hearing the project proponent agreed to extend the rooftop trellis and prohibit parking on the upper parking level after 11:00 pm. Any cars on the upper parking level parked before 11:00 pm would be allowed to remain. The upper parking level restrictions would also contribute to reducing potential noise levels associated with parking activities.

REFERENCE NOISE LEVEL MEASUREMENTS

As previously indicated, the purpose of this assessment is to supplement the existing parking lot reference noise level measurements with additional noise level measurement data describing similar parking lots in area. To identify the potential parking lot noise levels from the Project, long-term reference noise level measurements were collected at the following locations as shown on Exhibit A:

- Mariner's Mile Square Parking Lot
- On the Rocks Bar and Grill Parking Lot
- Parking Lot at West Oceanfront and 22nd Street
- The Landing Parking Lot

MEASUREMENT PROCEDURES

To assess the potential noise levels generated by the proposed Project parking lot, reference noise level measurements were collected between 11:00 a.m. on Friday, December 13th, 2019 to 8:00 a.m. on Sunday, December 16th, 2019. Appendix A includes photographs of the reference parking lot activities. The long-term noise level measurements were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The sound level meter was calibrated using a Larson-Davis calibrator, Model CAL 200. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (2)

REFERENCE NOISE LEVEL MEASUREMENT SUMMARY

Table 2 shows the peak hour nighttime (10:00 p.m. to 7:00 a.m.) reference parking lot noise level measurements collected in similar parking lots near the Project site in City of Newport Beach. All reference measurements are presented at both the reference distance they were taken, in addition to a uniform reference distance of 50 feet for comparison purposes. To present a conservative approach,

the peak nighttime noise hour for each parking lot is used to describe the noise reference noise levels in this assessment. Table 2 shows that during the peak nighttime noise hour, the four reference parking lot noise level measurements ranged from 35.7 to 40.5 dBA L_{eq} .

TABLE 2: REFERENCE PARKING LOT NOISE LEVELS

Reference Parking Lot	Location	Total Duration (hh:mm:ss)	Ref. Distance (Feet)	Source Height (Feet)	Reference Noise Levels (dBA L_{eq})	
					@ Ref. Distance	@ 50 Feet ³
Panasonic Avionics (Original Reference) ¹		01:00:00	10'	5'	52.2	38.2
Mariner's Mile Square ²	L1	01:00:00	5'	5'	55.7	35.7
On the Rocks Bar and Grill ²	L2	01:00:00	5'	5'	56.4	36.4
West Ocean Front and 22nd Street ²	L3	01:00:00	5'	5'	60.5	40.5
The Landing ²	L4	01:00:00	5'	5'	57.7	37.7

¹ As measured by Urban Crossroads, Inc. on 5/17/2017 at the Panasonic Avionics Corporation in the City of Lake Forest.

² As measured by Urban Crossroads, Inc. on 12/13/2019 to 12/16/2019 in the City of Newport Beach.

³ Reference noise levels at 50 feet represent the normalized noise source levels for comparison at a common distance.
 "Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

MARINER'S MILE SQUARE

Location L1 is located along Avon Street and serves the Mariner's Mile Square shopping center. There are approximately 117 parking spaces occupied by customers of the surrounding businesses. This parking lot is primarily active during the day but is likely to have nighttime activity from the restaurants and bars across Coast Highway.

ON THE ROCKS BAR AND GRILL

Location L2 is located north of Pacific Coast Highway serving On the Rocks Bar and Grill. This parking lot is used primarily for customers of the On the Rocks Bar and Grill restaurant. With about 28 parking spaces this parking lot is active during daytime hours and some nighttime hours as the restaurant remains open until 10:00 p.m.

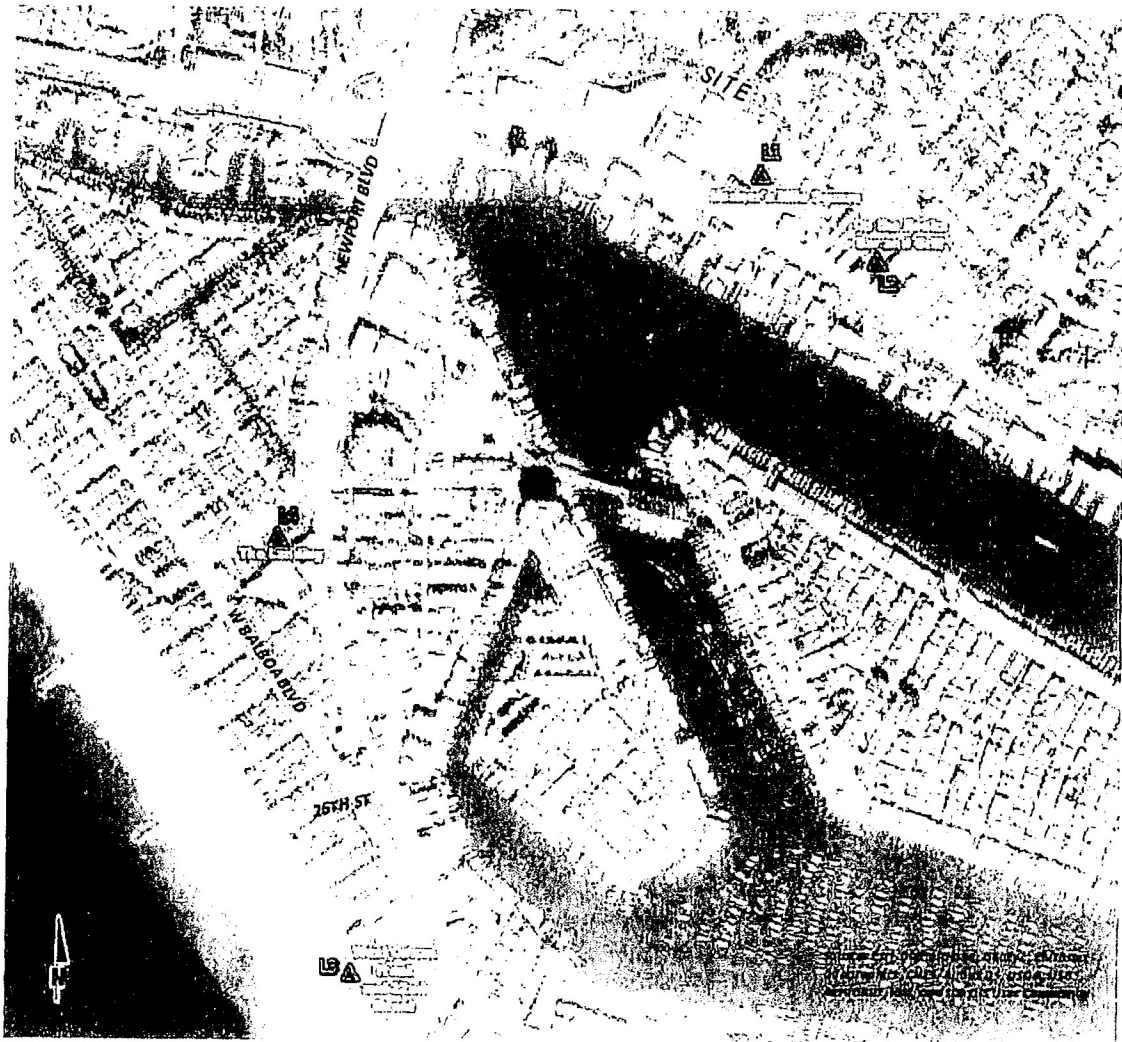
WEST OCEAN FRONT AND 22ND STREET

Location L3 is located on West Ocean Front and 22nd Street serving restaurants, bars, and stores along West Ocean Front. This parking lot is active during all times as bars are open late with some stores open 24 hours a day.

THE LANDING

Location L4 is located south of 32nd Street and west of Newport Boulevard serving the Landing Shopping center. Daytime use comes primarily from customers of The Landing which includes restaurants, grocery stores, and banks. Nighttime activity is likely to come from customers of Malarky's Irish Pub which is on the same block.

EXHIBIT A: REFERENCE MEASUREMENT LOCATIONS



LEGEND:

▲ Noise Measurement Locations

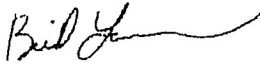
CONCLUSIONS

The reference parking lot measurements show that the original NIA adequately describes the potential Project parking lot noise levels. The four supplemental noise levels at similar reference parking lots in the City of Newport Beach ranged from 35.7 dBA L_{eq} to 40.5 dBA L_{eq} at 50 feet during the peak nighttime hours. This is generally consistent with the original NIA parking lot reference noise level measurement of 38.2 dBA L_{eq} from the Panasonic Avionics Corporation parking lot.

It is also important to recognize that while this assessment focuses on parking lot noise level impacts, the primary operational noise source activity of 57.2 dBA L_{eq} is related to the HVAC units, which will not be operating at night. In effect, the reference noise levels of 38.2 dBA L_{eq} associated with the parking lot are largely overshadowed by the HVAC operational noise levels of 57.2 dBA L_{eq} , which will not operate at night. This Supplemental Noise Assessment demonstrates that original parking lot reference noise level of 38.2 dBA L_{eq} adequately reflects the reference noise source levels ranging from 35.7 to 40.5 dBA L_{eq} at similar parking lots in Newport Beach. Therefore, the analysis in the original NIA adequately describes the potential parking lot noise level impacts at the nearby noise sensitive residential land use. If you have any questions, please contact me directly at (949) 336-5979.

Respectfully submitted,

URBAN CROSSROADS, INC.



Bill Lawson, P.E., INCE
Principal

REFERENCES

1. **Urban Crossroads, Inc.** *215 Riverside Avenue Noise Impact Analysis*. April 3, 2019.
2. **American National Standards Institute (ANSI)**. *Specification for Sound Level Meters ANSI S1.4-2014/IEC 61672-1:2013*.
3. **Harris, Cyril**. *Handbook of Acoustical Measurements and Noise Control*. 1998.

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APPENDIX A:
REFERENCE NOISE LEVEL MEASUREMENT PHOTOS

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JN:12356 Reference Noise Source Photos



L0_Panasonic_E
33, 39' 58.790000"117, 40' 20.490000"



L0_Panasonic_N
33, 39' 58.790000"117, 40' 20.490000"



L0_Panasonic_SW
33, 39' 58.790000"117, 40' 20.490000"



L0_Panasonic_W
33, 39' 58.790000"117, 40' 20.490000"



L1_Avon St_E
33, 37' 14.800000"117, 55' 22.320000"



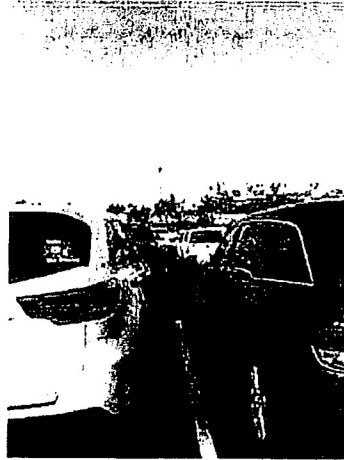
L1_Avon St_N
33, 37' 14.300000"117, 55' 22.840000"

JN:12356 Reference Noise Source Photos



L1_Avon St_S

33, 37' 14.650000"117, 55' 22.730000"



L1_Avon St_W

33, 37' 14.580000"117, 55' 22.870000"



L2_On The Rocks_E

33, 37' 10.500000"117, 55' 14.410000"



L2_On The Rocks_N

33, 37' 10.570000"117, 55' 14.470000"



L2_On The Rocks_S

33, 37' 10.500000"117, 55' 14.410000"



L2_On The Rocks_W

33, 37' 10.570000"117, 55' 14.470000"

JN:12356 Reference Noise Source Photos



L3_Seaside_Bakery_E
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L3_Seaside_Bakery_N
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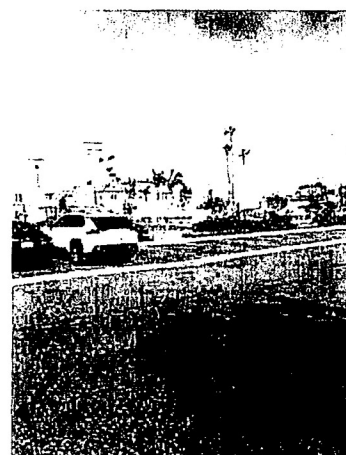
L3_Seaside_Bakery_S
33, 36' 35.230000"117, 55' 49.460000"



L3_Seaside_Bakery_W
33, 36' 35.230000"117, 55' 49.460000"



L4_The Landings_E
33, 36' 55.240000"117, 55' 52.260000"



L4_The Landings_N
33, 36' 55.230000"117, 55' 52.370000"

JN:12356 Reference Noise Source Photos



L4_The Landings_S
33, 36' 55.210000"117, 55' 52.230000"



L4_The Landings_W
33, 36' 55.210000"117, 55' 52.260000"



215 Riverside Avenue

NOISE IMPACT ANALYSIS

CITY OF NEWPORT BEACH

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APRIL 3, 2019

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LIST OF ABBREVIATED TERMS

(1)	Reference (See Section 7 for a list of all references)
ANSI	American National Standards Institute
CadnaA	Computer Aided Noise Abatement
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibels
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
INCE	Institute of Noise Control Engineering
L_{eq}	Equivalent continuous (average) sound level
L_{max}	Maximum level measured over the time interval
Project	215 Riverside Avenue

EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to evaluate the potential operational noise levels associated with the proposed two-story commercial office with attached parking structure at 215 Riverside Avenue ("Project"), and to identify whether exterior noise abatement measures are required to meet the City of Newport Beach Municipal Code exterior noise level standards. (1) The Project site is located at 215 Riverside Avenue in the City of Newport Beach, and consists of a two-story commercial building with attached two-level parking structure. Using reference noise levels of conservatively-representative operational activities, including roof-top air conditioning units and parking structure vehicle movements, this analysis estimates the Project-related operational (stationary-source) noise levels at the nearby noise-sensitive residential homes and adjacent commercial uses, consistent with the City of Newport Beach Municipal Code.

The City of Newport Beach Municipal Code identifies base exterior noise level standards which do not account for the existing ambient noise level. If existing ambient noise levels in the Project study area are higher than the base exterior standards, the ambient noise levels become the adjusted exterior noise level standards per Section 10.26.025 (A) of the City of Newport Beach Municipal Code. As such, to present a conservative approach, this analysis relies on the more restrictive base exterior noise level standards of 55 dBA L_{eq} daytime and 50 dBA L_{eq} nighttime at residential uses per the City of Newport Beach Municipal Code; rather than adjusted exterior noise levels based on higher existing ambient noise levels measured in the Project study area which ranged from 54.8 to 63.2 dBA L_{eq} during the daytime, and 47.2 to 59.6 dBA L_{eq} during the nighttime hours, as shown in Table 4-1 of this report.

Moreover, it is important to note that the Project operational noise levels described in this report assume a worst-case noise environment with the Project's roof-top air conditioning units and parking structure vehicle movements operating continuously throughout the daytime and nighttime hours. However, the noise levels associated with the Project are anticipated to vary throughout the day under typical operating conditions.

The results of this conservative analysis show that the Project-related operational noise levels associated with roof-top air conditioning units and parking structure vehicle movements will remain below the City of Newport Beach Municipal Code daytime and nighttime exterior noise level standards at the nearby noise-sensitive residential homes and adjacent commercial uses. Therefore, no additional exterior noise abatement measures (e.g., noise barriers) are required.

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1 INTRODUCTION

This noise analysis has been completed to evaluate the potential future operational noise levels associated with the operation of a two-story commercial office building with attached parking structure at 215 Riverside Avenue ("Project"), and to identify the necessary exterior noise abatement measures, if any, to satisfy the City of Newport Beach Municipal Code exterior noise level standards. (1) This noise study describes the Project, provides information regarding noise fundamentals, outlines the local regulatory setting, provides the study methods and procedures for operational noise analysis, and evaluates the operational noise levels from the Project.

1.1 SITE LOCATION

The Project is located at 215 Riverside Avenue in the City of Newport Beach, as shown on Exhibit 1-A.

Existing noise-sensitive uses in the Project study area include residential homes to the north and east. It is important to note that the residential homes to the north and east of the Project site are situated at a higher elevation than the 215 Riverside Avenue site. Commercial uses in the Project study area are located to the west and south of the Project site.

1.2 PROJECT DESCRIPTION

The Project consists of two-story commercial building with attached two-level parking structure. Exhibit 1-B shows the Project site plan.

EXHIBIT 1-A: LOCATION MAP

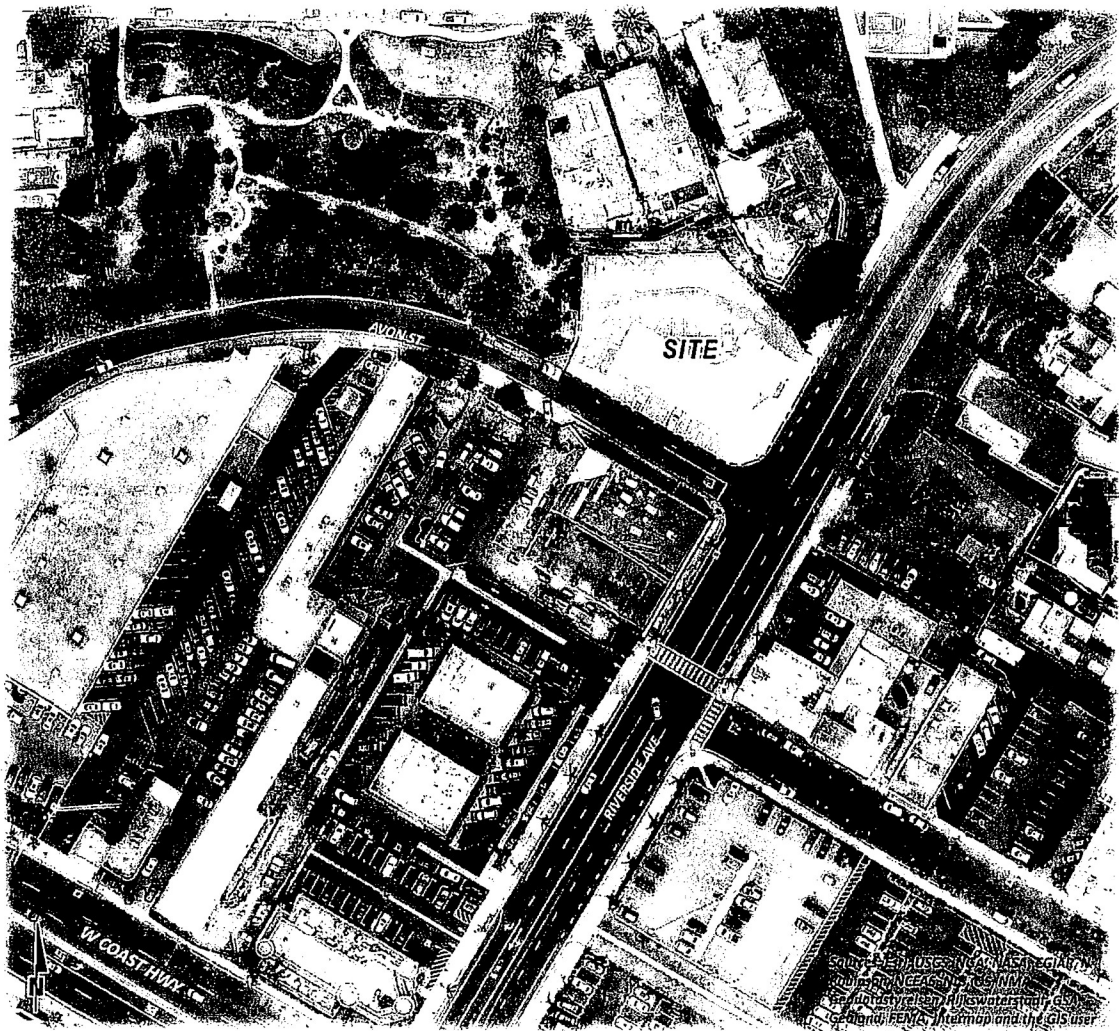
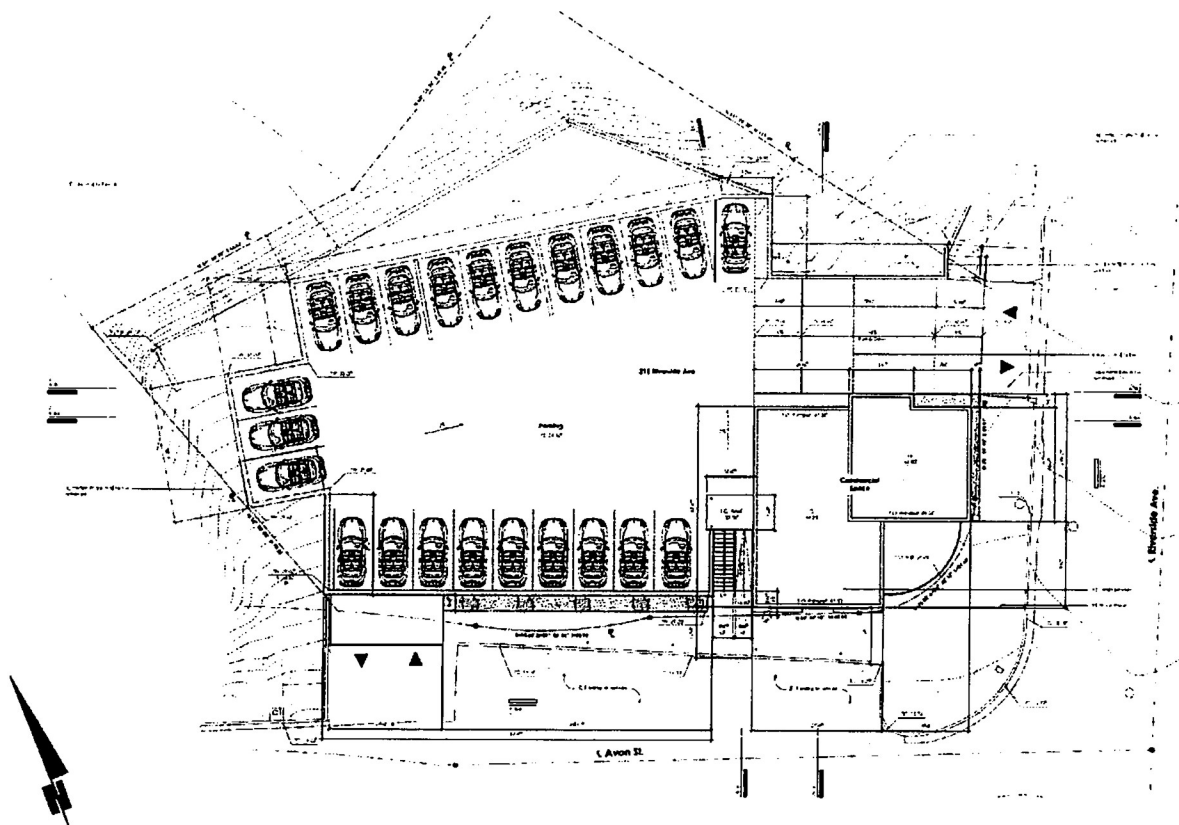


EXHIBIT 1-B: PROJECT SITE PLAN



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2 FUNDAMENTALS

Noise has been simply defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear. Exhibit 2-A presents a summary of the typical noise levels and their subjective loudness and effects that are described in more detail below.

EXHIBIT 2-A: TYPICAL NOISE LEVELS

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE
THRESHOLD OF PAIN		140	VERY NOISY	SPEECH INTERFERENCE
NEAR JET ENGINE		130		
		120		
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		
LOUD AUTO HORN		100		
GAS LAWN MOWER AT 1m (3 ft)		90	LOUD	SLEEP DISTURBANCE
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80		
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70		
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60	MODERATE	NO EFFECT
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50		
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		
QUIET SUBURBAN NIGHTTIME	LIBRARY	30	FAINT	NO EFFECT
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20		
	BROADCAST/RECORDING STUDIO	10		
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0	VERY FAINT	

Source: Environmental Protection Agency Office of Noise Abatement and Control, Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (EPA/ONAC 550/9-74-004) March 1974.

2.1 RANGE OF NOISE

Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. (2) The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA

at approximately 100 feet, which can cause serious discomfort. (3) Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

2.2 NOISE DESCRIPTORS

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most commonly used figure is the equivalent level (L_{eq}). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period and is commonly used to describe the “average” noise levels within the environment.

While sound pressure levels (e.g. L_{eq}) quantify in decibels the intensity of given sound sources at a reference distance, sound power levels (PWL) are connected to the sound source and are independent of distance. Sound pressure levels vary substantially with distance from the source, and also diminish as a result of intervening obstacles and barriers, air absorption, wind and other factors. Sound power is the acoustical energy emitted by the sound source and is an absolute value that is not affected by the environment.

2.3 SOUND PROPAGATION

When sound propagates over a distance, it changes in level and frequency content. The manner in which noise reduces with distance depends on the following factors.

2.3.1 GEOMETRIC SPREADING

Sound from a localized source (i.e., a stationary point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source. (4)

2.3.2 GROUND ABSORPTION

The propagation path of noise from a highway to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 ft. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground

attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (5)

2.3.3 ATMOSPHERIC EFFECTS

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects. (4)

2.3.4 SHIELDING

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Shielding by trees and other such vegetation typically only has an “out of sight, out of mind” effect. That is, the perception of noise impact tends to decrease when vegetation blocks the line-of-sight to nearby resident. However, for vegetation to provide a substantial, or even noticeable, noise reduction, the vegetation area must be at least 15 feet in height, 100 feet wide and dense enough to completely obstruct the line-of sight between the source and the receiver. This size of vegetation may provide up to 5 dBA of noise reduction. The FHWA does not consider the planting of vegetation to be a noise abatement measure. (5)

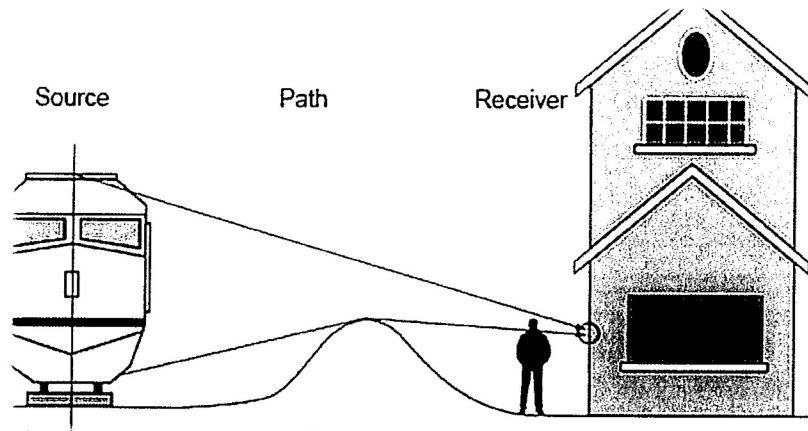
2.4 NOISE CONTROL

Noise control is the process of obtaining an acceptable noise environment for an observation point or receiver by controlling the noise source, transmission path, receiver, or all three. This concept is known as the source-path-receiver concept. (6) In general, noise control measures can be applied to these three elements. Exhibit 2-B shows the source-path-receiver concept.

2.5 NOISE BARRIER ATTENUATION

Effective noise barriers can reduce noise levels by 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receiver. Noise barriers, however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the path of the noise source. (5)

EXHIBIT 2-B: SOURCE-PATH-RECEIVER CONCEPT



Source: FTA, *Transit Noise and Vibration Impact Assessment Manual*, Figure 3-1.

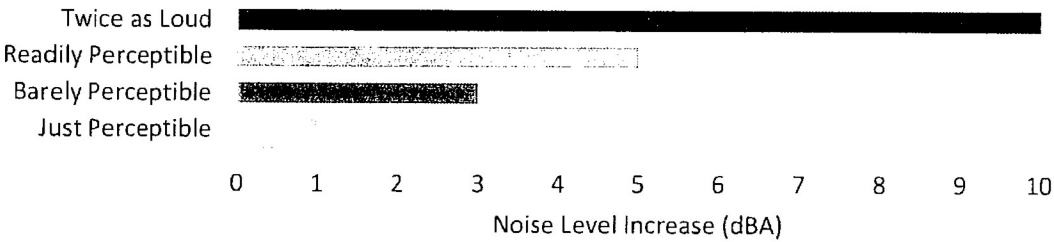
2.6 COMMUNITY RESPONSE TO NOISE

Community responses to noise may range from registering a complaint by telephone or letter, to initiating court action, depending upon everyone's susceptibility to noise and personal attitudes about noise. Several factors are related to the level of community annoyance including:

- Fear associated with noise producing activities;
- Socio-economic status and educational level;
- Perception that those affected are being unfairly treated;
- Attitudes regarding the usefulness of the noise-producing activity;
- Belief that the noise source can be controlled.

Approximately ten percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints will occur. Another twenty-five percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment. (7) Surveys have shown that about ten percent of the people exposed to traffic noise of 60 dBA will report being highly annoyed with the noise, and each increase of one dBA is associated with approximately two percent more people being highly annoyed. When traffic noise exceeds 60 dBA or aircraft noise exceeds 55 dBA, people may begin to complain. (7) Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-C. An increase or decrease of 1 dBA cannot be perceived except in carefully controlled laboratory experiments, a change of 3 dBA are considered *barely perceptible*, and changes of 5 dBA are considered *readily perceptible*. (5)

EXHIBIT 2-C: NOISE LEVEL INCREASE PERCEPTION



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3 REGULATORY SETTING

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. In most areas, automobile and truck traffic is the major source of environmental noise. Traffic activity generally produces an average sound level that remains fairly constant with time. Air and rail traffic, and commercial and industrial activities are also major sources of noise in some areas. Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies.

3.1 CITY OF NEWPORT BEACH MUNICIPAL CODE NOISE STANDARDS

The City of Newport Beach Municipal Code, Chapter 10.26 *Community Noise Control*, establishes the permissible exterior noise levels that may intrude into a neighboring property. According to Section 10.26.025(A) exterior noise levels at single-family residential land uses (Noise Zone 1) shall not exceed 55 dBA L_{eq} during the daytime hours (7:00 a.m. to 10:00 p.m.) and 50 dBA L_{eq} during the nighttime hours (10:00 p.m. to 7:00 a.m.). (1) For commercial uses, exterior noise levels shall not exceed 65 dBA L_{eq} during the daytime hours (7:00 a.m. to 10:00 p.m.) and 60 dBA L_{eq} during the nighttime hours (10:00 p.m. to 7:00 a.m.). The City of Newport Beach Municipal Code, Chapter 10.26 *Community Noise Control* exterior noise level standards are shown on Table 3-1 and are included in Appendix 3.1.

TABLE 3-1: EXTERIOR OPERATIONAL NOISE LEVEL STANDARDS

City	Land Use	Time Period	Base Exterior Noise Level Standards (dBA L_{eq}) ²
Newport Beach ¹	Residential (Noise Zone I)	Daytime	55
		Nighttime	50
	Commercial (Noise Zone II)	Daytime	65
		Nighttime	60

¹ Source: City of Newport Beach Municipal Code, Section 10.26.025 (Appendix 3.1).

² Base exterior noise level standards do not account for the existing ambient noise levels which, if higher than the base exterior standards, would become the adjusted exterior noise level standards per Section 10.26.025 (A) of the City of Newport Beach Municipal Code. As such, this analysis is based on the more conservative base exterior noise level standards.

"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

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4 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at four locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 4-A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Tuesday, February 26th, 2019. Appendix 4.1 includes study area photos.

4.1 MEASUREMENT PROCEDURE AND CRITERIA

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the daytime and nighttime hourly noise levels and calculate the 24-hour CNEL. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (8)

4.2 NOISE MEASUREMENT LOCATIONS

The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that, *sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources.* (4) Further, FTA guidance states, *that it is not necessary nor recommended that existing noise exposure be determined by measuring at every noise-sensitive location in the project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community.* (9)

Based on recommendations of Caltrans and the FTA, it is not necessary to collect measurements at each individual building or residence, because each receiver measurement represents a group of buildings that share acoustical equivalence. (9) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise sensitive areas and are used to estimate the future noise level impacts. Collecting reference ambient noise level measurements at the nearby

sensitive receiver locations allows for a comparison of the before and after Project noise levels and is necessary to assess potential noise impacts due to the Project's contribution to the ambient noise levels.

4.3 NOISE MEASUREMENT RESULTS

The noise measurements presented below focus on the average or equivalent sound levels (L_{eq}). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 4-1 identifies the hourly daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location. Appendix 4.2 provides a summary of the existing hourly ambient noise levels described below:

- Location L1 represents the noise levels northwest of the Project site on Cliff Drive in an existing park near residential homes. The energy (logarithmic) average daytime noise level was calculated at 55.7 dBA L_{eq} with an average nighttime noise level of 50.0 dBA L_{eq} .
- Location L2 represents the noise levels within the existing parking lot at the Project site, south of existing residential homes. The energy (logarithmic) average daytime noise level was calculated at 54.8 dBA L_{eq} with an average nighttime noise level of 47.2 dBA L_{eq} .
- Location L3 represents the noise levels on northeast of the Project site on Riverside Avenue adjacent to an existing park. The energy (logarithmic) average daytime noise level was calculated at 63.2 dBA L_{eq} with an average nighttime noise level of 59.6 dBA L_{eq} .
- Location L4 represents the noise levels east of the Project site on Ocean View Avenue adjacent to existing residential homes. The energy (logarithmic) average daytime noise level was calculated at 56.2 dBA L_{eq} with an average nighttime noise level of 48.7 dBA L_{eq} .

Table 4-1 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 4.2 provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, L_1 , L_2 , L_5 , L_8 , L_{25} , L_{50} , L_{90} , L_{95} , and L_{99} percentile noise levels observed during the daytime and nighttime periods.

The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated the arterial roadway network. This includes the auto and heavy truck activities on study area roadway segments near the noise level measurement locations. The 24-hour existing noise level measurement results are shown on Table 4-1.

TABLE 4-1: 24-HOUR AMBIENT NOISE LEVEL MEASUREMENTS

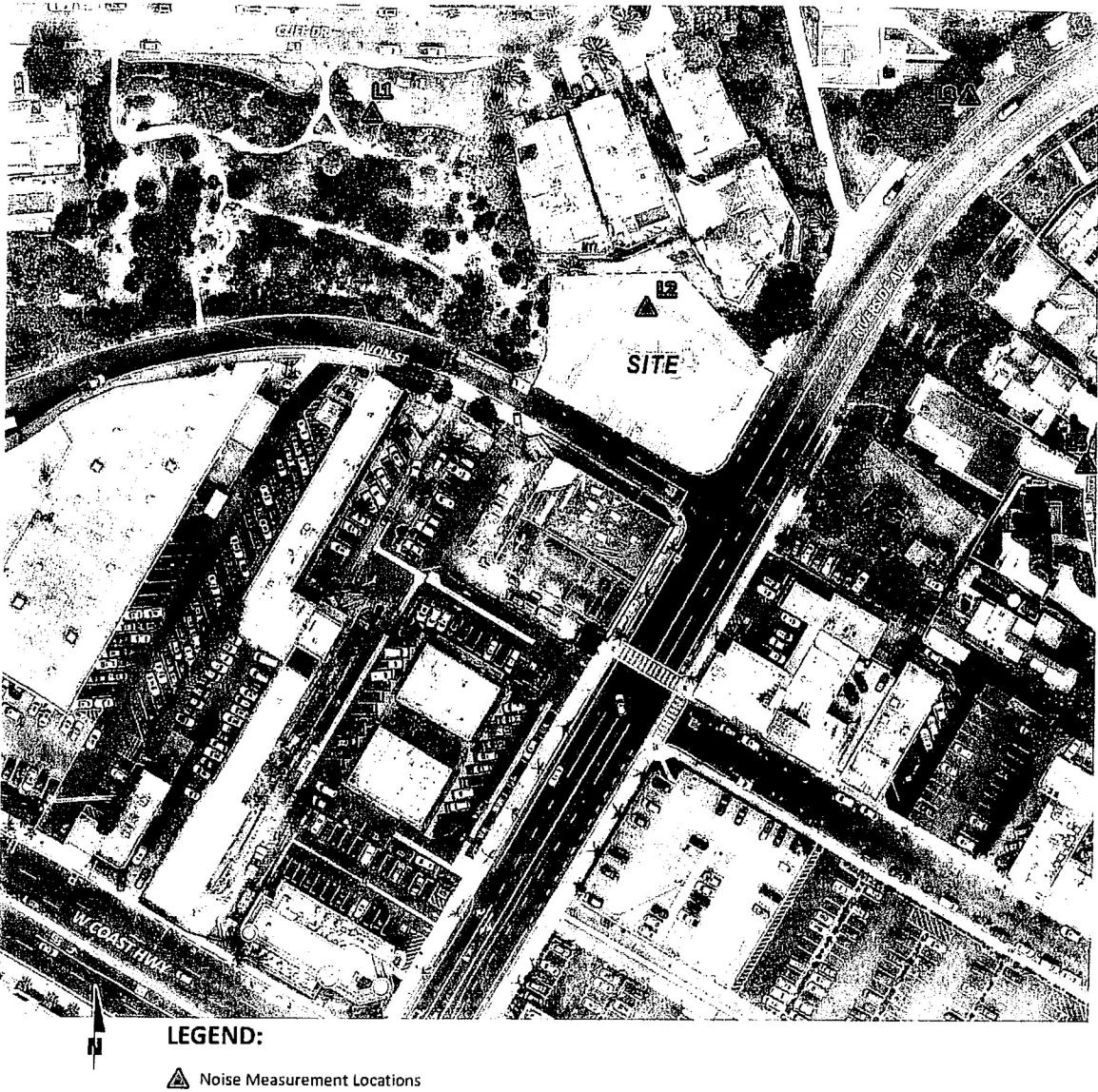
Location ¹	Description	Energy Average Noise Level (dBA L _{eq}) ²		CNEL
		Daytime	Nighttime	
L1	Located northwest of the Project site on Cliff Drive in an existing park near residential homes.	55.7	50.0	58.2
L2	Located within the existing parking lot at the Project site, south of existing residential homes.	54.8	47.2	56.3
L3	Located northeast of the Project site on Riverside Avenue adjacent to an existing park.	63.2	59.6	67.0
L4	Located east of the Project site on Ocean View Avenue adjacent to existing residential homes.	56.2	48.7	57.6

¹ See Exhibit 4-A for the noise level measurement locations.

² Energy (logarithmic) average levels. The long-term 24-hour measurement worksheets are included in Appendix 4.2.

"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

EXHIBIT 4-A: NOISE MEASUREMENT LOCATIONS



5 METHODS AND PROCEDURES

The following section outlines the methods and procedures used to model and analyze the noise levels due to Project operational activities.

5.1 REFERENCE OPERATIONAL NOISE LEVELS

To estimate the Project operational noise levels, reference noise level measurements were collected from conservatively-representative types of activities to represent the noise levels expected with the development of the proposed Project. This section provides a description of the reference noise level measurements shown on Table 5-1 used to estimate the Project operational noise impacts. It is important to note that the following projected noise levels assume the worst-case noise environment with the roof-top air conditioning units and parking structure vehicle movements all operating continuously. These noise level impacts will likely vary throughout the day.

TABLE 5-1: REFERENCE NOISE LEVEL MEASUREMENTS

Noise Source	Total Duration (hh:mm:ss)	Ref. Distance (Feet)	Source Height (Feet)	Reference Noise Levels (dBA L_{eq})		Sound Power Level (PWL) ⁴
				@ Ref. Distance	@ 50 Feet ³	
Roof-Top Air Conditioning Units ¹	96:00:00	5'	4'	77.2	57.2	88.9
Parking Lot Vehicle Movements ²	01:00:00	10'	5'	52.2	38.2	69.9

¹ As measured by Urban Crossroads, Inc. on 7/27/2015 at the Santee Walmart located at 170 Town Center Parkway.

² As measured by Urban Crossroads, Inc. on 5/17/2017 at the Panasonic Avionics Corporation in the City of Lake Forest.

³ Reference noise levels at 50 feet represent the normalized noise source levels for comparison at a common distance.

⁴ Calculated using the CadnaA noise model at the reference distance to the noise source.

"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

5.1.1 ROOF-TOP AIR CONDITIONING UNITS

To assess the impacts created by the roof-top air conditioning units at the Project buildings, reference noise levels measurements were taken over a four-day total duration at the Santee Walmart on July 27th, 2015. Located at 170 Town Center Parkway in the City of Santee, the noise level measurements describe mechanical roof-top air conditioning units on the roof of an existing Walmart store, in addition to background noise levels from additional roof-top units. The reference noise level represents Lennox SCA120 series 10-ton model packaged air conditioning units. At 5 feet from the closest roof-top air conditioning unit, the highest exterior noise level from all four days of the measurement period was measured at 77.2 dBA L_{eq} . Using the uniform reference distance of 50 feet, the noise level is 57.2 dBA L_{eq} . The operating conditions of the reference noise level measurement reflect peak summer cooling requirements with measured temperatures approaching 96 degrees Fahrenheit (°F) with average daytime temperatures of 82°F. This reference noise level measurement is anticipated to conservatively overstate the roof-top air conditioning unit noise levels of the Project since it represents the cooling equipment of a larger, commercial-retail box store.

5.1.2 PARKING STRUCTURE VEHICLE MOVEMENTS

To determine the noise levels associated with parking structure vehicle movements, Urban Crossroads collected reference noise level measurements over a 24-hour period on May 17th, 2017 at the parking lot for the Panasonic Avionics Corporation in the City of Lake Forest. The peak hour of activity measured over the 24-hour noise level measurement period occurred between 12:00 p.m. to 1:00 p.m., or the typical lunch hour for employees working in the area. The measured, peak-hour reference noise level at 50 feet from the parking activity was measured at 38.2 dBA L_{eq} . The parking activity noise levels are mainly due to cars pulling in and out of spaces during peak lunch hour activity and employees talking. This reference noise level measurement is anticipated to conservatively overstate the parking structure noise levels of the Project since it represents the parking activity associated with that of a larger, commercial office use with a greater number of parking spaces.

5.1.3 WORST-CASE PROJECT OPERATIONAL NOISE LEVELS

As previously indicated, it is important to note that the Project operational noise levels provided in this study assume a conservative estimation of the future noise environment, with the roof-top air conditioning units and parking structure vehicle movements all operating continuously, and simultaneously. Moreover, this analysis assumes that the highest reference noise source activity for all noise sources is operating every minute of every hour in a given day. Therefore, the analysis assumes no periods of inactivity, and assumes consistent operation across both daytime and nighttime hours. In reality, these noise level impacts will likely vary throughout the day.

5.2 CADNAA NOISE PREDICTION MODEL

To fully describe the exterior operational noise levels from the 215 Riverside Avenue, Urban Crossroads, Inc. developed a noise prediction model using the CadnaA (Computer Aided Noise Abatement) computer program. CadnaA can analyze the noise level of multiple types of noise sources and calculates the noise levels at any location using the spatially accurate Project site plan and includes the effects of topography, buildings, and multiple barriers in its calculations using the latest standards to predict outdoor noise impacts.

Using the spatially accurate Project site plan and flown aerial imagery from Nearmap, a CadnaA noise prediction model of the Project study area was developed. The noise model provides a three-dimensional representation of the Project study area using the following key data inputs:

- Ground absorption;
- Reflections at buildings and barriers;
- Reference noise level sources by type (area, point, etc.) and noise source height;
- Multiple noise receiver locations and heights;
- Barrier and building heights.

Based on these data inputs, the CadnaA noise prediction model will calculate the distance from each noise source to the noise receiver locations, using the ground absorption, distance, and barrier/building attenuation inputs to provide a summary of noise level calculations at each receiver location and the partial noise level contributions by noise source. The reference sound power level (PWL) for the highest noise source expected at the Project site was input into the CadnaA noise prediction model. While sound pressure levels (e.g. L_{eq}) quantify in decibels the intensity of given sound sources at a reference distance, sound power levels (PWL) are connected to the sound source and are independent of distance. Sound pressure levels vary substantially with distance from the source, and also diminish as a result of intervening obstacles and barriers, air absorption, wind, and other factors. Sound power is the acoustical energy emitted by the sound source and is an absolute value that is not affected by the environment.

The sound power level used in this analysis has been calibrated in the noise prediction model to accurately describe the reference dBA L_{eq} noise levels. Based on the technical guidance provided for CadnaA, (10) the reference noise source is created in a separate CadnaA noise model with a receiver at the reference distance of the noise level measurement. The PWL of the noise source is then adjusted in the separate CadnaA noise model until the noise level at the given reference distance equals the measured reference noise level.

The operational noise level calculations provided in this noise study account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. Soft site conditions are used in the operational noise analysis which result in noise levels that attenuate (or decrease) at a rate of 7.5 dBA for each doubling of distance from a point source, given the soft ground and vegetation between the Project site and adjacent sensitive receiver locations. Appendix 6.1 includes the CadnaA noise model inputs and calculation data.

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6 OPERATIONAL IMPACTS

This section analyzes the potential operational noise levels due to the Project's stationary noise sources at the adjacent residential and commercial receiver locations. Exhibit 6-A shows the noise source and receiver locations used to assess the Project-related operational noise levels generated by roof-top air conditioning units and parking structure vehicle movements. Based on the reference noise level measurements, previously described in Section 5.1, the Project operational stationary-source noise levels are estimated at each of the nearby receiver locations. All operational noise level calculations include the noise barrier attenuation provided by the planned parapet walls, Project building, existing buildings, and topography in the Project study area, as shown on Exhibit 6-A.

Table 6-1 shows the Project-only noise levels at receiver locations R1 to R7 range from 26.7 to 48.2 dBA L_{eq} based on the reference noise levels used in the analysis. At receiver locations R1 to R5, which represent noise-sensitive residential uses, the Project operational noise levels range from 26.7 to 48.2 dBA L_{eq} , and are shown to satisfy the City of Newport Beach Municipal Code daytime 55 dBA L_{eq} and nighttime 50 dBA L_{eq} exterior noise level standards for residential uses. At receiver locations R6 and R7, which represent existing commercial uses, the Project operational noise levels range from 37.4 to 37.9 dBA L_{eq} , and are shown to satisfy the City of Newport Beach Municipal Code daytime 65 dBA L_{eq} and nighttime 60 dBA L_{eq} exterior noise level standards for commercial uses. Therefore, the results of the analysis show that the Project-related operational noise levels associated with roof-top air conditioning units and parking structure vehicle movements will satisfy the City of Newport Beach Municipal Code daytime and nighttime base exterior noise level standards at the nearby noise-sensitive residential homes and adjacent commercial uses. As such, no additional exterior noise abatement measures (e.g., noise barriers) are required.

TABLE 6-1: OPERATIONAL NOISE LEVEL COMPLIANCE

Receiver Location ¹	Land Use	Unmitigated Project Operational Noise Levels (dBA L_{eq}) ²	Threshold (dBA L_{eq}) ³		Threshold Exceeded?	
			Daytime	Nighttime	Daytime	Nighttime
R1	Residential	28.4	55	50	No	No
R2	Residential	26.7	55	50	No	No
R3	Residential	45.5	55	50	No	No
R4	Residential	48.2	55	50	No	No
R5	Residential	40.8	55	50	No	No
R6	Commercial	37.9	65	60	No	No
R7	Commercial	37.4	65	60	No	No

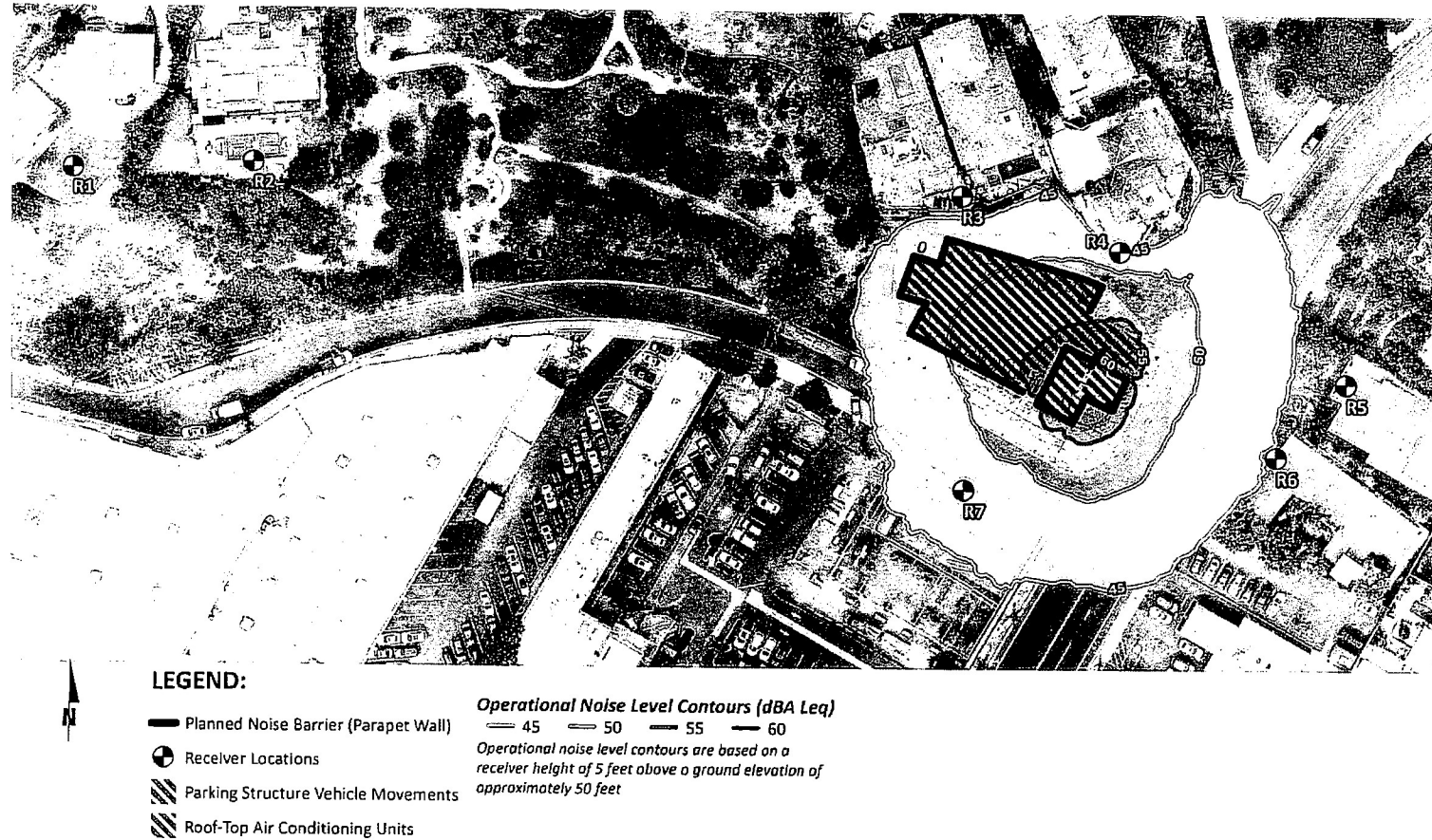
¹ See Exhibit 6-A for the receiver and noise source locations.

² CadnaA noise prediction model results are provided in Appendix 6.1.

³ Exterior noise level standards (Table 3-1).

"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

EXHIBIT 6-A: OPERATIONAL NOISE SOURCE LOCATIONS



7 REFERENCES

1. **City of Newport Beach.** *Municipal Code, Chapter 10.26 Community Noise Control.*
2. **California Department of Transportation Environmental Program.** *Technical Noise Supplement - A Technical Supplement to the Traffic Noise Analysis Protocol.* Sacramento, CA : s.n., September 2013.
3. **Environmental Protection Agency Office of Noise Abatement and Control.** *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.* March 1974. EPA/ONAC 550/9/74-004.
4. **California Department of Transportation Environmental Program.** *Technical Noise Supplement - A Technical Supplement to the Traffic Noise Analysis Protocol.* Sacramento, CA : s.n., September 2013.
5. **U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning, Noise and Air Quality Branch.** *Highway Traffic Noise Analysis and Abatement Policy and Guidance.* June, 1995.
6. **U.S. Department of Transportation Federal Transit Administration.** *Transit Noise and Vibration Impact Assessment Manual.* September 2018.
7. **U.S. Environmental Protection Agency Office of Noise Abatement and Control.** *Noise Effects Handbook-A Desk Reference to Health and Welfare Effects of Noise.* October 1979 (revised July 1981). EPA 550/9/82/106.
8. **American National Standards Institute (ANSI).** *Specification for Sound Level Meters ANSI S1.4-2014/IEC 61672-1:2013.*
9. **U.S. Department of Transportation, Federal Transit Administration.** *Transit Noise and Vibration Impact Assessment.* September 2018.
10. **DataKustik.** *Technical Note: Calibrating Point Sources TN0301e.* 2009.

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8 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the 215 Riverside Avenue Project. The information contained in this noise study report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 336-5979.

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EDUCATION

Master of Science in Civil and Environmental Engineering
California Polytechnic State University, San Luis Obispo • December, 1993

Bachelor of Science in City and Regional Planning
California Polytechnic State University, San Luis Obispo • June, 1992

PROFESSIONAL REGISTRATIONS

PE – Registered Professional Traffic Engineer – TR 2537 • January, 2009
AICP – American Institute of Certified Planners – 013011 • June, 1997–January 1, 2012
PTP – Professional Transportation Planner • May, 2007 – May, 2013
INCE – Institute of Noise Control Engineering • March, 2004

PROFESSIONAL AFFILIATIONS

ASA – Acoustical Society of America
ITE – Institute of Transportation Engineers

PROFESSIONAL CERTIFICATIONS

Certified Acoustical Consultant – County of Orange • February, 2011
FHWA-NHI-142051 Highway Traffic Noise Certificate of Training • February, 2013

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APPENDIX 3.1:

CITY OF NEWPORT BEACH MUNICIPAL CODE

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Chapter 10.26 COMMUNITY NOISE CONTROL

Sections:

- 10.26.005 Declaration of Policy.
- 10.26.010 Definitions.
- 10.26.015 Decibel Measurement Criteria.
- 10.26.020 Designated Noise Zones.
- 10.26.025 Exterior Noise Standards.
- 10.26.030 Interior Noise Standards.
- 10.26.035 Exemptions.
- 10.26.040 Schools, Day Care Centers, Churches, Libraries, Museums, Health Care Institutions—Special Provisions.
- 10.26.045 Heating, Venting and Air Conditioning—Special Provisions.
- 10.26.050 Sound-Amplifying Equipment.
- 10.26.055 Noise Level Measurement.
- 10.26.065 Proposed Developments.
- 10.26.070 Prima Facie Violation.
- 10.26.075 Violations.
- 10.26.080 Violations—Additional Remedies—Injunctions.
- 10.26.085 City Manager Waiver.
- 10.26.090 Noise Abatement Programs.
- 10.26.095 Manner of Enforcement.
- 10.26.100 Severability.

10.26.005 Declaration of Policy.

A. In order to control unnecessary, excessive and annoying noise in the City of Newport Beach, it is declared to be the policy of the City to prohibit such noise generated from or by all sources as specified in this chapter.

B. It is determined that certain noise levels are detrimental to the public health, welfare and safety and contrary to public interest, therefore, the City Council of the City of Newport Beach does ordain and declare that creating, maintaining, causing or allowing to be created, caused or maintained, any noise in a manner prohibited by, or not in conformity with, the provisions of this chapter, is a public nuisance and may be punished as a public nuisance. The ordinance codified in this chapter is effective thirty (30) days from adoption, however, all fixed noise sources existing at the date of adoption shall have ninety (90) days from the date of adoption to achieve compliance with this chapter. (Ord. 95-38 § 11 (part), 1995)

10.26.010 Definitions.

The following words, phrases and terms as used in this chapter shall have the meanings as indicated here:

"Agricultural property" means a parcel of real property which is undeveloped for any use other than agricultural purposes.

"Ambient noise level" means the all-encompassing noise level associated with a given environment, being a composite of sounds from all sources, excluding the alleged offensive noise, at the location and approximate time at which a comparison with the alleged offensive noise is to be made.

"A-weighted sound level" means the total sound level meter with a reference pressure of twenty (20) micropascals using the A-weighted network (scale) at slow response. The unit of measurement shall be defined as DBA.

"Code Enforcement Officer" means the Code Enforcement Officer of the City or his duly authorized deputy.

"Commercial property" means a parcel of real property which is used as either in part or in whole for commercial purposes.

"Cumulative period" means an additive period of time composed of individual time segments which may be continuous or interrupted.

"Decibel (Db)" means a unit which denotes the ratio between two quantities which are proportional to power: the number of decibels corresponding to the ratio of two amounts of power is ten times the logarithm to the base ten of this ratio.

"Dwelling unit" means any area within a structure on any parcel which:

1. Contains separate or independent living facilities for one or more persons, with an area or equipment for sleeping, sanitation and food preparation, and which has independent exterior access to ground level; or
2. Is being utilized for residential purposes by one or more persons separately or independently from occupants of other areas within the structure.

"Emergency machinery, vehicle, work or alarm" means any machinery, vehicle, work or alarm used, employed, performed or operated in an effort to protect, provide or restore safety conditions in the community or for the citizenry, or work by private or public utilities when restoring utility service.

"Equivalent, noise, level, leq." means the sound level corresponding to a steady state noise level over a given measurement period with the same amount of acoustic energy as the actual time varying noise level. Also known as the energy average noise level during the measurement period. The measurement period shall be fifteen (15) minutes under the terms of this chapter.

"Fixed noise source" means a stationary device which creates sounds while fixed or motionless including but not limited to residential, agricultural, industrial and commercial machinery and equipment, pumps, fans, compressors, air conditioners and refrigeration equipment.

"Grading" means any excavating or filling of earth material or any combination thereof conducted at a site to prepare said site for construction or other improvements thereon.

"Health care institution" means any hospital, convalescent home or other similar facility excluding residential.

"Hertz (HZ)" means the unit which describes the frequency of a function periodic in time which is the reciprocal of the period.

"Impulsive noise" means a noise of short duration usually less than one second and of high intensity, with an abrupt onset and rapid decay.

"Industrial property" means a parcel of real property which is used either in part or in whole for manufacturing purposes.

"Intruding noise level" means the total sound level, in decibels, created, caused, maintained or originating from an alleged offensive source at a specified location while the alleged offensive source is in operation.

"Licensed" means the issuance of a formal license or permit by the appropriate jurisdictional authority, or where no permits or licenses are issued, the sanctioning of the activity by the jurisdiction as noted in public record.

"Major roadway" means any street, avenue, boulevard or highway used for motor vehicle traffic which is owned or controlled by a public government entity.

"Mobile noise source" means any noise source other than a fixed noise source.

"Person" means any individual, firm, partnership, association, corporation, company or organization of any kind, including public agencies.

"Residential property" means a parcel of real property which is used either in part or in whole for residential purposes, other than transient uses such as hotels and motels, and residential care facilities. Residential property includes the residential portion of mixed use properties.

"Simple tone noise" means a noise characterized by a predominant frequency or frequencies so that other frequencies cannot be readily distinguished. If measured, simple tone noise shall exist if the one-third octave band sound pressure levels in the band with the tone exceeds the arithmetic average of the sound pressure levels of the two continuous one-third octave bands as follows: five Db for frequencies of five hundred (500) Hertz (Hz) and above or, by fifteen (15) Db for frequencies less than or equal to one hundred twenty-three (123) Hz.

"Sound level meter" means an instrument meeting American National Standard Institute's Standard S1.4-1971 or most recent revision thereof for Type 2 sound level meters or an instrument and the associated recording and analyzing equipment which will provide equivalent data.

"Sound pressure level" of a sound, in decibels, means twenty (20) times the logarithm to the base ten of the ratio of the pressure of the sound to a reference pressure which shall be explicitly stated.

"Vibration" means any movement of the earth, ground or other similar surface created by a temporal and spatial oscillation device or equipment located upon, affixed in conjunction with that surface. (Ord. 95-38 § 11 (part), 1995)

10.26.015 Decibel Measurement Criteria.

Any decibel measurement made pursuant to the provisions of this chapter shall be based on a reference sound pressure of twenty (20) micropascals as measured with a sound level meter using the A-weighted network (scale) at slow response. (Ord. 95-38 § 11 (part), 1995)

10.26.020 Designated Noise Zones.

The properties hereinafter described assigned to the following noise zones:

Noise Zone I	—	All single-, two- and multiple-family residential properties;
Noise Zone II	—	All commercial properties;
Noise Zone III	—	The residential portion of mixed-use properties;
Noise Zone IV	—	All manufacturing or industrial properties.

The actual use of the property shall be the determining factor in establishing whether a property is in Noise Zone I, II, III or IV provided that the actual use is a legal use in the City of Newport Beach. (Ord. 95-38 § 11 (part), 1995)

10.26.025 Exterior Noise Standards.

A. The following noise standards, unless otherwise specifically indicated, shall apply to all property with a designated noise zone:

NOISE ZONE	TYPE OF LAND USE	ALLOWABLE EXTERIOR NOISE LEVEL (Equivalent Noise Level, Leq)	
		7 a.m. to 10 p.m.	10 p.m. to 7 a.m.
I	Single-, two-or multiple-family residential	55 DBA	50 DBA
II	Commercial	65 DBA	60 DBA
III	Residential portions of mixed-use properties	60 DBA	50 DBA
IV	Industrial or manufacturing	70 DBA	70 DBA

If the ambient noise level exceeds the resulting standard, the ambient shall be the standard.

B. It is unlawful for any person at any location within the incorporated area of the City to create any noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level when measured on any other property, to exceed either of the following:

1. The noise standard for the applicable zone for any fifteen-minute period;
2. A maximum instantaneous noise level equal to the value of the noise standard plus twenty (20) DBA for any period of time (measured using A-weighted slow response).

C. In the event the ambient noise level exceeds the noise standard, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

D. The Noise Zone III standard shall apply to that portion of residential property falling within one hundred (100) feet of a commercial property, if the intruding noise originates from that commercial property.

E. If the measurement location is on boundary between two different noise zones, the lower noise level standard applicable to the noise zone shall apply. (Ord. 95-53 § 1, 1995; Ord. 95-38 § 11 (part), 1995)

10.26.030 Interior Noise Standards.

A. The following noise standard, unless otherwise specifically indicated, shall apply to all residential property within all noise zones:

NOISE ZONE	TYPE OF LAND USE	ALLOWABLE INTERIOR NOISE LEVEL (Equivalent Noise Level, Leq)	
		7 a.m. to 10 p.m.	10 p.m. to 7 a.m.
I	Residential	45 DBA	40 DBA

III	Residential portions of mixed-use properties	45 DBA	40 DBA
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If the ambient noise level exceeds the resulting standard, the ambient shall be the standard.

B. It shall be unlawful for any person at any location within the incorporated area of the City to create any noise or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such a person which causes the noise level when measured on any other property, to exceed either of the following:

1. The noise standard for the applicable zone for any fifteen-minute period;
2. A maximum instantaneous noise level equal to the value of the noise standard plus twenty (20) DBA for any period of time (measured using A-weighted slow response).

C. In the event the ambient noise level exceeds the noise standard, the noise standard applicable to said category shall be increased to reflect the maximum ambient noise level.

D. The Noise Zone III standard shall apply to that portion of residential property falling within one hundred (100) feet of a commercial property, if the intruding noise originates from that commercial property.

E. If the measurement location is on a boundary between two different noise zones, the lower noise level standard applicable to the noise zone shall apply. (Ord. 95-53 § 2, 1995; Ord. 95-38 § 11 (part), 1995)

10.26.035 Exemptions.

The following activities shall be exempted from the provisions of this chapter:

A. Any activity conducted on public property, or on private property with the consent of the owner, by any public entity, or its officers, employees, representatives, agents, subcontractors, permittees, licensees, or lessees, which are consistent with, and in furtherance of, the governmental functions or services the public entity has authorized, or responsible, to perform, activities which are exempt from the provisions of this chapter include, without limitation, sporting and recreational activities which are sponsored or co-sponsored by the City of Newport Beach or the Newport Mesa Unified School District;

B. Occasional outdoor gatherings, public dances, show, sporting and entertainment events, provided said events are conducted pursuant to a permit or license issued by the appropriate jurisdiction relative to the staging of said events;

C. Any mechanical device, apparatus or equipment used, related to or connected with emergency machinery, vehicle, work or warning alarm or bell, provided the sounding of any bell or alarm on any building or motor vehicle shall terminate its operation within forty-five (45) minutes in any hour of its being activated;

D. Noise sources associated with construction, repair, remodeling, demolition or grading of any real property. Such activities shall instead be subject to the provisions of Chapter 10.28 of this title;

E. Noise sources associated with construction, repair, remodeling, demolition or grading of public rights-of-way or during authorized seismic surveys;

F. All mechanical devices, apparatus or equipment associated with agriculture operations provided that:

1. Operations do not take place between eight p.m. and seven a.m. on weekdays, including Saturday, or at any time Sunday or a federal holiday, or

2. Such operations and equipment are utilized for the protection or salvage of agricultural crops during periods of potential or actual frost damage or other adverse weather conditions, or
 3. Such operations and equipment are associated with agricultural pest control through pesticide application, provided the application is made in accordance with permits issued by or regulations enforced by the California Department of Agriculture;
- G. Noise sources associated with the maintenance of real property. Such activities shall instead be subject to the provisions of Chapter 10.28 of this title;
- H. Any activity to the extent regulation thereof has been preempted by state or federal law. NOTE: Preemption may include motor vehicle, aircraft in flight, and railroad noise regulations;
- I. Any noise sources associated with people and/or music associated with a party at a residential property. Such noise is difficult to measure under the terms of this chapter and instead shall be subject to the provisions of Chapters 10.28 and 10.58 of this title;
- J. Any noise sources associated with barking dogs or other intermittent noises made by animals on any property within the City of Newport Beach. Such noise is difficult to measure under the terms of this chapter and instead shall be subject to the provisions of Chapter 7.20 of this Code;
- K. Any noise sources associated with the operation of a permanently installed heating, venting and air conditioning (HVAC) equipment on a residential property permitted under the provisions of Section 10.26.045(B) and (C);
- L. Any noise sources specifically identified and mitigated under the provisions of a use permit, modification permit, development agreement or planned community district development plan adopted prior to the date of adoption of this chapter. (Ord. 95-53 § 3, 1995; Ord. 95-38 § 11 (part), 1995)

10.26.040 Schools, Day Care Centers, Churches, Libraries, Museums, Health Care Institutions—Special Provisions.

It is unlawful for any person to create any noise which causes the noise level at any school, day care center, hospital or similar health care institution, church, library or museum while the same is in use, to exceed the noise standards specified in Section 10.26.025 prescribed for the assigned Noise Zone I (residential uses). (Ord. 95-38 § 11 (part), 1995)

10.26.045 Heating, Venting and Air Conditioning—Special Provisions.

A. **New HVAC Equipment.** New permits for heating, venting and air conditioning (HVAC) equipment in or adjacent to residential areas shall be issued only where installations can be shown by computation, based on the sound rating of the proposed equipment, not to exceed an A-weighted sound pressure level of fifty (50) dBA or not to exceed an A-weighted sound pressure level of fifty-five (55) dBA and be installed with a timing device that will deactivate the equipment during the hours of ten p.m. to seven a.m. The method of computation used shall be that specified in "Standard Application of Sound Rated Outdoor Unitary Equipment," Standard 275, Air conditioning and Refrigeration Institute, 1984 or latest revision thereof.

B. Existing HVAC Equipment.

1. HVAC equipment legally installed prior to April 22, 1981, shall be permitted to operate with an exterior noise limit of sixty-five (65) dBA until January 1, 1998.
2. HVAC equipment legally installed prior to April 22, 1981, shall be exempted from the interior noise level standard as specified in Section 10.26.030 of this chapter until January 1, 1998.

3. HVAC equipment legally installed after April 22, 1981, and prior to the date of adoption of this chapter shall not exceed a maximum exterior noise limit of fifty-five (55) dBA during the ninety-day compliance period set forth in Section 10.26.005.

C. In the event that HVAC equipment cannot meet the requirements set forth in this chapter, then the exterior noise limit for such equipment may be raised to sixty-five (65) dBA and exempted from the interior noise level standard as specified in Section 10.26.030 of this chapter, provided that the applicant obtains the written consent of all the owners of the affected properties. (Ord. 95-38 § 11 (part), 1995)

10.26.050 Sound-Amplifying Equipment.

Loudspeakers, sound amplifiers, public address systems or similar devices used to amplify sounds shall be subject to the provisions of Chapter 10.32 of this title. Such sound-amplifying equipment shall not be construed to include electronic devices, including but not limited to, radios, tape players, tape recorders, compact disc players, electric keyboards, music synthesizers, record players or televisions, which are designed and operated for personal use, or used entirely within a building and are not designed or used to convey the human voice, music or any other sound to an audience outside such building, or which are used in vehicles and heard only by occupants of the vehicle in which installed, which shall be subject to the provisions of Chapter 10.28 of this title. (Ord. 95-38 § 11 (part), 1995)

10.26.055 Noise Level Measurement.

A. The location selected for measuring exterior noise levels in a residential area shall be at any part of a private yard, patio, deck or balcony normally used for human activity and identified by the owner of the affected property as suspected of exceeding the noise level standard. This location may be the closest point in the private yard or patio, or on the deck or balcony, to the noise source, but should not be located in nonhuman activity areas such as trash container storage areas, planter beds, above or contacting a property line fence, or other areas not normally used as part of the yard, patio, deck or balcony. The location selected for measuring exterior noise levels in a nonresidential area shall be at the closest point to the noise source. The measurement microphone height shall be five feet above finish elevation or, in the case of a deck or balcony, the measurement microphone height shall be five feet above the finished floor level.

B. The location selected for measuring interior noise levels shall be made within the affected residential unit. The measurements shall be made at a point at least four feet from the wall, ceiling or floor, or within the frame of a window opening, nearest the noise source. The measurements shall be made with windows in an open position. (Ord. 95-38 § 11 (part), 1995)

10.26.065 Proposed Developments.

Each department whose duty it is to review and approve new projects or changes to existing projects that result or may result in the creation of noise shall consult with the Code Enforcement Officer prior to any such approval. If at any time the Code Enforcement Officer has reason to believe that a standard, regulation, action, proposed standard, regulation or action of any department respecting noise does not conform to the provisions as specified in this chapter, the Code Enforcement Officer may request such department to consult with him on the advisability of revising such standard or regulation to obtain uniformity. (Ord. 95-38 § 11 (part), 1995)

10.26.070 Prima Facie Violation.

Any noise exceeding the noise level standard as specified in Section 10.26.025 and 10.26.030 of this chapter, shall be deemed to be prima facie evidence of a violation of the provisions of this chapter. (Ord. 95-38 § 11 (part), 1995)

10.26.075 Violations.

Any persons violating any of the provisions of this chapter shall be deemed guilty of an infraction. (Ord. 95-38 § 11 (part), 1995)

10.26.080 Violations—Additional Remedies—Injunctions.

- A. As an additional remedy, the operation or maintenance of any device, instrument, vehicle or machinery in violation of any provisions of this chapter which operation or maintenance causes or creates sound levels exceeding the allowable standards as specified in this chapter shall be deemed and is declared to be a public nuisance and may be subject to abatement summarily by a restraining order or injunction issued by a court of competent jurisdiction.
- B. Any violation of this chapter is declared to be a public nuisance and may be abated in accordance with law. The expense of this chapter is declared to be public nuisance and may be by resolution of the City Council declared to be a lien against the property on which such nuisance is maintained, and such lien shall be made a personal obligation of the property owner. (Ord. 95-38 § 11 (part), 1995)

10.26.085 City Manager Waiver.

The City Manager is authorized to grant a temporary waiver to the provisions of this chapter for a period of time not to exceed thirty (30) days if such temporary waiver would be in the public interest and there is no feasible and prudent alternative to the activity, or the method of conducting the activity, for which the temporary waiver is sought. (Ord. 95-38 § 11 (part), 1995)

10.26.090 Noise Abatement Programs.

- A. In circumstances which adopted community-wide noise standards and policies prove impractical in controlling noise generated from a specific source, the City Council may establish a noise abatement program which recognizes the characteristics of the noise source and affected property and which incorporates specialized mitigation measures.
- B. Noise abatement programs shall set forth in detail the approved terms, conditions and requirements for achieving maximum compliance with noise standards and policies. Said terms, conditions and requirements may include, but shall not be limited to, limitations, restrictions, or prohibitions on operating hours, location of operations, and the types of equipment. (Ord. 95-38 § 11 (part), 1995)

10.26.095 Manner of Enforcement.

- A. The City Code Enforcement Officer is directed to enforce the provisions of this chapter and may issue citations for any violation of the provisions of this chapter or violations of this chapter may be prosecuted or enforced in the same manner as other infractions pursuant to this Code; provided, however, that in the event of an initial violation of the provisions of this chapter, a written notice may be given to the alleged violator which specifies the time by which the condition shall be corrected.
- B. No person shall interfere with, oppose or resist any authorized person charged with the enforcement of this chapter while such person is engaged in the performance of his/her duty.
- C. In the event the alleged violator cannot be located in order to serve any notice, the notice shall be deemed to be given upon mailing such notice by registered or certified mail to the alleged violator at his last known address or at the place where the violation occurred in which event the specified time period for abating the violation or applying for a variance shall commence at the date of the day following the mailing of such notice. (Ord. 95-38 § 11 (part), 1995)

10.26.100 Severability.

If any provision, clause, sentence, or paragraph of this chapter, or the application thereof to any person or circumstance shall be held invalid, such invalidity shall not affect the other provisions of this chapter which can be given effect without the invalid provisions or application and, to this end, the provisions of this chapter are hereby declared to be severable. (Ord. 95-38 § 11 (part), 1995)

The Newport Beach Municipal Code is current through Ordinance 2018-19, and legislation passed through December 11, 2018.

Disclaimer: The City Clerk's Office has the official version of the Newport Beach Municipal Code. Users should contact the City Clerk's Office for ordinances passed subsequent to the ordinance cited above.

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APPENDIX 4.1:
STUDY AREA PHOTOS

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JN:12356 Study Area Photos



L1 East
33, 37' 20.920000", 117, 55' 27.920000"



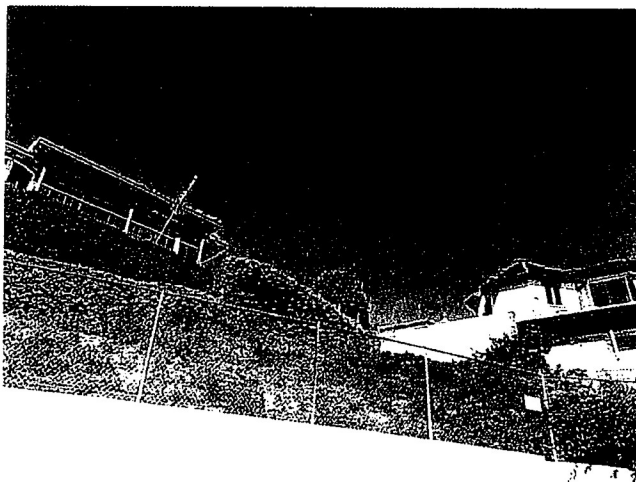
L1 North
33, 37' 20.950000", 117, 55' 27.980000"



L1 South
33, 37' 20.920000", 117, 55' 27.900000"



L1 West
33, 37' 21.000000", 117, 55' 27.980000"



L2 North
33, 37' 19.590000", 117, 55' 25.420000"



L2 Northeast
33, 37' 19.590000", 117, 55' 25.450000"

JN:12356 Study Area Photos



L2 South
33, 37' 19.590000", 117, 55' 25.480000"



L2 West
33, 37' 19.620000", 117, 55' 25.480000"



L3 North
33, 37' 21.060000", 117, 55' 22.680000"



L3 Southeast
33, 37' 21.070000", 117, 55' 22.680000"



L3 Southwest
33, 37' 21.090000", 117, 55' 22.600000"



L3 West
33, 37' 21.050000", 117, 55' 22.540000"

JN:12356 Study Area Photos



L4 Northeast
33, 37' 18.350000", 117, 55' 21.470000"



L4 South
33, 37' 18.340000", 117, 55' 21.500000"



L4 West
33, 37' 17.850000", 117, 55' 21.720000"

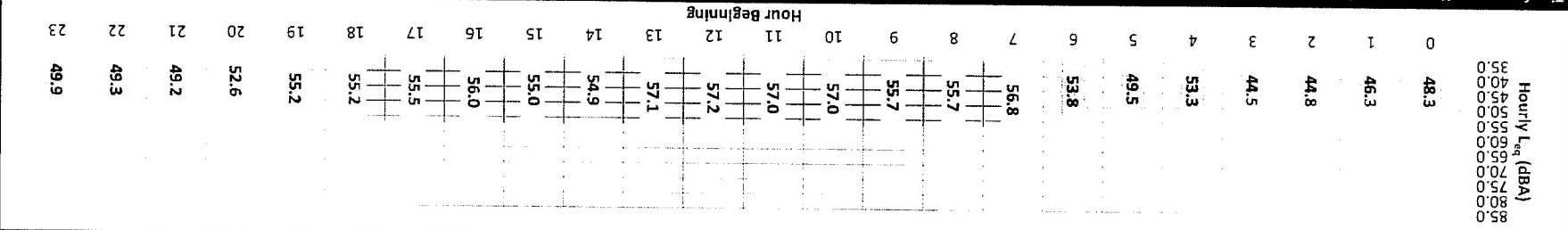
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APPENDIX 4.2:
AMBIENT NOISE LEVEL MEASUREMENT WORKSHEETS

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JN: 12356
Analyst: R. Sabert

Hourly L_{eq} (dBA)



Timeframe		Hour	L_{eq}	L_{max}	L_{min}	$L_{1\%}$	$L_{2\%}$	$L_{5\%}$	$L_{10\%}$	$L_{15\%}$	$L_{18\%}$	$L_{25\%}$	$L_{50\%}$	$L_{55\%}$	$L_{60\%}$	$L_{65\%}$	$L_{70\%}$	$L_{75\%}$	$L_{80\%}$	$L_{85\%}$	$L_{90\%}$	$L_{95\%}$	$L_{99\%}$	Adj. L_{eq}	Adj.		
Night	0	48.3	58.4	43.3	53.0	52.0	50.0	48.0	45.0	43.0	41.0	40.0	38.3	48.3	55.7	56.8	58.8	59.5	10.0	10.0	10.0	10.0	10.0	10.0	58.3	58.3	
	1	44.8	59.1	42.2	51.0	49.0	47.0	45.0	43.0	42.0	40.0	39.0	44.8	55.7	56.8	58.8	59.5	10.0	10.0	10.0	10.0	10.0	10.0	56.3	54.8		
	2	46.3	59.1	42.3	51.0	49.0	47.0	45.0	43.0	42.0	40.0	39.0	44.8	55.7	56.8	58.8	59.5	10.0	10.0	10.0	10.0	10.0	10.0	56.3	54.5		
	3	44.5	53.9	41.1	49.0	48.0	47.0	46.0	45.0	44.0	43.0	42.0	44.5	53.9	55.0	56.0	56.0	10.0	10.0	10.0	10.0	10.0	10.0	63.3	59.5		
	4	53.3	78.8	42.4	66.0	56.0	49.0	46.0	45.0	44.0	43.0	42.0	44.0	58.9	63.3	66.0	67.0	10.0	10.0	10.0	10.0	10.0	10.0	69.5	59.5		
Day	6	53.8	73.2	48.3	58.0	57.0	55.0	54.0	53.0	52.0	51.0	50.0	49.0	53.8	63.3	66.0	67.0	10.0	10.0	10.0	10.0	10.0	10.0	69.5	59.5		
	7	56.8	76.5	50.3	62.0	61.0	60.0	59.0	58.0	57.0	56.0	55.0	54.0	56.8	66.0	68.0	69.0	10.0	10.0	10.0	10.0	10.0	10.0	68.8	58.8		
	8	55.7	68.7	48.3	62.0	61.0	60.0	59.0	58.0	57.0	56.0	55.0	54.0	55.7	65.0	67.0	68.0	10.0	10.0	10.0	10.0	10.0	10.0	68.8	58.8		
	9	57.0	68.3	48.6	63.0	62.0	61.0	60.0	59.0	58.0	57.0	56.0	55.0	57.0	66.0	68.0	69.0	10.0	10.0	10.0	10.0	10.0	10.0	68.8	58.8		
	10	57.0	68.3	48.6	63.0	62.0	61.0	60.0	59.0	58.0	57.0	56.0	55.0	57.0	66.0	68.0	69.0	10.0	10.0	10.0	10.0	10.0	10.0	68.8	58.8		
	11	57.0	73.9	49.1	66.0	65.0	64.0	63.0	62.0	61.0	60.0	59.0	58.0	57.0	66.0	68.0	69.0	10.0	10.0	10.0	10.0	10.0	10.0	68.8	58.8		
	12	57.2	85.2	49.3	63.0	62.0	61.0	60.0	59.0	58.0	57.0	56.0	55.0	57.2	66.0	68.0	69.0	10.0	10.0	10.0	10.0	10.0	10.0	68.8	58.8		
	13	57.1	73.6	49.6	66.0	65.0	64.0	63.0	62.0	61.0	60.0	59.0	58.0	57.1	66.0	68.0	69.0	10.0	10.0	10.0	10.0	10.0	10.0	68.8	58.8		
	14	54.9	68.0	48.5	61.0	60.0	59.0	58.0	57.0	56.0	55.0	54.0	53.0	54.9	63.0	65.0	66.0	10.0	10.0	10.0	10.0	10.0	10.0	64.9	54.9		
	15	55.0	67.4	49.5	61.0	60.0	59.0	58.0	57.0	56.0	55.0	54.0	53.0	55.0	63.0	65.0	66.0	10.0	10.0	10.0	10.0	10.0	10.0	65.0	55.0		
Evening	16	56.0	73.7	49.5	61.0	60.0	59.0	58.0	57.0	56.0	55.0	54.0	56.0	63.0	65.0	66.0	67.0	10.0	10.0	10.0	10.0	10.0	10.0	66.0	56.0		
	17	55.5	74.8	49.1	62.0	61.0	60.0	59.0	58.0	57.0	56.0	55.0						10.0	10.0	10.0	10.0	10.0	10.0	66.0	55.5		
	18	55.2	71.8	47.6	63.0	62.0	61.0	60.0	59.0	58.0	57.0	56.0	55.0	55.2	63.0	65.0	66.0	10.0	10.0	10.0	10.0	10.0	10.0	65.2	55.2		
	19	52.2	70.6	47.6	64.0	62.0	61.0	60.0	59.0	58.0	57.0	56.0	55.0	52.2	62.0	64.0	65.0	10.0	10.0	10.0	10.0	10.0	10.0	60.2	52.2		
	20	52.6	64.6	44.0	56.0	55.0	54.0	53.0	52.0	51.0	50.0	49.0	49.0	52.6	52.6	53.0	54.0	10.0	10.0	10.0	10.0	10.0	10.0	59.3	53.3		
Night	22	49.3	61.9	44.0	53.0	52.0	51.0	50.0	49.0	48.0	47.0	46.0	45.0	49.3	49.3	49.0	49.0	10.0	10.0	10.0	10.0	10.0	10.0	59.9	59.9		
	23	49.9	63.9	45.4	58.0	57.0	56.0	55.0	54.0	53.0	52.0	51.0	50.0	49.9	49.9	49.0	49.0	10.0	10.0	10.0	10.0	10.0	10.0	59.9	59.9		
Timeframe			Hour	L_{eq}	L_{max}	L_{min}	$L_{1\%}$	$L_{2\%}$	$L_{5\%}$	$L_{10\%}$	$L_{15\%}$	$L_{18\%}$	$L_{25\%}$	$L_{50\%}$	$L_{55\%}$	$L_{60\%}$	$L_{65\%}$	$L_{70\%}$	$L_{75\%}$	$L_{80\%}$	$L_{85\%}$	$L_{90\%}$	$L_{95\%}$				
Day			1	54.9	68.0	48.5	61.0	60.0	59.0	58.0	57.0	56.0	55.0	54.0	53.0	52.0	51.0	50.0	49.0	49.0	48.0	47.0	46.0	45.0	54.9	54.9	
Evening			21	49.2	66.1	43.9	56.0	55.0	54.0	53.0	52.0	51.0	50.0	49.0	49.0	48.0	47.0	46.0	45.0	44.0	43.0	42.0	41.0	40.0	54.2	54.2	
Night			22	49.3	61.9	44.0	53.0	52.0	51.0	50.0	49.0	48.0	47.0	46.0	45.0	49.3	49.3	49.0	49.0	10.0	10.0	10.0	10.0	10.0	59.3	59.3	
			23	49.9	63.9	45.4	58.0	57.0	56.0	55.0	54.0	53.0	52.0	51.0	50.0	49.9	49.9	49.0	49.0	10.0	10.0	10.0	10.0	10.0	59.9	59.9	
Energy Average				56.2	Average:		62.8	60.9	58.9	58.2	56.0	55.0	54.0	53.0	52.0	51.0	50.0	49.0	49.0	48.0	47.0	46.0	45.0	44.0	55.0	55.0	
Evening			Min	49.2	64.6	43.9	56.0	55.0	54.0	53.0	52.0	51.0	50.0	49.0	49.0	48.0	47.0	46.0	45.0	44.0	43.0	42.0	41.0	40.0	54.3	54.3	
			Max	55.2	70.6	47.6	64.0	62.0	60.0	58.0	57.0	56.0	55.0	54.0	53.0	52.0	51.0	50.0	49.0	49.0	48.0	47.0	46.0	45.0	55.7	55.7	
Energy Average				53.0	Average:		60.3	58.3	55.7	54.7	51.7	50.3	50.3	49.0	48.0	47.0	46.0	45.0	44.0	43.0	42.0	41.0	40.0	38.3	48.3	48.3	
Night			Min	44.5	53.1	41.1	49.0	48.0	47.0	46.0	45.0	44.0	43.0	42.0	42.0	41.0	40.0	39.0	38.3	37.0	36.0	35.0	34.0	33.0	58.2	58.2	
			Max	53.8	78.8	48.3	66.0	56.0	49.0	46.0	45.0	44.0	43.0	42.0	42.0	41.0	40.0	39.0	38.3	37.0	36.0	35.0	34.0	33.0	58.2	58.2	
Energy Average				50.0	Average:		54.4	52.4	50.4	49.8	48.0	46.9	45.0	44.0	43.0	42.0	41.0	40.0	39.0	38.3	37.0	36.0	35.0	34.0	33.0	58.2	58.2
Energy Average				50.0	Average:		54.4	52.4	50.4	49.8	48.0	46.9	45.0	44.0	43.0	42.0	41.0	40.0	39.0	38.3	37.0	36.0	35.0	34.0	33.0	58.2	58.2

24-Hour Noise Level Measurement Summary

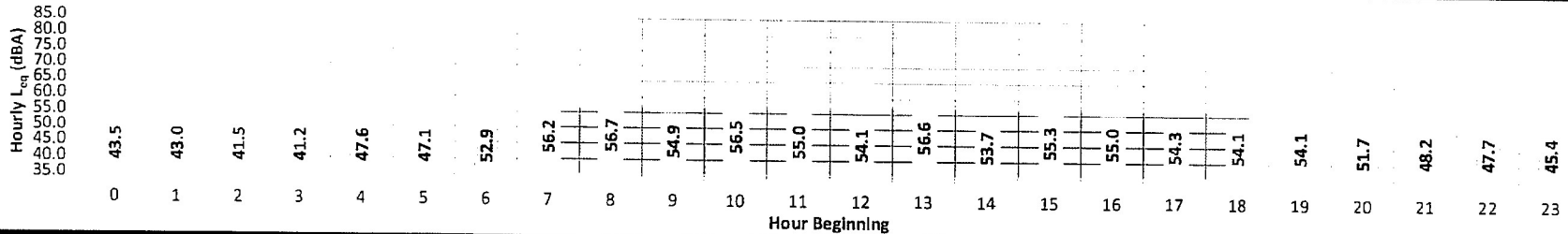
Date: Tuesday, February 26, 2019
Project: 215 Riverside

Location: L2 - Located within the existing parking structure at the
Project site, south of existing residential homes.

Meter: Piccolo I

JN: 12356
Analyst: R. Saber

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	43.5	53.4	38.5	49.0	47.0	46.0	45.0	44.0	42.0	41.0	40.0	40.0	43.5	10.0	53.5
	1	43.0	56.3	38.5	49.0	48.0	46.0	46.0	45.0	41.0	40.0	40.0	38.0	43.0	10.0	53.0
	2	41.5	59.0	38.5	48.0	46.0	43.0	42.0	41.0	40.0	38.0	38.0	38.0	41.5	10.0	51.5
	3	41.2	55.1	39.9	45.0	44.0	43.0	42.0	41.0	40.0	40.0	40.0	40.0	41.2	10.0	51.2
	4	47.6	71.2	40.2	59.0	54.0	47.0	46.0	42.0	41.0	40.0	40.0	40.0	47.6	10.0	57.6
	5	47.1	65.7	41.6	54.0	52.0	50.0	49.0	47.0	45.0	43.0	43.0	42.0	47.1	10.0	57.1
Day	6	52.9	66.4	45.1	63.0	61.0	58.0	55.0	51.0	49.0	47.0	47.0	46.0	52.9	10.0	62.9
	7	56.2	69.4	46.7	64.0	63.0	61.0	60.0	57.0	52.0	49.0	48.0	47.0	56.2	0.0	56.2
	8	56.7	70.0	44.0	65.0	64.0	62.0	60.0	57.0	53.0	47.0	46.0	45.0	56.7	0.0	56.7
	9	54.9	69.2	43.6	63.0	62.0	60.0	60.0	55.0	52.0	47.0	46.0	45.0	54.9	0.0	54.9
	10	56.5	68.4	44.9	64.0	63.0	61.0	60.0	57.0	54.0	48.0	47.0	46.0	56.5	0.0	56.5
	11	55.0	68.4	44.6	62.0	61.0	59.0	58.0	56.0	52.0	48.0	47.0	46.0	55.0	0.0	55.0
	12	54.1	73.1	44.0	61.0	60.0	58.0	57.0	54.0	51.0	48.0	47.0	45.0	54.1	0.0	54.1
	13	56.6	75.5	45.1	67.0	62.0	60.0	59.0	56.0	53.0	50.0	49.0	47.0	56.6	0.0	56.6
	14	53.7	67.3	44.3	62.0	60.0	58.0	57.0	54.0	51.0	47.0	46.0	45.0	53.7	0.0	53.7
	15	55.3	76.8	45.1	64.0	63.0	60.0	58.0	53.0	51.0	48.0	47.0	46.0	55.3	0.0	55.3
	16	55.0	73.2	45.9	63.0	61.0	59.0	58.0	55.0	53.0	49.0	49.0	47.0	55.0	0.0	55.0
	17	54.3	70.3	45.4	62.0	60.0	58.0	57.0	54.0	52.0	49.0	48.0	46.0	54.3	0.0	54.3
	18	54.1	73.2	44.3	61.0	60.0	58.0	57.0	53.0	51.0	48.0	48.0	46.0	54.1	0.0	54.1
Evening	19	54.1	69.3	44.7	63.0	62.0	59.0	57.0	53.0	50.0	47.0	46.0	45.0	54.1	5.0	59.1
	20	51.7	71.2	40.3	62.0	60.0	57.0	54.0	50.0	48.0	44.0	43.0	41.0	51.7	5.0	56.7
	21	48.2	68.4	38.5	58.0	55.0	52.0	51.0	47.0	44.0	41.0	40.0	40.0	48.2	5.0	53.2
Night	22	47.7	69.1	40.1	55.0	53.0	51.0	51.0	47.0	44.0	41.0	41.0	40.0	47.7	10.0	57.7
	23	45.4	61.0	41.2	52.0	51.0	49.0	47.0	45.0	44.0	42.0	42.0	41.0	45.4	10.0	55.4
Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq} (dBA)		
Day	Min	53.7	67.3	43.6	61.0	60.0	58.0	57.0	53.0	51.0	47.0	46.0	45.0	24-Hour		
	Max	56.7	76.8	46.7	67.0	64.0	62.0	60.0	57.0	54.0	50.0	49.0	47.0			
Energy Average		55.3	Average:		63.2	61.6	59.5	58.3	55.1	52.1	48.2	47.3	45.9	24-Hour CNEL (dBA)		
Evening	Min	48.2	68.4	38.5	58.0	55.0	52.0	51.0	47.0	44.0	41.0	40.0	40.0			
	Max	54.1	71.2	44.7	63.0	62.0	59.0	57.0	53.0	50.0	47.0	46.0	45.0			
Energy Average		52.0	Average:		61.0	59.0	56.0	54.0	50.0	47.3	44.0	43.0	42.0	56.3		
Night	Min	41.2	53.4	38.5	45.0	44.0	43.0	42.0	41.0	40.0	38.0	38.0	38.0			
	Max	52.9	71.2	45.1	63.0	61.0	58.0	55.0	51.0	49.0	47.0	47.0	46.0			
Energy Average		47.2	Average:		52.7	50.7	48.1	46.9	44.6	42.9	41.3	41.2	40.6			

24-Hour Noise Level Measurement Summary

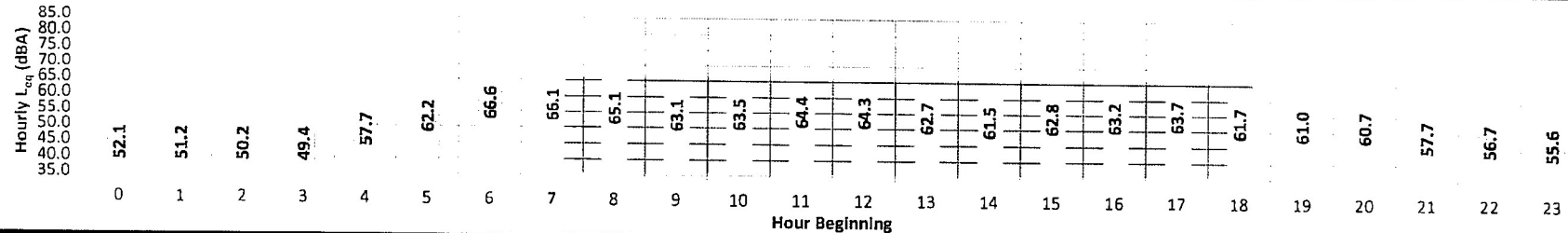
Date: Tuesday, February 26, 2019
Project: 215 Riverside

Location: L3 - Located northeast of the Project site on Riverside Avenue adjacent to an existing park.

Meter: Piccolo I

JN: 12356
Analyst: R. Saber

Hourly L_{eq} dBA Readings (unadjusted)



Road Beginning																			
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}			
Night	0	52.1	72.3	38.8	61.0	59.0	56.0	55.0	53.0	45.0	39.0	39.0	38.0	52.1	10.0	62.1			
	1	51.2	72.0	38.7	60.0	58.0	56.0	56.0	51.0	40.0	39.0	39.0	38.0	51.2	10.0	61.2			
	2	50.2	72.6	37.4	60.0	59.0	58.0	57.0	42.0	40.0	39.0	38.0	38.0	50.2	10.0	60.2			
	3	49.4	73.1	38.9	63.0	59.0	52.0	48.0	42.0	40.0	39.0	39.0	39.0	49.4	10.0	59.4			
	4	57.7	72.1	40.6	68.0	67.0	64.0	62.0	56.0	49.0	43.0	42.0	40.0	57.7	10.0	67.7			
	5	62.2	83.1	42.8	71.0	69.0	68.0	67.0	61.0	55.0	47.0	45.0	44.0	62.2	10.0	72.2			
	6	66.6	77.8	45.3	74.0	73.0	71.0	70.0	68.0	64.0	52.0	49.0	48.0	66.6	10.0	76.6			
Day	7	66.1	85.5	43.6	74.0	72.0	70.0	70.0	67.0	63.0	54.0	51.0	46.0	66.1	0.0	66.1			
	8	65.1	80.8	43.7	73.0	71.0	70.0	69.0	66.0	62.0	53.0	50.0	45.0	65.1	0.0	65.1			
	9	63.1	80.3	43.7	71.0	69.0	68.0	67.0	64.0	59.0	50.0	49.0	46.0	63.1	0.0	63.1			
	10	63.5	78.3	42.7	70.0	69.0	68.0	67.0	64.0	61.0	52.0	50.0	46.0	63.5	0.0	63.5			
	11	64.4	81.4	43.8	72.0	70.0	69.0	68.0	65.0	62.0	53.0	50.0	46.0	64.4	0.0	64.4			
	12	64.3	88.2	44.4	71.0	69.0	68.0	67.0	64.0	61.0	52.0	50.0	47.0	64.3	0.0	64.3			
	13	62.7	90.2	41.9	69.0	68.0	66.0	65.0	63.0	59.0	51.0	48.0	45.0	62.7	0.0	62.7			
	14	61.5	77.1	43.7	68.0	67.0	66.0	65.0	62.0	59.0	52.0	50.0	47.0	61.5	0.0	61.5			
	15	62.8	82.1	48.1	69.0	68.0	66.0	65.0	63.0	61.0	55.0	53.0	51.0	62.8	0.0	62.8			
	16	63.2	82.4	46.2	70.0	69.0	67.0	66.0	64.0	61.0	54.0	52.0	49.0	63.2	0.0	63.2			
	17	63.7	82.4	40.6	71.0	70.0	68.0	67.0	65.0	61.0	51.0	48.0	45.0	63.7	0.0	63.7			
	18	61.7	74.8	41.7	69.0	68.0	67.0	66.0	63.0	58.0	48.0	46.0	43.0	61.7	0.0	61.7			
Evening	19	61.0	81.3	39.8	69.0	68.0	66.0	65.0	61.0	55.0	44.0	43.0	41.0	61.0	5.0	66.0			
	20	60.7	86.1	38.9	70.0	69.0	66.0	65.0	58.0	51.0	41.0	40.0	39.0	60.7	5.0	65.7			
	21	57.7	76.5	38.9	69.0	67.0	64.0	62.0	53.0	47.0	41.0	40.0	40.0	57.7	5.0	62.7			
Night	22	56.7	75.0	45.1	67.0	66.0	62.0	60.0	53.0	51.0	48.0	47.0	46.0	56.7	10.0	66.7			
	23	55.6	73.3	45.1	66.0	63.0	58.0	57.0	55.0	53.0	50.0	49.0	47.0	55.6	10.0	65.6			
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq} (dBA)					
Day	Min	61.5	74.8	40.6	68.0	67.0	66.0	65.0	62.0	58.0	48.0	46.0	43.0	24-Hour	Daytime	Nighttime			
	Max	66.1	90.2	48.1	74.0	72.0	70.0	70.0	67.0	63.0	55.0	53.0	51.0						
Energy Average		63.7	Average:		70.6	69.2	67.8	66.8	64.2	60.6	52.1	49.8	46.3						
Evening	Min	57.7	76.5	38.9	69.0	67.0	64.0	62.0	53.0	47.0	41.0	40.0	39.0	24-Hour CNEL (dBA)	62.1	63.2	59.6		
	Max	61.0	86.1	39.8	70.0	69.0	66.0	65.0	61.0	55.0	44.0	43.0	41.0						
Energy Average		60.0	Average:		69.3	68.0	65.3	64.0	57.3	51.0	42.0	41.0	40.0						
Night	Min	49.4	72.0	37.4	60.0	58.0	52.0	48.0	42.0	40.0	39.0	38.0	38.0						
	Max	66.6	83.1	45.3	74.0	73.0	71.0	70.0	68.0	64.0	52.0	49.0	48.0						
Energy Average		59.6	Average:		65.6	63.7	60.6	59.1	53.4	48.6	44.0	43.0	42.0						
														67.0					

24-Hour Noise Level Measurement Summary

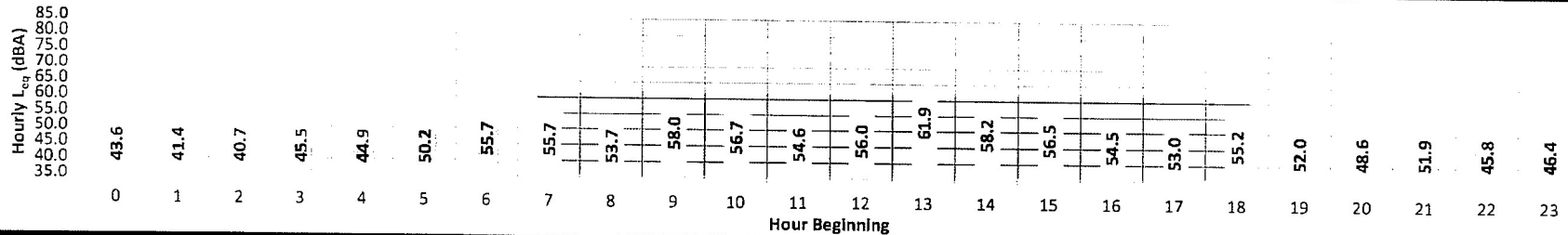
Date: Tuesday, February 26, 2019
Project: 215 Riverside

Location: L4 - Located east of the Project site on Ocean View Avenue adjacent to existing residential homes.

Meter: Piccolo I

JN: 12356
Analyst: R. Saber

Hourly L_{eq} dBA Readings (unadjusted)



Hour Beginning																
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq}	Adj.	Adj. L _{eq}
Night	0	43.6	59.0	39.4	51.0	50.0	48.0	47.0	49.0	41.0	40.0	40.0	40.0	43.6	10.0	53.6
	1	41.4	52.9	39.4	49.0	48.0	43.0	42.0	40.0	40.0	39.0	39.0	39.0	41.4	10.0	51.4
	2	40.7	50.6	39.4	45.0	43.0	42.0	41.0	40.0	40.0	39.0	39.0	39.0	40.7	10.0	50.7
	3	45.5	67.2	39.3	56.0	53.0	48.0	44.0	41.0	40.0	39.0	39.0	39.0	45.5	10.0	55.5
	4	44.9	53.9	39.9	50.0	49.0	48.0	47.0	45.0	43.0	41.0	40.0	40.0	44.9	10.0	54.9
	5	50.2	65.0	45.4	55.0	54.0	53.0	52.0	50.0	49.0	47.0	46.0	46.0	50.2	10.0	60.2
	6	55.7	77.8	44.1	64.0	63.0	61.0	60.0	55.0	50.0	46.0	46.0	45.0	55.7	10.0	65.7
Day	7	55.7	78.4	44.3	66.0	64.0	61.0	59.0	53.0	50.0	46.0	46.0	45.0	55.7	0.0	55.7
	8	53.7	70.3	42.9	65.0	62.0	59.0	57.0	51.0	48.0	46.0	45.0	44.0	53.7	0.0	53.7
	9	58.0	76.2	45.1	68.0	65.0	63.0	61.0	57.0	53.0	48.0	47.0	46.0	58.0	0.0	58.0
	10	56.7	80.7	46.0	67.0	64.0	61.0	59.0	53.0	50.0	47.0	47.0	46.0	56.7	0.0	56.7
	11	54.6	72.1	44.8	64.0	62.0	60.0	58.0	53.0	50.0	47.0	46.0	45.0	54.6	0.0	54.6
	12	56.0	74.9	45.2	68.0	64.0	61.0	58.0	52.0	49.0	47.0	46.0	46.0	56.0	0.0	56.0
	13	61.9	89.7	44.0	65.0	63.0	60.0	58.0	53.0	50.0	47.0	46.0	45.0	61.9	0.0	61.9
	14	58.2	80.9	45.4	67.0	65.0	63.0	60.1	54.0	52.0	48.0	47.0	46.0	58.2	0.0	58.2
	15	56.5	76.1	46.6	65.0	64.0	62.0	59.0	54.0	52.0	49.0	48.0	47.0	56.5	0.0	56.5
	16	54.5	75.4	44.1	65.0	62.0	59.0	57.0	52.0	49.0	47.0	46.0	45.0	54.5	0.0	54.5
	17	53.0	65.9	43.1	62.0	61.0	59.0	57.0	52.0	49.0	47.0	46.0	44.0	53.0	0.0	53.0
	18	55.2	71.2	44.0	65.0	64.0	61.0	60.0	53.0	49.0	46.0	45.0	44.0	55.2	0.0	55.2
Evening	19	52.0	67.9	41.1	64.0	62.0	57.0	54.0	49.0	47.0	44.0	43.0	42.0	52.0	5.0	57.0
	20	48.6	67.9	39.3	60.0	58.0	54.0	50.0	46.0	43.0	40.0	40.0	39.0	48.6	5.0	53.6
	21	51.9	74.3	39.4	65.0	61.0	53.0	50.0	45.0	43.0	40.0	40.0	39.0	51.9	5.0	56.9
Night	22	45.8	68.3	40.6	53.0	51.0	49.0	48.0	44.0	43.0	41.0	41.0	41.0	45.8	10.0	55.8
	23	46.4	64.4	39.9	60.0	54.0	49.0	47.0	44.0	41.0	40.0	40.0	40.0	46.4	10.0	56.4
Timeframe	Hour	L _{eq}	L _{max}	L _{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L _{eq} (dBA)		
Day	Min	53.0	65.9	42.9	62.0	61.0	59.0	57.0	51.0	48.0	46.0	45.0	44.0	24-Hour	Daytime	Nighttime
	Max	61.9	89.7	46.6	68.0	65.0	63.0	61.0	57.0	53.0	49.0	48.0	47.0			
Energy Average		56.9	Average:		65.6	63.3	60.8	58.6	53.1	50.1	47.1	46.3	45.3	54.6	56.2	48.7
Evening	Min	48.6	67.9	39.3	60.0	58.0	53.0	50.0	45.0	43.0	40.0	40.0	39.0			
	Max	52.0	74.3	41.1	65.0	62.0	57.0	54.0	49.0	47.0	44.0	43.0	42.0			
Energy Average		51.1	Average:		63.0	60.3	54.7	51.3	46.7	44.3	41.3	41.0	40.0	24-Hour CNEL (dBA)		
Night	Min	40.7	50.6	39.3	45.0	43.0	42.0	41.0	40.0	40.0	39.0	39.0	39.0	57.6		
	Max	55.7	77.8	45.4	64.0	63.0	61.0	60.0	55.0	50.0	47.0	46.0	46.0			
Energy Average		48.7	Average:		53.7	51.7	49.0	47.6	44.7	43.0	41.3	41.1	41.0			

APPENDIX 6.1:
CADNAA NOISE MODEL DATA INPUTS & RESULTS

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12352

CadnaA Noise Prediction Model

12352-03.cna

Date:

04.03.19

Analyst:

A.Wolfe

Receiver Noise Levels

Name	ID	Level	Lr	Height	Coordinates		
		Day			X	Y	Z
		(dBA)	(m)		(m)	(m)	(m)
1	1	28.4	1.52	r	1844518.39	662676.10	17.13
2	2	26.7	1.52	r	1844553.45	662677.42	16.52
3	3	45.5	1.52	r	1844688.05	662672.54	18.14
4	4	48.2	1.52	r	1844720.49	662661.88	17.59
5	5	40.8	1.52	r	1844762.84	662635.66	15.52
6	6	37.9	1.52	r	1844748.35	662622.30	9.52
7	7	37.4	1.52	r	1844690.22	662615.80	6.36

Area Source(s)

Name	Result, PWL		Lw / Li	
	Day	Night	Type	Value norm,
	(dBA)	(dBA)		dB(A)
Parking Lot	69.9	69.9	Lw	69.9
HVAC	88.9	88.9	Lw	88.9
HVAC	88.9	88.9	Lw	88.9

Barrier(s)

Name	Absorption		Height	
	left	right	Begin	End
			(m)	(m)
BARRIERS	0.21	0.21	2.44	g
BARRIERS	0.21	0.21	2.44	g
BARRIERS	0.21	0.21	1.83	g

Building(s)

Name	Absorption	Height
		Begin
		(m)
BUILDINGS	0.21	3.05 r
BUILDINGS	0.21	3.05 r
BUILDINGS	0.21	6.10 r
BUILDINGS	0.21	3.05 r
BUILDINGS	0.21	6.10 r
BUILDINGS	0.21	6.10 r
BUILDINGS	0.21	6.10 r
BUILDINGS	0.21	6.10 r
BUILDINGS	0.21	6.10 r
BUILDINGS	0.21	6.10 r
BUILDINGS	0.21	6.10 r
BUILDINGS	0.21	9.14 r
BUILDINGS	0.21	6.10 r
BUILDINGS	0.21	3.05 r
BUILDINGS	0.21	6.10 r
BUILDINGS	0.21	6.10 r
BUILDINGS	0.21	3.05 r
BUILDINGS	0.21	3.05 g
BUILDINGS	0.21	9.14 r
BUILDINGS	0.21	3.05 r
BUILDINGS	0.21	3.05 r
BUILDINGS	0.21	3.05 r
BUILDINGS	0.21	6.10 r
BUILDINGS	0.21	6.10 r

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Exhibit 3

Preliminary Water Quality Management Plan

Preliminary Water Quality Management Plan (pWQMP)

215 RIVERSIDE AVENUE

Por. Lot D, Tract No. 919
APN 049-103-17
Newport Beach, California

Prepared for:

CANNERY PARTNERS LLC
660 Newport Center Drive, Suite 200
Newport Beach, CA 92660
Contact: Gary Jabara (949) 999-4545

Prepared by:

TOAL ENGINEERING, INC.
139 Avenida Navarro, San Clemente, CA 92672
www.toalengineering.com
Contact: ADAM L. TOAL, R.C.E. 59275 (949) 492-8586
atoal@toalengineering.com

Prepared on: JUNE 7, 2019

Revised by: [Signature] Date: 06/10/2019

Project Owner's Certification			
Permit/ Application No.	PA2019-023	Grading Permit No.	(TBD)
Tract/Parcel Map No.	Lot D Tract No. 919	Building Permit No.	(TBD)
CUP, SUP, and/or APN (Specify Lot Numbers if Portions of Tract)			049-103-17

This Water Quality Management Plan (WQMP) has been prepared for Mr. Gary Jabara by Toal Engineering, Inc. The WQMP is intended to comply with the requirements of the local 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 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 San Diego Region (South Orange County).. 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: Gary Jabara			
Title			
Company	Cannery Partners LLC		
Address	660 Newport Center Drive, Suite 200, Newport Beach, CA 92660		
Email	gary@mobilitie.com		
Telephone #	949-999-4545		
Signature		Date	

Contents

Page No.

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Section III Site Description	7
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Section V Inspection/Maintenance Responsibility for BMPs.....	29
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Attachments

Attachment A	BMP Fact Sheets
Attachment B	Educational Materials
Attachment C	Operation & Maintenance Plan

Section I Discretionary Permit(s) and Water Quality Conditions

Project Information			
Permit/ Application No.	PA2019-023	Tract/ Parcel Map No.	Lot D Tract No. 919
Additional Information/ Comments:			
Water Quality Conditions			
Water Quality Conditions (list verbatim)	<p>Prior to the issuance of any grading or building permits, the applicant shall submit for review and approval by the Manager, Permit Services, a Water Quality Management Plan (WQMP) specifically identifying Best Management Practices (BMPs) that will be used onsite to control predictable pollution runoff. The applicant shall utilize the Orange County Drainage Area Management Plan (DAMP), Model WQMP, and Technical Guidance Manual for reference, and the County's WQMP template for submittal. This WQMP shall include the following:</p> <ul style="list-style-type: none">-Detailed site and project description-Potential stormwater pollutants-Post-development drainage characteristics-Low Impact Development (LID) BMP selection and analysis-Structural and Non-Structural source control BMPs-Site design and drainage plan (BMP Exhibit)-GIS coordinates for all LID and Treatment Control BMPs-Operation and Maintenance (O&M) Plan that (1) describes the mechanism for funding the long-term operation and maintenance of referenced BMPs. <p>The BMP Exhibit from the approved WQMP shall be included as a sheet in all plan sets submitted for plan check and all BMPs shall be depicted on these plans. Grading and building plans must be consistent with the approved BMP exhibit.</p>		

Watershed-Based Plan Conditions	
Provide applicable conditions from watershed - based plans including TMDLS.	TMDLs for Lower Newport Bay: Nutrients (1998) Toxics (2002) Fecal Coliform (1999)

Section II Project Description

II.1 Project Description

Description of Proposed Project				
Development Category (Verbatim from WQMP):	<p>8. All significant redevelopment projects, where significant redevelopment is defined as the addition or replacement of 5,000 or more square feet of impervious surface on an already developed site. Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of the facility, or emergency redevelopment activity required to protect public health and safety</p> <p>If the redevelopment results in the addition or replacement of less than 50 percent of the impervious area on-site and the existing development was not subject to WQMP requirement, the numeric sizing criteria discussed in Section 7.II-2.0 only applies to the addition or replacement area. If the addition or replacement accounts for 50 percent or more of the impervious area, the Project WQMP requirements apply to the entire development</p>			
Project Area (ft²): 16,290		Number of Dwelling Units: 1		SIC Code: 1521
Narrative Project Description:	<p>The project consists of the following: (1) demolition of the existing building and associated parking areas; (2) construction of a new retail space along with a 2-level parking garage and appurtenant hardscape, landscape, and drainage improvements.</p> <p>Runoff from the roof and upper level parking garage will be directed to and treated by a bioretention planter box prior to discharge. Runoff from within the basement level covered parking garage will be treated by filter inserts prior to discharge.</p>			
Project Area	Pervious		Impervious	
	Area (sf)	Percentage	Area (sf)	Percentage
Pre-Project Conditions	2,815	17	13,475	83
Post-Project Conditions	5,140	32	11,150	68
Drainage Patterns/Connections		See Section III.2.		

II.2 Potential Stormwater Pollutants

Pollutants of Concern			
Pollutant	Circle One: E=Expected to be of concern N=Not Expected to be of concern		Additional Information and Comments
Suspended-Solid / Sediment	<input checked="" type="radio"/> E	<input type="radio"/> N	
Nutrients	<input checked="" type="radio"/> E	<input type="radio"/> N	
Heavy Metals	<input checked="" type="radio"/> E	<input type="radio"/> N	
Pathogens (Bacteria/Virus)	<input checked="" type="radio"/> E	<input type="radio"/> N	
Pesticides	<input checked="" type="radio"/> E	<input type="radio"/> N	
Oil and Grease	<input checked="" type="radio"/> E	<input type="radio"/> N	
Toxic Organic Compounds	<input type="radio"/> E	<input checked="" type="radio"/> N	
Trash and Debris	<input checked="" type="radio"/> E	<input type="radio"/> N	

II.3 Hydrologic Conditions of Concern

Hydrologic Conditions of Concern (HCOCs) do not exist for this project since site runoff is conveyed in a storm drain system and discharged directly into Newport Bay.

II.4 Post Development Drainage Characteristics

Post-construction surface drainage will be directed to the same ultimate discharge points as prior to construction. Runoff from the front portion of the property will be directed to a gravel bed for infiltration prior to discharge to the street. Runoff from the remaining portions of the site will be collected in an area drain system and discharged into the existing street through drain box filter at the rear of the property and then pumped up to the street for discharge. The drainage system is shown on the Preliminary Grading and Drainage Plan and the Preliminary Water Quality Management Plan for the project.

II.5 Property Ownership/Management

This property is privately owned by:

Cannery Partners, LLC
Gary Jabara
660 Newport Center Dr., Suite 200
Newport Beach, CA 92660
Tel: (949) 999-4545

Section III Site Description

III.1 Physical Setting

Planning Area/ Community Name	N/A
Location/Address	215 Riverside Avenue, Newport Beach, California
Project Area Description	The subject property lies on the northwesterly corner of the intersection of Riverside Avenue and Avon Street.
Land Use	RSD-A: Single Unit Residential Detached (0.0-5.9 DU/AC)
Zoning	CG-05: Commercial General
Acreage	Property: 16,290 s.f. (0.374 acres) Project: 14,470 s.f. (0.332 acres)
Predominant Soil Type	Per the O.C. Hydrology Manual Plate B, the project is underlain by soil Type D.

III.2 Site Characteristics

<i>Precipitation Zone</i>	0.7-in (TGD Fig XVI-1)
<i>Topography</i>	The subject property is sloed commercial lot. Elevations on the developed portion of the site range from a maximum of about 43-feet to a minimum of about 16-feet.
<i>Drainage Patterns/Connections</i>	Under existing conditions, the runoff from the site flows to the streets at the east (Riverside) and south (Avon) of the property.
<i>Soil Type, Geology, and Infiltration Properties</i>	Per the O.C. Hydrology Manual Plate B, the project is underlain by soil Type D.
<i>Hydrogeologic (Groundwater) Conditions</i>	A soils report is not available at this time.
<i>Geotechnical Conditions (relevant to infiltration)</i>	According to infiltration BMP feasibility criteria, infiltration of the entire DVC is not feasible for this project.
<i>Off-Site Drainage</i>	The project site does not receive run-on from adjacent properties.
<i>Utility and Infrastructure Information</i>	Public and private utilities are already in place for this property.

III.3 Watershed Description

Receiving Waters	Lower Newport Bay
303(d) Listed Impairments	Chlordane, Copper, DDT, Indicator Bacteria, Nutrients, PCBs, Pesticides, Sediment Toxicity
Applicable TMDLs	Sediment, Nutrients, Toxics, Fecal Coliform
Pollutants of Concern for the Project	<p><u>Primary Pollutants of Concern:</u></p> <p><i>Chlordane, Copper, DDT, Indicator Bacteria, Nutrients, PCBs, Pesticides, Sediment Toxicity.</i></p> <p><u>Other Pollutants of Concern:</u></p> <p><i>None.</i></p>
Environmentally Sensitive and Special Biological Significant Areas	Lower Newport Bay.

Section IV Best Management Practices (BMPs)

IV. 1 Project Performance Criteria

Project Performance Criteria	
If HCOC exists, list applicable hydromodification control performance criteria (MWQMP Appendix C)	Per Section II.3 of this report, HCOCs do not exist for the proposed project.
List applicable LID performance criteria (Section 7.II-2.4.3 from MWQMP)	<ul style="list-style-type: none"> Priority Projects must infiltrate, harvest and use, evapotranspire, or biotreat/biofilter, the 85th percentile, 24-hour storm event (Design Capture Volume). A properly designed biotreatment system may only be considered if infiltration, harvest and use, and evapotranspiration (ET) cannot be feasibly implemented for the full design capture volume. In this case, infiltration, harvest and use, and ET practices must be implemented to the greatest extent feasible and biotreatment may be provided for the remaining design capture volume.
Calculate LID DCV for Project.	<p>Simple Method per TGD III.1.1.</p> $DCV = C \times d \times A$ $C = (0.75 \times imp + 0.15) = 0.75 \times 0.77 + 0.15 = 0.73$ $d = 0.70 \text{ in.}$ $A = 14,470 \text{ sq. ft.}$ $DCV = 0.73 \times 0.70 \text{ in.} \times 14,470 \text{ s.f.} \times \left(\frac{1 \text{ ft.}}{12 \text{ in.}} \right) = 616 \text{ cf}$

Worksheet B: Simple Design Capture Volume Sizing Method

Step 1: Determine the design capture storm depth used for calculating volume				
1	Enter design capture storm depth from Figure III.1, d (inches)	$d =$	0.70	inches
2	Enter the effect of provided HSCs, d_{HSC} (inches) (Worksheet A)	$d_{HSC} =$	-	inches
3	Calculate the remainder of the design capture storm depth, $d_{remainder}$ (inches) (Line 1 – Line 2)	$d_{remainder} =$	0.70	inches
Step 2: Calculate the DCV				
1	Enter Project area tributary to BMP (s), A (acres)	$A =$	0.332	acres
2	Enter Project Imperviousness, imp (unitless)	$imp =$	0.77	
3	Calculate runoff coefficient, $C = (0.75 \times imp) + 0.15$	$C =$	0.73	
4	Calculate runoff volume, $V_{design} = (C \times d_{remainder} \times A \times 43560 \times (1/12))$	$V_{design} =$	616	cu-ft
Step 3: Design BMPs to ensure full retention of the DCV				
Step 3a: Determine design infiltration rate				
1	Enter measured infiltration rate, $K_{measured}$ (in/hr) (Appendix VII)	$K_{measured} =$		In/hr
2	Enter combined safety factor from Worksheet H, S_{final} (unitless)	$S_{final} =$		
3	Calculate design infiltration rate, $K_{design} = K_{measured} / S_{final}$	$K_{design} =$		In/hr
Step 3b: Determine minimum BMP footprint				
4	Enter drawdown time, T (max 48 hours)	$T =$		Hours
5	Calculate max retention depth that can be drawn down within the drawdown time (feet), $D_{max} = K_{design} \times T \times (1/12)$	$D_{max} =$		feet
6	Calculate minimum area required for BMP (sq-ft), $A_{min} = V_{design} / d_{max}$	$A_{min} =$		sq-ft

IV.2. SITE DESIGN AND DRAINAGE PLAN

Overview

The ultimate plan of development for the proposed project is shown on the WQMP Site Plan in Section VI of this report. The project Precise Grading Plan shows the proposed grading, site improvements, and retaining walls necessary for construction of a single-family residence.

Site Design Practices

The project incorporates Site Design practices as follows:

- Preserve Existing Drainage Patterns and Time of Concentration - The ultimate points of discharge are the same for the pre- and post-project conditions. Time of concentration will be similar, since pre-and post-project flow path lengths will be similar.

Drainage Management Areas (DMAs)

There is one (1) Drainage Management Area (DMA) for this commercial development. The following LID BMP will be used to meet the calculated Design Volume for the DMA:

- Bioretention with Underdrain (Biotreatment BMP)

DM A	Area (sq. ft.)	% Impervious	BMP Type	Sizing
1	14,470	0.77	BIO-1: Bioretention w/ Underdrain	SWQD _v

See discussion for the selected BMP in Section IV.3.

See the WQMP Site Plan provided in Section VI of this report for DMA location and characteristics.

The GIS coordinates for all BMPs are nearly identical at: 33.6219, -117.9237.

IV.3 BMP SELECTION AND PROJECT CONFORMANCE ANALYSIS

IV.3.1 Hydrologic Source Controls

The Hydrologic Source Controls to be used for this project are indicated in the table below. Implementation of said controls is discussed in the text that follows.

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

Hydrologic Source Controls have not been used due to space constraints, including landscape area size and proximity to structure foundations.

IV.3.2 Infiltration BMPs

Infiltration BMPs to be used for this project are indicated in the table below. Implementation of said controls is discussed in the text that follows.

Name	Included?
Bioretention without underdrains	<input type="checkbox"/>
Rain gardens	<input type="checkbox"/>
Porous landscaping	<input type="checkbox"/>
Infiltration planters	<input type="checkbox"/>
Retention swales	<input type="checkbox"/>
Infiltration trenches	<input checked="" type="checkbox"/>
Infiltration basins	<input type="checkbox"/>
Drywells	<input type="checkbox"/>
Subsurface infiltration galleries	<input type="checkbox"/>
French drains	<input type="checkbox"/>
Permeable asphalt	<input type="checkbox"/>
Permeable concrete	<input type="checkbox"/>
Permeable concrete pavers	<input type="checkbox"/>
Other:	<input type="checkbox"/>

It is believed that infiltration will not be feasible for this project due to the Type "D" site soils. Further analysis will be done when the soils report becomes available.

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: Infiltration BMPs will not pose a significant risk to local groundwater. Groundwater in the vicinity of the project site is not used for drinking water. Pretreatment devices will mitigate entry of trash, sediment, and oil & grease into proposed infiltration BMPs.			
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): <ul style="list-style-type: none"> • 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:			
3	Would infiltration of the DCV from drainage area violate downstream water rights?		X
Provide basis: There are no downstream water right holders since site drainage is conveyed via the city storm drain system directly to receiving waters (Lower Newport Bay).			

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:			
Proposed facility is located on HSG-A soils per OCHM Soil Maps.			
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
Provide basis:			
Infiltration rate is presumed to be greater than 0.3 inches per hour based on site's HSG.			
6	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 ?		X
Provide citation to applicable study and summarize findings relative to the amount of infiltration that is permissible:			
No downstream beneficial uses such as ephemeral washes or groundwater sources of drinking water are located downstream of the subject property.			
7	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 ?		X
Provide citation to applicable study and summarize findings relative to the amount of infiltration that is permissible:			
No downstream beneficial uses such as ephemeral washes or groundwater sources of drinking water are located downstream of the subject property.			

Table 2.7: Infiltration BMP Feasibility Worksheet (continued)

Infiltration Screening Results (check box corresponding to result):		
8	<p>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)</p> <p>Provide narrative discussion and supporting evidence:</p> <p>No evidence of I&I has been provided by the local sewer agency (City of Newport Beach).</p>	No
9	<p>If any answer from row 1-3 is yes: infiltration of any volume is not feasible within the DMA or equivalent.</p> <p>Provide basis:</p>	
10	<p>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.</p> <p>Provide basis:</p>	
11	<p>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.</p>	X

IV.3.3 Evapotranspiration, Rainwater Harvesting BMPs

Evapotranspiration and/or Rainwater Harvesting BMPs to be used for this project are indicated in the table below. Implementation of said controls is discussed in the text that follows.

Name	Included?
All HSCs; <i>See Section IV.3.1</i>	<input type="checkbox"/>
Surface-based infiltration BMPs	<input type="checkbox"/>
Other vegetated BMPs	<input type="checkbox"/>
Above-ground cisterns and basins	<input type="checkbox"/>
Underground detention	<input type="checkbox"/>
Other:	<input type="checkbox"/>

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 on the following page.

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	<input type="checkbox"/>	
3	Landscape irrigation	<input type="checkbox"/>	
4	Other: _____	<input type="checkbox"/>	
5	What is the design capture storm depth? (Figure III.1)	d	.70 inches
6	What is the project size?	A	0.332 ac
7	What is the acreage of impervious area?	IA	0.256 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)	$0.84 \times 0.256 = 0.215$	ac
15	What is the proposed project irrigated area? (multiply conservation landscaping by 1; multiply active turf by 2)	0.076	ac
16	Is partial capture potentially feasible? (Line 15 > Line 14?)	No	
Provide supporting assumptions and citations for controlling demand calculation:			

IV.3.4 Biofiltration BMPs

Biofiltration BMPs to be used for this project are indicated in the table below. Implementation of said controls is discussed in the text that follows.

Name	Included?
Bioretention with underdrains	<input type="checkbox"/>
Stormwater planter boxes with underdrains	<input type="checkbox"/>
Proprietary vegetated biotreatment systems	<input type="checkbox"/>
Other:	<input type="checkbox"/>

DMA 1 utilizes a Biotreatment BMP as LID treatment for this project. DMA-1 includes the entire project.

The proposed bioretention w/ underdrain systems features: a 3" mulch layer underlain by 24" thick section of soil media (with an infiltration rate of 2.5" /hr. (min.)) and a 12" thick section of gravel. Above the media surface is a ponding depth of 12 inches, with inlets provided at the design ponding depth to provide collection for runoff volumes exceeding the capacity of the system. A 6" diameter, perforated underdrain pipe is provided near the base of the gravel layer for collection of storm water passing through the system. The required volume storage determined using Worksheet C (see Attachment B), with the results summarized below:

DMA-1: 202 cu. ft. (205 sq. ft. surface area w/ 12" ponding depth)

The BMP Fact Sheet for BIO-1: Bioretention with Underdrain is also provided in Attachment B.

See the WQMP Site Plan in Section VI for DMA drainage areas, BMP locations, and BMP detail.

DMA-1: Bioretention w/ Underdrain (BIO-1)

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)	$d=$	0.70	inches
2	Enter calculated drawdown time of the proposed BMP based on equation provided in applicable BMP Fact Sheet, T (hours)	$T=$	4.8	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	$X_1=$	0.34	
4	Enter the effect depth of provided HSCs upstream, d_{HSC} (inches) (Worksheet A)	$d_{HSC}=$	0	inches
5	Enter capture efficiency corresponding to d_{HSC} , Y_2 (Worksheet A)	$Y_2=$	0	%
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	$X_2=$	0	
7	Calculate the fraction of design volume that must be provided by BMP, $fraction = X_1 - X_2$	$fraction=$	0.34	
8	Calculate the resultant design capture storm depth (inches), $d_{fraction} = fraction \times d$	$d_{fraction}=$	0.238	inches
9	SOC Only: When using this method for biofiltration sizing, check that the resulting volume in ponding plus pore spaces is at least $0.75 \times$ the remaining DCV (after accounting for upstream HSC/retention BMPs). (See Worksheet SOC-1)		N/A	
Step 2: Calculate the DCV				
1	Enter Project area tributary to BMP (s), A (acres)	$A=$	0.332	acres
2	Enter Project Imperviousness, imp (unitless)	$imp=$	0.77	
3	Calculate runoff coefficient, $C = (0.75 \times imp) + 0.15$	$C=$	0.73	
4	Calculate runoff volume, $V_{design} = (C \times d_{fraction} \times A \times 43560 \times (1/12))$	$V_{design}=$	202	cu-ft
Supporting Calculations				
Describe system:				
Enclosed Planter Box w/ 12" ponding depth, 3" mulch layer, 24" of top soil/planting mix, over pea gravel w/ a 6" diameter underdrain pipe. Bioretention Area per WQMP Site Plan in Section VI = 205 sq. ft.				
$A = V_{design} / \text{Ponding Depth } (d_p) \rightarrow 202 \text{ cu. ft.} / 1 \text{ ft.} = 202 \text{ sq. ft.} \dots \text{OK}$				

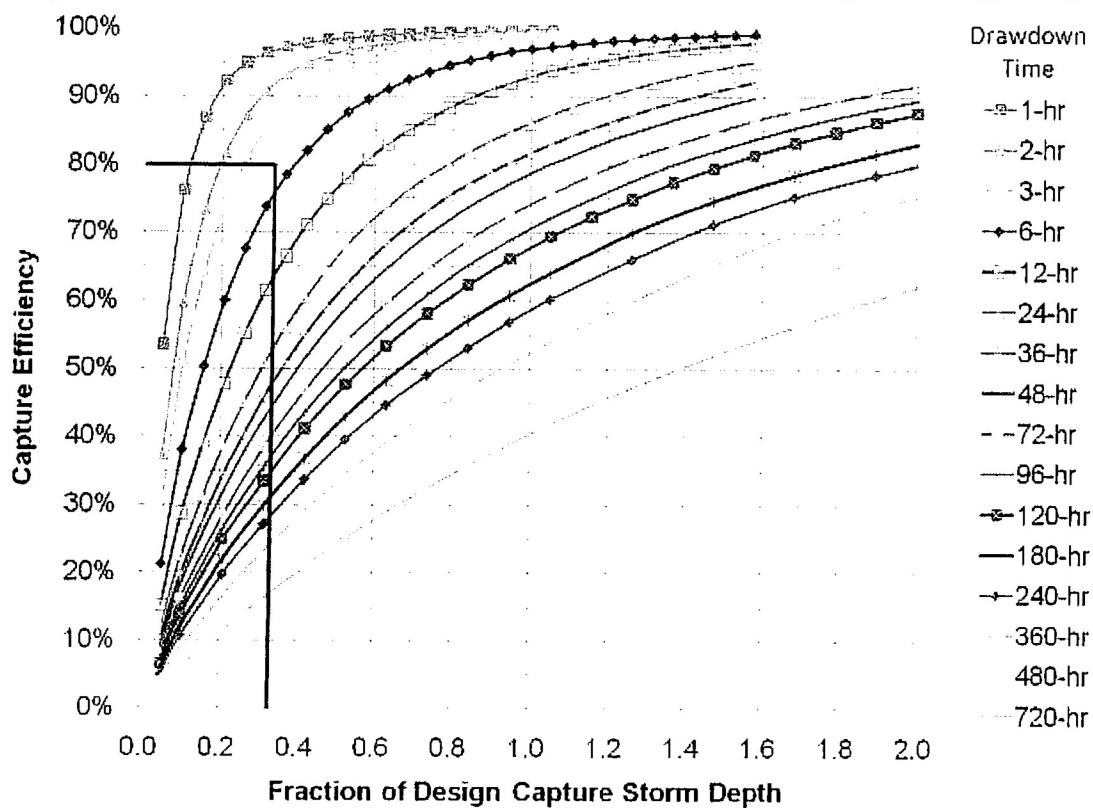
Worksheet C: Capture Efficiency Method for Volume-Based, Constant Drawdown BMPs

Provide drawdown time calculations per applicable BMP Fact Sheet:

$$DD = (d_p / K_{MEDIA}) * 12 \text{ in./ft.} \rightarrow DD = (1 / 2.5) * 12 \rightarrow \underline{DD = 4.8 \text{ hours}}$$

where: $K_{MEDIA} = 2.5 \text{ in./hr}$ (per TGD Appendix XIV-53, Capture Efficiency Method for Biotreatment)

Graphical Operations



Provide supporting graphical operations. See Example III.6.

IV.3.5 Hydromodification Control BMPs

Hydromodification controls are not required for this project because Hydrologic Conditions of Concern do not exist for this project. See Section II.3.

Hydromodification Control BMPs	
BMP Name	BMP Description

IV.3.6 Non-structural Source Control BMPs

Non-structural source control BMPs used for this project are described below.

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	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N2	Activity Restrictions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N3	Common Area Landscape Management	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No common areas present.
N4	BMP Maintenance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
N5	Title 22 CCR Compliance (How development will comply)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No hazardous waste.
N6	Local Industrial Permit Compliance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Not an industrial project.
N7	Spill Contingency Plan	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No hazardous waste.
N8	Underground Storage Tank Compliance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No USTs on site.
N9	Hazardous Materials Disclosure Compliance	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No hazardous waste.
N10	Uniform Fire Code Implementation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No hazardous waste.
N11	Common Area Litter Control	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No common areas present.
N12	Employee Training	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No employees.
N13	Housekeeping of Loading Docks	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No loading docks exposed to storm water proposed.
N14	Common Area Catch Basin Inspection	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No common areas present.
N15	Street Sweeping Private Streets and Parking Lots	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No exterior parking areas.
N16	Retail Gasoline Outlets	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None exist.

IV.3.7 Structural Source Control BMPs

Structural source control BMPs used for this project are described below.

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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Drain inlets on private property.
S2	Design and construct outdoor material storage areas to reduce pollution introduction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No outdoor MSAs.
S3	Design and construct trash and waste storage areas to reduce pollution introduction	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
S4	Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
S5	Protect slopes and channels and provide energy dissipation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No proposed slopes or channels.
	Incorporate requirements applicable to individual priority project categories (from SDRWQCB NPDES Permit)	<input type="checkbox"/>	<input type="checkbox"/>	
S6	Dock areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None exist.
S7	Maintenance bays	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None exist.
S8	Vehicle wash areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None exist.
S9	Outdoor processing areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None exist.
S10	Equipment wash areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None exist.
S11	Fueling areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None exist.
S12	Hillside landscaping	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None exist.
S13	Wash water control for food preparation areas	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None exist.
S14	Community car wash racks	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None exist.

IV.4 ALTERNATIVE COMPLIANCE PLAN (IF APPLICABLE)

IV.4.1 Request of Waiver of LID BMPs

IV.4.2 Water Quality Credits

Description of Proposed Project				
Project Types that Qualify for Water Quality Credits (Select all that apply):				
<input type="checkbox"/> Redevelopment projects that reduce the overall impervious footprint of the project site.	<input type="checkbox"/> 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.		<input type="checkbox"/> 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).	
<input type="checkbox"/> 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).	<input type="checkbox"/> 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		<input type="checkbox"/> 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).	
<input type="checkbox"/> Developments with dedication of undeveloped portions to parks, preservation areas and other pervious uses.	<input type="checkbox"/> Developments in a city center area.	<input type="checkbox"/> Developments in historic districts or historic preservation areas.	<input type="checkbox"/> 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.	<input type="checkbox"/> 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)	This project does not qualify for the water quality credits listed above.			

IV.4.3 Treatment Control BMPs

Since the project is fully treated using Infiltration BMPs, utilization of Treatment Control BMPs is not required.

Treatment Control BMPs

BMP Name	BMP Description
TRT-2 Media Filter	Kristar Flogard Catch Basin Filter Insert (Model FGP-24F) The Filter removes Hydrocarbons, oil, grease, trash and sediment and debris. See Spec Sheet on Attachment F

Use and Location

The indoor parking garage will not be directed to the Bioretention planter box for treatment. Because it is indoor, there is no runoff tributary to this area, however, drain inlets in the garage can collect contaminated water from cars that enter the garage. Therefore, the drains in the garage will be fitted with treatment filters. Locations of proposed treatment control BMPs are shown on the BMP Exhibit in Section VI.

Performance

The provided Filter insert performance (See Filter Insert Spec page on Attachment D) provides treatment for the pollutants of concern. Specifically:

Trash and Debris removal

Hydrocarbons (Oil, Grease, Pesticide) 80% Removal

Sediment (TSS) 86% Removal

Grease, Pesticide) 80% Removal

Sediment Removal

Pathogen/microorganism removal (Coliforms, Enterococcus)

Sizing

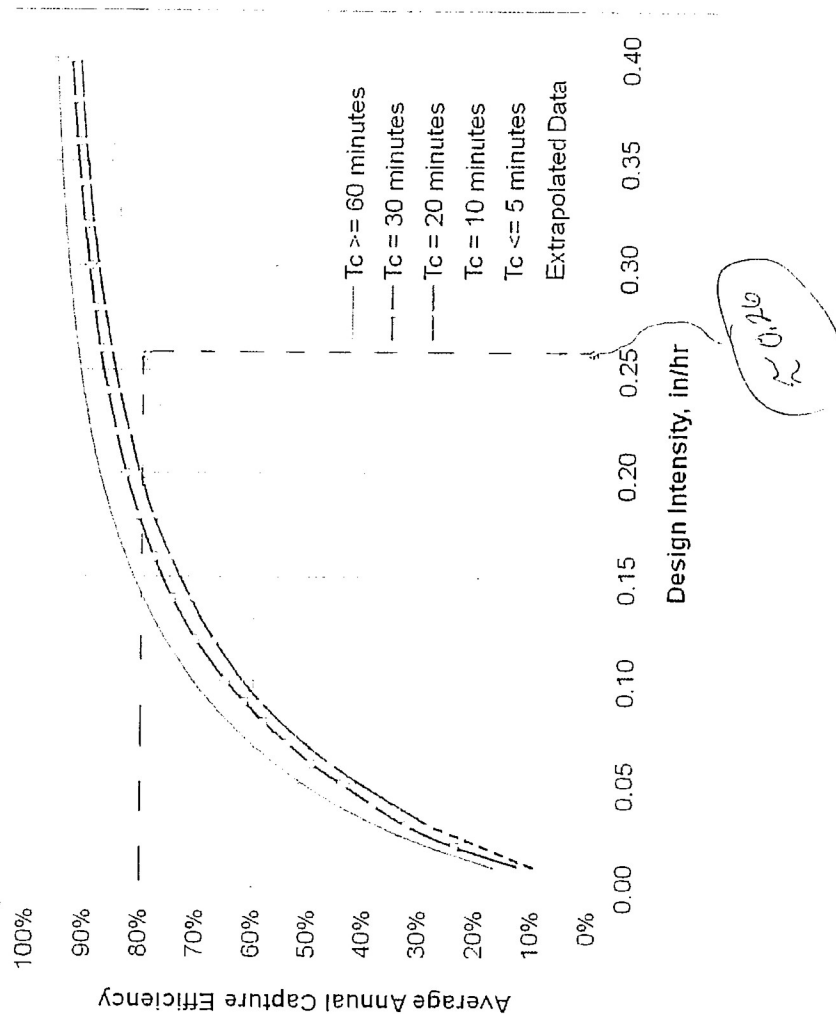
See Worksheet D (Capture Efficiency Method for Flow-Based BMPs) calculations on the following page. The design flow rate of 0.015 cfs is fully treated by the proposed Kristar FloGard Catch Basin Filter insert FGP-12F which has a treatment capacity of 0.25 cfs (See Spec sheet in Attachment C).

Worksheet D: Capture Efficiency Method for Flow-Based BMPs

Step 1: Determine the design capture storm depth used for calculating volume				
1	Enter the time of concentration, T_c (min) (See Appendix IV.2)	$T_c =$	5	
2	Using Figure III.4, determine the design intensity at which the estimated time of concentration (T_c) achieves 80% capture efficiency, I_1	$I_1 =$	0.26	in/hr
3	Enter the effect depth of provided HSCs upstream, d_{HSC} (inches) (Worksheet A)	$d_{HSC} =$	-	inches
4	Enter capture efficiency corresponding to d_{HSC} , Y_2 (Worksheet A)	$Y_2 =$	-	%
5	Using Figure III.4, determine the design intensity at which the time of concentration (T_c) achieves the upstream capture efficiency (Y_2), I_2	$I_2 =$	-	
6	Determine the design intensity that must be provided by BMP, $I_{design} = I_1 - I_2$	$I_{design} =$	0.26	
Step 2: Calculate the design flowrate				
1	Enter Project area tributary to BMP (s), A (acres)	$A =$	0.128	acres
2	Enter Project Imperviousness, imp (unitless)	$imp =$	0.64	
3	Calculate runoff coefficient, $C = (0.75 \times imp) + 0.15$	$C =$	0.63	
4	Calculate design flowrate, $Q_{design} = (C \times I_{design} \times A)$	$Q_{design} =$	0.021	cfs
Supporting Calculations				
The design flowrate for the lot that is using the filter insert is 0.021				
The provided Kristar FloGard filter Insert (FGP-12F) provides 0.25 cfs of filtered flow..... OK				
Provide time of concentration assumptions:				
Tc of 5-minutes is the minimum allowed and provides the most conservative design.				

TECHNICAL GUIDANCE DOCUMENT APPENDICES

Figure III.4. Capture Efficiency Nomograph for Off-line Flow-based Systems in Orange County



December 20, 2013

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IV.4.4 Regional/Sub-Regional LID BMPs

This project will not participate in Regional/Sub-Regional LID BMPs since the full DCV can be treated using LID BMPs.

Regional/Sub-Regional LID BMPs

IV.4.5 Other Alternative Compliance Measures

This project will not make use of other alternative compliance measures since the full DCV can be treated using LID BMPs.

Section V Inspection/Maintenance Responsibility for BMPs

An Operation and Maintenance Plan is included in Attachment C.

Section VI Site Plan and Drainage Plan

VI.1 SITE PLAN AND DRAINAGE PLAN

VI.2 ELECTRONIC DATA SUBMITTAL

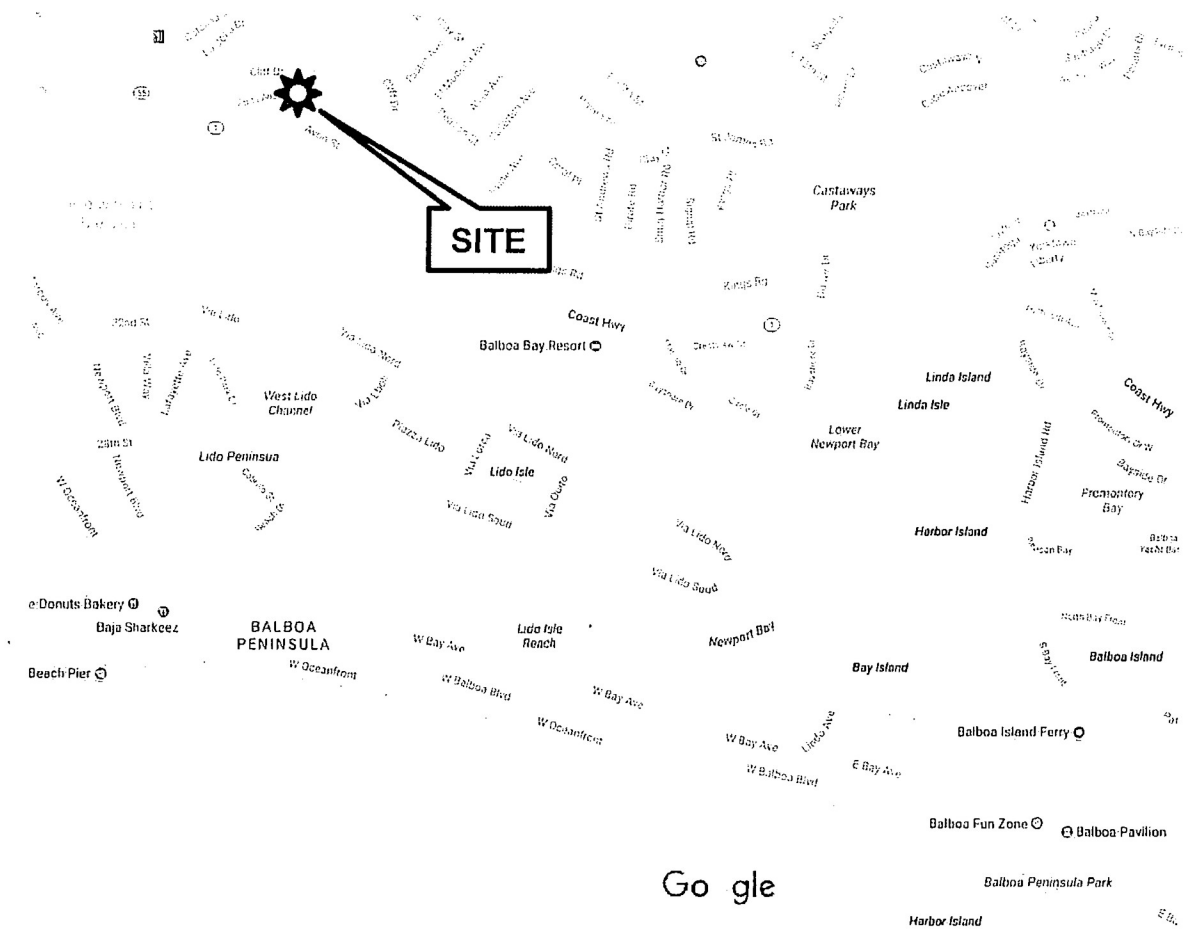


Figure VI.1. Vicinity Map.
 Source: maps.google.com

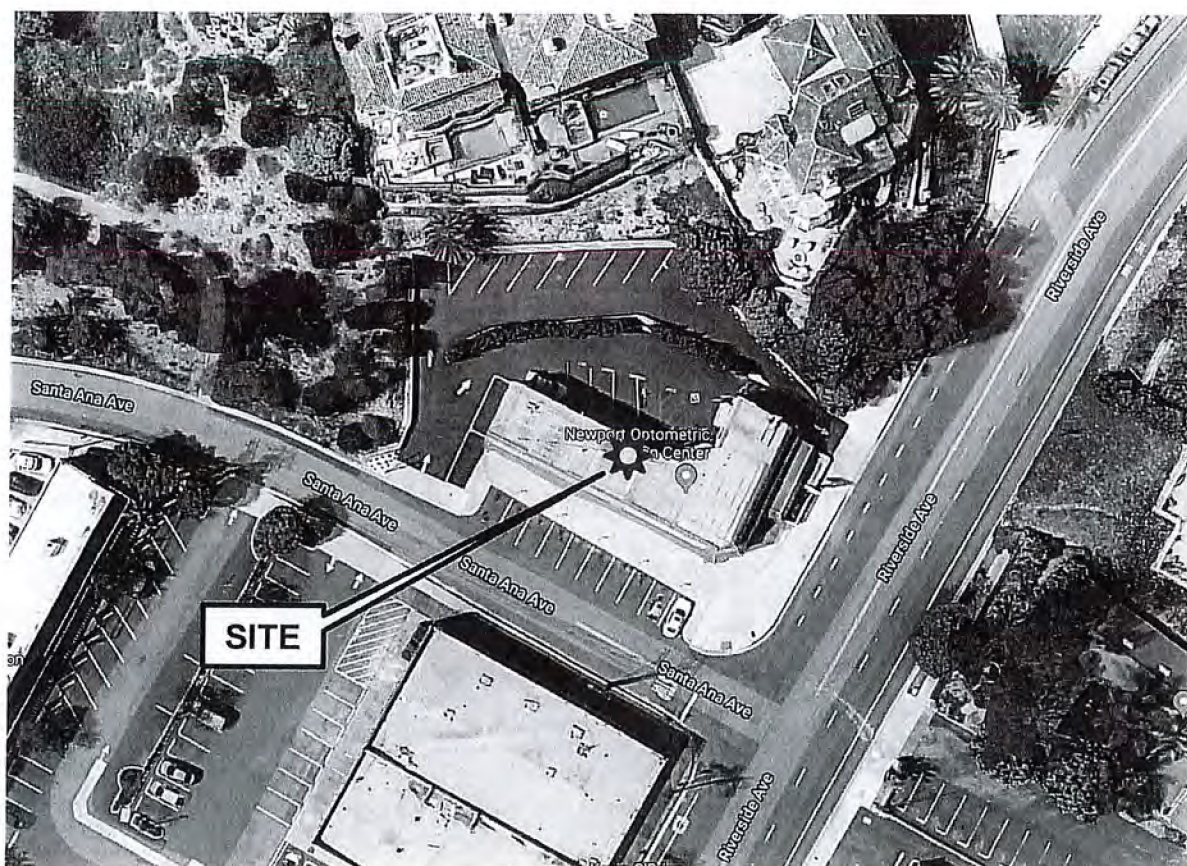
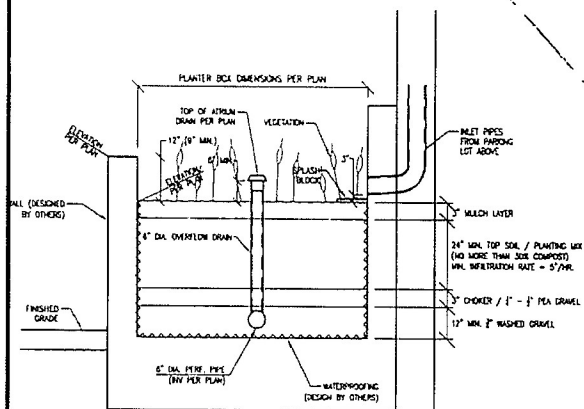
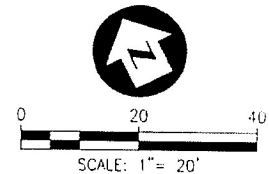


Figure VI.2. Aerial Image.
Source: maps.google.com

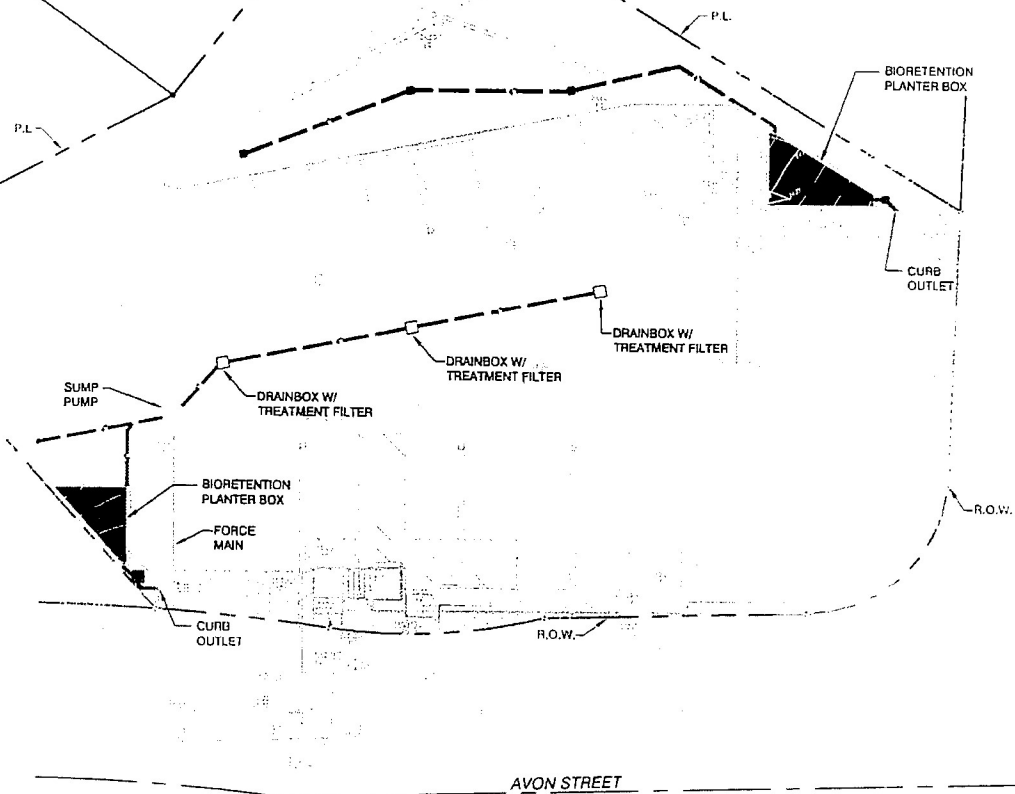
WQMP LEGEND

-  PROPOSED STRUCTURE
-  PROPOSED STRUCTURE WITH FOUNDATION
-  PROPOSED STRUCTURE WITH FOUNDATION AND RETENTION WALL
-  PROPOSED STRUCTURE WITH FOUNDATION AND RETENTION WALL AND WATER TABLE
-  PROPOSED STRUCTURE WITH FOUNDATION AND RETENTION WALL AND WATER TABLE AND DRAINAGE
-  PROPOSED STRUCTURE WITH FOUNDATION AND RETENTION WALL AND WATER TABLE AND DRAINAGE AND EROSION CONTROL
-  PROPOSED STRUCTURE WITH FOUNDATION AND RETENTION WALL AND WATER TABLE AND DRAINAGE AND EROSION CONTROL AND STORMWATER MANAGEMENT
-  PROPOSED STRUCTURE WITH FOUNDATION AND RETENTION WALL AND WATER TABLE AND DRAINAGE AND EROSION CONTROL AND STORMWATER MANAGEMENT AND FLOOD PROTECTION



PLANTER WALL STRUCTURAL DESIGN BY OTHERS
UNDER SEPARATE PLAN & PERMIT

DETAIL
BIORETENTION PLANTER BOX
NOT TO SCALE



TOAL
ENGINEERING, INC.



W.Q.M.P. SITE PLAN VI.1

JOB NO.: 18131

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Section VII Educational Materials

Refer to the Orange County Stormwater Program (ocwatersheds.com) for a library of materials available. For the copy submitted to the Permittee, only attach the educational materials specifically applicable to the 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	<input checked="" type="checkbox"/>	Tips for the Automotive Industry	<input type="checkbox"/>
Tips for Car Wash Fund-raisers	<input type="checkbox"/>	Tips for Using Concrete and Mortar	<input type="checkbox"/>
Tips for the Home Mechanic	<input checked="" type="checkbox"/>	Tips for the Food Service Industry	<input type="checkbox"/>
Homeowners Guide for Sustainable Water Use	<input checked="" type="checkbox"/>	Proper Maintenance Practices for Your Business	<input type="checkbox"/>
Household Tips	<input checked="" type="checkbox"/>	Compliance BMPs for Mobile Businesses	<input type="checkbox"/>
Proper Disposal of Household Hazardous Waste	<input checked="" type="checkbox"/>	Other Material	Check If Attached
Recycle at Your Local Used Oil Collection Center (North County)	<input checked="" type="checkbox"/>		
Recycle at Your Local Used Oil Collection Center (Central County)	<input type="checkbox"/>		
Recycle at Your Local Used Oil Collection Center (South County)	<input type="checkbox"/>		
Tips for Maintaining a Septic Tank System	<input type="checkbox"/>		
Responsible Pest Control	<input checked="" type="checkbox"/>		<input type="checkbox"/>
Sewer Spill	<input type="checkbox"/>		<input type="checkbox"/>
Tips for the Home Improvement Projects	<input checked="" type="checkbox"/>		<input type="checkbox"/>
Tips for Horse Care	<input type="checkbox"/>		<input type="checkbox"/>
Tips for Landscaping and Gardening	<input checked="" type="checkbox"/>		<input type="checkbox"/>
Tips for Pet Care	<input checked="" type="checkbox"/>		<input type="checkbox"/>
Tips for Projects Using Paint	<input checked="" type="checkbox"/>		<input type="checkbox"/>

ATTACHMENT A

XIV.5. Biotreatment BMP Fact Sheets (BIO)

Conceptual criteria for biotreatment BMP selection, design, and maintenance are contained in Appendix XII. These criteria are generally applicable to the design of biotreatment BMPs in Orange County and BMP-specific guidance is provided in the following fact sheets.²⁴

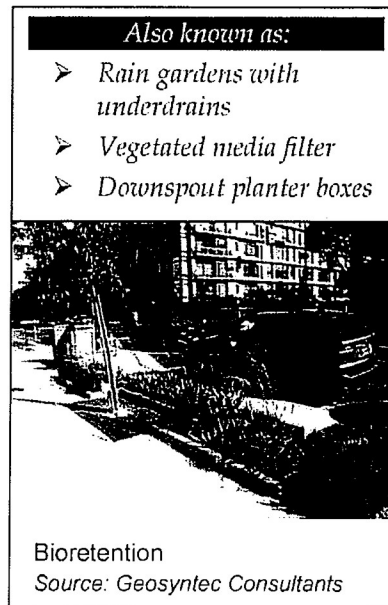
Note: Biotreatment BMPs shall be designed to provide the maximum feasible infiltration and ET based on criteria contained in Appendix XI.2.

BIO-1: Bioretention with Underdrains

Bioretention stormwater treatment facilities are landscaped shallow depressions that capture and filter stormwater runoff. These facilities function as a soil and plant-based filtration device that removes pollutants through a variety of physical, biological, and chemical treatment processes. The facilities normally consist of a ponding area, mulch layer, planting soils, and plants. As stormwater passes down through the planting soil, pollutants are filtered, adsorbed, biodegraded, and sequestered by the soil and plants.

Bioretention with an underdrain are utilized for areas with low permeability native soils or steep slopes where the underdrain system that routes the treated runoff to the storm drain system rather than depending entirely on infiltration.

Bioretention must be designed without an underdrain in areas of high soil permeability.



Feasibility Screening Considerations

- If there are no hazards associated with infiltration (such as groundwater concerns, contaminant plumes or geotechnical concerns), bioinfiltration facilities, which achieve partial infiltration, should be used to maximize infiltration.

²⁴ Not all BMPs presented in this section are considered “biofiltration BMPs” under the South Orange County Permit Area. Biofiltration BMPs are vegetated treat-and-release BMPs that filter stormwater through amended soil media that is biologically active, support plant growth, and also promote infiltration and/or evapotranspiration. For projects in South Orange County, the total volume of storage in surface ponding and pores spaces is required to be at least 75% of the remaining DCV that the biofiltration BMP is designed to address. This prevents significant down-sizing of BMPs which otherwise may be possible via routing calculations. Biotreatment BMPs that do not meet this definition are not considered to be LID BMPs, but may be used as treatment control or pre-treatment BMPs. See Section III.7 and Worksheet SOC-1 for guidance.

TECHNICAL GUIDANCE DOCUMENT APPENDICES

- Bioretention with underdrain facilities should be lined if contaminant plumes or geotechnical concerns exist. If high groundwater is the reason for infiltration infeasibility, bioretention facilities with underdrains do not need to be lined.

Opportunity Criteria

- Land use may include commercial, residential, mixed use, institutional, and subdivisions. Bioretention may also be applied in parking lot islands, cul-de-sacs, traffic circles, road shoulders, road medians, and next to buildings in planter boxes.
- Drainage area is ≤ 5 acres.
- Area is available for infiltration.
- Site must have adequate relief between land surface and the stormwater conveyance system to permit vertical percolation through the soil media and collection and conveyance in underdrain to stormwater conveyance system.

OC-Specific Design Criteria and Considerations

- ☐ Ponding depth should not exceed 18 inches; fencing may be required if ponding depth is greater than 6 inches to mitigate drowning.
- ☐ The minimum soil depth is 2 feet (3 feet is preferred).
- ☐ The maximum drawdown time of the bioretention ponding area is 48 hours. The maximum drawdown time of the planting media and gravel drainage layer is 96 hours, if applicable.

Infiltration pathways may need to be restricted due to the close proximity of roads, foundations, or other infrastructure. A geomembrane liner, or other equivalent water proofing, may be placed along the vertical walls to reduce lateral flows. This liner should have a minimum thickness of 30 mils.
- ☐ If infiltration in bioretention location is hazardous due to groundwater or geotechnical concerns, a geomembrane liner must be installed at the base of the bioretention facility. This liner should have a minimum thickness of 30 mils.
- ☐ The planting media placed in the cell shall be designed per the recommendations contained in MISC-1: Planting/Storage Media

Plant materials should be tolerant of summer drought, ponding fluctuations, and saturated soil conditions for 48 hours; native place species and/or hardy cultivars that are not invasive and do not require chemical inputs should be used to the maximum extent feasible
- ☐ The bioretention area should be covered with 2-4 inches (average 3 inches) or mulch at the start and an additional placement of 1-2 inches of mulch should be added annually.
- ☐ Underdrain should be sized with a 6 inch minimum diameter and have a 0.5% minimum slope.
- ☐ Underdrain should be slotted polyvinyl chloride (PVC) pipe; underdrain pipe should be more than 5 feet from tree locations (if space allows).
- ☐ A gravel blanket or bedding is required for the underdrain pipe(s). At least 0.5 feet of washed aggregate must be placed below, to the top, and to the sides of the underdrain pipe(s).
- ☐ An overflow device is required at the top of the bioretention area ponding depth.
- ☐ Dispersed flow or energy dissipation (i.e. splash rocks) for piped inlets should be provided at basin inlet to prevent erosion.
- ☐ Ponding area side slopes shall be no steeper than 3:1 (H:V) unless designed as a planter box BMP with appropriate consideration for trip and fall hazards.

Simple Sizing Method for Bioretention with Underdrain

If the Simple Design Capture Volume Sizing Method described in **Appendix III.3.1** is used to size a bioretention with underdrain facility, the user selects the basin depth and then determines the appropriate surface area to capture the DCV. The sizing steps are as follows:

Step 1: Determine DCV

Calculate the DCV using the Simple Design Capture Volume Sizing Method described in **Appendix III.3.1**.

Step 2: Verify that the Ponding Depth will Draw Down within 48 Hours

The ponding area drawdown time can be calculated using the following equation:

$$DD_P = (d_P / K_{MEDIA}) \times 12 \text{ in/ft}$$

Where:

DD_P = time to drain ponded water, hours

d_P = depth of ponding above bioretention area, ft (not to exceed 1.5 ft)

K_{MEDIA} = media design infiltration rate, in/hr (equivalent to the media hydraulic conductivity with a factor of safety of 2; K_{MEDIA} of 2.5 in/hr should be used unless other information is available)

If the drawdown time exceeds 48 hours, adjust ponding depth and/or media infiltration rate until 48 hour drawdown time is achieved.

Step 3: Determine the Depth of Water Filtered During Design Capture Storm

The depth of water filtered during the design capture storm can be estimated as the amount routed through the media during the storm, or the ponding depth, whichever is smaller.

$$d_{FILTERED} = \text{Minimum} [((K_{MEDIA} \times T_{ROUTING})/12), d_P]$$

Where:

$d_{FILTERED}$ = depth of water that may be considered to be filtered during the design storm event, ft

K_{MEDIA} = media design infiltration rate, in/hr (equivalent to the media hydraulic conductivity with a factor of safety of 2; K_{MEDIA} of 2.5 in/hr should be used unless other information is available)

$T_{ROUTING}$ = storm duration that may be assumed for routing calculations; this should be assumed to be no greater than 3 hours. If the designer desires to account for further routing effects, the Capture Efficiency Method for Volume-Based, Constant Drawdown BMPs (See **Appendix III.3.2**) should be used.

d_P = depth of ponding above bioretention area, ft (not to exceed 1.5 ft)

Step 4: Determine the Facility Surface Area

$$A = DCV / (d_P + d_{FILTERED})$$

Where:

A = required area of bioretention facility, sq-ft

DCV = design capture volume, cu-ft

$d_{FILTERED}$ = depth of water that may be considered to be filtered during the design storm event, ft

d_P = depth of ponding above bioretention area, ft (not to exceed 1.5 ft)

In South Orange County, the provided ponding plus pore volume must be checked to demonstrate that it is greater than 0.75 of the remaining DCV that this BMP is designed to address. See Section III.7 and Worksheet SOC-1.

Capture Efficiency Method for Bioretention with Underdrains

If the bioretention geometry has already been defined and the user wishes to account more explicitly for routing, the user can determine the required footprint area using the Capture Efficiency Method for Volume-Based, Constant Drawdown BMPs (See Appendix III.3.2) to determine the fraction of the DCV that must be provided to manage 80 percent of average annual runoff volume. This method accounts for drawdown time different than 48 hours.

Step 1: Determine the drawdown time associated with the selected basin geometry

$$DD = (d_p / K_{DESIGN}) \times 12 \text{ in/ft}$$

Where:

DD = time to completely drain infiltration basin ponding depth, hours

d_p = bioretention ponding depth, ft (should be less than or equal to 1.5 ft)

K_{DESIGN} = design media infiltration rate, in/hr (assume 2.5 inches per hour unless otherwise proposed)

If drawdown is less than 3 hours, the drawdown time should be rounded to 3 hours or the Capture Efficiency Method for Flow-based BMPs (See Appendix III.3.3) shall be used.

Step 2: Determine the Required Adjusted DCV for this Drawdown Time

Use the Capture Efficiency Method for Volume-Based, Constant Drawdown BMPs (See Appendix III.3.2) to calculate the fraction of the DCV the basin must hold to achieve 80 percent capture of average annual stormwater runoff volume based on the basin drawdown time calculated above.

Step 3: Determine the Basin Infiltrating Area Needed

The required infiltrating area (i.e. the surface area of the top of the media layer) can be calculated using the following equation:

$$A = \text{Design Volume} / d_p$$

Where:

A = required infiltrating area, sq-ft (measured at the media surface)

Design Volume = fraction of DCV, adjusted for drawdown, cu-ft (see Step 2)

d_p = ponding depth of water stored in bioretention area, ft (from Step 1)

This does not include the side slopes, access roads, etc. which would increase bioretention footprint. If the area required is greater than the selected basin area, adjust surface area or adjust ponding depth and recalculate required area until the required area is achieved.

In South Orange County, the provided ponding plus pore volume must be checked to demonstrate that it is greater than 0.75 of the remaining DCV that this BMP is designed to address. See Section III.7 and Worksheet SOC-1.

Configuration for Use in a Treatment Train

- Bioretention areas may be preceded in a treatment train by HSCs in the drainage area, which would reduce the required design volume of the bioretention cell. For example, bioretention could be used to manage overflow from a cistern.
- Bioretention areas can be used to provide pretreatment for underground infiltration systems.

Additional References for Design Guidance

- CASQA BMP Handbook for New and Redevelopment:
<http://www.cabmphandbooks.com/Documents/Development/TC-32.pdf>

TECHNICAL GUIDANCE DOCUMENT APPENDICES

- SMC LID Manual (pp 68):
http://www.lowimpactdevelopment.org/guest75/pub/All_Projects/SoCal_LID_Manual/SoCalLID_Manual_FINAL_040910.pdf
- Los Angeles County Stormwater BMP Design and Maintenance Manual, Chapter 5:
http://dpw.lacounty.gov/DES/design_manuals/StormwaterBMPDesignandMaintenance.pdf
- San Diego County LID Handbook Appendix 4 (Factsheet 7):
<http://www.sdcounty.ca.gov/dplu/docs/LID-Appendices.pdf>

Los Angeles Unified School District (LAUSD) Stormwater Technical Manual, Chapter 4:
http://www.laschools.org/employee/design/fs-studies-and-reports/download/white_paper_report_material/Storm_Water_Technical_Manual_2009-opt-red.pdf?version_id=76975850
- County of Los Angeles Low Impact Development Standards Manual, Chapter 5:
http://dpw.lacounty.gov/wmd/LA_County_LID_Manual.pdf

PRE-2: Catch Basin Insert Fact Sheet

Catch basin inserts are manufactured filters or fabric placed in a drop inlet to remove sediment and debris and may include sorbent media (oil absorbent pouches) to remove floating oils and grease. Catch basin inserts are selected specifically based upon the orientation of the inlet and the expected sediment and debris loading.

Opportunity Criteria

- Catch basin inserts come in such a wide range of configurations that it is practically impossible to generalize the expected performance. Inserts should mainly be used for catching coarse sediments and floatable trash and are effective as pretreatment in combination with other types of structures that are recognized as water quality treatment BMPs. Trash and large objects can greatly reduce the effectiveness of catch basin inserts with respect to sediment and hydrocarbon capture.
- Catch basin inserts are applicable for drainage area that include parking lots, vehicle maintenance areas, and roadways with catch basins that discharge directly to a receiving water.



OC-Specific Design Criteria and Considerations

- ☐ Frequent maintenance and the use of screens and grates to keep trash out may decrease the likelihood of clogging and prevent obstruction and bypass of incoming flows.
- ☐ Consult proprietors for specific criteria concerning the design of catch basin inserts.
- ☐ Catch basin inserts can be installed with specific media for pollutants of concern.

Proprietary Manufacturer / Supplier Websites

- Table XIV.2 is a list of manufacturers that provide catch basin inserts. The inclusion of these manufacturers does not represent an endorse of their products. Other devices and manufacturers may be acceptable for pretreatment.

Table XIV.2: Proprietary Catch Basin Insert Manufacturer Websites

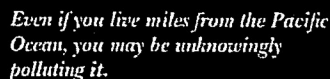
Device	Manufacturer	Website
AbTech Industries Ultra-Urban Filter™	AbTech Industries	www.abtechindustries.com
Aquashield Aqua-Guardian™ Catch Basin Insert	Aquashield™ Inc.	www.aquashieldinc.com
Bowhead StreamGuard™	Bowhead Environmental & Safety, Inc.	http://www.shopbowhead.com/
Contech® Triton Catch Basin Filter™	Contech® Construction Products Inc.	www.contech-cpi.com
Contech® Triton Curb Inlet Filter™	Contech® Construction Products Inc.	www.contech-cpi.com

TECHNICAL GUIDANCE DOCUMENT APPENDICES

Table XIV.2: Proprietary Catch Basin Insert Manufacturer Websites

Device	Manufacturer	Website
Contech [®] Triton Basin StormFilter [™]	Contech [®] Construction Products Inc.	www.contech-cpi.com
Contech [®] Curb Inlet StormFilter [™]	Contech [®] Construction Products Inc.	www.contech-cpi.com
Curb Inlet Basket	SunTree Technologies Inc.	www.suntreetech.com
Curb Inlet Grates	EcoSense International [™]	http://www.ecosenseint.com/
DrainPac [™]	United Storm Water, Inc.	http://www.unitedstormwater.com
Grate Inlet Skimmer Box	SunTree Technologies Inc.	www.suntreetech.com
KriStar FloGard+PLUS [®]	KriStar Enterprises Inc.	www.kristar.com
KriStar FloGard [®]	KriStar Enterprises Inc.	www.kristar.com
KriStar FloGard LoPro Matrix Filter [®]	KriStar Enterprises Inc.	www.kristar.com
Nyloplast Storm-PURE Catch Basin Insert	Nyloplast Engineered Surface Drainage Products	www.nyloplast-us.com
StormBasin [®]	FabCo [®] Industries Inc.	www.fabco-industries.com
Stormdrain Solutions Interceptor	FabCo [®] Industries Inc.	www.fabco-industries.com
Stormdrain Solutions Inceptor [®]	Stormdrain Solutions	www.stormdrains.com
StormPod [®]	FabCo [®] Industries Inc.	www.fabco-industries.com
Stormwater Filtration Systems	EcoSense International [™]	http://www.ecosenseint.com/
Ultra-CurbGuard [®]	UltraTech International Inc.	www.spillcontainment.com
Ultra-DrainGuard [®]	UltraTech International Inc.	www.spillcontainment.com
Ultra-GrateGuard [®]	UltraTech International Inc.	www.spillcontainment.com
Ultra-GutterGuard [®]	UltraTech International Inc.	www.spillcontainment.com
Ultra-InletGuard [®]	UltraTech International Inc.	www.spillcontainment.com

ATTACHMENT B



Dumping one quart of motor oil into a storm drain can contaminate 250,000 gallons of water.

- 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 rise 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.

- 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.

- 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.

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.

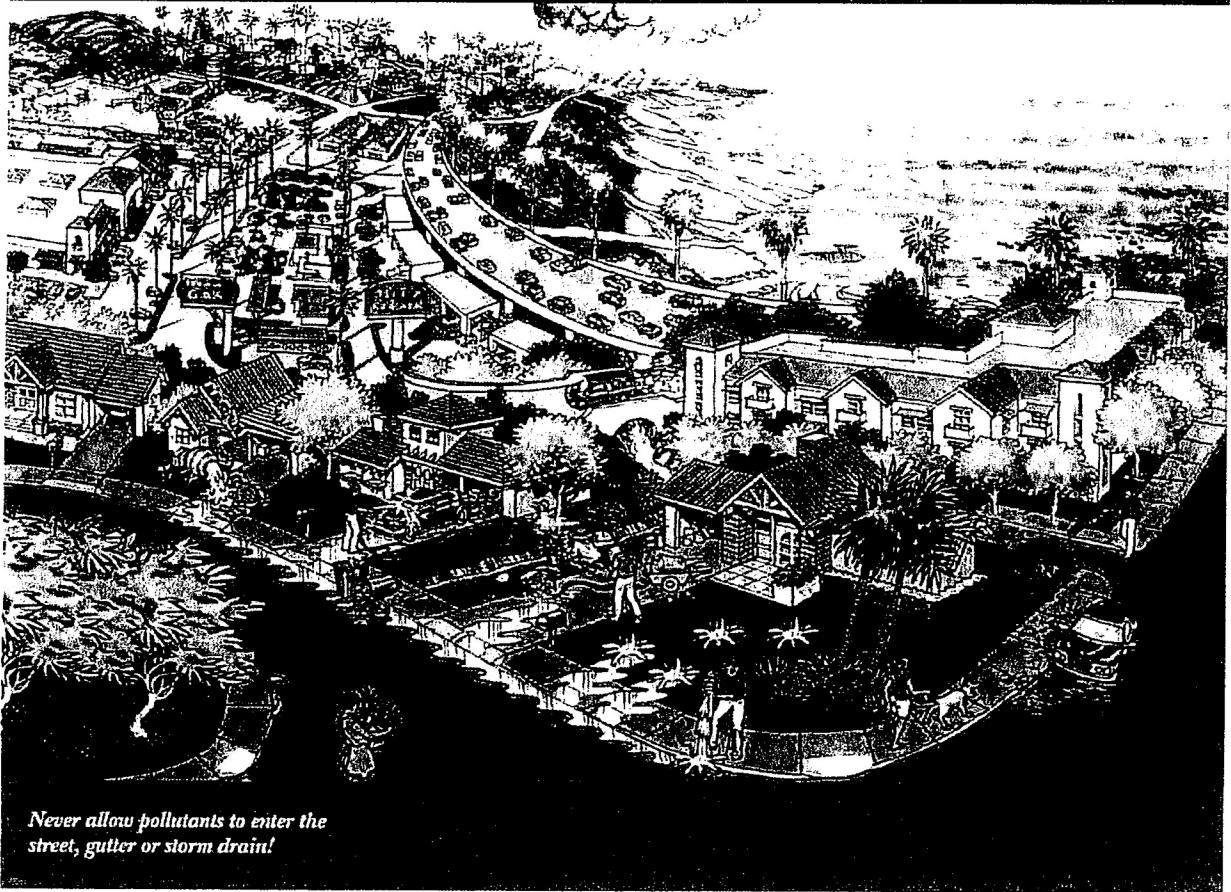
Support from Orange County residents and businesses is needed to improve water quality and reduce urban runoff pollution. Proper use and disposal of materials will help stop pollution before it reaches the storm drain and the ocean.



California Environmental Protection Agency
www.california.gov
• Air Resources Board
www.arb.ca.gov
• Department of Pesticide Regulation
www.cdpr.ca.gov
• Department of Toxic Substances Control
www.dtc.ca.gov
• Integrated Waste Management Board
www.iwmb.ca.gov
• Office of Environmental Health Hazard
Assessment
www.oehha.ca.gov
• State Water Resources Control Board
www.swbrc.ca.gov
Earth 911 (Community-Specific Environmental
Information) 800-4CLEANup or visit www.800cleanup.
org
Health Care Agency's Ocean and Bay Water Cleanups
(714) 433-8100 or visit www.oceanbaycleanup.com
Integrated Waste Management Dept. of Orange
County (714) 834-6522 or visit www.iwmbd.com for
information on household hazardous waste collection
centers, recycling centers and solid waste collection
centers
• Agriculture Commissioner
(714) 447-7100 or visit www.agcomm.com
• Stormwater Best Management Practices Handbook
Visit www.swbrcbhandbook.com
UC Master Gardener Hotline
(714) 708-1616 or visit www.uccecmg.com

[illegible]

The Ocean Begins at Your Front Door



Never allow pollutants to enter the street, gutter or storm drain!

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.oilandfills.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 1-800-4-LEANS-UP or visit www.1800leup.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 overwater. 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.oilandfills.com.

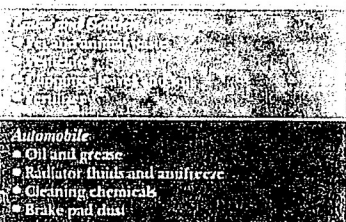
Trash

- 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.

For more information on how to protect the ocean from pollution, visit our website at www.oilandfills.com or call (714) 834-6752.



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.



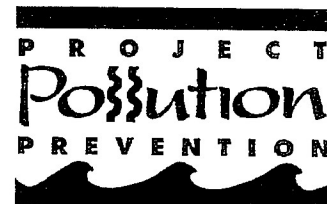
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Help Prevent Ocean Pollution:

Proper Disposal of Household Hazardous Waste



**The Ocean Begins at
Your Front Door**



ORANGE COUNTY

Pollution Prevention

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

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.

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.





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.

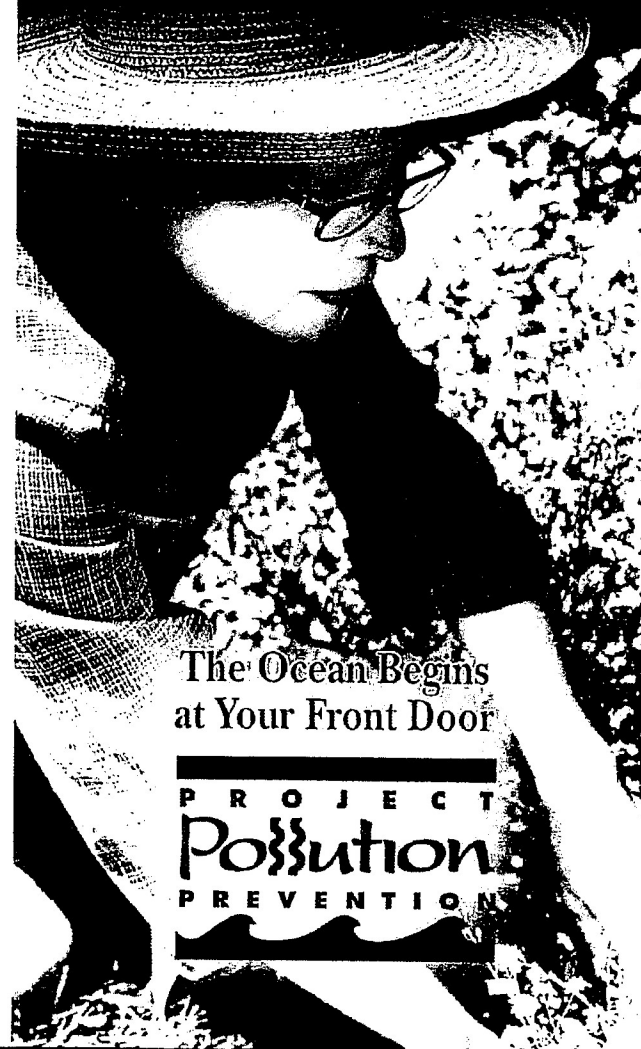
The tips contained in this brochure provide useful information to help prevent water pollution while landscaping or gardening. If you have other suggestions, please contact your city's stormwater representatives or call the Orange County Stormwater Program.



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Help Prevent Ocean Pollution:

Tips for Landscape & Gardening



**The Ocean Begins
at Your Front Door**

**PROJECT
Pollution
PREVENTION**

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. Swimming pools and spas are common in Orange County, but they must be maintained properly to guarantee that chemicals aren't allowed to enter the street, where they can flow into the storm drains and then into the waterways. Unlike water in sanitary sewers (from sinks and toilets), water in storm drains is not treated before entering our waterways.

You would never dump pool chemicals 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 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 maintaining your pool. If you have other suggestions, please contact your city's stormwater representatives or call the Orange County Stormwater Program.



Help Prevent Ocean Pollution:

Tips for Pool Maintenance



The Ocean Begins
at Your Front Door



Tips for Pool Maintenance

Many pools are plumbed to allow the pool to drain directly to the sanitary sewer. If yours is not, follow these instructions for disposing of pool and spa water.



Acceptable and Preferred Method of Disposal

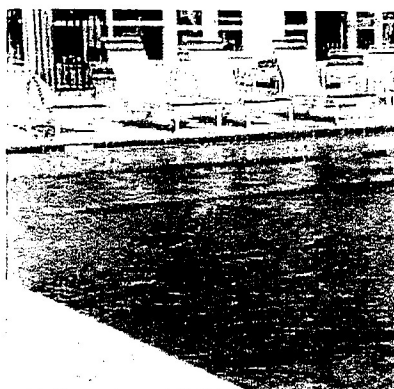
When you cannot dispose of pool water in the sanitary sewer, the release of dechlorinated swimming pool water is allowed if all of these tips are followed:

- The residual chlorine does not exceed 0.1 mg/l (parts per million).
- The pH is between 6.5 and 8.5.
- The water is free of any unusual coloration, dirt or algae.
- There is no discharge of filter media.
- There is no discharge of acid cleaning wastes.

- Some cities may have ordinances that do not allow pool water to be disposed into a storm drain. Check with your city.

How to Know if You're Following the Standards

You can find out how much chlorine is in your water by using a pool testing kit. Excess chlorine can be removed by discontinuing the use of chlorine for a few days prior to discharge or by purchasing dechlorinating chemicals from a local pool supply company. Always make sure to follow the instructions that come with any products you use.



Doing Your Part

By complying with these guidelines, you will make a significant contribution toward keeping pollutants out of Orange County's creeks, streams, rivers, bays and the ocean. This helps to protect organisms that are sensitive to pool chemicals, and helps to maintain the health of our environment.



ATTACHMENT C

Operations and Maintenance (O&M) Plan

for

215 RIVERSIDE AVENUE

Por. Lot D, Tract No. 919
APN 049-103-17
Newport Beach, California

Overall Responsible Party/Owner:

CANNERY PARTNERS LLC
660 Newport Center Drive, Suite 200
Newport Beach, CA 92660
Contact: Gary Jabara (949) 999-4545

Exhibit B, Operations and Maintenance Plan

BMP Applicable? Yes/No	BMP Name and BMP Implementation, Maintenance and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Person or Entity with Operation & Maintenance Responsibility
Non-Structural Source Control BMPs			
Yes	N1. Education for Property Owners, Tenants and Occupants Practical information materials will be provided to the first residents/occupants/tenants on general housekeeping practices that contribute to the protection of stormwater quality. These materials will be initially developed and provided to first residents/occupants/tenants by the developer.	Owner shall keep up to date with BMP requirements, and be responsible for educating maintenance personnel; As required.	<i>Owner</i>
No	N2. Activity Restrictions		
Yes	N3. Common Area Landscape Management Identify on-going landscape maintenance requirements that are consistent with those in the County Water Conservation Resolution (or city equivalent) that include fertilizer and/or pesticide usage consistent with Management Guidelines for Use of Fertilizers (DAMP Section 5.5). Statements regarding the specific applicable guidelines must be included in the project WQMP.	Keep garden areas clean, planted, and weed free. Weekly.	<i>Owner or contracted maintenance personnel</i>
Yes	N4. BMP Maintenance The project WQMP shall identify responsibility for implementation of each non-structural BMP and scheduled cleaning and/or maintenance of all structural BMP facilities.	Visual Inspection, perform more thorough inspection if ponding water sits for more than 48 hours. Twice yearly and immediately following each storm event.	<i>Owner or contracted maintenance personnel</i>
No	N5. Title 22 CCR Compliance		
No	N6. Local Water Quality Permit Compliance		
No	N7. Spill Contingency Plan		
No	N8. Underground Storage Tank Compliance		
No	N9. Hazardous Materials Disclosure Compliance		
No	N10. Uniform Fire Code Implementation		

BMP Applicable? Yes/No	BMP Name and BMP Implementation, Maintenance and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Person or Entity with Operation & Maintenance Responsibility
Yes	N11. Common Area Litter Control The owner may contract with their landscape maintenance firms to provide this service during regularly scheduled maintenance, which should consist of litter patrol, emptying of trash receptacles in common areas, and noting trash disposal violations by tenants/homeowners or businesses and reporting the violations to the owner/POA for investigation.	Keep site clean of litter. Weekly.	<i>Owner or contracted maintenance personnel</i>
No	N12. Employee Training		
No	N13. Housekeeping of Loading Docks		
Yes	N14. Common Area Catch Basin Inspection The owner is required to have at least 80 percent of drainage facilities inspected, cleaned and maintained on an annual basis with 100 percent of the facilities included in a two year period. Cleaning should take place in the late summer/early fall prior to the start of the rainy season. Drainage facilities include catch basins (storm drain inlets), detention basins, retention basins, sediment basins, open drainage channels and lift stations. Records should be kept to document the annual maintenance.	Inspect drain inlets and catch basins. Keep inlet covers clean. Weekly.	<i>Owner or contracted maintenance personnel</i>
No	N15. Street Sweeping Private Streets and Parking Lots		
Structural Source Control BMPs			
Yes	S1. Provide Storm Drain System Stenciling and Signage Provide stenciling or labeling of all storm drain inlets and catch basins, constructed or modified, within the project area with prohibitive language and/or graphical icons, which discourage illegal dumping.	Ensure that all catch basins are stencilled "No Dumping – Drains To Ocean."	<i>Owner or contracted maintenance personnel</i>
No	S2. Design Outdoor Hazardous Material Storage Areas to Reduce Pollutant Introduction		

BMP Applicable? Yes/No	BMP Name and BMP Implementation, Maintenance and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Person or Entity with Operation & Maintenance Responsibility
Yes	S3. Design Trash Enclosures to Reduce Pollutant Introduction Design trash storage areas to reduce pollutant introduction. All trash container areas shall be paved with an impervious surface, designed not to allow run-on, screened or walled to prevent off-site transport of trash, and be provided with a roof or awning to prevent direct precipitation.	Keep trash storage areas clean and orderly. Weekly.	<i>Owner or contracted maintenance personnel</i>
Yes	S4. Use Efficient Irrigation Systems and Landscape Design Projects shall design the timing and application methods of irrigation water to minimize the runoff of excessive irrigation water into the municipal storm drain system. Additionally, permittee shall: Employ rain shutoff devices, design irrigation systems to each landscape areas specific requirements, use flow reducers, group plants with similar water requirements together.	Ensure that sprinklers are working properly and minimize unnecessary irrigation. Weekly.	<i>Owner or contracted maintenance personnel</i>
No	S5. Protect Slopes and Channels		
No	S6. Loading Dock Areas		
No	S7. Maintenance Bays and Docks		
No	S8. Vehicle Wash Areas		
No	S9. Outdoor Processing Areas		
No	S10. Equipment Wash Areas		
No	S11. Fueling Areas		
No	S12. Site Design and Landscape Planning		
No	S13. Wash Water Controls for Food Preparation Areas		
No	S14. Community Car Wash Racks		

BMP Name and BMP Implementation, Maintenance and Inspection Procedures	Implementation, Maintenance, and Inspection Frequency and Schedule	Person or Entity with Operation & Maintenance Responsibility
Low Impact Development BMPs		
Filter Insert (Treatment). TRT-2 <ul style="list-style-type: none"> • Filter Insert Replacement/Rotation • Remove Sediment and debris. 	<ul style="list-style-type: none"> • Once a year. Refer to Manufacturer's O&M plan on pages 36-39 for details. • Three times per year and after storm events. Refer to Manufacturer's O&M plan on pages 36-39 for details. 	<i>Owner via maintenance contractors</i>
Bio-retention Planter (Biotreatment). BIO-1 <ul style="list-style-type: none"> • Visual inspection for debris, standing water. • Gravel/media replacement. • Filter fabric Replacement 	<ul style="list-style-type: none"> • Twice yearly and after each storm event. • Every 10 years as required. • Once a year as required. 	<i>Owner via maintenance contractors</i>



**GENERAL SPECIFICATIONS FOR MAINTENANCE OF
T-SERIES™ CATCH BASIN INSERT FILTERS
(POST-CONSTRUCTION INSTALLATION)**

SCOPE:

Federal, State and Local Clean Water Act regulations and those of insurance carriers require that stormwater filtration systems be maintained and serviced on a recurring basis. The intent of the regulations is to ensure that the systems, on a continuing basis, efficiently remove pollutants from stormwater runoff thereby preventing pollution of the nation's water resources. These Specifications apply to the T-Series™ Catch Basin Insert Filter.

RECOMMENDED FREQUENCY OF SERVICE:

Drainage Protection Systems (DPS) recommends that installed T-Series™ Catch Basin Insert Filters be serviced on a recurring basis. Ultimately, the frequency depends on the amount of runoff, pollutant loading and interference from debris (leaves, vegetation, cans, paper, etc.); however, it is recommended that each installation be serviced a minimum of three times per year, with a change of filter medium once per year. DPS technicians are available to do an on-site evaluation, upon request.

RECOMMENDED TIMING OF SERVICE:

DPS guidelines for the timing of service are as follows:

1. For areas with a definite rainy season: Prior to, during and following the rainy season.
2. For areas subject to year-round rainfall: On a recurring basis (at least three times per year).
3. For areas with winter snow and summer rain: Prior to and just after the snow season and during the summer rain season.
4. For installed devices not subject to the elements (washracks, parking garages, etc.): On a recurring basis (no less than three times per year).

SERVICE PROCEDURES:

1. The service shall commence with collection and removal of sediment and debris (litter, leaves, papers, cans, etc.) and broom sweeping around the drainage inlet. Accumulated materials shall be placed in a DOT approved container for later disposal.
2. The catch basin shall be visually inspected for defects and possible illegal dumping. If illegal dumping has occurred, the proper authorities and property owner representative shall be notified as soon as practicable.
3. The catch basin grate shall be removed and set to one side. Using an industrial vacuum, the collected materials shall be removed from the liner. (Note: DPS uses a truck-mounted vacuum for servicing T-Series™ catch basin inserts.)
4. When all of the collected materials have been removed, the filter medium pouches, if used, shall be removed by unsnapping the tether from the D-ring and set to one side. The filter liner, gaskets, stainless steel frame and mounting brackets, etc. shall be inspected for continued serviceability. Minor damage or defects found shall be corrected on-the-spot and a notation made on the Maintenance Record. More extensive deficiencies that affect the efficiency of the filter (torn liner, etc.), if approved by the customer representative, will be corrected and an invoice submitted to the representative along with the Maintenance Record.
5. The filter medium pouches shall be inspected for defects and continued serviceability and replaced as necessary and the pouch tethers re-attached to the liner's D-ring. See below.
6. The grate shall be replaced.

EXCHANGE AND DISPOSAL OF EXPOSED FILTER MEDIUM AND COLLECTED DEBRIS

The frequency of filter medium pouch exchange will be in accordance with the existing DPS-Customer Maintenance Contract. DPS recommends that the medium be changed at least once per year. During the appropriate service, or if so determined by the service technician during a non-scheduled service, the filter medium pouches will be replaced with new pouches and the exposed pouches placed in the DOT approved container, along with the exposed debris. Once the exposed pouches and debris have been placed in the container, DPS has possession and must dispose of it in accordance with local, state and federal agency requirements.

Note: As the generator, the landowner is ultimately responsible for the proper disposal of the exposed filter medium and debris. Because the materials likely contain petroleum hydrocarbons, heavy metals and other harmful pollutants, the materials must be treated as an EPA Class 2 Hazardous Waste and properly disposed of. DPS relieves the landowner of the actual disposal task, and provides certification of its completion in accordance with appropriate regulations.

DPS also has the capability of servicing all manner of catch basin inserts and catch basins without inserts, underground oil/water separators, stormwater interceptors and other such devices. All DPS personnel are highly qualified technicians and are confined space trained and certified. Call us at (888) 950-8826 for further information and assistance.

Required Permits

This section must list any permits required for the implementation, operation, and maintenance of the BMPs. Possible examples are:

- Permits for connection to sanitary sewer
- Permits from California Department of Fish and Game
- Encroachment permits

If no permits are required, a statement to that effect should be made.

Forms to Record BMP Implementation, Maintenance, and Inspection

The form that will be used to record implementation, maintenance, and inspection of BMPs is attached.

Recordkeeping

All records must be maintained for at least five (5) years and must be made available for review upon request.

RECORD OF BMP IMPLEMENTATION, MAINTENANCE, AND INSPECTION

Today's Date:

Name of Person Performing Activity
(Printed):

Signature:

BMP Name (As Shown in O&M Plan)	Brief Description of Implementation, Maintenance, and Inspection Activity Performed

Exhibit 4

Water and Wastewater Generation Memorandum

WATER DEMAND MEMORANDUM

215 Riverside Avenue
Newport Beach, CA 92663

PREPARED BY:
Fuscoe Engineering, Inc.
16795 Von Karman, Suite 100
Irvine, CA 92606
(949) 474-1960

Project Number:
1843-002-01

Project Manager:
Joshua Ruiz

Date Prepared:
June 5, 2019



E M G I M E R I N G

Water Demand Memorandum 215 RIVERSIDE AVENUE Newport Beach, CA June 5, 2019

Purpose

The purpose of this report is to present the results of the evaluation of the water demand analysis for the *215 Riverside Avenue* project.

Project Site Location

The existing site is located in the City of Newport Beach, CA. The site is to the northwest of the intersection of Riverside Avenue and Avon Street.

Existing Conditions

The site area is 0.4 acre. Based on our review, the existing two-story building currently serves as office space, along with a restaurant. Sheet G7-W of the City of Newport Beach water atlas map shows that there is an existing 8" waterline in Avon Street along with a 12" waterline in Riverside Avenue, fronting the property. A fire hydrant flow test was performed for a nearby project, located on WCH approximately 2,000 feet easterly from the *215 Riverside Avenue* project. A copy of the G7-W water atlas map is included as Attachment 1. The fire hydrant location (address) and test results are presented on the following page.

Water Demand Memorandum
215 RIVERSIDE AVENUE
Newport Beach, CA June 5, 2019

**CITY OF NEWPORT BEACH
UTILITIES DEPARTMENT**

FIRE HYDRANT FLOW TEST

FH #1 (North Side of Roadway)

AMOUNT PAID: \$360.00 DATE: 03/06/2019
CHECK NO: TIME: 6:00 AM
TEST NO: WEATHER: CLEAR

PROJECT: _____
PROJECT LOCATION: 2200 W. COAST HWY.
TEST CONDUCTED FOR: FUSCOE ENGINEERING
TEST PERFORMED BY: BULLMAN, AUGER
TEST WITNESSED BY: _____

FIELD OBSERVATIONS AND FLOW DATA

STATIC HYDRANT #: 408 F/H MANUFACTURER: JONES STATIC PRESSURE, (Ps, psi), PRE-FLOW: 68 RESIDUAL PRESSURE, (Pr, psi) FLOWING: 60 FLOW HYDRANT #: 409 F/H MANUFACTURER: AVK STATIC PRESSURE, PRE-FLOW (INFO ONLY, NOT FOR TEST CALCS): F/H OUTLET SIZE (2.5 or 4.0): 2.5 (d, inches) FLOW LOSS COEFFICIENT - TUBE C=1.0 - BUTT C=0.9 0.9 PITOT GAUGE READING (p, psi): 33	LOCATION: 2244 W. COAST HWY. NUMBER & SIZE OF OUTLETS: 2-2.5" 1-4" LOCATION: 2200 W. COAST HWY. NUMBER & SIZE OF OUTLETS: 2-2.5" 1-4"
--	--

OBSERVED FLOW: THE OBSERVED FLOW FROM A HYDRANT OUTLET IS CALCULATED FROM THE FOLLOWING EQUATION:

$$Q_s = 29.83(Cd^2)\sqrt{p}$$

WHERE: Q IS THE OBSERVED FLOW IN GPM; d IS THE OUTLET DIAMETER IN INCHES; p IS THE PITOT GAUGE PRESSURE IN PSI; AND C IS THE FLOW LOSS COEFFICIENT; C = 1.0 FOR FLOW TUBES AND C = 0.9 FOR BUTT FLOW READINGS.

OBSERVED FLOW (Qs, gpm): 964 GPM

DISCHARGE CALCS: THE DISCHARGE FOR A GIVEN FIRE HYDRANT CAN BE DETERMINED FROM THE FOLLOWING EQUATION USING THE INITIAL (STATIC) WATER PRESSURE AND THE RESIDUAL (DYNAMIC) WATER PRESSURE:

$$Q_r = Q_s \left(\frac{P_s - 20}{P_r - P_s} \right)^{0.54}$$

WHERE: Qs (STATIC OR RESIDUAL) IS THE FLOW IN GPM; AND Ps (STATIC OR RESIDUAL) IS THE PRESSURE IN PSI. NOTE: A 10 PSI DROP IS REQUIRED FOR A VALID TEST.

CALCULATED FLOW AT 20 psi (Qr, gpm): 2536 GPM

Water Demand Memorandum
215 RIVERSIDE AVENUE
Newport Beach, CA June 5, 2019

Proposed Development

The proposed development includes demolition of the existing building, and construction of the new retail building. In addition, according to the Preliminary Utility Plan (Attachment 3), a new water service is proposed, to replace the existing service, with the assumption that the condition of the existing service is not satisfactory. The total proposed commercial building area will be 2,772 square feet. The area calculations for the proposed project are as follows:

Main Level:		2 nd Level:	
Commercial Area		Commercial Area	
1	54 sf	1	54 sf
2	1215 sf	2	1215 sf
3	117 sf	3	117 sf
Total	1,386 sf	Total	1,386 sf

Water Demand Memorandum
215 RIVERSIDE AVENUE
Newport Beach, CA June 5, 2019

Water Demand Calculations

The water demand for the existing site was estimated based on the CC Appeal of PC Approval of Use Permit for Nesai Restaurant (see Attachment 4), along with Irvine Ranch Water District (IRWD) demand coefficients (see Attachment 2) for the existing development, which include the following:

- First Floor Restaurant; 2,910 square feet (220 gal/ksf/day) = 640 gallons/day
- Second Floor Office; 2,830 square feet (60 gal/ksf/day) = 170 gallons/day
- Third Floor Office; 2,316 square feet (60 gal/ksf/day) = 139 gallons/day
- Total Existing Water Demand = 949 gallons/day = 1.1 ac-ft per year

The water demand for the proposed development is based on IRWD demand coefficient for commercial development. The IRWD value of 220 gallons/ksf/day was used, along with the total area calculation of 2,772 square feet. The water demand calculations are as follows:

- 2,772 square feet (220 gal/ksf/day) = 610 gallons/day
- Total Proposed Water Demand = 610 gallons/day = 0.7 ac-ft per year.

Conclusion

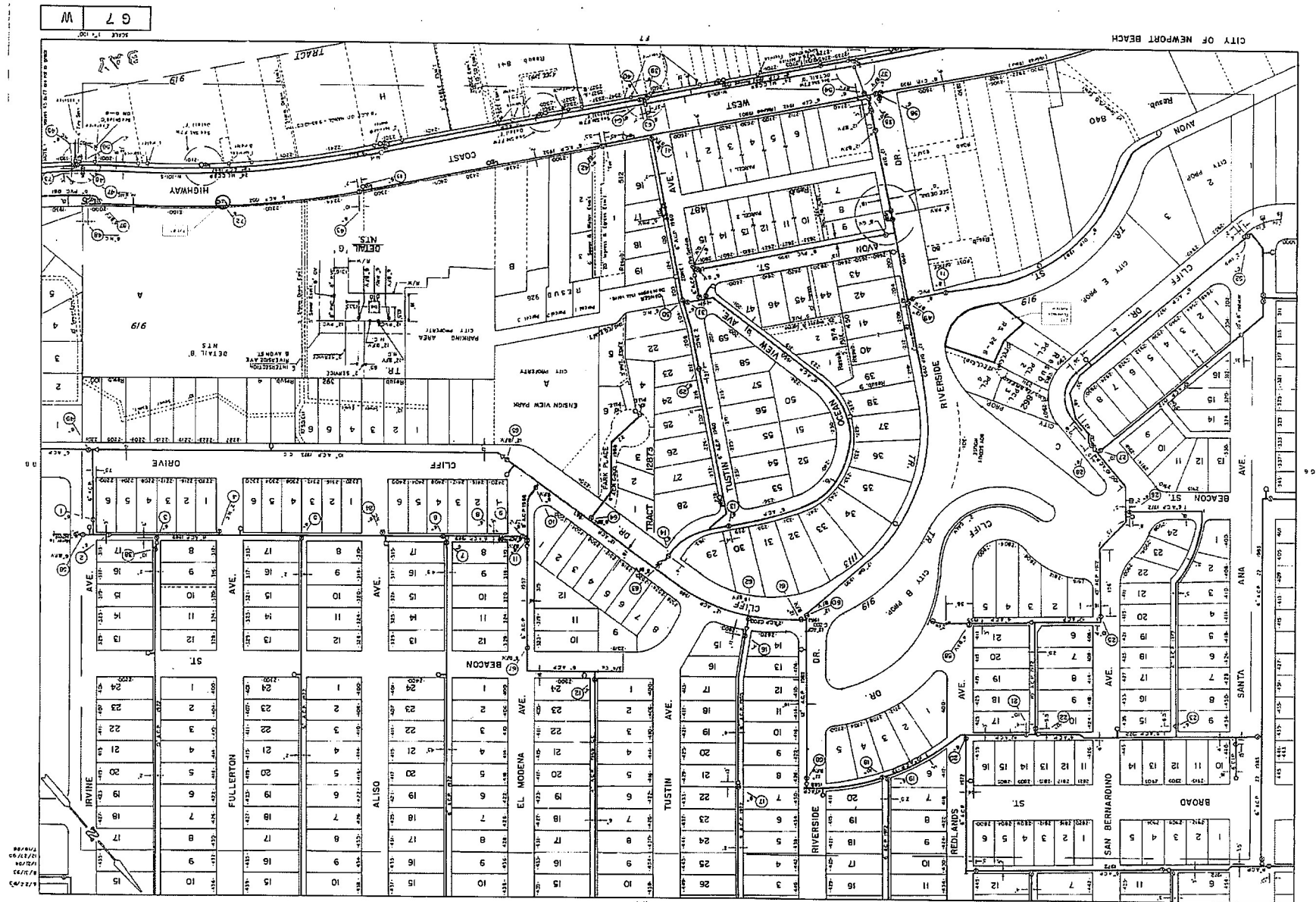
The water demand calculations show that the proposed project will require approximately 0.7 ac-ft of water per year. This will be a reduction from the existing water demand of 1.1 ac-ft per year. It is proposed to replace the existing service with a new water service line. The proposed new service location is shown on the Preliminary Utility Plan (Attachment 3).

Attachments:

1. Water Atlas Map G7-W
2. IRWD Water Demand Factors
3. Preliminary Utility Plan
4. Pages 249 & 281 from CC Appeal of PC Approval for Nesai Restaurant

ATTACHMENT 1

Water Atlas Map G7-W



ATTACHMENT 2

IRWD Water Demand Factors

1

Code	Land Use description	Land Use		Local Demands			Irrigation Demands	
		Agency	Average Density	Local Interior	Local Exterior	Total	% Irrigated Area	Irrigation Factor
1100	Residential		<u>DU/Ac</u>		<u>Gal/DU/Day</u>			<u>Gal/Ac/Day</u>
1111	Res - Rural Density	Orange	0.30	300	750	1,050	5	2,800
1121	Res - Estate Density	Orange	1.20	300	300	600	8	2,900
1131	Res - Low Density	Orange	4.00	300	300	600	15	2,900
1141	Res - Low-Medium Density	Orange	10.50	200	100	300	22	3,300
1161	Res - Medium Density	Orange	19.50	225	185	410	17	3,100
1122	Res - Estate Density	Irvine	0.50	300	600	900	7	2,800
1132	Res - Low Density	Irvine	3.00	225	180	405	16	3,000
1162	Res - Medium Density	Irvine	7.50	200	110	310	20	3,100
1172	Res - Medium-High Density	Irvine	17.50	165	15	180	25	3,600
1182	Res - High Density	Irvine	32.50	180	20	200	20	3,300
1192	Res - High-Rise Density	Irvine	40	180	20	200	20	3,300
1133	Res - Low Density	Newport Beach	1.00	250	190	440	17	3,100
1153	Res - Medium-Low Density	Newport Beach	2.75	250	200	450	10	2,800
1163	Res - Medium Density	Newport Beach	5.00	190	60	250	22	3,300
1183	Res - High Density	Newport Beach	12.25	155	20	175	25	3,600
1134	Res - Low Density PC	Tustin	4.50	225	185	410	17	3,100
1164	Res - Medium Density PC	Tustin	11.80	155	15	170	25	3,600
1184	Res - High Density PC	Tustin	17.40	135	15	150	15	3,700
1115	Res - Rural Density	County	0.26	300	750	1,050	5	2,800
1135	Res - Suburban Density	County	9.25	225	180	405	16	3,000
1175	Res - Urban Density	County	29.00	165	15	180	25	3,600
1126	Res - Estate Density	Lake Forest	0.50	300	600	900	7	2,800
1136	Res - Low Density	Lake Forest	3.00	225	180	405	16	3,000
1166	Res - Medium Density	Lake Forest	7.50	200	110	310	20	3,100
1176	Res - Medium-High Density	Lake Forest	17.50	165	15	180	25	3,600
1186	Res - High Density	Lake Forest	32.50	180	20	200	20	3,300
1200	Commercial		<u>KSF/Ac</u>		<u>Gal/KSF/Day</u>			<u>Gal/Ac/Day</u>
1210	Comm - General Office		25.00	56	4	60	30	4,000
1221	Comm - Community		9.09	209	11	220	30	3,500
1222	Comm - Regional		10.53	180.5	9.5	190	20	5,000
1230	Comm - Recreation		8.33	54	6	60	30	4,500
1240	Comm - Institutional		8.88	39.38	5.62	45	50	2,750
1244	Comm - Hospital		8.70	218.50	11.50	230	25	2,850
1260	Comm - School		13.33	14.25	0.75	15	50	2,500
1273	Comm - Military Air Field							
1300	Industrial		<u>KSF/Ac</u>		<u>Gal/KSF/Day</u>			<u>Gal/Ac/Day</u>
1310	Industrial - Light		25.00	56	4	60	25	4,000
1320	Industrial - Heavy		25.00	4,500	500	5,000	25	4,000
	Open Space & Other							<u>Gal/Ac/Day</u>
1820	Park - Community						90	3,400
1830	Park - Regional						85	2,100
2100	AG - Low-Irrigated						100	1,800
2110	AG - Low-Irrigated (TIC)						100	1,800
2200	AG - High-Irrigated						100	3,100
2210	AG - High-Irrigated (TIC)						100	3,100

Note: The database includes the following land use codes that do not use set factors or do not generate water demands:
0 = area not served by IRWD; 1411 = Airports; 1413 = Freeway and Major Roads; 1850 = Park-Wildlife Preserve;
1880 = Park-Open Space (Rec); 1900 = Vacant; 4100 = Water Body; 9100-9199 = Mixed Use (uses a combination of factors)

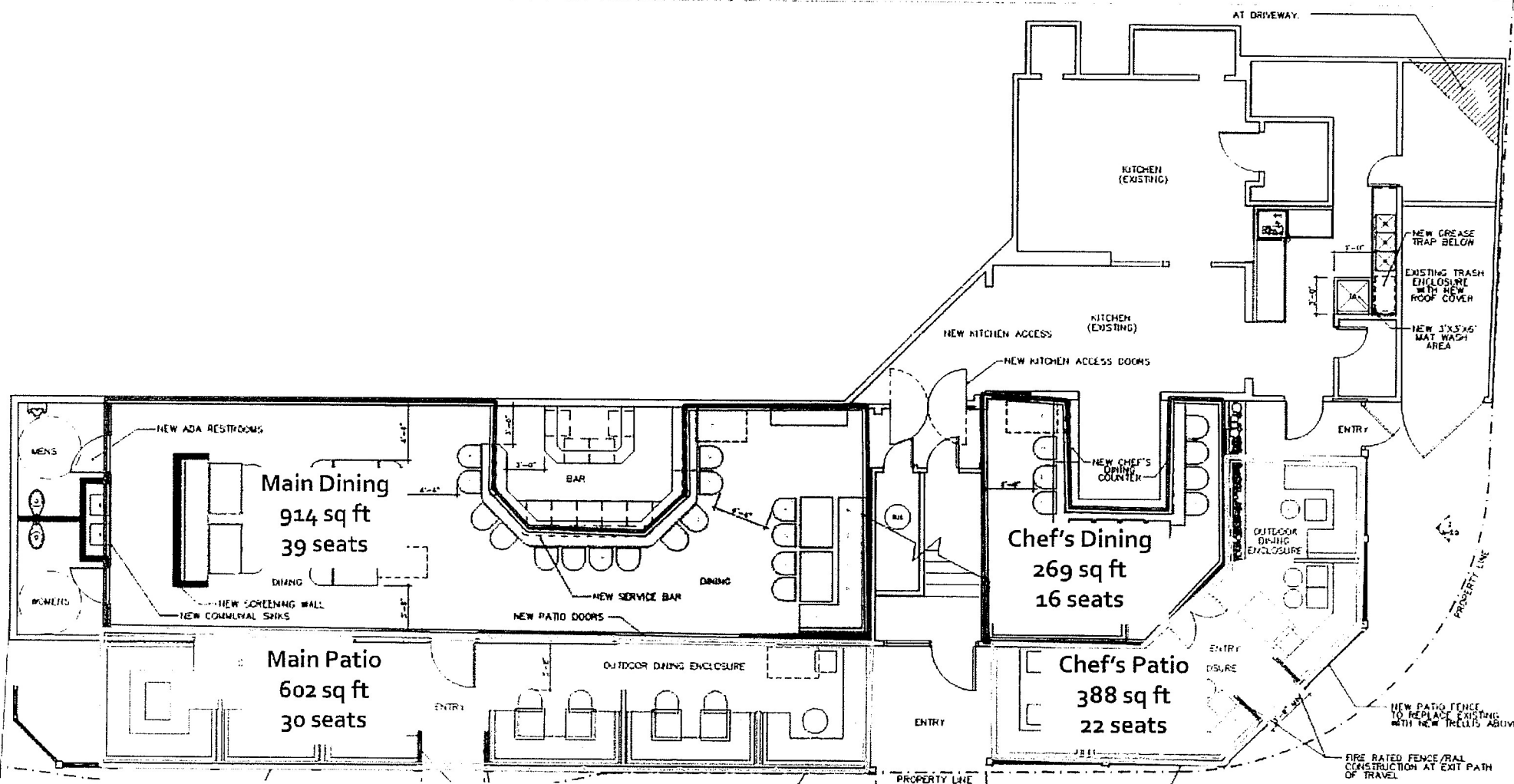
ATTACHMENT 3

Preliminary Utility Plan

ATTACHMENT 4

Pages 249 & 261 from CC Appeal of PC Approval for Nesai Restaurant

Project Plans



SEWER CAPACITY MEMORANDUM

215 Riverside Avenue
Newport Beach, CA 92663

PREPARED BY:
Fuscoe Engineering, Inc.
16795 Von Karman, Suite 100
Irvine, CA 92606
(949) 474-1960

Project Number:
1843-002-01

Project Manager:
Joshua Ruiz

Date Prepared:
June 5, 2019



2 1 5 R I V E R S I D E A V E

Sewer Capacity Memorandum
215 RIVERSIDE AVENUE
Newport Beach, CA June 5, 2019

Purpose

The purpose of this report is to present the results of the evaluation of the sewer capacity analysis for the *215 Riverside Avenue* project.

Project Site Location

The existing site is located in the City of Newport Beach, CA. The site is to the northwest of the intersection of Riverside Avenue and Avon Street.

Existing Conditions

The site area is 0.4 acre. Based on our review, the existing two-story building currently serves as office space, along with a restaurant. Based on our review of CC Appeal of PC Approval of Use Permit for Nesai Restaurant (see Attachment 1), the following is the usage of the existing site:

- First-Floor Restaurant (107 seats)
- Second Floor Office Space (2,830 square feet)
- Third Floor Office Space (2,316 square feet)

Based on our review of the City of Newport Beach GIS sewer atlas map (see Attachment 2), it appears that the existing wastewater is directed to an existing 6" City sewer line in Avon Street. From there, the line drains to the existing 8" sewer line in Riverside Avenue. The line continues southerly, and becomes a 12" diameter line at the southerly end of Riverside Avenue, and then connects to the existing Orange County Sanitation District (OCSD) sewer line in West Coast Highway (WCH).

Sewer Capacity Memorandum
215 RIVERSIDE AVENUE
Newport Beach, CA June 5, 2019

Proposed Development

The proposed development includes demolition of the existing building, and construction of the new retail building. According to the Preliminary Utility Plan (see Attachment 4) the existing sewer lateral in Avon Street will be replaced with a new lateral cleanout. The total proposed commercial building area will be 2,772 square feet. The area calculations for the proposed project are as follows:

Main Level:

Commercial Area

1	54 sf
2	1215 sf
3	117 sf
Total	1,386 sf

2nd Level:

Commercial Area

1	54 sf
2	1215 sf
3	117 sf
Total	1,386 sf

Sewer Capacity Memorandum
215 RIVERSIDE AVENUE
Newport Beach, CA June 5, 2019

Sewer Generation Calculations (City of Los Angeles Sewer Factors)

Since the City of Newport Beach does not have sewer generation factors for retail, commercial, or office uses (only residential), City of Los Angeles Sewer Factors were used. The calculations are based on the building square footage, along with a peaking factor. The following are the sewer calculations for both existing and proposed conditions:

- Existing Condition
 - o First Floor Restaurant; $107 \text{ seats} \times 30 \text{ gpd} = 3,210 \text{ gpd}$
 - o Second Floor Office; $2,830 \text{ square feet} \times 120/1000 \text{ gpd} = 340 \text{ gpd}$
 - o Third Floor Office; $2,316 \text{ square feet} \times 120/1000 \text{ gpd} = 278 \text{ gpd}$
 - Total Average Daily Flow = $(3,210 + 340 + 278) = 3,828 \text{ gpd}$
 - Peak Flow (peaking factor = 2.5): $9,570 \text{ gpd}$ (0.0148 cfs)
- Proposed Condition (commercial/retail): $(50 \text{ gpd}/1000 \text{ sf}) \times 2,772 \text{ square feet}$
 - o 139 gpd
 - o Peak Flow (peaking factor = 2.5): 348 gpd (0.0006 cfs)

A copy of the City of Los Angeles Sewerage Generation Factor Table is included as Attachment 2.

Sewer Flow-Depth Calculations

The flow-depth calculations of the peak flow were prepared using FlowMaster computer program. The flow-depth calculations shows an existing and proposed percent-full of 11.2% and 2.5%, respectively. The calculations demonstrate that the proposed development will not adversely impact the existing sewer system, since the percent-full of the sewer system does not exceed 50%-full. In addition, the proposed sewer loading will be less than the existing condition loading. The calculations are included on the following pages.

Sewer Capacity Memorandum
215 RIVERSIDE AVENUE
Newport Beach, CA June 5, 2019

Worksheet for Circular Pipe - Existing Development

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013
Channel Slope	0.01000 ft/ft
Diameter	6 in
Discharge	0.0148 ft ³ /s

Results

Normal Depth	0.06 ft
Flow Area	0.01 ft ²
Wetted Perimeter	0.34 ft
Hydraulic Radius	0.04 ft
Top Width	0.32 ft
Critical Depth	0.06 ft
Percent Full	11.2 %
Critical Slope	0.00814 ft/ft
Velocity	1.23 ft/s
Velocity Head	0.02 ft
Specific Energy	0.08 ft
Froude Number	1.11
Maximum Discharge	0.60 ft ³ /s
Discharge Full	0.56 ft ³ /s
Slope Full	0.00001 ft/ft
Flow Type	SuperCritical

Sewer Capacity Memorandum
215 RIVERSIDE AVENUE
Newport Beach, CA June 5, 2019

Worksheet for Circular Pipe - Proposed Development

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013
Channel Slope	0.01500 ft/ft
Diameter	6 in
Discharge	0.0006 ft ³ /s

Results

Normal Depth	0.01 ft
Flow Area	0.00 ft ²
Wetted Perimeter	0.16 ft
Hydraulic Radius	0.01 ft
Top Width	0.16 ft
Critical Depth	0.01 ft
Percent Full	2.5 %
Critical Slope	0.01264 ft/ft
Velocity	0.47 ft/s
Velocity Head	0.00 ft
Specific Energy	0.02 ft
Froude Number	0.91
Maximum Discharge	0.60 ft ³ /s
Discharge Full	0.56 ft ³ /s
Slope Full	0.00000 ft/ft
Flow Type	SubCritical

Sewer Capacity Memorandum
215 RIVERSIDE AVENUE
Newport Beach, CA June 5, 2019

Conclusion

The calculations presented in this memorandum show that the proposed 215 *Riverside Avenue* project will not adversely impact the existing sewer system. The proposed condition sewer loading will be less than that of the existing condition for the project site. In addition, the depths in the existing sewer lateral of 11.2%-full (existing condition) or 2.5%-full (proposed) do not exceed the City of Newport Beach design criteria of 50%-full.

Attachments:

1. Pages 249 & 281 from CC Appeal of PC Approval for Nesai Restaurant
2. GIS Sewer Atlas
3. City of Los Angeles Sewerage Generation Factor Table
4. Preliminary Utility Plan

ATTACHMENT 1

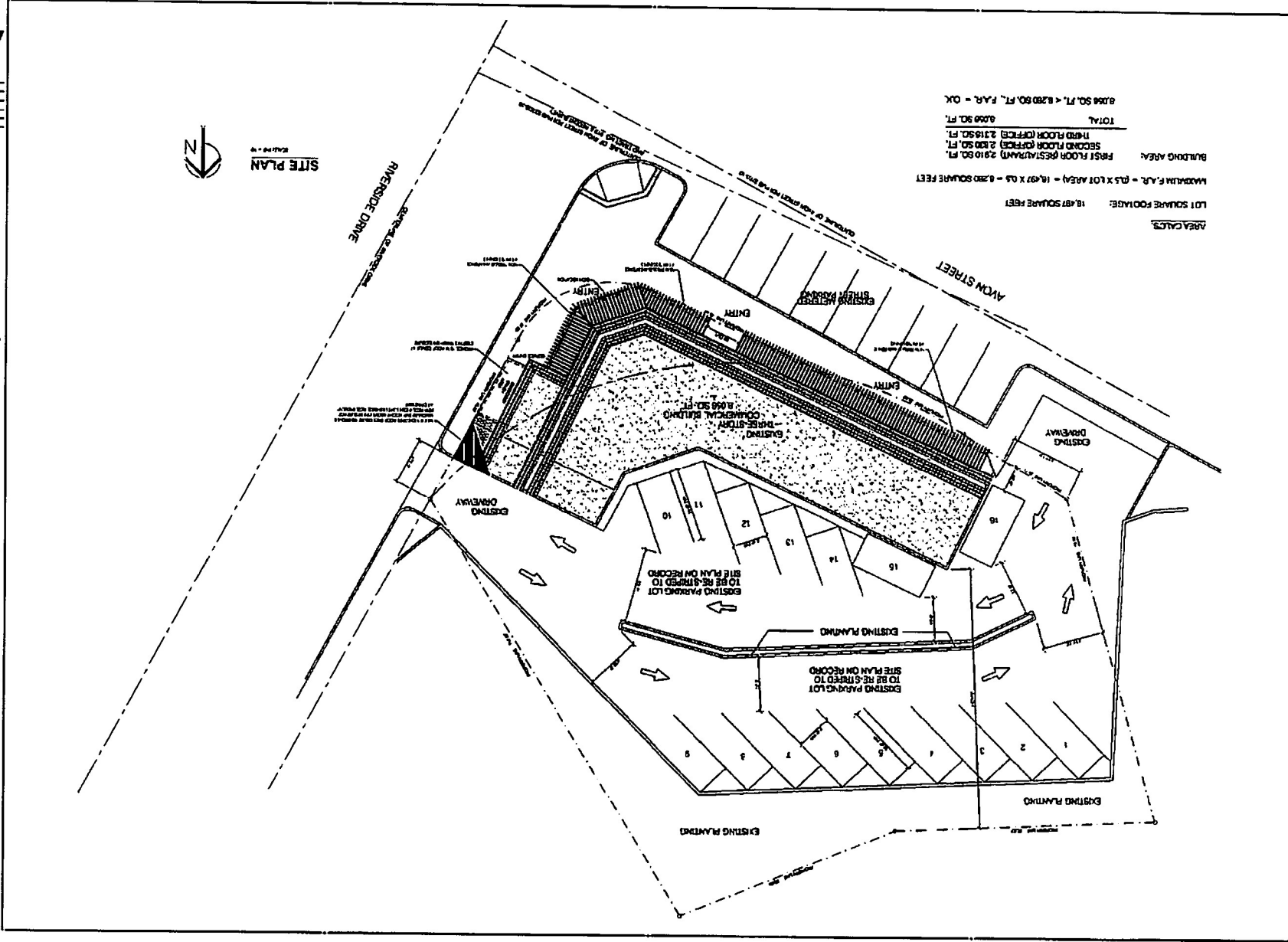
Pages from CC Appeal of PC Approval of Use Permit for Nesai Restaurant

DATE	20/05/2020
NAME	ANIL KUMAR
CELL NO	9876543210
STREET	1234567890
CITY	DELHI
STATE	INDIA

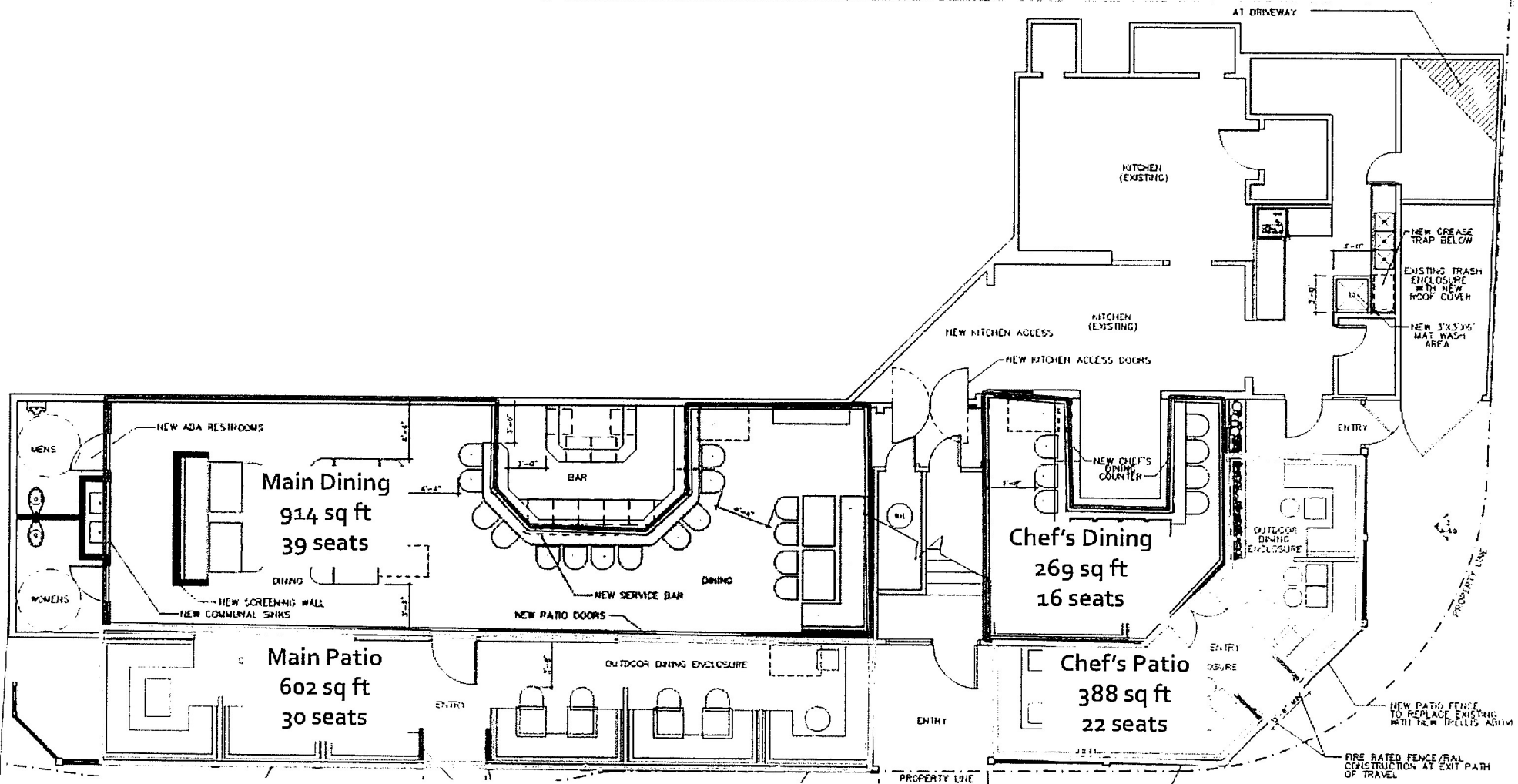
DETERMINE SITE PLAN

NESAI RESTAURANT
215-217 RIVERSIDE STREET
NEWPORT BEACH, CA 92663

WMC
 6700000000
 PLANNING & DESIGN
 27323 WILKES Pk.
 STEVENSON MOUNTAIN
 CALIFORNIA 91351
 TEL: 713 407 4755
 FAX: 713 407 4756



Project Plans



07/13/2012

Community Development Department - Planning Division

19

9-201

ATTACHMENT 2

GIS Sewer Atlas



ATTACHMENT 3

City of Los Angeles Sewerage Generation Factors

**SEWAGE FACILITIES CHARGE
SEWAGE GENERATION FACTOR FOR
RESIDENTIAL AND COMMERCIAL CATEGORIES**

EFFECTIVE DATE: April 6, 2012

Line No.	FACILITY DESCRIPTION	PROPOSED SGF IN GPD	BOD (mg/l)	SS (mg/l)
1	Acupuncture Office/Clinic	120/1,000 Gr SF	265	275
2	Arcade - Video Games	50/1,000 Gr SF	265	275
3	Auditorium (a)	3/Seat	265	275
4	Auto Parking (a)	20/1,000 Gr SF	265	275
5	Auto Mfg., Service Maintenance (b)	Actual	1,260	1,165
6	Bakery	280/1,000 Gr SF	3,020	2,540
7	Bank: Headquarters	120/1,000 Gr SF	265	275
8	Bank: Branch	50/1,000 Gr SF	265	275
9	Ballroom	350/1,000 Gr SF	265	275
10	Banquet Room	350/1,000 Gr SF	265	275
11	Bar: Cocktail, Fixed Set (a) (c)	15/Seat	265	275
12	Bar: Juice, No Baking Facilities (d)	720/1,000 Gr SF	265	275
13	Bar: Juice, with Baking Facilities (d)	720/1,000 Gr SF	265	275
14	Bar: Cocktail, Public Table Area (c)	720/1,000 Gr SF	265	275
15	Barber Shop	120/1,000 Gr SF	265	275
16	Barber Shop (s)	15/Stall	265	275
17	Beauty Parlor	425/1,000 Gr SF	265	275
18	Beauty Parlor (s)	50/Stall	265	275
19	Bldg. Const/Field Office (e)	120/Office	265	275
20	Bowling Alley: Alley, Lanes & Lobby Area	50/1,000 Gr SF	265	275
21	Bowling Facility: Arcade/Bar/Restaurant/Dancing	Total	Average	Average
22	Cafeteria: Fixed Seat	30/Seat	1,000	600
23	Car Wash: Automatic (b)	Actual	265	285
24	Car Wash: Coin Operated Bays (b)	Actual	265	285
25	Car Wash: Hand Wash (b)	Actual	265	285
26	Car Wash: Counter & Sales Area	50/1,000 Gr SF	265	275
27	Chapel: Fixed Seat	3/Seat	265	275
28	Chiropractic Office	120/1,000 Gr SF	265	275
29	Church: Fixed Seat	3/Seat	265	275
30	Church School: Day Care/Elem	9/Occupant	265	275
31	Church School: One Day Use (s)	9/Occupant	265	275
32	Cocktail Lounge: Fixed Seat (f)	15/Seat	265	275
33	Coffee House: No Food Preparation (d)	720/1,000 Gr SF	265	275
34	Coffee House: Pastry Baking Only (d)	720/1,000 Gr SF	265	275
35	Coffee House: Serves Prepared Food (d)	25/Seat	1,000	600
36	Cold Storage: No Sales (g)	30/1,000 Gr SF	265	275
37	Cold Storage: Retail Sales (g)	50/1,000 Gr SF	265	275
38	Comfort Station: Public	80/Fixture	265	275
39	Commercial Use (a)	50/1,000 Gr SF	265	275
40	Community Center	3/Occupant	265	275
41	Conference Room of Office Bldg.	120/1,000 Gr SF	265	275
42	Counseling Center (h)	120/1,000 Gr SF	265	275
43	Credit Union	120/1,000 Gr SF	265	275
44	Dairy	Average Flow	1,510	325
45	Dairy: Barn	Average Flow	1,510	325
46	Dairy: Retail Area	50/1,000 Gr SF	265	275
47	Dancing Area (of Bars or Nightclub) (c)	350/1,000 Gr SF	265	275
48	Dance Studio (i)	50/1,000 Gr SF	265	275
49	Dental Office/Clinic	250/1,000 Gr SF	265	275

**SEWAGE FACILITIES CHARGE
SEWAGE GENERATION FACTOR FOR
RESIDENTIAL AND COMMERCIAL CATEGORIES**

EFFECTIVE DATE: April 6, 2012

Lane No.	FACILITY DESCRIPTION	PROPOSED SGF IN GPD	BOD (mg/l)	SS (mg/l)
50	Doughnut Shop	280/1,000 Gr SF	1,000	600
51	Drug Rehabilitation Center (h)	120/1,000 Gr SF	265	275
52	Equipment Booth	30/1,000 Gr SF	265	275
53	Film Processing (Retail)	50/1,000 Gr SF	265	275
54	Film Processing (Industrial)	Actual	265	275
55	Food Processing Plant (b)	Actual	2,210	1,450
56	Gas Station: Self Service	100/W.C.	265	275
57	Gas Station: Four Bays Max	430/Station	1,950	1,175
58	Golf Course Facility: Lobby/Office/Restaurant/Bar	Total	700	450
59	Gymnasium: Basketball, Volleyball (k)	200/1,000 Gr SF	265	275
60	Hanger (Aircraft)	50/1,000 Gr SF	265	275
61	Health Club/Spa (k)	650/1,000 Gr SF	265	275
62	Homeless Shelter	70/Bed	265	275
63	Hospital	70/Bed	820	1,230
64	Hospital: Convalescent (a)	70/Bed	265	275
65	Hospital: Animal	300/1,000 Gr SF	820	1,230
66	Hospital: Psychiatric	70/Bed	265	275
67	Hospital: Surgical (a)	360/Bed	265	275
68	Hotel: Use Guest Rooms Only (a)	120/Room	265	275
69	Jail	85/Inmate	265	275
70	Kennel: Dog Kennel/Open	100/1,000 Gr SF	265	275
71	Laboratory: Commercial	250/1,000 Gr SF	265	275
72	Laboratory: Industrial	Actual	265	275
73	Laundromat	185/Machine	550	370
74	Library: Public Area	50/1,000 Gr SF	265	275
75	Library: Stacks, Storage	30/1,000 Gr SF	265	275
76	Lobby of Retail Area (l)	50/1,000 Gr SF	265	275
77	Lodge Hall	3/Seat	265	275
78	Lounge (l)	50/1,000 Gr SF	265	275
79	Machine Shop (No Industrial Waste Permit Required) (b)	50/1,000 Gr SF	265	275
80	Machine Shop (Industrial)	Actual	265	275
81	Mfg or Industrial Facility (No IW Permit Required) (b)	50/1,000 Gr SF	265	275
82	Mfg or Industrial Facility (Industrial)	Actual	265	275
83	Massage Parlor	250/1,000 Gr SF	265	275
84	Medical Building (a)	225/1,000 Gr SF	265	275
85	Medical: Lab in Hospital	250/1,000 Gr SF	340	275
86	Medical Office/Clinic	250/1,000 Gr SF	265	275
87	Mini-Mall (No Food)	50/1,000 Gr SF	265	275
88	Mortuary: Chapel	3/Seat	265	275
89	Mortuary: Embalming	300/1,000 Gr SF	800	800
90	Mortuary: Living Area	50/1,000 Gr SF	265	275
91	Motel: Use Guest Room Only (a)	120/Room	265	275
92	Museum: All Area	30/1,000 Gr SF	265	275
93	Museum: Office Over 15%	120/1,000 Gr SF	265	275
94	Museum: Sales Area	50/1,000 Gr SF	265	275
95	Office Building (a)	120/1,000 Gr SF	265	275
96	Office Bldg w/Cooling Tower	170/1,000 Gr SF	265	275
97	Plating Plant (No IW Permit Required) (b)	50/1,000 Gr SF	265	275
98	Plating Plant (Industrial) (b)	Actual	265	275

**SEWAGE FACILITIES CHARGE
SEWAGE GENERATION FACTOR FOR
RESIDENTIAL AND COMMERCIAL CATEGORIES**

EFFECTIVE DATE: April 6, 2012

Line No.	FACILITY DESCRIPTION	PROPOSED SGF IN GPD	BOD (mg/l)	SS (mg/l)
99	Pool Hall (No Alcohol)	50/1,000 Gr SF	265	275
100	Post Office: Full Service (m)	120/1,000 Gr SF	265	275
101	Post Office: Private Mail Box Rental	50/1,000 Gr SF	265	275
102	Prisons	175/Inmate	265	275
103	Residential Dorm: College or Residential (n)	70/Student	265	275
104	Residential: Boarding House	70/Bed	265	275
105	Residential: Apt - Bachelor (a)	75/DU	265	275
106	Residential: Apt - 1 BDR (a) (o)	110/DU	265	275
107	Residential: Apt - 2 BDR (a) (o)	150/DU	265	275
108	Residential: Apt - 3 BDR (a) (o)	190/DU	265	275
109	Residential: Apt - >3 BDR (o)	40/BDR	265	275
110	Residential: Condo - 1 BDR (o)	110/DU	265	275
111	Residential: Condo - 2 BDR (o)	150/DU	265	275
112	Residential: Condo - 3 BDR (o)	190/DU	265	275
113	Residential: Condo - >3 BDR (o)	40/BDR	265	275
114	Residential: Duplex/Towhouse - 1 BR (o)	110/DU	265	275
115	Residential: Duplex/Towhouse - 2 BR (o)	150/DU	265	275
116	Residential: Duplex/Towhouse - 3 BR (o)	190/DU	265	275
117	Residential: Duplex/Towhouse - >3 BR (o)	40/BDR	265	275
118	Residential: SFD - 1 BR (o)	140/DU	265	275
119	Residential: SFD - 2 BR (o)	185/DU	265	275
120	Residential: SFD - 3 BR (o)	230/DU	265	275
121	Residential: SFD - >3 BR (o)	45/BDR	265	275
122	Residential Room Addition: Bedroom (o)	45/BDR	265	275
123	Residential Room Conversion: Into a Bedroom (o)	45/BDR	265	275
124	Residential: Mobile Home	Same as Apt	265	275
125	Residential: Artist (2/3 Area)	75/DU	265	275
126	Residential: Artist Residence	75/DU	265	275
127	Residential: Guest Home w/ Kitchen	Same as Apt	265	275
128	Residential: Guest Home w/o Kitchen	45/BDR	265	275
129	Rest Home	70/Bed	555	490
130	Restaurant: Drive-In	50/Stall	1000	600
131	Restaurant: Drive-In Seating Area	25/Seat	1000	600
132	Restaurant: Fast Food Indoor Seat	25/Seat	1000	600
133	Restaurant: Fast Food Outdoor Seat	25/Seat	1000	600
134	Restaurant: Full Service Indoor Seat (a)	30/Seat	1000	600
135	Restaurant: Full Service Outdoor Seat	30/Seat	1000	600
136	Restaurant: Take Out	300/1,000 Gr SF	1000	600
137	Retail Area (greater than 100,000 SF)	50/1,000 Gr SF	265	275
138	Retail Area (less than 100,000 SF)	25/1,000 Gr SF	265	275
139	Rifle Range: Shooting Stalls/Lanes, Lobby	50/1,000 Gr SF	265	275
140	Rifle Range Facility: Bar/Restaurant	Total	Average	Average
141	School: Arts/Dancing/Music (i)	11/Student	265	275
142	School: Elementary/Jr. High (a) (p)	9/Student	265	275
143	School: High School (a) (p)	11/Student	265	275
144	School: Kindergarten (s)	9/Student	265	275
145	School: Martial Arts (i)	9/Student	265	275
146	School: Nursery-Day Care (p)	9/Child	265	275
147	School: Special Class (p)	9/Student	265	275

**SEWARAGE FACILITIES CHARGE
SEWAGE GENERATION FACTOR FOR
RESIDENTIAL AND COMMERCIAL CATEGORIES**

EFFECTIVE DATE: April 6, 2012

Line No.	FACILITY DESCRIPTION	PROPOSED SGF IN GPD	BOD (mg/l)	SS (mg/l)
148	School: Trade or Vocational (p)	11/Student	265	275
149	School: Training (p)	11/Student	265	275
150	School: University/College (a) (p)	16/Student	265	275
151	School: Dormitory (a) (n)	70/Student	265	275
152	School: Stadium, Pavilion	3/Seat	265	275
153	Spa/Jacuzzi (Commercial with backwash filters)	Total	265	275
154	Storage: Building/Warehouse	30/1,000 Gr SF	265	275
155	Storage: Self-Storage Bldg	30/1,000 Gr SF	265	275
156	Store: Ice Cream/Yogurt	25/1,000 Gr SF	1000	600
157	Store: Retail (l)	50/1,000 Gr SF	265	275
158	Studio: Film/TV - Audience Viewing Room (q)	3/Seat	265	275
159	Studio: Film/TV - Regular Use Indoor Filming Area (q)	50/1,000 Gr SF	265	275
160	Studio: Film/TV - Ind. Use Film Process/Machine Shop (q)	50/1,000 Gr SF	265	275
161	Studio: Film/TV - Ind. Use Film Process/Machine Shop	Total	265	275
162	Studio: Recording	50/1,000 Gr SF	265	275
163	Swimming Pool (Commercial with backwash filters)	Total	265	275
164	Tanning Salon: Independent, No Shower (r)	50/1,000 Gr SF	265	275
165	Tanning Salon: Within a Health Spa/Club	640/1,000 Gr SF	265	275
166	Theater: Drive-In	6/Vehicle	265	275
167	Theater: Live/Music/Opera	3/Seat	265	275
168	Theater: Cinema	3/Seat	265	275
169	Tract: Commercial/Residential	1/Acre	265	275
170	Trailer: Const/Field Office (c)	120/Office	265	275
171	Veterinary Clinic/Office	250/1,000 Gr SF	265	275
172	Warehouse	30/1,000 Gr SF	265	275
173	Warehouse w/ Office	Total	265	275
174	Waste Dump: Recreational	400/Station	2650	2750
175	Wine Tasting Room: Kitchen	200/1,000 Gr SF	265	275
176	Wine Tasting Room: All Area	50/1,000 Gr SF	265	275

FOOTNOTES TO SGFs TABLE

- (a) SFC rates for these facilities have historically been published in SFC ordinances.
- (b) Bureau of Sanitation will determine the flow based on the information given by applicants for facilities with industrial discharge. The flow will be redetermined by Sanitation inspectors annually based on water bills. If the actual flow exceeds the previous year's determined flow, the applicants will be charged for the difference.
If this type of facility is exempt from an industrial discharge permit, only the domestic SFC will be assessed.
- (c) The SFC for a bar shall be the sum of SFC's for all areas based on the SGF for each area (ex. fixed seat area, public table area, dancing area).
- (d) The determination of SGF for juice bars and coffee houses previously depended on the extent of the actual food preparation in house, not by the types of food provided. Food is assumed to be prepared offsite and as such, the three prior subcategories have been consolidated.
 - 1) SGF for no pastry baking and no food preparation is 720 gpd/1000 gr.sq.ft.
 - 2) SGF for pastry baking only and no food preparation is 720 gpd/1000 gr.sq.ft.
 - 3) SGF for complete food preparation is 25 gpd/seat, the same as a fast food restaurant.Juice bars and coffee houses do not serve any alcoholic drinks.
- (e) Building construction includes trailers, field offices, etc.
- (f) Cocktail lounge usually does not serve prepared food.
- (g) Cold storage facilities are categorized as follow:
 - 1) No Sales - the cold storage facility is used only for temporary storage, no selling is involved. For example, cold storage facilities at the harbor temporarily store seafood until it is distributed.
 - 2) Cold storage w/ retail sales - the primary function of this facility is to support the wholesale/retail operation of a store, such as supermarket freezers, refrigerators, etc.
- (h) Counseling centers include marriage counseling centers, alcohol/drug rehabilitation /dependency centers, nutrition centers, diet centers, etc.

- (i) Part-time basis schools or dance studios should be charged as retail area - 50 gpd /1000 gr.sq.ft. Full-time basis schools should be charged by the number of students.
- (j) Domestic waste is estimated at 50 gpd/1,000 square feet in addition to total process flow.
- (k) Bureau of Sanitation will determine if an industrial permit is needed for health spas. The first year flow is based on 650 gpd/1000 gr.sq.ft., and the Sanitation inspectors will redetermine the flow annually based on water bill from the previous year. The applicants are responsible for paying the difference of SFC.
Health club/spa includes lobby area, workout floors, aerobic rooms, swimming pools, Jacuzzi, sauna, locker rooms, showers, and restrooms. If a health club/spa has a gymnasium type of facility, this portion should be charged separately at the gymnasium SFC rate.
Gymnasiums include basketball court, volleyball court, and any other large open space with low occupancy density.
- (l) Lobby of retail includes lounges, holding rooms, or waiting area, etc.
- (m) Full service post offices include U.S. Postal Service, UPS, Federal Express, DHL, and etc.
- (n) The SGF for a college dormitory based on student capacity also includes the SGF for the dormitory cafeterias.
- (o) A bedroom is defined as an enclosed subdivision with 50 sq.ft. or more floor area in a residential building commonly used for sleeping purpose, and is partitioned off to form a habitable room.
- (p) The SGF for schools based on the student capacity, covers the following facilities:
 - 1) classrooms and lecture halls
 - 2) professors' offices
 - 3) administration offices
 - 4) laboratories for classes or research
 - 5) libraries
 - 6) bookstores
 - 7) student/professor lounges
 - 8) school cafeterias
 - 9) warehouses and storage areas
 - 10) auditoriums
 - 11) gymnasiums
 - 12) restrooms

It does not include water used by schools for swimming pools. When a school files an application for addition of any of the foregoing facilities, the student population will be reassessed and the total gpd for the new facility will be based on the number of students increased since the last SFC was paid or when the City implemented the SFC for the first time. The SFC for any school facility (ex. stadium, dormitory, etc.) not listed above, will be based on the designated SGF for that category.

- (q) The SFC for a TV or motion picture studio shall be the sum of SFC's for different facilities in the studio, based on the SGF for each facility. A studio may include one or more of the following facilities: audience viewing room, filming room, film processing, storage area, etc.
- (r) No independent tanning salons with shower were encountered during 1996 survey.
- (s) Alternative basis of charge for City's consideration. The prior square footage basis is also presented should the City decide to continue charging on that basis.

ATTACHMENT 4

Preliminary Utility Plan

[illegible]

RECEIVED: 12/15/93; REVISED: 1/15/94; ACCEPTED: 1/25/94.

- [illegible]

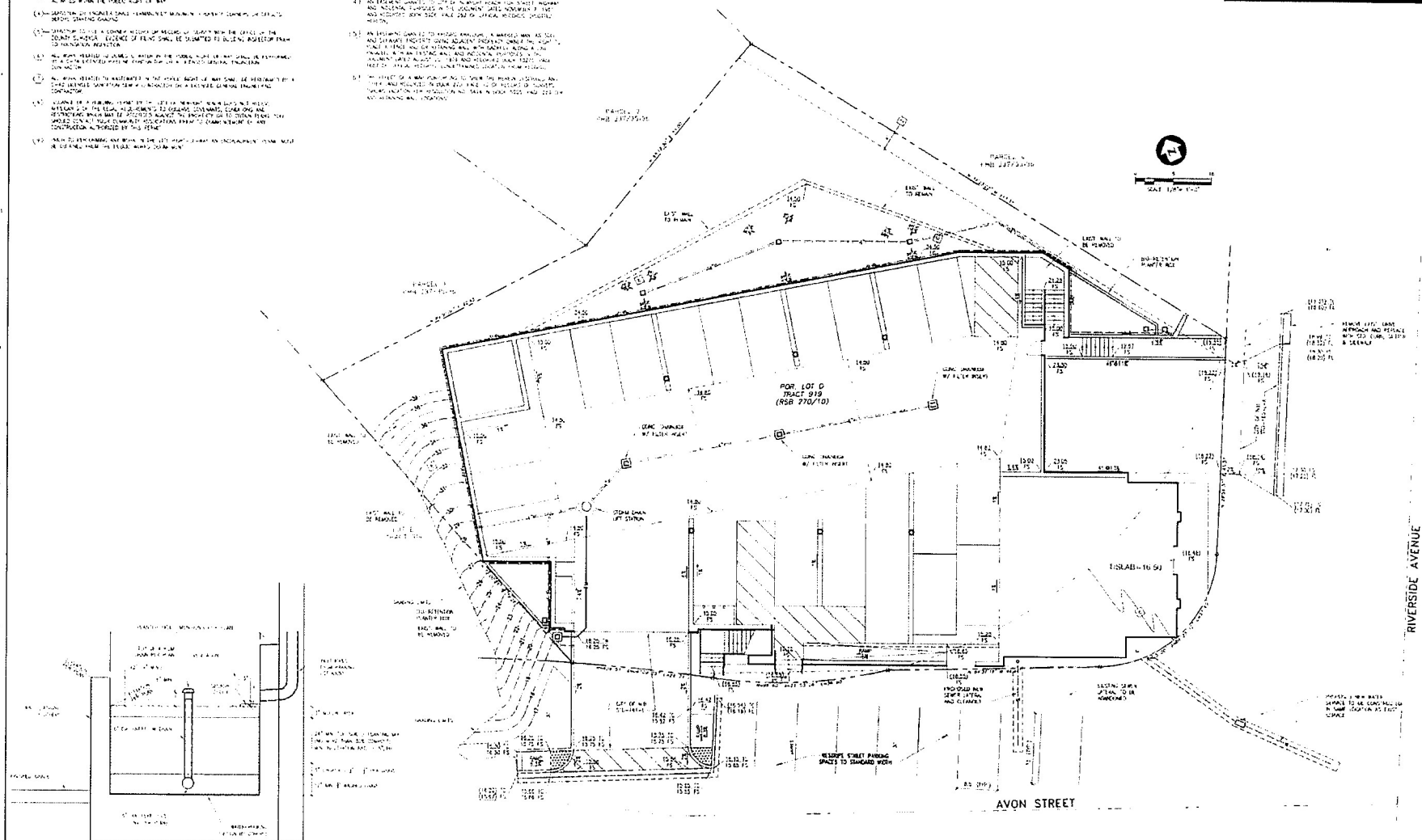
NET AREA	0.356 AC	16,240
COVERED AREA	0.252 AC	10,870
IMPERVIOUS AREA		
PAVE-PAVEMENT	0.303 AC	13,075
NEW OR REPLACEMENT	0.056 AC	2,350
EXIST-PAVEMENT	0.246 AC	10,725

CONSTRUCTION OF TUNNELS, DEVELOPMENT AND ADJACENT MARINE CREEK.
DUE TO THE ADJACENT MARINE CREEK, JUNCTION AND MARINE DEVELOPMENT.

CALL ENGINEER FOR RECONSTRUCTION APPROVAL REQUIREMENT TO
BACKFILL OF ALL DRAIN PIPES. CONTACT CALL ENGINEER TO
FIELD VERIFY LOCATION, SIZE, AND DEPTH OF DRAIN SYSTEM.



KUTAN, S. A.
 MC L. SWETS
 1981
 1981-1982
 1981-1982
 1981-1982



PLASTER WALLS, PLASTER DESIGN BY OTHERS
UNDER SEPARATE PLAN & PERMIT

DETAIL
BOLT TENSION PLATE IN BOX
SECTION

PRELIMINARY GRADING PLAN

7.0.0011 0101 224

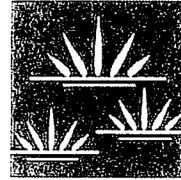
Exhibit 5

Biological Resources Memorandum

TECHNICAL MEMORANDUM

GLENN LUKOS ASSOCIATES

Regulatory Services



PROJECT NUMBER: 05600002RIVE

TO: Gregg Ramirez, Principal Planner, City of Newport Beach
Makana Nova, Associate Planner, City of Newport Beach

FROM: Tony Bomkamp

DATE: September 23, 2019

SUBJECT: 215 Riverside Avenue, Newport Beach: Delineation and Evaluation of Wetland within Avon Street Right-of-Way West of Subject Property

On September 3, 2019, I conducted a site visit to examine a potential wetland in the Avon Street right-of-way, west of the 215 Riverside Avenue project site (Exhibits 1 – Vicinity Map). During the site visit, I conducted a delineation of wetlands as defined in the City of Newport Beach Local Coastal Program (LCP) as well as in the California Coastal Act. I also evaluated the area to determine whether the area that is vegetated with predominately southern cattail (*Typha domingensis*) meets the definition of a stream pursuant to Section 1602 of the Fish and Game Code. Finally, I evaluated the functions of the potential wetland area to determine the need for set backs or buffers in accordance with Section 21.30B.040.C of the City's Local Coastal Program regarding Wetlands, Deepwater Areas, and Other Water Areas. Based on the presence of a predominance of wetland indicator plant species and wetland hydrology indicated by the presence of surface water I determined that a wetland is present along Avon Street. Wetland data sheets are provided as Appendix A.

It is also important to note that during review of the City's files, additional information was found that documents the presence of wetlands at this location. Specifically, a letter from Dr. Jan Vandersloot dated April 19, 1989 detailing the results of a hydrological study of the area which indicates that the wetland is supported by a "spring" which drains toward the west, discharging to a culvert near the western terminus of the wetland, consistent with my observations. Dr. Vandersloot's letter is attached as Exhibit 5. A hand-drawing of the wetland area is also included as Exhibit 6.

WETLANDS

The right-of-way for Avon Street supports a narrow strip of wetland dominated by southern cattail (*Typha domingensis*, OBL) with a few scattered arroyo willows (*Salix lasiolepis*, FACW) in the canopy layer with an understory of saltgrass (*Distichlis spicata*, FAC), that is intertwined with the southern cattail. The extent of wetland area in the Avon Street right-of-way is depicted on Exhibit

2. The narrow strip of wetland area is bisected by two pedestrian bridges connected to sidewalks north of Avon Street. During the September 3, 2019 site visit, water from the wetland was detected discharging to a pipe at the west end of the wetland area beneath a dense thicket of giant reed (*Arundo donax*, FACW), which appears to allow excess water in the wetland to drain. The wetland area is restricted on the south by the Avon Street curb and on the north by a steep slope, such that wetland area typically ranges from two to six feet in width.

In order to evaluate the need for buffers, measurements were taken beginning approximately 100 feet from the 215 Riverside Avenue property. For the entire 100-foot wetland segment nearest the 215 Riverside Avenue Property, the wetland is dominated by southern cattail with saltgrass understory and there are no arroyo willows within 100 feet of the 215 Riverside Avenue property. At the eastern pedestrian bridge, as depicted on Exhibit 3, the wetland vegetation transitions from mostly southern cattail to alkali bulrush (*Schoenoplectus maritimus*, OBL), which is the dominant wetland plant east of the pedestrian bridge. The area immediately east of the bridge exhibited surface water of one to two inches in depth, with surface water no longer present toward the eastern extent of the alkali bulrush. As depicted on Exhibit 3, the wetland ends abruptly where the vegetation changes to a monoculture of alkali heliotrope (*Heliotropium currasavicum*, FACU) (Exhibit 4, Photographs 1). The area dominated by alkali heliotrope, immediately east of the wetland was evaluated for hydric soils and subsurface water. Neither were detected confirming that the extent of alkali bulrush is the limit of the wetland on the east.

SECTION 1602 NOTIFICATION REQUIREMENTS

In an email to the City dated August 23, 2019, Mr. Charles Klobe made the following assertion:

On another note the adjacent riparian areas and stream of water are absolutely jurisdictional and the development of this site should be required to file a formal notification with the California Department of Fish and Wildlife to ensure that CDFW also concurs that there are no impacts from the proposed development. The site does not drain into this area however it is directly adjacent to the development and the CDFWS could at minimum require specific on-site protection to protect their stream.

In my professional opinion, I do not believe that the wetland within the Avon Street right-of-way meeting the California Fish and Game Code for a "Stream"; rather, the feature is best characterized as a "Slope wetland". Nevertheless, this is a moot point because, as discussed below, the wetland area is 29 feet from the closest area of impact and thus, there would be no Notification Requirements under Section 1602 as there is no potential alteration of a streambed or lake.

WETLAND BUFFERS

As noted, during the September 3, 2019 site visit, I evaluated the functions of the potential wetland area to determine the need for setbacks or buffers in accordance with Section 21.30B.040.C of the Local Coastal Program, which states

C. Wetland Buffers. A protective open space buffer shall be required to horizontally separate wetlands from development areas. Wetland buffers shall be of a sufficient size to ensure the biological integrity and preservation of the wetland. Wetlands shall have a minimum buffer width of one hundred (100) feet wherever possible.

1. Exception: Smaller wetland buffers may be allowed only where it can be demonstrated that:

a. A one hundred (100) foot wide buffer is not possible due to site-specific constraints; and

b. The proposed narrower buffer would be amply protective of the biological integrity of the wetland given the site-specific characteristics of the resource and of the type and intensity of disturbance.

Existing Condition

As described above, the wetland consists of a narrow strip (typically three- to six-foot-wide) immediately adjacent to the concrete curb along Avon Street, such that along the entire length of wetland, Avon Street is located approximately one to two feet from the wetland edge (see Exhibit 4, Photographs 2). The northern slope vegetated with mostly non-native species including overhanging Brazilian pepper trees (*Schinus terebinthifolius*), an invasive species,¹ giant reed, also an invasive species² and non-native ornamentals such as plumbago (*Plumbago capensis*) and blue gum eucalyptus (*Eucalyptus globulus*), which line the majority of the slope.

As depicted on Exhibit 3, the 215 Riverside Avenue site currently contains a vacant building with associated asphalt parking area. Immediately west of the parking area is a concrete wall that was constructed in a manner that encroaches on to City property and will be removed as a component of the project.

As depicted on Exhibit 3, the existing retaining wall is located approximately 29 feet from the eastern-most extent of the wetland, which is approximately 39 feet west of the property line and the limit of development upon completion of the project.

¹ <https://www.cdf-lpc.org/plants/profile/schinus-terebinthifolius-profile>

² <https://www.cdf-lpc.org/plants/profile/arundo-donax-profile>

Purposes for Wetland Buffers

Wetland buffers are often necessary to protect or ensure the integrity/functions of wetlands with high resource value. Wetland functions typically are separated into three areas for purpose of evaluating functions and associated impacts: Hydrologic, Biogeochemical (Water Quality), and Biological. Wetland buffers often are necessary to protect one or more of these functions from degradation. The purpose of this analysis is to evaluate the potential effects of the proposed project at 215 Riverside Avenue.

Hydrological/Hydrology

As noted above, the source of water detected in the wetland is from groundwater that ultimately drains to the western-most end of the wetland, discharging to a culvert approximately 430 feet from the eastern end of the wetland. Thus, the proposed project would have no potential to affect the hydrology of the wetland area, which is totally dependent on a groundwater source unconnected to the proposed project.

Wetlands also provide certain functions such as surface water storage, groundwater discharge and support of aquatic plants and animals. The proposed project exhibits no potential for changing the ability of the narrow wetland area to store limited amounts of surface water or groundwater originating from the adjacent slope that discharges to the wetland area. The project would also have no effect on the hydrology such that changes to wetland species would be caused by the project. Other potential biological impacts are discussed below.

Biogeochemical/Water Quality

Buffers often protect wetlands from degradation of biogeochemical functions such as sediment inputs, discharge of pollutants originating from landscaped areas, discharge of pollutants as street runoff, or pollutants from other sources. Any potential impacts to water quality during construction would be fully addressed through project BMPs such as silt fence, straw wattle, and other necessary protections determined in coordination with the City. In the post-project condition, the proposed project would have no potential to impact water quality.

Biological/Habitat Functions

As noted above, the cattail-dominated wetland is immediately adjacent to Avon Street, typically within a few feet of the street for its entire length as can be seen on Exhibit 4, Photographs 1 and 2. Thus, based on the existing conditions, as summarized above, the wetland exhibits very limited functions for wildlife, given the immediate surroundings, larger urban environment, very high "edge to habitat area" ratio, and the general low-value of cattails as habitat for special-status plants and animals. This is also the case for the area dominated by alkali bulrush east of the eastern

MEMORANDUM
September 23, 2019
Page 5

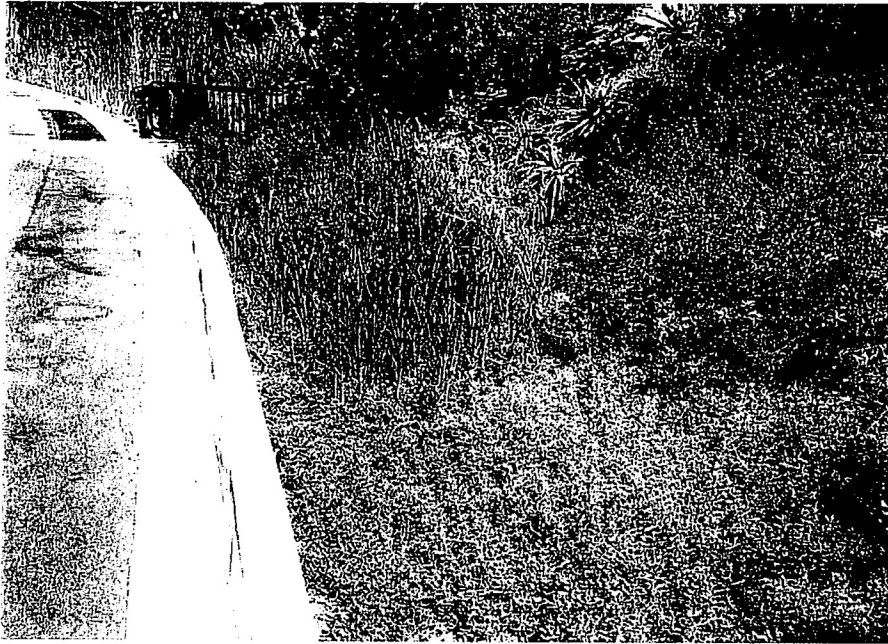
pedestrian bridge, which has a much lower stature than the cattails (three feet for the bulrush and over ten feet for the cattails).

Given the low-habitat value associated with the narrow strip of cattail and alkali bulrush, the proposed project at 215 Riverside Avenue would have no potential for indirect impacts on biological resources (as noted above, temporary grading would be approximately 29 feet from the eastern edge of the wetland) and in the final project, any potential development would be 39 feet from the wetland which is identical to the existing condition.

Thus, in the final project configuration, there would be no development within 39 feet of the wetland, identical to the current conditions. The 39-foot set back in the final configuration would provide more than adequate protection of the wetland, given that it is of low value and within one or two feet from Avon Street for the entire length.

CONCLUSIONS

The Avon Street Wetland is a slope wetland or groundwater fed wetland that has been documented at this location since at least 1989. The proposed development at 215 Riverside Avenue would have no potential to affect the wetland directly through dredging, filling, or other alteration. The proposed development would not affect the functions of the wetland which is located as close as two feet from Avon Street along its entire length, limiting the wetland functions. The proposed development has no potential to affect the wetland hydrology, which consists of discharging groundwater. The proposed project also exhibits no potential to affect biogeochemical (water quality) functions and would not affect potential habitat functions. Thus, the proposed development has not potential to adversely affect the Avon Street Wetland.



Photograph 1: Wetland ends at Bulrush transition to alkali heliotrope in center of photo.



GLENN LUKOS ASSOCIATES

Exhibit 4



Photograph 2: Photograph cattail dominated wetland and proximity to Avon Street curb west of eastern pedestrian bridge.

215 RIVERSIDE AVENUE PROJECT

Site Photographs

IAN D. VANDERSLOOT, M.D.

DIPLOMATE AMERICAN BOARD OF DERMATOLOGY

5-360
COUNCIL AGENDA

NO. F-4(b)

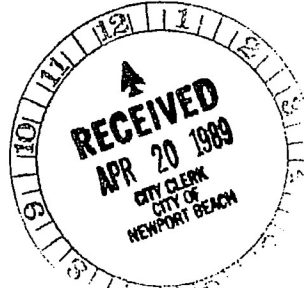
8101 NEWMAN, SUITE C
HUNTINGTON BEACH, CA 92647

2221 16th Street
Newport Beach, CA 92663
April 19, 1989

Mayor Don Strauss, and
Newport Beach City Council Members
City of Newport Beach
3300 Newport Blvd.
Newport Beach, CA 92663

Re: Avon Street Creek

Dear Mayor Strauss, and City Council Members,



Date 4/20/89 (714) 848-0770

COPIES SENT TO:

- ☐ Mayor
- ☐ Councilmen
- ☐ Manager
- ☐ Attorney
- ☐ Bldg. Dir.
- ☐ Gen. Serv. Dir.
- ☐ P.S. & R. Dir.
- ☐ Planning Dir.
- ☐ Police Chief
- ☐ P.W. Dir.
- ☐ Other

I wish to thank the City of Newport Beach for abandoning the proposed parking lot along Avon Street, which would have destroyed the wetland along the street known as Avon Street Creek.

However, there now appears to be another threat to this wetland which deserves your attention. Orange County Vector Control, apparently concerned about mosquitoes, has recently been asking the Public Works Department to clear out the vegetation in the wetland. It appears that there is presently not enough water in certain areas of the creek to support the mosquito fish which eat the mosquito larvae. In the past, the City has routinely removed vegetation in the creek with a backhoe, indiscriminately removing all vegetation every year or so.

Before authorizing this drastic step, however, I would like to request that the City hold off on the backhoe until our citizen's group, the Friends of Avon Street Creek, can meet and devise a plan to present to the City to protect and enhance the wetland vegetation, while restoring the water needed for the mosquito fish.

The problem is basically twofold. One is that vegetation has grown to the point of crowding out the water, and needs to be thinned out. The other problem is that the recently completed storm drain under Avon Street is diverting ground water which normally would surface in the creek alongside the road, providing the water source for the creek. This diversion of water, approximately 22 gallons a minute of crystal clear fresh water, can be measured at the main rear entrance of the Newport Imports dealership at the manhole there. The water from the artesian springs uncovered by the construction of the storm drain is now largely being lost into the storm drain pipes, due to the leaky nature of the storm drains.

The result is that before the storm drain construction, water flowed in the creek at the second set of stairs going up the west side of Cliff Drive Park at between 2 and 5 gallons a minute as measured by my geology consultants. After the storm drain, the soil is merely damp at this point, although the creek flows at its normal rate of about 3 gallons a minute at the western terminus of the creek.

Because of these changes, we would like to be given the opportunity to analyze alternatives designed to restore water to the creek. These alternatives range from elevating the drain pipes at the west end of

JAN D. VANDERSLOOT, M.D.

DIPLOMATE AMERICAN BOARD OF DERMATOLOGY

8101 NEWMAN, SUITE C
HUNTINGTON BEACH, CA 92647

Mayor Strauss
April 19, 1989
Page 2

(714) 848-0770

of the creek, so that the water level is increased throughout the wetland (due to the positive pressure nature of the artesian springs which feed the creek, water height in the creek can be adjusted by raising or lowering the drainage outlets of the creek at its western end. The springs will keep pumping water up to the level of drainage. If the drainage is blocked, flooding of the area occurs, which is what happened last Spring when a worker bulldozed over the drain pipe. The drain at the western end, if raised two feet, will raise the water level in the middle of the creek, where it is now needed). Water can also be restored into the creek by dredging down closer to the water table. Water can also be brought up from the water table by a pump, which might actually be cheaper to maintain than regular and repeated backhoe operations (the Environmental Nature Center also uses a pump to circulate water, although it has to purchase its water, while here it is free and available).

In any case, a well thought out plan should be considered and analyzed, then implemented, rather than allowing precipitous and indiscriminate removal of vegetation as requested by Vector Control. I would like to request that the Public Works Department and the General Services Department not be authorized to remove the vegetation until our group can work with the City in devising an alternative plan.

In addition, I would also recommend that since the Department of Fish and Game has determined that this area represents a wetland, and since this wetland lies within the Coastal Zone, that a Coastal Permit be applied for, before indiscriminate disruption of the flora and fauna in the creek.

In this same regard, and since the status of this area as a wetland is disputed by some of the City's staff, I would like to request that the City initiate the proper procedures to determine once and for all that this area is indeed a wetland, so that in the future, this wetland will receive the normal official protections that heretofore have been lacking.

Thank you.

Sincerely,

Jan D. Vandersloot MD
Jan D. Vandersloot MD

Attached: Register news article 4/89

NEWS

Environmentalists, Juaneno Indians fight parking-lot plan

Newport would hurt wetlands, historic pitch mine, they say

By Roberta Landman
The Register

NEWPORT BEACH — A 40-space parking lot for an unimproved section of Avon Street is raising the hackles of Newport Beach environmentalists and an Indian tribe.

Environmental-minded citizens are fighting the city's parking-lot plan, which includes paving over what the city calls an old Avon Street drainage ditch and digging out 15 feet from the cliff that the narrow 600-foot-long, shallow waterway hugs.

The environmentalists say the water that varies in depth from 2 inches to 2 feet lies not in a drainage ditch, but in a natural freshwater wetland habitat for wildlife, insects and plants — the only remaining wetlands in Newport Heights.

And somewhere within the nearby cliff is the site of a long-hidden Indian pitch mine, they said. "Indians got pitch for (sealing) their boats there," said Newport Harbor High School teacher Robert House, who opposes the plan.

Along with House and like-minded people in the Newport Heights neighborhood, the Environmental Nature Center and the science faculty at Newport Harbor High School, the Juaneno Indian tribe also is keeping a wary eye on the city's plans.

Tribe member Gloria Felix of Huntington Beach said the tribe's oral history recounts a pitch mine in the Avon Street area. If the cliff is excavated, she said the remaining 2,500 Juanenos would want the work completed carefully and done with a Juaneno tribe members at the site. The tribe that once roamed San Diego and Orange counties had its largest village in San Juan Capistrano, she said.

Although city representatives had promised an archeologist would monitor excavation, Felix said past excavations in other areas have resulted in archeologists incorrectly attributing Juaneno artifacts and tools to her tribe. House insists the street site is worth saving for its historical

value and for its value as a resource for education. For the past 35 years, the wetlands strip has been a nature-study site for high-school students engaged in science assignments, he said.

His sentiments are shared by Jan Vandersloot, leader of a protest group that has named itself Friends of the Avon Street Wetlands.

Vandersloot, a Newport Heights resident, has commissioned biological and geological assessments of the Avon Street area and cliff site. The results of a study by biological consultant Karlin Marsh confirm Vandersloot's notion that the area, though small, is a natural wetlands area — a remaining piece of historic wetlands once extensive in the Newport Beach area.

"The (freshwater) wetland is small, but it's nice, and quite unusual in something as intensely developed an area as Newport Heights," Marsh said.

"It's a reminder of what used to be ... the last of its kind. That makes it special."

"It has a good assortment of plants and animals within the environment ... aquatic insects ... butterflies nectaring on flowers ... the watercress is coming into bloom. ... It's functioning as a foraging source and a source of water of animals and birds," Marsh said.

"I'm not a hydrologist," Marsh said, "but I observed what appeared to be spring-fed seepage into that little creek, movement from where a spring seemed to be entering it." Wherever that water comes from, Marsh said, "It's not surface runoff."

City officials in the Planning and Public Works departments think otherwise. They say the water comes from urban runoff — the residue of watering lawns in Newport Heights mixed with a high water table.

The city also received contrary biological information from a study it commissioned. That report, by Karen Swirsky of Michael Brandman Associates, found stagnant water instead of moving water on the Avon Street waterway and said the area did not represent a significant biological resource.

One report, however, did establish the area as a wetland habitat, but it diminished it in importance.

Both Vandersloot and city officials asked the state Department of Fish and Game to evaluate the



Jan D. Vandersloot, left, and his children, Jon, 4, and Tiffany, 2, gather near an area called the Avon Street Creek, along with Peggy and Dan Clark, and Jean Watt, far right. These and other area residents are protesting a city plan to pave over what they feel is a natural wetland in an area where Newport Beach wants to put up a parking lot.

Vandersloot said his citizens group is prepared to take legal action to stop the city from continuing with the project. The future of the parking lot also will depend on how much the city wants to listen to another protest group, the Newport Heights Community Association, which is opposed to having a metered parking lot nearby for fear it will drive more people who use the Mariners Mile commercial area to look for free parking on neighborhood streets.

biological worth of the area. Both were told its value as a wetlands was insignificant on a regional basis. Fish and Game sanctioned the city's filling in the area on a trade-off basis, Don Webb of the city's Public Works Department said.

In exchange for Fish and Game approval, the city would contribute to a fund for a Fish and Game freshwater project at the mouth of Big Canyon. The city's contribution,

"probably in the low thousands," will be established "at the time we go forward with the project," Webb said.

Webb said he expects the project to begin in June. The city is waiting for results of soil studies "to establish what the ground is like at the (cliff) retaining wall," Webb said. To create enough space for head-in

parking, the city plans to cut away 15 feet of cliff slope and build a retaining wall.

Vandersloot likes to think the soil studies are necessary because nature is contriving against the city, sending up waters from underground springs to stop the project's advancement.

Webb said, "We're aware there's water." But the city, he said, would be able to design around whatever water there might be without any major expense.

Vandersloot said his citizens group is prepared to take legal action to stop the city from continu-

ing with the project.

The future of the parking lot also will depend on how much the city wants to listen to another protest group.

The Newport Heights Community Association is opposed to having a metered parking lot nearby for fear it will drive more people who use the Mariners Mile commercial area to look for free parking on neighborhood streets.

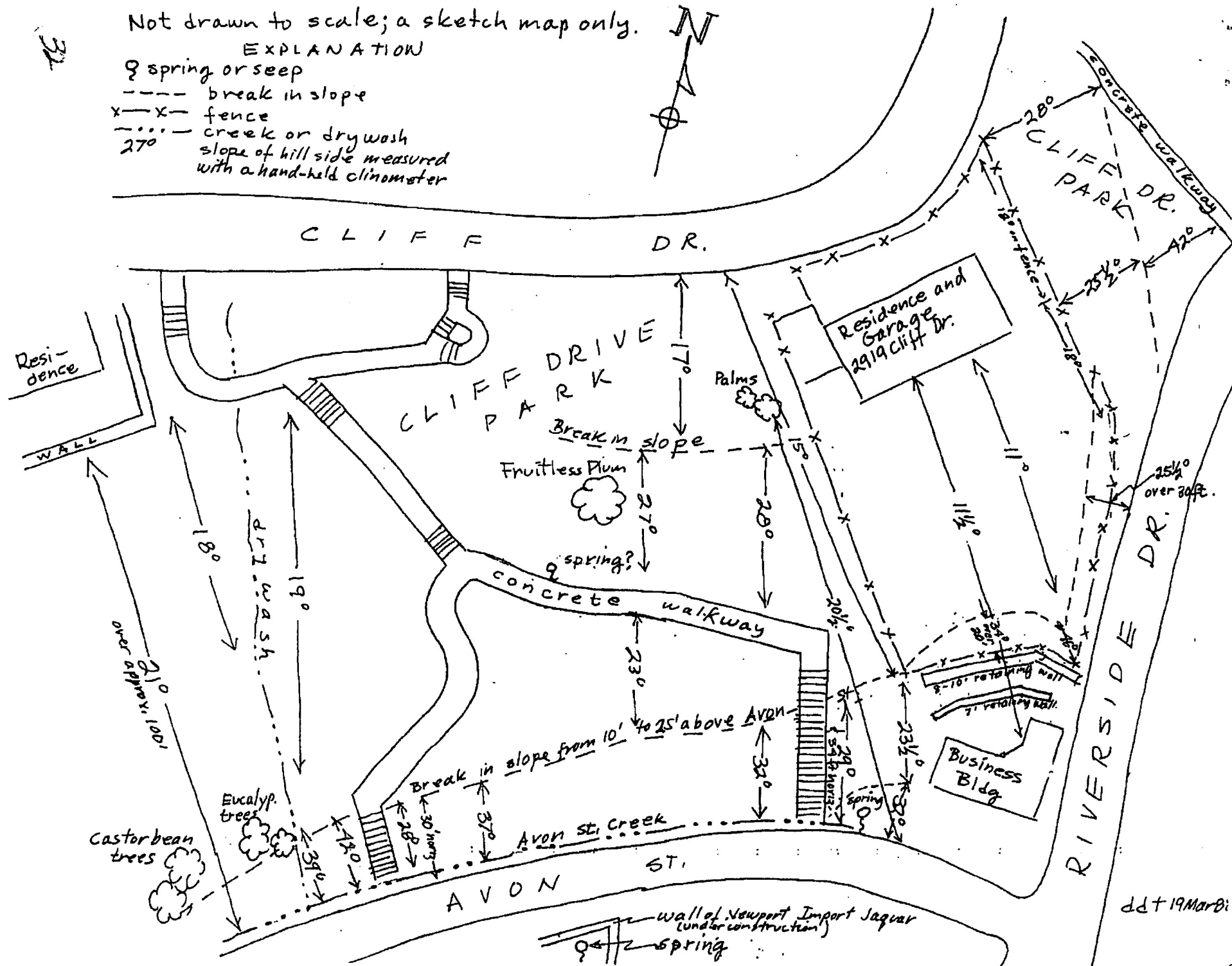
"We're getting terrible traffic problems," said Gail Demmer, the organization's president.

Are the Families of 20 years ago the same as the Families of today? We know better. That's why Accent focuses on Families and family relationships each Thursday. How are Family relationships changing? What trends are emerging and how can you better cope with them? Members of the household find out each week, while Accent explores the Family.

Not drawn to scale; a sketch map only.

EXPLANATION

- Q spring or seep
- break in slope
- x-x fence
- ... creek or dry wash
- 270° slope of hill side measured with a hand-held clinometer



dd + 19 Mar 81

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Avon Street Wetland City/County: Newport Beach Sampling Date: 9-3-19
 Applicant/Owner: City of Newport Beach State: CA Sampling Point: 1
 Investigator(s): Tony Bomkamp Section, Township, Range: Section 28, T6S, R10W,
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): Concave Slope (%): <2%
 Subregion (LRR): L Lat: 33° 37'19.17" Long: 117° 55'27.17" Datum: Nav83
 Soil Map Unit Name: NA NWI classification: NA - Not in Wetland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
= Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species <u>75</u> x 4 = <u>300</u> UPL species _____ x 5 = _____ Column Totals: <u>75</u> (A) <u>300</u> (B) Prevalence Index = B/A = <u>4.0</u>
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
= Total Cover				
Herb Stratum (Plot size: _____)				Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Heliotropium curassavicum</u>	<u>75</u>	<u>Yes</u>	<u>FACU</u>	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
= Total Cover				
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
1. _____				
2. _____				
= Total Cover				
% Bare Ground in Herb Stratum <u>25</u> % Cover of Biotic Crust <u>0</u>				
Remarks:				

Sampling Point: 1

HYDROLOGY

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WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Avon Street Wetland City/County: Newport Beach Sampling Date: 9-3-19
 Applicant/Owner: City of Newport Beach State: CA Sampling Point: 2
 Investigator(s): Tony Bomkamp Section, Township, Range: Section 28, T6S, R10W,
 Landform (hillslope, terrace, etc.): Slope Wetland Local relief (concave, convex, none): Concave Slope (%): <2%
 Subregion (LRR): L Lat: 33° 37'19.17" Long: 117° 55'27.17" Datum: Nav83
 Soil Map Unit Name: NA NWI classification: Palustrine
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species <u>70</u> x 1 = <u>70</u> FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species <u>10</u> x 4 = <u>40</u> UPL species _____ x 5 = _____ Column Totals: <u>80</u> (A) <u>110</u> (B) Prevalence Index = B/A = <u>1.4</u>
Sapling/Shrub Stratum (Plot size: _____) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover				
Herb Stratum (Plot size: _____) 1. <u>Schoenoplectus maritimus</u> <u>70</u> <u>Yes</u> <u>OBL</u> 2. <u>Heliotropium curassavicum</u> <u>10</u> <u>No</u> <u>FACU</u> 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ _____ = Total Cover				
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____ _____ = Total Cover				
% Bare Ground in Herb Stratum <u>20</u> % Cover of Biotic Crust <u>0</u>				
Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks:				

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)							
Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Blotic Crust (B12)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2 inches</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: _____

Remarks: _____

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Avon Street Wetland City/County: Newport Beach Sampling Date: 9-3-19
 Applicant/Owner: City of Newport Beach State: CA Sampling Point: 3
 Investigator(s): Tony Bomkamp Section, Township, Range: Section 28, T6S, R10W,
 Landform (hillslope, terrace, etc.): Slope Wetland Local relief (concave, convex, none): Concave Slope (%): <2%
 Subregion (LRR): L Lat: 33° 37'19.17" Long: 117° 55'27.17" Datum: Nav83
 Soil Map Unit Name: NA NWI classification: Palustrine

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>70</u> x 1 = <u>70</u> FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: <u>70</u> (A) <u>70</u> (B) Prevalence Index = B/A = <u>1.0</u>
Sapling/Shrub Stratum (Plot size: _____) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover				
Herb Stratum (Plot size: _____) 1. <u>Schoenoplectus maritimus</u> <u>50</u> <u>Yes</u> <u>OBL</u> 2. <u>Typha domingensis</u> <u>20</u> <u>yes</u> <u>FACU</u> 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ _____ = Total Cover				
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____ _____ = Total Cover				
% Bare Ground in Herb Stratum <u>10</u> % Cover of Biotic Crust <u>0</u>				
Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks:				

Sampling Point: 3

HYDROLOGY

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