APPENDIX F – WATER QUALITY MANAGEMENT PLAN

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WATER QUALITY MANAGEMENT PLAN
(WQMP)
For
Newport Boulevard and 32nd Street Modification Project
From 30th Street to Via Lido

CITY OF NEWPORT BEACH
DEPARTMENT OF PUBLIC WORKS

City of Newport Beach
Department of Public Works
Water Quality Management Plan (WQMP)

For

Newport Boulevard and 32nd Street Modification Project From 30th Street to Via Lido

Prepared by: **VA Consulting, Inc.**
46 Discovery, Suite 250
Irvine, CA 92618

Date: October 2013

Name of Preparer: Roger Chung, P.E.

Signature of Preparer: _____ Date: _____

Prepared for: **City of Newport Beach, Public Works**

OWNER'S CERTIFICATION

CITY OF NEWPORT BEACH
Public Works Department
WATER QUALITY MANAGEMENT PLAN

For

Newport Boulevard and 32nd Street Modification Project
From 30th Street to Via Lido

This Water Quality Management Plan (WQMP) has been developed for the City of Newport Beach, Public Works Department by VA Consulting, Inc. The WQMP is intended to comply with the requirements of the City's MS4 permit (Order R8-2009-0030) and 2003 Drainage Area Management Plan (DAMP) requirements.

The City of Newport Beach is responsible for the implementation of the provisions of this plan to ensure consistency with the 2003 DAMP, the most current version of the City's Local Implementation Plan (LIP) and the intent of the current MS4 permit (Order R8-2009-0030).

Responsible Party:

City of Newport Beach
Public Works Department
100 Civic Center Drive
Newport Beach, CA 92660
(949) 644-3311

CONTENTS

SECTION I

Discretionary Permit(s) and Water Quality Conditions

This section refers to the issuance of grading/building and other discretionary permits which enables the City to place water quality conditions on private projects in order to meet NPDES requirements. City of Newport Beach public projects are required to meet these same NPDES requirements but they are not subject to the City's grading/building permitting process.

Therefore, this section is not applicable to the City's public projects.

SECTION II

Project Description

Project Description: The Newport Boulevard and 32nd Street Modification Project is located along Newport Boulevard from 30th Street to Via Lido. One additional lane is proposed along Newport Boulevard for both northbound, from 30th Street to 32nd Street, and southbound, from Via Lido to 32nd Street. A 6-foot wide bike lane is also proposed on both northbound and southbound of Newport Boulevard. A public parking lot with a minimum of 26 parking spaces which would replace the 26 curb side public parking spaces on Newport Boulevard is proposed on the west side of Newport Boulevard between 32nd Street and Finley Avenue. To enhance the visual quality of the project area and improve safety, raised landscape medians along Newport Boulevard, as well as, additional landscape areas around the new parking lot, the sidewalk on the southeast corner of 32nd Street and Newport Boulevard, and the northeast corner of Finley and Newport Boulevard are proposed.

In the post-project condition, the total pervious area is approximately 0.32 acres. The project limits is within an urban MS4 (Orange County Permit #R8-2009-0030).

Existing Conditions: The existing condition of the project site is public roadway with some landscaped areas. The street flows are intercepted by existing curb opening catch basins. This project is located in Santa Ana River Hydrologic Unit in the Lower Santa Ana River Hydrologic Area (number 801.14). Lower Newport Bay is the primary receiving water.

Potential Storm Water Pollutants: Metals, Nutrients, Other Organics, Pathogens, Pesticides and Toxicity.

Percent of site to be covered by impervious surface: 92%

Post Development Drainage Characteristics: The drainage flow pattern will remain the same as existing condition. The proposed project will increase the net pervious area due to the increase of landscape areas in the medians and parking lot.

Ownership: City of Newport Beach

SECTION III

Site Description

Site Address: Newport Boulevard (From 30th Street to Via Lido)

City: Newport Beach, California

Project Size (acres): 4.13 acres

Pre-project percent impervious: 4.03 ac. (~98%)

Post-project percent impervious: 3.81 ac. (~92%)

Soil Type: A

Environmentally Sensitive Areas (ESAs): Yes, Newport Bay.

Watershed: Newport Bay

Downstream Receiving Waters: Pacific Ocean

Total Maximum Daily Loads (TMDLs): TMDLs have been established for Lower Newport Bay, which include metals, nutrients, other organics, pathogens, pesticides and toxicity.

Hydrologic Conditions of Concern:
There is approximately 0.10 ac. of pervious area in the pre-project condition. The pervious area increases in the post-project condition to approximately 0.32 ac. as shown in Figure 3. Due to the total net pervious area increase, there are no hydrologic conditions of concern for this project.

Green Streets Evaluation: The total net pervious area increase for the project is approximately 0.22 acres. The proposed project is required to evaluate the practicability of meeting the requirements of "Green Streets," *Managing Wet Weather with Green Infrastructure, Municipal Handbook, Green Streets* prepared by Robb Lukes and Christopher Kloss of Low Impact Development Center dated December 2008 (EPA-833-F-08-009). Green Street requires the evaluation of alternative street design width, swales, bioretention curb extensions and sidewalk planters, permeable pavement, and sidewalk trees and tree boxes. The following summarize the evaluation of each Green Street requirement.

- Alternate Street Design (Street width) – The proposed project lane width is in compliance with the City of Newport Beach standard. A reduction of the lane width is not permitted and could result in a reduction of safety for motorists.
- Swales – The proposed Project does not require a swale due to an increase in pervious area.
- Bioretention Curb Extensions and Sidewalk Planters – New landscape area is proposed on the southeast corner of Newport Boulevard and 32nd Street.
- Permeable Pavement – The use of permeable pavement in conjunction with the high traffic volume and the high axle loads associate with the project would be inappropriate.
- Sidewalk Trees and Tree Boxes – The limited right-of-way prohibits the installation of sidewalk trees and tree boxes.

SECTION IV

Best Management Practices (BMPs)

Source Control BMPs

The following tables show source control BMPs (routine non-structural and routine structural) and model maintenance procedures included in this project and those that were not applicable.

Routine Non-Structural BMPs

Identifier	Name	Check One		If not applicable, state brief reason
		Included	Not Applicable	
N1	Education for property owners, tenants and occupants		X	City of Newport Beach owned and maintained public roadway
N2	Activity Restrictions	X		
N3	Common Area Management		X	Public roadway
N4	BMP Maintenance		X	BMPs could not be implemented
N5	Title 22 CCR Compliance (how development will comply)		X	Public roadway
N6	Local Industrial Permit Compliance		X	Public roadway
N7	Spill Contingency Plan		X	Public roadway
N8	Underground Storage Tank Compliance		X	No underground storage tank, public roadway
N9	Hazardous Materials Disclosure Compliance		X	No hazardous material anticipated, public roadway
N10	Uniform Fire Code Implementation		X	Public roadway
N11	Common Area Litter Control	X		
N12	Employee Training	X		
N13	Housekeeping of Loading Docks		X	No loading docks, public roadway
N14	Common Area Catch Basin Inspection	X		
N15	Street Sweeping Private Streets and Parking Lots	X		

Municipal Activities Model Maintenance Procedures for the City of Newport Beach

Identifier	Name	Check One		If not applicable, state brief reason
		Included	Not Applicable	
Fixed Facility Model Maintenance Procedures				
FF1	Education for property owners, tenants and occupants		X	City of Newport Beach owned and maintained public roadway
FF2	Activity Restrictions	X		
FF3	Common Area Management		X	Public roadway
FF4	BMP Maintenance		X	BMPs could not be implemented
FF5	Title 22 CCR Compliance (how development will comply)		X	Public roadway
FF6	Local Industrial Permit Compliance		X	Public roadway
FF7	Spill Contingency Plan		X	Public roadway
FF8	Underground Storage Tank Compliance		X	No underground storage tank, public roadway
FF9	Hazardous Materials Disclosure Compliance		X	No hazardous materials anticipated, public roadway
FF10	Uniform Fire Code Implementation		X	Public roadway
FF11	Common Area Litter Control	X		
FF12	Employee Training	X		
FF13	Housekeeping of Loading Docks		X	No loading docks, public roadway
Drainage Facility Model Maintenance Procedure				
DF1	Drainage Facility Operation and Maintenance	X		
Field Program Model Maintenance Procedures				
FP1	Lake Management		X	The project does not include a lake.
FP2	Landscape Maintenance	X		
FP3	Roads, Streets, and Highways Operation and Maintenance	X		
FP4	Sidewalk, Plaza, and Fountain Maintenance and Cleaning	X		
FP5	Solid Waste Handling		X	No solid waste handling, public roadway
FP6	Water and Sewer Utility Operation and Maintenance	X		
FP7	Fire Department Activities	X		

Routine Structural BMPs

Name	Check One		If not applicable, state brief reason
	Included	Not Applicable	
Provide storm drain system stenciling and signage	X		
Design and construct outdoor material storage areas to reduce pollution introduction		X	No outdoor material storage required, public roadway
Design and construct trash and waste storage areas to reduce pollution introduction	X		
Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control	X		
Protect slopes and channels and provide energy dissipation	X		
Incorporate requirements applicable to individual priority project categories			
a. Dock areas		X	The project does not include dock areas.
b. Maintenance bays		X	The project does not include maintenance bays.
c. Vehicle wash areas		X	The project does not include vehicle wash areas.
d. Outdoor processing areas		X	The project does not include outdoor processing areas.
e. Equipment wash areas		X	The project does not include equipment wash areas.
f. Fueling areas		X	The project does not include fueling areas.
g. Hillside landscaping		X	The project does not include hillside landscaping.
h. Wash water control for food preparation areas		X	The project does not include food preparation areas.
i. Community car wash racks		X	The project does not include car wash racks.

Site Design BMPs

The following table shows site design BMPs that are included in this project. A description of each BMP follows:

Site Design BMPs

Technique	Included?		Brief Description of Method
	Yes	No	
Minimize Impervious Area/Maximize Permeability (C-Factor Reduction)	X		Minimum lane width requirement used and increase of landscape areas
Minimize Directly Connected Impervious Areas (DCIAs) (C-Factor Reduction)		X	Limited right-of-way to incorporate parkway to minimize directly connected impervious areas
Create Reduced or "Zero Drainage" Areas (Runoff Volume Reduction)	X		Due to increase in pervious areas, runoff volume reduction could be achieved.
Conserve Natural Areas (C-Factor Reduction)	X		Existing pervious areas are conserved to the maximum extent practical

Treatment Control BMPs

The following table shows treatment control BMPs that are included in this project. A description of each BMP follows:

Treatment Control BMPs

Name	Included?		If not applicable, state brief reason
	Yes	No	
Vegetated (Grass) Strips		X	Limited right-of-way width to achieve the usage of vegetated strips
Vegetated (Grass) Swales		X	Limited right-of-way width to achieve the usage of vegetated swales
Proprietary Control Measures		X	Cost prohibit the use of proprietary control measures
Dry Detention Basin		X	Limited right-of-way to use dry detention basin
Wet Detention Basin		X	Limited right-of-way to use wet detention basin
Constructed Wetland		X	Limited right-of-way to construct wetland
Detention Basin/Sand Filter		X	Limited right-of-way to use detention basin/sand filter
Porous Pavement Detention		X	Cost prohibit the use of porous pavement
Porous Landscape Detention		X	Limited right-of-way to incorporate landscape
Infiltration Basin		X	Limited right-of-way to use infiltration basin
Infiltration Trench		X	Limited right-of-way to use infiltration trench
Media Filter		X	Cost prohibit the use of media filter

SECTION V

Inspection/Maintenance Responsibility for BMPs

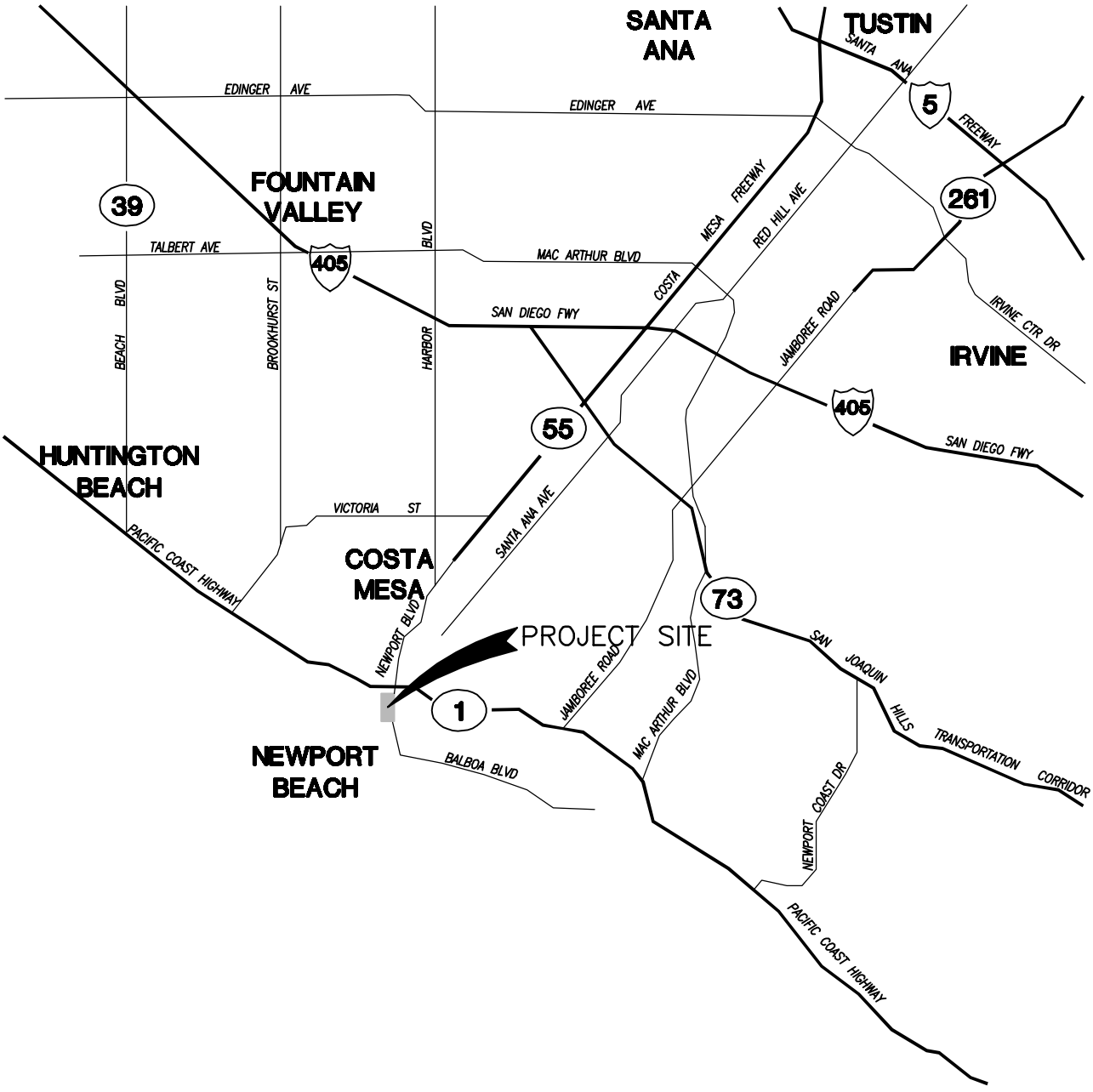
Inspection/Maintenance Responsibility Frequency Matrix[1]

BMP	Responsible Party	Maintenance Activity	Inspection/Maintenance Frequency
Source Control BMPs (Both structural and non-structural)			
Activity Restriction	City of Newport Beach	Prohibit the blowing, sweeping, or hosing of debris into storm drain inlets and other conveyances	As Needed
BMP Maintenance	N/A	N/A	N/A
Common Area Litter Control	City of Newport Beach	Empty trash receptacles, patrol common areas and perimeter fences to collect litter	Weekly or as needed
Employee Training	City of Newport Beach	Training courses for employee on storm water pollution	Annually
Common Area Catch Basin Inspection	City of Newport Beach	Visually inspect catch basins for debris	Monthly or as needed
Street Sweeping Public Streets and Parking Lots	City of Newport Beach	Sweep streets and maintain free from debris	Bi-weekly or as needed
Provide storm drain system stenciling and signage	City of Newport Beach	Inspect stenciling and signage for damage or fading	Semi-Annually or as needed
Design and construct trash and waste storage areas to reduce pollution introduction	City of Newport Beach	Inspect trash receptacles for leak and damage	Monthly
Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control*	City of Newport Beach	Inspect irrigation system for over spreading, or leaking irrigation system	Monthly
Protect slopes and channels and provide energy dissipation	N/A	N/A	N/A
BMP	Responsible Party	Maintenance Activity	Inspection/Maintenance Frequency
Treatment Control BMPs			
None	N/A	N/A	N/A

[1] Inspection/maintenance records must be kept for five years for inspection by the City inspector

SECTION VI

Vicinity Map & Location Map



VICINITY MAP
NOT TO SCALE

N

N.T.S.

VA Consulting, Inc.
ENGINEERS PLANNERS SURVEYORS
46 DISCOVERY SUITE 250 (949) 474-1400 TEL
IRVINE, CA 92618 (949) 261-8482 FAX

CITY OF NEWPORT BEACH
NEWPORT BLVD & 32ND STREET MODIFICATION

VICINITY MAP

DATE 10/13

FIGURE 1

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LOCATION MAP
NOT TO SCALE

N

N.T.S.

VA CONSULTING

VA Consulting, Inc.
ENGINEERS PLANNERS SURVEYORS
46 DISCOVERY SUITE 250 (949) 474-1400 TEL
IRVINE, CA 92618 (949) 261-8482 FAX

CITY OF NEWPORT BEACH
NEWPORT BLVD & 32ND STREET MODIFICATION

LOCATION MAP

DATE
10/13

FIGURE
2

DWG: X:\Projects\373_0600\Eng\CADD\DWG\Exhibits\EXH06-Location Map\373_0600-EXH06-Location Map.dwg BY: jhernandez Oct 23, 2013 - 1:23:42pm

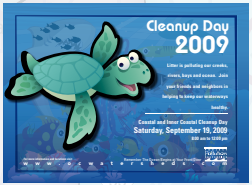
SECTION VII

Educational Materials

ORANGE COUNTY PROJECT Pollution PREVENTION

One County | 34 Cities

THREE MILLION STEWARDS OF WATER QUALITY



The Ocean Begins At Your Front Door | For more information go to www.ocwatersheds.com

ORANGE COUNTY
PROJECT
Pollution
PREVENTION

GIVE US A BRAKE!

The dust from your car's brake pads is a significant source of the copper in Orange County's creeks, rivers, bays and coastal waters. Copper is toxic to aquatic animals and is a common pollutant in Orange County waterways.

Please use commercial car washes or a mobile detailer that contains and reuses or properly disposes of any residual washwater. Car washing establishments divert the washwater to the sewer system where the water is treated, removing much of the copper that comes from your car's brake pads. If you wash your car at home, use a waterless car washing product, or at least divert the washwater to your lawn or landscaped area to help prevent water pollution.

By using alternative transportation options like buses, trains, carpooling, biking or walking, you can help reduce the amount of copper pollution in Orange County waterways.

THE OCEAN BEGINS AT YOUR FRONT DOOR.

www.ocwatersheds.com **1 877 89 SPILL**

CONNECT THE DROPS

KNOW WHERE YOUR RUNOFF GOES

Runoff is water from sprinklers, hoses or rain that leaves your property. This water can wash litter, pet waste, motor oil, pesticides and other pollutants into the storm drain where it flows untreated into our creeks, rivers, bays and ultimately, our ocean. Make the connection – help prevent water pollution from the start.

WHAT STARTS HERE

COULD TRAVEL HERE

WHICH FLOWS THROUGH HERE

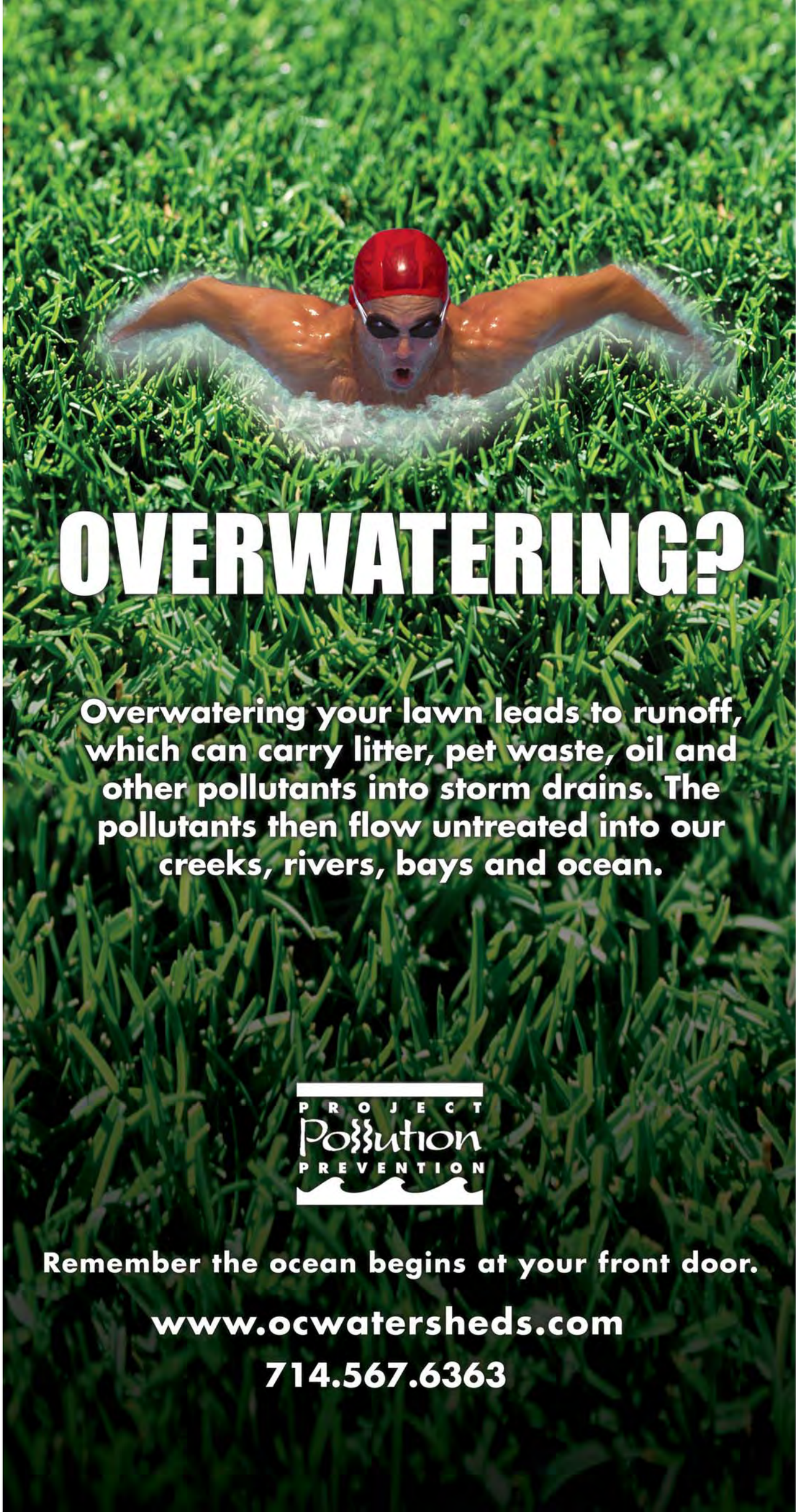
AND ENDS UP HERE

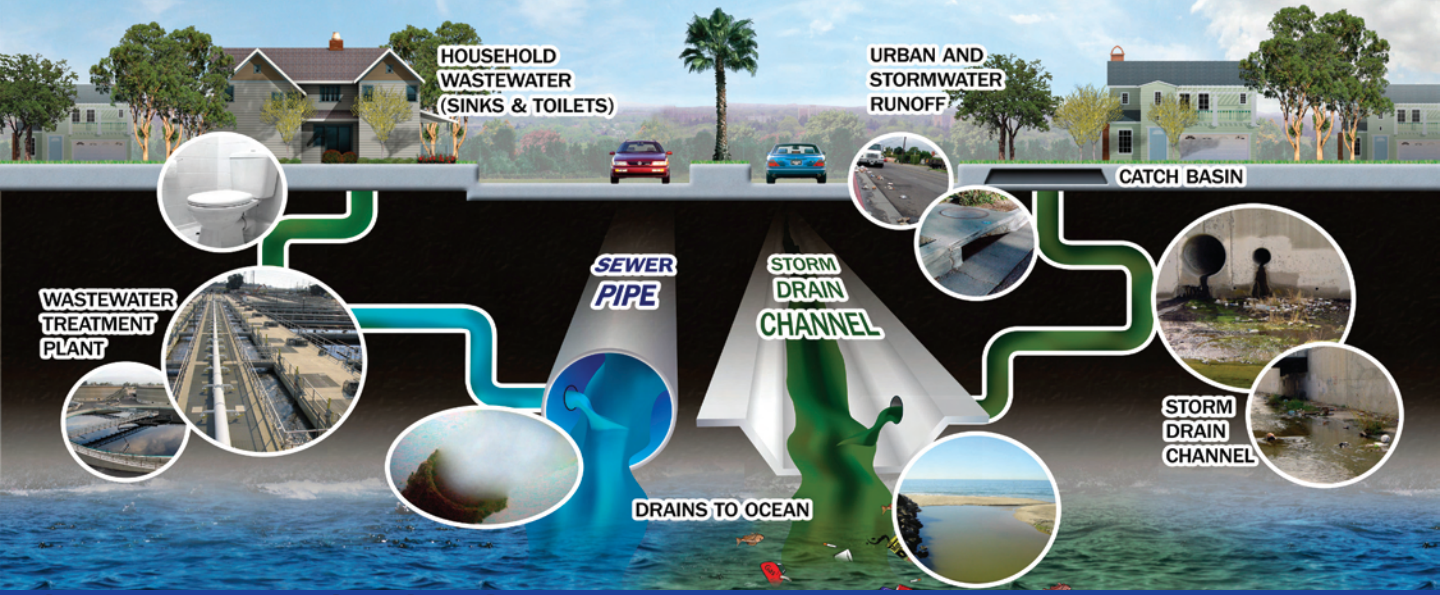
PROJECT Pollution PREVENTION

Remember The Ocean Begins at Your Front Door

www.ocwatersheds.com


PESTICIDE
OVERKILL
Excess pesticides from yard care activities eventually get washed into storm drains and flow directly into our creeks, rivers, bays and ocean.
PROJECT
Pollution
PREVENTION
Remember the ocean begins at your front door.
1.877.89.SPILL
www.ocwatersheds.com


OVERWATERING?
Overwatering your lawn leads to runoff, which can carry litter, pet waste, oil and other pollutants into storm drains. The pollutants then flow untreated into our creeks, rivers, bays and ocean.
PROJECT
Pollution
PREVENTION
Remember the ocean begins at your front door.
www.ocwatersheds.com
714.567.6363



SEWER VS. STORM DRAIN

DO YOU KNOW THE DIFFERENCE?

Not all water in Orange County is treated the same…in fact, some water isn't treated at all. Rain and water from sprinklers and hoses wash litter, pet waste, motor oil, pesticides and other pollutants into the storm drain where it flows untreated into our creeks, rivers, bays and ultimately, our ocean. Only water that enters the sewer (from sinks and toilets) is treated before entering our waterways. SO DON'T TREAT THEM THE SAME.

PROJECT Pollution PREVENTION

www.ocwatersheds.com

Remember The Ocean Begins at Your Front Door

Good Operating Practices

Gas Stations

Inspect and clean storm drain inlets and catch basins within the facility's boundary.

Inspeccione y limpie entradas de sumideros de aguas pluviales y cisternas de represa dentro de los límites de las localidades.

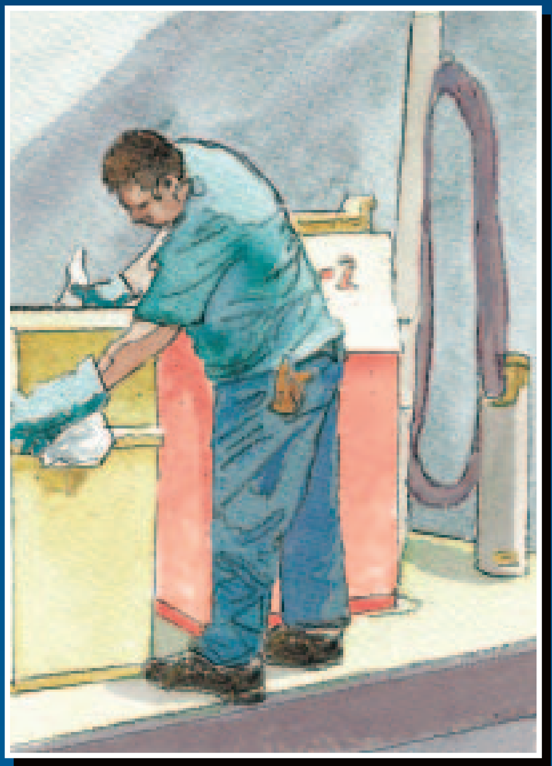
"Spot clean" leaks and spills routinely. A leak or spill isn't cleaned up until the contaminated absorbent is picked up and properly disposed of.

"Limpie Seguido" de goteras y derramamientos habitualmente. Una gotera o un derramamiento no está limpio hasta que se recoja y tira apropiadamente el absorbente contaminado.

NO DUMPING
DRAINS TO OCEAN

Use dry cleanup methods around your station. Sweep up debris and litter and use rags and absorbents for wet spills and/or leaks. Never wash down fueling or service areas unless the water can be collected and disposed of properly.

Utilice métodos secos (sin usar agua) de limpiar su en su estación. Barre desechos y basura y use trapos y absorbentes para limpiar derramamientos y lo goteras. Nunca lave o riegue áreas de servicio o áreas de gasolina a menos que pueda colectar y tirar el agua apropiadamente.



Prevent stormwater pollution at waste receptacles and air/water supply stations. Protect these areas from runoff (e.g. roofing areas, berming or grading areas). Maintain these areas and keep them clear of debris and litter. Use water tight receptacles for trash and keep the lids closed.

Evite contaminación de aguas pluviales en receptáculos de desechos y estaciones del suministro de agua/aire. Protege estas áreas (ejemplo: áreas de techo, pared de protección, áreas de inclinación) de los corrientes. Mantenga estas áreas libre de desechos y basura. Use receptáculos impermeables y déjelos bien cerrados con sus tapderas.

Illustration: Barnes Art Service & Design Illustration: Oscar Amao

The Ocean Begins At Your Front Door

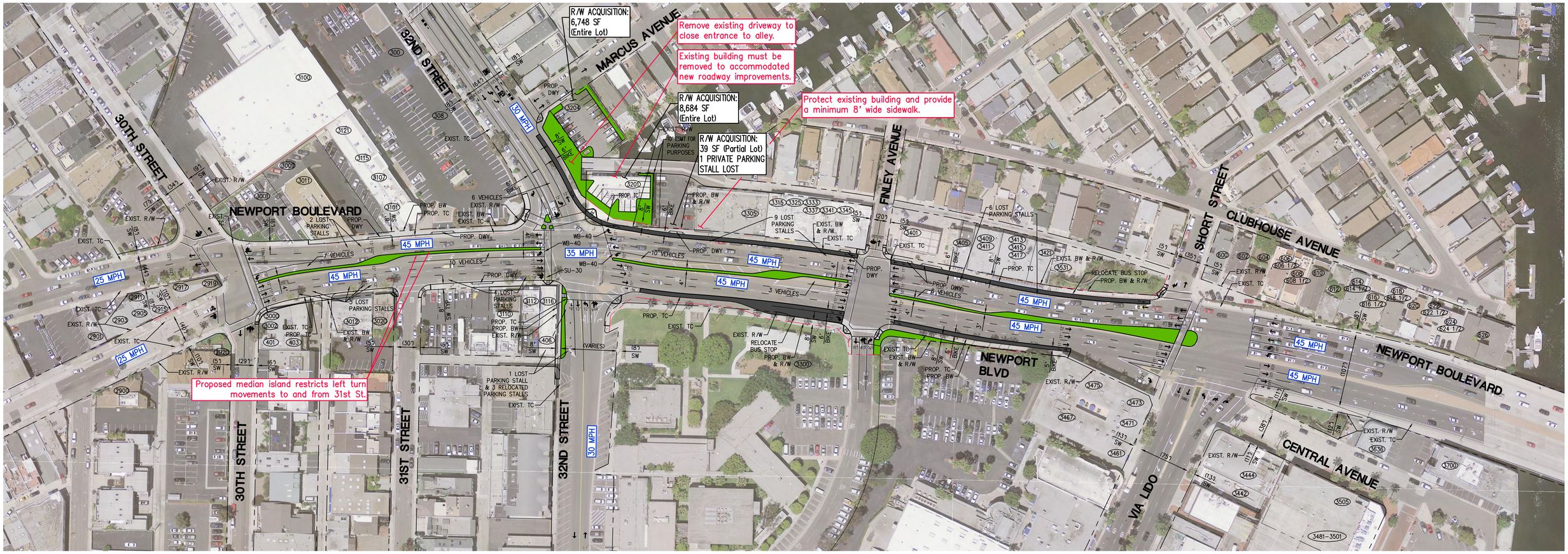
Water Pollution Problem
Reporting Hotline
(Para reportar descargo ilegal)

1-877-89SPILL

PROJECT Pollution PREVENTION

SECTION VIII

Conceptual Plan



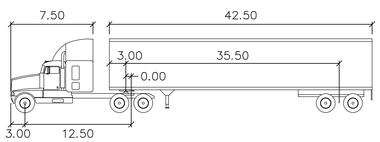
LEGEND

- XXXX — STREET ADDRESS NUMBER
- PROPOSED LANDSCAPING
- PROPOSED CONCRETE BIKE LANE
- PROPOSED R/W

MINIMUM HORIZONTAL CURVE RADII

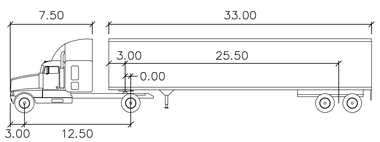
DESIGN SPEED	-2%	-1%	1%	2%
25	299	279	246	233
30	431	402	355	335
35	631	586	550	550
40	825	766	670	631
45	1131	1044	905	848

BASED UPON CALTRANS FIGURE 202.2 "MAXIMUM COMFORTABLE SPEED ON HORIZONTAL CURVES".



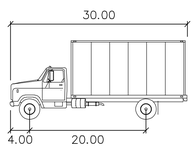
WB-50 feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 17.7
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		



WB-40 feet

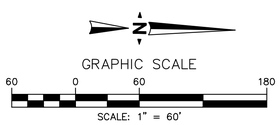
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.00	Steering Angle	: 20.3
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.00		



SU-30 feet

Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 31.8

WB-50 USED AS DESIGN VEHICLE FOR ALL TURNING MOVEMENTS AT THE INTERSECTION OF NEWPORT BLVD AND 32ND ST UNLESS OTHERWISE SHOWN.



LEVEL OF SERVICE (LOS) (FROM 32ND ST. TO VIA LIDO)	
EXISTING	1.013 (F)
PROPOSED	0.844 (D)

PREPARED BY:

VA CONSULTING

VA Consulting, Inc.
ENGINEERS • PLANNERS • SURVEYORS
46 DISCOVERY, SUITE 250 (949) 474-1400 TEL
IRVINE, CA 92618 (949) 261-8482 FAX

NO.	DATE	DESCRIPTION OF REVISIONS	APPROVED

CONCEPT PLAN FOR
NEWPORT BLVD AND 32ND ST WIDENING
ALTERNATIVE 5

CITY OF NEWPORT BEACH
PUBLIC WORKS DEPARTMENT

DATE: 07/02/13
SHEET 1 OF 1

NEWPORT BLVD AND 32ND ST WIDENING - CONCEPT PLAN (ALTERNATIVE 5)
08/08/13 05:13:42 PM X:\Projects\373_0600\Eng\CAD\LDVG\Exhibits\EXH02-ConceptPlans\EXH05-A1105\037301600-EXH02-A1105.dwg

SECTION IX

Pervious Area Exhibit

LEGEND

- PROJECT AREA BOUNDARY
- PRE-PROJECT PERVIOUS AREA (LANDSCAPE AREA)
- POST-PROJECT PERVIOUS AREA (LANDSCAPE AREA)

N

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 INCH = 50 FT

PREPARED OCTOBER, 2013

SEAL

REGISTERED PROFESSIONAL ENGINEER ROGER T. CHUNG No. 65388 Exp.09/30/15 STATE OF CALIFORNIA CIVIL

PLANS PREPARED BY:

VA CONSULTING

VA Consulting, Inc.
ENGINEERS · PLANNERS · SURVEYORS
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(949) 474-1400 TEL
(949) 261-8482 FAX

UNDER THE SUPERVISION OF:

ROGER T. CHUNG R.C.E. 65388 EXP: 09/30/15

CITY OF NEWPORT BEACH
NEWPORT BOULEVARD & 32ND STREET MODIFICATION

PERVIOUS AREA EXHIBIT

DATE 10/13

FIGURE 3

X:\Projects\373_0600\Eng\CADD\DWG\Exhibits\EXH08-Pervious Area Exhibit\373_0600-EXH08-Pervious Area Exhibit.dwg

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