

**Major Stormwater Management Plan
(Major SWMP)
For
(Dabbs Subdivision)**

Preparation/Revision Date:

October 11, 2010

Prepared for:

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The selection, sizing, and preliminary design of stormwater treatment and other control measures in this plan have been prepared under the direction of the following Registered Civil Engineer and meet the requirements of Regional Water Quality Control Board Order R9-2007-0001 and subsequent amendments.



Gary K. Piro, RCE # 24000

10/11/2010
Date

The Major Stormwater Management Plan (Major SWMP) must be completed in its entirety and accompany applications to the County for a permit or approval associated with certain types of development projects. To determine whether your project is required to submit a Major or Minor SWMP, please reference the County's Stormwater Intake Form for Development Projects.

Project Name:	Dabbs Subdivision
Project Location:	Aqueduct Rd., Bonsall, Ca.
Permit Number (Land Development Projects):	TM 5346 RPL 3, ER Log # 02-03-067
Work Authorization Number (CIP only):	
Applicant:	Donald Dabbs
Applicant's Address:	PO Bos 966, Bonsall, CA. 92003
Plan Prepared By (<i>Leave blank if same as applicant</i>):	Piro Engineering
Preparer's Address:	930 Boardwalk, Ste D, San Marcos, Ca 92078
Date:	10/08/10

The County of San Diego Watershed Protection, Storm Water Management, and Discharge Control Ordinance (WPO) (Ordinance No. 9926) requires all applications for a permit or approval associated with a Land Disturbance Activity to be accompanied by a Storm Water Management Plan (SWMP) (section 67.806.b). The purpose of the SWMP is to describe how the project will minimize the short and long-term impacts on receiving water quality. Projects that meet the criteria for a priority development project are required to prepare a Major SWMP.

Since the SWMP is a living document, revisions may be necessary during various stages of approval by the County. Please provide the approval information requested below.

Project Stages	Does the SWMP need revisions?		If YES, Provide Revision Date
	YES	NO	
4 th Review	x		4/30/10
5 th Review	x		10/11/10

Instructions for a Major SWMP can be downloaded at
<http://www.sdcountry.ca.gov/dpw/watersheds/susmp/susmp.html>

Completion of the following checklists and attachments will fulfill the requirements of a Major SWMP for the project listed above.

STEP 1

PRIORITY DEVELOPMENT PROJECT DETERMINATION

TABLE 1: IS THE PROJECT IN ANY OF THESE CATEGORIES?

Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	A	Housing subdivisions of 10 or more dwelling units. Examples: single-family homes, multi-family homes, condominiums, and apartments.
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	B	Commercial—greater than one acre. Any development other than heavy industry or residential. Examples: hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; municipal facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; airfields; and other light industrial facilities.
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	C	Heavy industry—greater than one acre. Examples: manufacturing plants, food processing plants, metal working facilities, printing plants, and fleet storage areas (bus, truck, etc.).
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	D	Automotive repair shops. A facility categorized in any one of Standard Industrial Classification (SIC) codes 5013, 5014, 5541, 7532-7534, or 7536-7539.
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	E	Restaurants. Any facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), where the land area for development is greater than 5,000 square feet. Restaurants where land development is less than 5,000 square feet shall meet all SUSMP requirements except for structural treatment BMP and numeric sizing criteria requirements and hydromodification requirements.
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	F	Hillside development greater than 5,000 square feet. Any development that creates 5,000 square feet of impervious surface and is located in an area with known erosive soil conditions, where the development will grade on any natural slope that is twenty-five percent or greater.
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	G	Environmentally Sensitive Areas (ESAs). All development located within or directly adjacent to or discharging directly to an ESA (where discharges from the development or redevelopment will enter receiving waters within the ESA), which either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10% or more of its naturally occurring condition. "Directly adjacent" means situated within 200 feet of the ESA. "Discharging directly to" means outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	H	Parking lots 5,000 square feet or more or with 15 or more parking spaces and potentially exposed to urban runoff.
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	I	Street, roads, highways, and freeways. Any paved surface that is 5,000 square feet or greater used for the transportation of automobiles, trucks, motorcycles, and other vehicles.
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	J	Retail Gasoline Outlets (RGOs) that are: (a) 5,000 square feet or more or (b) a projected Average Daily Traffic (ADT) of 100 or more vehicles per day.

To use the table, review each definition A through K. If any of the definitions match, the project is a Priority Development Project. Note some thresholds are defined by square footage of impervious area created; others by the total area of the development. Please see special requirements for previously developed sites and project exemptions on page 6 of the County USMP.

STEP 2

PROJECT STORMWATER QUALITY DETERMINATION

Total Project Site Area 38.3 Ac. (Acres or ft²)

Estimated amount of disturbed acreage: 6.25 Ac (Acres or ft²)

(If >1 acre, you must also provide a WDID number from the SWRCB) WDID: _____

Complete A through C and the calculations below to determine the amount of impervious surface on your project before and after construction.

A. Total size of project site: 38.3 Ac. (Acres or ft²)

B. Total impervious area (including roof tops) before construction 0 (Acres or ft²)

C. Total impervious area (including roof tops) after construction 5.0 Ac.(Acres or ft²)

Calculate percent impervious before construction: $B/A = \underline{0\%}$

Calculate percent impervious after construction: $C/A = \underline{13\%}$

Please provide detailed descriptions regarding the following questions:

TABLE 2: PROJECT SPECIFIC STORMWATER ANALYSIS

1.	Please provide a brief description of the project.
	The 38.3 Acre Dabbs Subdivision is located on the west side of Highway 395 in the Bonsall area of North San Diego County. The project is approximately 200' +/- North of the intersection of Highway 395 & Via Urner Way. The project consists of the subdivision of land into 9 lots for residential purposes. There will be an access road with associated underground utilities and driveways to serve the project. The surrounding land use is residential and agricultural. There is no dry weather flow within the project limits.
2.	Describe the current and proposed zoning and land use designation.
	The current zoning is Intensive Agricultural #18 with a use regulation of A-70. There is no proposed change in zoning.
3.	Describe the pre-project and post-project topography of the project. (Show on Plan)
	The existing topography slopes gently to the south at 5%-8% with 2 on-site seasonal drainage swales running north to south.
4.	Describe the soil classification, permeability, erodibility, and depth to groundwater for LID and Treatment BMP consideration. (Show on Plan) If infiltration BMPs are proposed, a Geotechnical Engineer must certify infiltration BMPs in Attachment E.
	From the Soils Group Map (attached) the site consists of an average of soils type C and D with a small area of B.
5.	Describe if contaminated or hazardous soils are within the project area. (Show on Plan)
	There are no known hazardous soils within the project area.
6.	Describe the existing site drainage and natural hydrologic features. (Show on Plan).
	The existing site drains by way of 2 seasonal swales running north to south and joining in the area of the proposed Extended Dry Detention/Infiltration Basin.
7.	Describe site features and conditions that constrain, or provide opportunities for stormwater control, such as LID features.
	Prior to this proposed project this site was a longstanding citrus grove with two seasonal drainage swales from the north to the south. There were a few small (100-200sqft) sediment basins and drains on site to control erosion and water flows off site. This project proposes to eliminate the smaller intermediate basins and expand the southerly basin to a grass lined retention basin designed to meet the criteria for matching the post construction flow conditions and water quality to that of the pre project condition. The on-site up hill drainages will be grass lined swales for filtration of pollutants from the individual driveways and lot development. There will be grass lined swales at strategic locations along the paved access road to filter pollutants washed from the road during rain events.

8.	Is this project within the environmentally sensitive areas as defined on the maps in Appendix A of the <i>County of San Diego Standard Urban Storm Water Mitigation Plan for Land Development and Public Improvement Projects</i> ?	No
9.	Is this an emergency project?	No

CHANNELS & DRAINAGES

Complete the following checklist to determine if the project includes work in channels.

TABLE 3: PROJECT SPECIFIC STORMWATER ANALYSIS

No.	CRITERIA	YES	NO	N/A	COMMENTS
1.	Will the project include work in channels?		x		If YES go to 2 If NO go to 13.
2.	Will the project increase velocity or volume of downstream flow?				If YES go to 6.
3.	Will the project discharge to unlined channels?				If YES go to 6.
4.	Will the project increase potential sediment load of downstream flow?				If YES go to 6.
5.	Will the project encroach, cross, realign, or cause other hydraulic changes to a stream that may affect downstream channel stability?				If YES go to 8.
6.	Review channel lining materials and design for stream bank erosion.				Continue to 7.
7.	Consider channel erosion control measures within the project limits as well as downstream. Consider scour velocity.				Continue to 8.
8.	Include, where appropriate, energy dissipation devices at culverts.				Continue to 9.
9.	Ensure all transitions between culvert outlets/headwalls/wingwalls and channels are smooth to reduce turbulence and scour.				Continue to 10.
10.	Include, if appropriate, detention facilities to reduce peak discharges.				Continue to 11.
11.	“Hardening” natural downstream areas to prevent erosion is not an acceptable technique for protecting channel slopes, unless pre-development conditions are determined to be so erosive that hardening would be required even in the absence of the proposed development.				Continue to 12.

No.	CRITERIA	YES	NO	N/A	COMMENTS
12.	Provide other design principles that are comparable and equally effective.				Continue to 13.
13.	End	x			

TEMPORARY CONSTRUCTION BMPs

Please check the construction BMPs that may be implemented during construction of the project. The applicant will be responsible for the placement and maintenance of the BMPs incorporated into the final project design.

- | | |
|--|--|
| <input checked="" type="checkbox"/> Silt Fence | <input type="checkbox"/> Desilting Basin |
| <input checked="" type="checkbox"/> Fiber Rolls | <input checked="" type="checkbox"/> Gravel Bag Berm |
| <input checked="" type="checkbox"/> Street Sweeping and Vacuuming | <input type="checkbox"/> Sandbag Barrier |
| <input checked="" type="checkbox"/> Storm Drain Inlet Protection | <input checked="" type="checkbox"/> Material Delivery and Storage |
| <input checked="" type="checkbox"/> Stockpile Management | <input checked="" type="checkbox"/> Spill Prevention and Control |
| <input checked="" type="checkbox"/> Solid Waste Management | <input checked="" type="checkbox"/> Concrete Waste Management |
| <input checked="" type="checkbox"/> Stabilized Construction Entrance/Exit | <input checked="" type="checkbox"/> Water Conservation Practices |
| <input type="checkbox"/> Dewatering Operations | <input checked="" type="checkbox"/> Paving and Grinding Operations |
| <input checked="" type="checkbox"/> Vehicle and Equipment Maintenance | |
| <input checked="" type="checkbox"/> Any minor slopes created incidental to construction and not subject to a major or minor grading permit shall be protected by covering with plastic or tarp prior to a rain event, and shall have vegetative cover reestablished within 180 days of completion of the slope and prior to final building approval. | |

EXCEPTIONAL THREAT TO WATER QUALITY DETERMINATION

Complete the checklist below to determine if a proposed project will pose an “exceptional threat to water quality,” and therefore require Advanced Treatment Best Management Practices during the construction phase.

TABLE 4: EXCEPTIONAL THREAT TO WATER QUALITY DETERMINATION

No.	CRITERIA	YES	NO	INFORMATION
1.	Is all or part of the proposed project site within 200 feet of waters named on the Clean Water Act (CWA) Section 303(d) list of Water Quality Limited Segments as impaired for sedimentation and/or turbidity? Current 303d list may be obtained from the following site: http://www.swrcb.ca.gov/tmdl/docs/303dlists2006/approved/r9_06_303d_reqtmlds.pdf		x	If YES, continue to 2. If NO, go to 5.
2.	Will the project disturb more than 5 acres, including all phases of the development?			If YES, continue to 3. If NO, go to 5.
3.	Will the project disturb slopes that are steeper than 4:1 (horizontal: vertical) with at least 10 feet of relief, and that drain toward the 303(d) listed receiving water for sedimentation and/or turbidity?			If YES, continue to 4. If NO, go to 5.
4.	Will the project disturb soils with a predominance of USDA-NRCS Erosion factors k_f greater than or equal to 0.4?			If YES, continue to 6. If NO, go to 5.
5.	Project is not required to use Advanced Treatment BMPs.	x		Document for Project Files by referencing this checklist.
6.	Project poses an “exceptional threat to water quality” and is required to use Advanced Treatment BMPs.		x	Advanced Treatment BMPs must be consistent with WPO section 67.811(b)(20)(D) performance criteria

Exemption potentially available for projects that require advanced treatment: Project proponent may perform a Revised Universal Soil Loss Equation, Version 2 (RUSLE 2), Modified Universal Soil Loss Equation (MUSLE), or similar analysis that shows to the County official's satisfaction that advanced treatment is not required

STEP 3

HYDROMODIFICATION DETERMINATION

The following questions provide a guide to collecting information relevant to hydromodification management issues.

TABLE 5: HYDROMODIFICATION DETERMINATION

	QUESTIONS	YES	NO	Information
1.	Will the proposed project disturb 50 or more acres of land? (Including all phases of development)		x	If YES, continue to 2. If NO, go to 6.
2.	Would the project site discharge directly into channels that are concrete-lined or significantly hardened such as with rip-rap, sackcrete, etc, downstream to their outfall into bays or the ocean?			If NO, continue to 3. If YES, go to 6.
3.	Would the project site discharge directly into underground storm drains discharging directly to bays or the ocean?			If NO, continue to 4. If YES, go to 6.
4.	Would the project site discharge directly to a channel (lined or un-lined) and the combined impervious surfaces downstream from the project site to discharge at the ocean or bay are 70% or greater?			If NO, continue to 5. If YES, go to 6.
5.	Project is required to manage hydromodification impacts.			Hydromodification Management Required as described in Section 67.812 b(4) of the WPO.
6.	Project is not required to manage hydromodification impacts.	x		Hydromodification Exempt. Keep on file.

An exemption is potentially available for projects that are required (No. 5. in Table 5 above) to manage hydromodification impacts: The project proponent may conduct an independent geomorphic study to determine the project's full hydromodification impact. The study must incorporate sediment transport modeling across the range of geomorphically-significant flows and demonstrate to the County's satisfaction that the project flows and sediment reductions will not detrimentally affect the receiving water to qualify for the exemption.

STEP 4

POLLUTANTS OF CONCERN DETERMINATION

WATERSHED

Please check the watershed(s) for the project.

<input type="checkbox"/> San Juan 901	<input type="checkbox"/> Santa Margarita 902	<input checked="" type="checkbox"/> San Luis Rey 903	<input type="checkbox"/> Carlsbad 904
<input type="checkbox"/> San Dieguito 905	<input type="checkbox"/> Penasquitos 906	<input type="checkbox"/> San Diego 907	<input type="checkbox"/> Sweetwater 909
<input type="checkbox"/> Otay 910	<input type="checkbox"/> Tijuana 911	<input type="checkbox"/> Whitewater 719	<input type="checkbox"/> Clark 720
<input type="checkbox"/> West Salton 721	<input type="checkbox"/> Anza Borrego 722	<input type="checkbox"/> Imperial 723	

http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml

HYDROLOGIC SUB-AREA NAME AND NUMBER(S)

Number	Name
903.1	Lower San Luis Rey
903.12	Bonsall

http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml

SURFACE WATERS that each project discharge point proposes to discharge to. List the impairments identified in Table 7.

SURFACE WATERS (river, creek, stream, etc.)	Hydrologic Unit Basin Number	Impairment(s) listed [303(d) listed waters or waters with established TMDLs]	Distance to Project
	903.12	Sediments, nutrients, trash & debris, oxygen demanding substances, oil & grease, bacteria & viruses, pesticides	4 miles from San Luis River

http://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/303dlists2006/epa/r9_06_303d_reqtmdl_s.pdf

GROUND WATERS

Ground Waters	Hydrologic Unit Basin Number	MUN	AGR	IND	PROC	GWR	FRESH	POW	REC1	REC2	BIOL	WARM	COLD	WILD	RARE	SPWN
Natural channel 4 mi. North of San Luis Rey River	903.10	•	•	•												

http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml

+ Excepted from Municipal

● Existing Beneficial Use

○ Potential Beneficial Use

PROJECT ANTICIPATED AND POTENTIAL POLLUTANTS

Using Table 6, identify pollutants that are anticipated to be generated from the proposed priority project categories. Pollutants associated with any hazardous material sites that have been remediated or are not threatened by the proposed project are not considered a pollutant of concern.

TABLE 6: ANTICIPATED AND POTENTIAL POLLUTANTS GENERATED BY LAND

<i>PDP Categories</i>	<i>General Pollutant Categories</i>								
	Sediments	Nutrients	Heavy Metals	Organic Compounds	Trash & Debris	Oxygen Demanding Substances	Oil & Grease	Bacteria & Viruses	Pesticides
Detached Residential Development	X	X			X	X	X	X	X
Attached Residential Development	X	X			X	P ⁽¹⁾	P ⁽²⁾	P	X
Commercial Development 1 acre or greater	P ⁽¹⁾	P ⁽¹⁾		P ⁽²⁾	X	P ⁽⁵⁾	X	P ⁽³⁾	P ⁽⁵⁾
Heavy industry /industrial development	X		X	X	X	X	X		
Automotive Repair Shops			X	X ⁽⁴⁾⁽⁵⁾	X		X		
Restaurants					X	X	X	X	
Hillside Development >5,000 ft ²	X	X			X	X	X		X
Parking Lots	P ⁽¹⁾	P ⁽¹⁾	X		X	P ⁽¹⁾	X		P ⁽¹⁾
Retail Gasoline Outlets			X	X	X	X	X		
Streets, Highways & Freeways	X	P ⁽¹⁾	X	X ⁽⁴⁾	X	P ⁽⁵⁾	X		
<p>X = anticipated P = potential (1) A potential pollutant if landscaping exists on-site. (2) A potential pollutant if the project includes uncovered parking areas. (3) A potential pollutant if land use involves food or animal waste products. (4) Including petroleum hydrocarbons. (5) Including solvents.</p>									

USE TYPE

PROJECT POLLUTANTS OF CONCERN SUMMARY TABLE

Please summarize the identified project pollutant of concern by checking the appropriate boxes in the table below and list any surface water impairments identified. Pollutants anticipated to be generated by the project, which are also causing impairment of receiving waters, shall be considered the primary pollutants of concern. For projects where no primary pollutants of concern exist, those pollutants identified as anticipated shall be considered secondary pollutants of concern.

TABLE 7: PROJECT POLLUTANTS OF CONCERN

Pollutant Category	Anticipated (X)	Potential (P)	Surface Water Impairments
Sediments	x		
Nutrients	x		
Heavy Metals			
Organic Compounds			
Trash & Debris	x		
Oxygen Demanding Substances	x		
Oil & Grease	x		
Bacteria & Viruses	x		
Pesticides	x		

STEP 5

LID AND SITE DESIGN STRATEGIES

Each numbered item below is a Low Impact Development (LID) requirement of the WPO. Please check the box(s) under each number that best describes the LID BMP(s) and Site Design Strategies selected for this project.

TABLE 8: LID AND SITE DESIGN

1.	Conserve natural Areas, Soils, and Vegetation
	<input checked="" type="checkbox"/> Preserve well draining soils (Type A or B)
	<input checked="" type="checkbox"/> Preserve Significant Trees
	<input type="checkbox"/> Preserve critical (or problematic) areas such as floodplains, steep slopes, wetlands, and areas with erosive or unstable soil conditions
	<input type="checkbox"/> Other. Description:
2.	Minimize Disturbance to Natural Drainages
	<input checked="" type="checkbox"/> Set-back development envelope from drainages
	<input checked="" type="checkbox"/> Restrict heavy construction equipment access to planned green/open space areas
	<input type="checkbox"/> Other. Description:
3.	Minimize and Disconnect Impervious Surfaces (see 5)
	<input type="checkbox"/> Clustered Lot Design
	<input checked="" type="checkbox"/> Items checked in 5?
	<input type="checkbox"/> Other. Description:
4.	Minimize Soil Compaction
	<input checked="" type="checkbox"/> Restrict heavy construction equipment access to planned green/open space areas
	<input type="checkbox"/> Re-till soils compacted by construction vehicles/equipment
	<input checked="" type="checkbox"/> Collect & re-use upper soil layers of development site containing organic Materials
	<input type="checkbox"/> Other. Description:
5.	Drain Runoff from Impervious Surfaces to Pervious Areas
	<u>LID Street & Road Design</u>
	<input checked="" type="checkbox"/> Curb-cuts to landscaping
	<input checked="" type="checkbox"/> Rural Swales
	<input type="checkbox"/> Concave Median
	<input type="checkbox"/> Cul-de-sac Landscaping Design
	<input checked="" type="checkbox"/> Other. Description: Vegetated grass lined swales which drain to the vegetated grass lined retention basin.

<u>LID Parking Lot Design</u>	
<input type="checkbox"/>	Permeable Pavements
<input type="checkbox"/>	Curb-cuts to landscaping
<input type="checkbox"/>	Other. Description:
<u>LID Driveway, Sidewalk, Bike-path Design</u>	
<input type="checkbox"/>	Permeable Pavements
<input checked="" type="checkbox"/>	Pitch pavements toward landscaping
<input checked="" type="checkbox"/>	Other. Description: Vegetated grass lined swales
<u>LID Building Design</u>	
<input type="checkbox"/>	Cisterns & Rain Barrels
<input checked="" type="checkbox"/>	Downspout to swale
<input type="checkbox"/>	Vegetated Roofs
<input checked="" type="checkbox"/>	Other. Description: Development pads will use vegetated grass lined swales to rock disipators
<u>LID Landscaping Design</u>	
<input checked="" type="checkbox"/>	Soil Amendments
<input checked="" type="checkbox"/>	Reuse of Native Soils
<input checked="" type="checkbox"/>	Smart Irrigation Systems
<input type="checkbox"/>	Street Trees
<input type="checkbox"/>	Other. Description:
6.	Minimize erosion from slopes
<input type="checkbox"/>	Disturb existing slopes only when necessary
<input checked="" type="checkbox"/>	Minimize cut and fill areas to reduce slope lengths
<input type="checkbox"/>	Incorporate retaining walls to reduce steepness of slopes or to shorten slopes
<input type="checkbox"/>	Provide benches or terraces on high cut and fill slopes to reduce concentration of flows
<input type="checkbox"/>	Rounding and shaping slopes to reduce concentrated flow
<input checked="" type="checkbox"/>	Collect concentrated flows in stabilized drains and channels
<input type="checkbox"/>	Other. Description:

STEP 6

SOURCE CONTROL

Please complete the checklist on the following pages to determine Source Control BMPs. Below is instruction on how to use the checklist. (Also see instructions on page 40 of the *SUSMP*)

1. Review Column 1 and identify which of these potential sources of stormwater pollutants apply to your site. Check each box that applies.
2. Review Column 2 and incorporate all of the corresponding applicable BMPs in your Source Control Exhibit in Attachment B.
3. Review Columns 3 and 4 and incorporate all of the corresponding applicable permanent controls and operational BMPs in a table in your Project-Specific *SUSMP*.

Describe your specific BMPs in an accompanying narrative, and explain any special conditions or situations that required omitting BMPs or substituting alternatives.

The project will implement the use of approximately 1800 linear feet of vegetated grass lined swales along the proposed access road and in the existing drainage swales which drain to a vegetated grass lined retention basin designed to comply with post flow condition requirements.

Use the format in Table 9 below to summarize the project Source Control BMPs. Incorporate all identified Source Control BMPs in your Source Control Exhibit in Attachment B.

TABLE 9: PROJECT SOURCE CONTROL BMPs

<i>Potential source of runoff pollutants</i>	<i>Permanent source control BMPs</i>	<i>Operational source control BMPs</i>
Landscape/Outdoor Pesticide Use	All Landscape Plans shall accomplish the following: Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to stormwater pollution.	Maintain landscaping using minimum or no pesticides. See applicable operational BMPs in Fact Sheet SC-41, "Building and Grounds Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

	<p>Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions.</p> <p>Consider using pest-resistant plants, especially adjacent to hardscape.</p> <p>To insure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.</p>	Provide IPM information to new owners, lessees and operators.
On-site storm drain inlets	All inlets will be marked "No Dumping! Flows to Ocean".	<p>Marking will be periodically repainted or replaced.</p> <p>A Home Owners guide to pollution prevention will be distributed to all owners.</p>
Need for future indoor & structural pest control		A section on Integrated Pest Management is included in the Home Owners Guide.

... THEN YOUR STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs			
1 IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	2 Permanent Controls—Show on Source Control Exhibit, Attachment B	3 Permanent Controls—List In SUSMP Table and Narrative	4 Operational BMPs—Include In SUSMP Table and Narrative
<input checked="" type="checkbox"/> A. On-site storm drain inlets	<input checked="" type="checkbox"/> Locations of inlets.	<input checked="" type="checkbox"/> Mark all inlets with the words “No Dumping! Flows to Bay” or similar.	<input checked="" type="checkbox"/> Maintain and periodically repaint or replace inlet markings. <input checked="" type="checkbox"/> Provide stormwater pollution prevention information to new site owners, lessees, or operators. <input type="checkbox"/> See applicable operational BMPs in Fact Sheet SC-44, “Drainage System Maintenance,” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com <input type="checkbox"/> Include the following in lease agreements: “Tenant shall not allow anyone to discharge anything to storm drains or to store or deposit materials so as to create a potential discharge to storm drains.”
<input type="checkbox"/> B. Interior floor drains and elevator shaft sump pumps		<input type="checkbox"/> State that interior floor drains and elevator shaft sump pumps will be plumbed to sanitary sewer.	<input type="checkbox"/> Inspect and maintain drains to prevent blockages and overflow.
<input type="checkbox"/> C. Interior parking garages		<input type="checkbox"/> State that parking garage floor drains will be plumbed to the sanitary sewer.	<input type="checkbox"/> Inspect and maintain drains to prevent blockages and overflow.

... THEN YOUR STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs				
IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on Source Control Exhibit, Attachment B	3 Permanent Controls—List in SUSMP Table and Narrative	4 Operational BMPs—Include in SUSMP Table and Narrative
<input checked="" type="checkbox"/> D1. Need for future indoor & structural pest control			<input type="checkbox"/> Note building design features that discourage entry of pests.	<input type="checkbox"/> Provide Integrated Pest Management information to owners, lessees, and operators.

IF THESE SOURCES WILL BE ON THE PROJECT SITE THEN YOUR STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on Source Control Exhibit, Attachment B	3 Permanent Controls—List in SUSMP Table and Narrative	4 Operational BMPs—Include in SUSMP Table and Narrative
<input checked="" type="checkbox"/> D2. Landscape/ Outdoor Pesticide Use <u>Note: Should be consistent with project landscape plan (if applicable).</u>	<input type="checkbox"/> Show locations of native trees or areas of shrubs and ground cover to be undisturbed and retained. <input type="checkbox"/> Show self-retaining landscape areas, if any. <input checked="" type="checkbox"/> Show stormwater treatment facilities.	<p>State that final landscape plans will accomplish all of the following:</p> <p><input type="checkbox"/> Preserve existing native trees, shrubs, and ground cover to the maximum extent possible.</p> <p><input checked="" type="checkbox"/> Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to stormwater pollution.</p> <p><input type="checkbox"/> Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions.</p> <p><input checked="" type="checkbox"/> Consider using pest-resistant plants, especially adjacent to hardscape.</p> <p><input checked="" type="checkbox"/> To insure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.</p>	<p><input checked="" type="checkbox"/> Maintain landscaping using minimum or no pesticides.</p> <p><input type="checkbox"/> See applicable operational BMPs in Fact Sheet SC-41, "Building and Grounds Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com</p> <p><input type="checkbox"/> Provide IPM information to new owners, lessees and operators.</p>

... THEN YOUR STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs				
IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	1	2	3	4
	Potential Sources of Runoff Pollutants	Permanent Controls—Show on Source Control Exhibit, Attachment B	Permanent Controls—List In SUSMP Table and Narrative	Operational BMPs—Include in SUSMP Table and Narrative
<input type="checkbox"/> E. Pools, spas, ponds, decorative fountains, and other water features.		<input type="checkbox"/> Show location of water feature and a sanitary sewer cleanout in an accessible area within 10 feet.	<input type="checkbox"/> If the local municipality requires pools to be plumbed to the sanitary sewer, place a note on the plans and state in the narrative that this connection will be made according to local requirements.	<input type="checkbox"/> See applicable operational BMPs in Fact Sheet SC-72, "Fountain and Pool Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
<input type="checkbox"/> F. Food service		<input type="checkbox"/> For restaurants, grocery stores, and other food service operations, show location (indoors or in a covered area outdoors) of a floor sink or other area for cleaning floor mats, containers, and equipment. <input type="checkbox"/> On the drawing, show a note that this drain will be connected to a grease interceptor before discharging to the sanitary sewer.	<input type="checkbox"/> Describe the location and features of the designated cleaning area. <input type="checkbox"/> Describe the items to be cleaned in this facility and how it has been sized to insure that the largest items can be accommodated.	<input type="checkbox"/>

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on Source Control Exhibit, Attachment B	3 Permanent Controls—List In SUSMP Table and Narrative	4 Operational BMPs—Include In SUSMP Table and Narrative
<input type="checkbox"/> G. Refuse areas	<input type="checkbox"/> Show where site refuse and recycled materials will be handled and stored for pickup. See local municipal requirements for sizes and other details of refuse areas. <input type="checkbox"/> If dumpsters or other receptacles are outdoors, show how the designated area will be covered, graded, and paved to prevent runoff and show locations of berms to prevent runoff from the area. <input type="checkbox"/> Any drains from dumpsters, compactors, and tallow bin areas shall be connected to a grease removal device before discharge to sanitary sewer.	<input type="checkbox"/> State how site refuse will be handled and provide supporting detail to what is shown on plans. <input type="checkbox"/> State that signs will be posted on or near dumpsters with the words “Do not dump hazardous materials here” or similar.	<input type="checkbox"/> State how the following will be implemented: Provide adequate number of receptacles. Inspect receptacles regularly; repair or replace leaky receptacles. Keep receptacles covered. Prohibit/prevent dumping of liquid or hazardous wastes. Post “no hazardous materials” signs. Inspect and pick up litter daily and clean up spills immediately. Keep spill control materials available on-site. See Fact Sheet SC-34, “Waste Handling and Disposal” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com	<input type="checkbox"/> See Fact Sheet SC-10, “Non-Stormwater Discharges” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
<input type="checkbox"/> H. Industrial processes.	<input type="checkbox"/> Show process area.	<input type="checkbox"/> If industrial processes are to be located on site, state: “All process activities to be performed indoors. No processes to drain to exterior or to storm drain system.”		

... THEN YOUR STORMWATER CONTROL PLAN SHOULD INCLUDE THESE SOURCE CONTROL BMPs				
IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on Source Control Exhibit, Attachment B	3 Permanent Controls—List in SUSMP Table and Narrative	4 Operational BMPs—Include in SUSMP Table and Narrative
	<input type="checkbox"/> 1. Outdoor storage of equipment or materials. (See rows J and K for source control measures for vehicle cleaning, repair, and maintenance.)	<input type="checkbox"/> Show any outdoor storage areas, including how materials will be covered. Show how areas will be graded and bermed to prevent run-on or run-off from area. <input type="checkbox"/> Storage of non-hazardous liquids shall be covered by a roof and/or drain to the sanitary sewer system, and be contained by berms, dikes, liners, or vaults. <input type="checkbox"/> Storage of hazardous materials and wastes must be in compliance with the local hazardous materials ordinance and a Hazardous Materials Management Plan for the site.	<input type="checkbox"/> Include a detailed description of materials to be stored, storage areas, and structural features to prevent pollutants from entering storm drains. Where appropriate, reference documentation of compliance with the requirements of local Hazardous Materials Programs for: <ul style="list-style-type: none">▪ Hazardous Waste Generation▪ Hazardous Materials Release Response and Inventory▪ California Accidental Release (CalARP)▪ Aboveground Storage Tank▪ Uniform Fire Code Article 80 Section 103(b) & (c) 1991▪ Underground Storage Tank	<input type="checkbox"/> See the Fact Sheets SC-31, “Outdoor Liquid Container Storage” and SC-33, “Outdoor Storage of Raw Materials” in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

<p><input type="checkbox"/> J. Vehicle and Equipment Cleaning</p>	<p><input type="checkbox"/> Show on drawings as appropriate:</p> <p>(1) Commercial/industrial facilities having vehicle /equipment cleaning needs shall either provide a covered, bermed area for washing activities or discourage vehicle/equipment washing by removing hose bibs and installing signs prohibiting such uses.</p> <p>(2) Multi-dwelling complexes shall have a paved, bermed, and covered car wash area (unless car washing is prohibited on-site and hoses are provided with an automatic shut-off to discourage such use).</p> <p>(3) Washing areas for cars, vehicles, and equipment shall be paved, designed to prevent run-on to or runoff from the area, and plumbed to drain to the sanitary sewer.</p> <p>(4) Commercial car wash facilities shall be designed such that no runoff from the facility is discharged to the storm drain system. Wastewater from the facility shall discharge to the sanitary sewer, or a wastewater reclamation system shall be installed.</p>	<p><input type="checkbox"/> If a car wash area is not provided, describe measures taken to discourage on-site car washing and explain how these will be enforced.</p>	<p>Describe operational measures to implement the following (if applicable):</p> <p><input type="checkbox"/> Wastewater from vehicle and equipment washing operations shall not be discharged to the storm drain system.</p> <p><input type="checkbox"/> Car dealerships and similar may rinse cars with water only.</p> <p><input type="checkbox"/> See Fact Sheet SC-21, "Vehicle and Equipment Cleaning," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com</p>
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<input type="checkbox"/> K. Vehicle/Equipment Repair and Maintenance	<input type="checkbox"/> Accommodate all vehicle equipment repair and maintenance indoors. Or designate an outdoor work area and design the area to prevent run-on and runoff of stormwater. <input type="checkbox"/> Show secondary containment for exterior work areas where motor oil, brake fluid, gasoline, diesel fuel, radiator fluid, acid-containing batteries or other hazardous materials or hazardous wastes are used or stored. Drains shall not be installed within the secondary containment areas. <input type="checkbox"/> Add a note on the plans that states either (1) there are no floor drains, or (2) floor drains are connected to wastewater pretreatment systems prior to discharge to the sanitary sewer and an industrial waste discharge permit will be obtained.	<input type="checkbox"/> State that no vehicle repair or maintenance will be done outdoors, or else describe the required features of the outdoor work area. <input type="checkbox"/> State that there are no floor drains or if there are floor drains, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency's requirements. <input type="checkbox"/> State that there are no tanks, containers or sinks to be used for parts cleaning or rinsing or, if there are, note the agency from which an industrial waste discharge permit will be obtained and that the design meets that agency's requirements.	<p>In the SUSMP report, note that all of the following restrictions apply to use the site:</p> <p><input type="checkbox"/> No person shall dispose of, nor permit the disposal, directly or indirectly of vehicle fluids, hazardous materials, or rinsewater from parts cleaning into storm drains.</p> <p><input type="checkbox"/> No vehicle fluid removal shall be performed outside a building, nor on asphalt or ground surfaces, whether inside or outside a building, except in such a manner as to ensure that any spilled fluid will be in an area of secondary containment. Leaking vehicle fluids shall be contained or drained from the vehicle immediately.</p> <p><input type="checkbox"/> No person shall leave unattended drip parts or other open containers containing vehicle fluid, unless such containers are in use or in an area of secondary containment.</p>
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<p><input type="checkbox"/> L. Fuel Dispensing Areas</p>	<p><input type="checkbox"/> Fueling areas¹ shall have impermeable floors (i.e., portland cement concrete or equivalent smooth impervious surface) that are: a) graded at the minimum slope necessary to prevent ponding; and b) separated from the rest of the site by a grade break that prevents run-on of stormwater to the maximum extent practicable.</p> <p><input type="checkbox"/> Fueling areas shall be covered by a canopy that extends a minimum of ten feet in each direction from each pump. [Alternative: The fueling area must be covered and the cover's minimum dimensions must be equal to or greater than the area within the grade break or fuel dispensing area¹.] The canopy [or cover] shall not drain onto the fueling area.</p>	<p><input type="checkbox"/> The property owner shall dry sweep the fueling area routinely.</p> <p><input type="checkbox"/> See the Business Guide Sheet, "Automotive Service—Service Stations" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com</p>
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¹ The fueling area shall be defined as the area extending a minimum of 6.5 feet from the corner of each fuel dispenser or the length at which the hose and nozzle assembly may be operated plus a minimum of one foot, whichever is greater.

<input type="checkbox"/> M. Loading Docks	<input type="checkbox"/> Show a preliminary design for the loading dock area, including roofing and drainage. Loading docks shall be covered and/or graded to minimize run-on to and runoff from the loading area. Roof downspouts shall be positioned to direct stormwater away from the loading area. Water from loading dock areas should be drained to the sanitary sewer where feasible. Direct connections to storm drains from depressed loading docks are prohibited. <input type="checkbox"/> Loading dock areas draining directly to the sanitary sewer shall be equipped with a spill control valve or equivalent device, which shall be kept closed during periods of operation. <input type="checkbox"/> Provide a roof overhang over the loading area or install door skirts (cowling) at each bay that enclose the end of the trailer.		<input type="checkbox"/> Move loaded and unloaded items indoors as soon as possible. <input type="checkbox"/> See Fact Sheet SC-30, "Outdoor Loading and Unloading," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
<input type="checkbox"/> N. Fire Sprinkler Test Water		<input type="checkbox"/> Provide a means to drain fire sprinkler test water to the sanitary sewer.	<input type="checkbox"/> See the note in Fact Sheet SC-41, "Building and Grounds Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

<p>O. Miscellaneous Drain or Wash Water</p> <p><input type="checkbox"/> Boiler drain lines</p> <p><input type="checkbox"/> Condensate drain lines</p> <p><input type="checkbox"/> Rooftop equipment</p> <p><input type="checkbox"/> Drainage sumps</p> <p><input checked="" type="checkbox"/> Roofing, gutters, and trim.</p>		<p><input type="checkbox"/> Boiler drain lines shall be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain system.</p> <p><input type="checkbox"/> Condensate drain lines may discharge to landscaped areas if the flow is small enough that runoff will not occur. Condensate drain lines may not discharge to the storm drain system.</p> <p><input type="checkbox"/> Rooftop mounted equipment with potential to produce pollutants shall be roofed and/or have secondary containment.</p> <p><input type="checkbox"/> Any drainage sumps on-site shall feature a sediment sump to reduce the quantity of sediment in pumped water.</p> <p><input checked="" type="checkbox"/> Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff.</p>	
<p><input type="checkbox"/> P. Plazas, sidewalks, and parking lots.</p>			<p><input type="checkbox"/> Plazas, sidewalks, and parking lots shall be swept regularly to prevent the accumulation of litter and debris. Debris from pressure washing shall be collected to prevent entry into the storm drain system. Washwater containing any cleaning agent or degreaser shall be collected and discharged to the sanitary sewer and not discharged to a storm drain.</p>

STEP 7

LID AND TREATMENT CONTROL SELECTION

A treatment control BMP and/or LID facility must be selected to treat the project pollutants of concern identified in Table 7 “Project Pollutants of Concern”. A treatment control facility with a high or medium pollutant removal efficiency for the project’s most significant pollutant of concern shall be selected. It is recommended to use the design procedure in Chapter 4 of the SUSMP to meet NPDES permit LID requirements, treatment requirements, and flow control requirements. If your project does not utilize this approach, the project will need to demonstrate compliance with LID, treatment and flow control requirements. Review Chapter 2 “Selection of Stormwater Treatment Facilities” in the SUSMP to assist in determining the appropriate treatment facility for your project.

Will this project be utilizing the unified LID design procedure as described in Chapter 4 of the Local SUSMP? <i>(If yes, please document in Attachment D following the steps in Chapter 4 of the County SUSMP)</i>	
Yes	No
If this project is not utilizing the unified LID design procedure, please describe how the alternative treatment facilities will comply with applicable LID criteria, stormwater treatment criteria, and hydromodification management criteria.	

➤ Indicate the project pollutants of concern (POCs) from Table 7 in Column 2 below.

TABLE 10: GROUPING OF POTENTIAL POLLUTANTS of Concern (POCs) by fate during stormwater treatment

Pollutant	Check Project Specific POCs	Coarse Sediment and Trash	Pollutants that tend to associate with fine particles during treatment	Pollutants that tend to be dissolved following treatment
Sediment	<input checked="" type="checkbox"/>	X	X	
Nutrients	<input checked="" type="checkbox"/>		X	X
Heavy Metals			X	
Organic Compounds			X	
Trash & Debris	<input checked="" type="checkbox"/>	X		
Oxygen Demanding	<input checked="" type="checkbox"/>		X	
Bacteria	<input checked="" type="checkbox"/>		X	
Oil & Grease	<input checked="" type="checkbox"/>		X	
Pesticides	<input checked="" type="checkbox"/>		X	

- Indicate the treatment facility(s) chosen for this project in the following table.

TABLE 11: GROUPS OF POLLUTANTS and relative effectiveness of treatment facilities

Pollutants of Concern	Bioretention Facilities (LID)	Settling Basins (Dry Ponds)	Wet Ponds and Constructed Wetlands	Infiltration Facilities or Practices (LID)	Media Filters	Higher-rate biofilters*	Higher-rate media filters*	Trash Racks & Hydro-dynamic Devices	Vegetated Swales
Coarse Sediment and Trash	High	High	High	High	High	High	High	High	High
Pollutants that tend to associate with fine particles during treatment	High	High	High	High	High	Medium	Medium	Low	Medium
Pollutants that tend to be dissolved following treatment	Medium	Low	Medium	High	Low	Low	Low	Low	Low

- Please check the box(s) that best describes the Treatment BMP(s) and/or LID BMP selected for this project.

TABLE 12: PROJECT LID AND TC-BMPS

Bioretention Facilities (LID)
<input type="checkbox"/> Bioretention area
<input type="checkbox"/> Flow-through Planter
<input type="checkbox"/> Cistern with Bioretention Facility
Settling Basins (Dry Ponds)
<input type="checkbox"/> Extended/dry detention basin with grass/vegetated lining
<input type="checkbox"/> Extended/dry detention basin with impervious lining
Infiltration Facilities or Practices (LID)
<input checked="" type="checkbox"/> Infiltration basin
<input type="checkbox"/> Dry well
<input type="checkbox"/> Infiltration trench
Wet Ponds and Constructed Wetlands
<input type="checkbox"/> Wet pond/basin (permanent pool)
<input type="checkbox"/> Constructed wetland
Vegetated Swales (LID⁽¹⁾)
<input checked="" type="checkbox"/> Vegetated Swale

Media Filters
<input type="checkbox"/> Austin Sand Filter
<input type="checkbox"/> Delaware Sand Filter
<input type="checkbox"/> Multi-Chambered Treatment Train (MCTT)
Higher-rate Biofilters
<input type="checkbox"/> Tree-pit-style unit
<input type="checkbox"/> Other _____
Higher-rate Media Filters
<input type="checkbox"/> Vault-based filtration unit with replaceable cartridges
<input type="checkbox"/> Other _____
Hydrodynamic Separator Systems
<input type="checkbox"/> Swirl Concentrator
<input type="checkbox"/> Cyclone Separator
Trash Racks
<input type="checkbox"/> Catch Basin Insert
<input type="checkbox"/> Catch Basin Insert w/ Hydrocarbon boom
<input type="checkbox"/> Other _____
Self-Treating or Self-Retaining Areas (LID)
<input type="checkbox"/> Pervious Pavements
<input type="checkbox"/> Vegetated Roofs
<input type="checkbox"/> Other _____

⁽¹⁾ Must be designed per SUSMP “Vegetated Swales” design criteria for LID credit (p. 65).

For design guidelines and calculations refer to Chapter 4 “Low Impact Development Design Guide” in the SUSMP. Please show all calculations and design sheets for all treatment facilities proposed in Attachment D.

- Create a Construction Plan SWMP Checklist for your project.

Instructions on how to fill out table

1. Number and list each measure or BMP you have specified in your SWMP in Columns 1 and Maintenance Category in Column 3 of the table. Leave Column 2 blank.
2. When you submit construction plans, duplicate the table (by photocopy or electronically). Now fill in Column 2, identifying the plan sheets where the BMPs are shown. List all plan sheets on which the BMP appears. This table must be shown on the front sheet of the grading and improvement plans.

Stormwater Treatment Control and LID BMP's			
Description / Type	Sheet	Maintenance Category	Revisions
1) Grass lined retention basin		Two	
2) grass line swales		One	

* BMP's approved as part of Stormwater Management Plan (SWMP) dated xx/xx/xx on file with DPW. Any changes to the above BMP's will require SWMP revision and Plan Change approvals.

Please describe why the chosen treatment BMP(s) was selected for this project. For projects utilizing a low performing BMP, please provide a feasibility analysis that demonstrates utilization of a treatment facility with a high or medium removal efficiency ranking is infeasible.

We have chosen to use about 1800 linear feet of vegetated grass lined swales located strategically along the side of the proposed access road and in the existing drainage swales. In addition there will be grass lined swales with rock dissipaters to filter sediment and pollutants from the graded residential pads before water leaves the pad areas. Nearly all site drainage will enter the grass lined retention basin after being treated in the grass lined swales where it will either, permeate through the grass, evaporate or leave the site in the pre-project flow condition.

A Treatment BMP must address runoff from developed areas. Please provide the post-construction water quality treatment volume or flow values for the selected project Treatment BMP(s). Guidelines for design calculations are located in Chapter 4 of the County SUSMP.

Label outfalls on the BMP map. The Water Quality peak rate of discharge flow (Q_{wq}) and the Water Quality storage volume (V_{wq}) is dependent on the type of treatment BMP selected for the project.

For flow based BMP's use $I_{wq}=0.2''/\text{hr}$.

$$\text{POE 1 } Q_{wq}=(0.30)(0.2)(40.0)=2.4 \text{ cfs}$$

$$\text{POE 2 } Q_{wq}=(0.30)(0.2)(11.6)=0.696$$

For volume based BMP's use $A*85^{\text{th}}$ percentile rainfall*0.1.

$$\text{POE 1 } V_{wq}=(1742400)(0.068)(0.1)=11848$$

$$\text{POE 2 } V_{wq}=(505296)(0.068)(0.1)=3436$$

Outfall	Tributary Area (acres)	Q_{wq} (cfs)	V_{wq} (ft^3)
POE 1	40.0	2.4	11848
POE 2	11.6	0.7	3436

STEP 8

OPERATION AND MAINTENANCE

- Please check the box that best describes the maintenance mechanism(s) for this project.

TABLE 13: PROJECT BMP CATEGORY

CATEGORY	SELECTED		BMP Description
	YES	NO	
First			Retention basin, Grass Lined Swales
Second ¹	x		
Third ²			
Fourth			

Note:

1. A recorded maintenance agreement will be required.
 2. Project will be required to establish or be included in a Stormwater Maintenance Assessment District for the long-term maintenance of treatment BMPs.
- Please list all individual LID and Treatment Control BMPs (TC-BMPs) incorporated into project. Please ensure the “BMP Identifier” is consistent with the legend in Attachment C “LID and/or TC-BMP Exhibit”. Please attach the record plan sheets upon completion of project and amend the Major SWMP where appropriate. For each type of LID or TC-BMP provide an inspection sheet in Attachment F “Maintenance Plan”.

TABLE 14: PROJECT SPECIFIC LID AND TC-BMPs

BMP Identifier*	LID or TC-BMP Type	BMP Pollutant of Concern Efficiency (H,M,L) – Table 11	Final Construction Date (to be completed by County inspector)	Final Construction Inspector Name (to be completed by County inspector)
BRF	LID bioretention	High for all pollutants of concern		

* For location of BMP's, see approved Record Plan dated XX/XX/XX, plan (TYPE) sheet (#).

➤ **Responsible Party for Long-term Maintenance:**

Identify the parties responsible for long-term maintenance of the BMPs identified above and Source Controls specified in Attachment B. Include the appropriate written agreement with the entities responsible for O&M in Attachment F. Please see Chapter 5 “Private Ownership and Maintenance” on page 94 of the County SUSMP for appropriate maintenance mechanisms.

Name: To be created Home Owners Association
Company Name:
Phone Number:
Street Address:
City/State/Zip:
Email Address:

➤ **Funding Source:**

Provide the funding source or sources for long-term operation and maintenance of each BMP identified above. By certifying the Major SWMP the applicant is certifying that the funding responsibilities have been addressed and will be transferred to future owners.

The funding source will be the Home Owner's Association

ATTACHMENTS

Please include the following attachments.

ATTACHMENT		COMPLETED	N/A
A	Project Location Map		
B	Source Control Exhibit		
C	LID and/or TC-BMP Exhibit		
D	Drainage Management Area (DMA) Maps, Sizing Design Calculations and BMP/IMP Design Details		
E	Geotechnical Certification Sheet		
F	Maintenance Plan		
G	Tracking Report		
H	Addendum		

Note: Attachments B and C may be combined.

ATTACHMENT A

Project Location Map

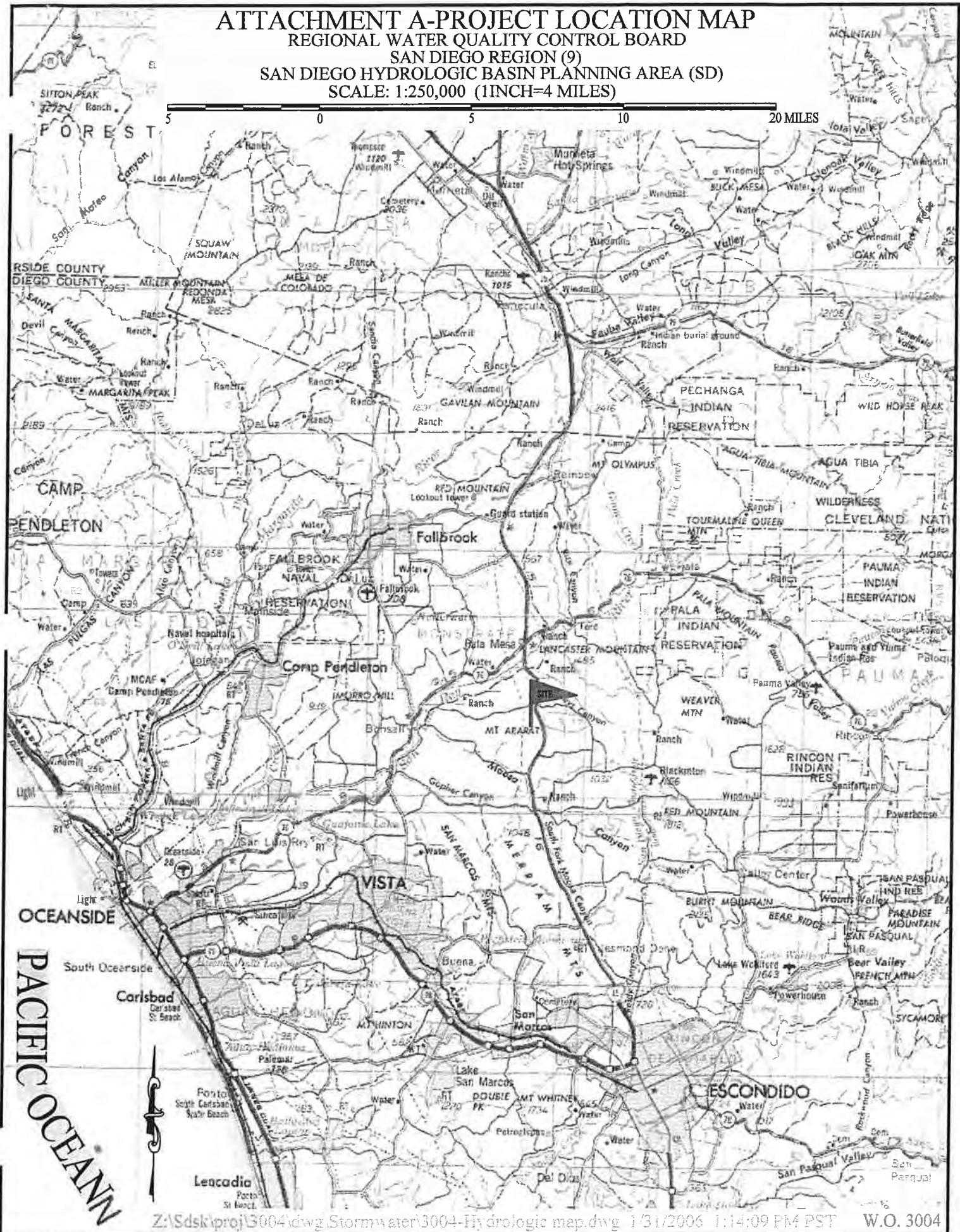
ATTACHMENT A-PROJECT LOCATION MAP

REGIONAL WATER QUALITY CONTROL BOARD

SAN DIEGO REGION (9)

SAN DIEGO HYDROLOGIC BASIN PLANNING AREA (SD)

SCALE: 1:250,000 (1INCH=4 MILES)



ATTACHMENT B

Source Control Exhibit

SOURCE CONTROL BMP LEGEND

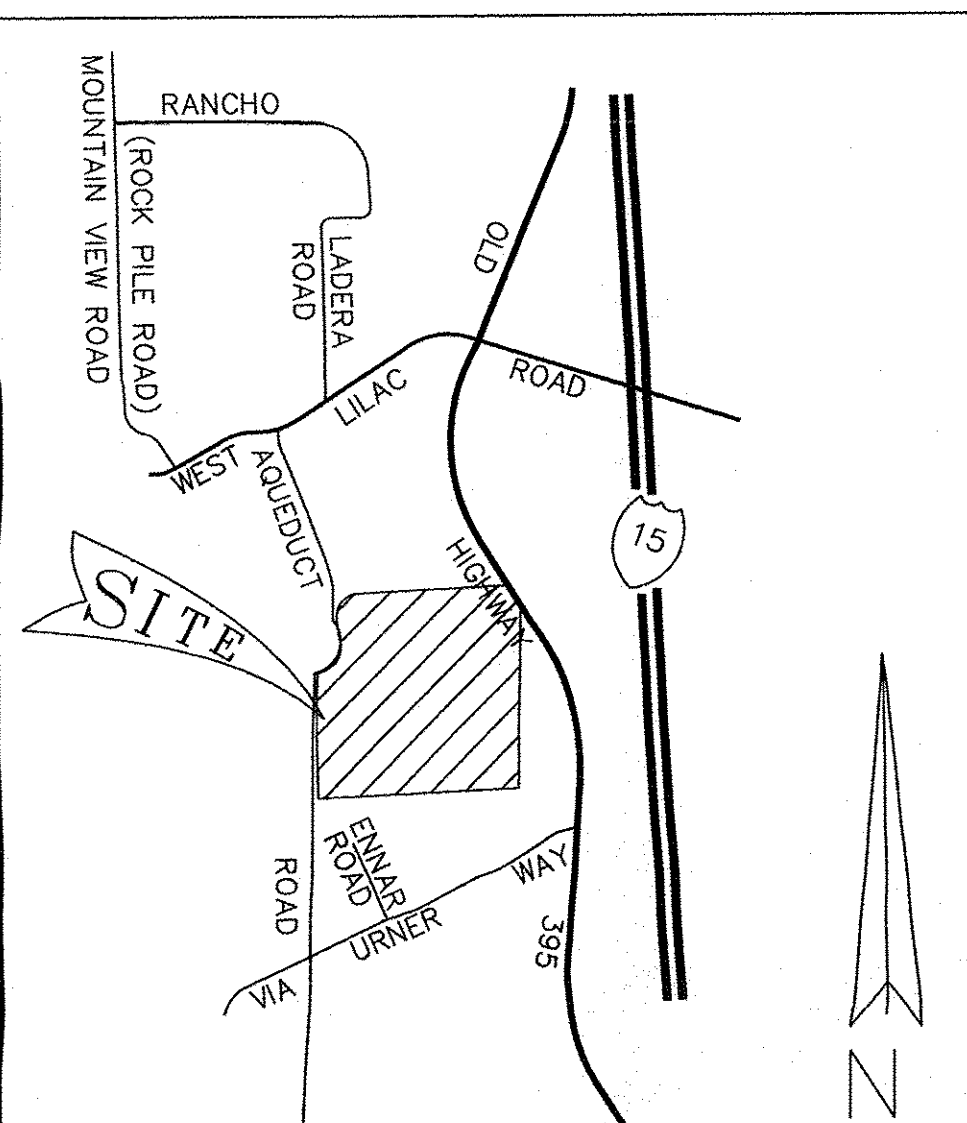
POTENTIAL SOURCES OF RUNOFF POLLUTANTS	PERMANENT CONTROLS & OPERATIONAL BMPs	FACT SHEET	SYMBOL
LANDSCAPE/OUTDOOR PESTICIDE USE	USE EFFICIENT IRRIGATION PRACTICES	CASQA SD-12	NON-PLOTTABLE
	SELECT PLANTS APPROPRIATE TO SITE SOILS, SLOPES, CLIMATE, SUN, WIND, RAIN, LAND USE, ECOLOGICAL CONSISTENCY AND PLANT INTERACTIONS	CASQA SD-10	
	BUILDING & GROUNDS MAINTENANCE	CASQA SC-41	
ROADS & DRIVEWAYS	DISTRIBUTION OF HOMEOWNERS GUIDE TO POLLUTION PREVENTION	N/A	NON-PLOTTABLE
	SWEEP REGULARLY TO PREVENT THE ACCUMULATION OF TRASH & DEBRIS. WASH WATER SHALL BE PREVENTED FROM REACHING ANY STORM DRAIN FACILITIES.	N/A	
STORM DRAIN INLETS	MARK STORM DRAIN INLETS "NO DUMPING, FLOWS TO OCEAN".		
CURB CUTS	CURB CUTS WITH GRAVEL ROCK DISIPATOR	3.3.3 SD COUNTY LID MANUAL	

CASQA BMP REFERENCE NOTE:

ALL CASQA BMP FACT SHEETS REFERENCED ON THIS PLAN ARE FROM THE CASQA NEW DEVELOPMENT BMP HANDBOOK. COPIES OF THE REFERENCED BMP FACT SHEETS CAN BE FOUND BY VISITING THE FOLLOWING WEB SITE:
<http://www.cabhandbooks.com/Development.asp>

COUNTY LID FACT SHEET NOTE:

ALL COUNTY OF SAN DIEGO LID FACT SHEETS CAN BE FOUND IN THE COUNTY OF SAN DIEGO LOW IMPACT DEVELOPMENT HANDBOOK (JULY 20, 2007 DRAFT EDITION). THIS MANUAL CAN BE OBTAINED FROM THE COUNTY OF SAN DIEGO.



VICINITY MAP

NO SCALE T.B. 1048, J-7

PROPERTY OWNER INFORMATION

NAME: DON DABBS
 ADDRESS: P.O. BOX 966
 BONSALL, CA 92003
 TELEPHONE NUMBER: (760) 727-7371
 (24 HOUR CONTACT NUMBER)
 SITE A.P.N. NUMBER: 127-071-38
 SITE ADDRESS: Old Highway 395 ±
 BONSALL, CA 92003

POLLUTANTS OF CONCERN

THE FOLLOWING ARE POLLUTANTS OF CONCERN FOR THE PROJECT SITE:

SEDIMENTS
 NUTRIENTS
 TRASH AND DEBRIS
 OXYGEN DEMANDING SUBSTANCES
 OIL AND GREASE
 BACTERIA AND VIRUSES
 PESTICIDES

HYDROLOGIC BASIN INFORMATION

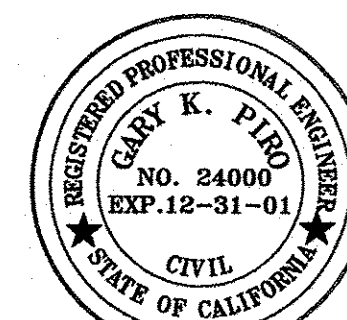
BASIN NUMBER: 903.12
 HYDROLOGIC UNIT: SAN LUIS REY
 HYDROLOGIC AREA: LOWER SAN LUIS REY
 HYDROLOGIC SUB-AREA: BONSALL
 RECEIVING WATERS: SAN LUIS REY RIVER

BASIN 303(d) INFORMATION

RECEIVING WATERS: 903.00
 POLLUTANTS/STRESSORS: BACTERIAL INDICATORS
 WATERBODY: PACIFIC OCEAN SHORELINE
 SEGMENT: SAN LUIS REY RIVER MOUTH
 EXTENT OF IMPAIRMENT: 0.4 MI.

BASIN BENEFICIAL USES

SURFACE WATERS:
 AGR
 IND
 REC1
 REC2
 WARM
 WILD
 RARE



ENGINEER OF WORK

PREPARED BY:
 PIRO ENGINEERING
 930 BOARDWALK, SUITE "D"
 SAN MARCOS, CA. 92069
 (760) 744-3700

RCE NO: 24000

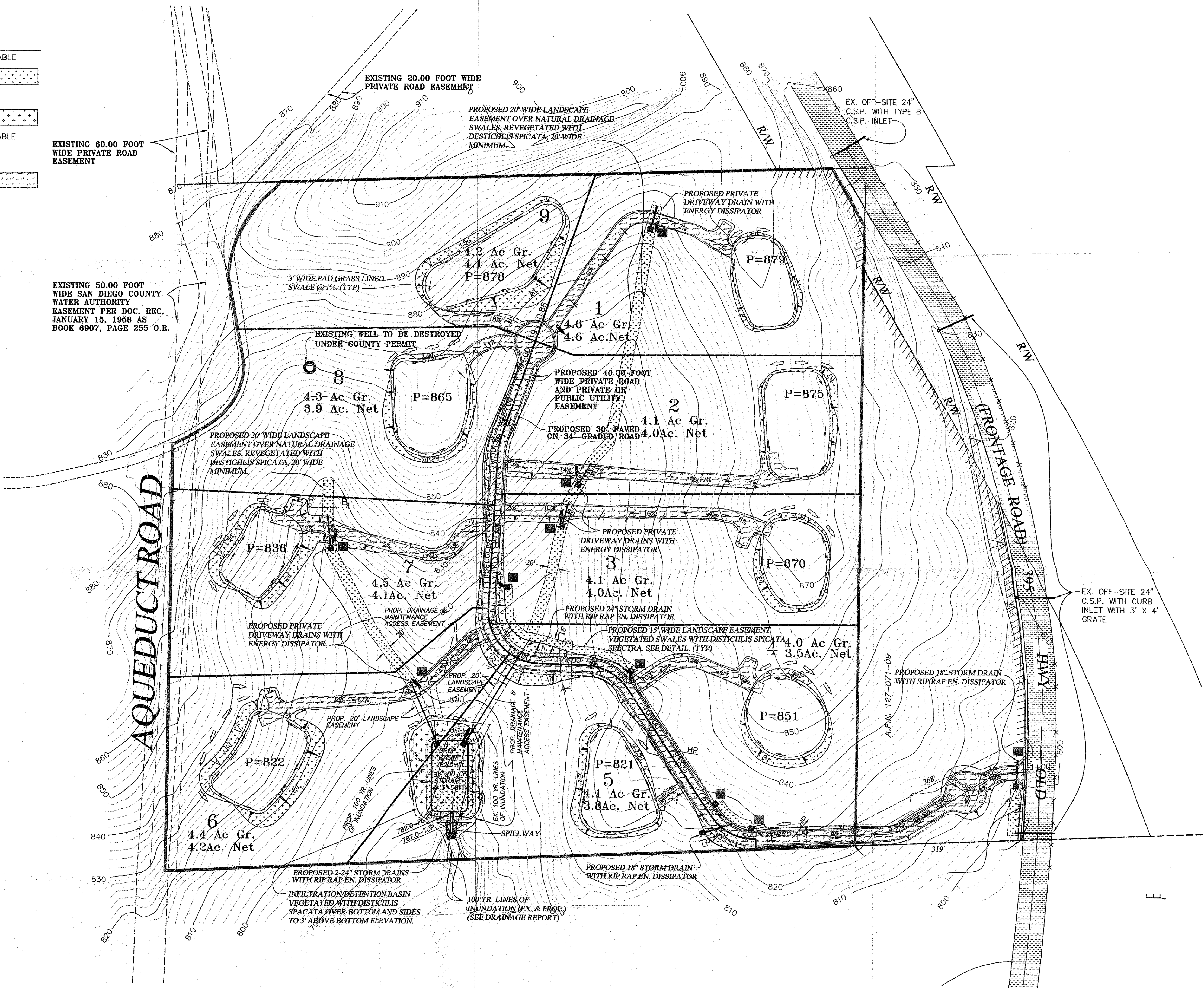
EXPIRES: 12-31-05

COUNTY OF SAN DIEGO
 DEPARTMENT OF PLANNING AND LAND USE

ATTACHMENT B
 SOURCE CONTROL EXHIBIT
 DABBS SUBDIVISION

SHEET: 1

OF SHEETS: 1



ATTACHMENT C

LID and/or TC-BMP Exhibit

LID AND TC BMP LEGEND

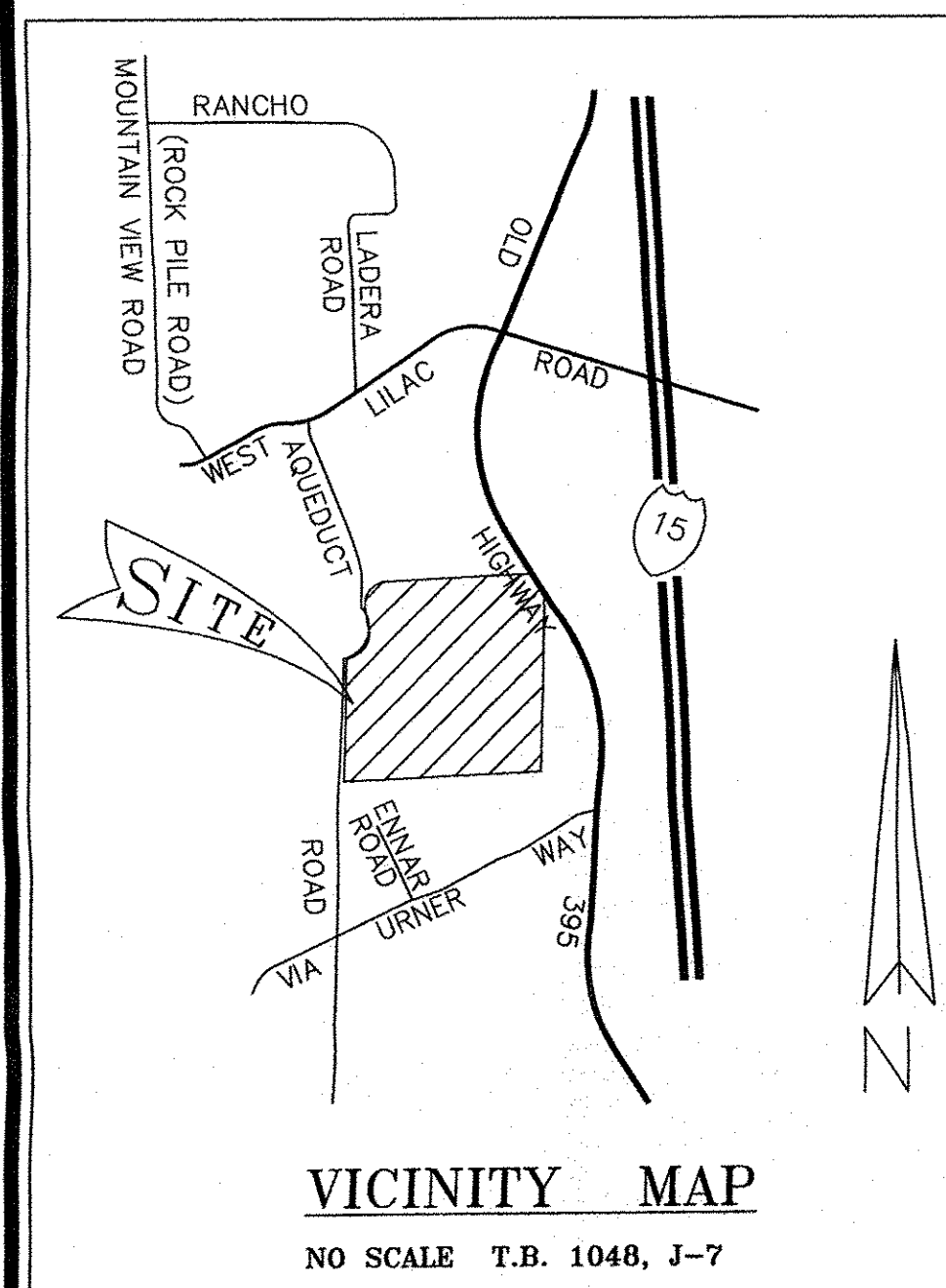
BMP TYPE	DESCRIPTION	FACT SHEET	SYMBOL
SITE DESIGN	MINIMIZE SOIL COMPACTION	N/A	NON-PLOTTABLE
	DRAIN RUNOFF FROM IMPERVIOUS SURFACES TO PERVIOUS AREAS		
	CURB CUTS WITH GRAVEL ROCK DISIPATOR TO VEGETATED SWALES	3.3.3 SD COUNTY LID MANUAL	
	LID LANDSCAPING DESIGN-REUSE OF NATIVE SOILS	N/A	NON-PLOTTABLE
	LID LANDSCAPING DESIGN-SMART IRRIGATION SYSTEMS	CASQA SD-12	NON-PLOTTABLE
	MINIMIZE EROSION FROM SLOPES		
	DISTURB EXISTING SLOPES ONLY WHEN NECESSARY	N/A	NON-PLOTTABLE
	MINIMIZE CUT AND FILL AREAS TO REDUCE SLOPES	N/A	NON-PLOTTABLE
	ROUNDING AND SHAPING OF SLOPES	N/A	NON-PLOTTABLE
	COLLECT CONCENTRATED FLOWS IN STABILIZED CHANNELS		
LID	BIORETENTION FACILITIES	LID FS-4	
	VEGETATED SWALE	LID FS-??	
LID	RETENTION BASIN	LID FS-??	
	SELF RETAINING AREAS	LID FS-??	
LID	VEGETATED PADS	LID FS-??	

CASQA BMP REFERENCE NOTE:

ALL CASQA BMP FACT SHEETS REFERENCED ON THIS PLAN ARE FROM THE CASQA NEW DEVELOPMENT BMP HANDBOOK. COPIES OF THE REFERENCED BMP FACT SHEETS CAN BE FOUND BY VISITING THE FOLLOWING WEB SITE:
<http://www.cahandbooks.com/Development.asp>

COUNTY LID FACT SHEET NOTE:

ALL COUNTY OF SAN DIEGO LID FACT SHEETS CAN BE FOUND IN THE COUNTY OF SAN DIEGO LOW IMPACT DEVELOPMENT HANDBOOK (JULY 20, 2007 DRAFT EDITION). THIS MANUAL CAN BE OBTAINED FROM THE COUNTY OF SAN DIEGO.



PROPERTY OWNER INFORMATION

NAME: DON DABBS
 ADDRESS: P.O. BOX 966
 BONSALL, CA 92003
 TELEPHONE NUMBER: (760) 727-7371
 (24 HOUR CONTACT NUMBER)
 SITE A.P.N. NUMBER: 127-071-38
 SITE ADDRESS: Old Highway 395 ±
 BONSALL, CA 92003

POLLUTANTS OF CONCERN

THE FOLLOWING ARE POLLUTANTS OF CONCERN FOR THE PROJECT SITE:

SEDIMENTS
 NUTRIENTS
 TRASH AND DEBRIS
 OXYGEN DEMANDING SUBSTANCES
 OIL AND GREASE
 BACTERIA AND VIRUSES
 PESTICIDES

HYDROLOGIC BASIN INFORMATION

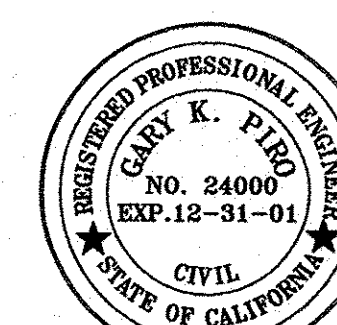
BASIN NUMBER: 903.12
 HYDROLOGIC UNIT: SAN LUIS REY
 HYDROLOGIC AREA: LOWER SAN LUIS REY
 HYDROLOGIC SUB-AREA: BONSALL
 RECEIVING WATERS: SAN LUIS REY RIVER

BASIN 303(d) INFORMATION

RECEIVING WATERS: 903.00
 POLLUTANTS/STRESSORS: BACTERIAL INDICATORS
 WATERBODY: PACIFIC OCEAN SHORELINE
 SEGMENT: SAN LUIS REY RIVER MOUTH
 EXTENT OF IMPAIRMENT: 0.4 MI.

BASIN BENEFICIAL USES

SURFACE WATERS:
 AGR
 IND
 REC1
 REC2
 WARM
 WILD
 RARE



ENGINEER OF WORK

PREPARED BY:
 PIRO ENGINEERING
 930 BOARDWALK, SUITE "D"
 SAN MARCOS, CA. 92069
 (760) 744-3700

RCE NO: 24000

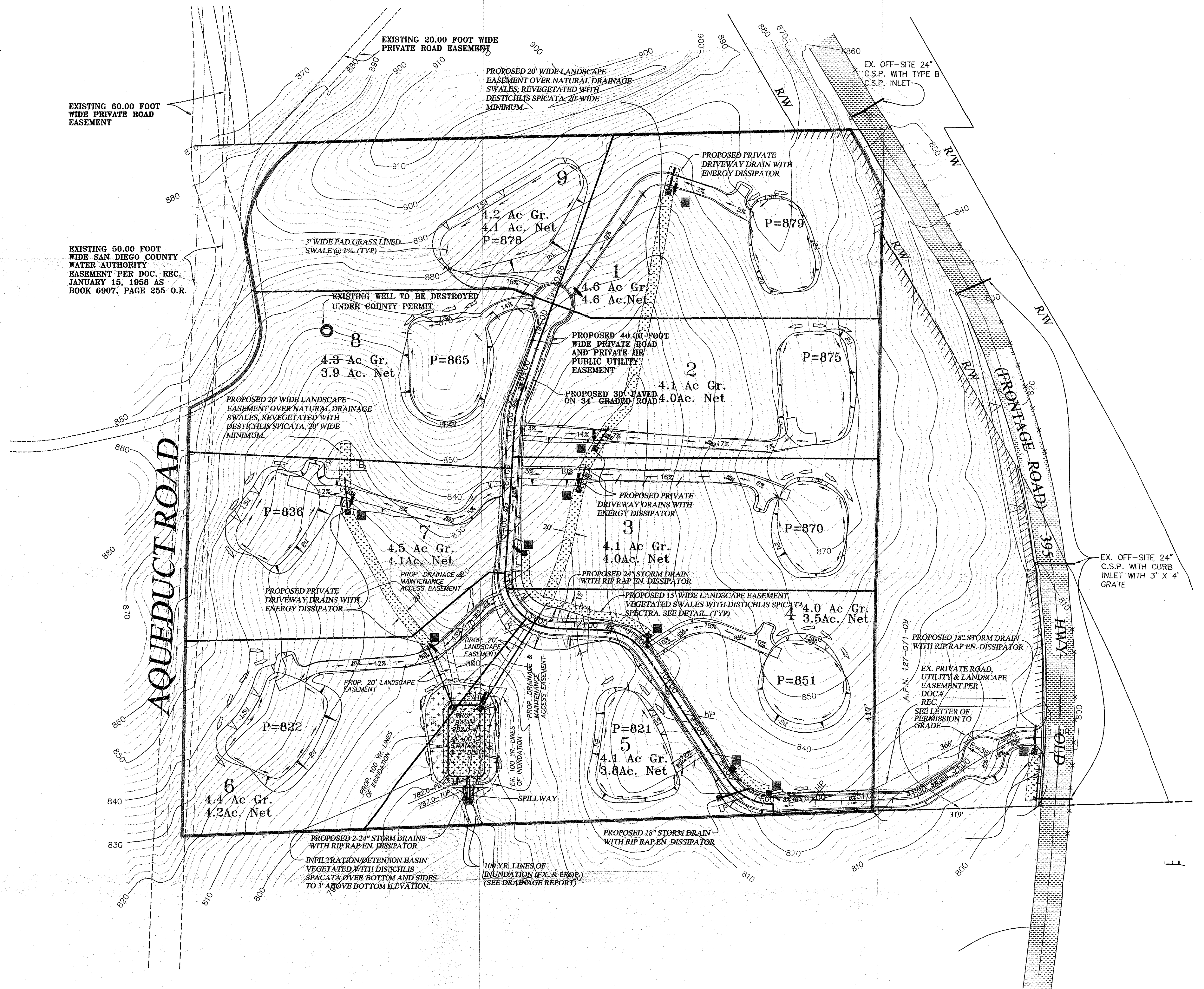
EXPIRES: 12-31-05

COUNTY OF SAN DIEGO
 DEPARTMENT OF PLANNING AND LAND USE

ATTACHMENT C
 LID AND TC-BMP EXHIBIT
 DABBS SUBDIVISION

SHEET: 1

OF SHEETS: 1



ATTACHMENT D

Drainage Management Area (DMA) Maps, Sizing Design Calculations and TC-BMP/LID Design Details

LEGEND

DRAINAGE MANAGEMENT AREA BOUNDARY

DRAINAGE MANAGEMENT AREA NAME

SUBDIVISION BOUNDARY

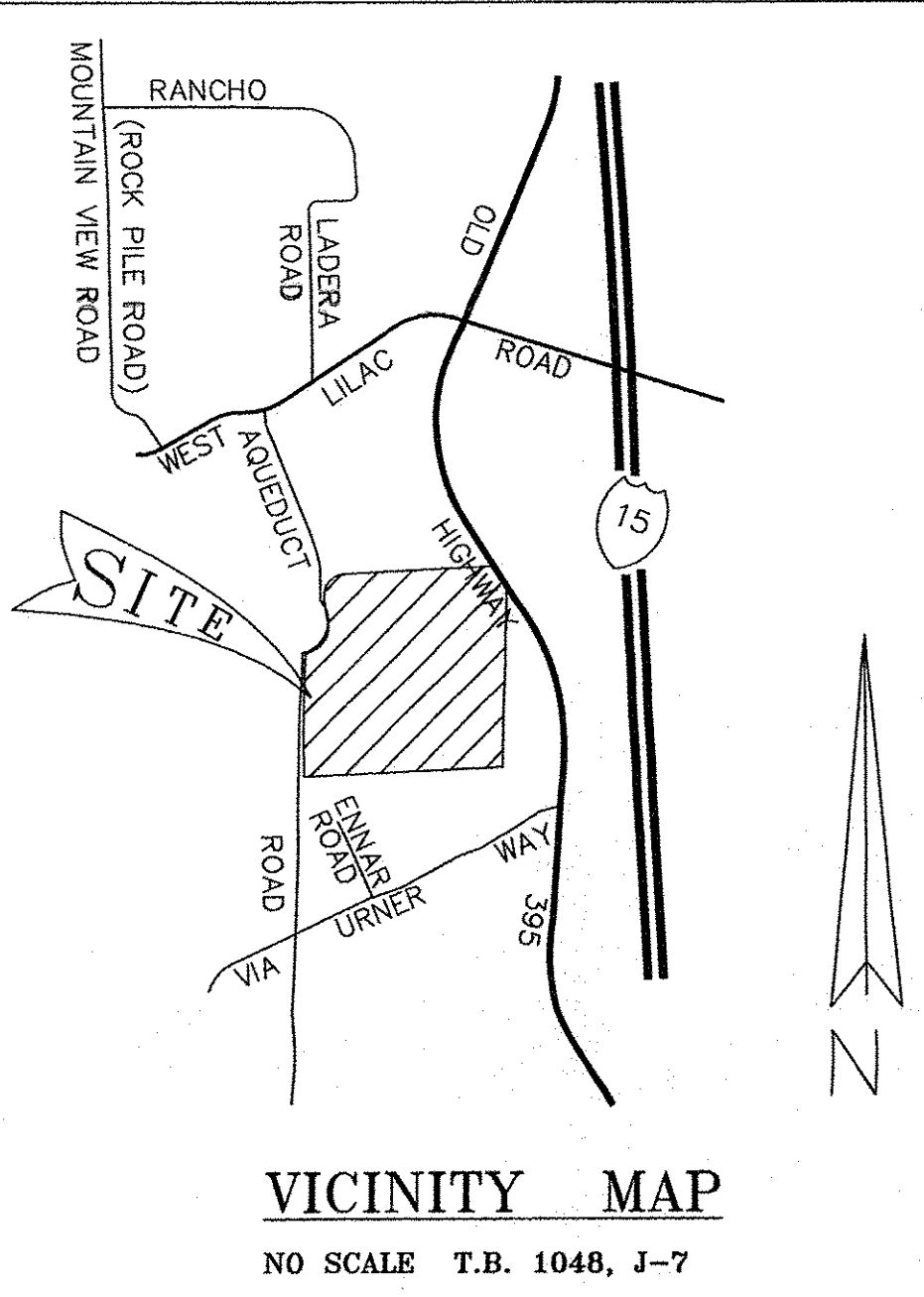
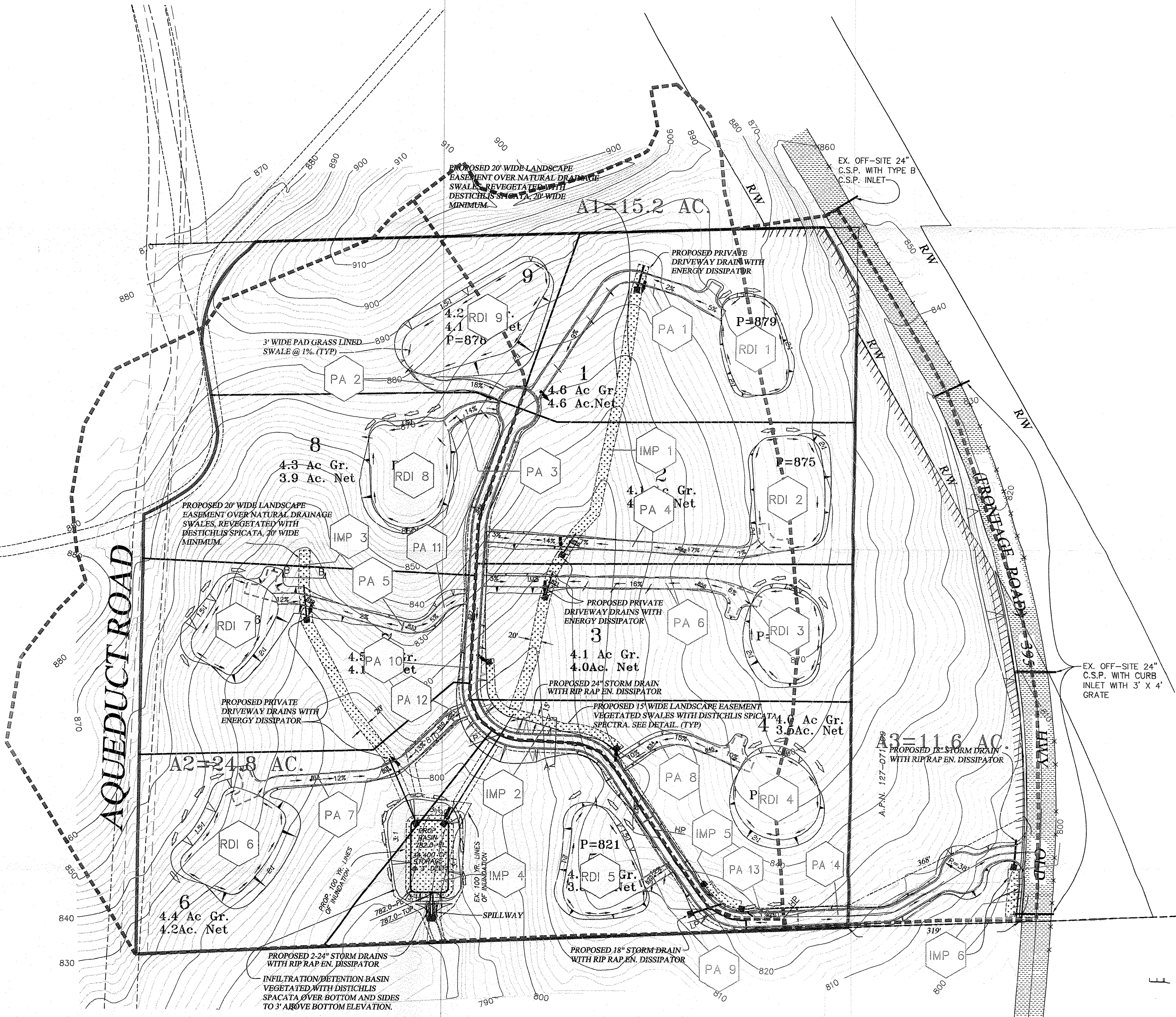
TABLE 1-ROOF/DRIVEWAY/IMPROVED AREAS		
DMA NAME	AREA (S.F.)	RUNOFF FACTOR
RDI 1	15690	1.0
RDI 2	21619	
RDI 3	16987	
RDI 4	17587	
RDI 5	20182	
RDI 6	20213	
RDI 7	15199	
RDI 8	22712	
RDI 9	26619	

TABLE 2-PAVED AREAS		
DMA NAME	AREA (S.F.)	RUNOFF FACTOR
PA 1	10388	1.0
PA 2	3302	
PA 3	2125	
PA 4	12303	
PA 5	6927	
PA 6	11195	
PA 7	9845	
PA 8	6149	
PA 9	1283	
PA 10	26956	
PA 11	2753	
PA 12	656	
PA 13	8943	
PA 14	14237	

TABLE 3-INTEGRATED MANAGEMENT PRACTICE AREAS		
IMP NAME	IMP TYPE	IMP AREA
IMP 1	BIO SWALE	17936.6 S.F.
IMP 2	BIO SWALE	5295.4 S.F.
IMP 3	BIO SWALE	9072.1 S.F.
IMP 4	RETENTION BASIN	34000 C.F.
IMP 5	BIO SWALE	1131 S.F.
IMP 6	BIO SWALE	1765 S.F.

TABLE 4—AREAS DRAINING TO IMP'S					
DMA NAME	RECEIVING IMP AREA	DMA AREA X RUNOFF FACTOR	IMP SIZING FACTOR	MIN AREA S.F.	PROP AREA S.F.
PA 1	IMP 1	10388	0.04	3527	17937
PA 4		12303			
PA 6		11195			
RDI 1		15590			
RDI 2		21619			
RDI 3		16987			
TOTAL		88182			
PA 2	IMP 2	3302	0.04	2381	5295
PA 3		2125			
PA 8		6149			
PA 10		26956			
PA 11		2753			
PA 12		656			
RDI 4	17587				
TOTAL		59528			
PA 5	IMP 3	6927	0.04	2858	9072
RDI 7		15199			
RDI 8		22712			
RDI 9		26619			
TOTAL		71457			
A1 *	IMP 4	237735	0.04	27095	34400
A2 *		389397			
PA 7		9845			
RDI 5		20182			
RDI 6		20213			
TOTAL		677372			
PA 9	IMP 5	1283	0.04	409	1131
PA 13		8943			
TOTAL		10232			
PA 14	IMP 6	14237	0.04	570	1765
TOTAL		14237			

* FOR A1 AND A2, THE DMA AREA X RUNOFF FACTOR WAS CALCULATED USING THE EXISTING PLUS PROJECT CONDITIONS RUNOFF FACTOR OF 0.35 AS SHOWN IN THE APPROVED DRAINAGE STUDY.



PROPERTY OWNER INFORMATION

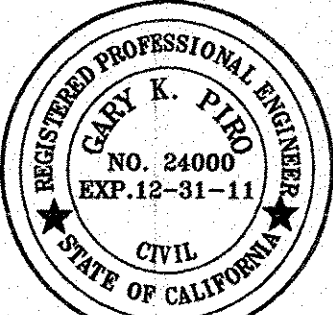
NAME: DON DABBS

ADDRESS: P.O. BOX 966
BONSALL, CA 92003

TELEPHONE NUMBER: (760) 727-7371
(24 HOUR CONTACT NUMBER)

SITE A.P.N. NUMBER: 127-071-38

SITE ADDRESS: Old Highway 395 ±
BONSALL, CA 92003



SOURCE OF TOPOGRAPHY	ENGINEER OF WORK	COUNTY OF SAN DIEGO DEPARTMENT OF PLANNING AND LAND USE
COUNTY 200 SCALE TOPOGRAPHY 410-1719	PREPARED BY: PIRO ENGINEERING 930 BOARDWALK, SUITE "D" SAN MARCOS, CA. 92069 (760) 744-3700 RCE NO: 24000	ATTACHMENT D DRAINAGE MANAGEMENT AREA EXHIBIT DABBS SUBDIVISION
	EXPIRES: 12-31-05	SHEET: 1 OF SHEETS: 1

ATTACHMENT E

Geotechnical Certification Sheet

The design of stormwater treatment and other control measures proposed in this plan requiring specific soil infiltration characteristics and/or geological conditions has been reviewed and approved by a registered Civil Engineer, Geotechnical Engineer, or Geologist in the State of California.


Name _____


Date _____

ATTACHMENT F

Maintenance Plan

(Use Chapter 5 of the SUSMP as guidance in developing your Maintenance Plan)

The following is a general outline for to create your project specific Maintenance Plan.

- I. Inspection, Maintenance Log and Self-Verification Forms (Examples are provided in Appendix F of the San Diego County SUSMP)
- II. Updates, Revisions and Errata
- III. Introduction
 - A. Narrative overview describing the site; drainage areas, routing, and discharge points; and treatment facilities.
- IV. Responsibility for Maintenance
 - A. General
 - (1) Name and contact information for responsible individual(s).
 - (2) Organization chart or charts showing organization of the maintenance function and location within the overall organization.
 - (3) Reference to Operation and Maintenance Agreement (if any). A copy of the agreement should be attached.
 - (4) Maintenance Funding
 - (1) Sources of funds for maintenance
 - (2) Budget category or line item
 - (3) Description of procedure and process for ensuring adequate funding for maintenance
 - B. Staff Training Program
 - C. Records
 - D. Safety
- V. Summary of Drainage Areas and Stormwater Facilities
 - A. Drainage Areas

- (1) Drawings showing pervious and impervious areas (copied or adapted from initial SWMP).
- (2) Designation and description of each drainage area and how flow is routed to the corresponding facility.

B. Treatment and Flow-Control Facilities

- (1) Drawings showing location and type of each facility
- (2) General description of each facility (Consider a table if more than two facilities)
 - (1) Area drained and routing of discharge.
 - (2) Facility type and size

VI. Facility Documentation

- A. "As-built" drawings of each facility (design drawings in the draft Plan)
- B. Manufacturer's data, manuals, and maintenance requirements for pumps, mechanical or electrical equipment, and proprietary facilities (include a "placeholder" in the draft plan for information not yet available).
- C. Specific operation and maintenance concerns and troubleshooting

VII. Maintenance Schedule or Matrix

- A. Maintenance Schedule for each facility with specific requirements for:
 - (1) Routine inspection and maintenance
 - (2) Annual inspection and maintenance
 - (3) Inspection and maintenance after major storms

B. Service Agreement Information

Assemble and make copies of your maintenance plan. One copy must be submitted to the County, and at least one copy kept on-site. Here are some suggestions for formatting the maintenance plan:

- Format plans to 8½" x 11" to facilitate duplication, filing, and handling.
- Include the revision date in the footer on each page.
- Scan graphics and incorporate with text into a single electronic file. Keep the electronic file backed-up so that copies of the maintenance plan can be made if the hard copy is lost or damaged.

**PRIVATE TREATMENT CONTROL BMP
OPERATION AND MAINTENANCE VERIFICATION FORM
BIOFILTER**

1. Transcribe the following information from your notification letter and make corrections as necessary:

Permit No.: _____

BMP Location: _____

Responsible Party: _____

Phone Number: () _____ ☐ Check here for Phone Number Change

Responsible Party Address: _____

Number Street Name & Suffix City/Zip

☐ Check here for Address Change

2. Using the Table below, please describe the inspections and maintenance activities that have been conducted during the last year, and date(s) maintenance was performed. Under "Results of Inspection," indicate whether maintenance was required based on each inspection, and if so, what type of maintenance. If maintenance was required, provide the date maintenance was conducted and description of the maintenance. Refer to the back of this sheet for information describing typical maintenance indicators and maintenance activities. If no maintenance was required based on the inspection results, state "no maintenance required."

Date of Inspection	Results of Inspection	Date Maintenance Completed and Description of Maintenance Conducted

3. Attach copies of available supporting documents (photographs, copies of maintenance contracts, and/or maintenance records).

4. Sign the bottom of the form and return to: County of San Diego Watershed Protection Program
Treatment Control BMP Tracking
5201 Ruffin Road, Suite P, MS 0326
San Diego, CA 92123

Signature of Responsible Party

Print Name

Date

PRIVATE TREATMENT CONTROL BMP OPERATION AND MAINTENANCE VERIFICATION FORM BIOFILTER

Biofilters Include:

☐ Vegetated Filter Strip

☐ Vegetated Swale

☐ Bioretention Facility

Routine maintenance is needed to ensure that flow is unobstructed, that erosion is prevented, and that soils are held together by plant roots and are biologically active. Typical maintenance consists of the following:

Bioretention BMPs Inspection and Maintenance Checklist	
Typical Maintenance Indicators	Typical Maintenance Actions
Accumulation of sediment, litter, or debris	Remove and properly dispose of accumulated materials, without damage to the vegetation.
Poor vegetation establishment	Examine the vegetation to ensure that it is healthy and dense enough to provide filtering and to protect soils from erosion. Replenish mulch as necessary, remove fallen leaves and debris, prune large shrubs or trees, and mow turf areas.
Overgrown vegetation	Mow or trim as appropriate, but not less than the design height of the vegetation (typically 4-6 inches for grass). Confirm that irrigation is adequate and not excessive and that sprays do not directly enter overflow grates. Replace dead plants and remove noxious and invasive vegetation.
Erosion due to concentrated irrigation flow	Repair/re-seed eroded areas and adjust the irrigation system.
Erosion due to concentrated stormwater runoff flow	Repair/re-seed eroded areas and make appropriate corrective measures such as adding erosion control blankets, adding stone at flow entry points, or re-grading where necessary.
Standing water (BMP not draining)	Abate any potential vectors by filling holes in the ground in and around the biofilter facility and by insuring that there are no areas where water stands longer than 48 hours following a storm. If mosquito larvae are present and persistent, contact the San Diego County Vector Control Program at (858) 694-2888. Mosquito larvicides should be applied only when absolutely necessary and then only by a licensed individual or contractor.
Obstructed inlet or outlet structure	Clear obstructions.
Damage to structural components such as weirs, inlet, or outlet structures	Repair or replace as applicable.

PRIVATE TREATMENT CONTROL BMP OPERATION AND MAINTENANCE VERIFICATION FORM DETENTION BASINS AND WET PONDS

1. Transcribe the following information from your notification letter and make corrections as necessary:

Permit No.: _____

BMP Location: _____

Responsible Party: _____

Phone Number: () _____ ☐ Check here for Phone Number Change

Responsible Party Address: _____

Number Street Name & Suffix City/Zip

☐ Check here for Address Change

2. Using the Table below, please describe the inspections and maintenance activities that have been conducted during the last year, and date(s) maintenance was performed. Under "Results of Inspection," indicate whether maintenance was required based on each inspection, and if so, what type of maintenance. If maintenance was required, provide the date maintenance was conducted and description of the maintenance. Refer to the back of this sheet for information describing typical maintenance indicators and maintenance activities. If no maintenance was required based on the inspection results, state "no maintenance required."

Date of Inspection	Results of Inspection	Date Maintenance Completed and Description of Maintenance Conducted

3. Attach copies of available supporting documents (photographs, copies of maintenance contracts, and/or maintenance records).

4. Sign the bottom of the form and return to:

County of San Diego Watershed Protection Program
Treatment Control BMP Tracking
5201 Ruffin Road, Suite P, MS 0326
San Diego, CA 92123

Signature of Responsible Party

Print Name

Date

PRIVATE TREATMENT CONTROL BMP OPERATION AND MAINTENANCE VERIFICATION FORM DETENTION – SIDE 2

These larger-scale facilities remove pollutants by detaining runoff in a quiescent pool long enough for some of the particulates to settle to the bottom. The following list of typical maintenance indicators and maintenance activities for detention basins and wet ponds is provided for your reference.

Detention BMPs Inspection and Maintenance Checklist	
Typical Maintenance Indicators	Typical Maintenance Actions
Poor vegetation establishment	Re-seed, re-establish vegetation.
Overgrown vegetation and invasive plants	Mow or trim as appropriate and remove invasive plants.
Erosion due to concentrated irrigation flow	Repair/re-seed eroded areas and adjust the irrigation system.
Erosion due to concentrated stormwater runoff flow	Repair/re-seed eroded areas and make appropriate corrective measures such as adding erosion control blankets, adding stone at flow entry points, or re-grading where necessary.
Gopher holes	Repair/re-seed holes and make appropriate corrective measures to prevent rodent activity.
Accumulation of sediment, litter, or debris	Remove and properly dispose of accumulated materials, without damage to the vegetation. Dredge accumulated sediment. This may be required every five to 15 years, and more frequently if there are excess sources of sediment (as may occur on newly constructed sites where soils are not yet stabilized). Dredging is usually a major project requiring mechanized equipment. The work will include an initial survey of depths and elevations; sediment sampling and testing; removal, transport, and disposal of accumulated sediment, and reestablishment of original design grades and sections.
Standing water (BMP not draining)	Abate any potential vectors by filling holes in the ground in and around the pond and by insuring that there are no areas where water stands longer than 48 hours following a storm. If mosquito larvae are present and persistent, contact the San Diego County Vector Control Program at (858) 694-2888. Mosquito larvicides should be applied only when absolutely necessary and then only by a licensed individual or contractor.
Obstructed inlet or outlet structure	Clear obstructions.
Damage to structural components such as weirs, inlet, or outlet structures	Remove any debris or sediment that could plug the outlets. Identify and correct any sources of sediment and debris. Check rocks or other armoring and replace as necessary.

ATTACHMENT G

Tracking Report



COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS
POST-CONSTRUCTION TRACKING AND
INVENTORY REPORT

General Project Information

Permit Number _____ SWMP Category (Major/Minor) _____
Location / Address _____
Engineer of Work: _____ State Registration Number: _____
Company Name: _____
Address: _____
Email Address: _____
Phone Number: _____

Priority Development Project – Step 1: _____

Percent Impervious Before Construction: % _____
Percent Impervious After Construction: % _____

Project Disturbed Area: _____ Acres

Hydromodification Management – Step 3:

Yes ☐ or No ☐

Primary or Secondary Pollutants of Concerns – Step 4 (*check all that apply*)

- | | |
|---|--|
| <input type="checkbox"/> Sediment | <input type="checkbox"/> Trash and Debris |
| <input type="checkbox"/> Nutrients | <input type="checkbox"/> Oxygen Demanding Substances |
| <input type="checkbox"/> Organic Compounds | <input type="checkbox"/> Oil and Grease |
| <input type="checkbox"/> Bacteria and Viruses | <input type="checkbox"/> Pesticides |

Project Specific Site Design, LID and Source Control BMPs

All selected Site Layout Strategies, LID, and Source Control BMPs must be shown on the Plan.

Site Layout Strategies – Step 5 (*check all that apply*)

- | | |
|--|---|
| <input type="checkbox"/> Limitation of Development Envelope | <input type="checkbox"/> Preservation of Natural Drainages |
| <input type="checkbox"/> Minimization of imperviousness | <input type="checkbox"/> Using drainage as a design element |
| <input type="checkbox"/> Setbacks from creeks, wetlands, and riparian habitats | |

Disperse Runoff from Impervious Surfaces to Pervious – Step 5 (*check all that apply*)

- | | |
|--|--|
| <input type="checkbox"/> Street and Road Design | <input type="checkbox"/> Parking Lot Design |
| <input type="checkbox"/> Driveway, Sidewalk, Bikepath Design | <input type="checkbox"/> Building Design |
| <input type="checkbox"/> Landscape Design | <input type="checkbox"/> Direct Runoff to Treatment BMP(s) |

Source BMPs – Step 6 (*check all that apply*)

- ☐ Stormdrain Signage and Stenciling
- ☐ Trash Storage Areas
- ☐ Private Road Drainage System
- ☐ Dock Areas
- ☐ Vehicle Wash Areas
- ☐ Equipment Wash Areas
- ☐ Fueling Areas

- ☐ Outdoor Storage Areas
- ☐ Efficient Landscape Irrigation Design
- ☐ Residential Driveways & Guest Parking
- ☐ Maintenance Bays
- ☐ Outdoor Processing Areas
- ☐ Parking Areas

Post-construction Treatment Control BMP Information

Responsible Party for Maintenance – Step 8:

Name _____ Phone Number (____) _____
 Street Number _____ Street Name _____
 City _____ State _____ Zip _____
 Email Address: _____

Project Maintenance Category (1, 2, 3 or 4): ____

Project Specific Treatment Control BMPs

BMP Identifier*	BMP Type	BMP Pollutant of Concern Efficiency (H,M,L) – Table 11	Final Construction Date (to be completed by County inspector)	Final Construction Inspector Name (to be completed by County inspector)

* For location of BMP's, see approved Record Plan dated _____, plan sheet ____.

<u>Record Plan Certification</u>

I certify that the above items for this project are in substantial conformance with the approved plans. Yes ☐ or No ☐

Please sign your name and seal.

[SEAL]

Print Name: _____

Sign Name: _____

ATTACHMENT H

Addendum