Storm Water Management Plan
For Priority Projects
(Major SWMP)

Project Name:	TPM 20985 RPL LOG No. ER 05-01-006
Permit Number (Land Development Projects):	
Work Authorization Number (CIP):	
Applicant:	Brian & Mary Ann Hobbs
Applicant's Address:	4932 San Jacinto Circle, Fallbrook CA 92028
Plan Prepare By *(Leave blank if same as applicant):*	*William Karn Surveying, Inc.* *PO Box 518, Fallbrook CA 92028*
Date:	March 9, 2006
Revision Date (If applicable):	May 26, 2006

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The County of San Diego Watershed Protection, Storm Water Management and Discharge Control Ordinance (WPO) (Ordinance No. 9424) requires all applications for a permit or approval associated with a Land Disturbance Activity must be accompanied by a Storm Water Management Plan (SWMP) (Section 67.804.f.) 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 project are required to prepare a Major SWMP.

Project Review Stage	YES	NO	If YES, Provide Revision Date
TPM 20985		X	

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

PROJECT DESCRIPTION:

The 4.3 +/- acre, Hobbs project, TPM 20985 is located northerly of San Jacinto Circle and easterly of Briana Court in the Fallbrook Community Plan area. The project will take access from San Jacinto Circle, a community service district road with a 60' right of way. The project will consist of two 2+ acre parcels. Parcel No. 2 has an existing single family residence and a proposed single family residenc for Parcel No. 1. An existing watermain within San Jacinto Circle will provide water service and sewer will be subsurface disposal. Electrical service on site. The grading will be minimal Cut bank will be 18 ft. for cuts & up to 11 ft for fills. Drvieway grading will be minimal, 4 ft+/- cuts, 4 ft +/- fills. No import or export.

PRIORITY PROJECT	YES	NO
Redevelopment within the County Urban Area that creates or adds at least 5,000 net sq ft. of additional impervious surface area.		
Residential development of more than 10 units.		x
Commercial developments with a land area for development of greater than 100,000 square feet.		x
Automotive repairs shops.		x
Restaurants, where the land area for development is greater than 5,000 square feet.		x
Hillside development in an area with known erosive soil conditions, where there will be grading on any natural slope that is twenty-five percent or greater, if the development creates 5,000 sq. ft or more of impervious surface.	x	
Environmentally Sensitive Area: All development and redevelopment located within or directly adjacent to or discharge adjacent to or discharging directly to an environmentally sensitive area, (where discharges from the development or redevelopment will enter receiving waters within the environmentally sensitive area), which either creates 2,500 sq. ft. of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10% or more of it's naturally occurring condition.		x
Parking Lots 5,000 sq. ft. or more or with 15 parking spaces or more and potentially exposed to urban runoff.		x
Driveway which would create a new paved surface that is 5,000 sq. ft. or greater.	x	

Limited Exclusion: Trenching and resurfacing work associated with utility projects are not considered priority projects. Parking lots, buildings and other structures associated with utility projects are subject to SUSMP requirements if one or more of the criteria above are met.

If you answered **NO** to all the questions, then STOP. Please complete a Minor SWMP for your project.

The following questions provide a guide to collecting information relevant to project stormwater quality issues. Please provide a description of the findings in text box below.

	QUESTIONS	COMPLETED	NA
1.	Describe the topography of the project area.	Rolling hills	
2.	Describe the local land use within the project area and adjacent areas.	SFD& avocado Grove	
3.	Evaluate the presence of dry weather flow.	No dry weather	
4.	Determine the receiving waters that may be affected by the project throughout the project life cycle (i.e., construction, maintenance and operation).	Bonsall Hyd. Sub Unit	
5.	For the project limits, list the 303(d) impaired receiving water bodies and their constituents of concern.	No 303d onsite	
6.	Determine if there are any High Risk Areas (municipal or domestic water supply reservoirs or groundwater percolation facilities) within the project limits.	No high risk areas downstream	
7.	Determine the Regional Board special requirements, including TMDLs, effluent limits, etc.	No special req.	
8.	Determine the general climate of the project area. Identify annual rainfall and rainfall intensity curves.	Annual rainfall 15" to 20"	
9.	If considering Treatment BMPs, determine the soil classification, permeability, erodibility, and depth to groundwater.	Soil Group "C" w/ good perc rates	
10.	Determine contaminated or hazardous soils within the project area.	No haz. soil onsite	

Please provide a description of the findings in the following box:

The project is located in the San Luis Rey Hydrologic Unit. The area is characterized as agricultural with single family homes on 2 acre parcels. Runoff from the site flows northeasterly 2000' and then southeasterly approximately 2 miles downstream to the San Luis Rey River at Bonsall, CA. Within the project limit there are no 303(d) impaired receiving water and no regional board special requirements. The 4.3+/- ac area represent 0.007% of the Bonsall HSA.

Complete the checklist below to determine if Treatment Best Management (BMP's) are required for this project.

No.	CRITERIA	YES	NO	INFORMATION
1.	Is this an emergency project		X	If YES, go to 6. If NO, continue to 2.
2.	Have TMDLs been established		X	If YES, go to 5.

No.	CRITERIA	YES	NO	INFORMATION
	for surface waters within the project limit?		X	If NO, continue to 3.
3.	Will the project directly discharge to a 303(d) impaired receiving water body?		X	If YES, go to 5. If NO, continue to 4.
4.	Is this project within the urban and environmentally sensitive areas as defined on the maps in Appendix B of the *County of San Diego Standard Urban Storm Water Mitigation Plan for Land Development and Public Improvement Projects?*		*X*	If YES, continue to 5. If NO, go to 6.
5.	Consider approved Treatment BMPs for the project.	X		If YES, go to 7.
6.	Project is not required to consider Treatment BMPs			Document for Project Files by referencing this checklist.
7.	End			

Now that the need for a treatment BMPs has been determined, other information is needed to complete the SWMP.

WATERSHED

Please check the watershed(s) for the project.

□ San Juan	□ Santa Margarita	x San Luis Rey	□ Carlsbad
□ San Dieguito	□ Penasquitos	□ San Diego	□ Pueblo San Diego
□ Sweetwater	□ Otay	□ Tijuana	

The hydrologic sub-area and number(s)

Number	Name
903.12	Bonsall Hydrological Sub Area

The beneficial uses for Inland Surface Waters and Ground Waters per attached table.

SURFACE WATERS	Hydrologic Unit Basin Number	MUN	AGR	IND	PROC	GWR	FRESH	POW	REC1	REC2	BIOL	WARM	COLD	WILD	RARE	SPWN
Inland Surface Waters	903.12	*	X	X				X	X			X		X		
Ground Waters	903.12	X	X	X												

X Existing Beneficial Use
0 Potential Beneficial Use
** Excepted from Municipal*

POLLUTANTS OF CONCERN
Using Table 1, 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 1. Antici ated and Potential Pollutants Generated b Land Use T e

	General Pollutant Catelgoråes								
PrEOrEty Project Categoråes	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 >100,000 ft²	P~4~	P~1~		P~6~	X	P~8~	X	P~8~	P~8~
Automotive Repair Shops			X	X~4~~5~	X		X		
Restaurants					X	X	X	X	
Hillside Development >5,000 ft²	X	X			X	X	X		X

	General Pollutant Categories								
Priority Project Categories	Sediments	Nutrients	Heavy Metals	Organic Compounds	Trash & Debris	Oxygen Demanding Substances	Oil & Grease	Bacteria & Viruses	Pesticides
Parking Lots	P(1)	P(1)	X		X	P(1)	X		P(1)
Streets, Highways & Freeways	X	P(1)	X	X(4)	X	P(5)	X		

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.

Note: If other monitoring data that is relevant to the project is available. Please include as Attachment C.

CONSTRUCTION BMPs

Please check the construction BMPs that may be used. The BMPs selected are those that will be implemented during construction of the project. The applicant is responsible for the placement and maintenance of the BMPs selected.

- ☒ Silt Fence
- ☒ Fiber Rolls
- ☐ Street Sweeping and Vacuuming
- ☐ Storm Drain Inlet Protection
- ☒ Stockpile Management
- ☒ Solid Waste Management
- ☒ Stabilized Construction Entrance/Exit
- ☐ Dewatering Operations
- ☐ Vehicle and Equipment Maintenance
- ☐ Desilting Basin
- ☒ Gravel Bag Berm
- ☐ Sandbag Barrier
- ☒ Material Delivery and Storage
- ☒ Spill Prevention and Control
- ☒ Concrete Waste Management
- ☒ Water Conservation Practices
- ☒ Paving and Grinding Operations

☒ 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.

SITE DESIGN

To minimize stormwater impacts, site design measures must be addressed. The following checklist provides options for avoiding or reducing potential impacts during project planning. If YES is checked, it is assumed that the measure was used for this project. If NO is checked, please provide a brief explanation why the option was not selected in the text bow below:

	OPTIONS	YES	NO	N/A
1.	Can the project be relocated or realigned to avoid/reduce impacts to receiving waters or to increase the preservation of critical (or problematic) areas such as floodplains, steep slopes, wetlands, and areas with erosive or unstable soil conditions?		X	
2.	Can the project be designed to minimize impervious footprint?		X	
3.	Conserve natural areas where feasible?	X		
4.	Where landscape is proposed, can rooftops, impervious sidewalks, walkways, trails and patios be drained into adjacent landscaping?	X		
5.	For roadway projects, can structures and bridges be designed or located to reduce work in live streams and minimize construction impacts?			X
6.	Can any of the following methods be utilized to minimize erosion from slopes:			
	6.a. Disturbing existing slopes only when necessary?	X		
	6.b. Minimize cut and fill areas to reduce slope lengths?	X		
	6.c. Incorporating retaining walls to reduce steepness of slopes or to shorten slopes?			X
	6.d. Providing benches or terraces on high cut and fill slopes to reduce concentration of flows?			X
	6.e. Rounding and shaping slopes to reduce concentrated flow?	X		
	6.f. Collecting concentrated flows in stabilized drains and channels?	X		

Retaining walls were not necessary as the cut & fill slopes are minor. Again, terraces and benches were not needed because of the minor cut & fill slopes.

If the project includes work in channels, then complete the following checklist. Information shall be obtained from the project drainage report.

No.	CRITERIA	YES	NO	N/A	COMMENTS
1.	Will the project increase velocity or volume of downstream flow?		X		If YES go to 5.
2.	Will the project discharge to unlined channels?	X			If YES go to 5.
3.	Will the project increase potential sediment load		X		If YES go to 5.

No.	CRITERIA	YES	NO	N/A	COMMENTS
	of downstream flow?				
4.	*Will the project encroach, cross, realign, or cause other hydraulic changes to a stream that may affect upstream and/or downstream channel stability?*		X		*If YES go to 7.*
5.	*Review channel lining materials and design for stream bank erosion.*			X	*Continue to 6.*
6.	*Consider channel erosion control measures within the project limits as well as downstream. Consider scour velocity.*	X			*Continue to 7.*
7.	*Include, where appropriate, energy dissipation devices at culverts.*	X			*Continue to 8.*
8.	*Ensure all transitions between culvert outlets/headwalls/wingwalls and channels are smooth to reduce turbulence and scour.*	X			*Continue to 9.*
9.	*Include, if appropriate, detention facilities to reduce peak discharges.*				X
10.	*"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.*			X	*Continue to 11.*
11.	*Provide other design principles that are comparable and equally effective.*			X	*Continue to 12.*
12.	*End*				

SOURCE CONTROL

Please complete the following checklist for Source Control BMPs. If the BMP is not applicable for this ro ect, then check N/A onl at the main cate o.

BMP			YES	NO	N/A
1.	*Provide Storm Drain System Stenciling and Signage*				
	1.a.	*All storm drain inlets and catch basins within the project area shall have a stencil or tile placed with prohibitive language (such as: "NO DUMPING") and/or graphical icons to discourage illegal dumping.*			X
	1.b.	*Signs and prohibitive language and/or graphical icons, which prohibit illegal dumping, must be posted at public access points along channels and creeks within the project area.*			X
2.	*Design Outdoors Material Storage Areas to Reduce Pollution Introduction*				
	2.a.	*This is a detached single-family residential project. Therefore, personal storage areas are exempt from this requirement.*	X		

BMP			YES	NO	N/A
	2.b.	Hazardous materials with the potential to contaminate urban runoff shall either be: (1) placed in an enclosure such as, but not limited to, a cabinet, shed, or similar structure that prevents contact with runoff or spillage to the storm water conveyance system; or (2) protected by secondary containment structures such as berms, dikes, or curbs.			X
	2.c.	The storage area shall be paved and sufficiently impervious to contain leaks and spills.			X
	2.d.	The storage area shall have a roof or awning to minimize direct precipitation within the secondary containment area.			X
3.	**Design Trash Storage Areas to Reduce Pollution Introduction**				
	3.a.	Paved with an impervious surface, designed not to allow run-on from adjoining areas, screened or walled to prevent off-site transport of trash; or,	X		
	3.b.	Provide attached lids on all trash containers that exclude rain, or roof or awning to minimize direct precipitation.	X		
4.	**Use Efficient Irrigation Systems & Landscape Design**				
	The following methods to reduce excessive irrigation runoff shall be considered, and incorporated and implemented where determined applicable and feasible.				
	4.a. Employing rain shutoff devices to prevent irrigation after precipitation.		X		
	4.b. Designing irrigation systems to each landscape area's specific water requirements.		X		
	4.c. Using flow reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines.		X		
	4.d. Employing other comparable, equally effective, methods to reduce irrigation water runoff.		X		
5.	**Private Roads**				
	The design of private roadway drainage shall use at least one of the following				
	5.a.	Rural swale system: street sheet flows to vegetated swale or gravel shoulder, curbs at street corners, culverts under driveways and street crossings.	X		
	5.b.	Urban curb/swale system: street slopes to curb, periodic swale inlets drain to vegetated swale/biofilter.	X		
	5.c.	Dual drainage system: First flush captured in street catch basins and discharged to adjacent vegetated swale or gravel shoulder, high flows connect directly to storm water conveyance system.			X
	5.d.	Other methods that are comparable and equally effective within the project.			X
6.	**Residential Driveways & Guest Parking**				
	The design of driveways and private residential parking areas shall use one at least of the following features.				
	6.a.	Design driveways with shared access, flared (single lane at street) or wheelstrips (paving only under tires); or, drain into landscaping prior to discharging to the storm water conveyance system.	X		
	6.b.	Uncovered temporary or guest parking on private residential lots may be: paved with a permeable surface; or, designed to drain into landscaping prior to discharging to the storm water conveyance system.	X		
	6.c.	Other features which are comparable and equally effective.			X
7.	**Dock Areas**				

		BMP	YES	NO	N/A
		Loading/unloading			
	7.a.	Cover loading dock areas, or design drainage to preclude urban run-on and runoff.			X
	7.b.	Direct connections to storm drains from depressed loading docks (truck wells) are prohibited.			X
	7.c.	Other features which are comparable and equally effective.			X
8.	**Maintenance Bays**				
	Maintenance bays shall include the following.				
	8.a.	Repair/maintenance bays shall be indoors; or, designed to preclude urban run-on and runoff.			X
	8.b.	Design a repair/maintenance bay drainage system to capture all wash water, leaks and spills. Connect drains to a sump for collection and disposal. Direct connection of the repair/maintenance bays to the storm drain system is prohibited. If required by local jurisdiction, obtain an Industrial Waste Discharge Permit.			X
	8.c.	Other features which are comparable and equally effective.			X
9.	**Vehicle Wash Areas**				
	Priority projects that include areas for washing/steam cleaning of vehicles shall use the following.				
	9.a. Self-contained; or covered with a roof or overhang.				X
	9.b. Equipped with a clarifier or other pretreatment facility.				X
	9.c. Properly connected to a sanitary sewer.				X
	9.d. Other features which are comparable and equally effective.				X
10.	**Outdoor Processing Areas**				
	Outdoor process equipment operations, such as rock grinding or crushing, painting or coating, grinding or sanding, degreasing or parts cleaning, waste piles, and wastewater and solid waste treatment and disposal, and other operations determined to be a potential threat to water quality by the County shall adhere to the following requirements.				
	10.a.	Cover or enclose areas that would be the most significant source of pollutants; or, slope the area toward a dead-end sump; or, discharge to the sanitary sewer system following appropriate treatment in accordance with conditions established by the applicable sewer agency.			X
	10.b.	Grade or berm area to prevent run-on from surrounding areas.			X
	10.c.	Installation of storm drains in areas of equipment repair is prohibited.			X
	10.d.	Other features which are comparable or equally effective.			X
11.	**Equipment Wash Areas**				
	Outdoor equipment/accessory washing and steam cleaning activities shall be.				
	11.a. Be self-contained; or covered with a roof or overhang.				X
	11.b. Be equipped with a clarifier, grease trap or other pretreatment facility, as appropriate				X
	11.c. Be properly connected to a sanitary sewer.				X
	11.d. Other features which are comparable or equally effective.				X
12.	**Parking Areas**				
	The following design concepts shall be considered, and incorporated and implemented where determined applicable and feasible by the County.				
	12.a.	Where landscaping is proposed in parking areas, incorporate landscape areas into the drainage design.	X		

		BMP	YES	NO	N/A
	12.b.	Overflow parking (parking stalls provided in excess of the County's minimum parking requirements) may be constructed with permeable paving.			X
	12.c.	Other design concepts that are comparable and equally effective.			X
13.	**Fueling Area**				
	Non-retail fuel dispensing areas shall contain the following.				
	13.a.	Overhanging roof structure or canopy. The cover's minimum dimensions must be equal to or greater than the area within the grade break. The cover must not drain onto the fuel dispensing area and the downspouts must be routed to prevent drainage across the fueling area. The fueling area shall drain to the project's treatment control BMP(s) prior to discharging to the storm water conveyance system.			X
	13.b.	Paved with Portland cement concrete (or equivalent smooth impervious surface). The use of asphalt concrete shall be prohibited.			X
	13.c.	Have an appropriate slope to prevent ponding, and must be separated from the rest of the site by a grade break that prevents run-on of urban runoff.			X
	13.d.	At a minimum, the concrete fuel dispensing area must extend 6.5 feet (2.0 meters) from the corner of each fuel dispenser, or the length at which the hose and nozzle assembly may be operated plus 1 foot (0.3 meter), whichever is less.			X

Please list other project specific Source Control BMPs in the following box.: **N/A**

TREATMENT CONTROL

To select a structural treatment BMP using Treatment Control BMP Selection Matrix (Table 2), each priority project shall compare the list of pollutants for which the downstream receiving waters are impaired (if any), with the pollutants anticipated to be generated by the project (as identified in Table 1). Any pollutants identified by Table 1, which are also causing a Clean Water Act section 303(d) impairment of the receiving waters of the project, shall be considered primary pollutants of concern. Priority projects that are anticipated to generate a primary pollutant of concern shall select a single or combination of stormwater BMPs from Table 2, which **maximizes pollutant removal** for the particular primary pollutant(s) of concern.

Priority projects that are **not** anticipated to generate a pollutant for which the receiving water is Clean Water Act Section 303(d) impaired shall select a single or combination of stormwater BMPs from Table 2, which are effective for pollutant removal of the identified secondary pollutants of concern, consistent with the "maximum extent practicable" standard.

Table 2. Treatment Control BMP Selection Matrix

Pollutant of Concern	*Treatment Control BMP Categories*						
	Biofilters	Detention Basins	Infiltration Basins(2)	Wet Ponds or Wetlands	Drainage Inserts	Filtration	Hydrodynamic Separator Systems(3)
Sediment	M	H	H	H	L	H	M
Nutrients	L	M	M	M	L	M	L
Heavy Metals	M	M	M	H	L	H	L
Organic Compounds	U	U	U	M	L	M	L
Trash & Debris	L	H	U	H	M	H	M
Oxygen Demanding Substances	L	M	M	M	L	M	L
Bacteria	U	U	H	H	L	M	L
Oil & Grease	M	M	U	U	L	H	L
Pesticides	U	U	U	L	L	U	L

(1) Copermittees are encouraged to periodically assess the performance characteristics of may of these BMPs to update this table.
(2) Including trenches & porous pavement.
(3) Also known as hydrodynamic devices & baffle boxes.
L: Low removal efficiency:
M: Medium removal efficiency:
H: High removal efficiency:
U: Unknown removal efficiency
Sources: Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters (1993) National Stormwater BMP Database(2001), Guide for BMP selection in Urban Development Areas (2001)& Caltrans New Technology

A Treatment BMP must address runoff from developed areas. Please provide the post-construction water quality values for the project. Label outfalls on the BMP map. Q_{WQ} is dependent on the type of treatment BMP selected for the project.

Outfall	**Tributary Area (acres)**	**Q_{100} (cfs)**	**Q_{WQ} (cfs)**
1	Driveway	3.7	1.1
2	Pad & above	5.3	1.6

Please check the box(s) that best describes the Treatment BMP(s) selected for this project.

Biofilters

☒ Grass swale
☒ Grass strip
☐ Wetland vegetation swale
☐ Bioretention

Detention Basins

☐ Extended/dry detention basin with grass lining
☐ Extended/dry detention basin with impervious lining

Infiltration Basins

□ Infiltration Basin □ Infiltration Trench □ Porous Asphalt
□ Porous Concrete □ Porous modular concrete block

Wet Ponds or Wetlands

□ Wet pond/basin (permanent pool)
□ Constructed wetland

Drainage Inserts (See note below)

□ Oil/Water separater □ Catch basin insert □ Storm drain inserts
□ Catch basin screens

Filtration

□ Media filtration
□ Sand filtration

Hydrodynamic Separator Systems

□ Swirl Concentrator □ Cyclone Separator □ Baffle Separator
□ Gross solids removal devise □ Linear radial Device

NOTE: Catch basin inserts and storm drain inserts are excluded from use on County maintained right-of-way and easements.

Include Treatment Datasheet as Attachment E. The data sheet Should include the following:	COMPLETED	NO
1. Description of how treatment BMP was designed. Provide a description for each type of treatment BMP.	X	
2. Engineering calculations for the BMP(s).	X	

Please describe why the selected treatment BMP(s) was selected for this project. For projects utilizing a low performing BMP, please provide a detailed explanation and justification.

The project is designed to minimize the use of impervious areas. Streets have been designed to meet the minimum widths. Landscaping will consist of both native and non-native plants. The goal is to achieve plant establishment expeditiously to reduce erosion. The irrigation system for these landscaped areas will be monitored to reduce over irrigation, also proposed bio filter swale for runoff of newly paved areas. Rock rip rap to reduce velocity at discharge point and stormdrain outfalls.

MAINTENANCE

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

CATEGORY	SELECTED	
	YES	NO
First	X	
Second		X
Third		X
Fourth		X

ATTACHMENTS	Completed	N/A
A Project Location Map	X	
B Site Plan	X	
C Relevant Monitoring Data		X
D Treatment BMP Location Map	X	
E Treatment BMP Datasheets	X	
F Operation & Maintenance program for Treatment BMP	X	
G Engineer's certification sheet	X	

ATTACHMENT A

LOCATION MAP

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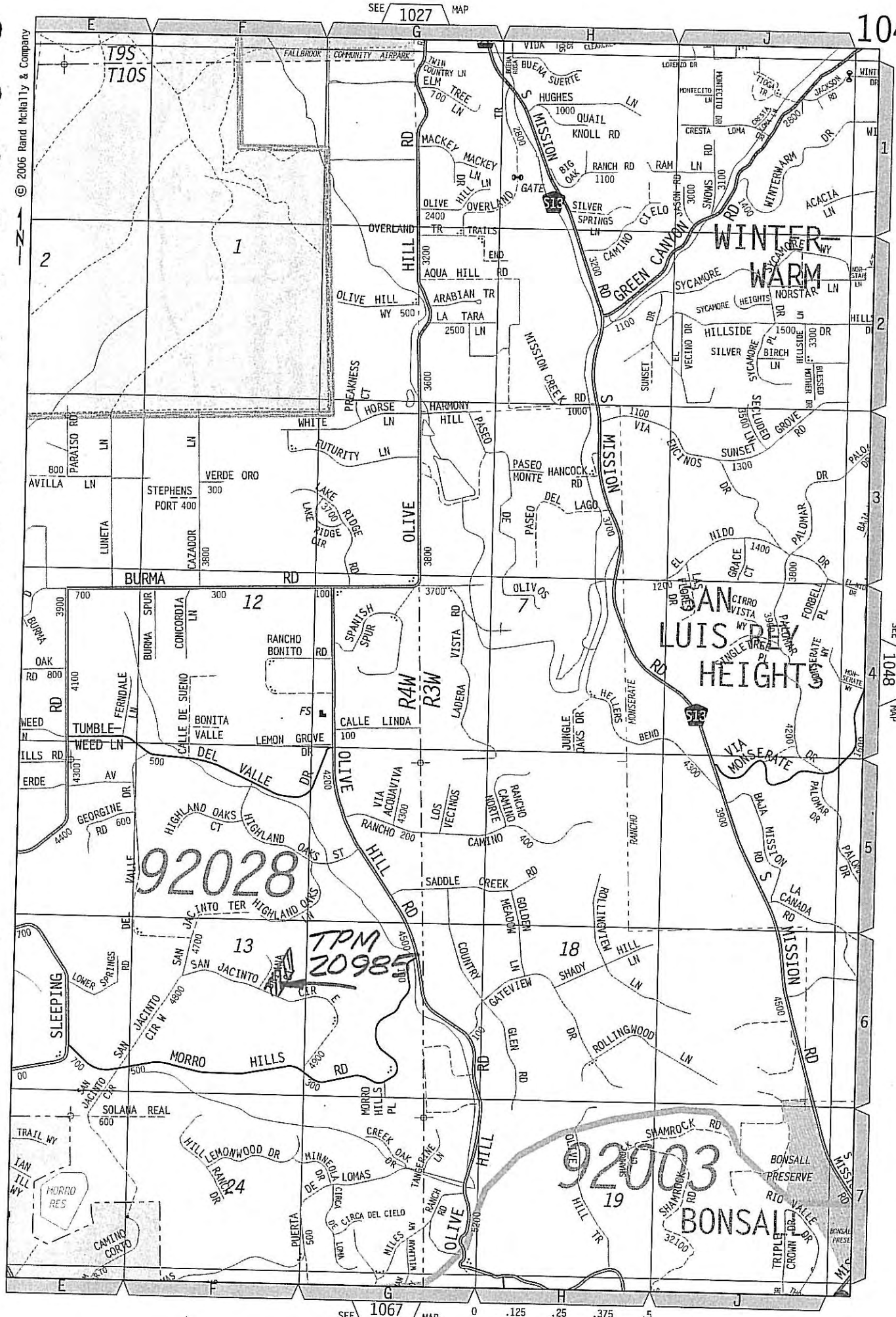


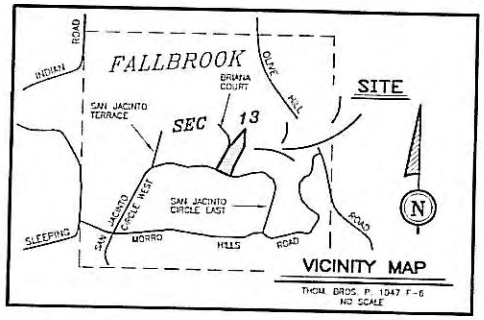
ATTACHMENT B

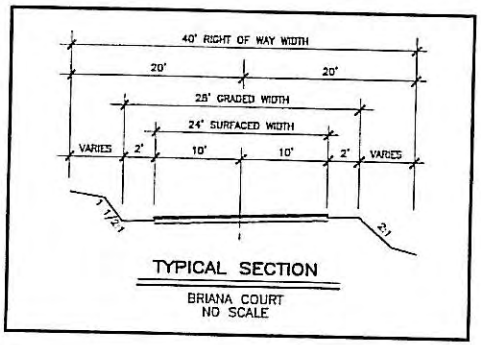
PROJECT MAP

ER LOG NO. 05-01-

H.D.P.M. NO. VPM 221

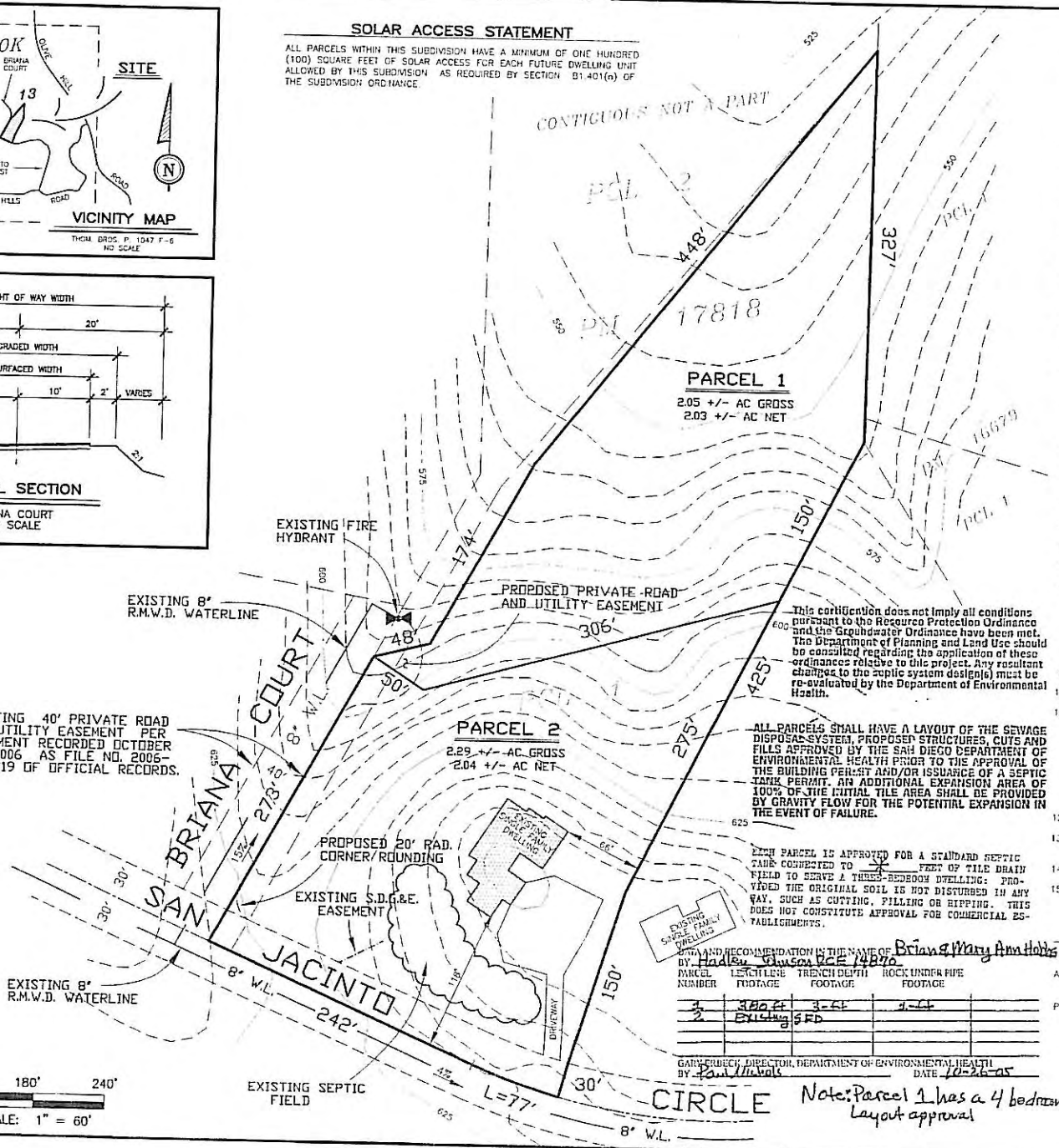
REPLACEMENT
TENTATIVE PARCEL MAP 20985





SOLAR ACCESS STATEMENT

ALL PARCELS WITHIN THIS SUBDIVISION HAVE A MINIMUM OF ONE HUNDRED (100) SQUARE FEET OF SOLAR ACCESS FOR EACH FUTURE DWELLING UNIT ALLOWED BY THIS SUBDIVISION AS REQUIRED BY SECTION 81.401(a) OF THE SUBDIVISION ORDINANCE.



This certification does not imply all conditions pursuant to the Resource Protection Ordinance and the Groundwater Ordinance have been met. The Department of Planning and Land Use should be consulted regarding the application of these ordinances relative to this project. Any resultant changes to the septic system design(s) must be re-evaluated by the Department of Environmental Health.

ALL PARCELS SHALL HAVE A LAYOUT OF THE SEWAGE DISPOSAL SYSTEM, PROPOSED STRUCTURES, CUTS AND FILLS APPROVED BY THE SAN DIEGO DEPARTMENT OF ENVIRONMENTAL HEALTH PRIOR TO THE APPROVAL OF THE BUILDING PERMIT AND/OR ISSUANCE OF A SEPTIC TANK PERMIT. AN ADDITIONAL EXPANSION AREA OF 100% OF THE INITIAL TILE AREA SHALL BE PROVIDED BY GRAVITY FLOW FOR THE POTENTIAL EXPANSION IN THE EVENT OF FAILURE.

EACH PARCEL IS APPROVED FOR A STANDARD SEPTIC TANK CONNECTED TO X FEET OF TILE DRAIN FIELD TO SERVE A THREE-BEDROOM DWELLING: PROVIDED THE ORIGINAL SOIL IS NOT DISTURBED IN ANY WAY, SUCH AS CUTTING, FILLING OR RIPPING. THIS DOES NOT CONSTITUTE APPROVAL FOR COMMERCIAL ESTABLISHMENTS.

DATA AND RECOMMENDATION IS THE NAME OF Brian & Mary Ann Hobbs BY Hadley Johnson RCE 14870

PARCEL NUMBER	LEACH LINE FOOTAGE	TRENCH DEPTH FOOTAGE	ROCK UNDER PIPE FOOTAGE
1	380 Ft	3-Ft	3-Ft
2	Existing SFD		

GARY ERBECK, DIRECTOR, DEPARTMENT OF ENVIRONMENTAL HEALTH
BY Paul Nichols DATE 10-26-05

Note: Parcel 1 has a 4 bedroom Layout approval

LAND DIVISION STATEMENT – OWNER'S CERTIFICATE

I HEREBY CERTIFY THAT I AM THE RECORD OWNER, AS SHOWN ON THE LATEST EQUALIZED COUNTY ASSESSMENT OF THE PROPERTY SHOWN ON THE TENTATIVE PARCEL MAP, ALL OF MY CONTIGUOUS OWNERSHIP WITHIN AND BEYOND THE BOUNDARIES OF THE TENTATIVE PARCEL MAP IS SHOWN. THE BASIS OF CREATION OF THE LOTS IN MY OWNERSHIP (I.E. PARCEL MAP, FINAL MAP, CERTIFICATE OF COMPLIANCE, RECORDED DEED BEFORE 2/1/72) AS INDICATED ON THE TENTATIVE. I UNDERSTAND THAT PROPERTY IS CONSIDERED CONTIGUOUS EVEN IF IT IS SEPARATED BY ROADS, STREETS, UTILITY EASEMENTS OR RAILROAD RIGHTS-OF-WAY. "FREEWAY" AS DEFINED IN SECTION 23.5 OF THE STREETS AND HIGHWAY CODES, SHALL NOT BE CONSIDERED AS ROADS OR STREETS.

I FURTHER CERTIFY THAT I WILL NOT, BY THIS APPLICATION, CREATE OR CAUSE TO BE CREATED, OR WILL NOT HAVE PARTICIPATED IN THE CREATION OF MORE THAN FOUR PARCELS ON CONTIGUOUS PROPERTY UNLESS SUCH PARCELS WERE CREATED BY MAJOR SUBDIVISION. FOR PURPOSES OF THIS CERTIFICATION, THE TERM "PARTICIPATED" MEANS HAVING COOPERATED WITH OR ACTED IN A PLANNING, COORDINATE OR DECISION-MAKING CAPACITY IN ANY FORMAL OR INFORMAL ASSOCIATION OR PARTNERSHIP FOR THE PURPOSE OF DIVIDING REAL PROPERTY.

I CERTIFY UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT. EXECUTED THIS _____ DAY OF MARCH, 2007, IN FALLBROOK, CALIFORNIA.

ADDRESS: 4932 SAN JACINTO CIRCLE
FALLBROOK, CA 92028
PHONE: (760) 728-6277

BRIAN J. HOBBS OWNER

MARYANN HOBBS OWNER

1. COMPLETE TAX ASSESSOR'S NUMBER: 121-230-39
2. ABBREVIATED LEGAL DESCRIPTION: PORTION OF PARCEL 1 AND PARCEL 2 OF PARCEL MAP NO. 17818
3. GENERAL PLAN REGIONAL CATEGORY: E.D.A.
4. COMMUNITY/SUBREGIONAL PLAN AREA: FALLBROOK COMMUNITY PLAN
5. LAND USE DESIGNATION(S): 17 ESTATE
6. EXISTING ZONING: A-70 2 AC.
7. GRADING: NONE PROPOSED
8. TOPOGRAPHY: COUNTY TOPO MAP 414-1689
9. TAX RATE AREA: 75015
10. ASSOCIATED PERMITS: N/A

USE REGULATIONS	A-70
NEIGHBORHOOD REGS	L
DENSITY	.50
LOT SIZE	2 AC.
BUILDING TYPE	C
MAX FIR AREA	--
FIR AREA RATIO	--
HEIGHT	G
COVERAGE	--
SETBACK	C
OPEN SPACE	--
SPECIAL AREA REGS	--

11. LOCATION AND STATUS OF EXISTING LEGAL ACCESS TO SUBJECT PROPERTY FROM A PUBLICLY MAINTAINED ROAD, (i.e. RECORDED EASEMENT, UNRECORDED IDENTIFY AND SPECIFY WIDTH): ACCESS FROM "OLIVE HILL ROAD", WHICH IS A PUBLICLY MAINTAINED ROAD, TO THE BOUNDARY OF SUBJECT PROPERTY IS OVER A PORTION OF SAN JACINTO CIRCLE EAST AND MORRO HILLS ROAD, WHICH IS MAINTAINED BY THE MORRO HILLS COMMUNITY SERVICE DISTRICT AS A PRIVATE ROAD. SEE LETTER FROM MORRO HILLS COMMUNITY SERVICE DISTRICT DATED 4/21/1988 ON FILE IN THE OFFICE OF THE COUNTY ENGINEER.
12. WATER SOURCE/ WATER DISTRICT: RAINBOW MUNICIPAL WATER DISTRICT
13. SEPTIC/SEWER DISTRICT: PARCEL 1 – EXISTING SINGLE FAMILY DWELLING
PARCEL 2 – SUBSURFACE DISPOSAL
14. FIRE DISTRICT: NORTH COUNTY FIRE PROTECTION DISTRICT
15. SCHOOL DISTRICT: FALLBROOK UNION ELEMENTARY AND FALLBROOK UNION HIGH SCHOOL

BRIAN J. HOBBS OWNER

ADDRESS: 4932 SAN JACINTO CIRCLE
FALLBROOK, CA 92028
PHONE: (760) 728-6277

12/7/07
HADLEY JOHNSON RCE 14870

PREPARED BY:
WM. KARN SURVEYING INC.
129 WEST FIG ST.
FALLBROOK, CA 92028
760-728-1134 LS 3961/RCE 14870

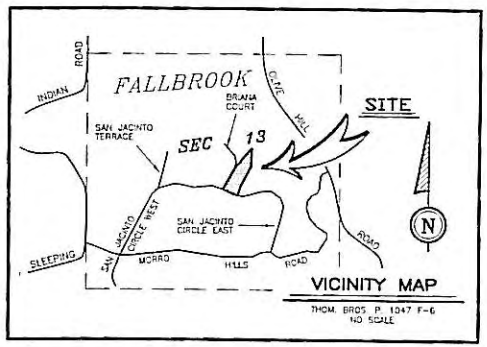
I:\8092\REPLACEMENT TPM

ATTACHMENT D

BMP MAP

PRELIMINARY GRADING PLAN

LOG NO. 05-01-006



LEGEND

ITEM	S.D.R.S.D./B.M.P.*	SYMBOL
EXIST. CONTOUR		650
PROP. CONTOUR		650
FILL SLOPE - 2:1	SS-7*	
CUT SLOPE - 1.5:1	SS-7*	
PROP. SPOT ELEVATION		650
6" EARTHEN BERM	SS-9	B B
PROP. EARTHEN BROW DITCH	SS-9	
PROP. ROCK RIP RAP (10'X10'X1.0') #2 BACKING OVER 1/4" GRAVEL FILTER BLANKET(0.5' THICK), TYPE 2, V=7-8 FT./SEC.	D-40/SS-10*	
SILT FENCE	SC-1*	SF SF
STABILIZED CONSTRUCTION ENTRANCE	TC-1*	
GRAVEL BAGS	SC-6*	
BIO FILTER		
GRASS SWALE		

LEGEND

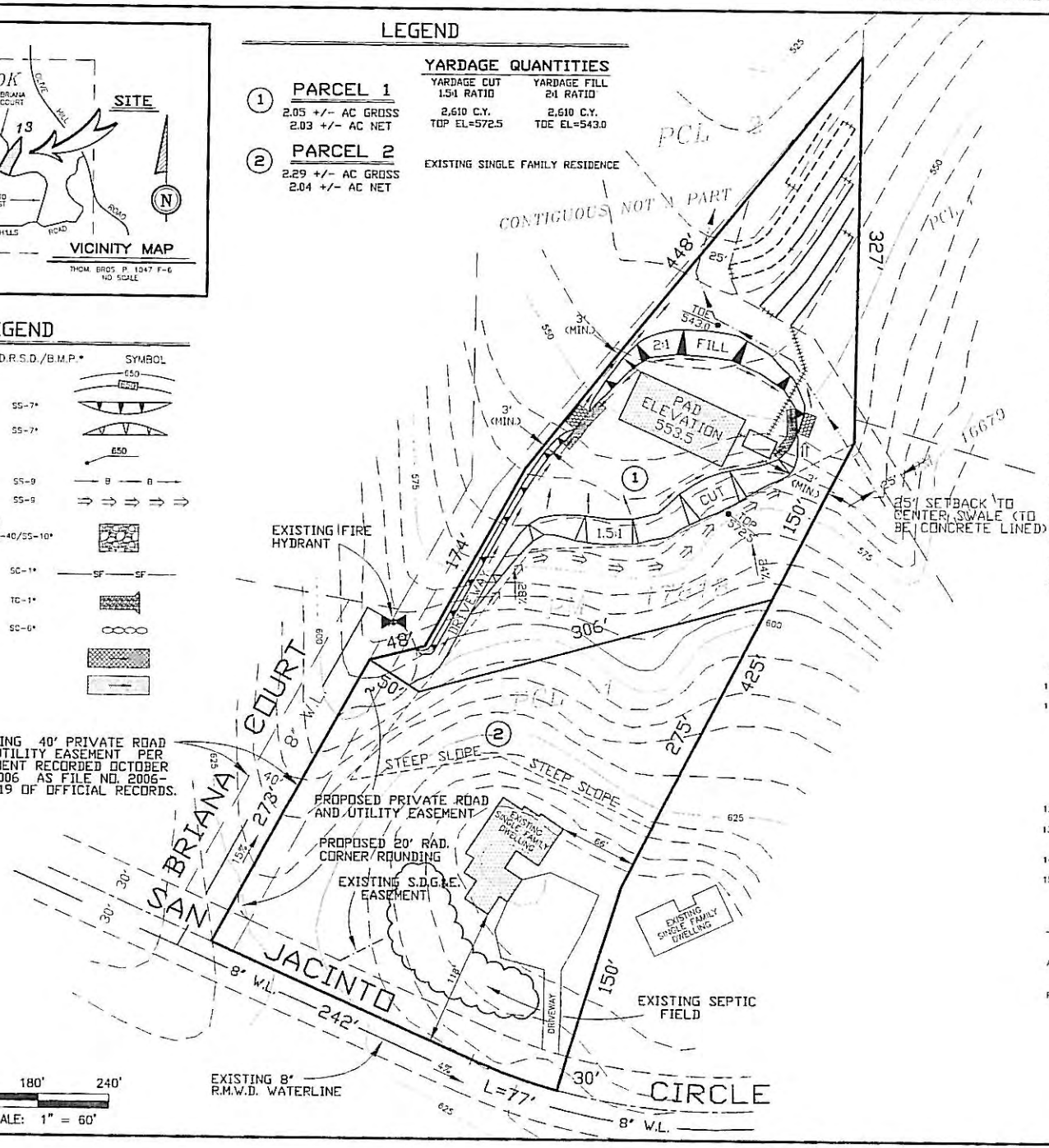
① PARCEL 1
2.05 +/- AC GROSS
2.03 +/- AC NET

② PARCEL 2
2.29 +/- AC GROSS
2.04 +/- AC NET

EXISTING SINGLE FAMILY RESIDENCE

YARDAGE QUANTITIES

	YARDAGE CUT 1.5:1 RATIO	YARDAGE FILL 2:1 RATIO
	2,610 C.Y.	2,610 C.Y.
	TOP EL=572.5	TOE EL=543.0



REPLACEMENT
TENTATIVE PARCEL MAP 20985

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USE REGULATIONS	A-70
NEIGHBORHOOD REGS	L
DENSITY	.50
LOT SIZE	2 AC.
BUILDING TYPE	C
MAX FIR AREA	–
FIR AREA RATIO	–
HEIGHT	G
COVERAGE	–
SETBACK	C
OPEN SPACE	–
SPECIAL AREA REGS	–

11. LOCATION AND STATUS OF EXISTING LEGAL ACCESS TO SUBJECT PROPERTY FROM A PUBLICLY MAINTAINED ROAD, (i.e. RECORDED EASEMENT, UNRECORDED IDENTIFY AND SPECIFY WIDTH) ACCESS FROM "OLIVE HILL ROAD", WHICH IS A PUBLICLY MAINTAINED ROAD, TO THE BOUNDARY OF SUBJECT PROPERTY IS OVER A PORTION OF SAN JACINTO CIRCLE EAST AND MORRO HILLS ROAD, WHICH IS MAINTAINED BY THE MORRO HILLS COMMUNITY SERVICE DISTRICT AS A PRIVATE ROAD. SEE LETTER FROM MORRO HILLS COMMUNITY SERVICE DISTRICT DATED 4/21/1988 ON FILE IN THE OFFICE OF THE COUNTY ENGINEER.
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Hadley Johnson 2/7/07

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HADLEY JOHNSON RCE 14870
PREPARED BY:
WM. KARN SURVEYING INC.
129 WEST FIG ST.
FALLBROOK, CA 92028
760-728-1134 LS 2961/RCE 14870

NOTE

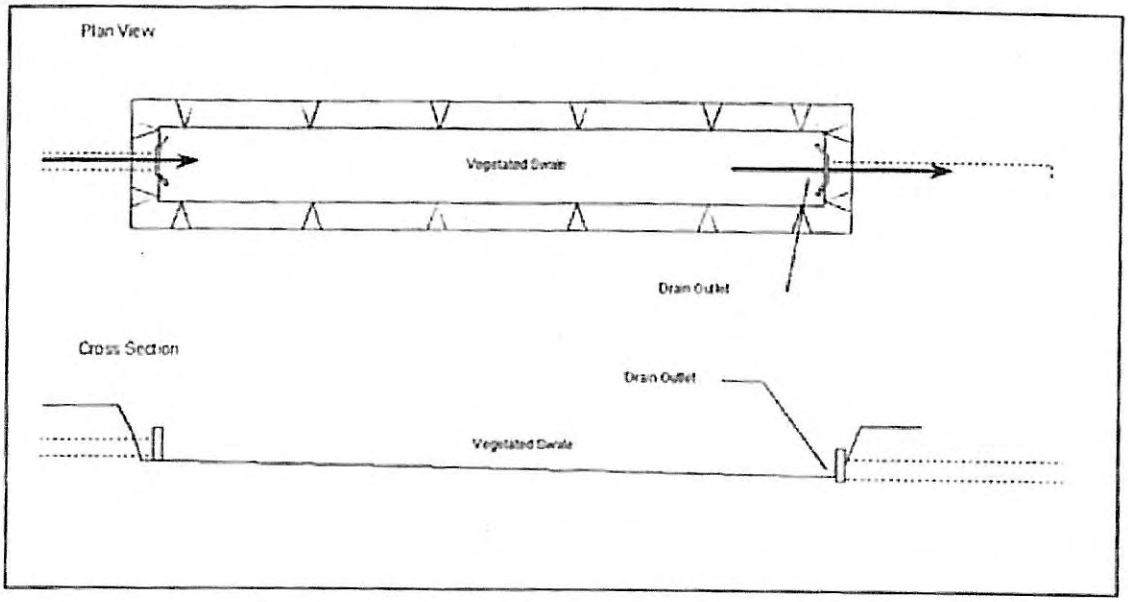
"THIS PLAN IS PROVIDED TO ALLOW FOR FULL AND ADEQUATE DISCRETIONARY REVIEW OF A PROPOSED DEVELOPMENT PROJECT. THE PROPERTY OWNER ACKNOWLEDGES THAT ACCEPTANCE OR APPROVAL OF THIS PLAN DOES NOT CONSTITUTE AN APPROVAL TO PERFORM ANY GRADING SHOWN HEREON, AND AGREES TO OBTAIN VALID GRADING PERMISSIONS BEFORE COMMENCING SUCH ACTIVITY."

I:\8092\REPLACEMENT TPM

ATTACHMENT E

BMP DATASHEET

BMP DATA SHEET



A bio-filter (grass) swale are proposed for the onsite pad area. This bio filter (grass swale) will be 50' long and designed flow of 1.6 cfs for the Q_{WQ} storm and handle the 100-year storm of 5 cfs. The proposed filter will be 5 feet wide, 6" deep, a slope of 2 percent with a water depth of 3 inches and a velocity of 2.4 ft/sec. for the Q_{WQ} storm – below scour velocity.

The bio-filter (grass swale) was chosen for this project as the best method to treat runoff from the proposed driveway and pad area. Bio filters are rated medium removal efficiency for sediment and oil & grease and will be maintained by the property owner.

HOBBS
DRAINAGE ANALYSIS
TPM 20985
APN 121-230-39
PARCEL 1, PM 17818

Drainage Area along driveway

1.2 acs.

Watershed L = 500'
Watershed H = 75'
S = 15%

Soil Group
C

Average C = 0.36

Tc = 2 + 6.4 = 8.4 mins.

$Q_{85} = 0.31(1.8)(1.2)$

$I_{85} = 1.8$ in/hr

$Q_{85} = 0.8$ cfs

$I_{100} = 6$ in/hr

$Q_{100} = 0.36(6)(1.2)$

$Q_{100} = 2.6$cfs

Capacity driveway exceeds 2.6 cfs . . OK

Flow from pad & above Area = 2 acs.

Soil Group C

Watershed L = 440'
Watershed H = 100'
S = 23%

Use C = 0.36

Tc = 1 + 6.4 = 7.4 mins.

Pre Construction

$Q_{85} = 0.36(2.1)(2)$
$Q_{85} = 1.5$ cfs

$I_{85} = 2.1$ in/hr
$I_{100} = 7.0$ in/hr

$Q_{100} = 0.36(7.0)(2.0)$

$Q_{100} = 5.0$ cfs
Capacity Swale exceeds 5 cfs ∴ OK

Post Construction

Approximate 0.2 acs will be paved driveway

The revised C will be

$$C_R = \frac{0.2 \text{ acs } (0.81) + 1.0\ (0.36)}{1.2} = 0.52$$

$Q_{85} = 0.52(1.8)(12)$
$Q_{85} = 1.1$ cfs

$Q_{100} = 0.52(6.0)(122)$
$Q_{100} = 3.7$ cfs

Increase flow
$Q_{85} = 0.4$ cfs
$Q_{100} = 1.1$ cfs

Pad Area & Above
Approximately 0.1 acs will be roof

The Revised C will be:

$$C_R = 0.1\frac{(0.81) + 1.9(0.36)}{2.0} = 0.38$$

$Q_{85} = 0.38(2.1)(2)$
$Q_{85} = 1.6$ cfs

$Q_{100} = 0.38(7.0)(2)$
$Q_{100} = 5.3$ cfs

Increase flow will be mitigated by grass lined swale

Capacity grass swale 5 ft. wide 50 ft long
Assume water depth 3"

Slope = 2% S ½ = 0.1414 Grass lined maintained
a = 1.25 sq. ft. n = 0.035
wp = 5' $r = \frac{1.25}{5} = 0.25$

r 2/3 = 0.4

$$Q = \frac{1.486}{0.035}(1.25)(0.4)(0.1414)$$

Q = 3 cfs exceed 1.6 cfs ∴ OK
V = 2.4 ft/sec.

Assess adequate vegetative cover	Invert/swale or less than 70 percent on swale side slope	be restored. File the schematic for assessment of persistent problems.	Assess quantity needed in May each year late wet season and late dry season.	Reseed/revegetate barren spots by Nov.		8	43.63	349.04	one-ton truck & hydroseeder	1	48.15	48.15	seed	150	547.19		
				Scarify area to be restored, to a depth of 2-inches. Restore side slope coverage with hydroseed mixture.		0	43.63	0	one-ton truck & hydroseeder	0	26.84	0			0		
Inspect for debris accumulation	Debris or litter present	Visual observation	During routine trashing, per Districts schedule.	If after 2 applications (2 seasons) of reseeding/revegetating and growth is unsuccessful both times, an erosion blanket or equivalent protection will be installed over eroding areas		0	43.63	0	one-ton truck & hydroseeder	0	26.84	0	blanket	0	0		
				Remove litter, and debris.	None	0	0	0	one-ton truck & hydroseeder	0	0	0			0		
Inspect for accumulated sediment	Sediment at or near vegetation height, channeling of flow, inhibited flow due to change in slope.	Visual observation	Annually	Remove sediment. If flow is channeled, determine cause and take corrective action. If sediment becomes deep enough to change the flow gradient, remove sediment during dry season, characterize and properly dispose of sediment, and revegetate.		16	43.63	698.08	one-ton truck & hydroseeder	1	48.15	48.15	seed, testing and disposal of sediment	300	1046.23	once every three years	
Inspect for burrows	Burrows, holes, mounds	Visual observation	Annually and after vegetation trimming.	Notify engineer to determine if regrading is necessary. If necessary, regrade to design specification and revegetate swale/strip. If regrading is necessary, the process should start in May. Revegetate strip/swale in Nov. Target completion prior to wet season.	None	2	43.63	87.26				0			87.26		
				Where burrows cause seepage, erosion and leakage, backfill firmly.		0	0	0	one-ton truck & hydroseeder	0	26.84	0			0		
General Maintenance Inspection	Inlet structures, outlet structures, side slopes or other features damaged, significant erosion, emergence of trees, woody vegetation, fence damage, etc.	Visual observation	Semi-Annually, late wet season and late dry season.	Corrective action prior to wet season. Consult engineer if an immediate solution is not evident.	Remove any trees, or woody vegetation.	16	43.63	698.08	one-ton truck & hydroseeder	2	26.84	53.68			751.76		
TOTAL BIO FILTER AND SWALES						52		2268.76				203.66		500	2972.42		

ATTACHMENT F

The project cost estimate for the bio filter grass swale is $2,972.00. The bio filter will be maintained by the onsite property owner.

Two grass swales 50 ft. x 50 ft.

Same as 100 ft. x 5

Routine action	$539.98
Veg. cover	$547.19
Sediment removal & reveg	$1,046.23
Engineer Review	$ 87.28
Corrective action	$751.76
Total grass swale	$2,972.42

ATTACHMENT G

Certification Sheet

This Stormwater Management Plan has been prepared under the direction of the following Registered Civil Engineer. The Registered Civil Engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions and decisions are based.

Hadley Johnson RCE 14870

May 26, 2006
Date