

**STORMWATER CONTROL PLAN
FOR A REGULATED PROJECT
ALOFT WINERY
430 COLD SPRINGS ROAD, NAPA COUNTY, CA
024-340-010 & -011**

Prepared For:

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**Job No. 14-26
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**BARTELT
ENGINEERING**

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- Agreement for Maintenance of Post-Construction Stormwater Runoff Best Management Practices (draft form)
- Stormwater Control Plan - Drainage Management Area Exhibit

This Stormwater Control Plan was prepared using the Bay Area Stormwater Agencies Association (BASMAA) template dated July 11, 2014

1. PROJECT DATA

TABLE 1-1: PROJECT DATA	
Project Name	Aloft Winery
Application Submittal Date	May 2017 - Revised
Project Location	APN 024-340-010 & -011
Project Phase No.	N/A
Project Type and Description	Use Permit Application
Total Project Site Area (acres)	58.58± acres (50.07± acres & 8.51± acres)
Total New and Replaced Impervious Surface Area (Onsite)	121,238± SF
Total Pre-Project Impervious Surface Area	68,376± SF
Total Post-Project Impervious Surface Area	143,955± SF
Percent Imperviousness Before Construction	3.1%
Percent Imperviousness After Construction	5.6%

2. SETTING

2.1. Project Location and Description

The Aloft Winery project is located at 430 Cold Springs Road, Napa County, CA approximately eight (8) miles northeast of St. Helena, California. Parcel APN 024-340-011 is approximately 8.51± acres and parcel APN 024-240-010 is approximately 50.07± acres. Both parcels are located in the Agricultural Watershed (AW) zoning district. The proposed project will consist of one (1) phase and has a disturbed area of approximately 5.0± acres. The disturbed area includes the proposed driveway, tasting room and offices, production areas and wine caves as well as parking areas and some minor landscaping.

2.2. Existing Site Features and Conditions

APN 024-340-011 is currently developed with two (2) residences, a garage, a pond and provides access to APN 024-340-010 through an existing easement and gravel access road. APN 024-340-010 is currently developed with 23.2± acres of vineyard, access roads and three (3) storm water infiltration/detention basins.

According to the NRCS Soil Report, the soil types found on the parcels with corresponding Hydraulic Soil Group (HSG) and slopes are listed below:

- Forward gravelly loam (2-9% slopes, map symbol 138, HSG "B")
- Forward gravelly loam (9-30% slopes, map symbol 139, HSG "B")
- Forward gravelly loam (30-75% slopes, map symbol 140, HSG "B")

2.3. Opportunities and Constraints for Stormwater Control

The winery and wine caves are proposed toward the southeasterly side of the subject parcel (APN 024-310-010). Access to this parcel is provided through the existing easement and proposed driveway on APN 024-030-011. Three (3) existing stormwater infiltration/detention basins exist on the subject parcel. One (1) of the existing basins is located west of the existing gravel staging area on the western side of the subject parcel. Two (2) of the existing basins are located on the southern side of the existing parcel. These basins will be repurposed to serve as a bioretention facility during smaller storm events and continue providing detention of stormwater during large storm events. The project is anticipated to experience heavy vehicles, moderate passenger vehicle traffic and will need to conform to Universal Access requirements. The existing and proposed conditions can be seen on the associated Use Permit Drawings prepared by Bartelt Engineering.

3. LOW IMPACT DEVELOPMENT DESIGN STRATEGIES

3.1. Optimization of Site Layout

3.1.1. Limitation of development envelope

The project is proposing replacement of existing pervious and semi-pervious areas with new impervious areas. Due to the large parcel(s) size, the amount of proposed impervious area is still relatively small when compared to the total pervious area.

Under the proposed design, the existing gravel access road would be replaced and expanded with a Hot Mix Asphalt (HMA) commercial driveway. Some of the existing vineyards, vineyard avenues and access roads would be removed and replaced with the proposed winery and wine caves. One (1) of the existing residences on APN 024-340-011 would be demolished to allow installation of the new HMA commercial driveway.

3.1.2. Preservation of natural drainage features

In general, the existing natural drainage features on this site will be maintained under the proposed conditions. Flows will be primarily directed to the southern side of the subject parcel or retained within existing vineyards and areas with dense trees. Various rock and grass lined swales and three (3) bioretention facilities are proposed to slow down and retain water flows onsite. The location of the bioretention facilities are proposed at naturally low occurring areas within the existing infiltration/detention basins.

Bioretention facility BRF-A is proposed to be located within the bottom portion of the existing storm water infiltration/detention basin located west of the existing gravel staging area and northwest of the proposed winery and wine caves. Stormwater runoff collected in this basin is from the proposed commercial driveway and nearby vineyard areas. Stormwater overflows from this basin through an existing level tee spreader (LS-1) located near the toward the western side of the property and infiltrates through pervious areas.

Bioretention facility BRF-B is proposed to be located within the bottom portion of the existing storm water infiltration/detention basin located west of the proposed winery and wine caves. Stormwater collected in this basin is from the proposed commercial driveway and nearby vineyard areas. Stormwater overflows from this basin through an existing level spreader (LS-2) located near the southwesterly property boundary and infiltrates through pervious areas.

Bioretention facility BRF-C is proposed to be located within the bottom portion of the existing stormwater infiltration/detention basin located south of the proposed winery and wine caves. Stormwater flows into this basin from the proposed commercial driveway, winery buildings, gravel access roads and nearby vineyard areas. An intermediate drainage basin (DBRF-C) is proposed to be located at a naturally occurring low spot near the proposed entrance to the winery. A stand pipe is proposed to outlet collected runoff to BRF-C at a reduced rate. Stormwater overflows from this basin through an existing level spreader (LS-3) located near the southwest property boundary and infiltrates through pervious areas.

Refer to the attached Drainage Management Area Exhibit for location of drainage areas and features.

3.1.3. Setbacks from creeks, wetlands and riparian habitats

The wastewater system will be constructed outside of any Napa County dispersal system setback (including well setbacks). There are no creeks, wetlands and/or riparian habitats identified on the subject parcel. There is an existing pond located on APN 024-340-011.

3.1.4. Minimization of imperviousness

Impervious area will increase as a result of the proposed project. The amount of new impervious areas is relatively small compared to the amount of pervious area located on the project site.

3.1.5. Use of drainage as a design element

There are multiple elements proposed for this project that are designed to reduce stormwater runoff and promote infiltration. Various rock and grass lined swales and three (3) bioretention facilities are proposed to slow down and retain water flows onsite. Any water that overtops the bioretention facilities and infiltration basins would outflow and infiltrate through pervious areas.

3.2. Use of Permeable Pavements

Although limited, the extent of areas with gravel roads are shown on the Aloft Winery Use Permit Drawings prepared by Bartelt Engineering.

3.3. Dispersal of Runoff to Pervious Areas

All runoff is dispersed to pervious areas. These areas include areas with dense trees, vineyards, bioswales and infiltration basins.

3.4. Stormwater Control Measures

This project will utilize a combination of self-retaining areas and bioretention facilities. See Section 4.1.1.

4. DOCUMENTATION OF DRAINAGE DESIGN

4.1. Descriptions of Each Drainage Management Area

4.1.1. Drainage Management Area Descriptions

The project will consist of numerous Drainage Management Areas (DMA) which include Self-Retaining Areas, Areas Draining to Self-Retaining Areas, Self-Treating Areas and Areas Draining to Bioretention Facilities. Each DMA type proposed for this project is described below and the corresponding area(s) can be seen in Table 4.1.2-1.

Self-Retaining Areas on this site consist of all areas starting with the prefix “SRA”. The corresponding areas for these DMAs can be seen in Table 4.1.1. Some of these areas will consist entirely of vineyard that is surrounded by vineyard avenues, these vineyard avenues help retain stormwater runoff. Other Self-Retaining Areas include planter areas near the winery buildings and landscaped areas with raised drop inlets.

Areas Draining to Self-Retaining Areas on this site consist of all areas starting with the prefix “DSRA”. These areas consist of roofs and pavement areas that do not drain to a bioretention facility.

Self-Treating Areas on this site consist of all areas starting with the prefix “STA”. These areas consist of vineyard areas that do not drain to a Bioretention Facility, but rather drain directly off site or to the storm drain system.

Areas Draining to Bioretention Facilities on this site consist of all areas starting with the prefix “DBRF”. These areas consist of roofs, pavement and a small portion of a gravel access road that are located near the corresponding bioretention facility. There are three (3) major bioretention facilities on the site, DBRF-A, DBRF-B and DBRF-C.

4.1.2. Table of Drainage Management Areas

The following table provides the name, area, DMA type and surface type of every DMA for this project.

TABLE 4.1.2-1: TABLE OF DRAINAGE MANAGEMENT AREAS			
DMA Name	Area (square feet)	DMA Type	Surface Type
SRA-A	13,131	Self Retaining Area (SRA)	Landscape
SRA-B	9,366	Self Retaining Area (SRA)	Landscape
SRA-C	61,579	Self Retaining Area (SRA)	Landscape
SRA-D	13,861	Self Retaining Area (SRA)	Landscape
SRA-E	23,063	Self Retaining Area (SRA)	Landscape
SRA-F	5,174	Self Retaining Area (SRA)	Landscape
SRA-G	4,773	Self Retaining Area (SRA)	Landscape
DSRA-A1	6,529	Areas Draining to SRA	Roof/Paving
DSRA-B1	11,864	Areas Draining to SRA	Roof/Paving
DSRA-C1	22,555	Areas Draining to SRA	Roof/Paving
DSRA-D1	4,776	Areas Draining to SRA	Roof/Paving
DSRA-E1	3,000	Areas Draining to SRA	Roof/Paving
DSRA-F1	1,471	Areas Draining to SRA	Roof/Paving
DSRA-G1	1,018	Areas Draining to SRA	Roof/Paving
DSRA-G1.1	190	Areas Draining to SRA	Roof/Paving
BRF-A	638	Bioretention Facility	Landscape
BRF-B	864	Bioretention Facility	Landscape
BRF-C	3,010	Bioretention Facility	Landscape
DBRF-A1	6,076	Areas Draining to Bio	Roof/Paving
DBRF-B1	17,651	Areas Draining to Bio	Roof/Paving
DBRF-C1	652	Areas Draining to Bio	Bricks/Pavers
DBRF-C1.1	21,363	Areas Draining to Bio	Roof/Paving
DBRF-C1.2	3,770	Areas Draining to Bio	Roof/Paving
DBRF-C1.3	1,219	Areas Draining to Bio	Landscape
DBRF-C1.4	1,121	Areas Draining to Bio	Roof/Paving
DBRF-C1.5	735	Areas Draining to Bio	Roof/Paving
DBRF-C1.6	358	Areas Draining to Bio	Roof/Paving
DBRF-C1.7	14,135	Areas Draining to Bio	Roof/Paving
DBRF-C2	55	Areas Draining to Bio	Roof/Paving
STA-A	8,170	Self Treating Area (STA)	Landscape
STB-B	4,176	Self Treating Area (STA)	Landscape

4.2. Tabulation and Sizing Calculations

4.2.1. Information Summary for Bioretention Facility Design

TABLE 4.2.1-1: INFORMATION SUMMARY FOR BIORETENTION FACILITY BRF-A	
Total Project Area (Square Feet)	6,076±
DBRF-A1	6,076

TABLE 4.2.1-2: INFORMATION SUMMARY FOR BIORETENTION FACILITY BRF-B	
Total Project Area (Square Feet)	17,651±
DBRF-B1	17,651

TABLE 4.2.1-3: INFORMATION SUMMARY FOR BIORETENTION FACILITY BRF-C	
Total Project Area (Square Feet)	43,408±
DBRF-C1	652
DBRF-C1.1	21,363
DBRF-C1.2	3,770
DBRF-C1.3	1,219
DBRF-C1.4	1,121
DBRF-C1.5	735
DBRF-C1.6	358
DBRF-C1.7	14,135
DBRF-C2	55

4.2.2. Self-Treating Areas

TABLE 4.2.2-1: SELF TREATING AREAS	
DMA Name	Area (square feet)
STA-A	8,170
STA-B	4,176

4.2.3. Self-Retaining Areas

TABLE 4.2.3-1: SELF-RETAINING AREAS	
DMA Name	Area (square feet)
SRA-A	13,131
SRA-B	9,366
SRA-C	61,579
SRA-D	13,861
SRA-E	23,063
SRA-F	5,174
SRA-G	4,773

4.2.4. Areas Draining to Self-Retaining Areas

TABLE 4.2.4-1: AREAS DRAINING TO SELF-RETAINING AREAS						
DMA	Area (square feet)	Post-project surface type	Runoff factor	Receiving self-retaining DMAs	Receiving self-retaining DMA Area (square feet)	Ratio of Impervious: Pervious
DSRA-A1	6,529	Roof/Paving	1.0	SRA-A	13,131	0.50
DSRA-B1	11,864	Roof/Paving	1.0	SRA-B	9,366	1.27
DSRA-C1	22,555	Roof/Paving	1.0	SRA-C	61,579	0.37
DSRA-D1	4,776	Roof/Paving	1.0	SRA-D	13,861	0.34
DSRA-E1	3,000	Roof/Paving	1.0	SRA-E	23,063	0.13
DSRA-F1	1,471	Roof/Paving	1.0	SRA-F	5,174	0.28
DSRA-G1	1,018	Roof/Paving	1.0	SRA-G	4,773	0.21
DRSA-G1.1	190	Roof/Paving	1.0	SRA-G	4,773	0.04

4.2.5. Areas Draining to Bioretention Facilities

TABLE 4.2.5-1: FORMAT FOR TABULATING AREAS DRAINING TO BIORETENTION FACILITIES AND CALCULATING MINIMUM BIORETENTION FACILITY SIZE							
DMA	DMA Area (square feet)	Post-project surface type	DMA Runoff factor	DMA Area x runoff factor	Bioretention Facility #1 (BRF-A)		
					Aloft Winery		
					IMP Sizing Factor	IMP Facility Size (square feet)	IMP Facility Size
DBRF-A1	6,076	Roof/Paving	1.0	6,076			
				-			
				-			
Total (square feet) =				6,076	0.04	243	638

TABLE 4.2.5-2: FORMAT FOR TABULATING AREAS DRAINING TO BIORETENTION FACILITIES AND CALCULATING MINIMUM BIORETENTION FACILITY SIZE

DMA	DMA Area (square feet)	Post-project surface type	DMA Runoff factor	DMA Area x runoff factor	Bioretention Facility #1 (BRF-A)		
					Aloft Winery		
DBRF-B1	17,651	Roof/Paving	1.0	17,651	IMP Sizing Factor	IMP Facility Size (square feet)	IMP Facility Size
				-			
				-			
				-			
Total (square feet) =				17,651	0.04	706	864

TABLE 4.2.5-3: FORMAT FOR TABULATING AREAS DRAINING TO BIORETENTION FACILITIES AND CALCULATING MINIMUM BIORETENTION FACILITY SIZE

DMA	DMA Area (square feet)	Post-project surface type	DMA Runoff factor	DMA Area x runoff factor	Bioretention Facility #2 (BRF-B)		
					Aloft Winery		
DBRF-C1	652	Bricks/Pavers	0.5	326	IMP Sizing Factor	IMP Facility Size (square feet)	IMP Facility Size
DBRF-C1.1	21,363	Roof/Paving	1.0	21,363			
DBRF-C1.2	3,770	Roof/Paving	1.0	3,770			
DBRF-C1.3	1,219	Landscape	0.1	122			
DBRF-C1.4	1,121	Roof/Paving	1.0	1,121			
DBRF-C1.5	735	Roof/Paving	1.0	735			
DBRF-C1.6	358	Roof/Paving	1.0	358			
DBRF-C1.7	14,135	Roof/Paving	1.0	14,135			
DBRF-C2	55	Roof/Paving	1.0	55			
Total (square feet) =				41,985	0.04	1,679.4	3,010

5. SOURCE CONTROL MEASURES

5.1. Site Activities and Potential Sources of Pollutants

5.1.1. Source Control Table

TABLE 5.1.1-1: SOURCE CONTROL TABLE		
Potential source of runoff pollutants	Permanent source control BMPs	Operational source control BMPs
Onsite storm drain inlets (unauthorized non-stormwater discharges and accidental spills or leaks)	<ul style="list-style-type: none"> Mark all inlets with the words "No Dumping! Flows to Bay" or similar. 	<ul style="list-style-type: none"> <input type="checkbox"/> Maintain and periodically repaint or replace inlet markings <input 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.casqa.org/resources/bump-handbooks <input type="checkbox"/> Include the following in lease agreements: "Tenants 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."
Interior floor drain and elevator shaft sump pumps	<ul style="list-style-type: none"> State that interior floor drains and elevator shaft sump pumps will be plumbed to sanitary sewer. 	<ul style="list-style-type: none"> <input type="checkbox"/> Inspect and maintain drains to prevent blockages and overflow.
Need for future indoor & structural pest control	<ul style="list-style-type: none"> Note building design features that discourage entry of pests. 	<ul style="list-style-type: none"> <input type="checkbox"/> Provide Integrated Pest Management information to owners, lessees and operators.

<p>Landscape/Outdoor pesticide use/building & grounds maintenance</p>	<p>State that final landscape plans will accomplish all of the following.</p> <ul style="list-style-type: none"> • Preserve existing native trees, shrubs and ground cover to maximum extent possible. • 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. • Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions. • Consider using pest-resistant plants, especially adjacent to hardscape. • To insure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency and plant interactions. 	<ul style="list-style-type: none"> <input type="checkbox"/> Maintain landscaping using minimum or no pesticides. <input type="checkbox"/> See applicable operational BMPs in Fact Sheets SC-41, "Building and Grounds Maintenance," in the CASQA Stormwater Quality Handbooks at: www.casqa.org/resources/bmp-handbooks <input type="checkbox"/> Provide IPM information to new owners, lessees and operators.
<p>Pools, spas, ponds, decorative fountains & other water features</p>	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> <input type="checkbox"/> See applicable operational BMPs in Fact Sheet SC-72, "Fountain and Pool Maintenance," in the CASQA Stormwater Quality Handbooks at www.casqa.org/resources/bmp-handbooks. The sanitary sewer operator must be notified and a clean out identified when pools are to be drained to the sanitary sewer.
<p>Food service</p>	<ul style="list-style-type: none"> • Describe the location and features of the designated cleaning area. • Describe the items to be cleaned in this facility and how it has been sized to insure that the largest items can be accommodated. 	<p>State maintenance schedule for grease interceptor.</p>

Refuse areas	<ul style="list-style-type: none"> • State how site refuse will be handled and provide supporting detail to what is shown on plans. • 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 liquids or hazardous wastes. Post “no hazardous materials” signs. Inspect and pick up litter daily and clean up spills immediately. Keep spill control materials available onsite. See Fact Sheet SC-34, “Waste Handling and Disposal” in the CASQA Stormwater Quality Handbooks at www.casqa.org/resources/bmp-handbooks
Industrial processes	<ul style="list-style-type: none"> • If the 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 systems.” 	<input type="checkbox"/> See Fact Sheet SC-10, “Non-Stormwater Discharges” in the CASQA Stormwater Quality Handbooks at www.casqa.org/resources/bmp-handbooks
Fire sprinkler test water	<ul style="list-style-type: none"> • Provide a means to drain fire sprinkler test water to sanitary sewer. • Municipal 	<input type="checkbox"/> See note in Fact Sheet SC-41, “Building and Grounds Maintenance,” in the CASQA Stormwater Quality Handbooks at www.casqa.org/resources/bmp-handbooks
Condensate drain lines Roofing, gutters & trim	<ul style="list-style-type: none"> • 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. • Any drainage sumps onsite shall feature a sediment sump to reduce the quantity of sediment in pumped water. • Include controls for other sources as specified by local reviewer. 	<p>If architectural copper is used, implement the following BMPs for management of rinse water during installation:</p> <ul style="list-style-type: none"> <input type="checkbox"/> If possible, purchase copper materials that have been pre-patinated at the factory. <input type="checkbox"/> If patinated is done onsite, prevent rinse water from entering storm drains by discharging to landscaping or by collecting in a tank and hauling offsite. <input type="checkbox"/> Consider coating the copper materials with an impervious coating that prevents further corrosion and runoff. Implement the following BMPs during routine maintenance: <input type="checkbox"/> Prevent rinse water from entering storm drains by discharging to landscaping or by collecting in a tank and hauling offsite.
Plazas, sidewalks & parking lots		<input type="checkbox"/> Sweep plazas, sidewalks and parking lots regularly to prevent accumulation of litter and debris. Collect debris from pressure washing to prevent entry into the storm drain system. Collect wash water containing any cleaning agent of degreaser and discharge to the sanitary sewer not to a storm drain.

5.2. Features, Materials and Methods of Construction of Source Control BMPs

Several features were incorporated into the design of the project to minimize the potential for stormwater pollution and are listed below. Please refer to the Aloft Winery Use Permit Drawings prepared by Bartelt Engineering for detailed materials and methods of construction of source control BMPs.

6. STORMWATER FACILITY MAINTENANCE

6.1. Ownership and Responsibility for Maintenance in Perpetuity

The Owner agrees to implement the stormwater control strategy as outlined in this document and as shown in the plans prepared by Bartelt Engineering. The Owner accepts responsibility for the installation, operation and maintenance of the stormwater treatment and flow-control facilities noted in this Stormwater Control Plan. The Owner agrees to undertake this responsibility until such time as the responsibility is formally transferred to a subsequent owner.

6.2. Summary of Maintenance Requirements for Each Stormwater Facility

The following activities shall be completed at least annually. The frequency should be adjusted in response to the needs of each particular facility.

Clean up. Remove any soil or debris blocking planter inlets or overflows. Remove trash that typically collects near inlets or gets caught in vegetation.

Prune or cut back plants for health and to ensure flow into inlets and across the surface of the facility. Remove and replant as necessary. When replanting, maintain the design surface elevation and minimize the introduction of soil.

Control weeds by manual methods and soil amendment. In response to problem areas or threatening invasions, corn gluten, white vinegar, vinegar-based products or non-selective natural herbicides such as Burnout or Safer's Sharpshooter may be used.

Add mulch. Aged mulch, also called compost mulch, reduces the ability of weeds to establish, keeps soil moist and replenishes soil nutrients. Mulch is added from time to time as necessary to maintain a mulch layer thickness (some agencies require 3 inches). However, ensure the underlying soil surface beneath the mulch layer is a minimum 6 inches below the overflow elevation, consistently throughout the surface area of the facility. In particular, ensure that the top of the mulch layer is below the facility overflow, so that as the facility fills during a major storm, the entire surface becomes wetted before the overflow elevation is reached.

Check signage. Remove graffiti and replace if necessary.

Check irrigation, if any, to confirm it is adequate but not excessive.

Landscaping maintenance personnel should be aware of the following:

Do not add fertilizer to bioretention facilities. Compost tea, available from various nurseries and garden supply retailers, may be applied at a recommended rate of 5

gallons mixed with 15 gallons of water per acre, up to two weeks prior to planting and once per year between March and June. Do not apply when temperatures are below 50° F or above 90° F or when rain is forecast in the next 48 hours.

Do not use synthetic pesticides on bioretention facilities. Beneficial nematodes and non-toxic controls may be used. Acceptable natural pesticides include Safer® products and Neem oil.

Sidewalks will be swept clean of debris regularly.

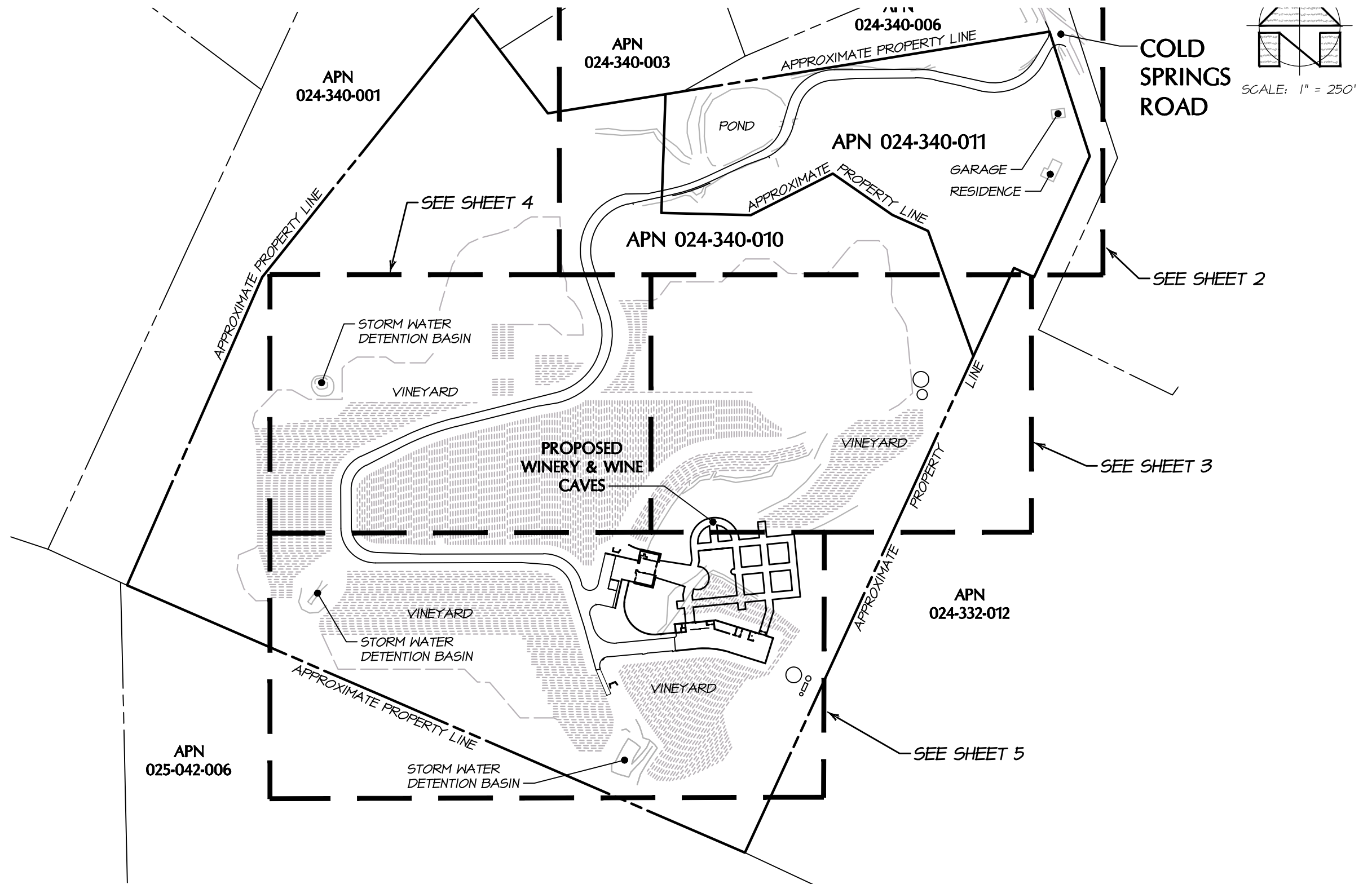
7. CONSTRUCTION CHECKLIST

Please refer to the Construction General Permit Stormwater Pollution Prevention Plan (SWPPP) prepared by Bartelt Engineering for all construction and post-construction BMPs. An Industrial General Permit No Exposure Certificate (NEC) will be filed with the State Water Resources Control Board.

8. CERTIFICATIONS

The preliminary design of stormwater treatment facilities and other stormwater pollution control measures in this plan are in accordance with the current edition of the BASMAA Post-Construction Manual.

5/31/2017 - 4:08 PM, christian, 5:\LAND PROJECTS\2013-2017\426VACAD\EXHIBITS\1426-SCP.DWG



**STORMWATER CONTROL PLAN -
DRAINAGE MANAGEMENT AREA EXHIBIT**

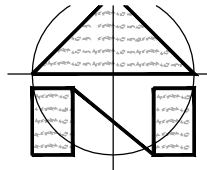
SCALE: 1" = 250'

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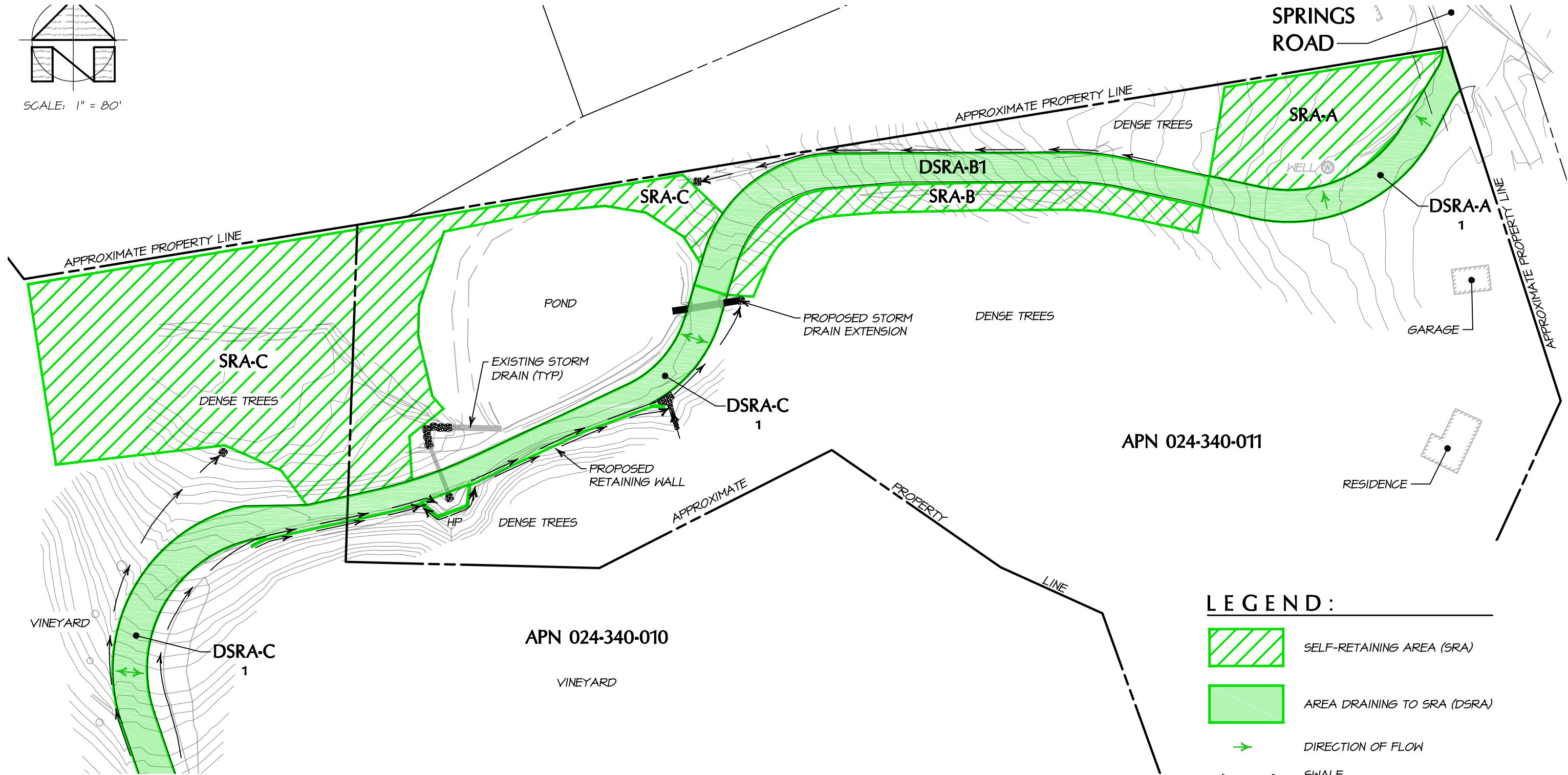
CIVIL ENGINEERING · LAND PLANNING
1303 Jefferson Street, 200 B, Napa, CA 94559
www.barteltengineering.com
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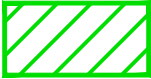



Aloft Winery
430 Cold Springs Road
Angwin, CA 94508
APN 024-340-010 & -011
Job No. 14-26
May 2017
Sheet 1 of 5



SCALE: 1" = 80'



LEGEND:

-  SELF-RETAINING AREA (SRA)
-  AREA DRAINING TO SRA (DSRA)
-  DIRECTION OF FLOW
-  SWALE

**STORMWATER CONTROL PLAN ·
DRAINAGE MANAGEMENT AREA EXHIBIT**

SCALE: 1" = 80'

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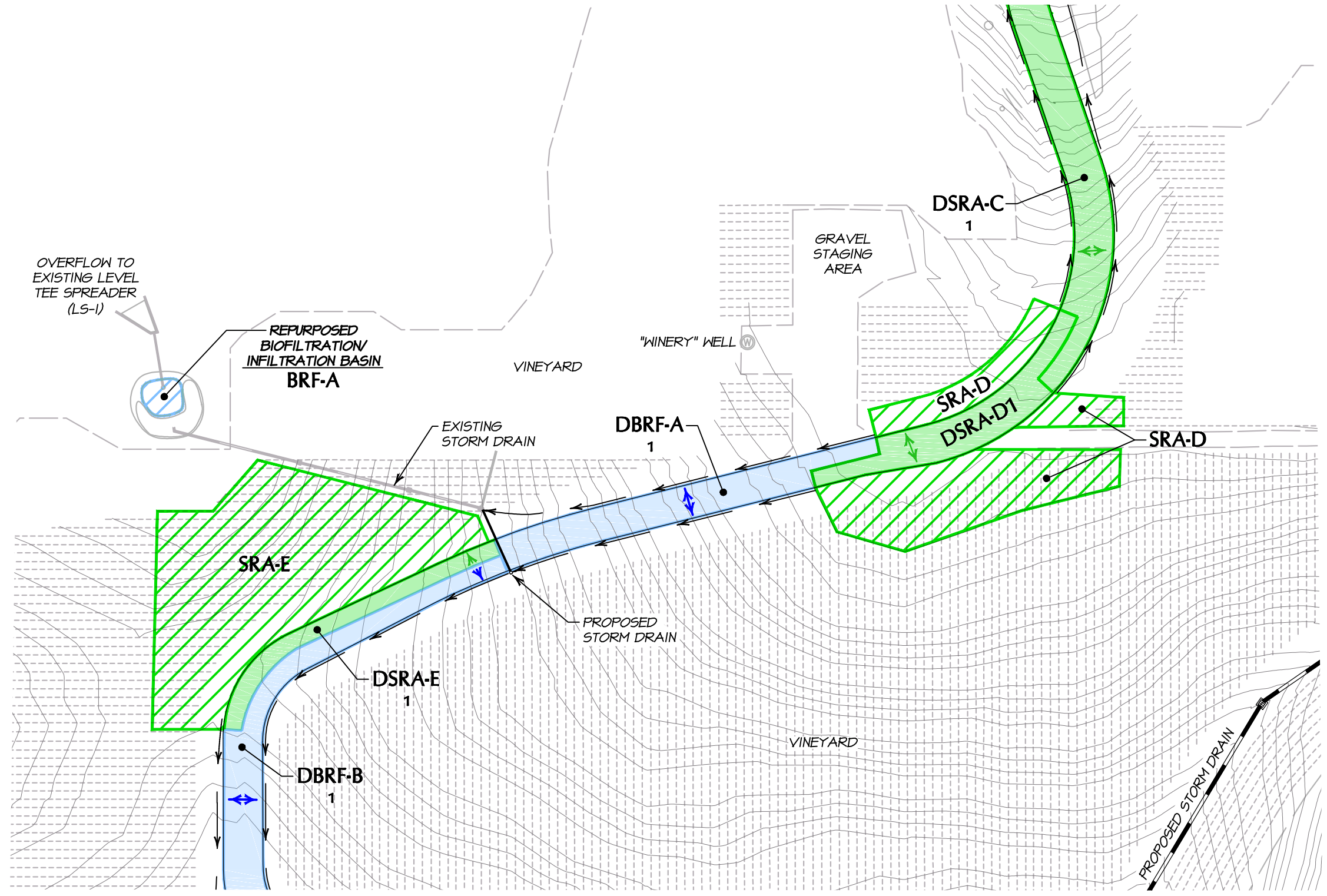
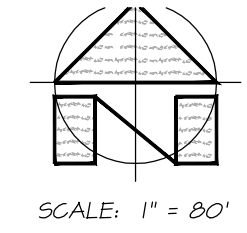
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May 2017
Sheet 2 of 5

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LEGEND:

	BIORETENTION FACILITY (BRF)
	AREA DRAINING TO BRF (DBRF)
	SELF-RETAINING AREA (SRA)
	AREA DRAINING TO SRA (DSRA)
	DIRECTION OF FLOW
	SWALE

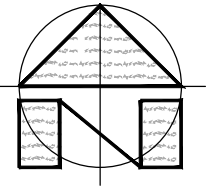
**STORMWATER CONTROL PLAN ·
DRAINAGE MANAGEMENT AREA EXHIBIT**

SCALE : 1" = 80'

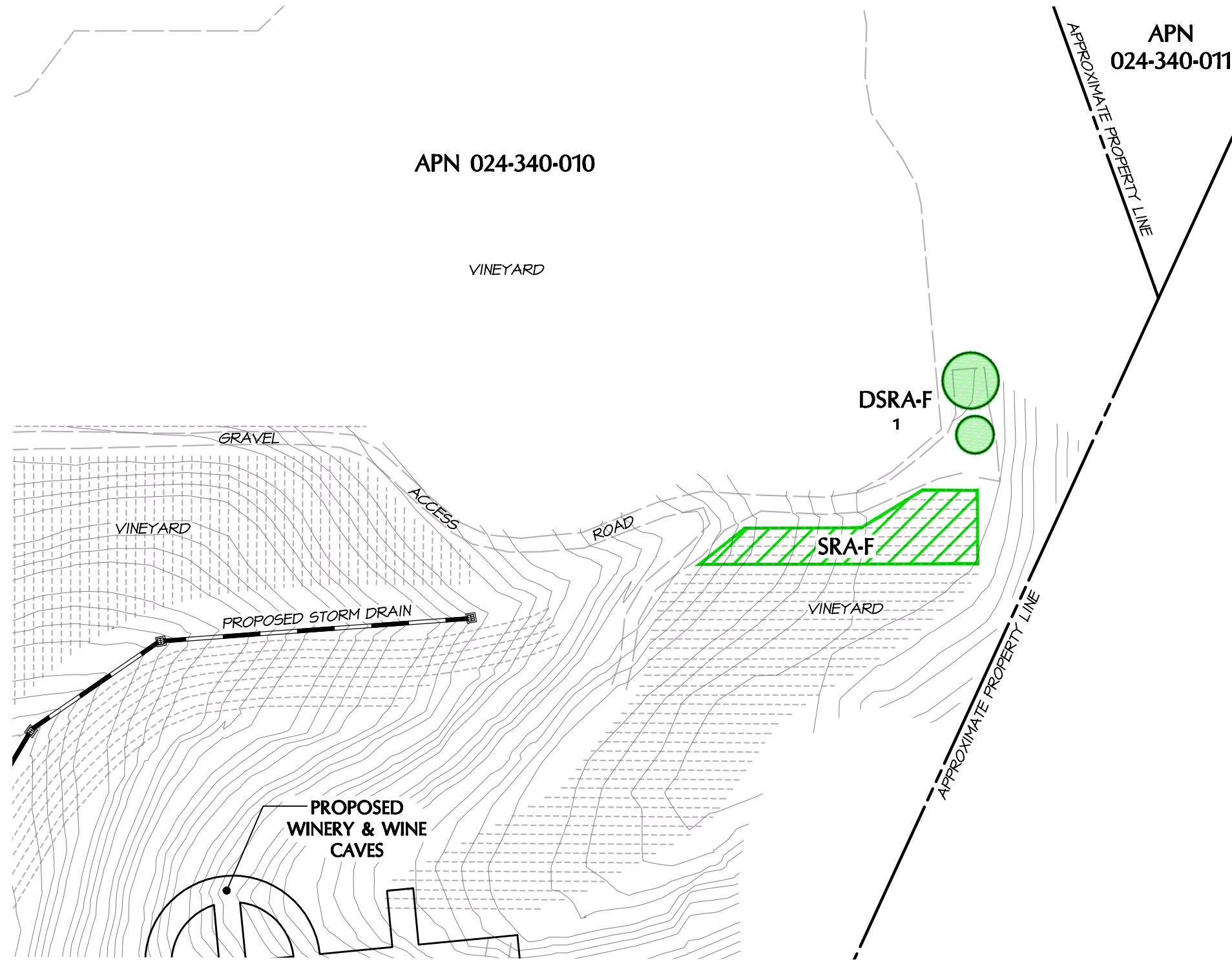
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Sheet 3 of 5

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SCALE: 1" = 80'



LEGEND:



SELF-RETAINING AREA (SRA)



AREA DRAINING TO SRA (DSRA)

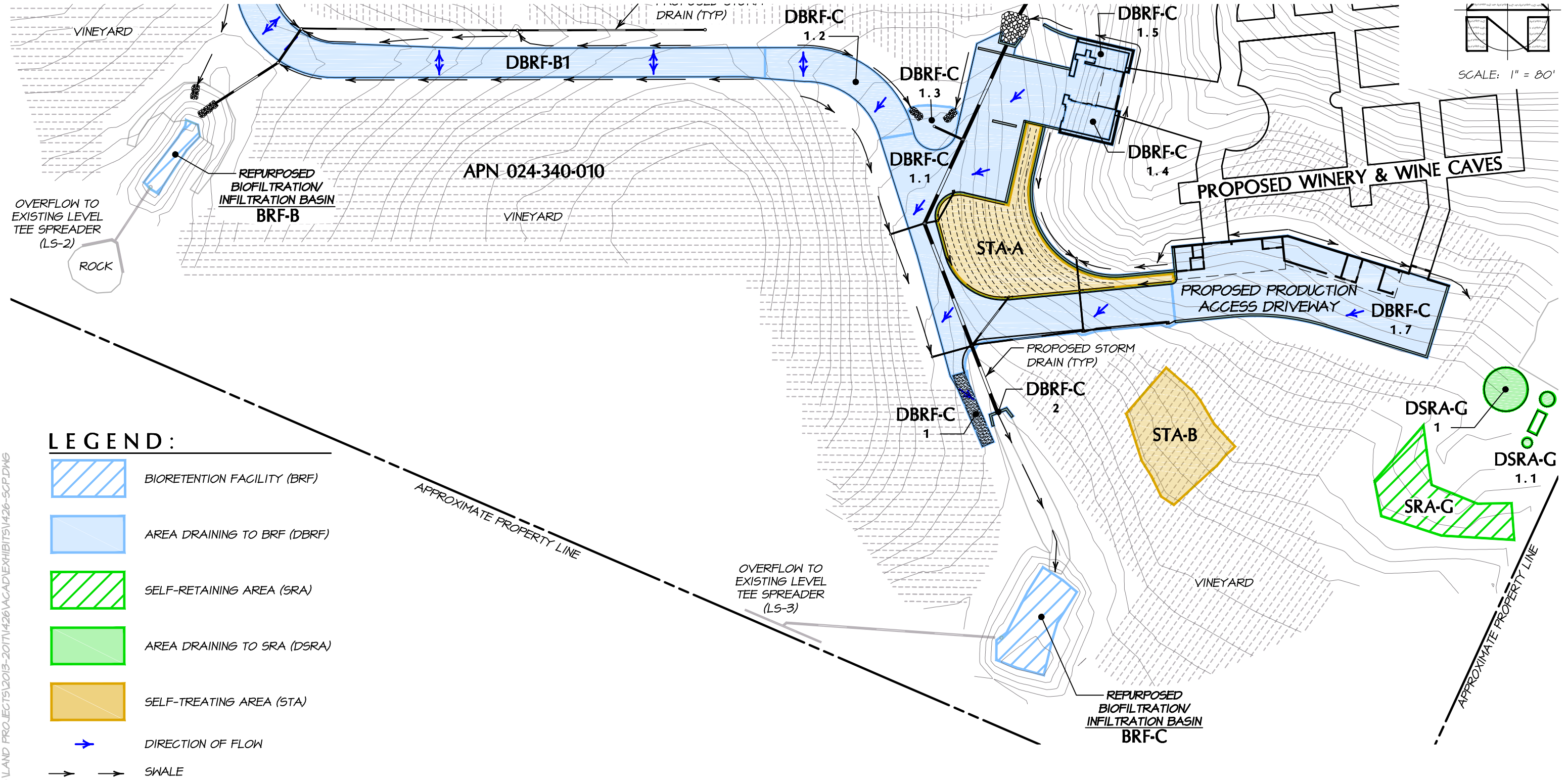
**STORMWATER CONTROL PLAN ·
DRAINAGE MANAGEMENT AREA EXHIBIT**

SCALE : 1" = 80'


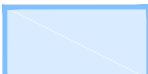

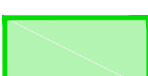



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Angwin, CA 94508
APN 024-340-010 & -011
Job No. 14-26
May 2017
Sheet 4 of 5



SCALE: 1" = 80'

- LEGEND:**
-  BIORETENTION FACILITY (BRF)
 -  AREA DRAINING TO BRF (DBRF)
 -  SELF-RETAINING AREA (SRA)
 -  AREA DRAINING TO SRA (DSRA)
 -  SELF-TREATING AREA (STA)
 -  DIRECTION OF FLOW
 -  SWALE

**STORMWATER CONTROL PLAN -
DRAINAGE MANAGEMENT AREA EXHIBIT**

SCALE : 1" = 80'

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RECORDING REQUESTED BY and for the BENEFIT OF:

Napa County
Department of Planning, Building and
Environmental Services

1195 Third St., room 201
Napa, CA 94559

NO FEE DOCUMENT
Gov. Code § 27383

SPACE ABOVE THIS LINE RESERVED FOR RECORDER'S

**AGREEMENT FOR MAINTENANCE OF POST-CONSTRUCTION STORM WATER
RUNOFF BEST MANAGEMENT PRACTICES
(Permit No. _____)**

THIS AGREEMENT FOR MAINTENANCE OF POST-CONSTRUCTION STORM WATER BEST MANAGEMENT PRACTICES ("Agreement") is made by _____ (the "Owner") and Napa County, a political subdivision of the State of California (the "County"), effective this ____ day of _____, 20__.

RECITALS

A. As of May 20, 2004, discharges from the Napa County Storm Water Management Program's ("Program") Small Municipal Separate Storm Sewer Systems ("Small MS4s") are authorized by the State Water Resources Control Board's General Permit for Storm Water Discharges from Small MS4s, Water Quality Order No. 2003-0005—DWQ ("Phase II General Permit"). The Program, which is comprised of the City of Napa, Town of Yountville, City of Calistoga, City of St. Helena, and Napa County, is now covered under the Phase II General Permit. The Program must implement its Storm Water Management Plan ("SWMP") and comply with the requirements and prohibitions of the Phase II General Permit; and

B. Provision D.e.(4) of the Phase II General Permit requires the County to ensure adequate long-term maintenance of all required Post-Construction Storm Water Treatment Control(s), Hydromodification Control(s), and designated Source Control(s) Best Management Practices ("BMPs"); and

C. The Owner is the fee simple owner of certain real property located within Napa County, California (the "Property"), APN: _____, described in Exhibit "A" attached hereto and incorporated herein by reference. The County has approved _____ (the "Project"). The Project is expressly conditioned upon (1) the Owner's compliance with the BMPs described in Exhibit "C" ("Maintenance Plan"), including the construction of those BMPs shown on Exhibit "B" (the "Site Plan"), both exhibits are attached hereto and incorporated herein by reference; and (2) the Owner's execution of an agreement with the County for the Owner to comply with and maintain those BMPs in perpetuity; and

D. The Owner has submitted a design for the construction of the BMPs shown on the Site Plan, which has been approved by the County; and

E. The Owner is obligated to construct such BMPs in accordance with the approved plans and specifications outlined by the California Stormwater Quality Association (CASQA) BMP Handbooks and the County; and

F. The Owner and County agree that the health, safety, and welfare of the citizens of Napa County require that all BMPs be properly maintained.

NOW, THEREFORE, in consideration of the benefits received and to be received by the Owner as a result of the County's approval of the Project, the Owner hereby agrees with the County as follows:

1. Affected Property: This Agreement affects the Property located within Napa County, California, as described in Exhibit "A."

2. Purpose: The BMPs are designed to remove pollutants from storm water runoff, preclude pollutants from being discharged to storm drain systems, and limit peak storm water runoff discharge rates from the Property. The purpose of this Agreement is to reflect the parties' rights and obligations concerning the maintenance of BMPs and compliance with all BMPs.

3. Owner's Obligations:

A. Performance and Maintenance Criteria. Owner, its successors and assigns, shall use its best efforts to diligently and adequately maintain in perpetuity the BMPs in a manner assuming peak performance at all times, and shall make such changes or modifications, subject to County's prior approval as may be reasonably necessary for the BMPs to continue to operate as designed and approved and to accomplish its intended purpose, in good repair, and in compliance with all applicable Federal, State, and County laws and regulations, including but not limited to the Napa County Storm Water Management Program (a copy of which is on file in the County's Department of Planning, Building and Environmental Services' Engineering Division) (collectively "Regulations"). The Owner shall be responsible for the costs incurred in operating, maintaining, repairing and replacing the BMPs and complying with the Regulations as conditioned by the County. Adequate maintenance is herein defined as maintenance that is necessary or convenient to ensure that the BMPs continue to operate as originally designed and approved and to accomplish their intended purpose. Owner shall not destroy or remove the BMPs nor modify any measure in any manner that would lessen its effectiveness.

B. Maintenance Plan. In addition to Owner's general obligations under Section (A), above, Owner shall, at its own cost, perform all maintenance specified in the Maintenance Plan and file the annual reports identified in Exhibit "D" attached hereto and made a part hereof.

4. Right of Entry: In addition to the rights provided by law, Owner, its successors and assigns, hereby grants permission to County, the Regional Water Quality Control Board ("Regional Board"), and the Napa County Mosquito Abatement District ("NCMAD"), their employees and agents, to enter upon the Property at reasonable times and in a reasonable manner to inspect, assess or observe the BMPs in order to ensure that the BMPs are being properly maintained and are continuing to perform in an adequate manner to protect water quality and the public health and safety. This includes the right to enter upon the Property when one or more of the identified agencies have a reasonable basis to believe that a violation of this Agreement, the County's storm water management program, guidelines, criteria, other written direction, or the Phase II General Permit, and any amendments or reissuances of this permit has occurred. The above-mentioned agencies are also authorized to enter the Property when necessary for abatement of a public nuisance or correction of a violation of the Storm Water Management Program, guideline, criteria or other written direction. Whenever possible, the County, Regional Board and the NCMAD shall provide reasonable notice to Owner before entering the Property.

5. Failure to Maintain: In the event the Owner, its successors or assigns, fails to maintain and repair the BMPs as required by this Agreement, after thirty (30) days written notice thereof, County may and is hereby authorized to cause, at the Owner's sole cost and expense, any and all maintenance to the BMPs necessary under the requirements specified in Exhibit "D". In addition to the actual costs of such maintenance, the Owner shall reimburse County for an additional fifteen percent (15%) thereof to cover costs of administration. All such actual and administrative costs shall accrue interest from the date incurred by County at the maximum rate authorized by law until paid in full. The notice provided herein shall be effective on the date sent by U.S. Mail, first class postage prepaid to the record owner of the

Property as shown on the most recent tax roll. If such costs are not paid within the time frame established by County, the unpaid costs shall be assessed against the Property. Said assessment shall be a lien against the Property and may be collected as ordinary taxes by County. The actions described in this section are in addition to and not in lieu of any and all legal remedies as provided by law, available to County as a result of Owner's failure to maintain the BMPs.

6. Retention of Records: For a time period of the most recent three (3) years, Owner shall maintain written documentation verifying any and all material(s) removed from the subject BMP, including identifying the material(s) removed, quantity, and manner and place of disposal thereof. Such documentation is subject to review by County from time to time upon request.

7. Pesticide and Herbicide Use: Application of any pesticides or herbicides by Owner to meet the obligations of this Agreement shall be minimal and in accordance with all applicable Federal, State, and County laws and regulations and in accordance with any restrictions imposed upon such use or application by Napa County.

8. Security: The County may require the Owner, its successors or assigns, from time to time, to post security in a form, amount, and for a time period satisfactory to County to guarantee performance of the obligations stated herein. Should the Owner, its successors or assigns, fail to perform the obligations under this Agreement, the County may, in the case of a cash bond, act for the Owner, its successors and assigns, using the proceeds from such cash bond, or in the case of a surety bond, require the surety to perform the obligations of this Agreement.

9. Indemnification: The Owner, its successors or assigns, shall indemnify, release, hold harmless, and defend the County from and against any and all claims, demands, suits, liabilities, fines, losses, damages, fines, and payments, including reasonable attorney's fees, claimed or made against the County that are alleged or proven to result or arise from the design, construction, presence, existence, location, operation, or maintenance of the Storm Water Source Controls, Treatment Measures and Baseline Hydromodification Management Measures, covered under the Phase II General Permit, by Owner or County but excluding claims adjudicated to be caused by the sole negligence or willful misconduct of County.

10. Recordation: This Agreement shall be recorded in the Office of the Recorder, Napa County, California, at the expense of the Owner, and shall constitute notice of the obligations herein set forth, which shall run with the land and shall be binding upon all of the successors and assigns in title to the Property. The Owner agrees that whenever the Property is sold, conveyed or otherwise transferred, the Property shall be subject to this Agreement, which shall apply to and bind all present and subsequent owners of the Property or part thereof.

11. Notices: All notices and other communications required or permitted to be given under this Agreement, including any notice of change of address, shall be in writing and given by personal delivery, or deposited with the United States Postal Service, postage prepaid, addressed to the parties intended to be notified. Notice shall be deemed given as of the date of personal delivery, or if mailed, upon the date of deposit with the United States Postal Services. Notice shall be given as follows, except that notice also may be given to the Owner at the address listed herein of this Agreement and to its successors or assigns, at the address(es) shown on the records for the Property maintained by the Assessor, Napa County, California:

TO COUNTY: Director of Planning, Building and Environmental Services
1195 Third Street, Room 210
Napa, CA 94559

TO OWNER: _____

12. Maintenance Responsibility: This Agreement shall serve as the signed statement by the Owner accepting responsibility for compliance with the operation and maintenance of BMPs as set forth in this Agreement until the responsibility is legally transferred to another entity. Before the Property is legally transferred to another entity, the Owner shall at a minimum provide to the County at least one of the following:

A. A signed statement from the project proponent accepting responsibility for the operation and maintenance (O&M) of structural control measure(s) until such responsibility is legally transferred to another entity; or

B. Written conditions in the sales or lease agreements or deed for the Project requiring the buyer or lessee to assume responsibility for the O&M of the installed source control(s), treatment system(s), and hydromodification control(s) (if any) until such responsibility is legally transferred to another entity; or

C. Written text in project deeds, or conditions, covenants and restrictions ("CC&Rs") for multi-unit residential projects that require the homeowners' association or, if there is no association, each individual owner to assume responsibility for the O&M of the installed source control(s), treatment system(s), hydromodification control(s) (if any) until such responsibility is legally transferred to another entity; or

D. Any other legally enforceable agreement or mechanism, satisfactory to Napa County Counsel, such as recordation in the property deed, that assigns the O&M responsibility for the installed source control(s), treatment system(s), hydromodification control(s) (if any) to the project owner(s) or the County.

13. General Provisions:

A. Headings. The heading titles for each paragraph of this Agreement are included only as a guide to the contents and are not to be considered as controlling, enlarging, or restricting the interpretation of the Agreement.

B. Severability. If any term of this Agreement (including any phrase, provision, covenant, or condition) is held by a court of competent jurisdiction to be invalid or unenforceable, the Agreement shall be construed as not containing that term, and the remainder of this Agreement shall remain in full force and effect; provided, however, this paragraph shall not be applied to the extent that it would result in a frustration of the parties' intent under this Agreement.

C. Governing Law, Jurisdiction, and Venue. The interpretation, validity, and enforcement of this Agreement shall be governed and interpreted in accordance with the laws of the State of California. Any suit, claim, or legal proceeding of any kind related to this Agreement shall be filed and heard in a court of competent jurisdiction in the County of Napa.

D. Attorney's Fees. In the event any legal action is commenced to enforce or interpret this Agreement, the prevailing party is entitled to reasonable attorney's fees, costs, and expenses incurred, whether or not such action proceeds to judgment.

E. Modifications and Rescission. This Agreement may not be modified orally or in any manner other than by an instrument in writing executed by the County and Owner at the time of modification or rescission.

F. Waivers. Waiver of a breach or default under this Agreement shall not constitute a continuing waiver or a waiver of a subsequent breach of the same or any other provision of this Agreement.

G. Time. Time is of the essence in carrying out the duties hereunder.

H. Entire Agreement. This Agreement, including all documents incorporated herein by reference, comprises the entire integrated understanding between the parties concerning the services described herein. This Agreement supersedes all prior negotiations, agreements, and understandings regarding this matter, whether written or oral. The documents incorporated by reference into this Agreement are complementary; what is called for in one is binding as if called for in all.

I. Each Parties' Role in Drafting the Agreement. Each party to this Agreement has had an opportunity to review the Agreement, confer with legal counsel regarding the meaning of the Agreement, and negotiate revisions to the Agreement. Accordingly, neither party shall rely upon Civil Code Section 1654 in order to interpret any uncertainty in the meaning of the Agreement.

J. Signatures. The individuals executing this Agreement represent and warrant that they have the right, power, legal capacity, and authority to enter into and to execute this Agreement on behalf of the respective legal entities of the Owner and the County.

IN WITNESS WHEREOF, the parties have duly executed this Agreement the day and year first above written.

<p>NAPA COUNTY, A political subdivision of the State of California</p> <p>_____</p> <p>David Morrison, Director Planning, Building, and Environmental Services Department</p> <p style="text-align: center;">“COUNTY”</p>	<p>DECLARANT</p> <p>_____</p> <p>[Printed Name & Title]</p> <p>_____</p> <p>[Owner Signature]</p> <p style="text-align: center;">“OWNER”</p>
<p style="text-align: center;">APPROVED AS TO FORM Office of County Counsel</p> <p>By: _____ Deputy County Counsel</p> <p>Date: _____</p>	

NEW ACKNOWLEDGMENT EFFECTIVE 01/01/2015

Civil Code 1189(a)

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of _____

On _____ before me, *(here insert the name and title of officer)*, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.
I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
Witness my hand and official seal.

Notary's Signature _____ [Seal]

NEW JURAT LANGUAGE EFFECTIVE 01/01/2015

Government Code 8202(a)

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of _____

Subscribed and sworn to (or affirmed) before me on this _____ day of _____, _____, by _____, proved to me on the basis of satisfactory evidence to be the person(s) who appeared before me.

Notary's Signature _____ [Seal]

Exhibit A

Legal Description of Property

Exhibit B

List of and Legible Reduced-Scale Copy of the Site Plan Showing Location and Type of Source Control(s), Treatment Control(s) and Hydromodification Control(s)
Best Management Practices (BMPs)

Exhibit C

Maintenance Plan for Post Construction Storm Water Source Control(s), Treatment Control(s), and Hydromodification Control(s) Best Management Practices

I. Owner's General Responsibilities:

It shall be the responsibility of the Owner to maintain the Treatment Control(s), Hydromodification Control(s), and designated Source Control(s) (if any) Best Management Practices ("BMPs") identified in Exhibit "B" and to perform the following non-structural Best Management Practices:

A. Inlet Labels. Provide concrete stamping, or equivalent, of all stormwater conveyance system inlets and catch basins within the project area with prohibitive language (e.g. "No Dumping-Drains to XXXX River/Creek/Lake"). Signage shall identify the receiving water the drain discharges to and including a message in Spanish.

B. Private Street and Parking Lot Sweeping. A sweeping program shall be implemented that at a minimum provides for sweeping immediately prior to October 15th, and once monthly. Sweep, collect, and dispose of debris and trash in a proper container. Do not sweep debris onto County streets or into catch basins. Use dry methods of sweeping and vacuuming to clean streets rather than hosing, pressure washing, or steam cleaning. If water is used for cleaning, collect wash water and dispose of as a hazardous waste or place on site where it can evaporate. Perform street cleaning during dry weather if possible. All oil captured shall be removed and disposed of in accordance with all applicable Federal, State, and County laws and regulations. Catch basins shall be cleaned every six (6) to twelve (12) months, or whenever the sump is half full.

C. Irrigation. Efficient irrigation, appropriate landscape design, and proper maintenance shall be implemented to reduce excess irrigation runoff, promote surface filtration, and minimize use of fertilizers, herbicides, and pesticides.

II. General Performance and Maintenance Criteria:

The Owner shall use its best efforts to diligently and adequately maintain all source control(s), treatment control(s), and hydromodification control(s) (if any) BMPs in perpetuity in such a manner assuming peak performance at all times and shall make such modifications, subject to Napa County ("County") prior approval, as may be necessary for the source control(s), treatment control(s), and hydromodification control(s) (if any) BMPs to continue to operate as designed and approved, to accomplish their intended purpose and in compliance with all applicable Federal, State, and County laws and regulations, including, but not limited to, the Napa County Storm Water Management Program, a copy of which is on file at the County's Department of Planning, Building and Environmental Services' Engineering Division (collectively "Regulations"), as the same may be amended, revised, or replaced from time to time. Adequate maintenance is herein defined as maintenance that is necessary or convenient to ensure that the drainage improvements continue to operate as originally designed and approved and to accomplish their intended purpose. Neither the Owner nor any successors or assigns shall destroy, modify, or remove any source control(s), treatment control(s), and hydromodification control(s) (if any) in any manner that would lessen its effectiveness. The Owner shall be responsible for the costs incurred in operating, maintaining, repairing, and replacing the source control(s), treatment control(s), and hydromodification control(s) (if any) and performing all non-structural BMPs identified above.

III. Specific Requirements:

In addition to the Owner's general responsibilities set forth above, the Owner shall implement an Operations and Maintenance Program for the stormwater treatment and baseline hydromodification management structural control measures defined herein.

A. Infiltration Systems Maintenance. Those Treatment Control BMPs where water enters the ground and moves downward through the unsaturated soil zone. Infiltration Treatment Control BMPs include, but is not limited to: Infiltration trench, infiltration basin, and retention/irrigation systems. Regular maintenance is critical to the successful operation of infiltration systems. Recommended operations and maintenance guidelines shall specifically include the following:

1. Infiltration. Observe drain time for the design storm after completion or modification of the facility to confirm that the desired drain time has been obtained.

2. Inspection. Schedule semiannual inspections for the beginning and end of the wet season, October 15th through April 1st, to identify potential problems such as erosion of side slopes and inverts, standing water, trash and debris and sediment accumulation.

3. Trash/Debris Management. Remove accumulated trash and debris in the infiltration facility at the start and end of the wet season.

4. Vegetation Management. Trim vegetation at the beginning and end of the wet season to prevent establishment of woody vegetation and for aesthetic and vector reasons.

5. Sediment Management. Remove accumulated sediment and re-grade when the accumulated sediment volume exceeds 10% of the infiltration facility.

6. Erosion Control. If erosion is occurring, re-vegetate immediately and stabilize with erosion control mulch or mat until vegetation cover is established.

7. Soil Development. To avoid reversing soil development, scarification or other disturbance should only be performed when there are actual signs of clogging, rather than on a routine basis. Always remove deposited sediment before scarification, and use a hand guided rotary tiller, if possible, or a disc harrow pulled by a very light tractor.

8. Vector Control. The Owner shall retain responsibility to ensure that facilities do not harbor vectors or otherwise create a nuisance, and shall immediately abate any nuisance caused by the facility. A licensed individual or contractor shall be engaged to apply vector pesticide and/or larvicide as necessary. Coordination with the Napa County Mosquito Abatement District is encouraged.

9. Safety. Adopt and enforce a confined space entry plan, if applicable, which meets all requirements of federal, state, and local laws and regulations. Maintenance personnel shall use confined space entry procedures when applicable. The facility shall not be entered, except by a person properly trained, equipped, and qualified to enter a confined space, as identified by local Occupational Safety and Health Administration (OSHA) regulations. All persons should watch for and avoid contact with overhead power lines when inspecting the facility with long sampling devices.

10. Access. Maintain ingress/egress routes in a manner that allows efficient inspection and maintenance to the facility.

B. Retention/Detention System Maintenance. Those treatment control BMPs where the stormwater is captured and retain runoff temporarily and release it to receiving water at predevelopment flow rates or released through evapotranspire runoff to the atmosphere. Retention/Detention treatment control BMPs include, but are not limited to: wet ponds, constructed wetlands, and detention basins. Recommended operations and maintenance guidelines shall specifically include the following:

1. Inspection. Schedule semiannual inspections for the beginning and end of the wet season, October 15th through April 1st, to identify potential problems such as erosion of side slopes and invert, standing water, trash and debris and sediment accumulation.

2. Trash/Debris Management. Remove accumulated trash and debris in the retention/detention facility and around stormwater conveyance systems during the semiannual inspections. The frequency of this activity may be altered to meet specific site conditions.

3. Vegetation Management. Trim vegetation at the beginning and end of the wet season to prevent establishment of woody vegetation and for aesthetic and vector reasons.

4. Sediment Management. Remove accumulated sediment and re-grade about every 5-7 years or when the accumulated sediment volume exceeds 10% of the retention/detention facility volume. Inspect the basin each year for accumulated sediment volume.

5. Vector Control. The Owner shall retain responsibility to ensure that facilities do not harbor vectors or otherwise create a nuisance, and shall immediately abate any nuisance caused by the facility. A licensed individual or contractor shall be engaged to apply vector pesticide and/or larvicide as necessary. Coordination with the Napa County Mosquito Abatement District is encouraged.

6. Safety. Adopt and enforce a confined space entry plan, if applicable, which meets all requirements of federal, state, and local laws and regulations. Maintenance personnel shall use confined space entry procedures when applicable. The facility shall not be entered, except by a person properly trained, equipped, and qualified to enter a confined space, as identified by local Occupational Safety and Health Administration (OSHA) regulations. All persons should watch for and avoid contact with overhead power lines when inspecting the facility with long sampling devices.

7. Access. Maintain ingress/egress routes, including emergent and perimeter shoreline vegetation to facilitate vector surveillance and control activities and efficient inspection and maintenance to the facility.

C. Biofiltration System Maintenance. Those treatment control BMPs where stormwater is designed to transport shallow depths of runoff slowly over vegetation. Biofiltration treatment control BMPs include, but are not limited to: Vegetated swales, vegetated buffer strips, and bioretention. Recommended operations and maintenance guidelines shall specifically include the following:

1. Inspection. Schedule a minimum of biannual inspections for erosion, damage to vegetation, and sediment and debris accumulation preferably at the end of the wet season to schedule summer maintenance and before major fall runoff to be sure the biofiltration facility is ready for winter. However, additional inspection after periods of heavy runoff is desirable.

2. Vegetation Management. Grass height and mowing frequency may not have a large impact on pollutant removal. Consequently, mowing may only be necessary once or twice a year for safety or aesthetics or to suppress weeds and woody vegetation.

3. Trash/Debris Management. The need for litter removal is determined through periodic inspections, but litter should always be removed prior to mowing.

4. Sediment Management. Sediment accumulating near culverts and in channels should be removed when it builds up to 3 inches at any spot, or cover vegetation.

5. Vector Control. The Owner shall retain responsibility to ensure that facilities do not harbor vectors or otherwise create a nuisance, and shall immediately abate any nuisance caused by the facility. A licensed individual or contractor shall be engaged to apply vector pesticide and/or larvicide as necessary. Coordination with the Napa County Mosquito Abatement District is encouraged.

D. Filtration System Maintenance. Those Treatment Control BMPs where stormwater is designed to be filtered through a multi-chambered system which include a pretreatment settling basin and a filter bed filled with sand or other absorptive filtering media. Filtration treatment control BMPs include, but are

not limited to any media filtering device. Recommended operations and maintenance guidelines shall specifically include the following:

1. Inspection. Schedule semiannual inspections for standing water, sediment, trash and debris, and to identify potential problems.

2. Trash/Debris Management. Remove accumulated trash and debris in the sedimentation basin, from the riser pipe, and the filter bed during routine inspections.

3. Filter Performance. Inspect the facility once during the wet season after a large rain event to determine whether the facility is draining completely within 72 hours.

4. Sediment Management. Remove accumulated sediment in the sedimentation basin every 5-7 years or when the accumulated sediment volume exceeds 10% of the retention/detention facility volume.

5. Vector Control. The Owner shall retain responsibility to ensure that facilities do not harbor vectors or otherwise create a nuisance, and shall immediately abate any nuisance caused by the facility. A licensed individual or contractor shall be engaged to apply vector pesticide and/or larvicide as necessary. Coordination with the Napa County Mosquito Abatement District is encouraged.

6. Safety. Maintenance of filtration BMPs involves handling of potentially hazardous material (oil and/or oil sorbent material), which requires special disposal. Additionally, maintenance may involve entry into the filtration BMP underground. Therefore the maintenance operator must be trained in handling and disposal of hazardous waste, and must also be certified for confined space entry if the maintenance will require entry into the filtration BMP. Therefore it is recommended that private BMP owners obtain a maintenance contract with a qualified contractor to provide inspection and maintenance.

E. Vault Separator Maintenance. With respect to any vault separator shown on Exhibit B, if applicable, the Owner shall inspect and maintain the vault separator as follows:

1. Inspection. Schedule two inspections during the first wet season of operation for sediment build-up, accumulated petroleum products, and floating debris. Following the first wet season schedule annual inspections for accumulated sediment, debris and petroleum products.

2. Constituent Management. Vault separator units should be inspected every six months and cleaned when the sediment level reaches 15% of total storage volume and following a spill event. Remove accumulated material with an educator truck on an annual basis or more frequent as needed. It may be necessary to remove and dispose the floatables separately due to the presence of petroleum products.

2. Safety. Do not enter the Vault separator treatment chamber unless properly trained, equipped and qualified to enter a confined space as identified by local OSHA. Watch for and avoid contact with overhead power lines when inspecting the unit with long sampling devices (e.g. Sludge Judge) Vault separator is designed so inspection of the unit can be preformed from grade (i.e. inspect for obstructions, etc.) Qualified personal may enter the upper by-pass chamber and use the insert as a platform to remove obstructions, sewer flushes, or camera surveys. Be aware that the insert may be slippery. Be aware that some units do not have a safety grate over the outlet riser pipe.

3. Vector Control. The Owner shall perform all actions necessary to inhibit the creation of a mosquito nuisance and shall mitigate any mosquito nuisance that develops due to standing water in the vault separator. A licensed individual or contractor shall be engaged to apply a mosquito pesticide and/or larvicide as necessary. Coordination with the Napa County Mosquito Abatement District is encouraged.

IV. General Inspection/Reporting Requirements:

A. Required Actions. In the event one or more of the treatment control(s) and/or hydromodification control(s) BMPs do not meet Performance and Maintenance Criteria described herein, the Owner shall take such corrective actions either identified in this Maintenance Plan, or as may be necessary or convenient, to ensure that they function as required. After taking the corrective action(s), the Owner shall conduct a follow up inspection to evaluate the action(s) taken. Photographs and video images shall be made of the condition of the Drainage Improvements and any corrective actions taken.

B. Inspection Report. A report of the inspection in the form of Exhibit D, as the same may be amended from time to time by the County, shall be submitted within fifteen (15) days after required inspections to:

Napa County Planning, Building and Environmental Services Department
Engineering Division
1195 Third Street, Room 210
Napa, CA 94559

V. Modifications:

Owner, at its sole expense, shall make such modifications to this Maintenance Plan as may be determined by the County to be reasonably necessary to ensure that the treatment control(s) and hydromodification control(s) (if any) continue to operate in accordance with the General Performance and Maintenance Criteria.

Exhibit D

Annual Report Template Form for Post-Construction Storm Water Source Control(s),
Treatment Control(s), and Hydromodification Control(s) Best Management Practices (BMPs)

Inspection Report -- BMPs

Napa County Planning, Building and Environmental Services Department
Engineering Division
1195 Third Street, Room 210
Napa, CA 94559

This inspection report is designed to document the inspection and maintenance conducted for the identified BMPs subject to the Maintenance for Post-Construction Storm Water Best Management Practices Agreement dated _____ 20____ between the County and the Owner during the annual reporting period indicated below. Please attach additional pages if necessary to complete any item identified below.

1. Property Information:

Property Address or APN: _____

Current Property Owner: _____

2. Contact Information:

Name of person to contact regarding this report: _____

Phone number and email address of contact person: _____

Address to which correspondence regarding this report should be directed:

3. Reporting Period:

This report documents the inspection and maintenance of the identified treatment measures during the time period from _____ to _____ .

4. BMP Information:

The following BMPs are located on the property identified above and are subject to the Maintenance Agreement:

Identifying Number of BMP	Type of BMP	Location of BMP on the Property

A. Underground Detention ("Facility")

MH Location	Depth of Sediment

Total amount of accumulated sediment removed from the underground detention system during the reporting period: _____ cubic yards.

The sediment was removed and disposed as follows: _____

Estimated storage capacity at time of inspection: _____

Describe condition of Underground Detention Inlets/Outlets and Overflow Structures:

B. Aboveground Detention

Depth of sediment in pond: _____

Total amount of cubic yards of accumulated sediment removed from the above ground detention system during the reporting period: _____

The sediment was removed and disposed as follows: _____

Was water standing in pond? ____ YES ____ NO If yes, describe what was done to eliminate standing water: _____

Are slopes stable? ____ YES ____ NO If no, describe measures taken to stabilize slopes:

What is height of vegetation: pond bottom: _____ pond sides _____

C. Vegetated Swale

Height of vegetation: _____ (note: cuttings should be collected and disposed of as yard waste)

Was vegetation damaged? ____ YES ____ NO If yes, describe damage and measures taken to repair damage: _____

Was swale clear of trash? ____ YES ____ NO

Was sediment present at a depth of over 3"? ____ YES ____ NO If yes, identify volume of sediment removed _____. Describe method of removal and identify disposal location: _____

Was there standing water in the swale? ____ YES ____ NO If yes, describe measures taken to eliminate standing water: _____

D. Bio-Retention

Were the trees and shrubs healthy? ___ YES ___ NO If no, what actions were taken to treat and/or replace vegetation: _____

Was erosion present? ___ YES ___ NO if yes, describe actions taken to repair: _____

Was there standing water in the bio-retention facility? ___ YES ___ NO If yes, describe measures taken to eliminate standing water: _____

Was the mulch in good condition? ___ YES ___ NO If no, provide date the mulch was replaced: _____ and volume of new mulch _____

Was sediment/debris built up at the inflow point or on top of the bio-retention facility? ___ YES ___ NO If yes, identify volume of sediment removed: _____ Describe method of removal and identify disposal location: _____

Was the under drain flowing freely? ___ YES ___ NO If no, describe measures taken to clear drain. _____

What was the pH of the soil? ___ if pH was not in the range of 5.5 and 6.5, identify actions taken to bring the soil pH within that range: _____

E. Wet Vault

MH Location	Depth of Sediment

Total amount of accumulated sediment removed from the underground detention system during the reporting period: _____ cubic yards.

The sediment was removed and disposed as follows: _____

Describe measures taken to control mosquito breeding: _____

Describe condition of hydrocarbon absorbing mats: _____

Date mats were replaced: _____

Was there contamination of liquid in permanent wet vault? ____ YES ____ NO

Date liquid was pumped out: _____

F. Other BMPs

Describe: _____

Condition: _____

Maintenance performed: _____

5. Photos/Video of BMPs:

Photo ID #	Date of Photo	Photo Taken by:	Remarks

6. Inspector Information:

Inspector Name and Title	Inspector's Employer and Address

7. Statement of BMP Condition:

Based on the inspections as documented above, is each BMP identified in this report located where required, maintained as required by the Maintenance Plan and does each BMP function as originally designed and approved and to accomplish its intended purpose? (Check yes or no.)

_____ YES _____ NO

If "No", describe each problem, proposed solution and schedule of correction: _____

8. Certification:

I hereby certify, under penalty of perjury, that the information presented in this report and attachments is true and complete:

(Signature of Property Owner or Other Responsible Party)

(Date)

(Type or Print Name)

(Company Name)

(Address)

Phone Number: _____

E-mail: _____