

“F”

## Stormwater Control Plan

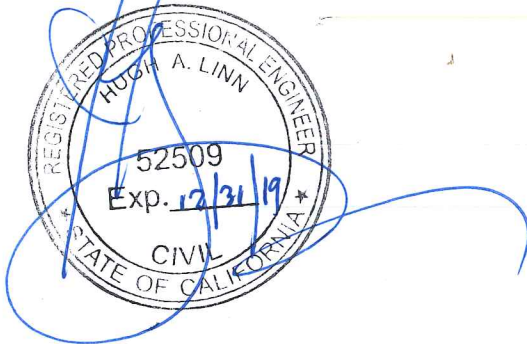


**STORMWATER CONTROL PLAN  
FOR A REGULATED PROJECT**  
*(PRELIMINARY FOR USE PERMIT ONLY)*

**GATEWAY EAST WINERY  
GATEWAY RD EAST  
NAPA, CA 94558**

THIS REPORT WAS PREPARED IN CONJUNCTION WITH THE INSTRUCTIONS, CRITERIA, AND MINIMUM REQUIREMENTS IN THE BAY AREA STORMWATER MANAGEMENT AGENCIES ASSOCIATION'S (BASMAA'S) POST CONSTRUCTION MANUAL.

Prepared for:  
Scannell Properties, LLC  
3569 Mt Diablo Blvd, Ste. 220  
Lafayette, CA 94549



Project No. 4117062.0  
October 5, 2018  
**Revised: February 26, 2019**



## Table of Contents

<b>I.</b>	<b>Project Data</b> .....	1
<b>II.</b>	<b>Setting</b> .....	1
II.A.	Project Location and Description .....	1
II.B.	Existing Site Features and Conditions .....	1
II.C.	Opportunities and Constraints for Stormwater Control .....	1
<b>III.</b>	<b>Low Impact Development Design Strategies</b> .....	2
III.A.	Optimization of Site Layout .....	2
III.B.	Use of Permeable Pavements.....	2
III.C.	Dispersal of Runoff to Pervious Areas .....	2
III.D.	Stormwater Control Measures .....	2
<b>IV.</b>	<b>Documentation of Drainage</b> .....	3
IV.A	Drainage Management Areas.....	3
	Drainage Management Area Descriptions .....	3
IV.B.	Tabulation and Sizing Calculations .....	4
<b>V.</b>	<b>Source Control Measures</b> .....	6
V.A.	Site activities and potential sources of pollutants .....	6
V.B.	Features, Materials, and Methods of Construction of Source Control BMPs .....	8
<b>VI.</b>	<b>Stormwater Facility Maintenance</b> .....	8
VI.A.	Ownership and Responsibility for Maintenance in Perpetuity .....	8
VI.B.	Summary of Maintenance Requirements for Each Stormwater Facility .....	8
<b>VII.</b>	<b>Construction Checklist</b> .....	9
<b>VIII.</b>	<b>Certifications</b> .....	9



**TABLES**

**Table 1. Project Data**

**Table 2. Drainage Management Areas**

**Table 3. Bioretention Facility Design**

**Table 4. Self-treating Areas**

**Table 5. Self-retaining Areas**

**Table 6. Areas Draining to Self-retaining Areas**

**Table 7. Areas Draining to Bioretention Facilities**

**Table 8. Sources and Source Control Measures**

**Table 9. Construction Plan C.3 Checklist**

**ATTACHMENTS**

**1. Stormwater Control Plan**



## I. Project Data

Table 1. Project Data Form

Project Name/Number	Gatewat East Winery (4117062.0)
Application Submittal Date	
Project Location	Gateway Road East Napa, CA 94558 APN: 057-210-039 & -040
Project Phase No.	N/A
Project Type and Description	Construction of an office / winery
Total Project Site Area (acres)	5.52 Acres
Total New and Replaced Impervious Surface Area	157,885 sq. ft
Total Post-Project Impervious Surface Area	157,885 sq. ft

## II. Setting

### II.A. Project Location and Description

The Gateway Easy Winery project is located at Gateway Road East in Napa, California. The APN is 057-210-039 & 040. The parcel has an area of 5.5 +/- acres. The parcel is bounded by Sheehy Creek to the north, a developed parcel to the south an under developed parcels to the east and west. The project will include the construction of a building that will serve as an office and a winery. The project will also include a parking lot in the front and side of the building, a loading dock, and landscaped areas.

### II.B. Existing Site Features and Conditions

The existing site is currently undeveloped. The site fronts on Gateway Road East.

Runoff from the project site flows northward via surface flows and new and existing storm drains to Sheehy creek and subsequently to the Napa River.

### II.C. Opportunities and Constraints for Stormwater Control

Stormwater treatment facilities have been integrated into the planning, design, construction, operation, and maintenance of the proposed development. The following potential opportunities and constraints were considered in determining the best stormwater control design for this development.

Opportunities for the site include the gently sloping topography of the site, and the proposed landscaped areas surrounding the building. Bioretention facilities will be installed in a portion of this area to treat stormwater runoff prior to discharge from the site. Runoff will be conveyed to bioretention facilities via surface flows, and storm drains.



Constraints include the size of the site, which has been taken into account by keeping small areas separated exclusively for bio-retention, and Sheehy Creek to the north. All runoff from new impervious areas will be directed to bioretention facilities for treatment before discharging to Sheehy Creek.

### **III. Low Impact Development Design Strategies**

#### **III.A. Optimization of Site Layout**

1. Limitation of development envelope

The footprint of the building has been kept to a minimum.

2. Preservation of natural drainage features

There are no natural drainage features to preserve.

3. Setbacks from creeks, wetlands, and riparian habitats

An existing wetland will be replaced with wetland mitigation areas in the northern portion of the site. No grading will take place within the setbacks of Sheehy Creek to the north.

4. Minimization of imperviousness

Walkways, flatwork and decking are designed to the minimum widths necessary without compromising public safety and a walkable environment. Landscaped areas are used instead of decorative impervious areas. Existing trees will be preserved to the maximum extent practicable.

5. Use of drainage as a design element

Bioretention facilities are incorporated into the aesthetic landscape design of the site.

#### **III.B. Use of Permeable Pavements**

Permeable pavement is used in the parking area totaling 1,197 square feet.

#### **III.C. Dispersal of Runoff to Pervious Areas**

Stormwater runoff will be directed to landscaped areas to the maximum extent practicable.

#### **III.D. Stormwater Control Measures**

3 bioretention facilities have been incorporated as stormwater control measures. The bioretention facilities will collect and treat onsite stormwater.



## IV. Documentation of Drainage

### IV.A Drainage Management Areas

Table 2. Drainage Management Areas

DMA Name	Pervious Area (square feet)	Impervious Area (square feet)	Total Area (square feet)
1	11,960	52,850	64,810
2	3,495	24,900	28,395
3	2,725	34,560	37,285
4	2,125	45,575	47,700

#### Drainage Management Area Descriptions

DMA 1, totaling 52,850 square feet of impervious area, consisting of the south-eastern portion of the site. It contains the southeast portion of the building roof, the eastern portion of the front parking lot, walkways, and a portion of the driveway and 11,960 square feet of landscaping. Runoff from this DMA is collected via storm drains and surface flows and conveyed to Bio-Retention facility 1 which is located in the southeast corner of the property. Bio-retention Facility 1 has an area of 2,200 square feet.

DMA 2, totaling 24,900 square feet of impervious area, consisting of the north-western portion of the site. This includes a portion of the building roof, the northwestern portion of the driveway, and 3,495 square feet of landscaping. Runoff from this DMA is collected via roof drains and surface flows along the western and northern side of the building, and is then conveyed via storm drain to bio-retention facility 2. Bio-retention facility 2 is located north of the driveway, between the wetlands, and has an area of 1,000 square feet.

DMA 3, totaling 34,560 square feet of impervious area, consisting of the southwestern portion of the site. This includes a portion of the building roof, the parking area to the south and west of the building, walkways, and 2,725 square feet of landscaping. Runoff from this DMA is collected via roof drains and surface flows on the driveway, and is then conveyed via storm drain to bio-retention facility 3. Bio-retention facility 3 is located west of the parking area at the rear of the building, and has an area of 1,400 square feet.

DMA 4, totaling 45,575 square feet of impervious area, consisting of the northwestern portion of the site. It includes the northwest portion of the roof, the loading dock area, a portion of the driveway, and 2,125 square feet of landscaping. Runoff from this DMA is collected via surface flow and roof drains to Bio-retention Facility 4, which is located north of the driveway, and has an area of 1,800 square feet.



IV.B. Tabulation and Sizing Calculations

Table 3. Information Summary for Bioretention Facility Design

DMA	Total Project Area (Square Feet)
1	64,810
2	28,395
3	37,285
4	47,700

Table 4. Self-Treating Areas

DMA Name	Area (square feet)

The site does not include self-treating areas.

Table 5. Self-Retaining Areas

DMA Name	Area (square feet)

The site does not include self-retaining areas.

Table 6. Areas Draining to Self-Retaining Areas

DMA Name	Area (square feet)	Post-project surface type	Runoff factor	Product (Area x runoff factor)[A]	Receiving self-retaining DMA	Receiving self-retaining DMA Area (square feet) [B]	Ratio [A]/[B]

The site does not include areas draining to self-retaining areas.





Table 7. Areas Draining to Bioretention

DMA Name	DMA Area (SF)	Post-project surface type	DMA Runoff factor	DMA Area runoff factor	Facility Name		
					Bioretention Facility 1		
DMA-1	11,960	Pervious	0.10	1196	Sizing Factor	Minimum Facility size (SF)	Proposed Facility Size (SF)
	52,850	Impervious	1	52,850			
Total>				54,046	0.04	2162	2,200
DMA Name	DMA Area (SF)	Post-project surface type	DMA Runoff factor	DMA Area runoff factor	Facility Name		
					Bioretention Facility 2		
DMA-2	3,495	Pervious	0.10	350	Sizing Factor	Minimum Facility size	Proposed Facility Size
	24,900	Impervious	1	24,900			
Total>				25,250	0.04	1,010	1,050

DMA Name	DMA Area (SF)	Post-project surface type	DMA Runoff factor	DMA Area runoff factor	Facility Name		
					Bioretention Facility 3		
DMA-3	2,725	Pervious	0.10	273	Sizing Factor	Minimum Facility size	Proposed Facility Size
	34,560	Impervious	1	34,560			
Total>				34,833	0.04	1,393	1,400

DMA Name	DMA Area (SF)	Post-project surface type	DMA Runoff factor	DMA Area runoff factor	Facility Name		
					Bioretention Facility 4		
DMA-4	2,125	Pervious	0.10	213	Sizing Factor	Minimum Facility size	Proposed Facility Size
	45,575	Impervious	1	45,575			
Total>				45,788	0.04	1,832	1,850



## V. Source Control Measures

### V.A. Site activities and potential sources of pollutants

The site activities and potential sources of pollutants for the Napa Small Animal Hospital project are listed in table 8, below.

Table 8. Control Table

Potential Sources of Runoff Pollutants	Permanent Source Control BMPs	Operational Source Control BMPs
A. On-site storm drain inlets (unauthorized non-stormwater discharges and accidental spills or leaks)	<input type="checkbox"/> Mark all inlets with the words "No Dumping! Flows to River" or similar.	<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-74, "Drainage System Maintenance." <input type="checkbox"/> Include the following in lease agreements: "Tenant shall not allow anyone to discharge anything to storm drains or to store or deposit materials so as to create a potential discharge to storm drains."
B. Interior floor drains and elevator shaft sump pumps	<input type="checkbox"/> Interior floor drains shall be plumbed to sanitary sewer.	<input type="checkbox"/> Inspect and maintain interior drains to prevent blockages and overflow.
C. Interior parking garages	N/A	N/A
D <sub>1</sub> . Need for future indoor & structural pest control	<input type="checkbox"/> Building design shall incorporate features that discourage entry of pests.	<input type="checkbox"/> Provide Integrated Pest Management information to owners, lessees, and operators.
D <sub>2</sub> . Landscape / outdoor pesticide use / building and grounds maintenance	Final landscape plans will accomplish all of the following: <input type="checkbox"/> Preserve existing native trees, shrubs, and ground cover to the maximum extent possible. <input type="checkbox"/> 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. <input type="checkbox"/> Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions. <input type="checkbox"/> Use pest-resistant plants, especially adjacent to hardscape. <input type="checkbox"/> To insure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.	<input type="checkbox"/> Maintain landscaping using minimum or no pesticides. <input type="checkbox"/> See applicable operational BMPs in Fact Sheet SC-41, "Building and Grounds Maintenance." <input type="checkbox"/> Provide IPM information to new owners, lessees and operators.



Potential Sources of Runoff Pollutants	Permanent Source Control BMPs	Operational Source Control BMPs
E. Pools, spas, ponds, decorative fountains, and other water features	N/A	N/A
F. Food service	N/A	N/A
G. Refuse areas	<ul style="list-style-type: none"> <li><input type="checkbox"/> Refuse areas shall be paved with an impervious surface, designed not to allow run-on from adjoining areas, and screened to prevent off-site transport of trash.</li> <li><input type="checkbox"/> Refuse areas shall contain a roof to minimize direct precipitation.</li> <li><input type="checkbox"/> No drain connections shall be made to the Refuse area.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Provide adequate number of receptacles.</li> <li><input type="checkbox"/> Inspect receptacles regularly; repair or replace leaky receptacles.</li> <li><input type="checkbox"/> Keep receptacles covered.</li> <li><input type="checkbox"/> Prohibit/prevent dumping of liquid or hazardous wastes.</li> <li><input type="checkbox"/> Post "no hazardous materials" signs.</li> <li><input type="checkbox"/> Inspect and pick up litter daily and clean up spills immediately.</li> <li><input type="checkbox"/> Keep spill control materials available on-site.</li> <li><input type="checkbox"/> Clean by dry-sweeping only, or with wet/dry vacuum. See Fact Sheet SC-34, "Waste Handling and Disposal"</li> </ul>
H. Industrial processes	<ul style="list-style-type: none"> <li><input type="checkbox"/> All process activities to be performed indoors or undercover. No processes to drain to exterior or to storm drain system</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Industrial discharge will be mitigated to the winery process wastewater system and will not be discharged to storm drains</li> </ul>
I. Outdoor Storage of Equipment or Materials	<ul style="list-style-type: none"> <li><input type="checkbox"/> Equipment and materials will be kept indoors to the maximum extent possible. If materials and equipment are outside they will be covered and protected.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> See the Fact Sheets SC-31, "Outdoor Liquid Container Storage" and SC-33, "Outdoor Storage of Raw Materials," in the CASQA Stormwater Quality Handbooks.</li> </ul>
J. Vehicle / equipment cleaning	N/A	N/A
K. Vehicle / equipment repair and maintenance	N/A	N/A
L. Fuel dispensing areas	N/A	N/A
M. Loading docks	<ul style="list-style-type: none"> <li><input type="checkbox"/> A 6' awning overhangs the full width of the loading dock. The loading dock area is graded to drain to a channel drain, which flows to a 'hold and haul' vault.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Move loaded and unloaded items indoors as soon as possible.</li> </ul>
N. Fire sprinkler test water	<ul style="list-style-type: none"> <li><input type="checkbox"/> Fire sprinkler test water shall be discharged to the sanitary sewer.</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> See the note in Fact Sheet SC-41, "Building and Grounds Maintenance"</li> </ul>
O. Miscellaneous drain or wash water or other sources <ul style="list-style-type: none"> <li>• Boiler drain lines</li> <li>• Condensate drain lines</li> <li>• Rooftop equipment</li> <li>• Drainage sumps</li> <li>• Roofing, gutters, and trim</li> <li>• Other sources</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Boiler drain lines shall be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain.</li> <li><input type="checkbox"/> Condensate drain lines may discharge to landscaped areas if the flow is small enough that runoff will not occur. Condensate drain lines may not discharge to the storm drain system.</li> </ul>	<p>If architectural copper is used, implement the following BMPs for management of rinsewater during installation:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> If possible, purchase copper materials that have been pre-patinated at the factory.</li> <li><input type="checkbox"/> If patination is done on-site, prevent rinse water from entering storm drains by discharging to</li> </ul>



Potential Sources of Runoff Pollutants	Permanent Source Control BMPs	Operational Source Control BMPs
	<input type="checkbox"/> Rooftop equipment with potential to produce pollutants shall be roofed and/or have secondary containment.	landscaping or by collecting in a tank and hauling off-site. <input type="checkbox"/> Consider coating the copper materials with an impervious coating that prevents further corrosion and runoff. <input type="checkbox"/> 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 off-site.
P. Plazas, sidewalks, and 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 washwater containing any cleaning agent or degreaser and discharge to the sanitary sewer, not to a storm drain.

**V.B. Features, Materials, and Methods of Construction of Source Control BMPs**

Source control BMPs will be designed and implemented per construction specifications and CASQA BMP fact sheets.

**VI. Stormwater Facility Maintenance**

**VI.A. Ownership and Responsibility for Maintenance in Perpetuity**

The applicant accepts responsibility for interim operation and maintenance of stormwater treatment and flow-control facilities until such time as this responsibility is formally transferred to a subsequent owner.

An Operations & Maintenance Plan has been prepared for this project. The owner shall execute a Post-Construction BMP Maintenance Agreement with the City of Napa upon request.

**VI.B. Summary of Maintenance Requirements for Each Stormwater Facility**

The site consists of three bioretention facilities. The bioretention facilities require maintenance as needed for any damage that may occur. A semi-annual inspection is required for possible erosion, damaged vegetation, debris, and health of any trees or shrubs. These inspections usually occur at the beginning of the wet season and end of the wet season. Any dead or diseased vegetation should be removed and replaced during the inspection. An annual inspection is required to complete the annual report for each bioretention facility. During this inspection mulch may be added, and tree stakes and wires replaced.



## VII. Construction Checklist

Table 9. Construction Checklist

Stormwater Control Plan Page #	Source Control or Treatment Control Measure	See Plan Sheet #s
5	Bioretention Facilities	SCP/UP-2
6	A. On-site storm drain inlets	UP-2
6	D1. Need for Future indoor & structural pest control	UP-2
6	D.2 Landscape/ outdoor pesticide use/ building and ground maintenance	UP-2
7	N. Fire sprinkler test water	UP-1
8	P. Plazas, sidewalks, and parking lots	UP-2

## VIII. Certifications

The 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, dated July 14, 2014.



## ATTACHMENT 1

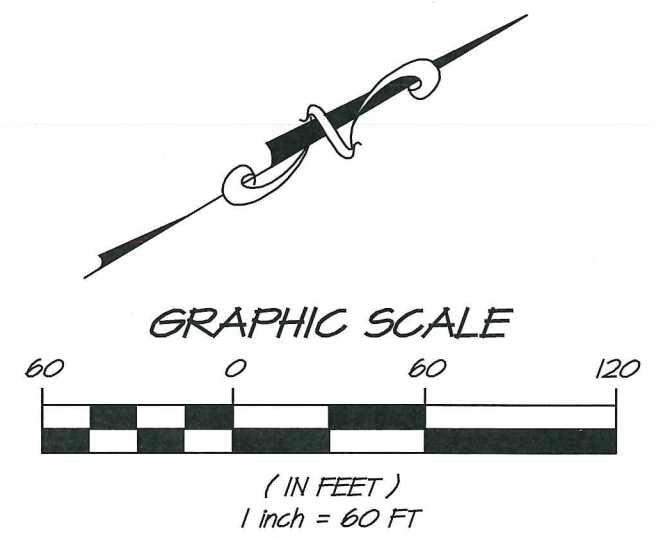
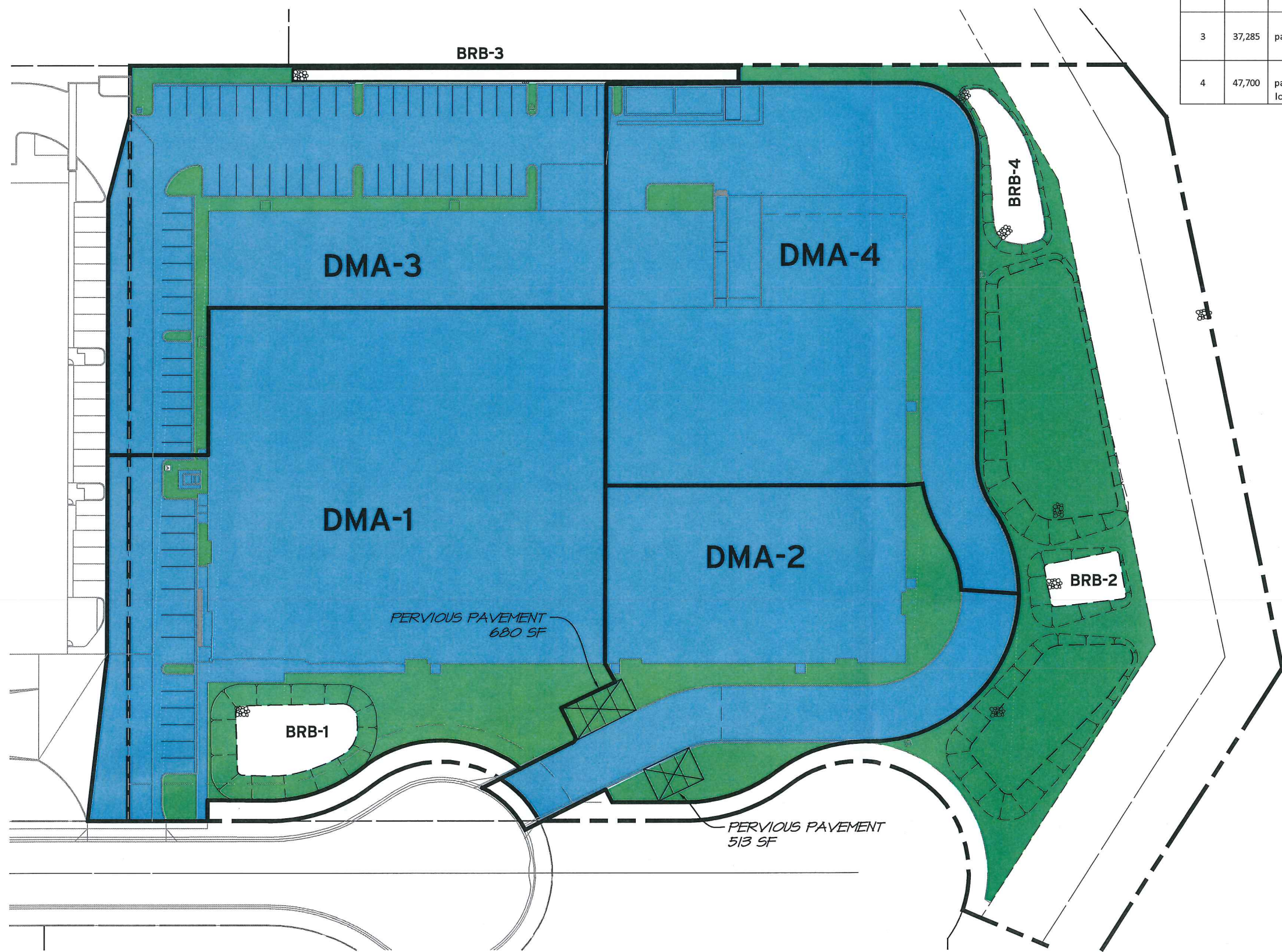
# STORMWATER CONTROL PLAN

# STORMWATER CONTROL PLAN

## SCANNELL PROPERTIES

NAPA CALIFORNIA

PROPOSED STORMWATER CONTROL PLAN AREA CALCULATIONS									
DMA #	Total Area (SF)	Surface Type	Proposed Impervious Area (SF)	Impervious Runoff Factor	Proposed Pervious Area (SF)	Pervious Runoff Factor	Required Bioretention Treatment Area (SF)	Provided Treatment Area (SF)	Facility Receiving Runoff
1	64,810	Driveway, parking, roof, walkway	52,850	1.0	11,960	0.1	2162	2200	BR-1
2	28,395	Roof, driveway, landscaped areas	24,900	1.0	3,495	0.1	1010	1050	BR-2
3	37,285	Driveway, parking, roof, walkway	34,560	1.0	2,725	0.1	1393	1400	BR-3
4	47,700	Driveway, parking, roof, loading dock,	45,575	1.0	2,125	0.1	1832	1850	BR-4



**RSA+** 1515 FOURTH STREET  
 NAPA, CALIF. 94559  
 OFFICE | 707 | 252.3301  
 + www.RSAcivil.com +

RSA+ | CONSULTING CIVIL ENGINEERS + SURVEYORS + est. 1980

R:\2017\4117062.0\_Scannell\_Properties\_Gateway\_Rd\_East\DESIGN\EXHIBITS\Exh-SCP.dwg 02/26/2019