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## Stormwater Control Plan



# STORMWATER CONTROL PLAN FOR A REGULATED PROJECT

For:

Sheehy Building - Devlin Road  
APN's: 057-210-037 and 038

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:

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RSA+ Project No. 4117014.0

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## **ATTACHMENTS**

**1. Stormwater Control Plan**



**I. Project Data**

Table 1. Project Data Form

Project Name/Number	Sheehy Building / 4117014.0
Application Submittal Date	
Project Location	Devlin Road   Address not assigned Napa, Ca 94558 APNs: 057-210-037 and 057-210-038
Project Phase No.	N/A
Project Type and Description	Construction of an Office / Warehouse / Manufacturing / Kitchen facility.
Total Project Site Area (acres)	2.74 Acres
Total New and Replaced Impervious Surface Area	89,305 sq. ft
Total Post-Project Impervious Surface Area	89,305 sq. ft

**II. Setting**

II.A. Project Location and Description

The Sheehy Building Project is located in the Napa Valley Gateway Park on the south end of Napa, California. The APN is 057-210-037 and 057-210-038. The parcel has an area of 2.74 acres. The project will include the construction of a building that will serve as an office, warehouse, manufacturing, and commercial kitchen facility. The project will also include a parking lot in the front and side of the building, a loading dock, driveway, and landscape areas.

II.B. Existing Site Features and Conditions

The existing site is currently undeveloped. The site fronts on Devlin Rd.

Runoff from the project site flows westward via surface flows to Devlin Rd. Stormwater is then conveyed to an existing storm drain conduit that 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 proposed landscaped areas surrounding the building. Bio-retention 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 bio-retention facilities via surface flows, valley gutters, and storm drains.

Constraints include the size of the site, which has been taken into account by way of keeping a small area separated exclusively for bio-retention.



### 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

There is a 35' creek setback on the north end of this site. Setback areas are allowed to be used for storm-water detention/detention facilities, per Napa County code of Ordinances 18.40.170 – "Watercourse Protection", Section B.

4. Minimization of imperviousness

Walkways, and flatwork 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

Bio-retention facilities are incorporated into the aesthetic landscape design of the site.

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

Permeable pavements are not in the scope of this project.

#### 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

A bio-retention facility has been incorporated as a stormwater control measure. The bio-retention facility will collect and treat onsite stormwater.



**IV. Documentation of Drainage**

IV.A Drainage Management Areas

Table 2. Drainage Management Areas

DMA #	Proposed Impervious Area (SF)	Proposed Pervious Area (SF)	Total Area (SF)
1	33,517	4,025	37,542
2	27,043	3,376	30,419
3	12,576	2,434	15,010
4	4,852	451	4,893
5	11,155	577	11,732
6	162	0	162

Drainage Management Area Descriptions

DMA 1, totaling 37,542 square feet consists of the north east portion of the site. This includes the loading dock (Except for the last 4’ of the dock at the building which is covered by roof overhang), landscaping, a portion of the driveway, a portion of the roof, and parking as well as adjacent landscaped areas. Note that a portion of the driveway is existing, but has been treated in this plan as if it is new. Runoff is collected via surface flows on the easternmost side of the driveway and is conveyed to bio-retention Area 1, located on the northeast side of the lot. Bio-retention facility 1 has an area of 1,357 square feet. Treated runoff leaves the bio-retention facility via infiltration or by entering the overflow drain. This runoff enters the onsite storm drain system that connects to the city storm drain system via the storm drain catch basin located at the eastern end of the property.

DMA 2, totaling 32,665 square feet consists of a portion of the building roof, patio, sidewalk, and a portion of the west parking lot as well as adjacent landscaped areas. Again a portion of the driveway is existing but treated as if it is new. Runoff is collected via surface flows and a valley gutter, and is conveyed to bio-retention facility 2. Bio-retention facility 2 has an area of 1,230 square feet. Treated runoff leaves the bio-retention facility via infiltration or by entering the overflow drain. This runoff enters the onsite storm drain system that connects to the city storm drain system via the storm drain catch basin located at the eastern end of the property.

DMA 3, totaling 15,010 square feet consists of a portion of the building’s roof, sidewalk, and a portion of the west parking lot as well as adjacent landscaped areas. Runoff is collected via surface flows and is conveyed to the bio-retention 3, located on the northwest end of the lot. Bio-retention 3 has an area of 550 square feet. Treated runoff leaves the bio-retention facility via infiltration or by entering the overflow drain. This runoff enters the onsite storm drain system that connects to the city storm drain system via the storm drain catch basin located at the eastern end of the property.

DMA 4, totaling 4,893 square feet, consists of a small portion of the driveway entrance, and a portion of the northwest parking lot as well as adjacent landscaped areas. Runoff from this area is collected via surface flows, storm drain, and a valley gutter, and is conveyed to bio-retention facility 4. Bio-retention facility 4 has an area of 200 square feet. Treated runoff leaves the bio-retention facility via infiltration or by entering the overflow drain. This runoff enters the onsite storm drain system that



connects to the city storm drain system via the storm drain catch basin located at the eastern end of the property.

DMA 5, totaling 11,732 square feet, consists of a small portion of the building’s roof, driveway, and northwest parking lot as well as adjacent landscaped areas. Runoff from this area is collected via surface flows and is conveyed to bio-retention facility 5. Bio-retention facility 5 has an area of 450 square feet. Treated runoff leaves the bio-retention facility via infiltration or by entering the overflow drain. This runoff enters the onsite storm drain system that connects to the city storm drain system via the storm drain catch basin located at the eastern end of the property.

DMA 6, totaling 162 square feet, consist of the first 6’ of the loading dock. This portion drains to a vault which will be pumped and hauled from site when full.

IV.B. Tabulation and Sizing Calculations

Table 3. Information Summary for Bio-retention Facility Design

DMA #	Total Area (SF)
1	37,542
2	30,419
3	15,010
4	4,893
5	11,732
6	162

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 Bio-retention Facilities

DMA Name	DMA Area (Square Feet)	Post-Project Surface Type	DMA Runoff Factor	DMA Area X Runoff Factor	Facility Name: DMA 1		
1	4,025	Pervious	0.1	403	Bio-Retention Facility #1		
1	33,517	Impervious	1.0	33,517	Sizing Factor	Minimum Facility Size	Proposed Facility Size
TOTAL →				33,920	0.04	1,357	1,357

DMA Name	DMA Area (Square Feet)	Post-Project Surface Type	DMA Runoff Factor	DMA Area X Runoff Factor	Facility Name: DMA 2		
2	3,376	Pervious	0.1	338	Bio-Retention Facility #2		
2	27,043	Impervious	1.0	27,043	Sizing Factor	Minimum Facility Size	Proposed Facility Size
TOTAL →				27,381	0.04	1,096	1,160

DMA Name	DMA Area (Square Feet)	Post-Project Surface Type	DMA Runoff Factor	DMA Area X Runoff Factor	Facility Name: DMA 3		
3	2,434	Pervious	0.1	244	Bio-Retention Facility #3		
3	12,576	Impervious	1.0	12,576	Sizing Factor	Minimum Facility Size	Proposed Facility Size
TOTAL →				12,820	0.04	513	550

DMA Name	DMA Area (Square Feet)	Post-Project Surface Type	DMA Runoff Factor	DMA Area X Runoff Factor	Facility Name: DMA 4		
4	451	Pervious	0.1	46	Bio-Retention Facility #4		
4	4,852	Impervious	1.0	4,852	Sizing Factor	Minimum Facility Size	Proposed Facility Size
TOTAL →				4,898	0.04	196	200



DMA Name	DMA Area (Square Feet)	Post-Project Surface Type	DMA Runoff Factor	DMA Area X Runoff Factor	Facility Name: DMA 5		
5	577	Pervious	0.1	58	Bio-Retention Facility #5		
5	11,155	Impervious	1.0	11,155	Sizing Factor	Minimum Facility Size	Proposed Facility Size
TOTAL →				11,213	0.04	449	500

DMA Name	DMA Area (Square Feet)	Post-Project Surface Type	DMA Runoff Factor	DMA Area X Runoff Factor	Facility Name: DMA 6		
6	0	Pervious	0.1	0			
6	162	Impervious	1.0	162	Sizing Factor	Minimum Facility Size	Proposed Facility Size
TOTAL →				168	0.04	Hold & Haul	Hold & Haul

**V. Source Control Measures**

V.A. Site activities and potential sources of pollutants

The site activities and potential sources of pollutants for the Sheehy Building 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	N/A	N/A



Potential Sources of Runoff Pollutants	Permanent Source Control BMPs	Operational Source Control BMPs
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	<p>Final landscape plans will accomplish all of the following:</p> <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.
E. Pools, spas, ponds, decorative fountains, and other water features	<input type="checkbox"/> If the local municipality requires pools to be plumbed to the sanitary sewer, place a note on the plans and state in the narrative that this connection	<input type="checkbox"/> See applicable operational BMPs in Fact Sheet SC-72, "Fountain and Pool Maintenance," in the CASQA Stormwater Quality Handbooks at



Potential Sources of Runoff Pollutants	Permanent Source Control BMPs	Operational Source Control BMPs
	will be made according to local requirements.	<a href="http://www.casqa.org/resources/bmp-handbooks">www.casqa.org/resources/bmp-handbooks</a>
F. Food service	<input type="checkbox"/> Indoor food service drains will be connected to grease interceptor before discharging to the sanitary sewer.	<input type="checkbox"/> Grease interceptor will be cleaned once every three months.
G. Refuse areas	<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. <input type="checkbox"/> Refuse areas shall contain a roof to minimize direct precipitation <input type="checkbox"/> No drain connections shall be made to the refuse areas	<input type="checkbox"/> Provide adequate number of receptacles. <input type="checkbox"/> Inspect receptacles regularly; repair or replace leaky receptacles. <input type="checkbox"/> Keep receptacles covered. <input type="checkbox"/> Prohibit/prevent dumping of liquid or hazardous wastes. <input type="checkbox"/> Post “no hazardous materials” signs. <input type="checkbox"/> Inspect and pick up litter daily and clean up spills immediately. <input type="checkbox"/> Keep spill control materials available on-site. <input type="checkbox"/> Clean by dry-sweeping only, or with wet/dry vacuum. <input type="checkbox"/> See Fact Sheet SC-34, “Waste Handling and Disposal”
H. Industrial processes	N/A	N/A
I. Outdoor Storage of Equipment or Materials	N/A	N/A
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	<input type="checkbox"/> 1 <sup>st</sup> 4’ of loading dock is covered with awning and drains to a ‘hold and haul’ vault.	N/A
N. Fire sprinkler test water	<input type="checkbox"/> Fire sprinkler test water shall be discharged to the sanitary sewer.	<input type="checkbox"/> See the note in Fact Sheet SC-41, “Building and Grounds Maintenance”



Potential Sources of Runoff Pollutants	Permanent Source Control BMPs	Operational Source Control BMPs
<p>O. Miscellaneous drain or wash water or other sources</p> <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>	N/A	<input type="checkbox"/> N/A
<p>P. Plazas, sidewalks, and parking lots</p>		<input type="checkbox"/> Sweep plazas, sidewalks, and parking lots regularly to prevent accumulation of litter and debris. 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 County of Napa upon request.

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

The site consists of five bio-retention facilities. The bio-retention facilities requires 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 bio-retention 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
3-6	Bio-retention Facilities	EX-SCP
6-7	A. On-site storm drain inlets	EX-SCP
7	D1. Need for Future indoor & structural pest control	EX-SCP
7	D.2 Landscape/ outdoor pesticide use/ building and ground maintenance	EX-SCP
8	E. Fountain and water maintenance	
8	F. Cleaning Area for Kitchen	EX-SCP
9	N. Fire sprinkler test water	EX-SCP
9	P. Plazas, sidewalks, and parking lots	EX-SCP

**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.

\_\_\_\_\_  
Preparer, Alan Spence, P.E.

\_\_\_\_\_  
Owner



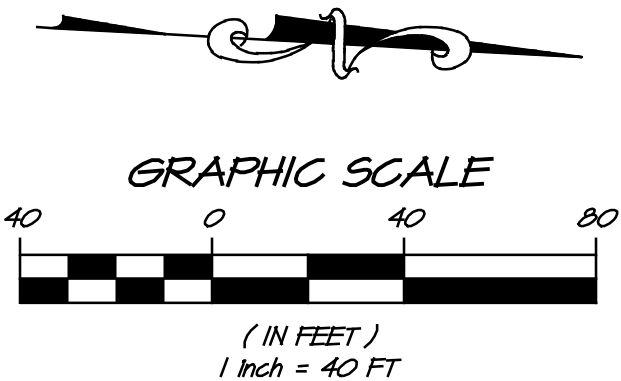
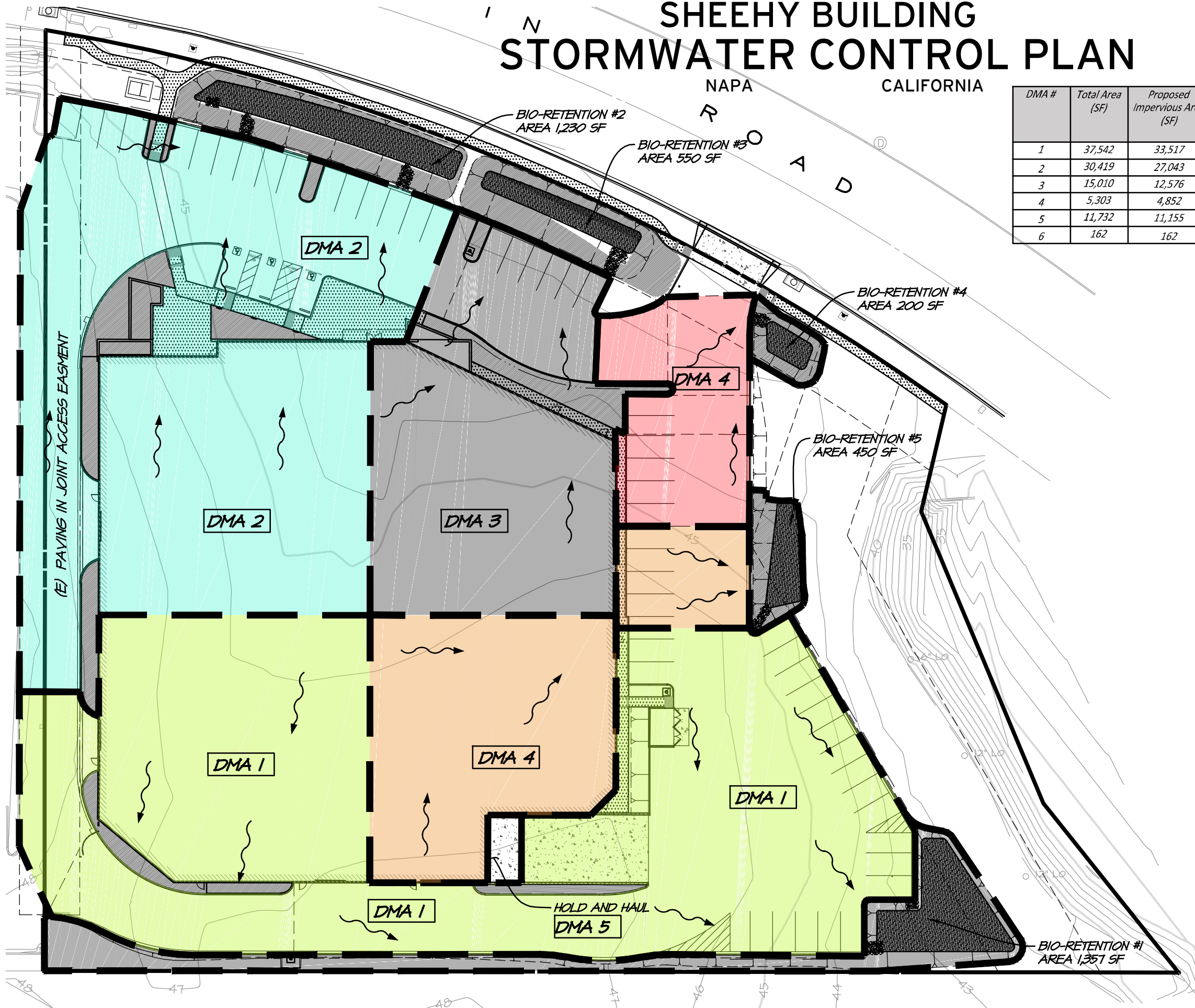
## ATTACHMENT 1

### STORMWATER CONTROL PLAN

# SHEEHY BUILDING STORMWATER CONTROL PLAN

NAPA CALIFORNIA

DMA #	Total Area (SF)	Proposed Impervious Area (SF)	Impervious Runoff Factor	Proposed Pervious Area (SF) B	Pervious Runoff Factor	Required Bioretention Treatment Area (SF)	Provided Treatment Area (SF)
1	37,542	33,517	1.0	4,025	0.1	1,357	1,357
2	30,419	27,043	1.0	3,376	0.1	1,096	1,230
3	15,010	12,576	1.0	2,434	0.1	513	550
4	5,303	4,852	1.0	451	0.1	196	200
5	11,732	11,155	1.0	577	0.1	449	450
6	162	162	1.0	0	0.1	N/A	N/A



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