Stormwater Control Plan

For a Regulated Project

1214 Grant Avenue Mixed Use

Novato, CA

March 15, 2025

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for the City of Novato
to assist users of the BASMAA Post-Construction Manual

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This Stormwater Control Plan was prepared using the template dated July 11, 2014.

I. Project Data

Table 1. Project Data Form

Project Name	1214 Grant Avenue Mixed Use
Application Submittal Date	March 15, 2024
Project Location	Grant Avenue and 3rd Street in Novato, CA
Project Phase No.	Not Applicable
Project Type and Description	5-Story Mixed Use Retail and Residential
Total Project Site Area (acres)	0.34 Acres±
Total New and Replaced Impervious Surface Area	11,386 SF±
Total Pre-Project Impervious Surface Area	12,000 SF±
Total Post-Project Impervious Surface Area	11,386 SF±

II. Setting

II.A. Project Location and Description

This project involves the demolition of two existing commercial buildings and two mobile building units, which will be replaced by a new 5-story mixed-used residential/commercial building. The parcel will be merged into a single lot to the East of the intersection of Grant Avenue and 3rd Street in Novato. See Figure 1 to the right.

The proposed use is consistent with current commercial/residential zoning. The planned number of units is 56, which will be located on all five levels of the building, with the retail space located on the ground level of the building fronting Grant Avenue.

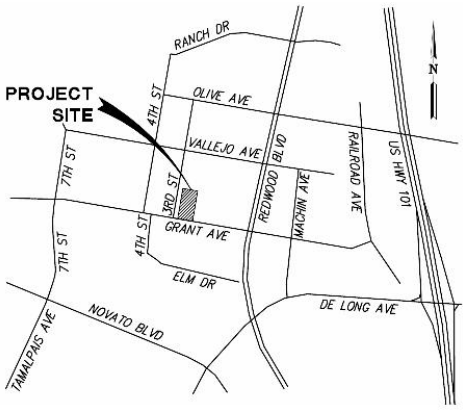

Figure 1. Vicinity Map of Project Site.

II.B. Existing Site Features and Conditions

The site is rectangular in shape. The topography of the site is generally flat sloping lightly towards the northeast corner. Most of the site is covered with buildings or pavement. The perimeter of the site adjacent to Grant Avenue is landscaped with mature trees. There are also trees along the north end of the property and near the existing buildings. See Figure 2. Soils and silty clays are typical of the area (Hydrologic Soil Group "D"). The existing drainage system is connected to a

municipal storm drain along the northerly curb of Grant Avenue.

II.C. Opportunities and Constraints for Stormwater Control

Constraints include impermeable soils (hydrologic soil group D), high intensity land use, and flat slopes. Disposal of runoff to deep infiltration is not feasible on this site due to the low permeability of the clay soils. High land values, the objective of creating a dense retail area, and parking requirements limit opportunities to reduce site imperviousness.

Setback areas–approximately nine feet on the northerly side, sixteen to twenty-one feet on the easterly side, eight feet to the south, and eight to ten feet to the west–might be usable as locations for treatment BMPs; however, these areas will also include landscaping paths and utilities at various locations. The City storm drain system in Grant Avenue is deep enough to provide sufficient hydraulic head is to route runoff across the surface of the site to a stormwater treatment facility, through the facility, and then to drain treated runoff to the City storm drain.

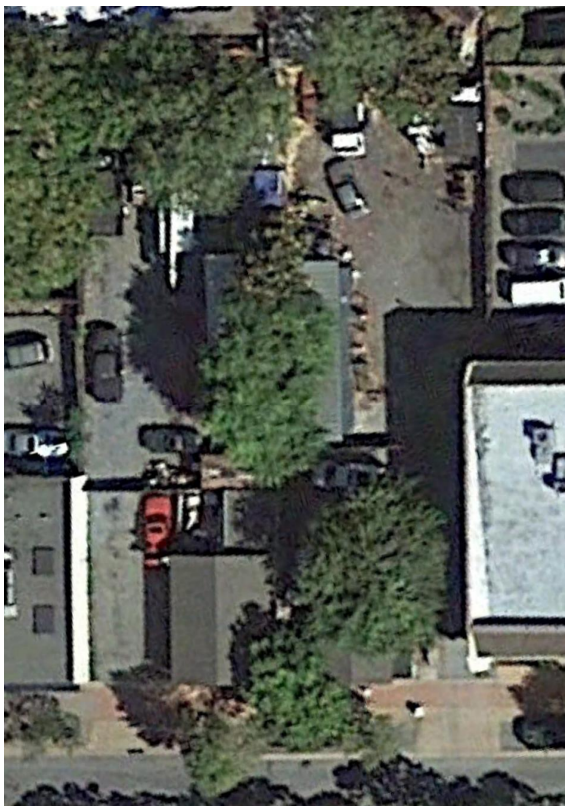

Figure 2. Existing Site Conditions.

III. Low Impact Development Design Strategies

III.A. Optimization of Site Layout

The site is densely developed infill within the existing urbanized area. The future retail area and leasing office has been included in the development plan to be concentrated along Grant Avenue and the residential units will be concentrated on the upper levels of the building which will reduce the amount of impervious area within the site. Landscaping in these areas will maximize aesthetic value and ensure the continued health of shrubs and trees within the project boundary.

III.B. Dispersal of Runoff to Pervious Areas

Landscaped areas at the perimeter of the building, particularly at the eastern portion of the building and the northwest portion of the building, will be used to disperse runoff from the building; in addition, the site will be graded so as to disperse runoff to bioretention areas at low points along these regions, therefore mitigating the amount of treatment BMPs required for the site.

III.C. Stormwater Control Measures

As shown in the Stormwater Control Plan Exhibit, the runoff from the site will be routed to three bioretentions in landscape area. The bioretention facilities will be designed and constructed to the criteria in the BASMAA *Post-Construction Manual* (July 2014), including the following features:

- Each layer built flat, level, and to the elevations specified in the plans:
    - Bottom of Gravel Layer (BGL)
    - Top of Gravel Layer (TGL)
    - Top of Soil Layer (TSL)
    - Overflow Grate
    - Facility Rim
- 12 inches of Class 2 permeable, Caltrans specification 68-2.02F(3)
- 18 inches sand/compost mix meeting BASMAA specifications
- 4 in. dia. PVC SDR 35 perforated pipe underdrain, installed with the invert at the bottom of the Class 2 permeable layer with holes facing down, and connected to the overflow structure at that same elevation
- 6-inch-deep reservoir between top of soil elevation and overflow grate elevation
- Concrete drop inlet with frame overflow structure, with grate set to specified elevation, connected to storm drain system that routes to Grant Avenue
- Vertical cutoff walls, plastic header board, or approved equal to protect adjacent pavement (see Figure 4 for Bioretention with Curb)

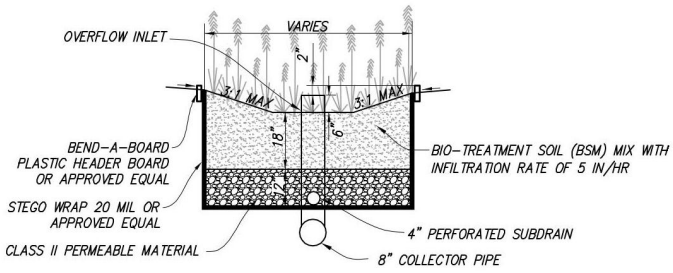

Figure 3. Bioretention in Landscape Area

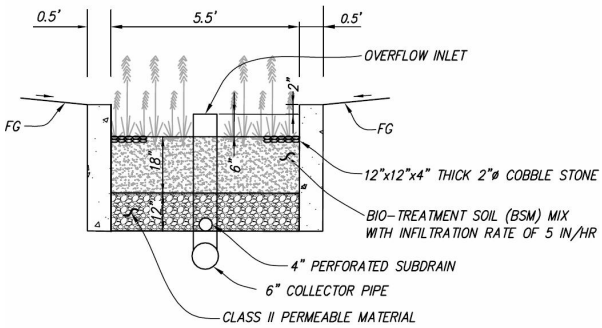

Figure 4. Bioretention in Landscape Area with Curb

- Plantings selected for water conservation
- Irrigation system on a separate zone, with drip emitters and "smart" irrigation controllers
- Sign identifying the facility as a stormwater treatment facility.

IV. Documentation of Drainage Design

IV.A. Descriptions of Each Drainage Management Area

IV.A.1. Drainage Management Areas

Table 2. Drainage Management Areas (DMAs) as shown on the Exhibit.

DMA Name	Surface Type	Area (SF)
DMA-1A	Landscape	1,195
DMA-1B	Walkway	915
DMA-2A	Landscape	956
DMA-2B	Walkway	236
DMA-3A	Landscape	1,189
DMA-3B	Walkway	646
DMA-4	Roof	243
DMA-5	Roof	972
DMA-6	Roof	801
DMA-7	Roof	678
DMA-8	Roof	1,400
DMA-9	Roof	771
DMA-10	Roof	746
DMA-11	Roof	674
DMA-12	Roof	550
DMA-13	Roof	977
DMA-14	Roof	959
DMA-15	Roof	522
DMA-16A	Landscape	401
DMA-16B	Walkway	169

IV.A.2. Drainage Management Area Descriptions

DMA 1, totaling 2,110 square feet, drains the landscape and walkway area between the southern edge of the building and the southerly boundary as well as the southeastern edge of the building and the easterly boundary. DMA 1 drains to Bioretention Facility #1.

DMA 2, totaling 1,192 square feet, drains the landscape and walkway area between the northeastern edge of the building and the northeasterly boundary. DMA-2A drains to Bioretention Facility #2.

DMA 3, totaling 1,835 square feet, drains the landscape and walkway area between the western edge of the building and the westerly boundary. DMA-3 drains to Bioretention Facility #3.

DMA 4, totaling 243 square feet, drains the northwestern portion of the roof. DMA-4 drains to Bioretention Facility #3.

DMA 5, totaling 972 square feet, drains the western portion of the roof. DMA-5 drains to Bioretention Facility #3.

DMA 6, totaling 801 square feet, drains the western portion of the roof. DMA-6 drains to Bioretention Facility #3.

DMA 7, totaling 678 square feet, drains the western portion of the roof. DMA-7 drains to Bioretention Facility #3.

DMA 8, totaling 1,400 square feet, drains the western portion of the roof. DMA-8 drains to Bioretention Facility #3.

DMA 9, totaling 972 square feet, drains the southwestern portion of the roof. DMA-9 drains to Bioretention Facility #3.

DMA 10, totaling 746 square feet, drains the southeastern portion of the roof. DMA-10 drains to Bioretention Facility #4.

DMA 11, totaling 674 square feet, drains the eastern portion of the roof. DMA-11 drains to Bioretention Facility #1.

DMA 12, totaling 550 square feet, drains the eastern portion of the roof. DMA-12 drains to Bioretention Facility #1.

DMA 13, totaling 977 square feet, drains the eastern portion of the roof. DMA-13 drains to Bioretention Facility #2.

DMA 14, totaling 959 square feet, drains the eastern portion of the roof. DMA-14 drains to Bioretention Facility #2.

DMA 15, totaling 522 square feet, drains the northeastern portion of the roof. DMA-15 drains to Bioretention Facility #2.

DMA 16, totaling 570 square feet, drains the landscape and walkway area between the southern edge of the building and the southern boundary. DMA-16 drains to Bioretention Facility #4.

IV.B. Tabulation and Sizing Calculations

IV.B.1. Area Drainage to Bioretention Facilities

Stormwater Treatment Table as shown on the Exhibit.

DMA NAME	DMA AREA (SF)	POST PROJECT SURFACE TYPE	DMA RUNOFF FACTOR	DMA AREA X RUNOFF FACTOR	SIZING FACTOR	MINIMUM FACILITY AREA (SF)	PROPOSED FACILITY AREA (SF)	FACILITY TYPE	FACILITY NAME
1	1,195	LANDSCAPE	0.1	120	0.04	5	6	BIORETENTION	BR #1
	915	IMPERVIOUS	1.0	915	0.04	37	37	BIORETENTION	BR #1
2	956	LANDSCAPE	0.1	96	0.04	4	4	BIORETENTION	BR #2
	236	IMPERVIOUS	1.0	236	0.04	9	9	BIORETENTION	BR #2
3	1,189	LANDSCAPE	0.1	119	0.04	5	5	BIORETENTION	BR #3
	646	IMPERVIOUS	1.0	646	0.04	26	26	BIORETENTION	BR #3
4	243	IMPERVIOUS	1.0	243	0.04	10	10	PLANTER	BR #3
5	972	IMPERVIOUS	1.0	972	0.04	39	39	PLANTER	BR #3
6	801	IMPERVIOUS	1.0	801	0.04	32	32	PLANTER	BR #3
7	678	IMPERVIOUS	1.0	678	0.04	27	27	PLANTER	BR #3
8	1,400	IMPERVIOUS	1.0	1,400	0.04	56	56	PLANTER	BR #3
9	771	IMPERVIOUS	1.0	771	0.04	31	31	PLANTER	BR #3
10	746	IMPERVIOUS	1.0	746	0.04	30	30	PLANTER	BR #4
11	674	IMPERVIOUS	1.0	674	0.04	27	27	PLANTER	BR #1
12	550	IMPERVIOUS	1.0	550	0.04	22	22	PLANTER	BR #1
13	977	IMPERVIOUS	1.0	977	0.04	39	39	PLANTER	BR #2
14	959	IMPERVIOUS	1.0	959	0.04	38	38	PLANTER	BR #2
15	522	IMPERVIOUS	1.0	522	0.04	21	21	PLANTER	BR #2
16	169	IMPERVIOUS	1.0	169	0.04	7	7	BIORETENTION	BR #4
	401	LANDSCAPE	0.1	40	0.04	2	2	BIORETENTION	BR #4
TOTAL	**15,000**	-	-	-	-	**465**	**468**	-	-

V. Source Control Measures

V.A. Site activities and potential sources of pollutants

On-site activities that could potentially produce stormwater pollutants include:

- Trash Management

V.B. Potential Pollutant Sources and Source Control Measures

Table 3. Pollutant Sources and Source Control Measures

Potential source of runoff pollutants	Permanent source control BMPs	Operational source control BMPs
Inlets (bioretention overflows)	All inlets will be marked with "No Dumping! Flows to Local Waterways" or similar	Markings will be regularly inspected and repainted or replaced as needed. Lessees will receive stormwater pollution prevention brochures. Lease agreements will include the following provision: "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."
Indoor and structural pest control		Owner will retain only companies that are certified in Integrated Pest Management (IPM) for on-site pest-management.
Landscape maintenance	Landscaping will minimize irrigation and runoff and be selected for pest resistance, and will minimize the need for fertilizers and pesticides. Plants will be selected appropriate to site soils, slopes, climate, sun, wind rain, land use, air movement, ecological consistency, and plant interactions.	Landscaping will be maintained using minimum or no pesticides. IPM information will be provided to new owners, lessees, and operators.

Refuse area.	Refuse and recycled materials will be handled in the refuse area labeled "Trash Room" on the exhibit.	All dumpsters will be posted with signs stating "Do not dump hazardous materials here" or similar.
Walkways		Walkways will be swept regularly. Debris and washwater from periodic pressure washing will be collected and disposed of to the sanitary sewer.

VI. Stormwater Facility Maintenance

VI.A. Ownership and Responsibility for Maintenance in Perpetuity

Maintenance of stormwater facilities will be the responsibility of the property owner and will be performed by the owner's contractors or employees as part of routine maintenance of buildings, grounds, and landscaping. The applicant has reviewed the Novato, CA, standard agreement regarding the maintenance of stormwater facilities and commits to execute any necessary agreements prior to completion of construction. 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.

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

The bioretention facilities will be maintained on the following schedule at a minimum. Details of maintenance responsibilities and procedures will be included in a Stormwater Facility Operation and Maintenance Plan to be submitted for approval prior to the completion of construction.

At no time will synthetic pesticides or fertilizers be applied, nor will any soil amendments, other than aged compost mulch or sand/compost mix, be introduced.

Daily: The facilities will be examined for visible trash during regular policing of the site, and trash will be removed.

After Significant Rain Events: A significant rain event is one that produces approximately a half-inch or more rainfall in a 24-hour period. Within 24 hours after each such event, the following will be conducted:

The surface of the facility will be observed to confirm there is no ponding.

- Inlets will be inspected, and any accumulations of trash or debris will be removed.
- The surface of the mulch layer will be inspected for movement of material. Mulch will be replaced and raked smooth if needed.

Prior to the Start of the Rainy Season: In September or each year, the facility will be inspected to confirm there is no accumulation of debris that would block flow, and that growth and spread of plantings does not block inlets or the movement of runoff across the surface of the facility.

Annual Landscape Maintenance: In December – February of each year, vegetation will be cut back as needed, debris removed, and plants and mulch replaced as needed. The concrete work will be inspected for damage. The elevation of the top of soil and mulch layer will be confirmed to be consistent with the 6-inch reservoir depth.

VII. Construction Plan E.12 Checklist

Table 4. Construction Checklist Table to be incorporated in Construction Drawings

Stormwater Control Plan Page #	Source Control or Treatment Control Measure	See Plan Sheet #s
4, 5, and Exhibit	DMAs drains to Bioretention Facilities as specified; facility is designed according to provided details	C-4
9	Bioretention Facility overflows are marked with "No Dumping" message	
10	Trash room posted with signs stating "Do not dump hazardous materials here" or similar	
10	Trash receptacles are located near the interior walkways	

VIII. 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*.