STORMWATER CONTROL PLAN
for
VITAL APARTMENTS

September 30, 2019

Prepared for:
Vital Building and Enterprise, Inc.
10835 San Pablo Ave.
El Cerrito, CA 94530

prepared by:
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2912 Vessing Rd.
Pleasant Hill, CA 94523
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Attachments
Stormwater Control Plan Exhibit
IMP Sizing Calculator Output

This Stormwater Control Plan was prepared using the template dated February 2018.
## I. PROJECT DATA

### Table 1. Project Data

<table>
<thead>
<tr>
<th><strong>Project Name/Number</strong></th>
<th><strong>Vital Apartments</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Application Submittal Date</strong></td>
<td>August 2019</td>
</tr>
<tr>
<td><strong>Project Location</strong></td>
<td>10290 San Pablo Ave., El Cerrito, CA 94530</td>
</tr>
<tr>
<td><strong>Name of Developer</strong></td>
<td>Vital Building and Enterprise, Inc.</td>
</tr>
<tr>
<td><strong>Project Phase No.</strong></td>
<td>NA</td>
</tr>
<tr>
<td><strong>Project Type and Description</strong></td>
<td>5-story multi-unit residential building with ground level parking garage</td>
</tr>
<tr>
<td><strong>Project Watershed</strong></td>
<td>Cerrito</td>
</tr>
<tr>
<td><strong>Total Project Site Area (acres)</strong></td>
<td>0.39 acres</td>
</tr>
<tr>
<td><strong>Total Area of Land Disturbed (acres)</strong></td>
<td>0.39 acres</td>
</tr>
<tr>
<td><strong>Total New Impervious Surface Area (sq. ft.)</strong></td>
<td>0 sf</td>
</tr>
<tr>
<td><strong>Total Replaced Impervious Surface Area</strong></td>
<td>16,136 sf</td>
</tr>
<tr>
<td><strong>Total Pre-Project Impervious Surface Area</strong></td>
<td>16,913 sf</td>
</tr>
<tr>
<td><strong>Total Post-Project Impervious Surface Area</strong></td>
<td>16,136 sf</td>
</tr>
<tr>
<td><strong>50% Rule[*]</strong></td>
<td>Applies</td>
</tr>
<tr>
<td><strong>Project Density</strong></td>
<td>Floor Area Ratio = 0.27</td>
</tr>
<tr>
<td><strong>Applicable Special Project Categories [Complete even if all treatment is LID]</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Percent LID and non-LID treatment</strong></td>
<td>100 % LID</td>
</tr>
<tr>
<td><strong>HM Compliance [†]</strong></td>
<td>Does not apply</td>
</tr>
</tbody>
</table>

[*50% rule applies if: Total Replaced Impervious Surface Area > 0.5 x Pre-Project Impervious Surface Area]*

[†HM required (unless project meets one of the exemptions on Guidebook p. 9) if: (Total New Impervious Surface Area + Total Replaced Impervious Surface Area) ≥ 1 acre]

## II. SETTING

### II.A. Project Location and Description

The project is located at the corner of San Pablo Avenue and Eureka Avenue in El Cerrito. The proposed project consists of demolishing of the existing commercial buildings on the site and
construction of an at-grade covered parking structure and a five-story apartment building with commercial space on the ground floor. The garage entrance will be from Eureka Avenue.

II.B. **Existing Site Features and Conditions**
The existing project site is 0.29 acres of completely impervious surfaces including building roofs and asphalt paving parking lot at the yard of the lot. Storm water runoff is currently directed to the adjacent streets via drain inlet located in the middle of the parking lot and also via roof downspouts. There is not any rain water treatment currently applied.

II.C. **Opportunities and Constraints for Stormwater Control**
Constraints on the site include flat grades, poor soils and lack of pervious area.
Opportunities for the stormwater control are the two strips created by side and rear building setbacks that can be used as flow-through planters for water treatment.

III. **LOW IMPACT DEVELOPMENT DESIGN STRATEGIES**

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

III.A.1. **Limitation of development envelope**
Development envelope will completely cover the existing site.

III.A.2. **Preservation of natural drainage features**
There are no natural drainage features on the project or nearby.
III.A.3. Setbacks from creeks, wetlands, and riparian habitats
There are no creeks, wetlands or riparian habitats on or nearby the project site.

III.A.4. Minimization of imperviousness
The lot area is completely covered by the proposed building with exception of two setback strips and stepped roof decks creating roof gardens.

III.A.5. Use of drainage as a design element
On-site bio-retention flow-through planters set on grade will be utilized to buffer and treat runoff before entering the public storm drain system.

III.B. Use of Permeable Pavements
On-site parking is covered, therefore there is no opportunity for permeable pavement use.

III.C. Dispersal of Runoff to Pervious Areas
All on-site runoff (from the roof downspouts) will be dispersed to flow through planters.

III.D. Bioretention or other Integrated Management Practices
All site runoff (from the roofs) will be directed via downspouts to bioretention planters located alongside rear and side building setbacks. Covered parking drains to oil separator.

IV. DOCUMENTATION OF DRAINAGE DESIGN

IV.A. Descriptions of each Drainage Management Area

IV.A.1. Table of Drainage Management Areas

<table>
<thead>
<tr>
<th>DMA Name</th>
<th>Area (SF)</th>
<th>Surface Type/Description</th>
<th>Receiving IMP/Drains to</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMA-1</td>
<td>11,400</td>
<td>NEW BUILDING ROOF</td>
<td>DRAINS TO IMP</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(FTP-1)</td>
</tr>
<tr>
<td>DMA-2a</td>
<td>269</td>
<td>CONCRETE WALKWAY</td>
<td>DRAINS TO IMP</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(FTP-1)</td>
</tr>
<tr>
<td>IMP-2</td>
<td>43</td>
<td>LANDSCAPING</td>
<td>SELF-TREATING</td>
</tr>
<tr>
<td>DMA-3</td>
<td>54</td>
<td>CONCRETE WALKWAY</td>
<td>DRAINS TO IMP</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(FTP-1)</td>
</tr>
<tr>
<td>IMP-1</td>
<td>610</td>
<td>FTP-1</td>
<td>BIO-RETENTION AREA</td>
</tr>
</tbody>
</table>
IV.A.2. Drainage Management Area Descriptions

See Table of Drainage Management Areas above for descriptions, areas and where areas drain to.

IV.B. Integrated Management Practice Descriptions

Flow-through planters FTP-1

Is located at rear and side building setbacks. Planter will be surrounded by building concrete wall on one side and by concrete retaining wall at property line side.

Planters will have splash blocks or rock at all inlets from downspouts or sidewalks. Top layer will consist of 18” of growing medium (sand/compost mix) over 12” Caltrans class II rock. At bottom of planter will be 4” PVC SDR-35 perforated pipe.
Public sidewalk planters

Planters will consist of 30” layer of growing medium (sand/compost mix) over 3” pea gravel over 9” Caltrans class II rock (or 3/4” to 5/8” gravel).

IV.B.1. Areas Draining to Non-LID Treatment

None.

IV.C. Tabulation and Sizing Calculations

See Attachment, Output from the IMP Sizing Calculator

V. SOURCE CONTROL MEASURES

V.A. Site activities and potential sources of pollutants

The project is a residential apartment complex with covered on-site parking with landscaping on the San Pablo street frontage. The project will have the potential for trash, fertilizers and pesticides associated with landscaping, and contaminants and pollutants associated with vehicles.
V.B. Source Control Table

<table>
<thead>
<tr>
<th>Potential source of runoff pollutants</th>
<th>Permanent source control BMPs</th>
<th>Operational source control BMPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRASH ENCLOSURE</td>
<td>Place in covered enclosure and connect floor drain to sewer system.</td>
<td>Good housekeeping, clean-up and maintenance.</td>
</tr>
<tr>
<td>COVERED PARKING AREA</td>
<td>Covered, so does not collect storm water. Does not drain to the street. Trench drain at garage door ramp and interior catch basin both drain to the sand/oil separator which is connected to the sewer system.</td>
<td>Good housekeeping, clean-up and maintenance.</td>
</tr>
<tr>
<td>LANDSCAPING</td>
<td>Use of drought tolerant plants such as Rosemary, Blue Grama grass, Delta Bluegrass, Pacific Wax Myrtle, California Sycamore, Red Spire Pear and Saratoga Bay Laurel. Refer to Landscape plans for detailed plant list.</td>
<td>Minimize use of fertilizers and pesticides. Don’t overwater.</td>
</tr>
</tbody>
</table>

V.C. Features, Materials, and Methods of Construction of Source Control BMPs
Enclosed trash area with drain to sanitary sewer. Concrete parking area with drainage system conveyed through sand/oil separator and discharge to sanitary sewer system.

VI. STORMWATER FACILITY MAINTENANCE

VI.A. Ownership and Responsibility for Maintenance in Perpetuity
The owner of the building will have the responsibility for maintenance of all aspects of the facility. The owner will enter into an Operation and Maintenance Agreement/Right of Entry with the City of El Cerrito.

VI.B. Summary of Maintenance Requirements for Each Stormwater Facility
The owner is responsible for having an Operation and Maintenance Plan. A draft plan can be submitted with construction documents when applying for permits. A revised O&M plan shall be finalized before construction is complete.

Planter Boxes
Planter boxes capture runoff from downspouts or sheet flow from plazas and paved areas. The runoff briefly floods the surface of the box and then percolates through an active soil layer to drain rock below. Typical maintenance consists of the following:
- Examine downspouts from rooftops or sheet flow from paving to ensure that flow to
  the planter is unimpeded. Remove any debris and repair any damaged pipes. Check
  splash blocks or rocks and repair, replace, or replenish as necessary.
- Examine the overflow pipe to make sure that it can safely convey excess flows to a
  storm drain. Repair or replace any damaged or disconnected piping.
- Check the underdrain piping to make sure it is intact and unobstructed.
- Observe the structure of the box and fix any holes, cracks, rotting, or failure.
- Check that the soil is at the appropriate depth to allow a reservoir above the soil surface
  and is sufficient to effectively filter stormwater. Remove any accumulations of sediment, litter,
  and debris. Till or replace soil as necessary. Confirm that soil is not clogging and that the planter will
  drain within 3-4 hours after a storm event.
- Determine whether the vegetation is dense and healthy. Replace dead plants. Prune or remove any
  overgrown plants or shrubs that may interfere with planter operation. Clean up fallen leaves or
  debris and replenish mulch. Remove any nuisance or invasive
- vegetation.

VII. CONSTRUCTION PLAN C.3 CHECKLIST

See Sheet C-4.0, “STORMWATER CONTROL PLAN” of the Civil Improvement Plans and Exhibit below
for flow diagram, drainage areas, and location and size of bioretention areas and see sheet C-1.0,
“GRADING AND DRAINAGE PLAN”, for detailed information and elevations of the improvements.

VIII. CERTIFICATIONS

The selection, sizing, and preliminary design of stormwater treatment and other control measures in this
plan meet the requirements of Regional Water Quality Control Board Order R2-2015-0049.
**Self-Treating DMAs**

<table>
<thead>
<tr>
<th>DMA Name</th>
<th>Area (sq ft)</th>
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<tr>
<td>NB-2</td>
<td>43.0</td>
</tr>
<tr>
<td>M-2</td>
<td>264</td>
</tr>
<tr>
<td>N-2</td>
<td>83.0</td>
</tr>
<tr>
<td>N-7</td>
<td>65.0</td>
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</table>

**IV. Areas Draining to IMPs**

**IMP Name:** IMP-1  
**IMP Type:** Ficw-Through Planter  
**Soil Group:** IMP-1

<table>
<thead>
<tr>
<th>DMA Name</th>
<th>Area (sq ft)</th>
<th>Post Project Surface Type</th>
<th>DMA Runoff Factor</th>
<th>DMA Area x Runoff Factor</th>
<th>IMP Sizing Factor</th>
<th>Rain Adjustment Factor</th>
<th>Minimum Area or Volume</th>
<th>Proposed Area or Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMA-1</td>
<td>11,400</td>
<td>Conventional Roof</td>
<td>.60</td>
<td>11,400</td>
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<td></td>
</tr>
<tr>
<td>DMA-2a</td>
<td>264</td>
<td>Corrugated Corrugated</td>
<td>.60</td>
<td>264</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>DMA-3</td>
<td>54</td>
<td>Corrugated Corrugated</td>
<td>.60</td>
<td>54</td>
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<td><strong>Total</strong></td>
<td><strong>11,723</strong></td>
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**IMP Name:** IMP-4  
**IMP Type:** Ficw-Through Planter  
**Soil Group:** IMP-4

<table>
<thead>
<tr>
<th>DMA Name</th>
<th>Area (sq ft)</th>
<th>Post Project Surface Type</th>
<th>DMA Runoff Factor</th>
<th>DMA Area x Runoff Factor</th>
<th>IMP Sizing Factor</th>
<th>Rain Adjustment Factor</th>
<th>Minimum Area or Volume</th>
<th>Proposed Area or Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMA-6</td>
<td>2,160</td>
<td>Corrugated Corrugated</td>
<td>.60</td>
<td>2,160</td>
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<td></td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,160</strong></td>
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</tbody>
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**IMP Name:** IMP-6  
**IMP Type:** Ficw-Through Planter  
**Soil Group:** IMP-6

<table>
<thead>
<tr>
<th>DMA Name</th>
<th>Area (sq ft)</th>
<th>Post Project</th>
<th>DMA Runoff Factor</th>
<th>DMA Area x</th>
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<tbody>
<tr>
<td>DNA Name</td>
<td>Area (sq ft)</td>
<td>Post-Project Surface Type</td>
<td>DNA Runoff Factor</td>
<td>DNA Area x Runoff Factor</td>
</tr>
<tr>
<td>----------</td>
<td>--------------</td>
<td>---------------------------</td>
<td>-------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>DNA-7</td>
<td>5'5</td>
<td>Concrete or Asphalt</td>
<td>1.00</td>
<td>5'9</td>
</tr>
<tr>
<td>DNA-9</td>
<td>5'5</td>
<td>Concrete or Asphalt</td>
<td>1.00</td>
<td>5'9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**IMP Name:** IMP-3
**IMP Type:** Flow-Through Planter
**Soil Group:** IMP-3

<table>
<thead>
<tr>
<th>DNA Name</th>
<th>Area (sq ft)</th>
<th>Post-Project Surface Type</th>
<th>DNA Runoff Factor</th>
<th>DNA Area x Runoff Factor</th>
<th>IMP Sizing Factor</th>
<th>Rain Adjustment Factor</th>
<th>Minimum Area or Volume</th>
<th>Proposed Area or Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNA-3</td>
<td>5'5</td>
<td>Concrete or Asphalt</td>
<td>1.00</td>
<td>5'9</td>
<td>1.00</td>
<td>1.00</td>
<td>630</td>
<td>2.040</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>630</strong></td>
<td><strong>2.040</strong></td>
</tr>
</tbody>
</table>

**IMP Name:** IMP-3a
**IMP Type:** Flow-Through Planter
**Soil Group:** IMP-3a

<table>
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<tr>
<th>DNA Name</th>
<th>Area (sq ft)</th>
<th>Post-Project Surface Type</th>
<th>DNA Runoff Factor</th>
<th>DNA Area x Runoff Factor</th>
<th>IMP Sizing Factor</th>
<th>Rain Adjustment Factor</th>
<th>Minimum Area or Volume</th>
<th>Proposed Area or Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNA-6</td>
<td>63</td>
<td>Concrete or Asphalt</td>
<td>1.00</td>
<td>63</td>
<td>1.00</td>
<td>1.00</td>
<td>630</td>
<td>2.040</td>
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<td><strong>Total</strong></td>
<td></td>
<td><strong>630</strong></td>
<td><strong>2.040</strong></td>
</tr>
</tbody>
</table>

Report generated on 9/6/2019 12:00:00 AM by the Contra Costa Clean Water Program IMP Sizing Tool software (version 1.3.1.0).