Above Grade Engineering, Inc.
1304 Broad Street
San Luis Obispo, CA 93401
(805) 540-5115
abovegradeengineering.com

STORMWATER MANAGEMENT FACILITY OPERATION AND MAINTENANCE (O&M) MANUAL

Oasis Senior Center
700 Block of E. Clark Ave.
Orcutt, CA 93455

October 17, 2016

PROPERTY OWNER / RESPONSIBLE PERSON

NAME:

PHONE:

MAINTENANCE PROVIDER

NAME:

PHONE:

24-HR EMERGENCY CONTACT

NAME:

PHONE:

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STORMWATER MANAGEMENT FACILTY O&M COMPLIANCE

This **Stormwater Management Facility Operation and Maintenance (O&M) Manual** provides the required procedures to ensure that stormwater facilities associated with this project are sufficiently operated and maintained to function properly, in compliance with Santa Barbara County regulations and requirements.

In accordance with Chapter 5 of the Project Clean Water Stormwater Technical Guide, the following maintenance activities are required:

- Property owners are responsible to maintain their premises in such a way as to comply with the above-referenced chapter and prevent migration of pollutants into the storm drain system.

- Property owners of development or redevelopment projects which require installation of post-construction storm water devices shall submit a maintenance plan or manufacturer's maintenance guide for those devices as part of the project submittal. The plan or guide provided shall be considered the minimum maintenance required, with additional maintenance performed as needed to comply with the above- referenced chapter.

- Property owners with post-construction storm water devices on their property shall submit to the director annual inspection/maintenance reports to confirm continued compliance with the above-referenced chapter. Reports shall be signed and certified by the property owner or the authorized representative.

- Property owners with post-construction storm water devices on their property shall enter into an agreement with the city, to be recorded, documenting the devices, the required maintenance and the responsibility by the property owners for maintenance and reporting.

PREVENTATIVE MEASURES

Preventative maintenance is the most effective way to ensure common pollutants (e.g., sediment, trash, debris, chemicals, wash water, animal wastes) from entering the stormwater management facilities.

The following preventative measures shall be incorporated into regular operations as appropriate on the property to address the potential for pollutants into the stormwater management facilities:

- Educate tenants to be aware of actions that affect water quality and maintenance costs.
- Keep the property, streets, gutters, and parking areas free from trash and debris.
- Ensure the proper disposal of hazardous wastes and chemicals.
- Plan lawn care to minimize the use of chemicals and pesticides.

- Sweep paved surfaces regularly.
- Maintain vehicles from leaking fluids and use disposal absorbents for spills.
- Re-vegetate disturbed and bare areas to minimize erosion.
- Clean out the upstream components of the storm drainage system, including inlets, storm sewers and outfalls.
- Do not store materials outdoors (including landscaping materials) unless properly protected from wind and rain.
- Close the covers on dumpsters to prevent liquids from leaking into the storm system.

Additional preventative measures shall be added to regular operations of the facilities on the property to address changes or additions that would increase pollutants to the stormwater management facilities.

MAINTAINING STORMWATER MANAGEMENT FACILITIES

Stormwater management facilities must be properly maintained to ensure that they operate correctly and provide the water quality treatment for which they were designed. Routine maintenance performed on a frequently scheduled basis can help avoid more costly rehabilitative maintenance that results when facilities are not adequately maintained.

ROUTINE WORK

Routine work consists of inspection, scheduled mowing, weed control, and trash and debris pickups for stormwater management facilities during the growing season. This includes items such as the removal of debris/material that may be clogging the outlet structure and weed control in vegetated areas. These activities shall be performed at least annually. More frequency may be required during the year as needed. Routine work shall be updated to reflect changes and updates to these facilities.

MINOR WORK

Minor work consists of a variety of isolated or small-scale maintenance and work needed to address operational problems. Most of this work can be completed by a small crew with minor tools and small equipment.

MAJOR WORK

Major work consists of large-scale maintenance and major improvements needed to address failures within the stormwater management facilities. This work may require engineered plans to be prepared for review and approval by the City of San Luis Obispo. This work may also require more specialized maintenance equipment, surveying, construction permits or assistance through private contractors and consultants.

STORMWATER MANAGEMENT FACILITIES INFORMATION

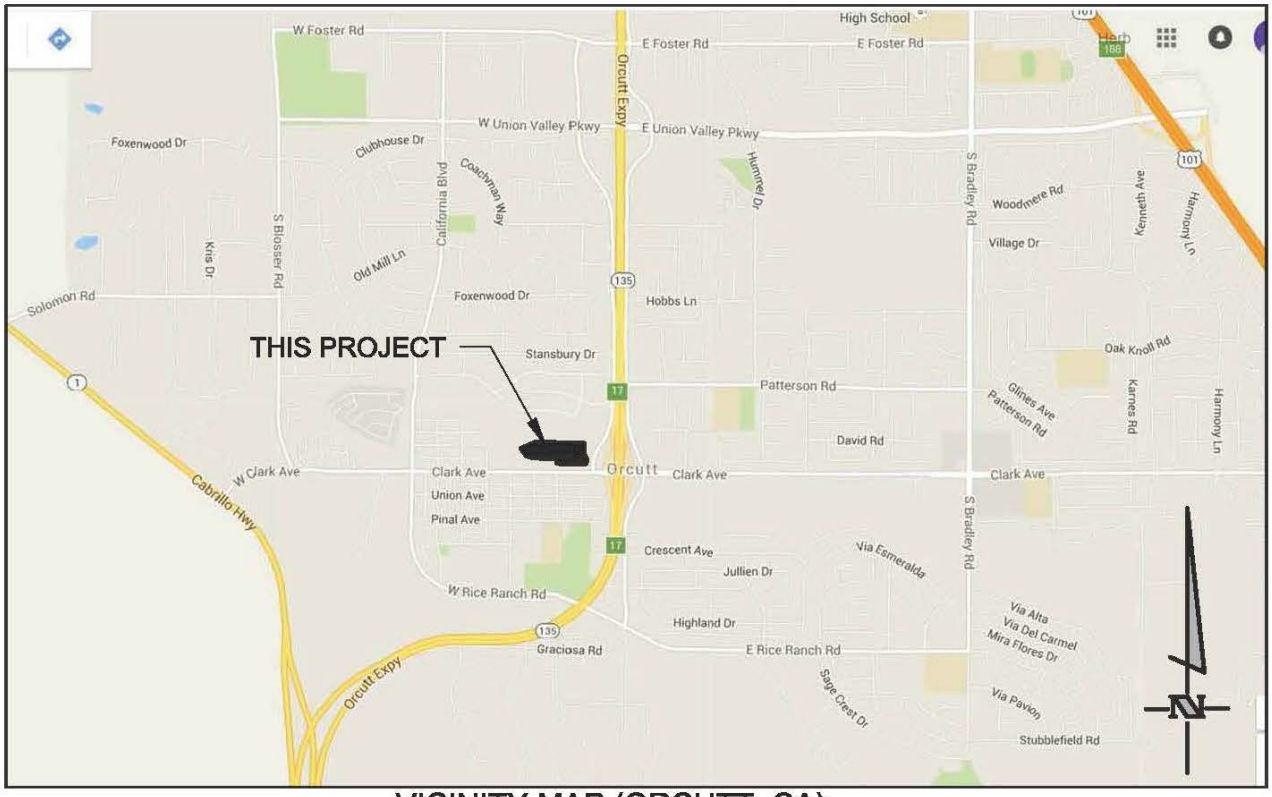
Project Address: 700 Block of E. Clark Ave., Orcutt, CA 93455
Property Owner:

Contact Person:

Designer:

PROPERTY DESCRIPTION

APN 105-020-063, located at NW corner of E. Clark Ave. and Foxenwood Lane as shown below.



VICINITY MAP (ORCUTT, CA)
(NO SCALE)

Figure 1

ANNUAL SITE-SPECIFIC MAINTENANCE ACTIVITIES Checklist

#1 - INSPECTION & MAINTENANCE CHECKLIST: ANNUAL SITE-SPECIFIC MAINTENANCE

Inspected by: _____

Date: _____ (INSPECTION SHALL BE REQUIRED **PRIOR TO OCTOBER 15** ANNUALLY)

Inspection Items

1. Trash bins and dumpsters covered at all times? ❑ Yes ❑ No
2. Parking lot areas swept regularly to prevent sediment and debris from entering storm drain? ❑ Yes ❑ No
3. Spill cleanup kit provided onsite? ❑ Yes ❑ No
4. No uncontrolled discharge of pressure washing fluids? ❑ Yes ❑ No
5. Storm drain system including catch basins, piping swales cleaned and free from silt and debris prior to rainy season (October 15 thru April 15) ❑ Yes ❑ No
6. Inspection of SCM #1 catch basins conducted annually? ❑ Yes ❑ No

Inspection Comments /Description

_____

_____

Overall Condition of Stormwater Management Facility

❑ Acceptable ❑ Not Acceptable

Corrective Action Needed

_____

Corrective actions completed on _____ (date) by _____ (inspector's initials

INSPECTION & MAINTENANCE CHECKLIST: #2- BIO-RETENTION FACILITY

Facility Description:

- Located within landscape areas. Interior slopes to provide required 6" reservoir to capture rain during higher intensity before spilling over the outlet structure.
- Each layer shall have a flat and level bottom.
- Class 2 permeable, Caltrans specification 68-2.02F(3); depth as shown in as-built drawings
- 24 inches sand/compost mix; 60%-70% sand and 30%-40% compost
- 4 inch diameter SDR-35 PVC perforated pipe underdrain shall be installed with the invert at the top of the Class 2 permeable layer with perforations facing down, and shall be connected to the overflow structure at the same elevation as shown in as-built drawings.
- 6 inch deep reservoir between top of soil elevation and overflow grate elevation
- 12 inch diameter 'Nyloplast' drain basin with dome grate to act as an overflow structure with grate set to a specified elevation, connected to a centralized storm drain system that will convey drainage to specified above ground detention basin, or subsurface chambers.
- Plantings that can tolerate fast-draining soils
- Irrigation systems with drip emitters and irrigation controllers
- Sign identifying the facility as a stormwater treatment facility

Bio-retention Facility Locations:

See attached exhibit for bio-retention locations and connecting drain inlets.

Routine Activities:

- Clean landscape areas of debris prior to rainy season and after significant storms that generated more than an inch or rainfall
- Remove any graffiti, vandalism, or other notable damage to be addressed within 48 hours
- If area contains plants, weeding shall be performed on a monthly basis. Inspect the integrity and health of the plants and irrigation system. Check for leaks or broken pipes by manually turning on the irrigation system. Replace vegetation as necessary.

Activities following a Major Rain Event:

- Inlets shall be inspected for the accumulation of trash and/or debris and shall be removed.
- The integrity of the mulch layer will be inspected. If the mulch has significantly moved from its original design, the mulch layer shall be replaced and raked smooth as necessary.
- Replace soil media if integrity has been compromised, i.e. shifted substantially, contains void spaces/debris/excessive amounts of foreign liquids such as oils, etc. Replacement of

soil media should be conducted every 120 months if found to be in good condition after a major rain event.

Inspected by: _____

Date: _____

Inspection Comments /Description

_____

_____

_____

INSPECTION & MAINTENANCE CHECKLIST: #3- DETENTION BASIN FACILITY

Facility Description:

- Located within landscape area. Interior slopes to provide required depth needed to achieve a detention volume used to assist in mitigating discharge peak flow rates.
- Bottom of the basin shall be flat and level.
- Earthen headwalls and rip-rap are present within which allows for discharge from pipes inletting into the basin to dissipate.
- 18 inch diameter HDPE outlet pipe shall be installed at the location shown in as-built drawings and shall connect to the catch basin outlet structure.
- Emergency overflow spillway shall be located as shown in as-built drawings and shall be constructed of asphaltic concrete.
- 12 inches of freeboard shall be provided below emergency overflow spillway
- Outlet structure to contain galvanized steel plate with specifically sized orifices at different elevations to mitigate discharge peak flows.
- Outlet pipe with diameter of 12 inches shall contain rip-rap at the end of the pipe in order to prevent erosion
- 16 foot wide all weather access road shall be provided down into the bottom of the basin
- Sign identifying the facility as a stormwater detention basin facility.

Bio-retention Facility Locations:

See attached exhibit for detention basin locations and connecting drain inlets.

Routine Activities:

- Clean landscape areas of debris prior to rainy season and after significant storms that generated more than an inch or rainfall
- Remove any graffiti, vandalism, or other notable damage to be addressed within 48 hours
- If area contains plants, weeding shall be performed on a monthly basis. Inspect the integrity and health of the plants and replace vegetation as necessary.
- Inspect upstream drain inlets for debris and sedimentation build-up.
- Inspect outlet structure for debris and remove if necessary.
- Inspect rip-rap at end of outlet pipe and inlet pipe to and from the detention basin respectively. Ensure integrity and remove debris if present.
- Ensure integrity of earthen wall if present. Inspect gravity drain for debris and sedimentation. Replace gravity drain and/or earthen headwall as necessary.

- Inspect all weather access road for integrity and presence of trash/debris and remove/replace as necessary.

Activities following a Major Rain Event:

- Outlet structure shall be inspected for the accumulation of trash and/or debris and shall be removed.
- Galvanized steel plate orifices shall be inspected for blockage or wear. Replace galvanized steel plate if orifices have become deformed.
- Inlets shall be inspected for the accumulation of trash and/or debris and shall be removed.
- Outlet pipes shall be inspected for trash and/or debris which shall be removed. If outlet pipe leaks or is broken, remove and replace as necessary.

Inspected by: _____

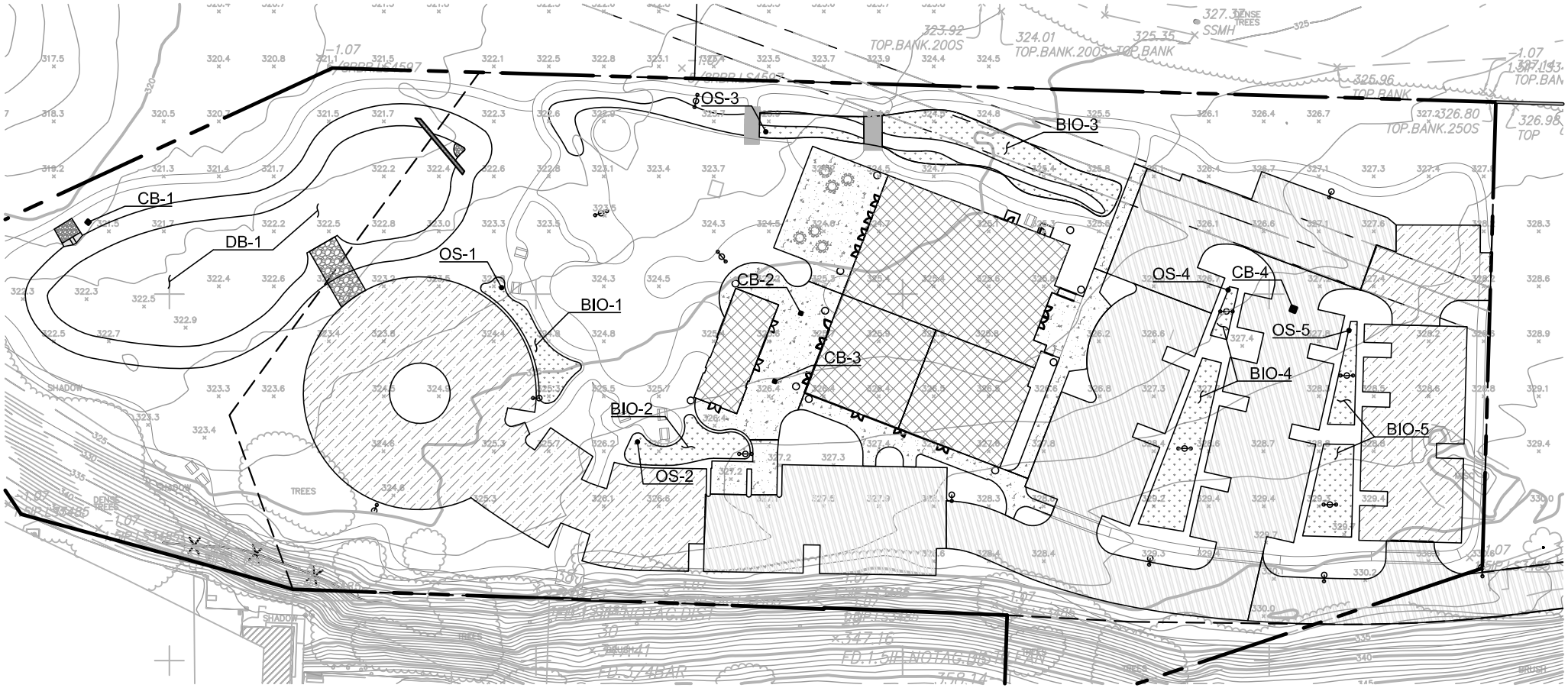
Date: _____

Inspection Comments /Description

_____

_____

_____



LEGEND

- PAVEMENT
- CONCRETE FLATWORK
- GRAVEL
- ROOF
- BIO-RETENTION

ABBREVIATIONS

BIO: BIO-RETENTION AREA
CB: CATCH BASIN
DB: DETENTION BASIN
OS: OVERFLOW STRUCTURE

O & M FACILITIES LOCATIONS

NO SCALE