

# **Preliminary Stormwater Control Plan**

**For**

## **Famcon Pipe and Supply, Inc.**

**1350 Founders Ave.  
Santa Maria, CA.  
October 18, 2023**

Prepared for:  
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**I. Project Data**

Project Name:	Famcon Pipe & Supply
Application Submittal Date:	October 18, 2023
Project Location:	1350 Founders Ave. – Santa Maria, CA.
Total Project site area:	172,190 S.F. / 3.95 acres
Total New Impervious Surface Area:	37,987 S.F. / 0.87 acres
Total Pre-Project Impervious Area:	0 S.F. / 0 acres
Total Post-Project Impervious Area:	37,987 S.F. / 0.87 acres
Total Replaced Impervious Area:	0 S.F. / 0 acres
Design Storm Frequency and Depth:	1.5-inch Design Storm

**II. Setting**

**II.A. Project Location and Description**

The project site is located on the east side of Highway 101, at 1350 Founders Ave., in an unincorporated area, in the County of Santa Barbara. The project consists of the development of a 11,040 s.f. commercial building with outdoor storage. Additional site improvements include parking, driveways, a trash enclosure, and landscaping. The site is currently undeveloped. Primary access to the site will be from Founders Avenue to the north with secondary access to the west. The required infiltration volume for this project will be handled within an underground chamber system on-site. A hydrodynamic separator will treat the runoff prior to entering the chamber system.

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

The site is currently undeveloped and is 100% pervious. The site slopes to the south and west towards Morningside Dr. The USDA, Natural Resources Conservation Service, Web Soil Survey, determines that the site consists of 55.7%± Oceano sand (OcD) and 44.3%± Marina Sand (MaE). The definitions in the Stormwater Technical Guide helped determine the site’s soil would fit 55.7% into HSG A category and 44.3% into HSG B category.

**II.C. Opportunities and Constraints for the Stormwater Control**

The opportunities selected for stormwater control include a 13,389 S.F. underground chamber system to treat and retain all storm water runoff from a 1.5 inch design storm. With this, the grading design will direct / transport the stormwater to the proposed chamber system via multiple catch basins on-site.

### III. Low Impact Development Design Strategies

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

The site was designed to direct run-off into an underground chamber system designed to infiltrate a 1.5 inch design storm. (see Appendix A).

##### III.A.1. Limitation of Development Envelope

The project has no substantial limitations for proposed development.

##### III.A.2. Preservation of Natural Drainage Features

The site currently sheet flows to the south and west towards Morningside Drive. The project proposes to maintain this existing drainage pattern towards Morningside Drive.

##### III.A.3. Setbacks from Creeks, Wetlands and Riparian Habitats

There are no Creeks, Wetlands or Riparian Habitats near the proposed project site.

##### III.A.4. Minimization of Imperviousness

Care was taken in the design process to minimize impervious to the extent possible.

##### III.A.5. Use of Drainage as a Design Element

Drainage has been considered in the design to allow drainage and minimize ponding on the hardscaped areas.

#### III.B. Use of Permeable Pavement

The project does not propose the use of permeable pavement as a control feature of the site.

#### III.C. Dispersal of Runoff to Pervious areas

Stormwater runoff from impervious surface areas is directed towards permeable surfaces and catch basins.

#### III.D. Stormwater Control Measures

The stormwater control measures (SCMs) are designed to retain and infiltrate stormwater. The Drainage Management Areas (DMAs) drain to the infiltration areas (see Appendix A).

### IV. Documentation of Drainage Design

#### IV.A. Description of each Drainage Management Areas

##### IV.A.1. Tables

Table 1: DMA Exhibit 1 reference

DMA	AREA (SF)	Drains to
DMA 1	11,040	SCM 1
DMA 2	26,947	SCM 1
DMA 3	28,886	SCM 1
DMA 4	105,317	SCM 1

Table 2: SCM Exhibit 1 reference

SCM #	TYPE	AREA (SF)
SCM 1	Infiltration Basin	15,427

#### IV.A.2. Drainage Management Area Descriptions

DMA 1, totaling 11,040 square feet, drains site building. DMA 1 flows through roof drains, onto DMAs 2 and 4, into catch basins, through a hydrodynamic separator, and into SCM 1.

DMA 2, totaling 26,947 square feet, drains all site hardscape. DMA 2 sheet flows into catch basins, through a hydrodynamic separator, and into SCM 1.

DMA 3, totaling 28,886 square feet, drains all site landscape areas. DMA 3 is self-treating but is included in the SCM 1 infiltration calculations.

DMA 4, totaling 105,317 square feet, drains all site class II base. DMA 4 sheet flows into catch basins, through a hydrodynamic separator, and into SCM 1.

SCM 1, totaling 15,427 square feet collects run-off from DMA's 1 thru 4. SCM 1 is an underground chamber system and has been sized using HydroCAD software (see Appendix C).

#### IV.A.3. On-Site Retention Requirement

All 95<sup>th</sup> percentile storm event runoff will be retained on-site within the proposed underground chamber system (see Appendix A).

#### IV.A.4. Pre Development Flows for 2-10 Year Storm Events

The summary table below contains the results showing the post development runoff being less than the pre-development runoff.

PRE-DEVELOPMENT RUNOFF	
<b>2 YEAR</b>	<b>0.02 cfs</b>
<b>5 YEAR</b>	<b>0.08 cfs</b>
<b>10 YEAR</b>	<b>0.24 cfs</b>

POST DEVELOPMENT RUNOFF			
SCM #	<b>2 YEAR</b>	<b>5 YEAR</b>	<b>10 YEAR</b>
<b>SCM 1:</b>	<b>0.00 cfs</b>	<b>0.00 cfs</b>	<b>0.00 cfs</b>

### IV.B. Tabulation and Size Calculations

Stormwater control measure sizing was calculated using HydroCAD software.

## V. Source Control Measures

### V.A. Site Activities and Potential Sources of Pollutants

Any potential sources of pollutants that could be transported to the permeable pavers could also be transported off-site. Pollutants could be from the illegal dumping of chemicals into catch basins as well as pollutants left by vehicles that visit the site. In addition, the materials used to construct and

maintain the site could also be possible sources of pollution. Overflow from landscape areas can carry pesticides. Storm water from roofs can carry metals. Drains made of copper or other materials with an unprotected surface may cast-off metal particles to the main basins. Parking areas and hardscapes may contribute litter that can be carried into the basin. All areas should be kept clean to minimize the possibility of litter making its way into the storm water control facilities.

### **V.B. Source Control Table**

Source control table will be included in Final Storm Water Control Plan.

### **V.C. Features, Materials and Methods of Construction of Source Control BMP's**

The stormwater features are to be built per the grading, landscape and architectural plans and material and methods of construction are to be determined by the owner/developer and contractors.

## **VI. Stormwater Facility Maintenance**

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

Signed ownership and responsibility for maintenance agreement to be on file at the City of Santa Maria Public Works Division.

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

For maintenance requirements, refer to the Stormwater Maintenance Plan (To be included with final Storm Water Control Plan).

## **VII. Construction Checklist**

Construction Checklist to be included in Final Storm Water Control Plan.

### **VII.A. Stormwater Control Measures**

Stormwater Control Measures will be included in Final Storm Water Control Plan.

## **VIII. Certifications**

The preliminary design of stormwater treatment and other stormwater pollution control measures in this plan are in accordance with the current edition of the Santa Barbara County Project Clean Water's Stormwater Technical Guide.

## Exhibit / Report Overview

The California Regional Water Quality Control Board of the Central Coast Region adopted the Post-Construction Requirements (PCRs) in July 2013. The County of Santa Barbara obtained a grant to assist designers and municipalities with the implementation of the PCRs. Through this grant, the County has developed, published, and released The Stormwater Technical Guide for Low Impact Development to ensure compliance with the Regional Board's PCRs. The development of the Post-Construction Stormwater Control Measures/LID features throughout the project site will adhere to the Technical Guide as described below.

For the purposes of this report the post construction stormwater requirements the net impervious was calculated as follows

New impervious = 37,987 S.F.

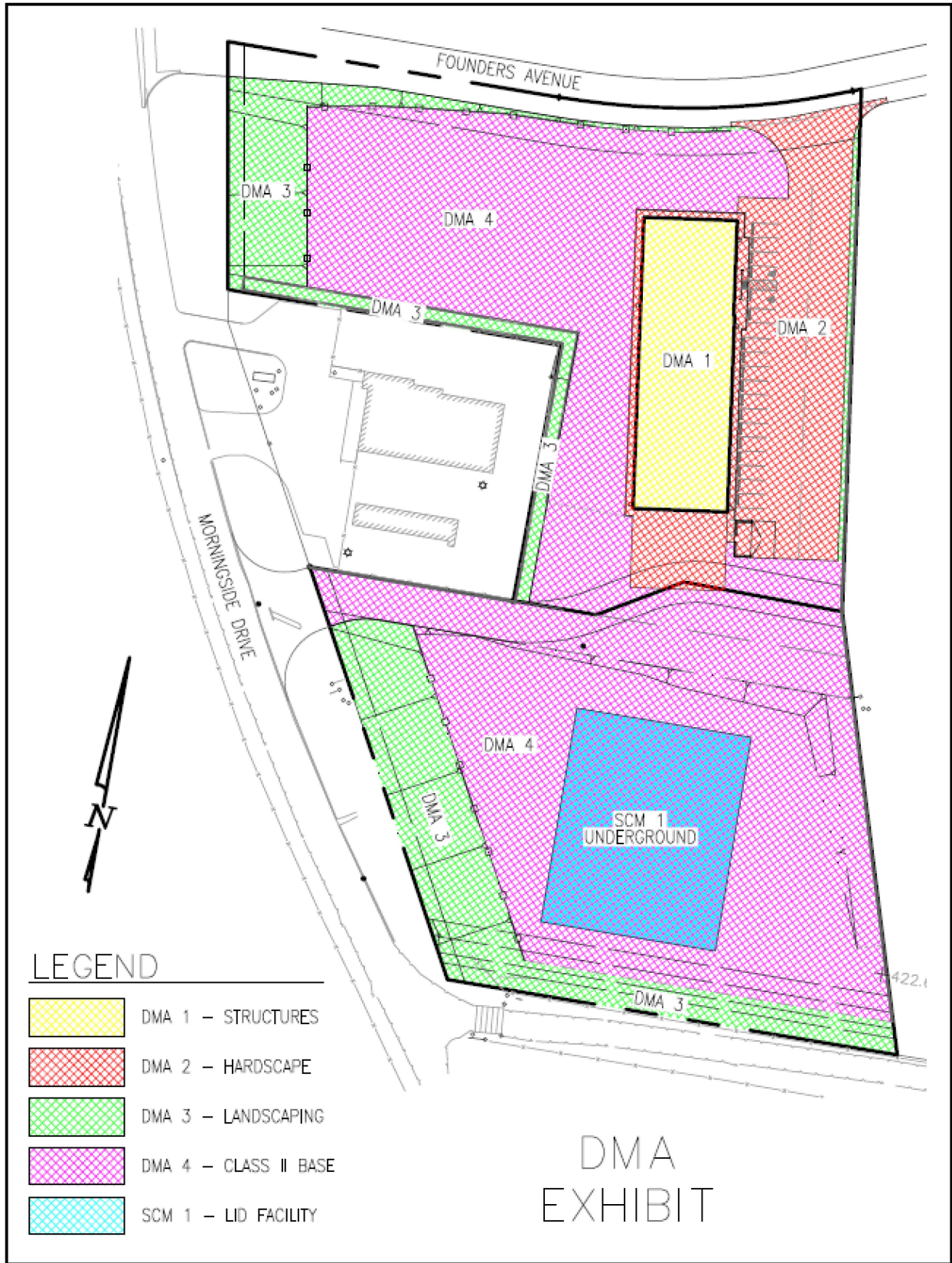
This project is located outside the NPDES Permit Area.

Therefore, this project is designated as a Tier 4 project. This development proposes the following:

- Limit the disturbance of natural drainage features
- Limit clearing, grading, and soil compaction
- Minimize impervious surfaces
- Minimize runoff by dispersing/distributing runoff to landscape
- Treat runoff with an approved and appropriately sized LID treatment system prior to discharge from the site (1.5 inch design storm)
- Manage Post-Development Peak Flows for 2-10 year storms

## **Appendix A: DMA & SCM Map**





**Appendix B: Soil Map**



## Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
MaE	Marina sand, 9 to 30 percent slopes	B	1.6	44.3%
OcD	Oceano sand, 2 to 15 percent slopes	A	2.0	55.7%
<b>Totals for Area of Interest</b>			<b>3.7</b>	<b>100.0%</b>

## **Appendix C: HydroCAD Summary**

**Summary for Pond 1P: Chambers**

Inflow Area = 3.953 ac, 22.06% Impervious, Inflow Depth > 3.82" for 100 YEAR event  
 Inflow = 8.00 cfs @ 9.98 hrs, Volume= 1.258 af  
 Outflow = 0.27 cfs @ 4.80 hrs, Volume= 0.466 af, Atten= 97%, Lag= 0.0 min  
 Discarded = 0.27 cfs @ 4.80 hrs, Volume= 0.466 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.050 hrs  
 Peak Elev= 414.25' @ 23.12 hrs Surf.Area= 15,368 sf Storage= 34,526 cf

Plug-Flow detention time= 312.1 min calculated for 0.465 af (37% of inflow)  
 Center-of-Mass det. time= 82.9 min ( 805.3 - 722.5 )

Volume	Invert	Avail.Storage	Storage Description
#1A	411.00'	18,339 cf	<b>137.50'W x 111.77'L x 6.75'H Field A</b> 103,733 cf Overall - 42,602 cf Embedded = 61,131 cf x 30.0% Voi
#2A	411.75'	42,602 cf	<b>ADS_StormTech MC-4500 +Cap</b> x390 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.02'L = 106.5 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 390 Chambers in 15 Rows Cap Storage= +35.7 cf x 2 x 15 rows = 1,071.0 cf
		60,942 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	411.00'	<b>0.750 in/hr Exfiltration over Surface area</b>

**Discarded OutFlow** Max=0.27 cfs @ 4.80 hrs HW=411.07' (Free Discharge)  
 ↑1=Exfiltration (Exfiltration Controls 0.27 cfs)

**Events for Pond 1P: Chambers**

Event	Inflow (cfs)	Discarded (cfs)	Elevation (feet)	Storage (cubic-feet)
1.5 in Rain Event	<b>2.10</b>	<b>0.27</b>	<b>411.79</b>	<b>3,954</b>