

T21-00002

CITY OF OCEANSIDE ENGINEERING DIVISION	
PRIORITY DEVELOPMENT PROJECT STORM WATER QUALITY MANAGEMENT PLAN FOR 3710 Vista Way Homes	
ENGINEER OF WORK	Please provide signed version ¹
Victor Rodriguez-Fernandez – PE NUMBER 35373	

PREPARED FOR:

**OCEANSIDE GAS
NEPTUNE INVESTMENTS, LLC
PO Box 9890
Rancho Santa Fe, CA 92067**

PREPARED BY:

**ALTA CONSULTANTS
Planning, Engineering, Surveying
1283 E. Main St., Suite #109
San Diego, CA 92021
(619) 749-8818**



Summary of Comments on Microsoft Word - 2022 V Way PDP SWQMP.docx

Page: 1

 Number: 1 Author: bryan Subject: Text Box Date: 6/17/2022 11:32:17 AM

Please provide signed version

Select "New Development" instead
of Redevelopment¹

Project Type Determination Checklist			Form I-2
Project Information			
Project Name: Vista Way Homes			
Permit Application Number: TM T21-00002			
Project Type Determination: Standard Project or PDP			
The project is (select one): ☐ New Development ☒ Redevelopment			
The total proposed newly created or replaced impervious area is: 30,389 ft ² (0.70) acres			
Is the project in any of the following categories, (a) through (f)?			
Yes ☒	No ☐	(a)	New development projects that create 10,000 square feet or more of impervious surfaces (collectively over the entire project site). This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land.
Yes ☐	No ☒	(b)	Redevelopment projects that create and/or replace 5,000 square feet or more of impervious surface (collectively over the entire project site on an existing site of 10,000 square feet or more of impervious surfaces). This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land.
Yes ☐	No ☒	(c)	New and redevelopment projects that create 5,000 square feet or more of impervious surface (collectively over the entire project site), and support one or more of the following uses: (i) Restaurants. This category is defined as a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption SIC code 5812). (ii) Hillside development projects. This category includes development on any natural slope that is twenty-five percent or greater. (iii) Parking lots. This category is defined as a land area or facility for the temporary parking or storage of motor vehicles used personally, for business, or for commerce. (iv) Streets, roads, highways, freeways, and driveways. This category is defined as any paved impervious surface used for the transportation of automobiles, trucks, motorcycles, and other vehicles.



Select "New Development" instead of Redevelopment

Form I-4 Page 3 of 3

SC-6 Additional BMPs Based on Potential Sources of Runoff Pollutants (must answer for each source listed below)	Implemented?		
Onsite storm drain inlets	☒ Yes	☐ No	☐ N/A
Interior floor drains and elevator shaft sump pumps	☐ Yes	☐ No	☒ N/A
Interior parking garages	☐ Yes	☐ No	☒ N/A
Need for future indoor & structural pest control	☒ Yes	☐ No	☐ N/A
Landscape/outdoor pesticide use	☒ Yes	☐ No	☐ N/A
Pools, spas, ponds, decorative fountains, and other water features	☐ Yes	☐ No	☒ N/A
Food service	☐ Yes	☐ No	☒ N/A
Refuse area	☐ Yes	☐ No	☒ N/A
Industrial processes	☐ Yes	☐ No	☒ N/A
Outdoor storage of equipment or materials	☐ Yes	☐ No	☒ N/A
Vehicle and equipment cleaning	☒ Yes	☐ No	☐ N/A
Vehicle/equipment repair and maintenance	☐ Yes	☐ No	☒ N/A
Fuel dispensing areas	☒ Yes	☐ No	☐ N/A
Loading docks	☐ Yes	☐ No	☒ N/A
Fire sprinkler test water	☐ Yes	☐ No	☒ N/A
Miscellaneous drain or wash water	☐ Yes	☐ No	☒ N/A
Plazas, sidewalks, and parking lots	☒ Yes	☐ No	☐ N/A
Discussion / justification if SC-6 not implemented. Clearly identify which sources of runoff pollutants are discussed. Justification must be provided for <u>all</u> "No" answers shown above. Revise to be consistent with Form I-3B			



 Number: 1	Author: bryan	Subject: Callout	Date: 6/17/2022 2:35:37 PM
N/A			
 Number: 2	Author: bryan	Subject: Callout	Date: 6/17/2022 2:36:04 PM
N/A			
 Number: 3	Author: bryan	Subject: Callout	Date: 6/17/2022 2:37:38 PM
Revise to be consistent with Form I-3B			

Summary of PDP Structural BMPs	Form I-6 (PDPs)
Project Identification	
Project Name: Vista Way Homes	
Permit Application Number: TM T21-00002	
PDP Structural BMPs	
All PDPs must implement structural BMPs for storm water pollutant control (see Chapter 5 of the manual). Selection of PDP structural BMPs for storm water pollutant control must be based on the selection process described in Chapter 5. PDPs subject to hydromodification management requirements must also implement structural BMPs for flow control for hydromodification management (see Chapter 6 of the manual). Both storm water pollutant control and flow control for hydromodification management can be achieved within the same structural BMP(s). PDP structural BMPs must be verified by the local jurisdiction at the completion of construction. This may include requiring the project owner or project owner's representative to certify construction of the structural BMPs (see Section 1.12 of the manual). PDP structural BMPs must be maintained into perpetuity, and the local jurisdiction must confirm the maintenance (see Section 7 of the manual). Use this form to provide narrative description of the general strategy for structural BMP implementation at the project site in the box below. Then complete the PDP structural BMP summary information sheet (page 3 of this form) for each structural BMP within the project (copy the BMP summary information page as many times as needed to provide summary information for each individual structural BMP). Describe the general strategy for structural BMP implementation at the site. This information must describe how the steps for selecting and designing storm water pollutant control BMPs presented in Section 5.1 of the manual were followed, and the results (type of BMPs selected). For projects requiring hydromodification flow control BMPs, indicate whether pollutant control and flow control BMPs are integrated or separate. The proposed area of disturbance has been delineated as drainage management areas (DMAs), there are small self-mitigating areas within the DMA, The DCV was estimated by adjusting the runoff factor to account for pervious surfaces that drain to the treatment facility. Harvesting was determined to be unfeasible due to the lack of landscaped areas. The project proposes the use of a proprietary Biofiltration BMPs consisting of a treatment system and an above ground storage system. These devices comply with treatment and flow sizing requirements. Additionally, within the storage system a concrete box with a weir wall and orifice have been proposed to comply with flow control requirements. The weir wall will retain storm events up to the 100-year and the orifice has been sized to comply with pre-developed project site conditions. A pump basin and system will be downstream of the storm water treatment and storage facilities. The treated and stored storm water will be discharge at two locations along Vista Way. Please show self mitigating areas on DMA Exhibit or revise text under (Continue on page 2 as necessary.)	
Form I-6 Page 2 of 4	



Number: 1 Author: bryan Subject: Callout Date: 6/17/2022 3:04:34 PM
Please show self mitigating areas on DMA Exhibit or revise text

Number: 2 Author: bryan Subject: Callout Date: 6/17/2022 3:04:47 PM
under

Structural BMP Summary Information**(Copy this page as needed to provide information for each individual proposed structural BMP)**

Structural BMP ID No. BMP 1

Construction Plan Sheet No. TM

Type of structural BMP:

- ☐ Retention by harvest and use (HU-1)
☐ Retention by infiltration basin (INF-1)
☐ Retention by bioretention (INF-2)
☐ Retention by permeable pavement (INF-3)
☐ Partial retention by biofiltration with partial retention (PR-1)
☒ Biofiltration (BF-1)
☐ Flow-thru treatment control with prior lawful approval to meet earlier PDP requirements (provide BMP type/description in discussion section below)
☐ Flow-thru treatment control included as pre-treatment/forebay for an onsite retention or biofiltration BMP (provide BMP type/description and indicate which onsite retention or biofiltration BMP it serves in discussion section below)
☐ Flow-thru treatment control with alternative compliance (provide BMP type/description in discussion section below)
☒ Detention pond or vault for hydromodification management
☐ Other (describe in discussion section below)

unselect

Purpose:

- ☒ Pollutant control only
☐ Hydromodification control only
☐ Combined pollutant control and hydromodification control
☐ Pre-treatment/forebay for another structural BMP
☐ Other (describe in discussion section below)

Who will certify construction of this BMP?

Provide name and contact information for the party responsible to sign BMP verification forms if required by the [City Engineer] (See Section 1.12 of the manual)

ALTA Consultants

619-749-8818

Who will be the final owner of this BMP?

Property Owner

Who will maintain this BMP into perpetuity?

Property Owner

What is the funding mechanism for maintenance?

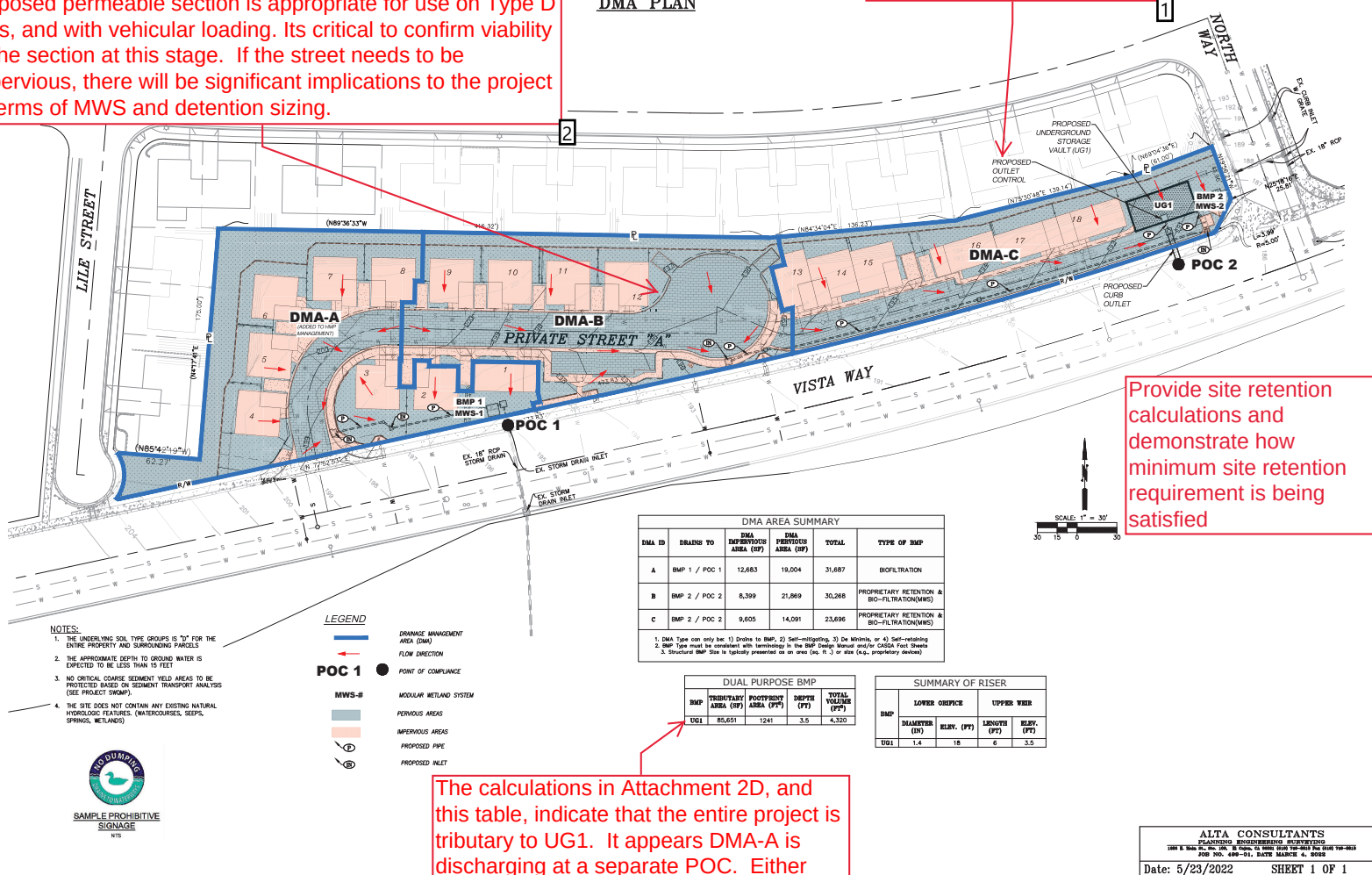
Property Owner



Provide a letter from the soils engineer indicating that the proposed permeable section is appropriate for use on Type D soils, and with vehicular loading. Its critical to confirm viability of the section at this stage. If the street needs to be impervious, there will be significant implications to the project in terms of MWS and detention sizing.

VISTA WAY HOMES DMA PLAN

This appears to be inside the detention system how is this maintained?



Provide site retention calculations and demonstrate how minimum site retention requirement is being satisfied

The calculations in Attachment 2D, and this table, indicate that the entire project is tributary to UG1. It appears DMA-A is discharging at a separate POC. Either route DMA-A to UG1 or provide another detention system in DMA-A to address HMP requirements

Number: 1 Author: bryan Subject: Callout Date: 6/17/2022 4:20:48 PM

This appears to be inside the detention system how is this maintained?

Number: 2 Author: bryan Subject: Callout Date: 6/17/2022 3:56:25 PM

Provide a letter from the soils engineer indicating that the proposed permeable section is appropriate for use on Type D soils, and with vehicular loading. Its critical to confirm viability of the section at this stage. If the street needs to be impervious, there will be significant implications to the project in terms of MWS and detention sizing.

Number: 3 Author: bryan Subject: Text Box Date: 6/17/2022 3:57:40 PM

Provide site retention calculations and demonstrate how minimum site retention requirement is being satisfied

Number: 4 Author: bryan Subject: Callout Date: 6/17/2022 3:47:22 PM

The calculations in Attachment 2D, and this table, indicate that the entire project is tributary to UG1. It appears DMA-A is discharging at a separate POC. Either route DMA-A to UG1 or provide another detention system in DMA-A to address HMP requirements



Modular Wetlands[®] Linear

A Stormwater Biofiltration Solution





Number: 1

Author: bryan

Subject: Text Box

Date: 6/17/2022 4:32:07 PM

[Move to Attachment 1f](#)

SIZING CHART

FLOW-BASED DESIGNS

The Modular Wetlands® Linear can be used in stand-alone applications to meet treatment flow requirements, and since it is the only biofiltration system that can accept inflow pipes several feet below the surface, it can be used in decentralized design applications as well as large central end-of-the-line applications.

Model #	Dimensions	WetlandMEDIA Surface Area (sq.ft.)	Treatment Flow Rate (cfs)
MWS-L-4-4	4'x4'	23	0.052
MWS-L-4-6	4'x6'	32	0.073
✓ MWS-L-4-8	4'x8'	50	0.115 ✓
MWS-L-8-8	8'x8'	100	0.230
✓ MWS-L-8-12	8'x12'	151	0.346 ✓
MWS-L-8-16	8'x16'	201	0.462
MWS-L-8-20	8'x20'	252	0.577
MWS-L-8-24	8'x24'	302	0.693

APPLICATIONS



The Modular Wetlands® Linear has been successfully used on numerous new construction and retrofit projects. The system's superior versatility makes it beneficial for a wide range of stormwater and waste water applications.

INDUSTRIAL

The Modular Wetlands has helped various sites meet difficult EPA-mandated effluent limits for dissolved metals and other pollutants.

RESIDENTIAL

Low to high density developments can benefit from the versatile design of the Modular Wetlands. The system can be used in both decentralized LID design and cost-effective end-of-the-line configurations.

STREETS

The Modular Wetlands is extremely space efficient, and adept to meeting special constraints of existing utilities on retrofit projects.

PARKING LOTS

Parking lots are designed to maximize space and the Modular Wetlands' 4 ft. standard planter width allows for easy integration into parking lot islands and other landscape medians.

COMMERCIAL

Compared to bioretention systems, the Modular Wetlands can treat far more area in less space, meeting treatment and volume control requirements.

More applications include:

- Agriculture
- Reuse
- Low Impact Development
- Waste Water
- Mixed Use



Number: 1

Author: bryan

Subject: Text Box

Date: 6/17/2022 4:32:13 PM

[Move to Attachment 1f](#)

Attachment 1e

Form I-8, Categorization of Infiltration Feasibility Condition

TO BE PROVIDED ON NEXT SUBMITTAL

Along with Form I-8, provide an assessment of infiltration feasibility from the soils engineer, including Worksheet C.4-1.

1





Along with Form I-8, provide an assessment of infiltration feasibility from the soils engineer, including Worksheet C.4-1.

Automated Worksheet B.1: Calculation of Design Capture Volume (V2.0)

Category	#	Description	<i>i</i>	<i>ii</i>	Units
Standard Drainage Basin Inputs	1	Drainage Basin ID or Name	DMA A	DMA B&C	unitless
	2	85th Percentile 24-hr Storm Depth	0.62	0.62	inches
	3	Impervious Surfaces <u>Not Directed to Dispersion Area</u> (C=0.90)	12,683	18,004	sq-ft
	4	Semi-Pervious Surfaces <u>Not Serving as Dispersion Area</u> (C=0.30)			sq-ft
	5	Engineered Pervious Surfaces <u>Not Serving as Dispersion Area</u> (C=0.10)	19,004	35,960	sq-ft
	6	Natural Type A Soil <u>Not Serving as Dispersion Area</u> (C=0.10)			sq-ft
	7	Natural Type B Soil <u>Not Serving as Dispersion Area</u> (C=0.14)			sq-ft
	8	Natural Type C Soil <u>Not Serving as Dispersion Area</u> (C=0.23)			sq-ft
	9	Natural Type D Soil <u>Not Serving as Dispersion Area</u> (C=0.30)			sq-ft
Dispersion Area, Tree Well & Rain Barrel Inputs (Optional)	10	Does Tributary Incorporate Dispersion, Tree Wells, and/or Rain Barrels?	No	No	yes/no
	11	Impervious Surfaces Directed to Dispersion Area per SD-B (Ci=0.90)			sq-ft
	12	Semi-Pervious Surfaces Serving as Dispersion Area per SD-B (Ci=0.30)			sq-ft
	13	Engineered Pervious Surfaces Serving as Dispersion Area per SD-B (Ci=0.10)			sq-ft
	14	Natural Type A Soil Serving as Dispersion Area per SD-B (Ci=0.10)			sq-ft
	15	Natural Type B Soil Serving as Dispersion Area per SD-B (Ci=0.14)			sq-ft
	16	Natural Type C Soil Serving as Dispersion Area per SD-B (Ci=0.23)			sq-ft
	17	Natural Type D Soil Serving as Dispersion Area per SD-B (Ci=0.30)			sq-ft
	18	Number of Tree Wells Proposed per SD-A			#
	19	Average Mature Tree Canopy Diameter			ft
	20	Number of Rain Barrels Proposed per SD-E			#
Initial Runoff Factor Calculation	21	Average Rain Barrel Size			gal
	22	Total Tributary Area	31,687	53,964	sq-ft
	23	Initial Runoff Factor for Standard Drainage Areas	0.42	0.37	unitless
	24	Initial Runoff Factor for Dispersed & Dispersion Areas	0.00	0.00	unitless
	25	Initial Weighted Runoff Factor	0.42	0.37	unitless
Dispersion Area Adjustments	26	Initial Design Capture Volume	688	1,032	cubic-feet
	27	Total Impervious Area Dispersed to Pervious Surface	0	0	sq-ft
	28	Total Pervious Dispersion Area	0	0	sq-ft
	29	Ratio of Dispersed Impervious Area to Pervious Dispersion Area	n/a	n/a	ratio
	30	Adjustment Factor for Dispersed & Dispersion Areas	1.00	1.00	ratio
Tree & Barrel Adjustments	31	Runoff Factor After Dispersion Techniques	0.42	0.37	unitless
	32	Design Capture Volume After Dispersion Techniques	688	1,032	cubic-feet
	33	Total Tree Well Volume Reduction	0	0	cubic-feet
Results	34	Total Rain Barrel Volume Reduction	0	0	cubic-feet
	35	Final Adjusted Runoff Factor	0.42	0.37	unitless
	36	Final Effective Tributary Area	13,309	19,967	sq-ft
	37	Initial Design Capture Volume Retained by Site Design Elements	0	0	cubic-feet
	38	Final Design Capture Volume Tributary to BMP	688	1,032	cubic-feet

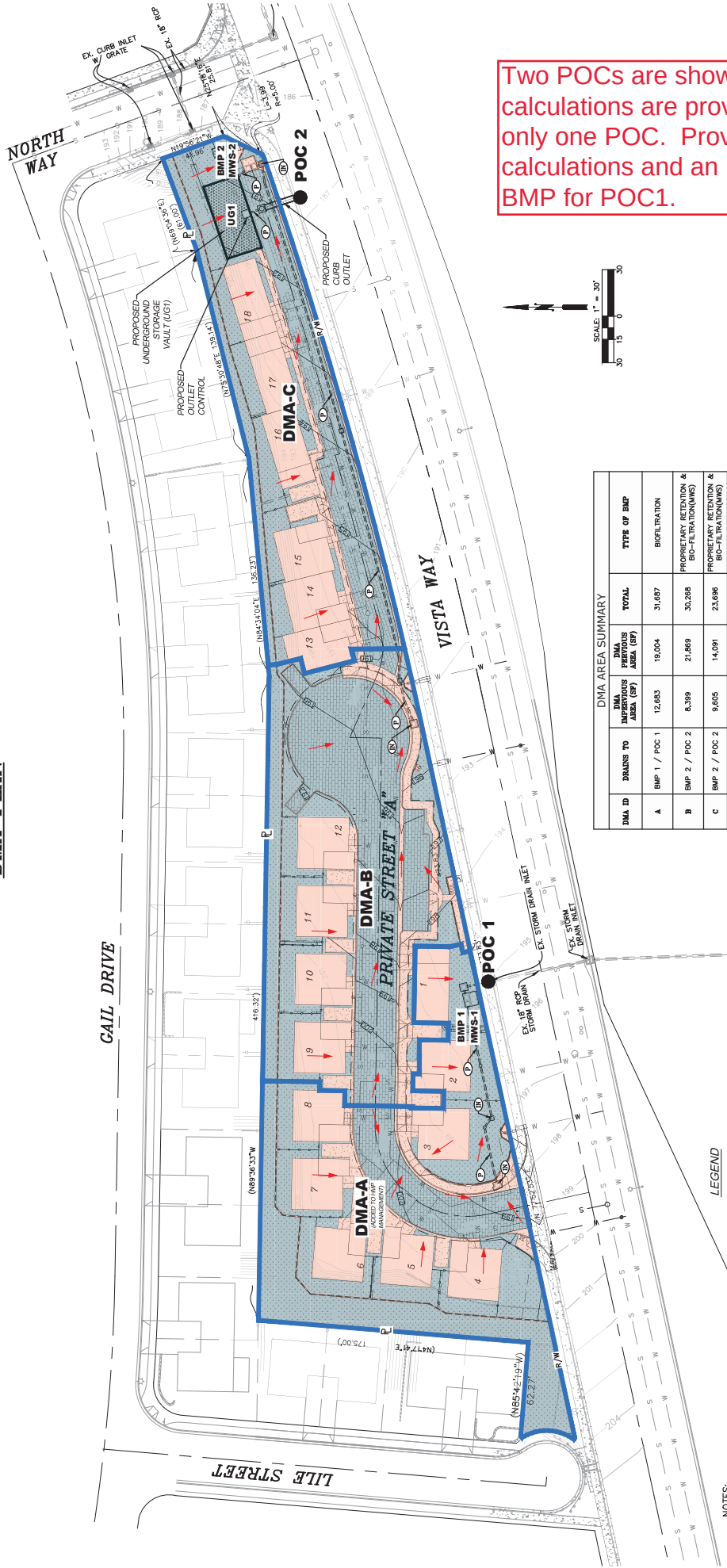
No Warning Messages

Demonstrate that minimum site retention is provided, use the County of San Diego Automated Stormwater Pollutant Control Worksheets V2.0 to calculate retention volume.



Demonstrate that minimum site retention is provided, use the County of San Diego Automated Stormwater Pollutant Control Worksheets V2.0 to calculate retention volume.

VISTA WAY HOMES
DMA PLAN



Two POCs are shown but calculations are provided for only one POC. Provide calculations and an HMP BMP for POC1.

DMA AREA SUMMARY				
DMA ID	TRAFFIC TO BMP	DMA IMPERVIOUS AREA (SF)	DMA PAVED AREA (SF)	TOTAL TYPE OF BMP
A	BMP 1 / POC 1	12,653	19,004	31,657 BIO-FILTRATION
B	BMP 2 / POC 2	8,399	21,869	30,268 PROPRIETARY RETENTION & BIO-FILTRATION(NWS)
C	BMP 2 / POC 2	9,605	14,091	23,696 PROPRIETARY RETENTION & BIO-FILTRATION(NWS)

1. DMA Type can only be: 1) Detention to BMP, 2) Self-retention, 3) Detention, or 4) Self-retention.
2. BMP Type must be consistent with terminology in the BMP Design Manual and/or CADA Test Sheet.
3. Structural BMP Size is typically presented as an area (sq. ft.) or size (e.g., proprietary device).

SUMMARY OF RISER				
BMP	DIAMETER (IN)	RISER (FT)	LENGTH (FT)	RISER (FT)
UG1	1.4	18	6	3.5

DUAL PURPOSE BMP				
	TRIBUTARY AREA (SF)	FOOTPRINT AREA (FT²)	DEPTH (FT)	TOTAL VOLUME (FT³)
UG1	85,651	1241	3.5	4,320

LEGEND

— DRAINAGE MANAGEMENT
— FLOW DIRECTION
● POINT OF COMPLIANCE
POC 1
NWS-#
MODULAR WETLAND SYSTEM
PERVIOUS AREAS
IMPERVIOUS AREAS
PROPOSED PIPE
PROPOSED INLET

- NOTES:**
- THE UNDERLYING SOIL TYPE GROUPS IS "T" FOR THE ENTIRE PROPERTY AND SURROUNDING PARCELS
 - THE APPROXIMATE DEPTH TO GROUND WATER IS EXPECTED TO BE LESS THAN 15 FEET
 - NO CRITICAL COARSE SEDIMENT YIELD AREAS TO BE IDENTIFIED BASED ON SEDIMENT TRANSPORT ANALYSIS (SSP) FOR THE SITE
 - THE SITE DOES NOT CONTAIN ANY EXISTING NATURAL HYDROLOGIC FEATURES (WATERCOURSES, SEEPS, SPRINGS, WETLANDS)



SAMPLE PROHIBITIVE SIGNAGE
NTS



Two POCs are shown but calculations are provided for only one POC. Provide calculations and an HMP BMP for POC1.

Areas Draining to BMP						HMP Sizing Factors	Minimum BMP Size
DMA Name	Area (sf)	Pre Project Soil Type	Pre-Project Slope	Post Project Surface Type	Area Weighted Runoff Factor (Table G.2-1) ¹	Volume	Volume (CF)
DMA 1 impervious	12,683	D	Moderate	Concrete	1.0	0.12	1522
DMA 1 pervious	19,004	D	Moderate	Landscape	0.1	0.12	228
DMA 2 impervious	8,399	D	Moderate	Concrete	1.0	0.12	1008
DMA 2 pervious	21,869	D	Moderate	Landscape	0.1	0.12	262
DMA 3 impervious	9,605	D	Moderate	Concrete	1.0	0.12	1153
DMA 3 pervious	14,091	D	Moderate	Landscape	0.1	0.12	169
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
BMP Tributary Area	85,651					Minimum BMP Size	4342

1

Standard Cistern Depth (Overflow Elevation)	3.5	ft
Provided Cistern Depth (Overflow Elevation)	3.5	ft
Minimum Required Cistern Footprint	1241	CF

* Assumes standard configuration

Notes:

1. Runoff factors which are used for hydromodification management flow control (Table G.2-1) are different from the runoff factors used for pollutant control BMP sizing (Table B.1-1). Table references are taken from the San Diego Region Model BMP Design Manual.

Describe the BMP's in sufficient detail in your PDP SWQMP to demonstrate the area, volume, and other criteria can be met within the constraints of the site.

BMP's must be adapted and applied to the conditions specific to the development project such as unstable slopes or the lack of available head.

Designated Staff have final review and approval authority over the project design.

This BMP Sizing Spreadsheet has been updated in conformance with the San Diego Region Model BMP Design Manual, May 2018. For questions or concerns please contact the jurisdiction in which your project is located.

Please provide naming consistent with the rest of the report

Provide drawdown calculations

ATTACHMENT 4
Copy of Plan Sheets Showing Permanent Storm Water BMPs

Provide appropriate plan sheets here. ¹





Number: 1

Author: bryan

Subject: Text Box

Date: 6/17/2022 4:47:00 PM

Provide appropriate plan sheets here.

TENTATIVE MAP T21-00002	
General Notes	

[illegible]

RIGHT END VIEW

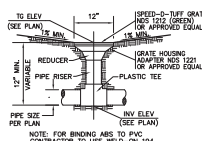
REQUIRED INSTEAD: VOLUME (C)

WETLANDS
THE INFORMATION IS PROPERTY OF FORD MOTOR CREDIT. NO PART MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS.

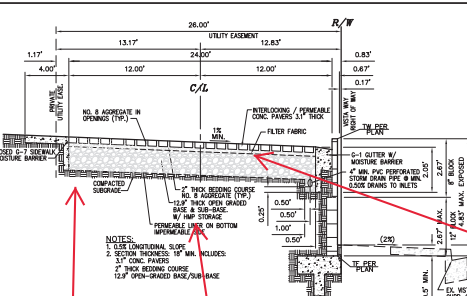
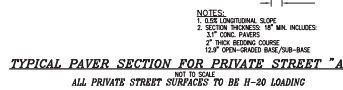
TO ELEV
(SEE PLAN)

12"

SPEED-O-TUFF GRATE
NDS 1212 (GREEN)
OR APPROVED EQUAL



PRIVATE
LANDSCAPE AREA DRAIN DETAIL



NOT TO SCALE
PRIVATE DRIVEWAY SURFACES TO BE H-20 LOADING

Is this intended to be an HMP BMP?

Provide a letter from the soils engineer indicating that the proposed permeable section is appropriate for use on Type D soils, and with H-20 vehicular loading. Its critical to confirm viability of the section at this stage. If the street needs to be impervious, there will be significant implications to the project in terms of MWS and detention sizing.

- [illegible]

Filter fabric will clog, revise section to remove fabric

ENGINEER OF WORK

BARTOLOME J. PASTOR, RCE 38808
DATED: MAY , 2022



T21-00002
D21-00005
B21-00003

ALTA CONSULTANTS PLANNING ENGINEERING SURVEYING 1885 N. Main St., Ste. 100, St. Cajon, CA 92081 (916) 742-8811 Fax (916) 742-8852 JOB NO. 490-01, DATE MAY 24, 2008	
Date: 5/24/2022	SHEET 10 OF 15

☰ Number: 1 Author: bryan Subject: Callout Date: 6/17/2022 4:00:37 PM

Filter fabric will clog, revise section to remove fabric

☰ Number: 2 Author: bryan Subject: Callout Date: 6/17/2022 4:03:43 PM

Is this intended to be an HMP BMP?

☰ Number: 3 Author: bryan Subject: Callout Date: 6/17/2022 4:03:05 PM

Provide a letter from the soils engineer indicating that the proposed permeable section is appropriate for use on Type D soils, and with H-20 vehicular loading. Its critical to confirm viability of the section at this stage. If the street needs to be impervious, there will be significant implications to the project in terms of MWS and detention sizing.