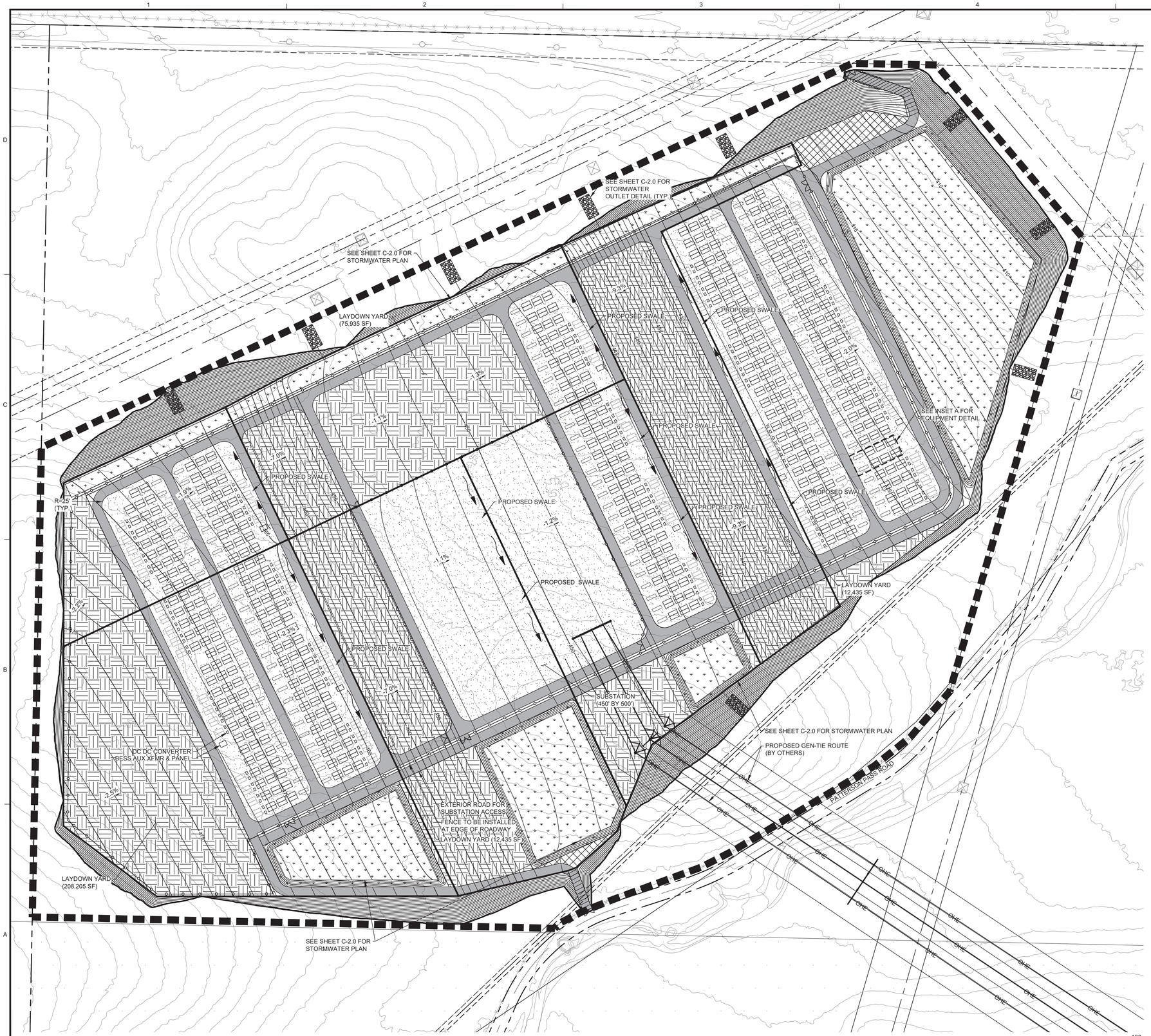
DOCKETED	
Docket Number:	24-OPT-04
Project Title:	Potentia-Viridi Battery Energy Storage System
TN #:	258049
Document Title:	Project Design Layout and Elevations
Description:	Provides detailed civil design plans for the BESS facility
Filer:	Jennifer Dorgan
Organization:	Allen Matkins Leck Gamble Mallory & Nats
Submitter Role:	Applicant Representative
Submission Date:	7/26/2024 11:06:27 AM
Docketed Date:	7/26/2002

Appendix 2A

Project Design Layout and Elevations



LEGEND

- GRAVEL ACCESS ROAD
- GRAVEL
- STORMWATER/ LID AREA
- LAYDOWN AREA
- OTHER

EARTHWORK QUANTITIES
CUT = 588,018 CUBIC YARDS
FILL = 344,900 CUBIC YARDS
NET = 243,118 CUBIC YARDS (EXPORT)

TOTAL = 932,918 CUBIC YARDS

NOTE:
1. EARTHWORK QUANTITIES ARE ESTIMATES ONLY AND ARE NOT ADJUSTED FOR SHRINKAGE, CONSOLIDATION, AND CLEARING LOSS FACTORS. THESE QUANTITIES ARE TO BE USED FOR BONDING AND PERMIT PURPOSES ONLY.
2. CUT/FILL SLOPES ARE SHOWN NO STEEPER THAN 3:1.
3. PRELIMINARY EARTHWORK QUANTITIES ASSUME ONSITE MATERIAL IS ADEQUATE FILL. ASSUMPTIONS ARE TO BE CONFIRMED BASED ON GEOTECH RECOMMENDATIONS.
4. EARTHWORK QUANTITIES DO NOT INCLUDE GEN-TIE LINE.

SYSTEM SUMMARY	
ESS TYPE	SOLBANK
ESS QUANTITY	1000
PCS UNITS	140
BATTERY CAPACITY	400 MW/3200 MWH
BESS YARD	13.3 ACRES
PROJECT SUBSTATION	5.5 ACRES
ACCESS ROADS	6.6 ACRES
LAYDOWN YARD (INCLUDING O&M BUILDING)	15.2 ACRES
STORMWATER AREAS*	9.3 ACRES
STORMWATER OUTFALL	0.6 ACRES
OTHER**	7.2 ACRES
TOTAL DISTURBED AREA***	57.7 ACRES

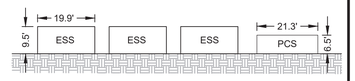
NOTE:
* PRELIMINARY STORMWATER TREAMENT AND STORAGE SIZING BASED ON ALAMEDA COUNTY STANDARDS
** INCLUDES SLOPED AREAS
*** TO GRADING DAYLIGHT

ABBREVIATIONS:

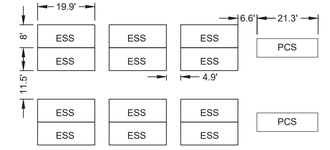
ESS	ENERGY STORAGE SYSTEM
PCS	POWER CONVERSION SYSTEM
POI	POINT OF INTERCONNECTION
XMFR	TRANSFORMER

GENERAL NOTES:
FUTURE STEEL FRAME O&M BUILDING (100'X50') WILL BE LOCATED WITHIN PROPOSED LAYDOWN YARD. EXACT BUILDING SIZE AND LOCATION TBD.

FIRE NOTES:
1) FIRE APPARATUS ACCESS ROADS SHALL HAVE AN UNOBSTRUCTED WIDTH OF NOT LESS THAN 20 FEET.
2) INTERNAL RADII = 25' MINIMUM.



INSET A - ELEVATION



INSET A - PLAN

UTILITY STATEMENT
LOCATION OF EXISTING UNDERGROUND UTILITIES HAVE BEEN TAKEN FROM DRAWINGS AND FIELD LOCATES SUPPLIED BY THE APPROPRIATE UTILITY COMPANIES. UTILITY LOCATIONS SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY. PRIOR TO BEGINNING ANY CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EACH UTILITY.

100 50 0 100 200
SCALE: 1 INCH = 100 FEET

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1939 Harrison Street, Suite 320
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ph 510.251.9578
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POTENTIA-VIRIDI BATTERY ENERGY STORAGE SYSTEM

LEVY ALAMEDA, LLC

NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION

PROJ. NO.	232059
DRAWN	LB
CHECKED	RB
DATE	7/15/24

SHEET TITLE:

CIVIL SITE PLAN

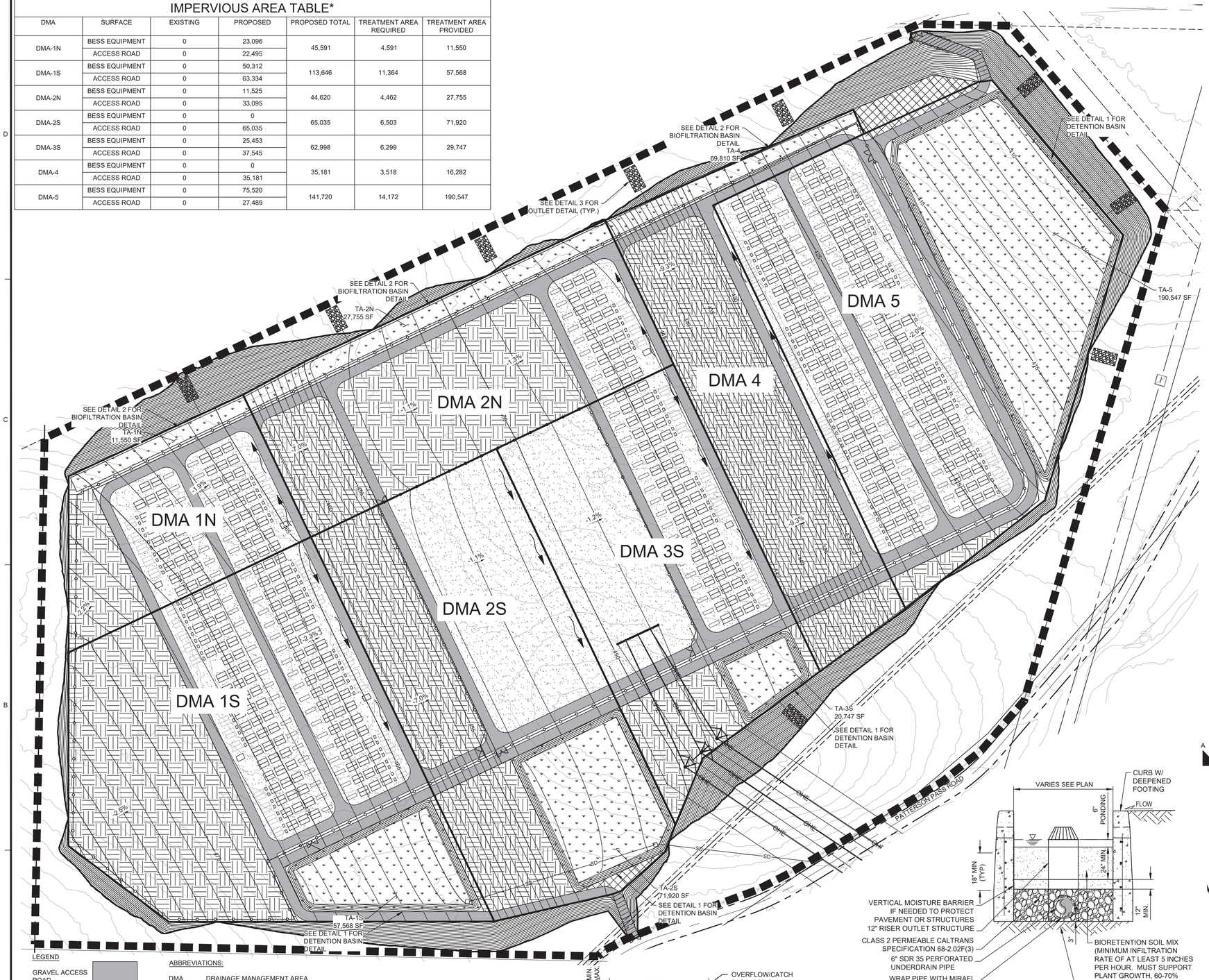
SHEET NO:

C-1.0

SHEET 4 OF 7

IMPERVIOUS AREA TABLE*

DMA	SURFACE	EXISTING	PROPOSED	PROPOSED TOTAL	TREATMENT AREA REQUIRED	TREATMENT AREA PROVIDED
DMA-1N	BESS EQUIPMENT	0	23,096	45,591	4,591	11,550
	ACCESS ROAD	0	22,495			
DMA-1S	BESS EQUIPMENT	0	50,312	113,646	11,364	57,568
	ACCESS ROAD	0	63,334			
DMA-2N	BESS EQUIPMENT	0	11,525	44,620	4,462	27,755
	ACCESS ROAD	0	33,095			
DMA-2S	BESS EQUIPMENT	0	0	65,035	6,503	71,920
	ACCESS ROAD	0	65,035			
DMA-3S	BESS EQUIPMENT	0	25,453	62,998	6,299	29,747
	ACCESS ROAD	0	37,545			
DMA-4	BESS EQUIPMENT	0	0	35,181	3,518	16,282
	ACCESS ROAD	0	35,181			
DMA-5	BESS EQUIPMENT	0	75,520	141,720	14,172	190,547
	ACCESS ROAD	0	27,489			

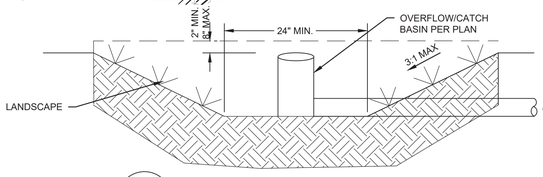


LEGEND

- GRAVEL ACCESS ROAD
- GRAVEL
- STORMWATER/ LID AREA
- LAYDOWN AREA
- OTHER
- SWALE

ABBREVIATIONS:

DMA DRAINAGE MANAGEMENT AREA
TA TREATMENT AREA

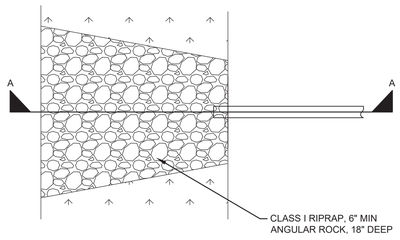


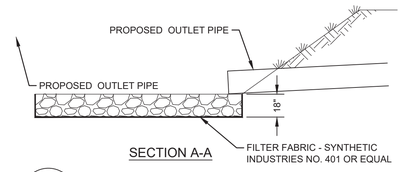
1 – DETENTION BASIN

SCALE: NTS

2 – BIORETENTION BASIN

SCALE: NTS





SECTION A-A

3 – RIPRAP OUTLET PROTECTION

SCALE: NTS

100 50 0 100 200

SCALE: 1 INCH = 100 FEET

PRELIMINARY HYDROLOGY CALCS**

DMA	STORM EVENT	INTENSITY (IN/HR)	Q-PRE (CFS)	Q-POST (CFS)	DELTA-Q (CFS)
DMA-1N	5-YEAR	1.15	0.8	2.7	1.9
	15-YEAR	1.50	1.0	3.5	2.4
	25-YEAR	1.66	1.1	3.8	2.7
	100-YEAR	2.05	1.4	4.7	3.3
DMA-1S	5-YEAR	1.06	1.9	6.5	4.6
	15-YEAR	1.38	2.5	8.4	6.0
	25-YEAR	1.52	2.7	9.3	6.6
	100-YEAR	1.88	3.4	11.5	8.1
DMA-2N	5-YEAR	1.15	1.4	4.7	3.3
	15-YEAR	1.50	1.8	6.1	4.3
	25-YEAR	1.66	2.0	6.8	4.8
	100-YEAR	2.05	2.5	8.3	5.9
DMA-2S	5-YEAR	1.21	2.0	6.9	4.9
	15-YEAR	1.58	2.7	9.0	6.4
	25-YEAR	1.74	2.9	10.0	7.0
	100-YEAR	2.16	3.6	12.4	8.7
DMA-3S	5-YEAR	1.02	1.4	4.6	3.3
	15-YEAR	1.32	1.8	6.0	4.2
	25-YEAR	1.46	1.9	6.6	4.7
	100-YEAR	1.81	2.4	8.2	5.8
DMA 4	5-YEAR	0.73	0.8	2.6	1.8
	15-YEAR	0.95	1.0	3.3	2.4
	25-YEAR	1.05	1.1	3.7	2.6
	100-YEAR	1.30	1.3	4.6	3.2
DMA 5	5-YEAR	1.45	3.4	11.4	8.1
	15-YEAR	1.89	4.4	14.9	10.5
	25-YEAR	2.08	4.8	16.4	11.6
	100-YEAR	2.59	6.0	20.4	14.4

VOLUME SIZING

DMA	REQUIRED STORAGE VOLUME (CF)	TREATMENT AREA PROVIDED	DEPTH REQUIRED
DMA-1N	72,284	11,550	6.3
DMA-1S	175,245	57,568	3.0
DMA-2N	127,235	27,755	4.6
DMA-2S	188,346	71,920	2.6
DMA-3S	124,989	29,747	6.0
DMA-4	69,810	16,282	4.3
DMA-5	31,758	190,547	1.6

* PRELIMINARY LID CALCULATIONS ARE CONSERVATIVELY BASED ON 10% OF TOTAL IMPERVIOUS AREA.

** HYDROLOGY CALCULATIONS ARE PER ALAMEDA COUNTY HYDROLOGY & HYDRAULICS MANUAL 2016. RAINFALL INTENSITY IS BASED ON A CALCULATED TIME OF CONCENTRATION (T_c) AND MEAN ANNUAL PRECIPITATION OF 12 INCHES PER ALAMEDA CO. HYDROLOGY & HYDRAULICS MANUAL.

NOTE:
PER CALCULATIONS ABOVE, THE POST-CONSTRUCTION RUNOFF RATES FOR THE 100-YEAR STORM EXCEED 5 CFS SO A PRELIMINARY ON-SITE STORM RUNOFF DETENTION PLAN WILL BE REQUIRED PER ALAMEDA COUNTY GUIDELINES.

UTILITY STATEMENT
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REV	DATE	DESCRIPTION

PROJ. NO.	232059
DRAWN	LB
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DATE	7/15/2024

SHEET TITLE:

PRELIMINARY STORMWATER PLAN

SHEET NO:

C-2.0

SHEET 4 OF 7