Prelimanary Drainage Study

FOR:

3710 Vista Way
Oceanside, CA 92056
Tentative Map

Prepared for:
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Project Site Address:
3710 Vista Way
Oceanside, CA 92056
APN: 165-493-47

Preparation Date:
March 2021

Revision Date:
-

Engineer of Work: Bartolome J. Pastor
RCE. 38606

Table of Contents

1.1 INTRODUCTION

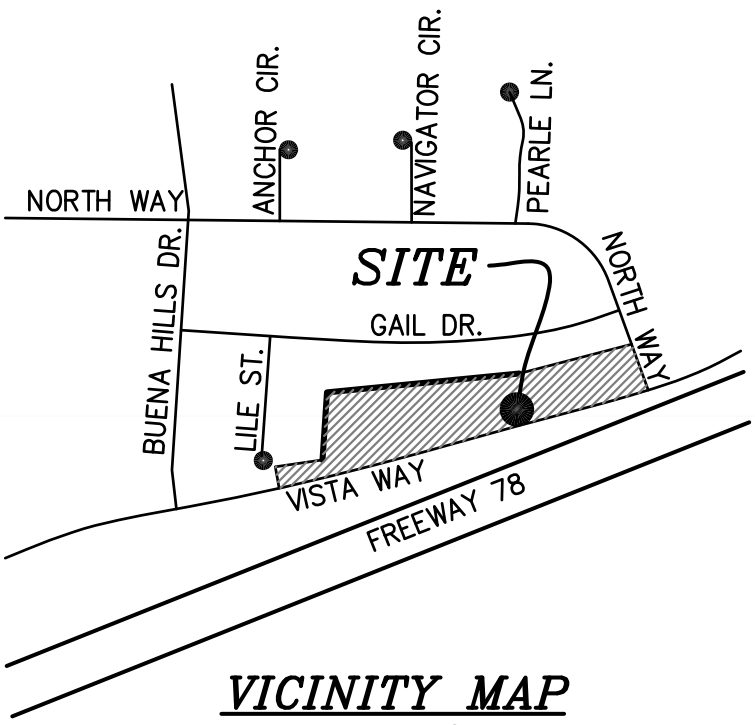
This section describes the project, Vista Way Homes (20 residential units). This project is proposed to be a *"Common Intrest Development for Senior Housing"*. This project will include affordable housing and bonus density (see attachment 1). CCR's will be prepared for this project prior to ocupancy. These CCR's will cover the maintenace of drainage and storm water facilities for this site. The project is on 1.97-acre lot with no existing visible improvements other than some retaining walls. This site was previously a part of a residential development with homes and streets. These improvements have been removed from the site.

The drainage study is based on the County of San Diego Drainage Manual, January 2017. The Rational Method is used to calculate pre and post development runoff for this project. The 6-hour precipitation is as calculated in the Intensity-Duration Design Chart (see section 3.2). The Soil classification used in this study is "D". The pre-development coefficient of runoff "C" values for this project are based on the previous residential single family development C=0.55. The post-development coefficient of runoff "C" values for this project are based on the County of San Diego's Evaluation of Rational Method "C" Values see table 3.1b.

Due to the preliminary nature of this project no detention calculations have been included at this time. Once the City of Oceanside and other pertinent agencies have reviewed the project design, detention calculations and storage volumes can be calculated and added to this report.

1.2 PROJECT LOCATION

The project is located at 3710 Vista Way adjacent to 78 Freeway. The project is located along the north side of Vista Way, at the northwest corner of Vista Way and North Way. The 78 freeway runs parrallel with Vista Way's southerly right-of-way. Access to the site is from Vista Way.



VICINITY MAP

NOT TO SCALE

1.3 PROJECT DESCRIPTION VISTA WAY HOMES

The project site has been previously developed. The previous residential development that was on this site has been removed. The site now is vacante as shown on exhibit "A". All pre-development calculations are based on the previous residentian use. The existing storm drain facilities should have been designed to receive runoff from the previous development. We are using a coeffiecent of runoff of C=055 for the pre-development hydrology which corresponds to single family residental with soil type "D" that should have been used to design the existing storm drain system.

There is an existing manufactured slope along the north and west side of the project with several large existing trees. The remainder of the site is relatively flat. The site slopes west to east towards the southeast corner of the site (the northwest corner of Vista Way and North Way) where there is an existing cross-gutter that conveys runoff easterly across North Way. Both Vista Way and North Way are fully improved streets no new street dedications or improvements are proposed by this project. The only improvements proposed within the public rigt-of-way are utility connections, driveway cuts and private storm drain connections to the existing public storm drain facilities. No offsite drainage flows onto the site, except at the west side of the project where a small amount of slope within the public right of way flows onto the site. This offsite area does not include any hard scape. Since this site does not have any off-site drainage flowing onto it except as described and none of the improvements in the right-of-way proposed by this project will measurably increase runoff the watershed area is bounded by the project boundary and the right-of-way including the small offsite right-of-way area on the west side of the site.

Pre-Development see Exhibit A

The Pre-Development runoff sheet flows to the existing streets. This sheet flow goes into (3) three public storm drain facilities. The west portion of the site sheet flows to the Vista Way gutter where it is collected by an existing inlet (Existing Curb Inlet A). A small area located at the northeast corner of the site sheet flows to North Way gutter and into an existing inlet (Existing Curb Inlet B). The remainder of the site sheet flows to the Vista Way and curb return gutter at the southeast corner of the site where it enters the existing cross gutter which flows easterly across North Way.

Post-Development see Exhibit B

The Post-development drainage will also flow to the (3) three public drainage facilities descrbed in the pre-development discussion above. The proposed site improvements for this project will collect the majority of the site runoff on-site where it will then be conveyed to the existing public storm drain facilities.

A portion of the site will continue to sheet flow into the existing gutters. The development of this site requires several retaining walls. Retaining walls will be installed parrallel with both the Vista Way and North Way. To keep the footings on private

property there is a minimum of 2 inch setback from the right-of-way to the face of wall (driange basins A3, B2, portion of B3 & D1). Also there are landscped areas that contnue to sheet flow to the Vista Way one at the curb return (portion of B3) and a larger area at the west end of the site (A1). Area B2 also includes a slope area behind the retaining wall. Area B4 is the portion of the sidewalk constructed for the emergency access driveway and sheet flows to the gutter.

The on-site drainage that is collected and treated prior to entering the public storm drain facilities as folows:

Area A: area A1+A2+A3 are located at the west end of the site and has an equivalent area to P1. These areas all drain to the Existing Curb Inlet “A”. Areas A1 & A3 sheet flow to the Vista Way gutter which conveys their runoff to Existing Curb Inlet “A”. Area A2 flows to Existing Curb Inlet “A” outletting into the inlet through a private 8” pvc pipe connected to the back of the inlet. Area A2a units 5-8 sheet flow into a paver swale in driveway “B”. The paver swale directs the runoff south where there are aditional pavers and a slot drain located at the back of sidewalk which collects the runoff from area A2a in a gravel layer under the pavers for flow control. The detained runoff enters a modified D-9 cleanout with a sump pump. The detained A2a detained runoff is pumped to node 8. Area A2b through A2e will have gravel storage areas under paver patios for units 1-4 for flow control. All detained runoff from these areas gravity flows to a proposed modular wetland for pollution control the outlets as described above to Existing Curb Inlet “A”.

Area B: area B1+B2+B3+B4 are located at the center and east end of the site. These areas all drain to the Existing Cross Gutter. Areas B2, B3 & B4 sheet flow to the Vista Way & curb return gutter which conveys their runoff to Existing Cross Gutter. Area B1 flows to a proposed D-25 curb outlet then the B1 runoff flows easterly in the Vista Way gutter to the existing cross gutter. Area B1a units 9-12 sheet flow into a paver swale in driveway “B”. The paver swale directs the runoff east to a parking area surfaced in pavers. There is a gravel layer under these pavers that the runoff from area B1a flows for flow control. Area B1b units 13-14 sheet flow into a paver swale the south to a slot drain located at the back of sidewalk which collects the runoff from area B1b. The B1b runoff enters a modified D-9 cleanout with a sump pump. The B1b runoff is pumped to node 17 into the gravel layer under the parking area pavers for flow control. From there the combinded detained B1a & B1b runoffs enters the Modular Wetland for Pollution Control. The detained runoff the flows south to the D-25 curb outlet.

Area C1: area C1 is located at the east end of the site. This area drains to Existing Curb Inlet “B” outletting into the inlet through a private 8” pvc pipe connected to the back of the inlet. Area A1 units 15-20 sheet flow into a paver swale in driveway “B”. The paver swale directs the runoff south where there are aditional pavers in front of unit 20 which collects the runoff from in a gravel layer under the pavers for flow control. The gravel layer will be sized so that the portion of C1 east of these pavers that do not flow to these pavers flow control is included. The area of C1 east of the pavers flows through a paver swale and a slot drain located at the back of sidewalk which collects the runoff from area

C1. The detained runoff enters a modified D-9 cleanout with a sump pump. The detained C1 runoff is pumped to Modular Wetland for pollution control. The Modular Wetland outlets through gravity flow in an 8" pvc as described above to Existing Curb Inlet "A"

2. HYDRO-MODIFICATION

Hydro-Modification is required for this project. See this project's SWQMP for Hydro Modification.

3. PROCEDURE

In preparation of the pre-development hydrology our calculations are based on the rational method with coefficient of runoff C=0.55 for the previous single-family development. The total pre-development runoff is Q=5.04 CFS (100-year storm frequency). See Table 3.3a for a summary of 100, 50, 10, 5 & 2-year storm frequency runoff values

The post-development runoff coefficients are calculated using the County of San Diego's *Evaluation Ration Method "C" Values* method per table 3.2b. The initial time of concentration is based on urban areas overland time of flow curves. The total post-development runoff is Q=7.11 CFS (100-year storm frequency). See table 3.3b for a summary of 100, 50, 10, 5 & 2-year storm frequency runoff values.

For a comparison of pre to post development 100, 50, 10, 5 & 2-year storm frequency runoff values see table 3.4c.

3.1 Peak Flows (P6)

Using the Isopluvial Charts the Peak Flows used for this project are as follows:

Table 3.1a: Peak Flows Rainfall Event P24 (24 Hours)				
100 YR	50 YR	10 YR	5 YR	2 YR
5.00	4.50	3.25	2.50	2.00

Table 3.1b: Peak Flows Rainfall Event P6 (6 Hours)				
100 YR	50 YR	10 YR	5 YR	2 YR
2.80	2.50	1.80	1.40	1.10

Table 3.1c: Ratio P6/P24				
100 YR	50 YR	10 YR	5 YR	2 YR
56.0%	55.6%	55.4%	56.0%	55.0%
Adjusted P6				
2.80	2.50	1.80	1.40	1.10

3.2 Coefficient of Runoff "C" Values

Soil Type "D": Cp= 0.35

The Pre-Development "C" values for this site is based on the previous Residential Single family development and is C=0.55.

Table 3.3a shows the % impervios for the site per Exhibit "A"

Table 3.2a: Pre-Development "C" Values							
Drainage Basin	Area In AC	Area In SF	Impervious Area	% Imp.	Pervious Area	% Per.	"C" Value
P1	0.73	31,644	90	0%	31,554	100%	0.55
P2	1.24	53,813	9	0%	53,804	100%	0.55
P3	0.01	342	0	0%	342	100%	0.55
Total	1.97	85,799	98	0%	85,701	100%	0.55

The Post-development "C" Values for this site were determined using Equation below included in the County of San Diego "Evaluation of Rational Method "C" Values"

Equation 1: C=0.90(% impervious) + Cp(1-%impervious)

To determine the % impervious for the various drainage basins for this site the See Table 3.3b.

Table 3.2b: Post-Development "C" Values

Drainage Basin	Area In AC	Area In SF	Impervious Area	% Imp.	Pervious Area	% Per.	"C" Value
A1	0.06	2,487	43	2%	2,444	98%	0.36
A2	0.67	29,097	12,271	42%	16,826	58%	0.58
A3	0.00	60	0	0%	60	100%	0.35
A	0.73	31,644	12,314	39%	19,330	61%	
B1	0.64	27,786	15,967	57%	11,819	43%	0.67
B2	0.03	1,342	197	15%	1,145	85%	0.43
B3	0.01	273	6	2%	267	98%	0.36
B4	0.00	31	31	100%	0	0%	0.90
B	0.68	29,432	16,201	55%	13,231	45%	
C1	0.57	24,719	15,043	61%	9,676	39%	0.68
D1	0.00	4	0	0%	4	100%	0.35
C+D	0.57	24,723	15,043	61%	9,680	39%	

Table 3.2c: Post-Development Sub Basins

Drainage Basin	Area In AC	Area In SF	Drainage Basin	Area In AC	Area In SF
A2a	0.47	20,300	B1a	0.47	20,583
A2b	0.05	2,065	B1b	0.17	7,203
A2c	0.05	2,167	B1	0.64	27,786
A2d	0.05	2,168	C1	0.57	24,719
A2e	0.06	2,397	D1	0.00	4
A2	0.67	29,097			

3.3 Summary of Runoff

Table 3.3a: Pre-Development Runoff					
Drainage Basin	Q 100 CFS	Q 50 CFS	Q 10 CFS	Q 5 CFS	Q 2 CFS
P1	2.47	2.21	1.59	1.24	0.97
P2	2.51	2.24	1.61	1.25	0.98
P3	0.06	0.06	0.04	0.03	0.03
Total	5.04	4.50	3.24	2.52	1.98

Table 3.3b: Post-Development Undetained Runoff					
Drainage Basin	Q 100 CFS	Q 50 CFS	Q 10 CFS	Q 5 CFS	Q 2 CFS
A1	0.11	0.10	0.07	0.06	0.04
A2	0.00	1.78	1.27	0.98	0.79
A3	2.00	0.00	0.00	0.00	0.00
A	2.11	1.88	1.34	1.03	0.83
B1	3.00	2.68	1.93	1.50	1.18
B2	0.05	0.05	0.03	0.03	0.02
B3	0.01	0.01	0.00	0.00	0.00
B4	0.01	0.01	0.01	0.01	0.00
B	3.08	2.75	1.98	1.54	1.21
C1	1.92	1.72	1.24	0.96	0.75
D1	0.00	0.00	0.00	0.00	0.00
C+D	1.92	1.72	1.24	0.96	0.75
Total	7.11	6.34	4.55	3.53	2.79

Table 3.3c: Comparison of Pre to Post Develoment Runoffs						
Drainage Basin	Area In SF	Q 100 CFS	Q 50 CFS	Q 10 CFS	Q 5 CFS	Q 2 CFS
P1	31,644	2.47	2.21	1.59	1.24	0.97
A	31,644	2.11	1.88	1.34	1.03	0.83
Pre-Post	0	0.36	0.33	0.25	0.20	0.14
P2	53,813	2.51	2.24	1.61	1.25	0.98
B	29,432	3.08	2.75	1.98	1.54	1.21
Pre-Post	24,381	-0.57	-0.51	-0.37	-0.29	-0.22
P3	342	0.06	0.07	0.06	0.03	0.03
C + D	24,723	1.92	1.72	1.24	0.96	0.75
Pre-Post	-24,381	-1.86	-1.64	-1.18	-0.93	-0.73
Total Pre-Post	0	-2.06	-1.82	-1.30	-1.01	-0.81

4. CONCLUSION

The existing drainage pattern is altered. Prior to development this site sheet flowed to Vista Way & North Way gutters generating a runoff of Q=5.04 CFS (100-Year Frequency) This project proposes to split the site drainage into (3) drainage basins as described in 1.3 Post-Development see Exhibit B narative. The total post development runoff is Q=7.11 CFS (100-Year Frequency) which is 7.11 CFS-5.04 CFS=2.07 CFS increase in runoff. This increase in runoff will require on-site detention. Once the City of Oceanside and other pertinent agencies have reviewed the project design, detention calculations and storage volumes can be calculated and added to this report.

5. REFERENCES

This report has been prepared in accordance with current City of Oceanside regulations and procedures. The following have been used in preparation of this study:

- County of San Diego Drainage Design Manual, January 2017
- Handbook of Hydraulics (7^{th} Edition), Baxter and King

The calculations are based on the Rational Method.

APPENDIX 1
Hydrology Calculations

PRE-DEVELOPMENT HYDROLOGY

Project Name: TPM for 3710 Vista Way

Location: Oceanside

*INTENSITY-DURATION DESIGN CHART

Date: March 18, 2021

Pre-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT A

Frequency = 100 Yr. Storm

P6 = 2.80

NODE		**Watershed**		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA P1																		
							Elev. Node 1	230.0		Dist. Travel =	250.00							
							Elev. Node 2	196.0										
							Elev. Delta	34.00										
A	4	P1	0.73	OS				13.60%			250.00	6.56	6.56	6.19	0.55	0.40	2.47	
Node 4 Existing Curb Inlet A																		
WATERSHED AREA P2																		
							Elev. Node 1	215.0		Dist. Travel =	610.00							
							Elev. Node 2	186.6										
							Elev. Delta	28.40										
B	24	P2	1.24	OS				4.66%			610.00	14.65	14.65	3.69	0.55	0.68	2.51	
Node 4 Cross Gutter																		
WATERSHED AREA P3																		
							Elev. Node 1	204.0		Dist. Travel =	36.00							
							Elev. Node 2	187.5										
							Elev. Delta	16.50										
C	28	P3	0.01	OS				45.83%			36.00	1.66	1.66	15.01	0.55	0.00	0.06	
Node 4 Existing Curb Inlet B																		

Project Name: TPM for 3710 Vista Way

Location: Oceanside

*INTENSITY-DURATION DESIGN CHART

Date: March 18, 2021

Pre-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT A

Frequency = 50 Yr. Storm

P6 = 2.50

NODE		Watershed		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA P1																		
							Elev. Node 1	230.0		Dist. Travel =	250.00							
							Elev. Node 2	196.0										
							Elev. Delta	34.00										
A	4	P1	0.73	OS				13.60%			250.00	6.56	6.56	5.53	0.55	0.40	2.21	
Node 4 Existing Curb Inlet A																		
WATERSHED AREA P2																		
							Elev. Node 1	215.0		Dist. Travel =	610.00							
							Elev. Node 2	186.6										
							Elev. Delta	28.40										
B	24	P2	1.24	OS				4.66%			610.00	14.65	14.65	3.29	0.55	0.68	2.24	
Node 4 Cross Gutter																		
WATERSHED AREA P3																		
							Elev. Node 1	204.0		Dist. Travel =	36.00							
							Elev. Node 2	187.5										
							Elev. Delta	16.50										
C	28	P3	0.01	OS				45.83%			36.00	1.66	1.66	13.40	0.55	0.00	0.06	
Node 4 Existing Curb Inlet B																		

Project Name: TPM for 3710 Vista Way

Location: Oceanside

*INTENSITY-DURATION DESIGN CHART

Date: March 18, 2021

Pre-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT A

Frequency = 10 Yr. Storm

P6 = 1.80

NODE		Watershed		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA P1																		
							Elev. Node 1	230.0		Dist. Travel =	250.00							
							Elev. Node 2	196.0										
							Elev. Delta	34.00										
A	4	P1	0.73	OS				13.60%			250.00	6.56	6.56	3.98	0.55	0.40	1.59	
Node 4 Existing Curb Inlet A																		
WATERSHED AREA P2																		
							Elev. Node 1	215.0		Dist. Travel =	610.00							
							Elev. Node 2	186.6										
							Elev. Delta	28.40										
B	24	P2	1.24	OS				4.66%			610.00	14.65	14.65	2.37	0.55	0.68	1.61	
Node 4 Cross Gutter																		
WATERSHED AREA P3																		
							Elev. Node 1	204.0		Dist. Travel =	36.00							
							Elev. Node 2	187.5										
							Elev. Delta	16.50										
C	28	P3	0.01	OS				45.83%			36.00	1.66	1.66	9.65	0.55	0.00	0.04	
Node 4 Existing Curb Inlet B																		

Project Name: TPM for 3710 Vista Way

Location: Oceanside

*INTENSITY-DURATION DESIGN CHART

Date: March 18, 2021

Pre-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT A

Frequency = 5 Yr. Storm

P6 = 1.40

NODE		Watershed		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA P1																		
							Elev. Node 1	230.0		Dist. Travel =	250.00							
							Elev. Node 2	196.0										
							Elev. Delta	34.00										
A	4	P1	0.73	OS				13.60%			250.00	6.56	6.56	3.09	0.55	0.40	1.24	
Node 4 Existing Curb Inlet A																		
WATERSHED AREA P2																		
							Elev. Node 1	215.0		Dist. Travel =	610.00							
							Elev. Node 2	186.6										
							Elev. Delta	28.40										
B	24	P2	1.24	OS				4.66%			610.00	14.65	14.65	1.84	0.55	0.68	1.25	
Node 4 Cross Gutter																		
WATERSHED AREA P3																		
							Elev. Node 1	204.0		Dist. Travel =	36.00							
							Elev. Node 2	187.5										
							Elev. Delta	16.50										
C	28	P3	0.01	OS				45.83%			36.00	1.66	1.66	7.51	0.55	0.00	0.03	
Node 4 Existing Curb Inlet B																		

Project Name: TPM for 3710 Vista Way

Location: Oceanside

*INTENSITY-DURATION DESIGN CHART

Date: March 18, 2021

Pre-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT A

Frequency = 2 Yr. Storm

P6 = 1.10

NODE		Watershed		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA P1																		
							Elev. Node 1	230.0		Dist. Travel =	250.00							
							Elev. Node 2	196.0										
							Elev. Delta	34.00										
A	4	P1	0.73	OS				13.60%			250.00	6.56	6.56	2.43	0.55	0.40	0.97	
Node 4 Existing Curb Inlet A																		
WATERSHED AREA P2																		
							Elev. Node 1	215.0		Dist. Travel =	610.00							
							Elev. Node 2	186.6										
							Elev. Delta	28.40										
B	24	P2	1.24	OS				4.66%			610.00	14.65	14.65	1.45	0.55	0.68	0.98	
Node 4 Cross Gutter																		
WATERSHED AREA P3																		
							Elev. Node 1	204.0		Dist. Travel =	36.00							
							Elev. Node 2	187.5										
							Elev. Delta	16.50										
C	28	P3	0.01	OS				45.83%			36.00	1.66	1.66	5.90	0.55	0.00	0.03	
Node 4 Existing Curb Inlet B																		

POST-DEVELOPMENT HYDROLOGY

Project Name: TPM for 3710 Vista Way

Location: Oceanside

*INTENSITY-DURATION DESIGN CHART

Date: March 18, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 100 Yr. Storm

P6 = 2.80

NODE		**Watershed**		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA A																		
							Elev. Node 1	217.0		Dist. Travel =	170.00							
							Elev. Node 2	199.5										
							Elev. Delta	17.50										
1	2	A1	0.06	OS				10.29%			170.00	8.00	8.00	5.45	0.36	0.02	0.11	
Node 2 is Existing Gutter																		
							Elev. Node 3	199.0		Dist. Travel =	125.00							
							Elev. Node 4	196.0										
							Elev. Delta	3.00										
3	4	A3	0.00	OS				2.40%			125.00	11.28	11.28	4.37	0.35	0.00	0.00	
Node 4 Existing Curb Inlet A																		
							Elev. Node 5	216.0		Dist. Travel =	290.00							
							Elev. Node 6	199.0										
							Elev. Delta	17.00										
5	6	A2a	0.47	RES				5.86%			290.00	8.81	8.81	5.12	0.58	0.27	1.39	
Node 6 is a French Drain connected to a Modified D-9 Cleanout with																		
with Pump Camber that collects Runoff from Gravel Storage under							Elev. Node 7	203.85		Dist. Travel =	65.00							
Driveway Pavers							Elev. Node 8	203.20										
							Elev. Delta	0.65										
7	8	A2b	0.05	RES				1.00%			65.00	7.52	7.52	5.67	0.58	0.03	0.16	
Node 8 is Catch Basin for Area A2b that collects Runoff from Gravel Storage under Patio Pavers																		
							Elev. Node 9	203.00		Dist. Travel =	65.00							
							Elev. Node 10	202.35										
							Elev. Delta	0.65										
9	10	A2c	0.05	RES				1.00%			65.00	7.52	7.52	5.67	0.58	0.03	0.16	
Node 10 is Catch Basin for Area A2c that collects Runoff from Gravel Storage under Patio Pavers																		
							Elev. Node 11	200.30		Dist. Travel =	65.00							
							Elev. Node 12	199.65										
							Elev. Delta	0.65										
11	12	A2d	0.05	RES				1.00%			65.00	7.52	7.52	5.67	0.58	0.03	0.16	
Node 12 is Catch Basin for Area A2d that collects Runoff from Gravel Storage under Patio Pavers																		

Project Name: TPM for 3710 Vista Way

Location: Oceanside

*INTENSITY-DURATION DESIGN CHART

Date: March 18, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 100 Yr. Storm

P6 = 2.80

NODE		**Watershed**		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
							Elev. Node 13	199.45		Dist. Travel =	65.00							
							Elev. Node 14	198.80										
							Elev. Delta	0.65										
13	14	A2e	0.06	RES				1.00%			65.00	7.52	7.52	5.67	0.58	0.03	0.18	
Node 14 is Catch Basin for Area A2e that collects Runoff from Gravel Storage under Patio Pavers																		
14	15				0.333	0.013	0.18	1.00%	0.26	2.48	25.00	0.17	7.69	5.59				4" PVC
Node 15 is 8" PVC Tee																		
6	8	Runoff to be pumped from Node 6 to Node 8					1.39				17.50							2" PVC
Node 6 is a French Drain connected to a Modified D-9 Cleanout with																		
with Pump Camber that collects Runoff from Gravel Storage under																		
Driveway Pavers											Q	Tc	I					
Node 8 is Catch Basin for Area A2b that collects Runoff from Gravel Storage under Patio Pavers									A2a	Q1 =	1.39	8.81	5.12					
									A2b	Q2 =	0.16	7.52	5.67		∑CA=	0.30		
											TC =	8.81				Q =	1.53	
8	10				0.67	0.013	1.53	2.00%	0.49	5.55	45.00	0.14	8.95	5.07				8" PVC
Node 10 is Catch Basin for Area A2c that collects Runoff from Gravel Storage under Patio Pavers											Q	Tc	I					
									A2a+b	Q1 =	1.53	8.95	5.07					
									A2c	Q2 =	0.16	7.52	5.67		∑CA=	0.33		
											TC =	8.95				Q =	1.68	
10	12				0.67	0.013	1.68	2.00%	0.53	5.60	45.00	0.13	9.08	5.02				8" PVC
Node 12 is Catch Basin for Area A2d that collects Runoff from Gravel Storage under Patio Pavers											Q	Tc	I					
									A2a+b+c	Q1 =	1.68	9.08	5.02					
									A2d	Q2 =	0.16	7.52	5.67		∑CA=	0.36		
											TC =	9.08				Q =	1.83	
12	15				0.67	0.013	1.83	2.00%	0.60	5.54	48.00	0.14	9.23	4.97				8" PVC
Node 15 is 8" PVC Tee											Q	Tc	I					
									A2a+b+c+d	Q1 =	1.83	9.23	4.97					
									A2e	Q2 =	0.18	7.69	5.59		∑CA=	0.39		
											TC =	9.23				Q =	2.00	
15	16				0.67	0.013	2.00	2.50%	0.57	6.24	2.00	0.01	9.23	4.97				8" PVC
Node 16 is a Modular Wetland																		
16	4				0.67	0.013	2.00	2.50%	0.57	6.24	12.00	0.03	9.26	4.96				8" PVC
Node 4 Existing Curb Inlet A																		

Project Name: TPM for 3710 Vista Way

Location: Oceanside

*INTENSITY-DURATION DESIGN CHART

Date: March 18, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 100 Yr. Storm

P6 = 2.80

NODE		Watershed		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA B																		
							Elev. Node 5	217.0		Dist. Travel =	214.00							
							Elev. Node 17	196.0										
							Elev. Delta	21.00										
5	17	B1a	0.47	RES				9.81%			214.00	5.34	5.34	7.07	0.67	0.31	2.22	
Node 17 is Modular Wetland that collects Runoff from Gravel																		
Storage Area under Parking Area Pavers							Elev. Node 18	212.0		Dist. Travel =	150.00							
							Elev. Node 19	192.8										
							Elev. Delta	19.20										
18	19	B1b	0.17	RES				12.80%			150.00	4.09	4.09	8.39	0.67	0.11	0.92	
Node 19 is a French Drain connected to a Modified D-9 Cleanout with																		
with Pump Camber that collects Runoff from Gravel Storage under																		
Driveway Pavers																		
19	17	Runoff to be pumped from Node 19 to Node 17					0.92				17.50							2" PVC
Node 17 is Modular Wetland that collects Runoff from Gravel																		
Storage Area under Parking Area Pavers											Q	Tc	I					
									A2a+b+c+d	Q1 =	2.22	5.34	7.07					
									A2e	Q2 =	0.92	4.09	8.39		∑CA=	0.42		
											TC =	5.34				Q =	3.00	
17	20				0.83	0.013	3.00	2.00%	0.67	6.46	2.00	0.01	5.35	7.07				10" PVC
Node 17 Modular Wetland																		
Node 20 D-25 Curb Outlet																		
							Elev. Node 22	203.8		Dist. Travel =	285.00							
							Elev. Node 19	192.8										
							Elev. Delta	11.00										
21	22	B2	0.03	OS				3.86%			285.00	12.97	12.97	3.99	0.43	0.01	0.05	
Node 21 Back of Wall																		
Node 22 Gutter							Elev. Node 23	193.5		Dist. Travel =	285.00							
							Elev. Node 24	186.6										
							Elev. Delta	6.90										
23	24	B3	0.01	OS				2.42%			285.00	16.70	16.70	3.39	0.36	0.00	0.01	
Node 24 Cross Gutter																		
							Elev. Node 25	187.0		Dist. Travel =	20.00							
							Elev. Node 24	186.6										
							Elev. Delta	0.40										
25	24	B4	0.00	OS				2.00%			20.00	1.28	1.28	17.78	0.90	0.00	0.01	
Node 24 Cross Gutter																		

Project Name: TPM for 3710 Vista Way

Location: Oceanside

*INTENSITY-DURATION DESIGN CHART

Date: March 18, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 100 Yr. Storm

P6 = 2.80

NODE		Watershed		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA C																		
							Elev. Node 5	210.0		Dist. Travel =	455.00							
							Elev. Node 17	187.0										
							Elev. Delta	23.00										
26	25	C1	0.57	RES				5.05%			455.00	9.30	9.30	4.95	0.68	0.39	1.92	
Node 25 is a French Drain connected to a Modified D-9 Cleanout with																		
with Pump Camber that collects Runoff from Gravel Storage under																		
Driveway Pavers																		
25	27	Runoff to be pumped from Node 6 to Node 8					-				9.00							2" PVC
Node 27 is a Modular Wetland																		
27	28				0.67	0.013	1.92	2.50%	0.54	6.26	9.00	0.02	9.32	4.94				8" PVC
Node 28 Existing Curb Inlet B																		
WATERSHED AREA D																		
							Elev. Node 5	189.8		Dist. Travel =	25.00							
							Elev. Node 17	187.5										
							Elev. Delta	2.30										
29	28	D1	0.00	RES				9.20%			25.00	3.22	3.22	9.79	0.35	0.00	0.00	
Node 28 Existing Curb Inlet B																		

Project Name: TPM for 3710 Vista Way

Location: Oceanside

*INTENSITY-DURATION DESIGN CHART

Date: March 17, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 50 Yr. Storm

P6 = 2.50

NODE		**Watershed**		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA A																		
							Elev. Node 1	217.0		Dist. Travel =	170.00							
							Elev. Node 2	199.5										
							Elev. Delta	17.50										
1	2	A1	0.06	OS				10.29%			170.00	8.00	8.00	4.87	0.36	0.02	0.10	
Node 2 is Existing Gutter																		
							Elev. Node 3	199.0		Dist. Travel =	125.00							
							Elev. Node 4	196.0										
							Elev. Delta	3.00										
3	4	A3	0.00	OS				2.40%			125.00	11.28	11.28	3.90	0.35	0.00	0.00	
Node 4 Existing Curb Inlet A																		
							Elev. Node 5	216.0		Dist. Travel =	290.00							
							Elev. Node 6	199.0										
							Elev. Delta	17.00										
5	6	A2a	0.47	RES				5.86%			290.00	8.81	8.81	4.57	0.58	0.27	1.24	
Node 6 is a French Drain connected to a Modified D-9 Cleanout with																		
with Pump Camber that collects Runoff from Gravel Storage under							Elev. Node 7	203.85		Dist. Travel =	65.00							
Driveway Pavers							Elev. Node 8	203.20										
							Elev. Delta	0.65										
7	8	A2b	0.05	RES				1.00%			65.00	7.52	7.52	5.06	0.58	0.03	0.14	
Node 8 is Catch Basin for Area A2b that collects Runoff from Gravel Storage under Patio Pavers																		
							Elev. Node 9	203.00		Dist. Travel =	65.00							
							Elev. Node 10	202.35										
							Elev. Delta	0.65										
9	10	A2c	0.05	RES				1.00%			65.00	7.52	7.52	5.06	0.58	0.03	0.15	
Node 10 is Catch Basin for Area A2c that collects Runoff from Gravel Storage under Patio Pavers																		
							Elev. Node 11	200.30		Dist. Travel =	65.00							
							Elev. Node 12	199.65										
							Elev. Delta	0.65										
11	12	A2d	0.05	RES				1.00%			65.00	7.52	7.52	5.06	0.58	0.03	0.15	
Node 12 is Catch Basin for Area A2d that collects Runoff from Gravel Storage under Patio Pavers																		

Project Name: TPM for 3710 Vista Way

Location: Oceanside

*INTENSITY-DURATION DESIGN CHART

Date: March 18, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 50 Yr. Storm

P6 = 2.50

NODE		**Watershed**		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
							Elev. Node 13	199.45		Dist. Travel =	65.00							
							Elev. Node 14	198.80										
							Elev. Delta	0.65										
13	14	A2e	0.06	RES				1.00%			65.00	7.52	7.52	5.06	0.58	0.03	0.16	
Node 14 is Catch Basin for Area A2e that collects Runoff from Gravel Storage under Patio Pavers																		
14	15				0.333	0.013	0.16	1.00%	0.24	2.45	25.00	0.17	7.69	4.99				4" PVC
Node 15 is 8" PVC Tee																		
6	8	Runoff to be pumped from Node 6 to Node 8					1.24				17.50							2" PVC
Node 6 is a French Drain connected to a Modified D-9 Cleanout with																		
with Pump Camber that collects Runoff from Gravel Storage under																		
Driveway Pavers											Q	Tc	I					
Node 8 is Catch Basin for Area A2b that collects Runoff from Gravel Storage under Patio Pavers									A2a	Q1 =	1.24	8.81	4.57					
									A2b	Q2 =	0.14	7.52	5.06		∑CA=	0.30		
											TC =	8.81				Q =	1.37	
8	10				0.67	0.013	1.37	2.00%	0.45	5.45	45.00	0.14	8.95	4.52				8" PVC
Node 10 is Catch Basin for Area A2c that collects Runoff from Gravel Storage under Patio Pavers											Q	Tc	I					
									A2a+b	Q1 =	1.37	8.95	4.52					
									A2c	Q2 =	0.15	7.52	5.06		∑CA=	0.33		
											TC =	8.95				Q =	1.50	
10	12				0.67	0.013	1.50	2.00%	0.48	5.53	45.00	0.14	9.09	4.48				8" PVC
Node 12 is Catch Basin for Area A2d that collects Runoff from Gravel Storage under Patio Pavers											Q	Tc	I					
									A2a+b+c	Q1 =	1.50	9.09	4.48					
									A2d	Q2 =	0.15	7.52	5.06		∑CA=	0.36		
											TC =	9.09				Q =	1.63	
12	15				0.67	0.013	1.63	2.00%	0.52	5.58	48.00	0.14	9.23	4.44				8" PVC
Node 15 is 8" PVC Tee											Q	Tc	I					
									A2a+b+c+d	Q1 =	1.63	9.23	4.44					
									A2e	Q2 =	0.16	7.69	4.99		∑CA=	0.39		
											TC =	9.23				Q =	1.78	
15	16				0.67	0.013	1.78	2.50%	0.51	6.23	2.00	0.01	9.23	4.43				8" PVC
Node 16 is a Modular Wetland																		
16	4				0.67	0.013	1.78	2.50%	0.51	6.23	12.00	0.03	9.27	4.42				8" PVC
Node 4 Existing Curb Inlet A																		

NODE		Watershed		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA B																		
							Elev. Node 5	217.0		Dist. Travel =	214.00							
							Elev. Node 17	196.0										
							Elev. Delta	21.00										
5	17	B1a	0.47	RES				9.81%			214.00	5.34	5.34	6.31	0.67	0.31	1.99	
Node 17 is Modular Wetland that collects Runoff from Gravel																		
Storage Area under Parking Area Pavers							Elev. Node 18	212.0		Dist. Travel =	150.00							
							Elev. Node 19	192.8										
							Elev. Delta	19.20										
18	19	B1b	0.17	RES				12.80%			150.00	4.09	4.09	7.49	0.67	0.11	0.83	
Node 19 is a French Drain connected to a Modified D-9 Cleanout with																		
with Pump Camber that collects Runoff from Gravel Storage under																		
Driveway Pavers																		
19	17	Runoff to be pumped from Node 19 to Node 17					0.83				17.50							2" PVC
Node 17 is Modular Wetland that collects Runoff from Gravel																		
Storage Area under Parking Area Pavers											Q	Tc	I					
									A2a+b+c+d	Q1 =	1.99	5.34	6.31					
									A2e	Q2 =	0.83	4.09	7.49		∑CA=	0.42		
											TC =	5.34				Q =	2.68	
17	20				0.83	0.013	2.68	2.00%	0.60	6.39	2.00	0.01	5.35	6.31				10" PVC
Node 17 Modular Wetland																		
Node 20 D-25 Curb Outlet																		
							Elev. Node 22	203.8		Dist. Travel =	285.00							
							Elev. Node 19	192.8										
							Elev. Delta	11.00										
21	22	B2	0.03	OS				3.86%			285.00	12.97	12.97	3.56	0.43	0.01	0.05	
Node 21 Back of Wall																		
Node 22 Gutter							Elev. Node 23	193.5		Dist. Travel =	285.00							
							Elev. Node 24	186.6										
							Elev. Delta	6.90										
23	24	B3	0.01	OS				2.42%			285.00	16.70	16.70	3.03	0.36	0.00	0.01	
Node 24 Cross Gutter																		
							Elev. Node 25	187.0		Dist. Travel =	20.00							
							Elev. Node 24	186.6										
							Elev. Delta	0.40										
25	24	B4	0.00	OS				2.00%			20.00	1.28	1.28	15.88	0.90	0.00	0.01	
Node 24 Cross Gutter																		

Project Name: TPM for 3710 Vista Way

Location: Oceanside

*INTENSITY-DURATION DESIGN CHART

Date: March 18, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 50 Yr. Storm

P6 = 2.50

NODE		Watershed		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA C																		
							Elev. Node 5	210.0		Dist. Travel =	455.00							
							Elev. Node 17	187.0										
							Elev. Delta	23.00										
26	25	C1	0.57	RES				5.05%			455.00	9.30	9.30	4.42	0.68	0.39	1.72	
Node 25 is a French Drain connected to a Modified D-9 Cleanout with																		
with Pump Camber that collects Runoff from Gravel Storage under																		
Driveway Pavers																		
25	27	Runoff to be pumped from Node 6 to Node 8					-				9.00							2" PVC
Node 27 is a Modular Wetland																		
27	28				0.67	0.013	1.72	2.50%	0.49	6.20	9.00	0.02	9.32	4.41				8" PVC
Node 28 Existing Curb Inlet B																		
WATERSHED AREA D																		
							Elev. Node 5	189.8		Dist. Travel =	25.00							
							Elev. Node 17	187.5										
							Elev. Delta	2.30										
29	28	D1	0.00	RES				9.20%			25.00	3.22	3.22	8.74	0.35	0.00	0.00	
Node 28 Existing Curb Inlet B																		

Project Name: TPM for 3710 Vista Way

Location: Oceanside

*INTENSITY-DURATION DESIGN CHART

Date: March 17, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 10 Yr. Storm

P6 = 1.80

NODE		**Watershed**		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA A																		
							Elev. Node 1	217.0		Dist. Travel =	170.00							
							Elev. Node 2	199.5										
							Elev. Delta	17.50										
1	2	A1	0.06	OS				10.29%			170.00	8.00	8.00	3.50	0.36	0.02	0.07	
Node 2 is Existing Gutter																		
							Elev. Node 3	199.0		Dist. Travel =	125.00							
							Elev. Node 4	196.0										
							Elev. Delta	3.00										
3	4	A3	0.00	OS				2.40%			125.00	11.28	11.28	2.81	0.35	0.00	0.00	
Node 4 Existing Curb Inlet A																		
							Elev. Node 5	216.0		Dist. Travel =	290.00							
							Elev. Node 6	199.0										
							Elev. Delta	17.00										
5	6	A2a	0.47	RES				5.86%			290.00	8.81	8.81	3.29	0.58	0.27	0.89	
Node 6 is a French Drain connected to a Modified D-9 Cleanout with																		
with Pump Camber that collects Runoff from Gravel Storage under							Elev. Node 7	203.85		Dist. Travel =	65.00							
Driveway Pavers							Elev. Node 8	203.20										
							Elev. Delta	0.65										
7	8	A2b	0.05	RES				1.00%			65.00	7.52	7.52	3.65	0.58	0.03	0.10	
Node 8 is Catch Basin for Area A2b that collects Runoff from Gravel Storage under Patio Pavers																		
							Elev. Node 9	203.00		Dist. Travel =	65.00							
							Elev. Node 10	202.35										
							Elev. Delta	0.65										
9	10	A2c	0.05	RES				1.00%			65.00	7.52	7.52	3.65	0.58	0.03	0.11	
Node 10 is Catch Basin for Area A2c that collects Runoff from Gravel Storage under Patio Pavers																		
							Elev. Node 11	200.30		Dist. Travel =	65.00							
							Elev. Node 12	199.65										
							Elev. Delta	0.65										
11	12	A2d	0.05	RES				1.00%			65.00	7.52	7.52	3.65	0.58	0.03	0.11	
Node 12 is Catch Basin for Area A2d that collects Runoff from Gravel Storage under Patio Pavers																		

Project Name: TPM for 3710 Vista Way

Location: Oceanside

*INTENSITY-DURATION DESIGN CHART

Date: March 18, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 10 Yr. Storm

P6 = 1.80

NODE		**Watershed**		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
							Elev. Node 13	199.45		Dist. Travel =	65.00							
							Elev. Node 14	198.80										
							Elev. Delta	0.65										
13	14	A2e	0.06	RES				1.00%			65.00	7.52	7.52	3.65	0.58	0.03	0.12	
Node 14 is Catch Basin for Area A2e that collects Runoff from Gravel Storage under Patio Pavers																		
14	15				0.333	0.013	0.12	1.00%	0.19	2.30	25.00	0.18	7.70	3.59				4" PVC
Node 15 is 8" PVC Tee																		
6	8	Runoff to be pumped from Node 6 to Node 8					0.89				17.50							2" PVC
Node 6 is a French Drain connected to a Modified D-9 Cleanout with																		
with Pump Camber that collects Runoff from Gravel Storage under																		
Driveway Pavers											Q	Tc	I					
Node 8 is Catch Basin for Area A2b that collects Runoff from Gravel Storage under Patio Pavers									A2a	Q1 =	0.89	8.81	3.29					
									A2b	Q2 =	0.10	7.52	3.65		∑CA=	0.30		
											TC =	8.81				Q =	0.98	
8	10				0.67	0.013	0.98	2.00%	0.36	5.06	45.00	0.15	8.96	3.26				8" PVC
Node 10 is Catch Basin for Area A2c that collects Runoff from Gravel Storage under Patio Pavers											Q	Tc	I					
									A2a+b	Q1 =	0.98	8.96	3.26					
									A2c	Q2 =	0.11	7.52	3.65		∑CA=	0.33		
											TC =	8.96				Q =	1.07	
10	12				0.67	0.013	1.07	2.00%	0.38	5.16	45.00	0.15	9.11	3.22				8" PVC
Node 12 is Catch Basin for Area A2d that collects Runoff from Gravel Storage under Patio Pavers											Q	Tc	I					
									A2a+b+c	Q1 =	1.07	9.11	3.22					
									A2d	Q2 =	0.11	7.52	3.65		∑CA=	0.36		
											TC =	9.11				Q =	1.16	
12	15				0.67	0.013	1.16	2.00%	0.40	5.27	48.00	0.15	9.26	3.19				8" PVC
Node 15 is 8" PVC Tee											Q	Tc	I					
									A2a+b+c+d	Q1 =	1.16	9.26	3.19					
									A2e	Q2 =	0.12	7.70	3.59		∑CA=	0.39		
											TC =	9.26				Q =	1.27	
15	16				0.67	0.013	1.27	2.50%	0.40	5.85	2.00	0.01	9.26	3.19				8" PVC
Node 16 is a Modular Wetland																		
16	4				0.67	0.013	1.27	2.50%	0.40	5.85	12.00	0.03	9.30	3.18				8" PVC
Node 4 Existing Curb Inlet A																		

NODE		Watershed		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA B																		
							Elev. Node 5	217.0		Dist. Travel =	214.00							
							Elev. Node 17	196.0										
							Elev. Delta	21.00										
5	17	B1a	0.47	RES				9.81%			214.00	5.34	5.34	4.54	0.67	0.31	1.43	
Node 17 is Modular Wetland that collects Runoff from Gravel																		
Storage Area under Parking Area Pavers							Elev. Node 18	212.0		Dist. Travel =	150.00							
							Elev. Node 19	192.8										
							Elev. Delta	19.20										
18	19	B1b	0.17	RES				12.80%			150.00	4.09	4.09	5.40	0.67	0.11	0.59	
Node 19 is a French Drain connected to a Modified D-9 Cleanout with																		
with Pump Camber that collects Runoff from Gravel Storage under																		
Driveway Pavers																		
19	17	Runoff to be pumped from Node 19 to Node 17					0.59				17.50							2" PVC
Node 17 is Modular Wetland that collects Runoff from Gravel																		
Storage Area under Parking Area Pavers											Q	Tc	I					
									A2a+b+c+d	Q1 =	1.43	5.34	4.54					
									A2e	Q2 =	0.59	4.09	5.40		∑CA=	0.42		
											TC =	5.34				Q =	1.93	
17	20				0.83	0.013	1.93	2.00%	0.48	5.99	2.00	0.01	5.35	4.54				10" PVC
Node 17 Modular Wetland																		
Node 20 D-25 Curb Outlet																		
							Elev. Node 22	203.8		Dist. Travel =	285.00							
							Elev. Node 19	192.8										
							Elev. Delta	11.00										
21	22	B2	0.03	OS				3.86%			285.00	12.97	12.97	2.56	0.43	0.01	0.03	
Node 21 Back of Wall																		
Node 22 Gutter							Elev. Node 23	193.5		Dist. Travel =	285.00							
							Elev. Node 24	186.6										
							Elev. Delta	6.90										
23	24	B3	0.01	OS				2.42%			285.00	16.70	16.70	2.18	0.36	0.00	0.00	
Node 24 Cross Gutter																		
							Elev. Node 25	187.0		Dist. Travel =	20.00							
							Elev. Node 24	186.6										
							Elev. Delta	0.40										
25	24	B4	0.00	OS				2.00%			20.00	1.28	1.28	11.43	0.90	0.00	0.01	
Node 24 Cross Gutter																		

Project Name: TPM for 3710 Vista Way

Location: Oceanside

*INTENSITY-DURATION DESIGN CHART

Date: March 18, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 10 Yr. Storm

P6 = 1.80

NODE		**Watershed**		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA C																		
							Elev. Node 5	210.0		Dist. Travel =	455.00							
							Elev. Node 17	187.0										
							Elev. Delta	23.00										
26	25	C1	0.57	RES				5.05%			455.00	9.30	9.30	3.18	0.68	0.39	1.24	
Node 25 is a French Drain connected to a Modified D-9 Cleanout with																		
with Pump Camber that collects Runoff from Gravel Storage under																		
Driveway Pavers																		
25	27	Runoff to be pumped from Node 6 to Node 8					-				9.00							2" PVC
Node 27 is a Modular Wetland																		
27	28				0.67	0.013	1.24	2.50%	0.39	5.83	9.00	0.03	9.32	3.17				8" PVC
Node 28 Existing Curb Inlet B																		
WATERSHED AREA D																		
							Elev. Node 5	189.8		Dist. Travel =	25.00							
							Elev. Node 17	187.5										
							Elev. Delta	2.30										
29	28	D1	0.00	RES				9.20%			25.00	3.22	3.22	6.29	0.35	0.00	0.00	
Node 28 Existing Curb Inlet B																		

Project Name: TPM for 3710 Vista Way

Location: Oceanside

*INTENSITY-DURATION DESIGN CHART

Date: March 17, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 5 Yr. Storm

P6 = 1.40

NODE		**Watershed**		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA A																		
							Elev. Node 1	217.0		Dist. Travel =	170.00							
							Elev. Node 2	199.5										
							Elev. Delta	17.50										
1	2	A1	0.06	OS				10.29%			170.00	8.00	8.00	2.73	0.36	0.02	0.06	
Node 2 is Existing Gutter																		
							Elev. Node 3	199.0		Dist. Travel =	125.00							
							Elev. Node 4	196.0										
							Elev. Delta	3.00										
3	4	A3	0.00	OS				2.40%			125.00	11.28	11.28	2.18	0.35	0.00	0.00	
Node 4 Existing Curb Inlet A																		
							Elev. Node 5	216.0		Dist. Travel =	290.00							
							Elev. Node 6	199.0										
							Elev. Delta	17.00										
5	6	A2a	0.47	RES				5.86%			290.00	8.81	8.81	2.56	0.58	0.27	0.69	
Node 6 is a French Drain connected to a Modified D-9 Cleanout with																		
with Pump Camber that collects Runoff from Gravel Storage under							Elev. Node 7	203.85		Dist. Travel =	65.00							
Driveway Pavers							Elev. Node 8	203.20										
							Elev. Delta	0.65										
7	8	A2b	0.05	RES				1.00%			65.00	7.52	7.52	2.84	0.58	0.03	0.08	
Node 8 is Catch Basin for Area A2b that collects Runoff from Gravel Storage under Patio Pavers																		
							Elev. Node 9	203.00		Dist. Travel =	65.00							
							Elev. Node 10	202.35										
							Elev. Delta	0.65										
9	10	A2c	0.05	RES				1.00%			65.00	7.52	7.52	2.84	0.58	0.03	0.08	
Node 10 is Catch Basin for Area A2c that collects Runoff from Gravel Storage under Patio Pavers																		
							Elev. Node 11	200.30		Dist. Travel =	65.00							
							Elev. Node 12	199.65										
							Elev. Delta	0.65										
11	12	A2d	0.05	RES				1.00%			65.00	7.52	7.52	2.84	0.58	0.03	0.08	
Node 12 is Catch Basin for Area A2d that collects Runoff from Gravel Storage under Patio Pavers																		

Project Name: TPM for 3710 Vista Way

Location: Oceanside

*INTENSITY-DURATION DESIGN CHART

Date: March 18, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 5 Yr. Storm

P6 = 1.40

NODE		Watershed		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
							Elev. Node 13	199.45		Dist. Travel =	65.00							
							Elev. Node 14	198.80										
							Elev. Delta	0.65										
13	14	A2e	0.06	RES				1.00%			65.00	7.52	7.52	2.84	0.58	0.03	0.09	
Node 14 is Catch Basin for Area A2e that collects Runoff from Gravel Storage under Patio Pavers																		
14	15				0.333	0.013	0.09	1.00%	0.16	2.14	25.00	0.19	7.71	2.79				4" PVC
Node 15 is 8" PVC Tee																		
6	8	Runoff to be pumped from Node 6 to Node 8					0.69				17.50							2" PVC
Node 6 is a French Drain connected to a Modified D-9 Cleanout with																		
with Pump Camber that collects Runoff from Gravel Storage under																		
Driveway Pavers											Q	Tc	I					
Node 8 is Catch Basin for Area A2b that collects Runoff from Gravel Storage under Patio Pavers									A2a	Q1 =	0.69	8.81	2.56					
									A2b	Q2 =	0.08	7.52	2.84		∑CA=	0.30		
											TC =	8.81				Q =	0.76	
8	10				0.67	0.013	0.76	2.00%	0.31	4.75	45.00	0.16	8.97	2.53				8" PVC
Node 10 is Catch Basin for Area A2c that collects Runoff from Gravel Storage under Patio Pavers											Q	Tc	I					
									A2a+b	Q1 =	0.76	8.97	2.53					
									A2c	Q2 =	0.08	7.52	2.84		∑CA=	0.33		
											TC =	8.97				Q =	0.83	
10	12				0.67	0.013	0.83	2.00%	0.33	4.86	45.00	0.15	9.12	2.50				8" PVC
Node 12 is Catch Basin for Area A2d that collects Runoff from Gravel Storage under Patio Pavers											Q	Tc	I					
									A2a+b+c	Q1 =	0.83	9.12	2.50					
									A2d	Q2 =	0.08	7.52	2.84		∑CA=	0.36		
											TC =	9.12				Q =	0.90	
12	15				0.67	0.013	0.90	2.00%	0.34	4.95	48.00	0.16	9.29	2.47				8" PVC
Node 15 is 8" PVC Tee											Q	Tc	I					
									A2a+b+c+d	Q1 =	0.90	9.29	2.47					
									A2e	Q2 =	0.09	7.71	2.79		∑CA=	0.39		
											TC =	9.29				Q =	0.98	
15	16				0.67	0.013	0.98	2.50%	0.34	5.51	2.00	0.01	9.29	2.47				8" PVC
Node 16 is a Modular Wetland																		
16	4				0.67	0.013	0.98	2.50%	0.34	5.51	12.00	0.04	9.33	2.47				8" PVC
Node 4 Existing Curb Inlet A																		

Project Name: TPM for 3710 Vista Way

Location: Oceanside

*INTENSITY-DURATION DESIGN CHART

Date: March 18, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 5 Yr. Storm

P6 = 1.40

NODE		Watershed		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA B																		
							Elev. Node 5	217.0		Dist. Travel =	214.00							
							Elev. Node 17	196.0										
							Elev. Delta	21.00										
5	17	B1a	0.47	RES				9.81%			214.00	5.34	5.34	3.53	0.67	0.31	1.11	
Node 17 is Modular Wetland that collects Runoff from Gravel																		
Storage Area under Parking Area Pavers							Elev. Node 18	212.0		Dist. Travel =	150.00							
							Elev. Node 19	192.8										
							Elev. Delta	19.20										
18	19	B1b	0.17	RES				12.80%			150.00	4.09	4.09	4.20	0.67	0.11	0.46	
Node 19 is a French Drain connected to a Modified D-9 Cleanout with																		
with Pump Camber that collects Runoff from Gravel Storage under																		
Driveway Pavers																		
19	17	Runoff to be pumped from Node 19 to Node 17					0.46				17.50							2" PVC
Node 17 is Modular Wetland that collects Runoff from Gravel																		
Storage Area under Parking Area Pavers											Q	Tc	I					
									A2a+b+c+d	Q1 =	1.11	5.34	3.53					
									A2e	Q2 =	0.46	4.09	4.20		∑CA=	0.42		
											TC =	5.34				Q =	1.50	
17	20				0.83	0.013	1.50	2.00%	0.41	5.64	2.00	0.01	5.35	3.53				10" PVC
Node 17 Modular Wetland																		
Node 20 D-25 Curb Outlet																		
							Elev. Node 22	203.8		Dist. Travel =	285.00							
							Elev. Node 19	192.8										
							Elev. Delta	11.00										
21	22	B2	0.03	OS				3.86%			285.00	12.97	12.97	1.99	0.43	0.01	0.03	
Node 21 Back of Wall																		
Node 22 Gutter							Elev. Node 23	193.5		Dist. Travel =	285.00							
							Elev. Node 24	186.6										
							Elev. Delta	6.90										
23	24	B3	0.01	OS				2.42%			285.00	16.70	16.70	1.69	0.36	0.00	0.00	
Node 24 Cross Gutter																		
							Elev. Node 25	187.0		Dist. Travel =	20.00							
							Elev. Node 24	186.6										
							Elev. Delta	0.40										
25	24	B4	0.00	OS				2.00%			20.00	1.28	1.28	8.89	0.90	0.00	0.01	
Node 24 Cross Gutter																		

Project Name: TPM for 3710 Vista Way

Location: Oceanside

*INTENSITY-DURATION DESIGN CHART

Date: March 18, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 5 Yr. Storm

P6 = 1.40

NODE		Watershed		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA C																		
							Elev. Node 5	210.0		Dist. Travel =	455.00							
							Elev. Node 17	187.0										
							Elev. Delta	23.00										
26	25	C1	0.57	RES				5.05%			455.00	9.30	9.30	2.47	0.68	0.39	0.96	
Node 25 is a French Drain connected to a Modified D-9 Cleanout with																		
with Pump Camber that collects Runoff from Gravel Storage under																		
Driveway Pavers																		
25	27	Runoff to be pumped from Node 6 to Node 8					-				9.00							2" PVC
Node 27 is a Modular Wetland																		
27	28				0.67	0.013	0.96	2.50%	0.33	5.48	9.00	0.03	9.32	2.47				8" PVC
Node 28 Existing Curb Inlet B																		
WATERSHED AREA D																		
							Elev. Node 5	189.8		Dist. Travel =	25.00							
							Elev. Node 17	187.5										
							Elev. Delta	2.30										
29	28	D1	0.00	RES				9.20%			25.00	3.22	3.22	4.90	0.35	0.00	0.00	
Node 28 Existing Curb Inlet B																		

Project Name: TPM for 3710 Vista Way

Location: Oceanside

*INTENSITY-DURATION DESIGN CHART

Date: March 17, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 2 Yr. Storm

P6 = 1.10

NODE		**Watershed**		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA A																		
							Elev. Node 1	217.0		Dist. Travel =	170.00							
							Elev. Node 2	199.5										
							Elev. Delta	17.50										
1	2	A1	0.06	OS				10.29%			170.00	8.00	8.00	2.14	0.36	0.02	0.04	
Node 2 is Existing Gutter																		
							Elev. Node 3	199.0		Dist. Travel =	125.00							
							Elev. Node 4	196.0										
							Elev. Delta	3.00										
3	4	A3	0.00	OS				2.40%			125.00	11.28	11.28	1.72	0.35	0.00	0.00	
Node 4 Existing Curb Inlet A																		
							Elev. Node 5	216.0		Dist. Travel =	290.00							
							Elev. Node 6	199.0										
							Elev. Delta	17.00										
5	6	A2a	0.47	RES				5.86%			290.00	8.81	8.81	2.01	0.58	0.27	0.55	
Node 6 is a French Drain connected to a Modified D-9 Cleanout with																		
with Pump Camber that collects Runoff from Gravel Storage under							Elev. Node 7	203.85		Dist. Travel =	65.00							
Driveway Pavers							Elev. Node 8	203.20										
							Elev. Delta	0.65										
7	8	A2b	0.05	RES				1.00%			65.00	7.52	7.52	2.23	0.58	0.03	0.06	
Node 8 is Catch Basin for Area A2b that collects Runoff from Gravel Storage under Patio Pavers																		
							Elev. Node 9	203.00		Dist. Travel =	65.00							
							Elev. Node 10	202.35										
							Elev. Delta	0.65										
9	10	A2c	0.05	RES				1.00%			65.00	7.52	7.52	2.23	0.58	0.03	0.06	
Node 10 is Catch Basin for Area A2c that collects Runoff from Gravel Storage under Patio Pavers																		
							Elev. Node 11	200.30		Dist. Travel =	65.00							
							Elev. Node 12	199.65										
							Elev. Delta	0.65										
11	12	A2d	0.05	RES				1.00%			65.00	7.52	7.52	2.23	0.58	0.03	0.06	
Node 12 is Catch Basin for Area A2d that collects Runoff from Gravel Storage under Patio Pavers																		

Project Name: TPM for 3710 Vista Way

Location: Oceanside

*INTENSITY-DURATION DESIGN CHART

Date: March 18, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 2 Yr. Storm

P6 = 1.10

NODE		**Watershed**		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
							Elev. Node 13	199.45		Dist. Travel =	65.00							
							Elev. Node 14	198.80										
							Elev. Delta	0.65										
13	14	A2e	0.06	RES				1.00%			65.00	7.52	7.52	2.23	0.58	0.03	0.07	
Node 14 is Catch Basin for Area A2e that collects Runoff from Gravel Storage under Patio Pavers																		
14	15				0.333	0.013	0.07	1.00%	0.14	2.01	25.00	0.21	7.72	2.19				4" PVC
Node 15 is 8" PVC Tee																		
6	8	Runoff to be pumped from Node 6 to Node 8					0.55				17.50							2" PVC
Node 6 is a French Drain connected to a Modified D-9 Cleanout with																		
with Pump Camber that collects Runoff from Gravel Storage under																		
Driveway Pavers											Q	Tc	I					
Node 8 is Catch Basin for Area A2b that collects Runoff from Gravel Storage under Patio Pavers									A2a	Q1 =	0.55	8.81	2.01					
									A2b	Q2 =	0.06	7.52	2.23		∑CA=	0.30		
											TC =	8.81				Q =	0.60	
8	10				0.67	0.013	0.60	2.00%	0.27	4.46	45.00	0.17	8.98	1.99				8" PVC
Node 10 is Catch Basin for Area A2c that collects Runoff from Gravel Storage under Patio Pavers											Q	Tc	I					
									A2a+b	Q1 =	0.60	8.98	1.99					
									A2c	Q2 =	0.06	7.52	2.23		∑CA=	0.33		
											TC =	8.98				Q =	0.66	
10	12				0.67	0.013	0.66	2.00%	0.29	4.59	45.00	0.16	9.14	1.96				8" PVC
Node 12 is Catch Basin for Area A2d that collects Runoff from Gravel Storage under Patio Pavers											Q	Tc	I					
									A2a+b+c	Q1 =	0.66	9.14	1.96					
									A2d	Q2 =	0.06	7.52	2.23		∑CA=	0.36		
											TC =	9.14				Q =	0.72	
12	15				0.67	0.013	0.72	2.00%	0.30	4.69	48.00	0.17	9.31	1.94				8" PVC
Node 15 is 8" PVC Tee											Q	Tc	I					
									A2a+b+c+d	Q1 =	0.72	9.31	1.94					
									A2e	Q2 =	0.07	7.72	2.19		∑CA=	0.39		
											TC =	9.31				Q =	0.79	
15	16				0.67	0.013	0.79	2.50%	0.30	5.21	2.00	0.01	9.32	1.94				8" PVC
Node 16 is a Modular Wetland																		
16	4				0.67	0.013	0.79	2.50%	0.30	5.21	12.00	0.04	9.36	1.93				8" PVC
Node 4 Existing Curb Inlet A																		

Project Name: TPM for 3710 Vista Way

Location: Oceanside

*INTENSITY-DURATION DESIGN CHART

Date: March 18, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 2 Yr. Storm

P6 = 1.10

NODE		Watershed		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA B																		
							Elev. Node 5	217.0		Dist. Travel =	214.00							
							Elev. Node 17	196.0										
							Elev. Delta	21.00										
5	17	B1a	0.47	RES				9.81%			214.00	5.34	5.34	2.78	0.67	0.31	0.87	
Node 17 is Modular Wetland that collects Runoff from Gravel																		
Storage Area under Parking Area Pavers							Elev. Node 18	212.0		Dist. Travel =	150.00							
							Elev. Node 19	192.8										
							Elev. Delta	19.20										
18	19	B1b	0.17	RES				12.80%			150.00	4.09	4.09	3.30	0.67	0.11	0.36	
Node 19 is a French Drain connected to a Modified D-9 Cleanout with																		
with Pump Camber that collects Runoff from Gravel Storage under																		
Driveway Pavers																		
19	17	Runoff to be pumped from Node 19 to Node 17					0.36				17.50							2" PVC
Node 17 is Modular Wetland that collects Runoff from Gravel																		
Storage Area under Parking Area Pavers											Q	Tc	I					
									A2a+b+c+d	Q1 =	0.87	5.34	2.78					
									A2e	Q2 =	0.36	4.09	3.30		∑CA=	0.42		
											TC =	5.34				Q =	1.18	
17	20				0.83	0.013	1.18	2.00%	0.36	5.30	2.00	0.01	5.35	2.78				10" PVC
Node 17 Modular Wetland																		
Node 20 D-25 Curb Outlet																		
							Elev. Node 22	203.8		Dist. Travel =	285.00							
							Elev. Node 19	192.8										
							Elev. Delta	11.00										
21	22	B2	0.03	OS				3.86%			285.00	12.97	12.97	1.57	0.43	0.01	0.02	
Node 21 Back of Wall																		
Node 22 Gutter							Elev. Node 23	193.5		Dist. Travel =	285.00							
							Elev. Node 24	186.6										
							Elev. Delta	6.90										
23	24	B3	0.01	OS				2.42%			285.00	16.70	16.70	1.33	0.36	0.00	0.00	
Node 24 Cross Gutter																		
							Elev. Node 25	187.0		Dist. Travel =	20.00							
							Elev. Node 24	186.6										
							Elev. Delta	0.40										
25	24	B4	0.00	OS				2.00%			20.00	1.28	1.28	6.99	0.90	0.00	0.00	
Node 24 Cross Gutter																		

Project Name: TPM for 3710 Vista Way

Location: Oceanside

*INTENSITY-DURATION DESIGN CHART

Date: March 18, 2021

Post-Development Hydrology

Soil Classification = "D"

Appendix 1-1

EXHIBIT B

Frequency = 2 Yr. Storm

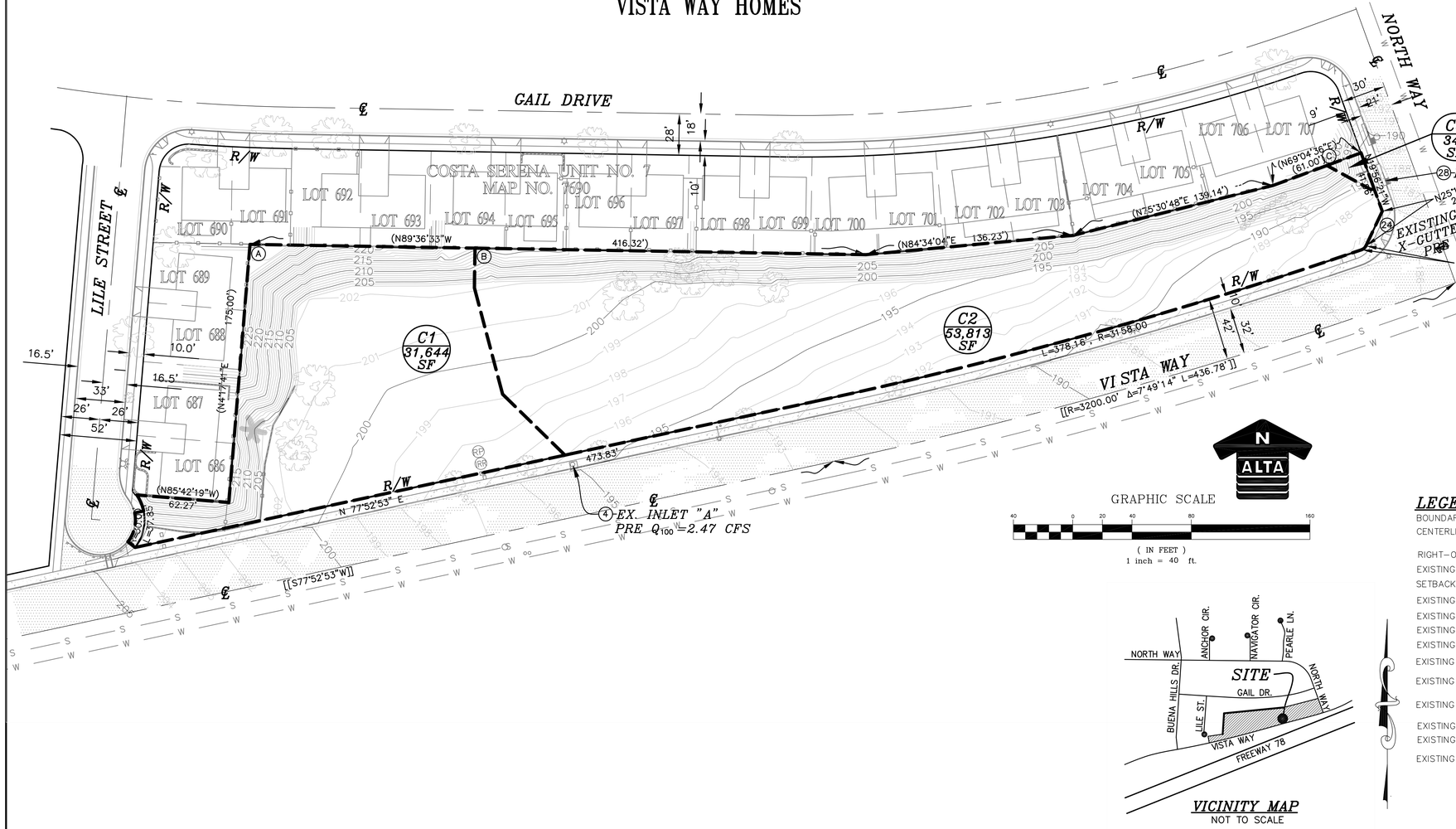
P6 = 1.10

NODE		Watershed		Land	Pipe		Designed	So or	Water	H or	Dist.	Travel		P6		∑	Q	
Fr	To	No.	AC.	Use	Size	n	Runofff	Sf	"Y"	Vel	Travel	"Ti"	Tc	I	C	CA	TOTAL	Remarks
WATERSHED AREA C																		
							Elev. Node 5	210.0		Dist. Travel =	455.00							
							Elev. Node 17	187.0										
							Elev. Delta	23.00										
26	25	C1	0.57	RES				5.05%			455.00	9.30	9.30	1.94	0.68	0.39	0.75	
Node 25 is a French Drain connected to a Modified D-9 Cleanout with																		
with Pump Camber that collects Runoff from Gravel Storage under																		
Driveway Pavers																		
25	27	Runoff to be pumped from Node 6 to Node 8					-				9.00							2" PVC
Node 27 is a Modular Wetland																		
27	28				0.67	0.013	0.75	2.50%	0.29	5.15	9.00	0.03	9.32	1.94				8" PVC
Node 28 Existing Curb Inlet B																		
WATERSHED AREA D																		
							Elev. Node 5	189.8		Dist. Travel =	25.00							
							Elev. Node 17	187.5										
							Elev. Delta	2.30										
29	28	D1	0.00	RES				9.20%			25.00	3.22	3.22	3.85	0.35	0.00	0.00	
Node 28 Existing Curb Inlet B																		

EXHIBIT A

Pre-Development Drainage Map

VISTA WAY HOMES



N

ALTA

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

VICINITY MAP
NOT TO SCALE

LEGEND:

- BOUNDARY
- CENTERLINE — ℄
- RIGHT-OF-WAY — R/W
- EXISTING LOT LINE
- SETBACK LINE
- EXISTING CURB & GUTTER
- EXISTING WATER — W
- EXISTING SEWER — S
- EXISTING FENCE
- EXISTING RETAINING WALL
- EXISTING CONCRETE
- EXISTING AC PAVING
- EXISTING CONTOUR LINE — 770
- EXISTING ELEVATION — 769.8
- EXISTING FIRE HYDRANTS

EXHIBIT "B"
PRE-DEVELOPMENT DRAINAGE AREA MAP FOR TENTATIVE MAP

POST DAM LEGEND:

100 YEAR FREQUENCY

WATERSHED BOUNDARY
WATERSHED NAME
WATERSHED DESIGNATION — B2
WATERSHED AREA — 500 SF

DRAINAGE NODE ----- (1)

HYDROLOGIC SOIL GROUP "D"
DEPTH TO GROUNDWATER > 12'

General Notes

THIS PROJECT IS A COMMON INTEREST DEVELOPMENT FOR SENIOR HOUSING. CCR'S WILL BE PREPARED FOR THIS PROJECT TO DEFINE AND MAINTAIN COMMON USE AREAS SUCH AS DRIVEWAYS, PARKING, LANDSCAPING & ETC. AFFORDABLE HOUSING IS INCLUDED AS A PART OF THIS PROJECT ALONG WITH BONUS DENSITY

1. EXISTING GROSS SUBDIVISION AEREA: 1.97 AC
2. PROPOSED GROSS SUBDIVISION AEREA: 1.97 AC
9. ASSESSOR'S PARCEL NUMBER: 165-493-47
10. SITE ADDRESS: 3710 VISTA WAY
    OCEANSIDE, CA 92056
11. PORTIONS OF LOTS 684, 685, 708 THROUGH 720, LOTS 721 THROUGH 725 AND PORTIONS OF LOTS 726 AND 727 OF COSTA SERENA UNIT NO. 7, IN THE CITY OF OCEANSIDE, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 7690, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, JULY 3, 1973, TOGETHER WITH THAT PORTION OF PORT CIRCLE STREET AS VACATED BY RESOLUTION RECORDED FEBRUARY 26, 2002 AS FILE NO. 2002-0159407 OF OFFICIAL RECORDS.
18. BENCH MARK: DESCRIPTION: CL MONUMENT 3.5" BRASS DISC STAMPED LS-4506
    LOCATION: INT VISTA WAY AND BUENA HILLS
    RECORD: CITY OF OCEANSIDE
    ELEVATION: 206.80 DATUM: NAV 88
19. SOURCE OF TOPOGRAPHY: ALATA CONSULTANTS
    SURVEYED ON: 02/20/2020
20. TOPOGRAPHIC CONTOUR INTERVAL: 1 FOOT
27. FEMA FLOOD DESIGNATION: THIS SITE IS NOT WITH A 100-YEAR FLOODWAY OR FLOODPLAIN PER FEMA MAP 06073C0766G

ENGINEER OF WORK

BARTOLOME J. PASTOR, RCE 38606

DATED: MARCH 18 ,2021

REGISTERED PROFESSIONAL ENGINEER
BARTOLOME J. PASTOR
No.38606
Exp.3/31/23
CIVIL
STATE OF CALIFORNIA

ALTA CONSULTANTS
PLANNING ENGINEERING SURVEYING
1283 E. Main St., Ste. 109, El Cajon, CA 92021 (619) 749-8818 Fax (619) 749-8818

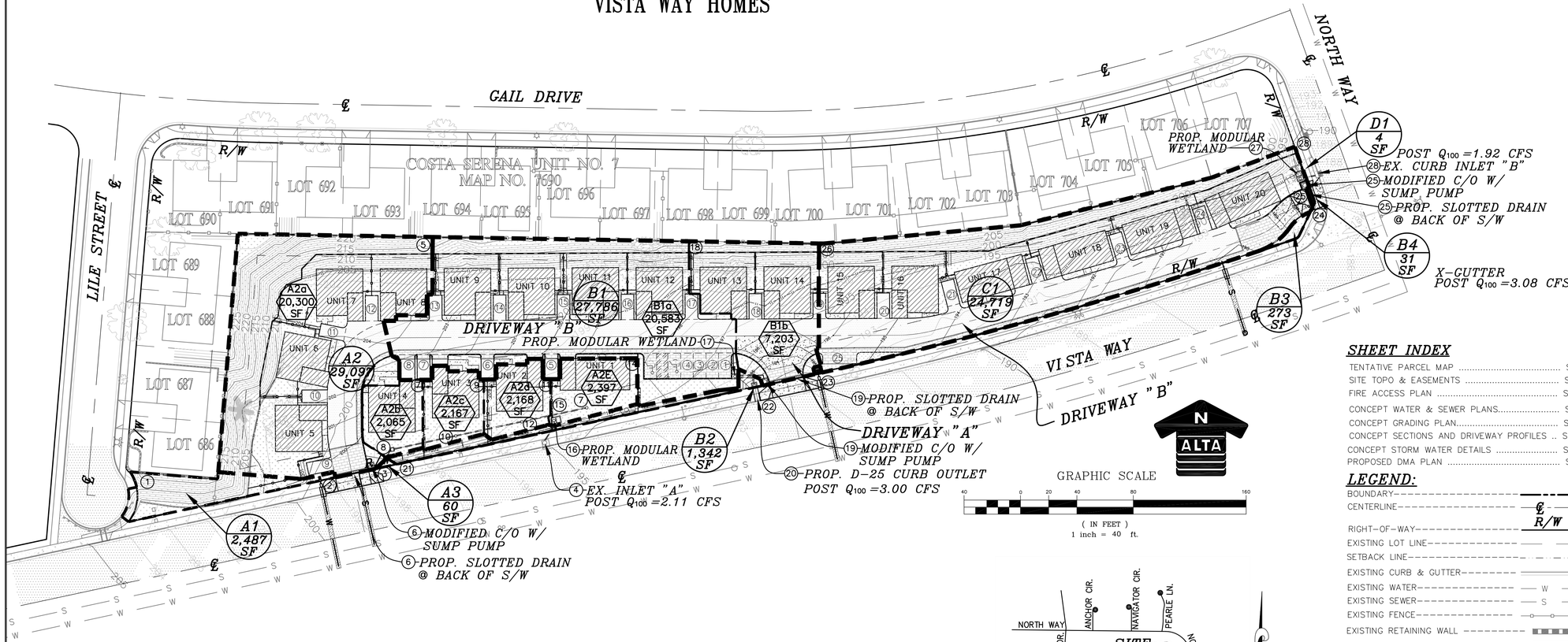
JOB NO. 499-01, DATE MARCH 18, 2021

Date: 03/18/2021 SHEET 1 OF 1

EXHIBIT B

Post-Development Drainage Map

VISTA WAY HOMES

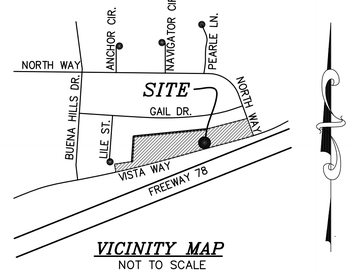


N
ALTA

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.



VICINITY MAP
NOT TO SCALE

SHEET INDEX

LEGEND:

- BOUNDARY
- CENTERLINE (℄)
- RIGHT-OF-WAY (R/W)
- EXISTING LOT LINE
- SETBACK LINE
- EXISTING CURB & GUTTER
- EXISTING WATER (W)
- EXISTING SEWER (S)
- EXISTING FENCE
- EXISTING RETAINING WALL
- EXISTING CONCRETE
- EXISTING AC PAVING
- EXISTING CONTOUR LINE (770)
- EXISTING ELEVATION (769.8)
- EXISTING FIRE HYDRANTS
- EXISTING WATER SERVICE W/ EX. BACKFLOW PREVENTER TO BE USED FOR IIRRIGATION (IRR) (RP)
- PROPOSED WATER SERVICE W/ BACKFLOW PREVENTER (W) (RP)
- PROPOSED SEWER LATERAL SERVICE (S)
- SEWER MH (S)
- PARKING SPACE NUMBER (1)
- PROPOSED TYPE G PER G-2 CURB
- PROPOSED LANDSCAPING
- PROPOSED CONCRETE
- PROPOSED AC PAVING
- PROPOSED PAVER PER DETAIL ON SHEET NO. 6
- TRENCH RESURFACING
- PROPOSED RETAINING WALL
- 2:1 SLOPE
- DAYLIGHT LINE (CUT / FILL)
- DIRECTION OF FLOW
- PROPOSED STORM DRAIN
- CURB OUTLET PER D-25
- PROPRIETARY TREATMENT UNIT PER DETAIL ON SHEET NO. 7
- MODIFIED TYPE D CLEANOUT PER D-9 AND DETAILS ON SHEET NO. 7

EXHIBIT "B"
POST-DEVELOPMENT DRAINAGE AREA MAP FOR TENTATIVE MAP

POST DAM LEGEND:

100 YEAR FREQUENCY

- WATERSHED BOUNDARY
- WATERSHED NAME
- WATERSHED DESIGNATION — B2
- WATERSHED AREA — 500 SF
- SUBBASIN BOUNDARY
- SUBBASIN NAME
- WATERSHED DESIGNATION — B1a
- SUBBASIN AREA — 20,583 SF
- DRAINAGE NODE — (1)

HYDROLOGIC SOIL GROUP "D"
DEPTH TO GROUNDWATER > 12'

General Notes

THIS PROJECT IS A COMMON INTEREST DEVELOPMENT FOR SENIOR HOUSING. CCR'S WILL BE PREPARED FOR THIS PROJECT TO DEFINE AND MAINTAIN COMMON USE AREAS SUCH AS DRIVEWAYS, PARKING, LANDSCAPING & ETC. AFFORDABLE HOUSING IS INCLUDED AS A PART OF THIS PROJECT ALONG WITH BONUS DENSITY

1. EXISTING GROSS SUBDIVISION AEREA: 1.97 AC
2. PROPOSED GROSS SUBDIVISION AEREA: 1.97 AC
3. PROPOSED PUBLIC STREET DEDICATION: 0 AC
4. PROPOSED PRIVATE STREET AREA: 0 AC
5. TOTAL NUMBER OF EXISTING LOTS: 1
6. TOTAL NUMBER OF PROPOSED LOTS: 1
7. TOTAL NUMBER OF PROPOSED PROPOSED UNITS: 20
8. PROPOSED PARKING:
   1 ATTACHED GARAGE SPACE PER UNIT=20
   UNATTACHED STNDARD PARKING SPACES (18'x10')=25
   VAN ACCESSABLE HADICAPPED PARKING SPACES=2
   TOTAL PARKING SPACES PROPOSED=47
   PARKING SPACES PER UNIT=2.35
9. ASSESSOR'S PARCEL NUMBER: 165-493-47
10. SITE ADDRESS: 3710 VISTA WAY
    OCEANSIDE, CA 92056
11. PORTIONS OF LOTS 684, 685, 708 THROUGH 720, LOTS 721 THROUGH 725 AND PORTIONS OF LOTS 726 AND 727 OF COSTA SERENA UNIT NO. 7, IN THE CITY OF OCEANSIDE, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 7690, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, JULY 3, 1973, TOGETHER WITH THAT PORTION OF PORT CIRCLE STREET AS VACATED BY RESOLUTION RECORDED FEBRUARY 26, 2002 AS FILE NO. 2002-0159407 OF OFFICIAL RECORDS.
12. EXISTING GENERAL PLAN LAND USE: RESDENTIAL
13. PROPOSED GENERAL PLAN LAND USE: RESIDENTIAL
14. EXISTING ZONNING: RM-A
15. PROPOSED ZONNING: RM-A
16. PROPOSED DENSITY: 10.15 DU/AC
17. STATUS OF LEGAL ACCESS: VISTA WAY AN EXISTING & FULLY IMPROVED PUBLIC STREET
18. BENCH MARK: DESCRIPTION: CL MONUMENT 3.5" BRASS DISC STAMPED LS-4506
    LOCATION: INT VISTA WAY AND BUENA HILLS
    RECORD: CITY OF OCEANSIDE
    ELEVATION: 206.80 DATUM: NAV 88
19. SOURCE OF TOPOGRAPHY: ALATA CONSULTANTS
    SURVEYED ON: 02/20/2020
20. TOPOGRAPHIC CONTOUR INTERVAL: 1 FOOT
21. MAXIMUM SLOPE GRADIANT: 2:1
22. AREA/PERCENT OF SITE IN DRIVEWAYS & PARKING: 22,588 SF OR 26%
23. AREA/PERCENT OF SITE IN OPEN SPACE: 0
24. AREA/PERCENT OF SITE IN LANDSCAPING: 38,050 SF OR 44%
25. ONSITE GRADING FOR THIS PROJECT: (8% SHRINKAGE FOR CUT)
    CUT= 3,000 C.Y. FILL= 4,000 C.Y. IMPORT= 1,000 C.Y.
    NOTE: ALL QUANTITIES ARE BASED ON FINISH GRADE. NO ALLOWANCE MADE FOR SHRINKAGE OR BULKING OF MATERIAL.
26. GRADED AREA: 1.63 AC=82% OF SITE
27. FOR PROPOSED FENCING SEE LANDSCAPE PLANS FOR THIS PROJECT.
28. FEMA FLOOD DESIGNATION: THIS SITE IS NOT WITH A 100-YEAR FLOODWAY OR FLOODPLAIN PER FEMA MAP 06073C0766G
29. SOLAR ACCESS: ALL LOTS WITHIN THIS SUBDIVISION HAVE A MINIMUM OF 100 SQUARE FEET OF SOLAR ACCESS FOR EACH FUTURE DWELLING ALLOWED BY THIS SUBDIVISION.

ENGINEER OF WORK

BARTOLOME J. PASTOR, RCE 38606

DATED: MARCH 18 ,2021

REGISTERED PROFESSIONAL ENGINEER — BARTOLOME J. PASTOR — No. 38606 — Exp. 3/31/23 — CIVIL — STATE OF CALIFORNIA

ALTA CONSULTANTS
PLANNING ENGINEERING SURVEYING
1283 E. Main St., Ste. 109, El Cajon, CA 92021 (619) 749-8818 Fax (619) 749-8818

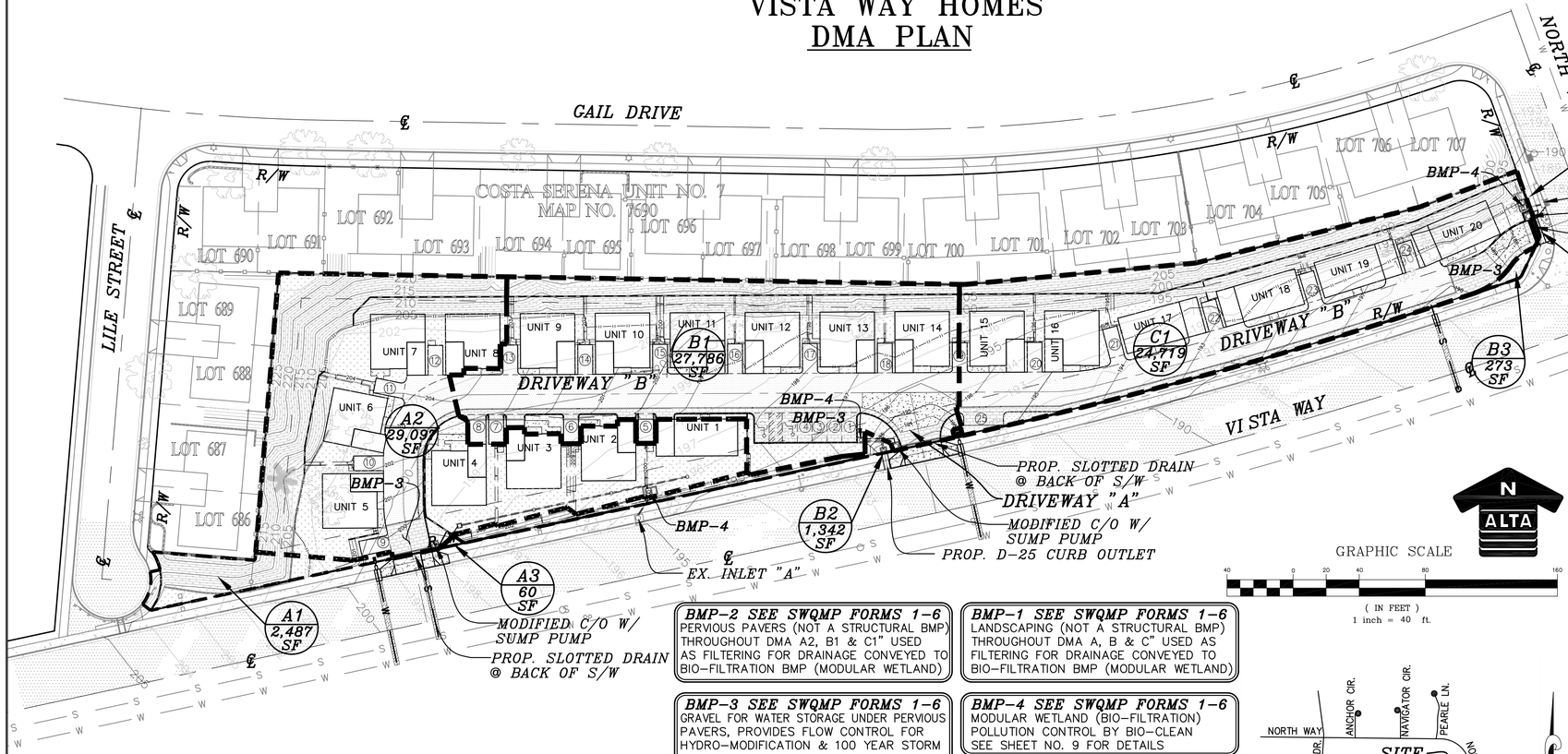
JOB NO. 499-01, DATE MARCH 18, 2021

Date: 03/18/2021 SHEET 1 OF 1

EXHIBIT C
Post-Development DMA Map

EXHIBIT C

VISTA WAY HOMES
DMA PLAN



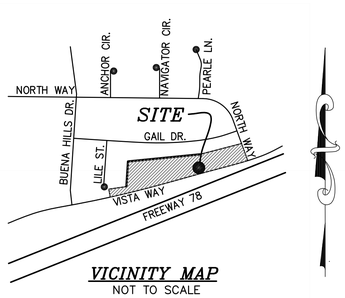
BMP-2 SEE SWQMP FORMS 1-6
PERVIOUS PAVERS (NOT A STRUCTURAL BMP) THROUGHOUT DMA A2, B1 & C1" USED AS FILTERING FOR DRAINAGE CONVEYED TO BIO-FILTRATION BMP (MODULAR WETLAND)

BMP-1 SEE SWQMP FORMS 1-6
LANDSCAPING (NOT A STRUCTURAL BMP) THROUGHOUT DMA A, B & C" USED AS FILTERING FOR DRAINAGE CONVEYED TO BIO-FILTRATION BMP (MODULAR WETLAND)

BMP-3 SEE SWQMP FORMS 1-6
GRAVEL FOR WATER STORAGE UNDER PERVIOUS PAVERS, PROVIDES FLOW CONTROL FOR HYDRO-MODIFICATION & 100 YEAR STORM DETENTION PRIOR TO BEING CONVEYED TO BIO-FILTRATION (MODULAR WETLAND

BMP-4 SEE SWQMP FORMS 1-6
MODULAR WETLAND (BIO-FILTRATION) POLLUTION CONTROL BY BIO-CLEAN
SEE SHEET NO. 9 FOR DETAILS

GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.



VICINITY MAP
NOT TO SCALE

LEGEND:

- BOUNDARY
- CENTERLINE ℄
- PROPOSED LOT LINE
- RIGHT-OF-WAY R/W
- EXISTING LOT LINE
- SETBACK LINE
- EXISTING CURB & GUTTER
- EXISTING WATER — W —
- EXISTING SEWER — S —
- EXISTING FENCE
- EXISTING RETAINING WALL
- EXISTING CONCRETE
- EXISTING AC PAVING
- EXISTING CONTOUR LINE — 770 —
- EXISTING ELEVATION 769.8
- EXISTING FIRE HYDRANTS
- EXISTING WATER SERVICE W/ EX. BACKFLOW PREVENTER TO BE USED FOR IIRRIGATION (IRR) (RP)
- EXISTING STREET SIGN
- PROPOSED WATER SERVICE W/ BACKFLOW PREVENTER — W — (W) (RP)
- PROPOSED SEWER LATERAL SERVICE — S — (S)
- SEWER MH — S —
- PARKING SPACE NUMBER (1)
- PROPOSED TYPE G PER G-2 CURB
- PROPOSED FENCE SEE LANDSCAPE PLANS FOR DETAILS
- PROPOSED GATE FOR EMERGENCY ACCESS SEE LANDSCAPE PLANS FOR DETAILS
- PROPOSED LANDSCAPING
- PROPOSED CONCRETE
- PROPOSED AC PAVING
- PROPOSED PAVER PER DETAIL ON SHEET NO. 6
- PROPOSED BUILDING
- TRENCH RESURFACING
- PROPOSED RETAINING WALL
- 2:1 SLOPE
- DAYLIGHT LINE — CUT / FILL
- DIRECTION OF FLOW
- PROPOSED STORM DRAIN
- CURB OUTLET PER D-25
- PROPRIETARY TREATMENT UNIT PER DETAIL ON SHEET NO. 9
- MODIFIED TYPE D CLEANOUT W/SUMP PUMP

DMA LEGEND:

DMA AREA
WATERSHED NAME
WATERSHED DESIGNATION — B2
WATERSHED AREA — 500 SF

HYDROLOGIC SOIL GROUP "D"
DEPTH TO GROUNDWATER > 12

POTENTIAL POLUTANTS

POLLUTANT	POTENTIAL SOURCE	SOURCE CONTROLS
SEDIMENT	DURING GRADING OPERATIONS	CONST. BMP'S PERMANENT LANDSCAPING AND HARDSCAPE
NUTRIANTS	FERTILIZER	TO BE APPLIED ONLY AS NEEDED
TRASH & DEBRIS	GENERAL TRASH	REMOVE & DISPOSE IN A PROPER MANOR
OXYGEN DEMANDING SUBSTANCES	GENERAL	TO REMOVE & DISPOSE IN A PROPER MAONOR
BACTERIA & VIRUSES	GENERAL	ALL RUNOFF IS DIRECTED TO BIO-FILTRATION UNITS
PESTICIDES	LANDSCAPING	ALL RUNOFF IS DIRECTED TO BIO-FILTRATION UNITS

REQUIRED NOTES FOR THIS EXHIBIT:

1. THE UNDERLYING HYDROLOGIC SOIL GROUP IS "D".
2. THE GROUDWATER IN THIS AREA IS DEEP ENOUGH NOT TO IMPACT SITE DEVELOPMENT.
3. THERE ARE NO NATURAL HYDROLOGIC FEATURES ON THIS SITE.
4. THERE ARE NO CRITICAL COURSE SEDIMENT YIELD AREAS ON THE PROJECT.
5. THE EXISTING TOPOGRAPHY AND PROPOSED IMPERVIOUS AREAS ARE INDICATED ON THE EXHIBIT.
6. THE EXISTING AND PROPOSED SITE DRAINAGE NETWORK AND CONNECTIONS TO OFFSITE ARE SHOWN.
7. THERE IS NO PROPOSED DEMOLITION ON THIS SITE. OTHER THAN CLEARING & GRUBING, REMOVAL OF EXISTING WALLS, AND SAWCUT AND REMOVAL OF EXISTING PUBLIC IMPROVEMENTS AS NEEDED TO PROVIDE ACCESS AND UTILITIES FOR THIS SITE.
8. THE PROPOSED GRADING IS SHOWN ON THIS EXHIBIT. INCLUDING PROPOSED RETAINING WALLS.
9. THE PROPOSED IMPERVIOUS FEATURES ON THIS PROJECT ARE SHOWN ON THIS EXHIBIT.
10. THE DESIGN FEATURES AND SURFACE TREATMENTS USED TO MAINTAIN IMPERVIOUSNESS ARE SHOWN ON THIS EXHIBIT.
11. DRAINAGE MANAGEMENT AREAS ARE SHOWN AND IDENTIFIED. MINAULMIST AREAS ARE INDICATED.
12. THERE ARE NO POLLUTANT SOURCE AREAS REQUIRING SOURCE CONTROLS ON THIS PROJECT.
13. THE STRUCTURAL (PERMANENT) BMPS ARE SHOWN AND IDENTIFIED ON THIS EXHIBIT.

AREA A2 LOW IMPACT DEVELOPMENT DESIGN DRAINS TO MODULAR WETLAND

DMA NAME		DMA AREA SF	POST PROJECT SURFACE TYPE	% OF A2	DMA RUNOFF FACTOR	DMA AREA x RUNOFF FACTOR	% OF A2	SOIL TYPE "D"
ASPHALT		2,765	ASPHALT	9.5%	1.0	2,765	9.5%	
BUILDINGS		8,692	BUILDINGS	30%	1.0	8,692	30%	
CONCRETE		594	CONCRETE	2.0%	1.0	594	2.0%	
LANDSCAPING		16,396	LANDSCAPING	56.0%	0.1	1,640	5.5%	C=0.58
WALLS		220	WALLS	1%	1.0	220	1%	
PAVERS		430	PAVERS	1.5%	0.2	86	0.5%	
TREATMENT		35	PROPRIETARY	0%	0.1	4	0%	
TOTAL DMA AREA		29,097	34% OF TOTAL AREA	100%	SEE SWQMP FOR SITE SPECIFIC POLLUTION CONTROL & FLOW CONTROL		SIZING FACTOR	MINIMUM AREA
TOTAL DMA AREA						13,996	0.04	559

AREA C1 LOW IMPACT DEVELOPMENT DESIGN DRAINS TO MODULAR WETLAND

DMA NAME		DMA AREA SF	POST PROJECT SURFACE TYPE	% OF C1	DMA RUNOFF FACTOR	DMA AREA x RUNOFF FACTOR	% OF C1	SOIL TYPE "D"
ASPHALT		6,624	ASPHALT	27%	1.0	6,624	27%	
BUILDINGS		6,454	BUILDING	26%	1.0	6,454	26%	
CONCRETE		1,436	CONCRETE	5.5%	1.0	1,436	5.5%	
LANDSCAPING		8,262	LANDSCAPING	33.5%	0.1	826	3.5%	C=0.68
WALLS		529	WALLS	2%	1.0	529	2%	
PAVERS		1,414	PAVERS	6%	0.2	283	1%	
TREATMENT		35	PROPRIETARY	0%	0.1	4	0%	
TOTAL DMA AREA		24,719	29% OF TOTAL AREA	100%	SEE SWQMP FOR SITE SPECIFIC POLLUTION CONTROL & FLOW CONTROL		SIZING FACTOR	MINIMUM AREA
TOTAL DMA AREA						16,152	0.04	646

AREA B2, B3 & B4 LOW IMPACT DEVELOPMENT DESIGN DRAINS TO EXISTING X-GUTTER

DMA NAME		DMA AREA SF	POST PROJECT SURFACE TYPE	% OF B2 B3 & B4	DMA RUNOFF FACTOR	DMA AREA x RUNOFF FACTOR	% OF B2 B3 & B4	SOIL TYPE "D"
ASPHALT		0	ASPHALT	0%	1.0	0	0%	
BUILDINGS		0	ROOFS	0%	1.0	0	0%	
CONCRETE		57	CONCRETE	3.5%	1.0	57	3.5%	
LANDSCAPING		1,412	LANDSCAPING	85.5%	0.1	141	8.5%	C=0.43
WALLS		177	WALLS	11%	1.0	177	11%	
PAVERS		0	PAVERS	0%	0.2	0	0%	
TREATMENT		0	MINIMALIST	0%	–	0	0%	
TOTAL DMA AREA		1,646	2.0% OF TOTAL AREA	100%	SEE SWQMP FOR SITE SPECIFIC POLLUTION CONTROL & FLOW CONTROL		SIZING FACTOR	MINIMUM AREA
TOTAL DMA AREA						375	0.04	15

AREA B1 LOW IMPACT DEVELOPMENT DESIGN DRAINS TO MODULAR WETLAND

DMA NAME		DMA AREA SF	POST PROJECT SURFACE TYPE	% OF B1	DMA RUNOFF FACTOR	DMA AREA x RUNOFF FACTOR	% OF B1	SOIL TYPE "D"
ASPHALT		7,323	ASPHALT	26%	1.0	7,323	26%	
BUILDINGS		6,534	BUILDINGS	23.5%	1.0	6,534	23.5%	
CONCRETE		1,926	CONCRETE	7.0%	1.0	1,926	7.0%	
LANDSCAPING		9,415	LANDSCAPING	34%	0.1	942	3.5%	C=0.67
WALLS		184	WALLS	0.5%	1.0	184	0.5%	
PAVERS		2,404	PAVERS	9%	0.2	480	1.0%	
TREATMENT		35	PROPRIETARY	0%	0.1	4	0%	
TOTAL DMA AREA		27,786	32% OF TOTAL AREA	100%	SEE SWQMP FOR SITE SPECIFIC POLLUTION CONTROL & FLOW CONTROL		SIZING FACTOR	MINIMUM AREA
TOTAL DMA AREA						17,389	0.04	695

AREA A1 & A3 LOW IMPACT DEVELOPMENT DESIGN DRAINS TO EXISTING INLET "A"

DMA NAME		DMA AREA SF	POST PROJECT SURFACE TYPE	% OF A1 & A3	DMA RUNOFF FACTOR	DMA AREA x RUNOFF FACTOR	% OF A1 & A3	SOIL TYPE "D"
ASPHALT		0	ASPHALT	0%	1.0	0	0%	
BUILDINGS		0	BUILDINGS	0%	1.0	0	0%	
CONCRETE		6	CONCRETE	0%	1.0	6	0%	
LANDSCAPING		2,504	LANDSCAPING	98.5%	0.1	250	10%	C=0.36
WALLS		37	WALLS	1.5%	1.0	37	1.5%	
PAVERS		0	PAVERS	0%	0.2	0	0%	
TREATMENT		0	MINIMALIST	0%	–	0	0%	
TOTAL DMA AREA		2,547	3% OF TOTAL AREA	100%	SEE SWQMP FOR SITE SPECIFIC POLLUTION CONTROL & FLOW CONTROL		SIZING FACTOR	MINIMUM AREA
TOTAL DMA AREA						293	0.04	12

AREA D1 LOW IMPACT DEVELOPMENT DESIGN DRAINS TO EXISTING INLET "B"

DMA NAME		DMA AREA SF	POST PROJECT SURFACE TYPE	% OF D1	DMA RUNOFF FACTOR	DMA AREA x RUNOFF FACTOR	% OF D1	SOIL TYPE "D"
ASPHALT		0	ASPHALT	0%	1.0	0	0%	
BUILDINGS		0	ROOFS	0%	1.0	0	0%	
CONCRETE		0	CONCRETE	0%	1.0	0	0%	
LANDSCAPING		4	LANDSCAPING	100%	0.1	0.4	10%	C=0.35
WALLS		0	WALLS	0%	1.0	0	0%	
PAVERS		0	PAVERS	0%	0.2	0	0%	
TREATMENT		0	MINIMALIST	0%	–	0	0%	
TOTAL DMA AREA		4	0% OF TOTAL AREA	100%	SEE SWQMP FOR SITE SPECIFIC POLLUTION CONTROL & FLOW CONTROL		SIZING FACTOR	MINIMUM AREA
TOTAL DMA AREA						0.4	0.04	0.02

General Notes

THIS PROJECT IS A COMMON INTEREST DEVELOPMENT FOR SENIOR HOUSING. CCR'S WILL BE PREPARED FOR THIS PROJECT TO DEFINE AND MAINTAIN COMMON USE AREAS SUCH AS DRIVEWAYS, PARKING, LANDSCAPING & ETC. AFFORDABLE HOUSING IS INCLUDED AS A PART OF THIS PROJECT ALONG WITH BONUS DENSITY

1. EXISTING GROSS SUBDIVISION AEREA: 1.97 AC
2. PROPOSED GROSS SUBDIVISION AEREA: 1.97 AC
3. PROPOSED PUBLIC STREET DEDICATION: 0 AC
4. PROPOSED PRIVATE STREET AREA: 0 AC
5. TOTAL NUMBER OF EXISTING LOTS: 1
6. TOTAL NUMBER OF PROPOSED LOTS: 1
7. TOTAL NUMBER OF PROPOSED PROPOSED UNITS: 20
   5 UNITS 1, 17-20 ARE 1.069 SF, 15 UNITS 2-16 ARE 1,089 SF
8. PROPOSED PARKING:
   1 ATTACHED GARAGE SPACE PER UNIT=20
   UNATTACHED STNDARD PARKING SPACES (18'x10')=25
   VAN ACCESSABLE HADICAPPED PARKING SPACES=2
   TOTAL PARKING SPACES PROPOSED=47
   PARKING SPACES PER UNIT=2.35
9. ASSESSOR'S PARCEL NUMBER: 165-493-47
10. SITE ADDRESS: 3710 VISTA WAY
    OCEANSIDE, CA 92056
11. PORTIONS OF LOTS 684, 685, 708 THROUGH 720, LOTS 721 THROUGH 725 AND PORTIONS OF LOTS 726 AND 727 OF COSTA SERENA UNIT NO. 7, IN THE CITY OF OCEANSIDE, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 7690, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, JULY 3, 1973, TOGETHER WITH THAT PORTION OF PORT CIRCLE STREET AS VACATED BY RESOLUTION RECORDED FEBRUARY 26, 2002 AS FILE NO. 2002-0159407 OF OFFICIAL RECORDS.
17. STATUS OF LEGAL ACCESS: VISTA WAY AN EXISTING & FULLY IMPROVED PUBLIC STREET
18. BENCH MARK: DESCRIPTION: CL MONUMENT 3.5" BRASS DISC STAMPED LS-4506
    LOCATION: INT VISTA WAY AND BUENA HILLS
    RECORD: CITY OF OCEANSIDE
    ELEVATION: 206.80 DATUM: NAV 88
19. SOURCE OF TOPOGRAPHY: ALATA CONSULTANTS SURVEYED ON: 02/20/2020
20. TOPOGRAPHIC CONTOUR INTERVAL: 1 FOOT
21. MAXIMUM SLOPE GRADIANT: 2:1
25. ONSITE GRADING FOR THIS PROJECT: (8% SHRINKAGE FOR CUT)
    CUT= 3,000 C.Y. FILL= 4,000 C.Y. IMPORT= 1,000 C.Y.
    NOTE: ALL QUANTITIES ARE BASED ON FINISH GRADE. NO ALLOWANCE MADE FOR SHRINKAGE OR BULKING OF MATERIAL.
26. GRADED AREA: 1.63 AC=82% OF SITE
27. FEMA FLOOD DESIGNATION: THIS SITE IS NOT WITH A 100-YEAR FLOODWAY OR FLOODPLAIN PER FEMA MAP 06073C0766G

ENGINEER OF WORK

BARTOLOME J. PASTOR, RCE 38606

DATED: MARCH 18 ,2021

REGISTERED PROFESSIONAL ENGINEER — BARTOLOME J. PASTOR — No.38606 Exp.3/31/23 — CIVIL — STATE OF CALIFORNIA

ALTA CONSULTANTS
PLANNING ENGINEERING SURVEYING
1283 E. Main St., Ste. 109, El Cajon, CA 92021 (619) 749-8818 Fax (619) 749-8818

JOB NO. 499-01, DATE MARCH 18, 2021

Date: 03/18/2021 **SHEET 1 OF 1**

ATTACHMENT A
Scope of Work

ALTA CONSULTANTS

PLANNING ♦ ENGINEERING ♦ SURVEYING

1283 E. Main Street, Suite 109, El Cajon, CA. 92021 Tel. (858) 581-6101 Fax. (619) 749-8806

State License R.C.E. 38606 and L.S. 5335

March 22, 2021 Job No. 499-01

APN: 165-493-47-00

Letter of Description & Justification for 3710 Vista Way Applications for Tentative Map And Conditional Use Permit

This project is a common interest development for 20 detached one-story units of senior housing with (1) one attached garage for each unit, 27 detached parking spaces (2) two of which are van accessible handicap spaces. for a total of 47 parking spaces. No off-site parking is included in this parking count. CCR's will be prepared for this project prior to occupancy. This project includes affordable housing and is requesting a density bonus. The project is located at 3710 Vista Way adjacent to 78 Freeway. The project is located along the north side of Vista Way, at the northwest corner of Vista Way and North Way. The 78 freeway runs parrallel with Vista Way's southerly right-of-way. Access to the site is from Vista Way. The project is on 1.97-acre lot with no existing visible improvements other than some retaining walls. This site was previously a part of a residential development with homes and streets. These improvements have been removed from the site. There is an existing manufactured slope along the north and west side of the project with several large existing trees. The remainder of the site is relatively flat. The site slopes west to east towards the southeast corner of the site (the northwest corner of Vista Way and North Way) where there is an existing cross-gutter that conveys runoff easterly across North Way. Both Vista Way and North Way are fully improved streets no new street dedications or improvements are proposed by this project.

This project will comply with the current State of California MS-4 permit. This project has minmualist areas adjacent to the street right-of-ways that will sheet flow into the existing curb and gutter. The roof gutters will discarge into landscaped areas then sheet flow into a paver swale that will collect the storm runoff into a gravel layer under pavers for flow control hydro-modification. The storm runoff will the be directed to modlar wetland for pollution control. There will be storm water flow and pollution control compliance with this project.

The only improvements proposed within the public right-of-way are utility connections, driveway cuts and private storm drain connections to the existing public storm drain facilities. No offsite drainage flows onto the site, except at the west side of the project where a small amount of slope within the public right of way flows onto the site. There is one existing water service located on Vista Way this project proposes that this existing water service be reserved for irrigation purposes. This project proposes (2) new water services on Vista Way. Each service to supply water to half the proposed units (10 units each). The units will be individually metered by on-site private water meters. There are (2) two proposed sewer laterals. The westerly sewer lateral is proposed to be a standard "Y" connection and services 3 units (units 5-7). The easterly sewer lateral is proposed to

be a manhole connection with on site manholes and services the remaining 17 units. Electrical, phone, cable and gas connections and site improvements will be designed by others at a later date.

Proposed site acces is from (2) two 24 foot wide standard driveways on Vista Way. The westerly driveway will also be for emergency (fire access). The easterly driveway can be used for emergency access only to service those units west of this driveway for larger emergency vehicles. A 16 foot wide (emergency access only) non-standard driveway is proposed at the east end of the site on North Way. This driveway will be gated and locked with a locking mechanisum that is acceptable to the Oceanside fire department.

This development requires several deviations from standards including the following:

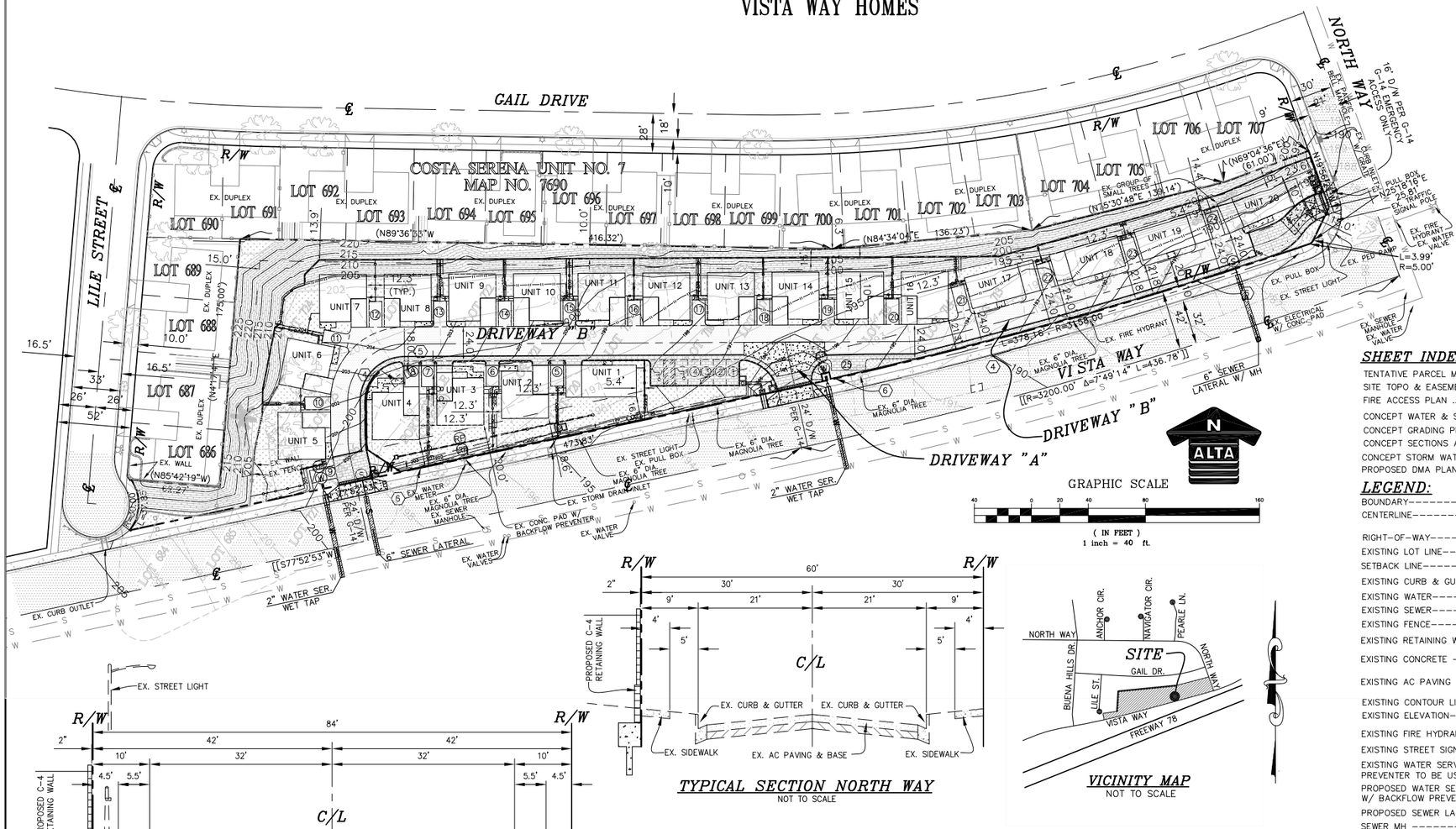
1) The above described 16' emergency access driveway on North Way. This driveway encroaches into the street return and the gutter transition for the inlet on the north side of the driveway. To maximize the number and type of proposed units. An on-site fire turn-a-round would require losing one or more units.
2) Several of the units encroach into the setbacks. The reason for this the shape of the lot and the type of development proposed. The lot is long and shallow stretching along Vista Way. Access to Vista Way is limited due to the traffic and the separation needed from North Way. This layout proposes setback encroachments for 1, 2, 4, 19 & 20.
3) The retaining walls do not meet City of Oceanside height standards. A 4 foot maximum height wall is proposed along the Vista Way and North Way right-of-way. A up to 14 foot height retaining wall is proposed behind the proposed units on the west and north side of the site. These walls are needed to provide rear yard space, and along Vista Way access to the Easterly units.

This site's design provides several benefits to the community. This is an infill project that removes a vacant site for the community eliminating the adverse possibilities that can happen on vacant sites such as trash and vagrancy. Detached one-story independent single-family senior housing. Affordable senior housing that is not in a multi-unit building. The proposed units will be sized at approximately 1,100 SF providing an easily maintained compact unit with individual rear yards. In addition once these units are occupied there will be an increase in the City of Oceanside's tax base along with the positive impact for local Oceanside businesses with the residences that this project will provide

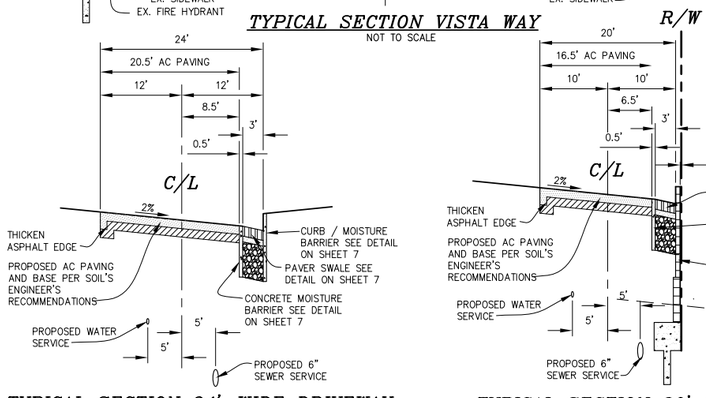
For the developer the benefits include the economic return for selling the units once the project is completed and the knowledge that this development greatly benefits the Oceanside community.

ATTACHMENT B
TPM Plans

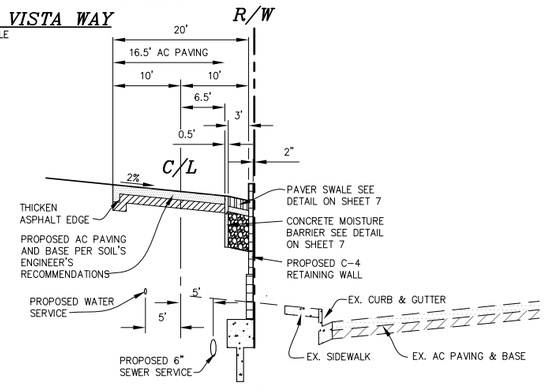
VISTA WAY HOMES



TYPICAL SECTION VISTA WAY
NOT TO SCALE



TYPICAL SECTION 24' WIDE DRIVEWAY
NOT TO SCALE
ALL DRIVEWAY SURFACES TO BE H-20 LOADING



TYPICAL SECTION 20' WIDE DRIVEWAY
NOT TO SCALE
ALL DRIVEWAY SURFACES TO BE H-20 LOADING

TYPICAL SECTION NORTH WAY
NOT TO SCALE

VICINITY MAP
NOT TO SCALE

EASEMENTS NOTES

SEE SHEET NO. 2 FOR DETAILS

THE FOLLOWING EASEMENTS ARE SHOWN ON THE TITLE REPORT PREPARED BY STEWART TITLE COMPANY, ORDER NO. 19000480110 AND DATED FEBRUARY 01, 2019, EASEMENTS SHOWN HEREON USE THE SAME ITEMS NUMBERS AS REFERENCED IN SAID REPORT:

(2) EASEMENT IN FAVOR OF PACIFIC TELEPHONE & TELEGRAPH COMPANY RECORDED MARCH 04, 1911 IN BOOK 511, PAGE 235 OF DEEDS. SAID EASEMENT IS NOT PLOTTED HEREON AS NO EXACT LOCATION IS SPECIFIED IN SAID DOCUMENT.

(4) EASEMENT IN FAVOR OF THE SAN DIEGO GAS & ELECTRIC COMPANY RECORDED AUGUST 14, 1973 AS DOCUMENT NO. 73-226902 OF OFFICIAL RECORDS.

(5) EASEMENT IN FAVOR OF THE SAN DIEGO GAS & ELECTRIC COMPANY RECORDED DECEMBER 10, 1976 AS DOCUMENT NO. 76-414701 OF OFFICIAL RECORDS.

(6) AN EASEMENT FOR PUBLIC STREET AND HIGHWAY IN FAVOR OF THE CITY OCEANSIDE PER DOCUMENT RECORDED FEBRUARY 26, 2002 AS DOCUMENT NO. 2002-0159406 OF OFFICIAL RECORDS. THE NORTH LINE OF SAID DOCUMENT IS THE SOUTH LINE OF THIS PROJECT SITE.

SHEET INDEX

LEGEND:

BOUNDARY
CENTERLINE (℄)
RIGHT-OF-WAY (R/W)
EXISTING LOT LINE
SETBACK LINE
EXISTING CURB & GUTTER
EXISTING WATER (W)
EXISTING SEWER (S)
EXISTING FENCE
EXISTING RETAINING WALL
EXISTING CONCRETE
EXISTING AC PAVING
EXISTING CONTOUR LINE (770)
EXISTING ELEVATION (769.8)
EXISTING FIRE HYDRANTS
EXISTING STREET SIGN
EXISTING WATER SERVICE W/ EX. BACKFLOW PREVENTER TO BE USED FOR IRRIGATION (IRR) (RP)
PROPOSED WATER SERVICE W/ BACKFLOW PREVENTER (W) (RP)
PROPOSED SEWER LATERAL SERVICE (S)
SEWER MH (S)
PARKING SPACE NUMBER (1)
PROPOSED TYPE G PER G-2 CURB
PROPOSED FENCE SEE LANDSCAPE PLANS FOR DETAILS
PROPOSED GATE FOR EMERGENCY ACCESS SEE LANDSCAPE PLANS FOR DETAILS
PROPOSED LANDSCAPING
PROPOSED CONCRETE
PROPOSED AC PAVING
PROPOSED PAVER PER DETAIL ON SHEET NO. 6
TRENCH RESURFACING M_3A
PROPOSED RETAINING WALL
2:1 SLOPE
DAYLIGHT LINE (CUT / FILL)
DIRECTION OF FLOW
(PVT.) PROPOSED STORM DRAIN
CURB OUTLET PER D-25
(PVT.) PROPRIETARY TREATMENT UNIT PER DETAIL ON SHEET NO. 9
(PVT.)MODIFIED TYPE D CLEANOUT W/SUMP PUMP

General Notes

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1. EXISTING GROSS SUBDIVISION AEREA: 1.97 AC
2. PROPOSED GROSS SUBDIVISION AEREA: 1.97 AC
3. PROPOSED PUBLIC STREET DEDICATION: 0 AC
4. PROPOSED PRIVATE STREET AREA: 0 AC
5. TOTAL NUMBER OF EXISTING LOTS: 1
6. TOTAL NUMBER OF PROPOSED LOTS: 1
7. TOTAL NUMBER OF PROPOSED PROPOSED UNITS: 20
   5 UNITS 1, 17-20 ARE 1.069 SF; 15 UNITS 2-16 ARE 1,089 SF
8. PROPOSED PARKING:
   1 ATTACHED GARAGE SPACE PER UNIT=20
   UNATTACHED STNDARD PARKING SPACES (18'x10')=25
   VAN ACCESSABLE HADICAPPED PARKING SPACES=2
   TOTAL PARKING SPACES PROPOSED=47
   PARKING SPACES PER UNIT=2.35
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12. EXISTING GENERAL PLAN LAND USE: RESIDENTIAL
13. PROPOSED GENERAL PLAN LAND USE: RESIDENTIAL-SENIOR HOUSING
14. EXISTING ZONNING: RM-A
15. PROPOSED ZONNING: RM-A
16. PROPOSED DENSITY: 10.15 DU/AC
17. STATUS OF LEGAL ACCESS: VISTA WAY AN EXISTING & FULLY IMPROVED PUBLIC STREET
18. BENCH MARK: DESCRIPTION: CL MONUMENT 3.5" BRASS DISC STAMPED LS-4506
    LOCATION: INT VISTA WAY AND BUENA HILLS
    RECORD: CITY OF OCEANSIDE
    ELEVATION: 206.80 DATUM: NAV 88
19. SOURCE OF TOPOGRAPHY: ALATA CONSULTANTS
    SURVEYED ON: 02/20/2020
20. TOPOGRAPHIC CONTOUR INTERVAL: 1 FOOT
21. MAXIMUM SLOPE GRADIANT: 2:1
22. AREA/PERCENT OF SITE IN DRIVEWAYS & PARKING: 22,588 SF OR 26%
23. AREA/PERCENT OF SITE IN OPEN SPACE: 0
24. AREA/PERCENT OF SITE IN LANDSCAPING: 37,993 SF OR 44%
25. ONSITE GRADING FOR THIS PROJECT: (8% SHRINKAGE FOR CUT)
    CUT= 3,000 C.Y. FILL= 4,000 C.Y. IMPORT= 1,000 C.Y.
    NOTE: ALL QUANTITIES ARE BASED ON FINISH GRADE. NO ALLOWANCE MADE FOR SHRINKAGE OR BULKING OF MATERIAL.
26. GRADED AREA: 1.63 AC=82% OF SITE
27. FOR PROPOSED FENCING & SIGNAGE SEE LANDSCAPE PLANS FOR THIS PROJECT.
28. FEMA FLOOD DESIGNATION: THIS SITE IS NOT WITH A 100-YEAR FLOODWAY OR FLOODPLAIN PER FEMA MAP 06073C0766G
29. SOLAR ACCESS: ALL LOTS WITHIN THIS SUBDIVISION HAVE A MINIMUM OF 100 SQUARE FEET OF SOLAR ACCESS FOR EACH FUTURE DWELLING ALLOWED BY THIS SUBDIVISION.

	SITE AREA IN AC	SITE DENSITY DU/AC	GENERAL PLAN	ZONING	LANDSCAPING
EXISTING	1.97	0	RESIDENTIAL	RM-A	100%
PROPOSED	1.97	10.15	RESIDENTIAL SINGLE-FAMILY	RM-A	40%

UNIT #	BUILD. AREA IN SF	SETBACKS
1, 17-20	1,069	REAR 15'
2-16	1,089	SIDE 15'
20 UNITS TOTAL		FRONT 20'

ENGINEER OF WORK

BARTOLOME J. PASTOR, RCE 38606

DATED: MARCH 11 ,2021

REGISTERED PROFESSIONAL ENGINEER BARTOLOME J. PASTOR No.38606 Exp.3/31/23 CIVIL STATE OF CALIFORNIA

OWNER

OWNER: NEPTUNE INVESTMENTS, LLC

ADDRESS: POB BOX 9890
RANCHO SANTA FE, CA 92067

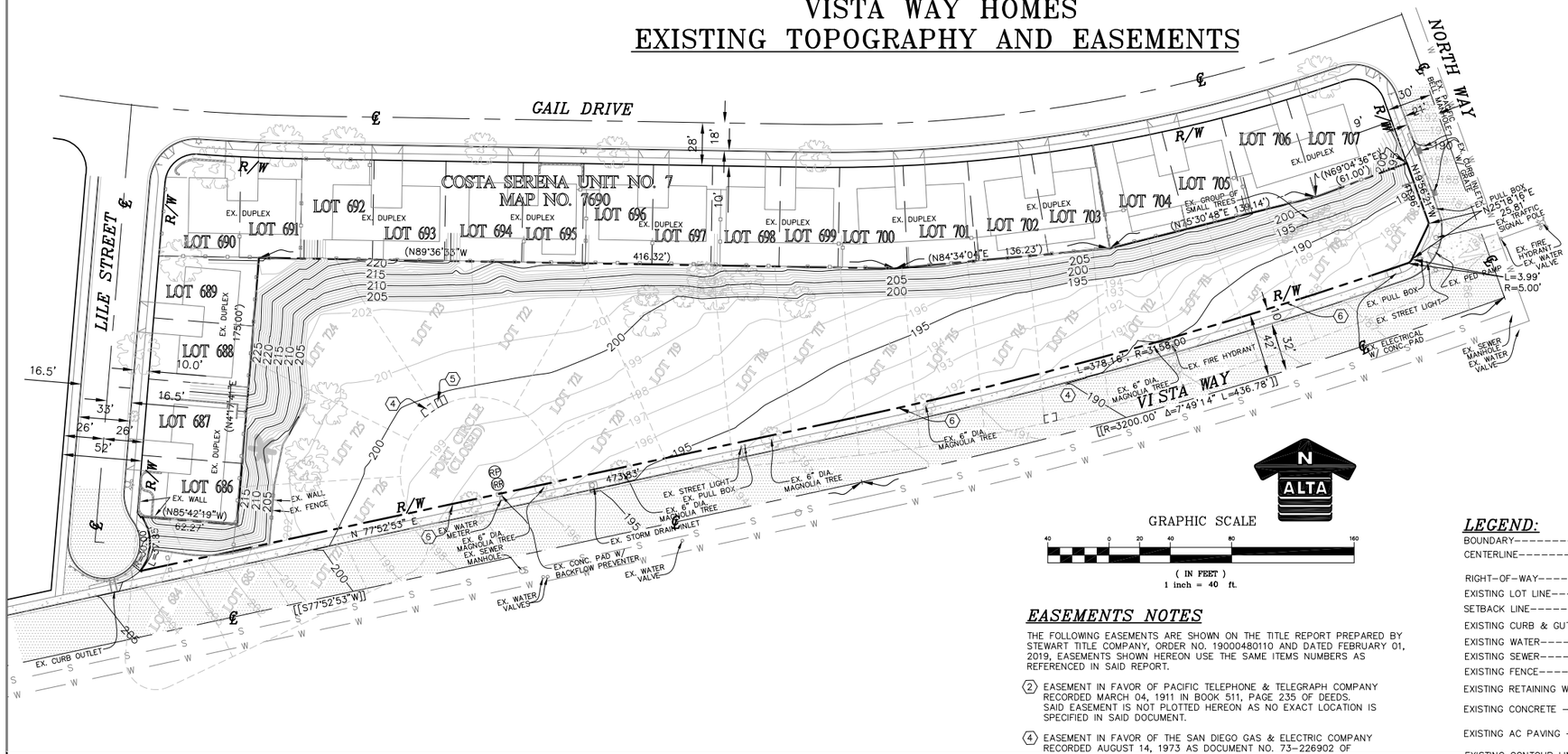
TELEPHONE: (858) 401-9090

E-MAIL: rezashera@gmail.com

BY: REZA SHERA

ALTA CONSULTANTS
PLANNING ENGINEERING SURVEYING
1283 E. Main St., Ste. 109, El Cajon, CA 92021 (619) 749-8818 Fax (619) 749-8818
JOB NO. 499-01, DATE MARCH 11, 2021

VISTA WAY HOMES
EXISTING TOPOGRAPHY AND EASEMENTS



GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

EASEMENTS NOTES

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LEGEND:

- BOUNDARY
- CENTERLINE
- RIGHT-OF-WAY
- EXISTING LOT LINE
- SETBACK LINE
- EXISTING CURB & GUTTER
- EXISTING WATER — W —
- EXISTING SEWER — S —
- EXISTING FENCE
- EXISTING RETAINING WALL
- EXISTING CONCRETE
- EXISTING AC PAVING
- EXISTING CONTOUR LINE — 770 —
- EXISTING ELEVATION 769.8
- EXISTING FIRE HYDRANTS
- EXISTING STREET SIGN

General Notes

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19. SOURCE OF TOPOGRAPHY: ALATA CONSULTANTS
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ENGINEER OF WORK

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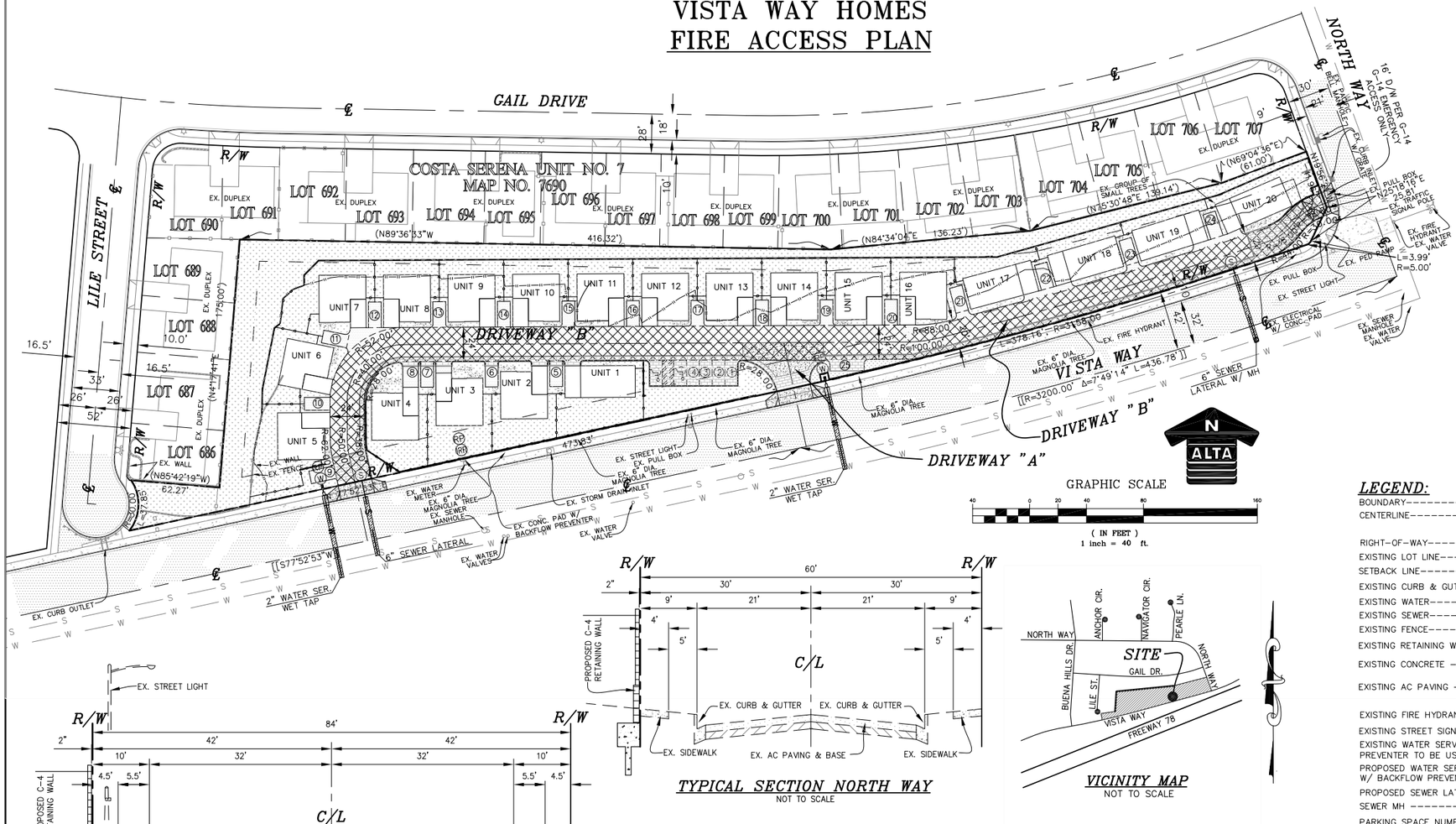
PLANNING ENGINEERING SURVEYING
1283 E. Main St., Ste. 109, El Cajon, CA 92021 (619) 749-8818 Fax (619) 749-8818
JOB NO. 499-01, DATE MARCH 11, 2021

VISTA WAY HOMES
FIRE ACCESS PLAN



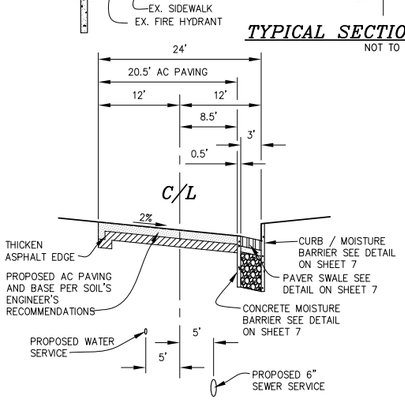
GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

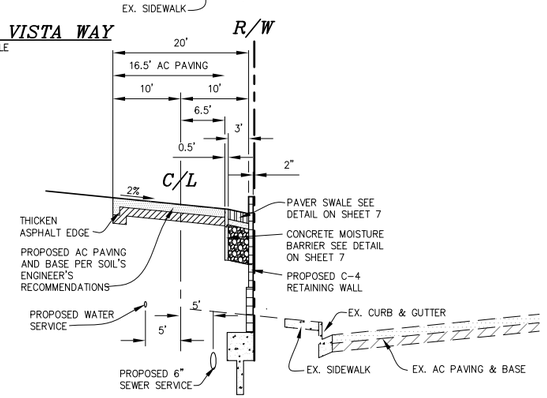
TYPICAL SECTION NORTH WAY
NOT TO SCALE

VICINITY MAP
NOT TO SCALE

TYPICAL SECTION VISTA WAY
NOT TO SCALE



TYPICAL SECTION 24' WIDE DRIVEWAY
NOT TO SCALE
ALL DRIVEWAY SURFACES TO BE H-20 LOADING



TYPICAL SECTION 20' WIDE DRIVEWAY
NOT TO SCALE
ALL DRIVEWAY SURFACES TO BE H-20 LOADING

LEGEND:

- BOUNDARY
- CENTERLINE — ℄
- RIGHT-OF-WAY — R/W
- EXISTING LOT LINE
- SETBACK LINE
- EXISTING CURB & GUTTER
- EXISTING WATER — W
- EXISTING SEWER — S
- EXISTING FENCE
- EXISTING RETAINING WALL
- EXISTING CONCRETE
- EXISTING AC PAVING
- EXISTING FIRE HYDRANTS
- EXISTING STREET SIGN
- EXISTING WATER SERVICE W/ EX. BACKFLOW PREVENTER TO BE USED FOR IIRRIGATION — IRR RP
- PROPOSED WATER SERVICE W/ BACKFLOW PREVENTER — W W RP
- PROPOSED SEWER LATERAL SERVICE — S S
- SEWER MH — S
- PARKING SPACE NUMBER — 1
- PROPOSED TYPE G PER G-2 CURB
- PROPOSED LANDSCAPING
- PROPOSED CONCRETE
- PROPOSED AC PAVING
- PROPOSED PAVER PER DETAIL ON SHEET NO. 6
- TRENCH RESURFACING
- PROPOSED RETAINING WALL
- PROPOSED FENCE SEE LANDSCAPE PLANS FOR DETAILS
- PROPOSED GATE FOR EMERGENCY ACCESS SEE LANDSCAPE PLANS FOR DETAILS

General Notes

THIS PROJECT IS A COMMON INTEREST DEVELOPMENT FOR SENIOR HOUSING. CCR'S WILL BE PREPARED FOR THIS PROJECT TO DEFINE AND MAINTAIN COMMON USE AREAS SUCH AS DRIVEWAYS, PARKING, LANDSCAPING & ETC. AFFORDABLE HOUSING IS INCLUDED AS A PART OF THIS PROJECT ALONG WITH BONUS DENSITY

1. EXISTING GROSS SUBDIVISION AEREA: 1.97 AC
2. PROPOSED GROSS SUBDIVISION AEREA: 1.97 AC
5. TOTAL NUMBER OF EXISTING LOTS: 1
6. TOTAL NUMBER OF PROPOSED LOTS: 1
7. TOTAL NUMBER OF PROPOSED PROPOSED UNITS: 20
   5 UNITS 1, 17-20 ARE 1.069 SF; 15 UNITS 2-16 ARE 1,089 SF
8. PROPOSED PARKING:
   1 ATTACHED GARAGE SPACE PER UNIT=20
   UNATTACHED STNDARD PARKING SPACES (18'x10')=25
   VAN ACCESSABLE HADICAPPED PARKING SPACES=2
   TOTAL PARKING SPACES PROPOSED=47
   PARKING SPACES PER UNIT=2.35
9. ASSESSOR'S PARCEL NUMBER: 165-493-47
10. SITE ADDRESS: 3710 VISTA WAY
    OCEANSIDE, CA 92056
11. PORTIONS OF LOTS 684, 685, 708 THROUGH 720, LOTS 721 THROUGH 725 AND PORTIONS OF LOTS 726 AND 727 OF COSTA SERENA UNIT NO. 7, IN THE CITY OF OCEANSIDE, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 7690, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, JULY 3, 1973, TOGETHER WITH THAT PORTION OF PORT CIRCLE STREET AS VACATED BY RESOLUTION RECORDED FEBRUARY 26, 2002 AS FILE NO. 2002-0159407 OF OFFICIAL RECORDS.
12. EXISTING GENERAL PLAN LAND USE: RESDENTIAL
13. PROPOSED GENERAL PLAN LAND USE: RESIDENTIAL-SENIOR HOUSING
14. EXISTING ZONNING: RM-A
15. PROPOSED ZONNING: RM-A
16. PROPOSED DENSITY: 10.15 DU/AC
17. STATUS OF LEGAL ACCESS: VISTA WAY AN EXISTING & FULLY IMPROVED PUBLIC STREET
27. FOR PROPOSED FENCING SEE LANDSCAPE PLANS FOR THIS PROJECT.

FIRE NOTES:

1. THE NORTH AVENUE EMERGENCY ACCESS IS FOR EMERGENCY VEHICLES ONLY. THIS ENTRANCE WILL BE GATED WITH A LOCKING MECHANISM THAT IS ACCEPTABLE WITH THE OCEANSIDE FIRE DEPARTMENT.
2. ALL DRIVEWAY SURFACES WILL BE DESIGNED FOR H-20 LOADING.

FIRE LANE .....

ENGINEER OF WORK

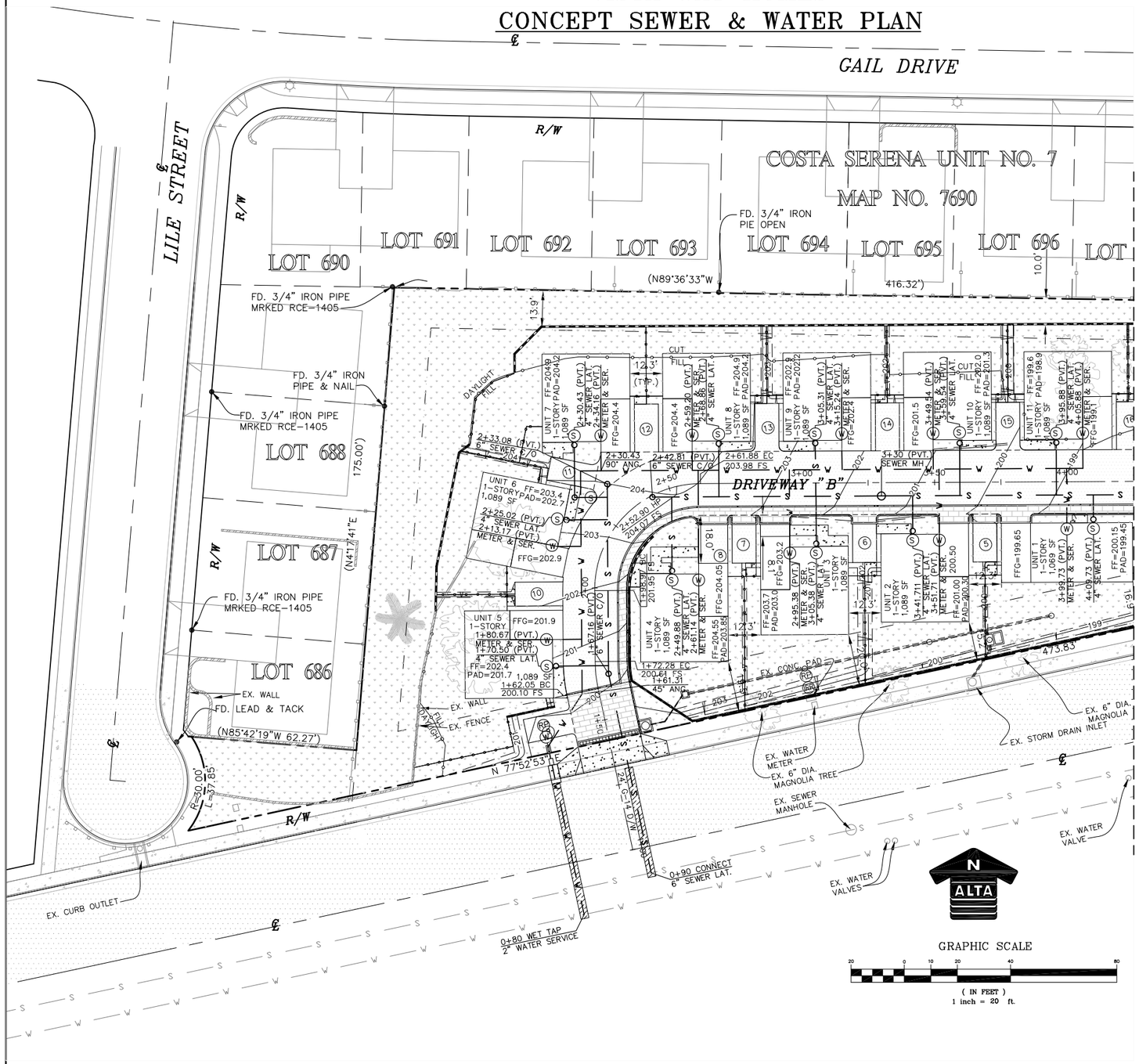
BARTOLOME J. PASTOR, RCE 38606

DATED: MARCH 11 ,2021

REGISTERED PROFESSIONAL ENGINEER — BARTOLOME J. PASTOR — No.38606 Exp.3/31/23 — CIVIL — STATE OF CALIFORNIA

ALTA CONSULTANTS
PLANNING ENGINEERING SURVEYING
1283 E. Main St., Ste. 109, El Cajon, CA 92021 (619) 749-8815 Fax (619) 749-8816
JOB NO. 499-01, DATE MARCH 11, 2021

VISTA WAY HOMES
CONCEPT SEWER & WATER PLAN



WATER NOTES:

1) CPC 2013, SECTION 603.5.11: NO RECLAIMED WATER IS AVAILABLE FOR THIS PROJECT. NO RECLAIMED WATER IS PROPOSED FOR THIS PROJECT.

2) CPC 2013, SECTION 603.5.11: NO RECLAIMED WATER IS AVAILABLE FOR THIS PROJECT. THERE ARE NO CONNECTIONS TO NON-POTABLE WATER.

3) CPC 2013, SECTION 601.2: IDENTIFICATION OF POTABLE AND NON-POTABLE WATER SYSTEM (NO NON-POTABLE WATER SYSTEM IN THIS PROJECT) EACH SYSTEM SHALL BE COLOR COATED AS FOLLOWS:

a) 601.2.1 POTABLE WATER: GREEN BACKGROUND WITH WHITE LETTERING

1. NON-POTABLE WATER: YELLOW BACKGROUND WITH BLACK LETTERING WITH THE WORDS "CAUTION: NON-POTABLE WATER, DO NOT DRINK". "A UNIVERSAL POISON SYMBOL OF SKULL AND CROSSBONES SHALL BE PROVIDED" [HCD 1 & 2]

b) 601.2.2 MINIMUM LENGTH OF COLOR FIELD AND SIZE OF LETTERS. SEE TABLE

1. RECLAIMED WATER: PURPLE IN COLOR (PANTONE #512) AND SHALL BE IMPRINTED IN NORMAL 1/2 INCH HIGH. BLACK, UPPER CASE LETTERS, WITH THE WORDS "CAUTION: RECLAIMED WATER, DO NOT DRINK". "A UNIVERSAL POISON SYMBOL OF SKULL AND CROSSBONES SHALL BE PROVIDED" [HCD 1 & 2]

4) CPC 2013, SECTION 611.1: WATER TREATMENT UNITS. REVERSE OSMOSIS DRINKING WATER TREATMENT UNITS SHALL MEET THE REQUIREMENTS OF THE APPROPRIATE STANDARDS) REFERENCED IN TABLE 611.4. WASTE DISCHARGE FROM REVERSE OSMOSIS OR OTHER TYPES OF WATER TREATMENT UNITS SHALL ENTER THE DRAINAGE SYSTEM THROUGH AN AIRGAP. SIZING RESIDENTIAL UNITS.

5) CPC 2013, SECTION 603.2: APPROVAL OF BACKFLOW DEVICES OR ASSEMBLIES: BEFORE ANY DEVICE OR ASSEMBLY IS INSTALLED FOR THE PREVENTION OF BACKFLOW, IT SHALL SHALL FIRST BEEN APPROVED BY THE AUTHORITY (SWEETWATER AUTHORITY) HAVING JURISDICTION. DEVICES OR ASSEMBLIES SHALL BE TESTED FOR CONFORMING RECOGNIZED STANDARDS OR OTHER STANDARDS ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION THAT ARE CONSISTENT WITH THE INTENT OF THIS CODE.

a) TESTING OF BACKFLOW DEVICES OR ASSEMBLIES SHALL BE PERFORMED BY A CERTIFIED BACKFLOW ASSEMBLY CHECKER (CPC SECTION 603.2).

B) COPIES OF TESTING OF BACKFLOW DEVICES OR ASSEMBLIES SHALL BE PROVIDED.

6) PRIVATE WATER METERS WILL BE INSTALLED FOR EACH PROPOSED UNIT. THESE PRIVATE WATER METERS WILL BE MAINTAINED AND MANAGED AS BY THE HOA FOR THIS PROJECT.

LEGEND:

- BOUNDARY
- CENTERLINE — ℄ R/W
- RIGHT-OF-WAY
- EXISTING LOT LINE
- SETBACK LINE
- EXISTING CURB & GUTTER
- EXISTING WATER — W
- EXISTING SEWER — S
- EXISTING FENCE
- EXISTING RETAINING WALL
- EXISTING CONCRETE
- EXISTING AC PAVING
- EXISTING CONTOUR LINE — 770
- EXISTING ELEVATION — 769.8
- EXISTING FIRE HYDRANTS
- EXISTING WATER SERVICE W/ EX. BACKFLOW PREVENTER TO BE USED FOR IIRRIGATION — IRR RP
- EXISTING STREET SIGN
- PROPOSED WATER SERVICE W/ BACKFLOW PREVENTER — W W RP
- PROPOSED SEWER LATERAL SERVICE — S S
- SEWER MH — S
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- PROPOSED TYPE G PER G-2 CURB
- PROPOSED FENCE SEE LANDSCAPE PLANS FOR DETAILS
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- PROPOSED LANDSCAPING
- PROPOSED CONCRETE
- PROPOSED AC PAVING
- PROPOSED PAVER PER DETAIL ON SHEET NO. 6
- TRENCH RESURFACING
- PROPOSED RETAINING WALL
- 2:1 SLOPE
- DAYLIGHT LINE — CUT / FILL
- DIRECTION OF FLOW
- PROPOSED STORM DRAIN
- CURB OUTLET PER D-25
- PROPRIETARY TREATMENT UNIT PER D-9 AND DETAILS ON SHEET NO. 9
- MODIFIED TYPE D CLEANOUT W/ SUMP PUMP

General Notes

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1. EXISTING GROSS SUBDIVISION AEREA: 1.97 AC
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4. PROPOSED PRIVATE STREET AREA: 0 AC
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16. PROPOSED DENSITY: 10.15 DU/AC
17. STATUS OF LEGAL ACCESS: VISTA WAY AN EXISTING & FULLY IMPROVED PUBLIC STREET
18. BENCH MARK: DESCRIPTION: CL MONUMENT 3.5" BRASS DISC STAMPED LS-4506
    LOCATION: INT VISTA WAY AND BUENA HILLS
    RECORD: CITY OF OCEANSIDE
    ELEVATION: 206.80 DATUM: NAV 88
19. SOURCE OF TOPOGRAPHY: ALATA CONSULTANTS
    SURVEYED ON: 02/20/2020
20. TOPOGRAPHIC CONTOUR INTERVAL: 1 FOOT
21. MAXIMUM SLOPE GRADIANT: 2:1
22. AREA/PERCENT OF SITE IN DRIVEWAYS & PARKING: 22,588 SF OR 26%
23. AREA/PERCENT OF SITE IN OPEN SPACE: 0
24. AREA/PERCENT OF SITE IN LANDSCAPING: 37,993 OR 44%
27. FOR PROPOSED FENCING & SIGNAGE SEE LANDSCAPE PLANS PLANS FOR THIS PROJECT.
28. FEMA FLOOD DESIGNATION: THIS SITE IS NOT WITH A 100-YEAR FLOODWAY OR FLOODPLAIN PER FEMA MAP 06073C0766G

ENGINEER OF WORK

BARTOLOME J. PASTOR, RCE 38606

DATED: MARCH 11 ,2021

REGISTERED PROFESSIONAL ENGINEER BARTOLOME J. PASTOR No.38606 Exp.3/31/23 CIVIL STATE OF CALIFORNIA

ALTA CONSULTANTS
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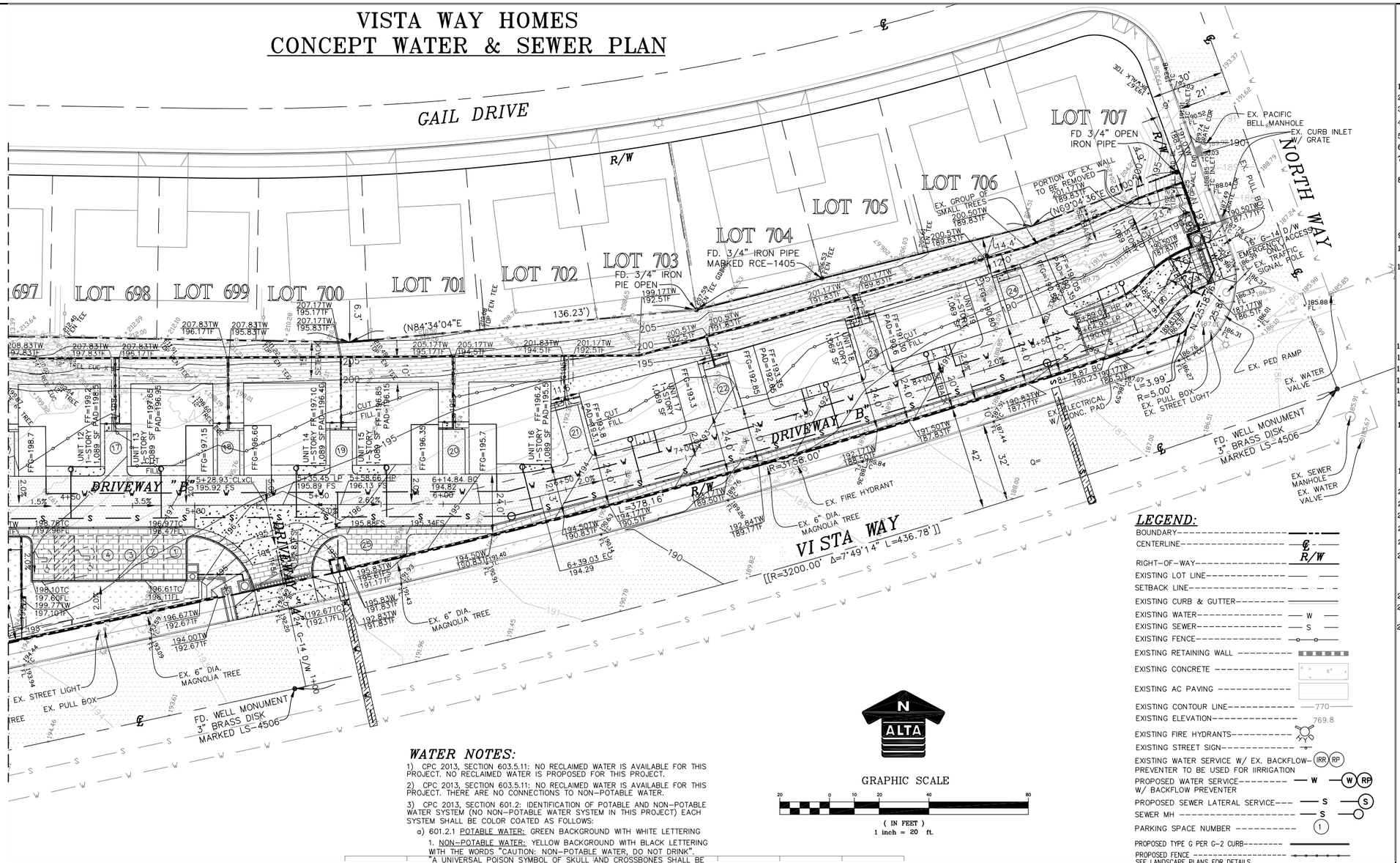
JOB NO. 499-01, DATE MARCH 11, 2021

VISTA WAY HOMES
CONCEPT WATER & SEWER PLAN



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N
ALTA

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

LEGEND:

- BOUNDARY
- CENTERLINE (℄)
- RIGHT-OF-WAY (R/W)
- EXISTING LOT LINE
- SETBACK LINE
- EXISTING CURB & GUTTER
- EXISTING WATER — W
- EXISTING SEWER — S
- EXISTING FENCE
- EXISTING RETAINING WALL
- EXISTING CONCRETE
- EXISTING AC PAVING
- EXISTING CONTOUR LINE — 770
- EXISTING ELEVATION — 769.8
- EXISTING FIRE HYDRANTS
- EXISTING STREET SIGN
- EXISTING WATER SERVICE W/ EX. BACKFLOW PREVENTER TO BE USED FOR IIRRIGATION (IRR, RP)
- PROPOSED WATER SERVICE W/ BACKFLOW PREVENTER — W (W, RP)
- PROPOSED SEWER LATERAL SERVICE — S (S)
- SEWER MH — S
- PARKING SPACE NUMBER (1)
- PROPOSED TYPE G PER G-2 CURB
- PROPOSED FENCE SEE LANDSCAPE PLANS FOR DETAILS
- PROPOSED GATE FOR EMERGENCY ACCESS SEE LANDSCAPE PLANS FOR DETAILS
- PROPOSED LANDSCAPING
- PROPOSED CONCRETE
- PROPOSED AC PAVING
- PROPOSED PAVER PER DETAIL ON SHEET NO. 6
- TRENCH RESURFACING
- PROPOSED RETAINING WALL
- 2:1 SLOPE
- DAYLIGHT LINE — CUT / FILL
- DIRECTION OF FLOW
- PROPOSED STORM DRAIN
- CURB OUTLET PER D-25
- PROPRIETARY TREATMENT UNIT SEE DETAIL ON SHEET NO. 9
- MODIFIED TYPE D CLEANOUT W/SUMP PUMP

General Notes

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1. EXISTING GROSS SUBDIVISION AEREA: 1.97 AC
2. PROPOSED GROSS SUBDIVISION AEREA: 1.97 AC
3. PROPOSED PUBLIC STREET DEDICATION: 0 AC
4. PROPOSED PRIVATE STREET AREA: 0 AC
5. TOTAL NUMBER OF EXISTING LOTS: 1
6. TOTAL NUMBER OF PROPOSED LOTS: 1
7. TOTAL NUMBER OF PROPOSED PROPOSED UNITS: 20
   5 UNITS 1, 17-20 ARE 1.069 SF; 15 UNITS 2-16 ARE 1,089 SF
8. PROPOSED PARKING:
   1 ATTACHED GARAGE SPACE PER UNIT=20
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22. AREA/PERCENT OF SITE IN DRIVEWAYS & PARKING: 22,588 SF OR 26%
23. AREA/PERCENT OF SITE IN OPEN SPACE: 0
24. AREA/PERCENT OF SITE IN LANDSCAPING: 37,993 OR 44%
25. ONSITE GRADING FOR THIS PROJECT: (8% SHRINKAGE FOR CUT)
    CUT= 3,000 C.Y. FILL= 4,000 C.Y. IMPORT= 1,000 C.Y.
    NOTE: ALL QUANTITIES ARE BASED ON FINISH GRADE. NO ALLOWANCE MADE FOR SHRINKAGE OR BULKING OF MATERIAL.
26. GRADED AREA: 1.63 AC=82% OF SITE
27. FOR PROPOSED FENCING & SIGNAGE SEE LANDSCAPE PLANS PLANS FOR THIS PROJECT.
28. FEMA FLOOD DESIGNATION: THIS SITE IS NOT WITH A 100-YEAR FLOODWAY OR FLOODPLAIN PER FEMA MAP 06073C0766G

ENGINEER OF WORK

BARTOLOME J. PASTOR, RCE 38606

DATED: MARCH 11 ,2021

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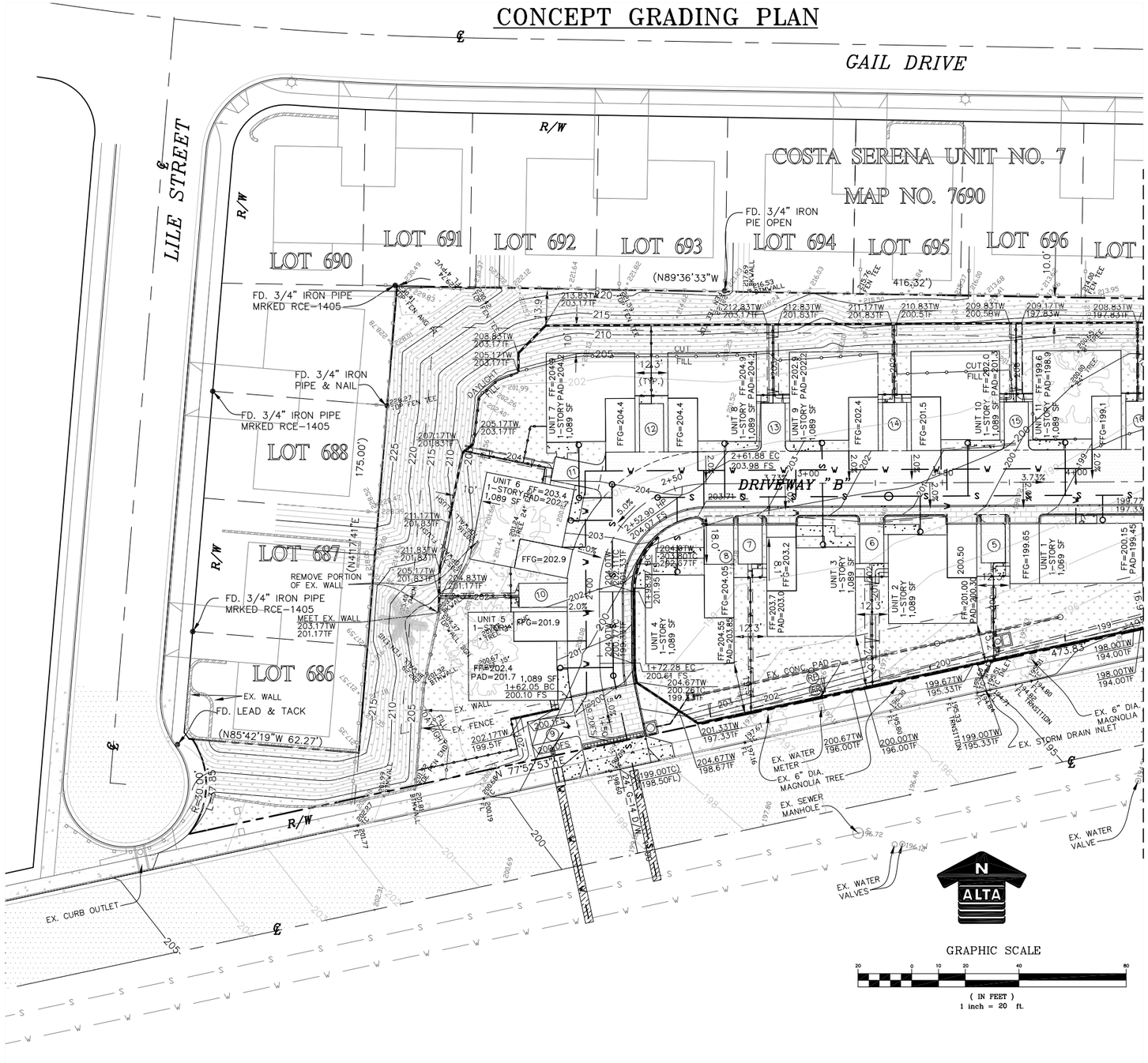
JOB NO. 499-01, DATE MARCH 11, 2021

TENTATIVE MAP_____

VISTA WAY HOMES
CONCEPT GRADING PLAN



LEGEND:

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- MODIFIED TYPE D CLEANOUT W/ SUMP PUMP

General Notes

THIS PROJECT IS A COMMON INTEREST DEVELOPMENT FOR SENIOR HOUSING. CCR'S WILL BE PREPARED FOR THIS PROJECT TO DEFINE AND MAINTAIN COMMON USE AREAS SUCH AS DRIVEWAYS, PARKING, LANDSCAPING & ETC. AFFORDABLE HOUSING IS INCLUDED AS A PART OF THIS PROJECT ALONG WITH BONUS DENSITY

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   PARKING SPACES PER UNIT=2.35
9. ASSESSOR'S PARCEL NUMBER: 165-493-47
10. SITE ADDRESS: 3710 VISTA WAY
    OCEANSIDE, CA 92056
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    ELEVATION: 206.80 DATUM: NAV 88
19. SOURCE OF TOPOGRAPHY: ALATA CONSULTANTS
    SURVEYED ON: 02/20/2020
20. TOPOGRAPHIC CONTOUR INTERVAL: 1 FOOT
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22. AREA/PERCENT OF SITE IN DRIVEWAYS & PARKING: 22,588 SF OR 26%
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25. ONSITE GRADING FOR THIS PROJECT: (8% SHRINKAGE FOR CUT)
    CUT= 3,000 C.Y. FILL= 4,000 C.Y. IMPORT= 1,000 C.Y.
    NOTE: ALL QUANTITIES ARE BASED ON FINISH GRADE. NO ALLOWANCE MADE FOR SHRINKAGE OR BULKING OF MATERIAL.
26. GRADED AREA: 1.63 AC=82% OF SITE
27. FOR PROPOSED FENCING & SIGNAGE SEE LANDSCAPE PLANS PLANS FOR THIS PROJECT.
28. FEMA FLOOD DESIGNATION: THIS SITE IS NOT WITH A 100-YEAR FLOODWAY OR FLOODPLAIN PER FEMA MAP 06073C0766G

ENGINEER OF WORK

BARTOLOME J. PASTOR, RCE 38606

DATED: MARCH 11 ,2021

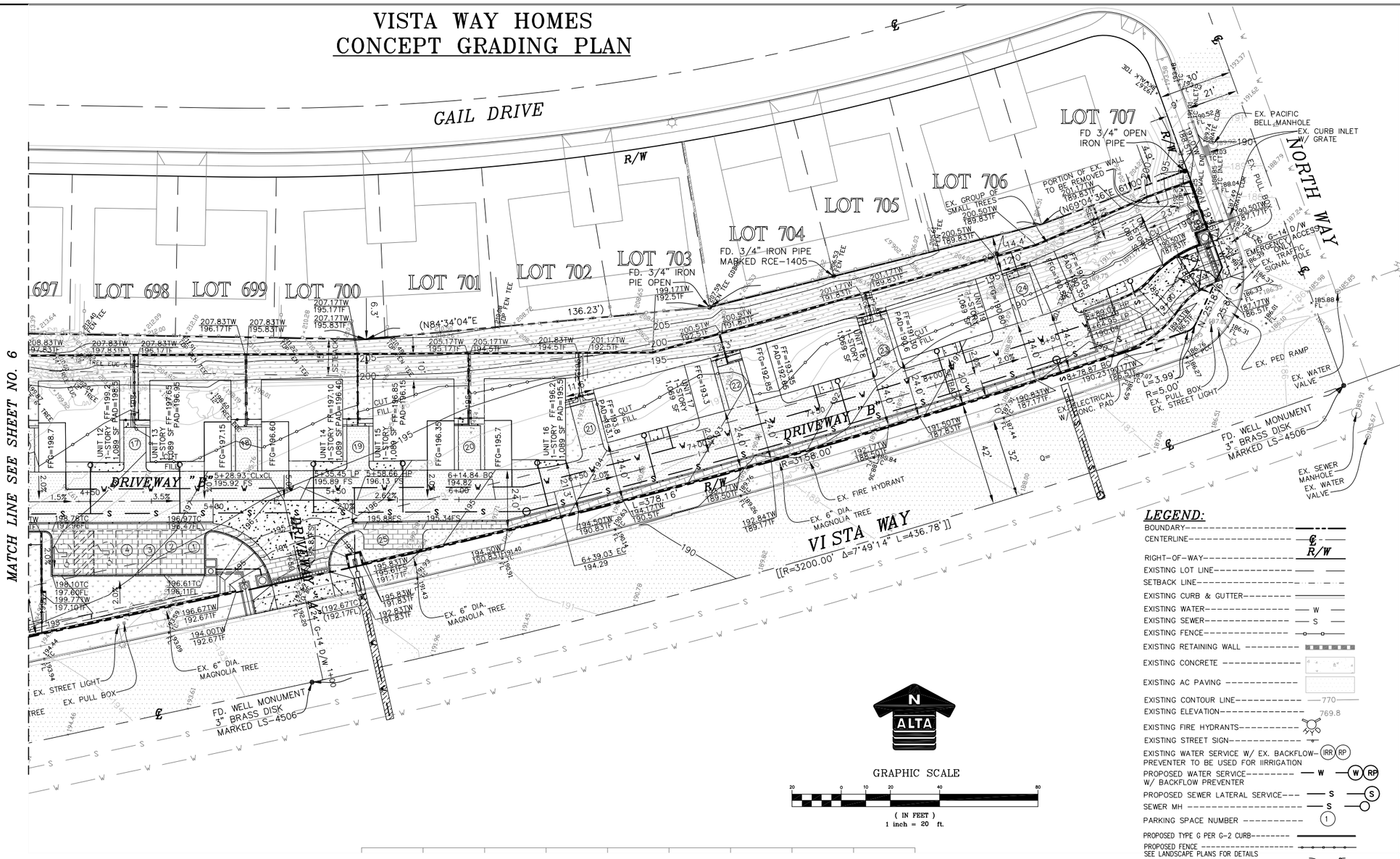
REGISTERED PROFESSIONAL ENGINEER BARTOLOME J. PASTOR No.38606 Exp.3/31/23 CIVIL STATE OF CALIFORNIA

ALTA CONSULTANTS
PLANNING ENGINEERING SURVEYING
1283 E. Main St., Ste. 109, El Cajon, Ca 92021 (619) 749-8815 Fax (619) 749-8815

JOB NO. 499-01, DATE MARCH 11, 2021

Date: 03/11/2021 SHEET 6 OF 10

VISTA WAY HOMES
CONCEPT GRADING PLAN



N
ALTA

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

LEGEND:

- BOUNDARY
- CENTERLINE (℄)
- RIGHT-OF-WAY (R/W)
- EXISTING LOT LINE
- SETBACK LINE
- EXISTING CURB & GUTTER
- EXISTING WATER — W
- EXISTING SEWER — S
- EXISTING FENCE
- EXISTING RETAINING WALL
- EXISTING CONCRETE
- EXISTING AC PAVING
- EXISTING CONTOUR LINE — 770
- EXISTING ELEVATION — 769.8
- EXISTING FIRE HYDRANTS
- EXISTING STREET SIGN
- EXISTING WATER SERVICE W/ EX. BACKFLOW PREVENTER TO BE USED FOR IIRRIGATION (IRR, RP)
- PROPOSED WATER SERVICE W/ BACKFLOW PREVENTER — W (W, RP)
- PROPOSED SEWER LATERAL SERVICE — S (S)
- SEWER MH — S
- PARKING SPACE NUMBER (1)
- PROPOSED TYPE G PER G-2 CURB
- PROPOSED FENCE SEE LANDSCAPE PLANS FOR DETAILS
- PROPOSED GATE FOR EMERGENCY ACCESS SEE LANDSCAPE PLANS FOR DETAILS
- PROPOSED LANDSCAPING
- PROPOSED CONCRETE
- PROPOSED AC PAVING
- PROPOSED PAVER PER DETAIL ON SHEET NO. 6
- TRENCH RESURFACING
- PROPOSED RETAINING WALL
- 2:1 SLOPE
- DAYLIGHT LINE — CUT / FILL
- DIRECTION OF FLOW
- PROPOSED STORM DRAIN
- CURB OUTLET PER D-25
- PROPRIETARY TREATMENT UNIT SEE DETAIL ON SHEET NO. 9
- MODIFIED TYPE D CLEANOUT W/SUMP PUMP

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DATED: MARCH 11 ,2021

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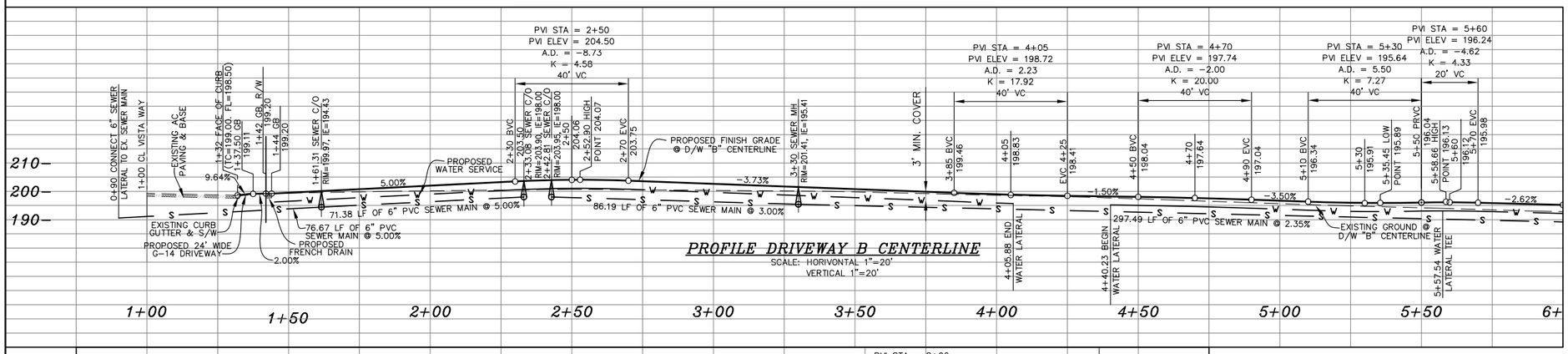
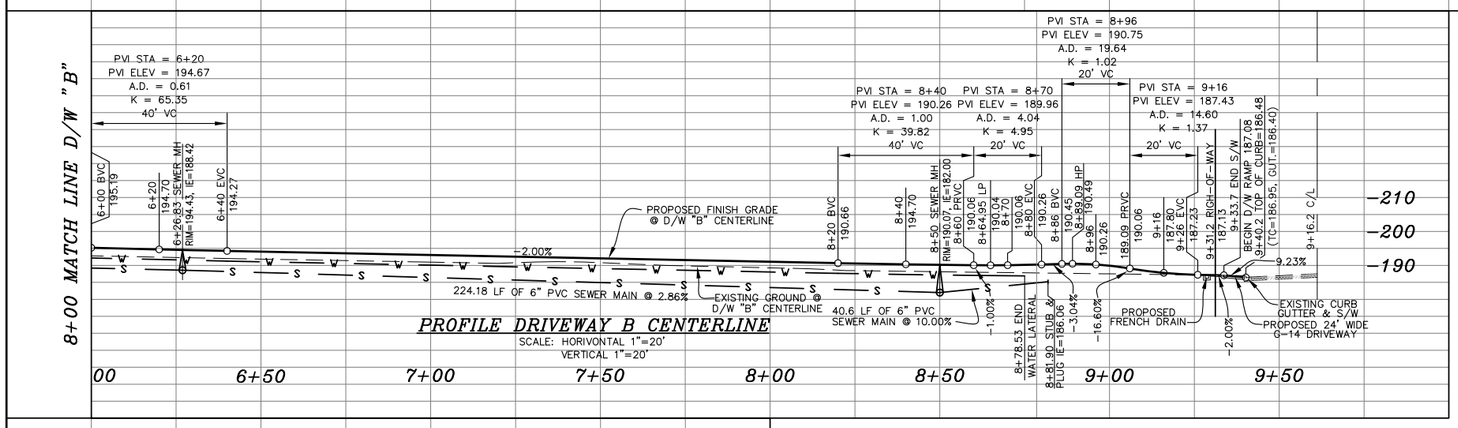
JOB NO. 499-01, DATE MARCH 11, 2021

VISTA WAY HOMES
CONCEPT PROFILES AND SECTIONS



PROFILE DRIVEWAY B CENTERLINE
SCALE: HORIVONTAL 1"=20'
VERTICAL 1"=20'



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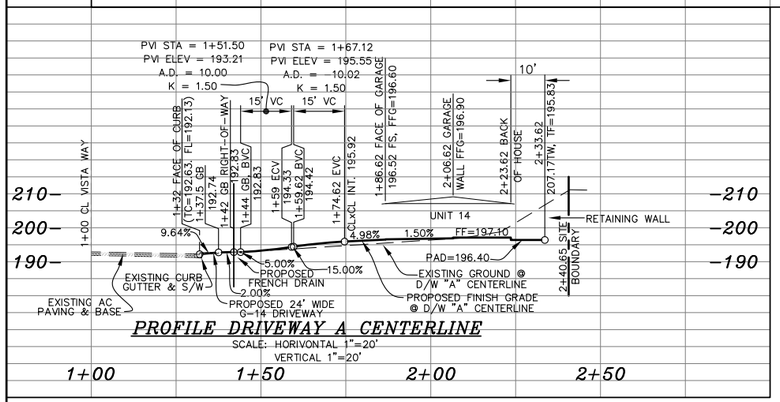

PROFILE DRIVEWAY A CENTERLINE
SCALE: HORIVONTAL 1"=20'
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19. SOURCE OF TOPOGRAPHY: ALATA CONSULTANTS SURVEYED ON: 02/20/2020
20. TOPOGRAPHIC CONTOUR INTERVAL: 1 FOOT

ENGINEER OF WORK

BARTOLOME J. PASTOR, RCE 38606

DATED: MARCH 11 ,2021

REGISTERED PROFESSIONAL ENGINEER BARTOLOME J. PASTOR No.38606 Exp.3/31/23 CIVIL STATE OF CALIFORNIA

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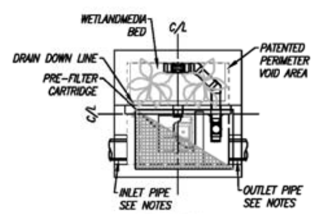
PLANNING ENGINEERING SURVEYING
1283 E. Main St., Ste. 109, El Cajon, CA 92021 (619) 749-8816 Fax (619) 749-8818
JOB NO. 499-01, DATE MARCH 11, 2021

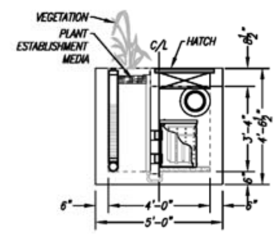
Date: 03/11/2021 SHEET 7 OF 10

VISTA WAY HOMES
STORM WATER DETAILS

SITE SPECIFIC DATA			
PROJECT NUMBER			
PROJECT NAME			
PROJECT LOCATION			
TREATMENT REQUIRED			
VOLUME BASED (CF)		FLOW BASED (CFS)	
1,248		N/A	
PEAK BYPASS REQUIRED (CFS) – IF APPLICABLE			OFFLINE
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE		PVC	8"
OUTLET PIPE		PVC	8"
	PRETREATMENT	BIOFILTRATION	DISCHARGE
RIM ELEVATION	--		
SURFACE LOAD	PEDESTRIAN	OPEN PLANTER	PEDESTRIAN
FRAME & COVER	24" X 42"	N/A	N/A
WETLANDMEDIA VOLUME (CY)			0.83
ORIFICE SIZE (DIA. INCHES)			Ø0.48"
NOTES: PRELIMINARY NOT FOR CONSTRUCTION.			



PLAN VIEW



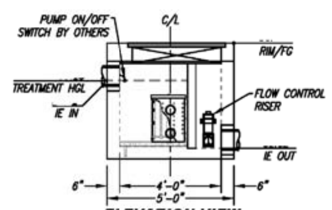
LEFT END VIEW

INSTALLATION NOTES

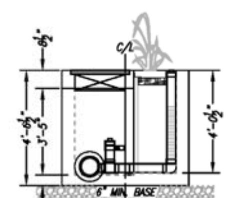
1. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SYSTEM AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURERS SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURERS CONTRACT.
2. UNIT MUST BE INSTALLED ON LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE TO VERIFY PROJECT ENGINEERS RECOMMENDED BASE SPECIFICATIONS.
4. CONTRACTOR TO SUPPLY AND INSTALL ALL EXTERNAL CONNECTING PIPES. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE. (PIPES CANNOT INTRUDE BEYOND FLUSH). INVERT OF OUTFLOW PIPE MUST BE FLUSH WITH DISCHARGE CHAMBER FLOOR. ALL PIPES SHALL BE SEALED WATER TIGHT PER MANUFACTURERS STANDARD CONNECTION DETAIL.
5. CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL RISERS, MANHOLES, AND HATCHES. CONTRACTOR TO GROUT ALL MANHOLES AND HATCHES TO MATCH FINISHED SURFACE UNLESS SPECIFIED OTHERWISE.
6. VEGETATION SUPPLIED AND INSTALLED BY OTHERS. ALL UNITS WITH VEGETATION MUST HAVE DRIP OR SPRAY IRRIGATION SUPPLIED AND INSTALLED BY OTHERS.
7. CONTRACTOR RESPONSIBLE FOR CONTACTING BIO CLEAN FOR ACTIVATION OF UNIT. MANUFACTURERS WARRANTY IS VOID WITH OUT PROPER ACTIVATION BY A BIO CLEAN REPRESENTATIVE.

GENERAL NOTES

1. MANUFACTURER TO PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS AND CAPACITIES ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS AND ACCESSORIES PLEASE CONTACT BIO CLEAN.



ELEVATION VIEW



RIGHT END VIEW

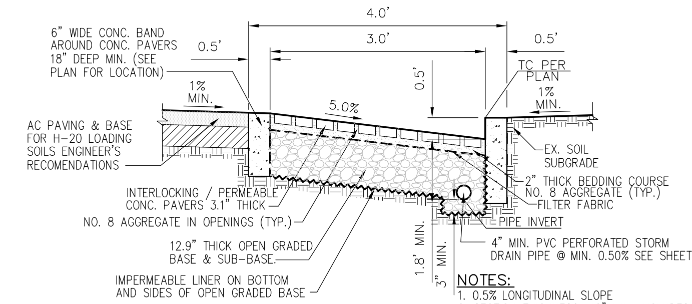
REQUIRED TREATMENT VOLUME (CF)	
DRAINDOWN DURATION (HOURS)	36
AVERAGE DISCHARGE RATE PER MWS UNIT(GPM)	
OPERATING HEAD (FT)	2.5
WETLANDMEDIA INFILTRATION RATE (IN/HR)	26
OR	
WETLANDMEDIA LOADING RATE (GPM/SF)	0.26

PROPRIETARY AND CONFIDENTIAL:

Bio Clean
A Forterra Company

MWS-L-4-4-4'-1"-V
STORMWATER BIOFILTRATION SYSTEM
STANDARD DETAIL

MODULAR WETLAND



NOTES:
1. 0.5% LONGITUDINAL SLOPE
2. SECTION THICKNESS: 18" MIN. INCLUDES:
   3.1" CONC. PAVERS
   2" THICK BEDDING COURSE
   12.9" OPEN-GRADED BASE/SUB-BASE

PRIVATE
PAVER SWALE
NOT TO SCALE

TENTATIVE MAP

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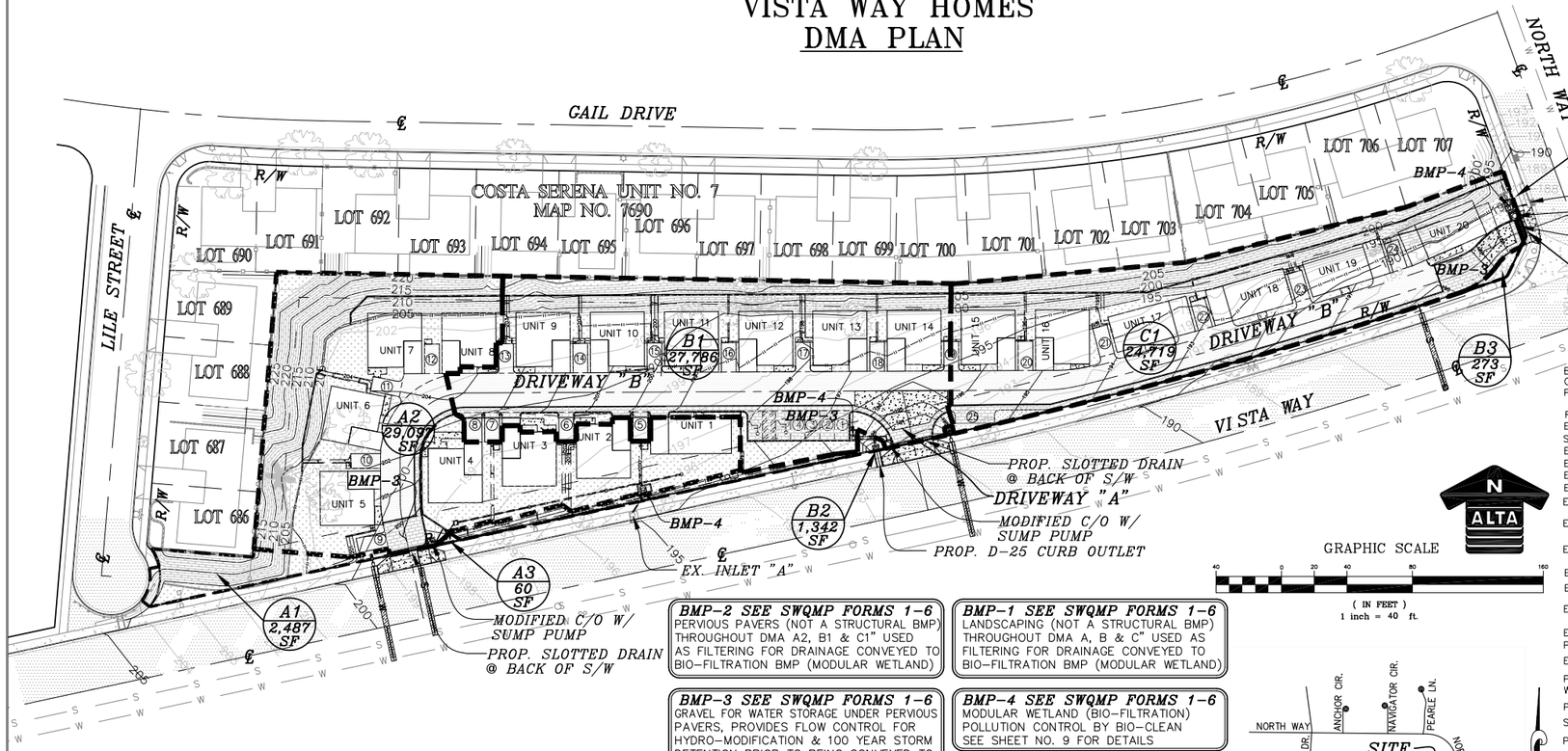
DMA PLAN



GRAPHIC SCALE

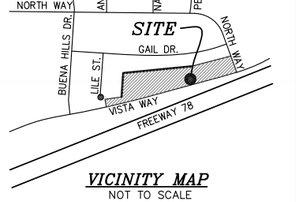
(IN FEET)
1 inch = 40 ft.

BMP-2 SEE SWQMP FORMS 1-6
PERVIOUS PAVERS (NOT A STRUCTURAL BMP) THROUGHOUT DMA A2, B1 & C1" USED AS FILTERING FOR DRAINAGE CONVEYED TO BIO-FILTRATION BMP (MODULAR WETLAND)

BMP-1 SEE SWQMP FORMS 1-6
LANDSCAPING (NOT A STRUCTURAL BMP) THROUGHOUT DMA A, B & C" USED AS FILTERING FOR DRAINAGE CONVEYED TO BIO-FILTRATION BMP (MODULAR WETLAND)

BMP-3 SEE SWQMP FORMS 1-6
GRAVEL FOR WATER STORAGE UNDER PERVIOUS PAVERS, PROVIDES FLOW CONTROL FOR HYDRO-MODIFICATION & 100 YEAR STORM DETENTION PRIOR TO BEING CONVEYED TO BIO-FILTRATION (MODULAR WETLAND

BMP-4 SEE SWQMP FORMS 1-6
MODULAR WETLAND (BIO-FILTRATION) POLLUTION CONTROL BY BIO-CLEAN
SEE SHEET NO. 9 FOR DETAILS



VICINITY MAP
NOT TO SCALE

POTENTIAL POLUTANTS		
POLLUTANT	POTENTIAL SOURCE	SOURCE CONTROLS
SEDIMENT	DURING GRADING OPERATIONS	CONST. BMP'S PERMANENT LANDSCAPING AND HARDSCAPE
NUTRIANTS	FERTILIZER	TO BE APPLIED ONLY AS NEEDED
TRASH & DEBRIS	GENERAL TRASH	REMOVE & DISPOSE IN A PROPER MANOR
OXYGEN DEMANDING SUBSTANCES	GENERAL	TO REMOVE & DISPOSE IN A PROPER MAONOR
BACTERIA & VIRUSES	GENERAL	ALL RUNOFF IS DIRECTED TO BIO-FILTRATION UNITS
PESTICIDES	LANDSCAPING	ALL RUNOFF IS DIRECTED TO BIO-FILTRATION UNITS

REQUIRED NOTES FOR THIS EXHIBIT:

1. THE UNDERLYING HYDROLOGIC SOIL GROUP IS "D".
2. THE GROUDWATER IN THIS AREA IS DEEP ENOUGH NOT TO IMPACT SITE DEVELOPMENT.
3. THERE ARE NO NATURAL HYDROLOGIC FEATURES ON THIS SITE.
4. THERE ARE NO CRITICAL COURSE SEDIMENT YIELD AREAS ON THE PROJECT.
5. THE EXISTING TOPOGRAPHY AND PROPOSED IMPERVIOUS AREAS ARE INDICATED ON THE EXHIBIT.
6. THE EXISTING AND PROPOSED SITE DRAINAGE NETWORK AND CONNECTIONS TO OFFSITE ARE SHOWN.
7. THERE IS NO PROPOSED DEMOLITION ON THIS SITE. OTHER THAN CLEARING & GRUBING, REMOVAL OF EXISTING WALLS, AND SAWCUT AND REMOVAL OF EXISTING PUBLIC IMPROVEMENTS AS NEEDED TO PROVIDE ACCESS AND UTILITIES FOR THIS SITE.
8. THE PROPOSED GRADING IS SHOWN ON THIS EXHIBIT. INCLUDING PROPOSED RETAINING WALLS.
9. THE PROPOSED IMPERVIOUS FEATURES ON THIS PROJECT ARE SHOWN ON THIS EXHIBIT.
10. THE DESIGN FEATURES AND SURFACE TREATMENTS USED TO MAINTAIN IMPERVIOUSNESS ARE SHOWN ON THIS EXHIBIT.
11. DRAINAGE MANAGEMENT AREAS ARE SHOWN AND IDENTIFIED. MINAULMIST AREAS ARE INDICATED.
12. THERE ARE NO POLLUTANT SOURCE AREAS REQUIRING SOURCE CONTROLS ON THIS PROJECT.
13. THE STRUCTURAL (PERMANENT) BMPS ARE SHOWN AND IDENTIFIED ON THIS EXHIBIT.

AREA A2 LOW IMPACT DEVELOPMENT DESIGN DRAINS TO MODULAR WETLAND

DMA NAME		DMA AREA SF	POST PROJECT SURFACE TYPE	% OF A2	DMA RUNOFF FACTOR	DMA AREA x RUNOFF FACTOR	% OF A2	SOIL TYPE "D"	
ASPHALT		2,765	ASPHALT	9.5%	1.0	2,765	9.5%		
BUILDINGS		8,692	BUILDINGS	30%	1.0	8,692	30%		
CONCRETE		594	CONCRETE	2.0%	1.0	594	2.0%		
LANDSCAPING		16,396	LANDSCAPING	56.0%	0.1	1,640	5.5%	C=0.58	
WALLS		220	WALLS	1%	1.0	220	1%		
PAVERS		430	PAVERS	1.5%	0.2	86	0.5%		
TREATMENT		35	PROPRIETARY	0%	0.1	4	0%		
TOTAL DMA AREA		29,097	34% OF TOTAL AREA	100%	SEE SWQMP FOR SITE SPECIFIC POLLUTION CONTROL & FLOW CONTROL		SIZING FACTOR	MINIMUM AREA	
TOTAL DMA AREA						13,996	0.04	559	

AREA C1 LOW IMPACT DEVELOPMENT DESIGN DRAINS TO MODULAR WETLAND

DMA NAME		DMA AREA SF	POST PROJECT SURFACE TYPE	% OF C1	DMA RUNOFF FACTOR	DMA AREA x RUNOFF FACTOR	% OF C1	SOIL TYPE "D"	
ASPHALT		6,624	ASPHALT	27%	1.0	6,624	27%		
BUILDINGS		6,454	BUILDING	26%	1.0	6,454	26%		
CONCRETE		1,436	CONCRETE	5.5%	1.0	1,436	5.5%		
LANDSCAPING		8,262	LANDSCAPING	33.5%	0.1	826	3.5%	C=0.68	
WALLS		529	WALLS	2%	1.0	529	2%		
PAVERS		1,414	PAVERS	6%	0.2	283	1%		
TREATMENT		35	PROPRIETARY	0%	0.1	4	0%		
TOTAL DMA AREA		24,719	29% OF TOTAL AREA	100%	SEE SWQMP FOR SITE SPECIFIC POLLUTION CONTROL & FLOW CONTROL		SIZING FACTOR	MINIMUM AREA	
TOTAL DMA AREA						16,152	0.04	646	

AREA B2, B3 & B4 LOW IMPACT DEVELOPMENT DESIGN DRAINS TO EXISTING X-GUTTER

DMA NAME		DMA AREA SF	POST PROJECT SURFACE TYPE	% OF B2 B3 & B4	DMA RUNOFF FACTOR	DMA AREA x RUNOFF FACTOR	% OF B2 B3 & B4	SOIL TYPE "D"	
ASPHALT		0	ASPHALT	0%	1.0	0	0%		
BUILDINGS		0	ROOFS	0%	1.0	0	0%		
CONCRETE		57	CONCRETE	3.5%	1.0	57	3.5%		
LANDSCAPING		1,412	LANDSCAPING	85.5%	0.1	141	8.5%	C=0.43	
WALLS		177	WALLS	11%	1.0	177	11%		
PAVERS		0	PAVERS	0%	0.2	0	0%		
TREATMENT		0	MINIMALIST	0%	–	0	0%		
TOTAL DMA AREA		1,646	2.0% OF TOTAL AREA	100%	SEE SWQMP FOR SITE SPECIFIC POLLUTION CONTROL & FLOW CONTROL		SIZING FACTOR	MINIMUM AREA	
TOTAL DMA AREA						375	0.04	15	

AREA B1 LOW IMPACT DEVELOPMENT DESIGN DRAINS TO MODULAR WETLAND

DMA NAME		DMA AREA SF	POST PROJECT SURFACE TYPE	% OF B1	DMA RUNOFF FACTOR	DMA AREA x RUNOFF FACTOR	% OF B1	SOIL TYPE "D"	
ASPHALT		7,323	ASPHALT	26%	1.0	7,323	26%		
BUILDINGS		6,534	BUILDINGS	23.5%	1.0	6,534	23.5%		
CONCRETE		1,926	CONCRETE	7.0%	1.0	1,926	7.0%		
LANDSCAPING		9,415	LANDSCAPING	34%	0.1	942	3.5%	C=0.67	
WALLS		184	WALLS	0.5%	1.0	184	0.5%		
PAVERS		2,404	PAVERS	9%	0.2	480	1.0%		
TREATMENT		35	PROPRIETARY	0%	0.1	4	0%		
TOTAL DMA AREA		27,786	32% OF TOTAL AREA	100%	SEE SWQMP FOR SITE SPECIFIC POLLUTION CONTROL & FLOW CONTROL		SIZING FACTOR	MINIMUM AREA	
TOTAL DMA AREA						17,389	0.04	695	

AREA A1 & A3 LOW IMPACT DEVELOPMENT DESIGN DRAINS TO EXISTING INLET "A"

DMA NAME		DMA AREA SF	POST PROJECT SURFACE TYPE	% OF A1 & A3	DMA RUNOFF FACTOR	DMA AREA x RUNOFF FACTOR	% OF A1 & A3	SOIL TYPE "D"	
ASPHALT		0	ASPHALT	0%	1.0	0	0%		
BUILDINGS		0	BUILDINGS	0%	1.0	0	0%		
CONCRETE		6	CONCRETE	0%	1.0	6	0%		
LANDSCAPING		2,504	LANDSCAPING	98.5%	0.1	250	10%	C=0.36	
WALLS		37	WALLS	1.5%	1.0	37	1.5%		
PAVERS		0	PAVERS	0%	0.2	0	0%		
TREATMENT		0	MINIMALIST	0%	–	0	0%		
TOTAL DMA AREA		2,547	3% OF TOTAL AREA	100%	SEE SWQMP FOR SITE SPECIFIC POLLUTION CONTROL & FLOW CONTROL		SIZING FACTOR	MINIMUM AREA	
TOTAL DMA AREA						293	0.04	12	

AREA D1 LOW IMPACT DEVELOPMENT DESIGN DRAINS TO EXISTING INLET "B"

DMA NAME		DMA AREA SF	POST PROJECT SURFACE TYPE	% OF D1	DMA RUNOFF FACTOR	DMA AREA x RUNOFF FACTOR	% OF D1	SOIL TYPE "D"	
ASPHALT		0	ASPHALT	0%	1.0	0	0%		
BUILDINGS		0	ROOFS	0%	1.0	0	0%		
CONCRETE		0	CONCRETE	0%	1.0	0	0%		
LANDSCAPING		4	LANDSCAPING	100%	0.1	0.4	10%	C=0.35	
WALLS		0	WALLS	0%	1.0	0	0%		
PAVERS		0	PAVERS	0%	0.2	0	0%		
TREATMENT		0	MINIMALIST	0%	–	0	0%		
TOTAL DMA AREA		4	0% OF TOTAL AREA	100%	SEE SWQMP FOR SITE SPECIFIC POLLUTION CONTROL & FLOW CONTROL		SIZING FACTOR	MINIMUM AREA	
TOTAL DMA AREA						0.4	0.04	0.02	

General Notes

THIS PROJECT IS A COMMON INTEREST DEVELOPMENT FOR SENIOR HOUSING. CCR'S WILL BE PREPARED FOR THIS PROJECT TO DEFINE AND MAINTAIN COMMON USE AREAS SUCH AS DRIVEWAYS, PARKING, LANDSCAPING & ETC. AFFORDABLE HOUSING IS INCLUDED AS A PART OF THIS PROJECT ALONG WITH BONUS DENSITY

1. EXISTING GROSS SUBDIVISION AEREA: 1.97 AC
2. PROPOSED GROSS SUBDIVISION AEREA: 1.97 AC
3. PROPOSED PUBLIC STREET DEDICATION: 0 AC
4. PROPOSED PRIVATE STREET AREA: 0 AC
5. TOTAL NUMBER OF EXISTING LOTS: 1
6. TOTAL NUMBER OF PROPOSED LOTS: 1
7. TOTAL NUMBER OF PROPOSED PROPOSED UNITS: 20
   5 UNITS 1, 17-20 ARE 1.069 SF; 15 UNITS 2-16 ARE 1,089 SF
8. PROPOSED PARKING:
   1 ATTACHED GARAGE SPACE PER UNIT=20
   UNATTACHED STNDARD PARKING SPACES (18'x10')=25
   VAN ACCESSABLE HADICAPPED PARKING SPACES=2
   TOTAL PARKING SPACES PROPOSED=47
   PARKING SPACES PER UNIT=2.35
9. ASSESSOR'S PARCEL NUMBER: 165-493-47
10. SITE ADDRESS: 3710 VISTA WAY
    OCEANSIDE, CA 92056
11. PORTIONS OF LOTS 684, 685, 708 THROUGH 720, LOTS 721 THROUGH 725 AND PORTIONS OF LOTS 726 AND 727 OF COSTA SERENA UNIT NO. 7, IN THE CITY OF OCEANSIDE, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 7690, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, JULY 3, 1973, TOGETHER WITH THAT PORTION OF PORT CIRCLE STREET AS VACATED BY RESOLUTION RECORDED FEBRUARY 26, 2002 AS FILE NO. 2002-0159407 OF OFFICIAL RECORDS.
17. STATUS OF LEGAL ACCESS: VISTA WAY AN EXISTING & FULLY IMPROVED PUBLIC STREET
18. BENCH MARK: DESCRIPTION: CL MONUMENT 3.5" BRASS DISC STAMPED LS-4506
    LOCATION: INT VISTA WAY AND BUENA HILLS
    RECORD: CITY OF OCEANSIDE
    ELEVATION: 206.80 DATUM: NAV 88
19. SOURCE OF TOPOGRAPHY: ALATA CONSULTANTS
    SURVEYED ON: 02/20/2020
20. TOPOGRAPHIC CONTOUR INTERVAL: 1 FOOT
21. MAXIMUM SLOPE GRADIANT: 2:1
25. ONSITE GRADING FOR THIS PROJECT: (8% SHRINKAGE FOR CUT)
    CUT= 3,000 C.Y. FILL= 4,000 C.Y. IMPORT= 1,000 C.Y.
    NOTE: ALL QUANTITIES ARE BASED ON FINISH GRADE. NO ALLOWANCE MADE FOR SHRINKAGE OR BULKING OF MATERIAL.
26. GRADED AREA: 1.63 AC=82% OF SITE
27. FEMA FLOOD DESIGNATION: THIS SITE IS NOT WITH A 100-YEAR FLOODWAY OR FLOODPLAIN PER FEMA MAP 06073C0766G

LEGEND:

- BOUNDARY
- CENTERLINE
- PROPOSED LOT LINE
- RIGHT-OF-WAY
- EXISTING LOT LINE
- SETBACK LINE
- EXISTING CURB & GUTTER
- EXISTING WATER — W —
- EXISTING SEWER — S —
- EXISTING FENCE
- EXISTING RETAINING WALL
- EXISTING CONCRETE
- EXISTING AC PAVING
- EXISTING CONTOUR LINE — 770
- EXISTING ELEVATION — 769.8
- EXISTING FIRE HYDRANTS
- EXISTING WATER SERVICE W/ EX. BACKFLOW PREVENTER TO BE USED FOR IIRRIGATION (IRR) (RP)
- EXISTING STREET SIGN
- PROPOSED WATER SERVICE W/ BACKFLOW PREVENTER — W — (W) (RP)
- PROPOSED SEWER LATERAL SERVICE — S — (S)
- SEWER MH — S — (S)
- PARKING SPACE NUMBER (1)
- PROPOSED TYPE G PER G-2 CURB
- PROPOSED FENCE SEE LANDSCAPE PLANS FOR DETAILS
- PROPOSED GATE FOR EMERGENCY ACCESS SEE LANDSCAPE PLANS FOR DETAILS
- PROPOSED LANDSCAPING
- PROPOSED CONCRETE
- PROPOSED AC PAVING
- PROPOSED PAVER PER DETAIL ON SHEET NO. 6
- PROPOSED BUILDING
- TRENCH RESURFACING
- PROPOSED RETAINING WALL
- 2:1 SLOPE
- DAYLIGHT LINE — CUT / FILL
- DIRECTION OF FLOW
- PROPOSED STORM DRAIN
- CURB OUTLET PER D-25
- PROPRIETARY TREATMENT UNIT PER DETAIL ON SHEET NO. 9
- MODIFIED TYPE D CLEANOUT W/SUMP PUMP

DMA LEGEND:

DMA AREA
WATERSHED NAME — B2
WATERSHED DESIGNATION — 500 SF
WATERSHED AREA
HYDROLOGIC SOIL GROUP "D"
DEPTH TO GROUNDWATER > 12

ENGINEER OF WORK

BARTOLOME J. PASTOR, RCE 38606

DATED: MARCH 11 ,2021

REGISTERED PROFESSIONAL ENGINEER — BARTOLOME J. PASTOR — No.38606 — Exp.3/31/23 — CIVIL — STATE OF CALIFORNIA

ALTA CONSULTANTS
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JOB NO. 490-01, DATE MARCH 11, 2021

Date: 03/11/2021 SHEET 10 OF 10