Part 9 - California Fire Code Part 11 - California Green Building Standards Code (CALGreen Code) Part 12 - California Referenced Standards Code

2. The Work shall comply with the applicable Codes, Ordinances and Regulations of the City of Santa Rosa

1. The Work shall comply with the California Building Standards Code (Title 24), 2019

3. The designs depicted in these construction documents comply substantially with the requirements set forth in Part 6 of Title 24, the California Energy Code. Mandatory energy savings features for this project, whether or not they are shown or stated in these documents, must be incorporated into the project as outlined in the Title 24 Energy Compliance documentation prepared for this project.

## 1650 West Steele Lane Apartments

**RECEIVED December 21, 2022** 

9 state bonus density units

Supplemental Density Bonus: Santa Rosa City Code 20-31.070

36 units desired - 27 units available with state density bonus = 9 units

Eligible for 100% density bonus over base density of 18 units = 36 units

Propose 100 points from (1) very low income unit to add 8 supplemental density bonus units

(1) 3 bedroom - very low income unit (per Gov. Code 65915)

(1) 1 bedroom - very low income unit (per Gov. Code 65915)

(1) 1 bedroom - very low income unit (per Gov. Code 65915)

(1) 1 bedroom - very low income unit (per City Code 20-31.070)

50% x 100 = 100 points

50% supplemental density bonus requested(100% -50% = 50%)

 $3.7\% \times 18 = .67$ , round up to 1 unit

(15) market rate base density units

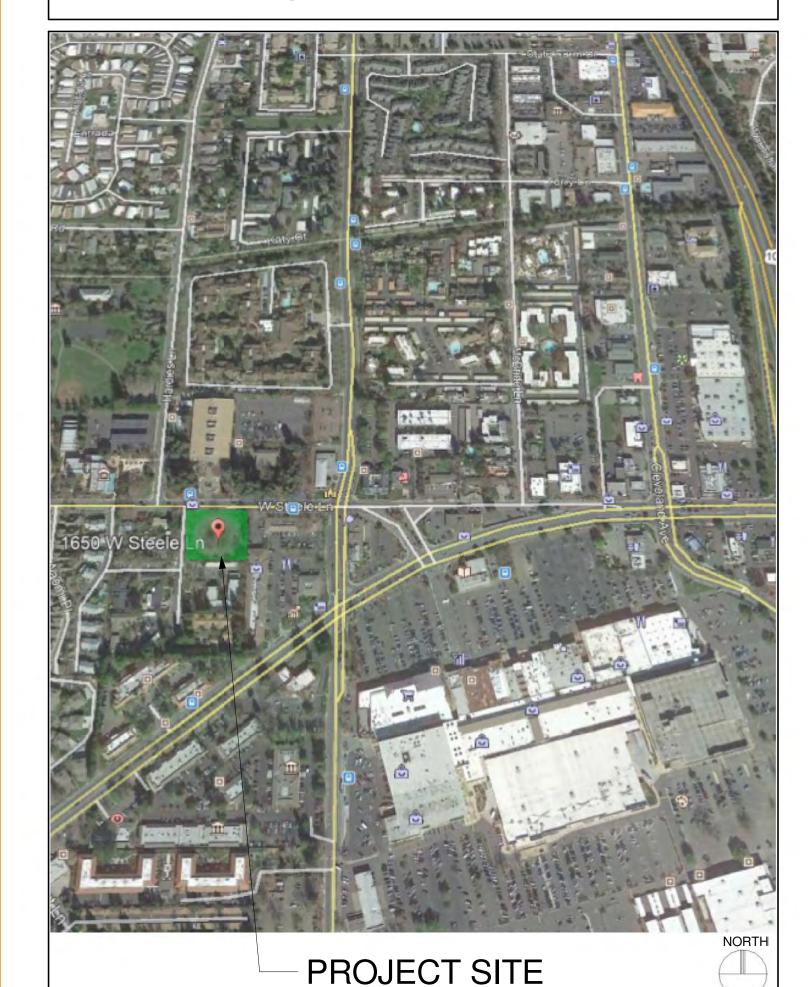
17) Density Bonus Units

= 27 total units

50% x 18 (base density) = 9 units 27 units + 9 units = 36 units



### VICINITY MAP



## PROJECT DATA

LEVEL 1-			PARKING REQUIRED -				ASSESSOR'S PARCEL #:	041-042-012
(9) UNITS- HE		12,224 SF	TABLE 3-6 DENSITY BONUS	HOUSING DEVELOPMENT	MAXIMUM PAR	RKING RATIOS:		
	DRY- HEATED SPACE	942 SF					GENERAL PLAN:	MEDIUM RESIDENTIAL
OFFICE- HEAT		420 SF	MARKET RATE UNITS					
COVERED BR	REEZEWAY	1,992 SF	(5) 1 BEDROOM UNITS	1.5/UNIT		STALLS	ZONING:	R-3-15-SA
GARAGE Build	ding II - tuck under	1,470 SF	(25) 2 BEDROOM UNITS	1.5/UNIT	= 37.5	STALLS		NORTH STATION AREA
GARAGE Build	ding III - tuck under	890 SF	(2) 3 BEDROOM UNITS	1.5/UNIT	= 3	STALLS		SPECIFIC PLAN
<b>GARAGE Build</b>	ding IV- automated parking	2,282 SF	32 UNITS TOTAL		= 48	STALLS		
TOTAL SF	, ,	16,866 SF					LOT AREA:	0.98 ACRES (42,688.80 SF)
			AFFORDABLE UNITS					
LEVEL 2-			(2) 1 BEDROOM UNITS	1/UNIT	= 2	STALLS	BUILDING COVERAGE:	16,866 SF (40% BUILDING COVERAGE
(14) UNITS- H	EATED SPACE	12, 418 SF	(1) 2 BEDROOM UNIT	1/UNIT	= 1	STALLS		· ·
` '		•	(1) 3 BEDROOM UNIT	1/UNIT	= 1	STALLS	PAVING & TRASH	8,100 SF (19% DRIVEWAY
			4 UNITS TOTAL REQUIRED		= 4	STALLS	ENCLOSURE:	AND SURFACE PARKING COVERAG
LEVEL 3-								
	EATED SPACE	11, 586 SF	PARKING REQUIRED		= 52	STALLS	OPEN - LANDSCAPED AREA:	17,722 SF (41% LANDSCAPING AND
( - / -		,						PAVED WALKWAY COVERAGE)
TOTAL BUILD	ING CONSTRUCTION AREA:	43,742 SF	PARKING PROVIDED:					•
		,	MARKET RATE UNITS				MAX. ALLOWABLE BLDG.HT.	35'
			(4) 1 BEDROOM UNITS	1.0 COVERED	= 4	STALLS	PROPOSED BLDG. HT.	45'
			(26) 2 BEDROOM UNITS	1.0 COVERED	= 26	STALLS		
			(2) 3 BEDROOM UNITS	1.0 COVERED	= 2	STALLS		
			30 UNITS TOTAL			STALLS	<u>UNIT MIX</u>	
State Density I	Bonus: Gov. Code 65915		33 31113 13 1712		- 02.0	0171220		
			AFFORDABLE UNITS:				LEVEL 1	BUILDING "I"
Base density:	.98 acre x 18 units/ acre = 17.6 units		(3) 1 BEDROOM UNITS	1.0	= 3	STALLS	1 BEDROOM - 1	1 BEDROOM - 2
	(9) bonus density market rate units a		(1) 3 BEDROOM UNIT	1.0	= 1	STALL	2 BEDROOM - 7	2 BEDROOM -14
	150% state density bonus is reques	ted: 1.5 x 18 = 27 units	4 UNITS PROVIDED		= 4	STALLS	3 BEDROOM - 1	<u> 3 BEDROOM - 3</u>
	9 + 18 = 27 units		. 6.4.761.716.71525		- ,	0171220	9 UNITS 9	19 UNITS
	(3) very low income units are propos						LEVEL 2	BUILDDING "II"
	$15\% \times 18 = 2.70$ , round up to 3 units		TOTAL PROVIDED		= 36	STALLS	1 BEDROOM - 4	1 BEDROOM - 5
	2 development incentives are reque		TOTALTHOUBED		- 00	0171220	2 BEDROOM - 9	2 BEDROOM - 5
	<ul> <li>For reduction of rear yard s</li> </ul>	etback to from 15' to 5'	PARKING RATIO REQUIRED	- 1 3 STALLS PER LINIT			3 BEDROOM - 1	3 BEDROOM - 0
	at parking structure		PARKING RATIO PROVIDED				14 UNITS	10 UNITS
	<ul> <li>For increase in height from</li> </ul>	35' to 45'	TATION TO THE VIDED	- 1 017(22) 01(11			LEVEL 3	BUILDING "III"
			BICYCLE STORAGE: 9 SECU	RF ± 9 IN BACKS = 18 BIC	YCLE STALLS		1 BEDROOM - 3	1 BEDROOM - 1
	15 market rate units + 3 below mark		BIOTOLL OTOTINGL: 5 OLOO	TE TO INTROCKS = TO BIOT	TOLL OTTILLO		2 BEDROOM - 9	2 BEDROOM - 6
	18 base density units + 9 density bo	nus market rate units = 27 units					3 BEDROOM - 1	3 BEDROOM - 0
	3 affordable units +						13 UNITS	- 7 UNITS
	15 base density market rate units +						TOTAL 36 UNITS	TOTAL 36 UNITS
	9 state honus density units						. 3 // 12	. 5 17 12 00 01 11 10

### **PROJECT DESCRIPTION**

The proposed multi-family residential project is located on a parcel in a Transit Oriented Priority Development Area, the North Station Area Specific Plan district. A public library, museums, ice skating arena, the City's largest shopping center, two major grocery stores, local small businesses and services, public transit, including the SMART line, bike and pedestrian paths, neighborhood parks parks, and schools are all located within one half mile of the project.

The multi-family apartment building comprises 36 dwellings and proposes a 100% increase in allowable density from 18 units to 36 units, as permitted by Supplemental Bonus Density Ordinance 20-31.070, of 50% over the State Density Bonus of 50%. 4 of the 36 units are proposed as below market rate, very low income units.

The dwellings are in (3) separate three story buildings, with massing organized around a central community open space - interior courtyard. Semi-private open space is provided in walled garden patios at the ground floor units, and balconies at upper level units. A common use open area is in the courtyard on the ground floor, at the entry garden plaza and in the covered passage located at the intersection of West Steele Lane and Meadowbrook Court. There is a common Laundry facility at the ground floor as well as a Lobby and Leasing Office.

Covered parking for 25 cars is provided in a 2 level automated parking structure at the east side yard. 11 surface parking stalls are provided at the south (rear) yard. A parking ratio of 1 stall per unit is proposed in this transit-oriented development. On-site shortterm and long-term bicycle secure storage is provided for 18 bicycles.

As permitted by the Density Bonus Law, Gov. Code 65915, A waiver of development standard to allow an increase of maximum building height from 35' to 45' is requested. A concession to allow a parking reduction from 52 stalls required to 36 stalls provided is requested. A concession for a reduction of side yard setback at the east property boundary from 10' to 5' is requested.

### SHEET INDEX

A0	Cover Sheet
A0.1	Site Context Map
A0.2	Existing and Surrounding Land Uses
A1	Architectural Site Plan
A1.1	Photometric Plan
A2	First Floor Plan
A3	Second Floor Plan
A4	Third Floor Plan
A5	Roof Plan
A6	Unit Plans
A7	Unit Plans
A8	Unit Plans
A9	Elevations - BLDG 'I'
A10	Elevations - BLDG 'II', 'III' & 'IV'
A10.1	Colors and Materials
A11	Sections
A12.1	Perspective Views
A12.2	Perspective at Entry
A12.3	Perspective at Courtyard
A12.4	Perspective Rendering from Steele Lane
A12.5	Perspective Rendering from Meadowbrook Court
C1	Site Grading and Utility Plan
C2	Grading Sections and Site Building Sections
L1	Irrigation Plan
L2	Planting Plan
L3	Landscape Details
L4	Landscape Specifications

### PROJECT TEAM

OWNER
MCBRIDE LANE
APARTMENTS, LLC
19 LEONA DRIVE
SAN RAFAEL, CA, 9490
(415) 491-4091 TEL
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(415) 716-1678 CELL
ONEILLSUSA5@AOL.COM

### **CIVIL ENGINEER**

ANDY BORDESSA **CIVIL DESIGN CONSULTANTS** 2200 RANGE AVE, SUITE 204 SANTA ROSA, CA, 95403 (707) 542-4820 TEL ANDY@CIVILDESIGNCONSULTANTS.COM

HEDGPETH ARCHITECTS 2321 BETHARDS DR, SUITE B SANTA ROSA, CA, 95405 (707) 523-7010 TEL (707) 542-2328 FAX INGRID@HEDGPETHARCHITECTS.COM

### LANDSCAPE ARCHITECT

DON MACNAIR MACNAIR LANDSCAPE ARCHITECTURE P.O. BOX 251 KENWOOD, CA, 95452 (707) 883-2288 TEL DON@MACNAIRLANDSCAPES.COM

### PLANNER

JEAN KAPOLCHOK & ASSOCIATES 843 2ND STREET SANTA ROSA, CA 95404 JKAPOLCHOK@SBCGLOBAL.NET

### FIRE DEPT. NOTES

1. Provide KNOX box as required by Fire Department at secured points of access

2. Provide address identification visible from West Steele Lane and at driveway entry on Meadowbrook Court. Location and design to be approved by Fire Dept. 3. Buildings I, II, III, IV are 30'-0" or less from Grade Plane to top of structural plate. Per, CFC D105, aerial access is not required.

4. See Sheet A1.2 for diagram of hose pull and emergency vehicle access, perCFC Appendix D 103. Hose pull and fire apparatus access is provided within 150' of all portiions of exterior walls at the ground floor and an emergency vehicle turn-around is not required.

### Fire Department Plan Submittals

Gates and Barricades across fire apparatus access roads

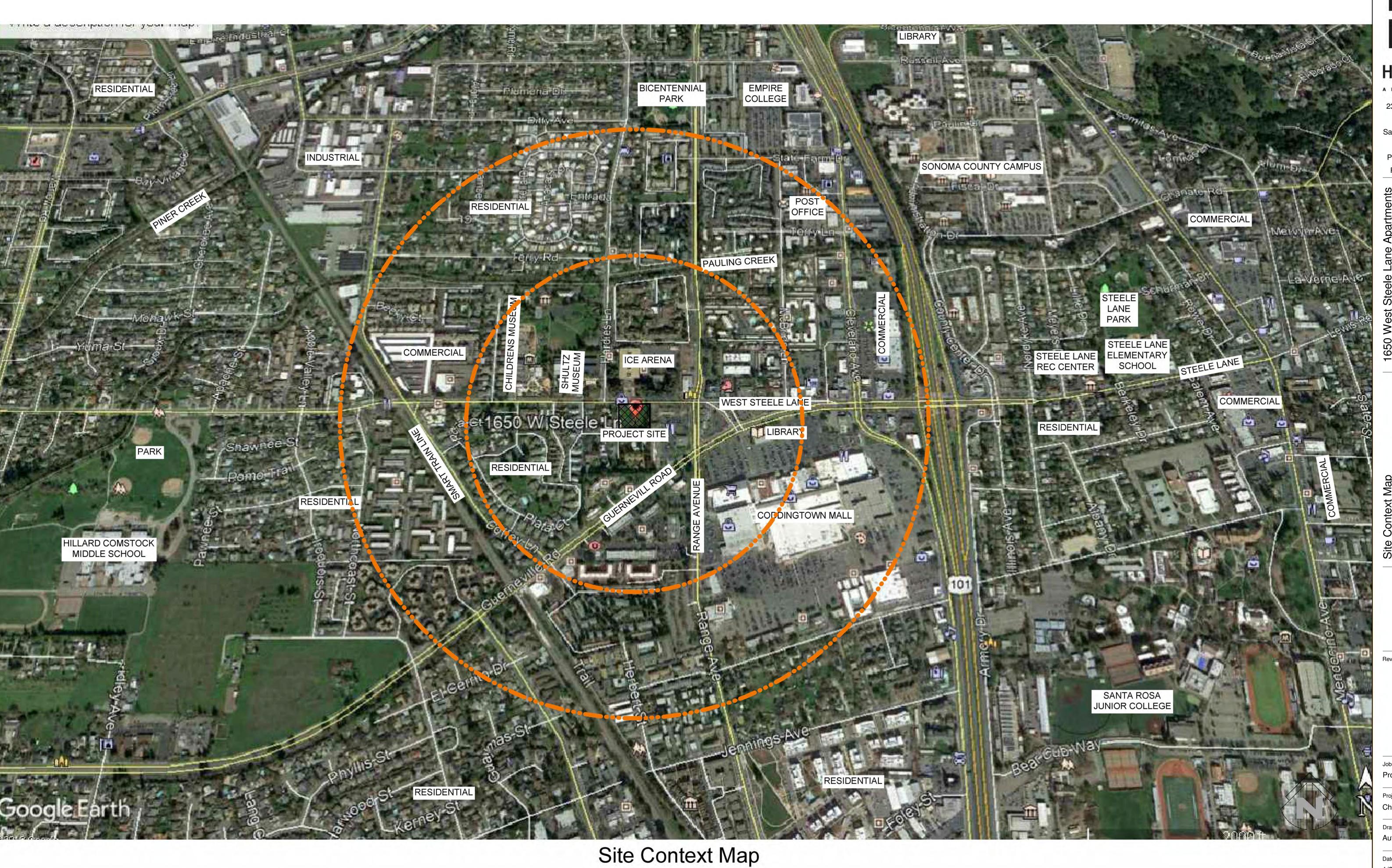
Santa Rosa, CA 95403

A.P.N. 041-042-012

- Wayfaring and accessible signage
- NFPA 13 sprinklers NFPA 14 standpipe system
- NFPA 24 private fire
- underground system
- 6. NFPA 72 fire alarm system

Fax 707 542 2328

**A0.1** 



**A0.2** 





Looking North to Ice Arena from Parcel boundary



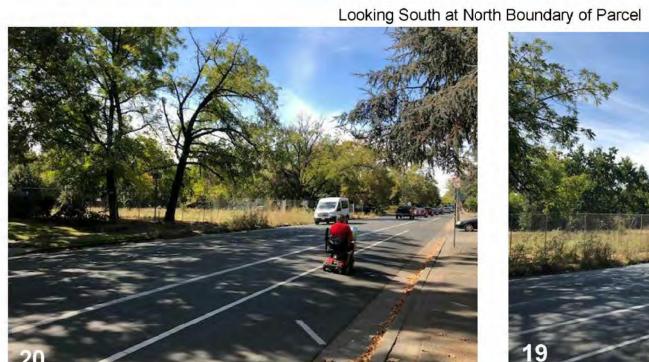
Looking North to Ice Arena from interior of Parcel Looking East from interior of Parcel



West Steele Lane Elevation of adjacent Retail



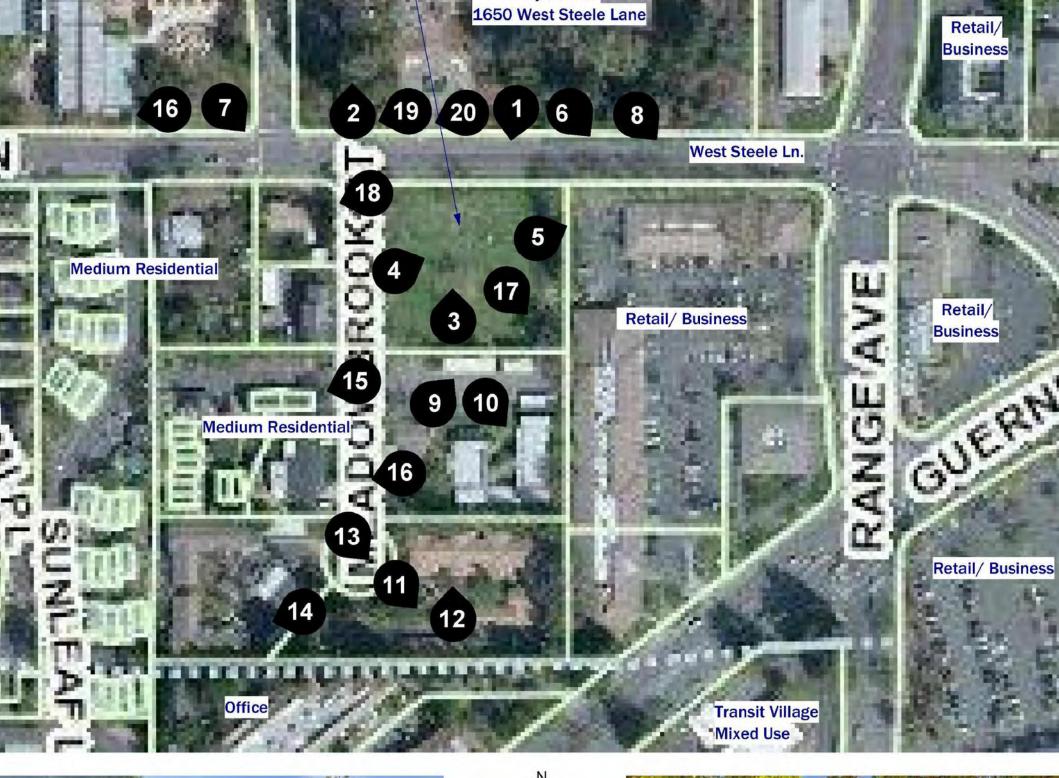
Pair of Red Tail Hawks nesting in one of the sycamore trees on the site



North Boundary of parcel from West Steele Lane











Apartment building at parcel south of project site



Single Family Residence at west side of Meadowbrook Court



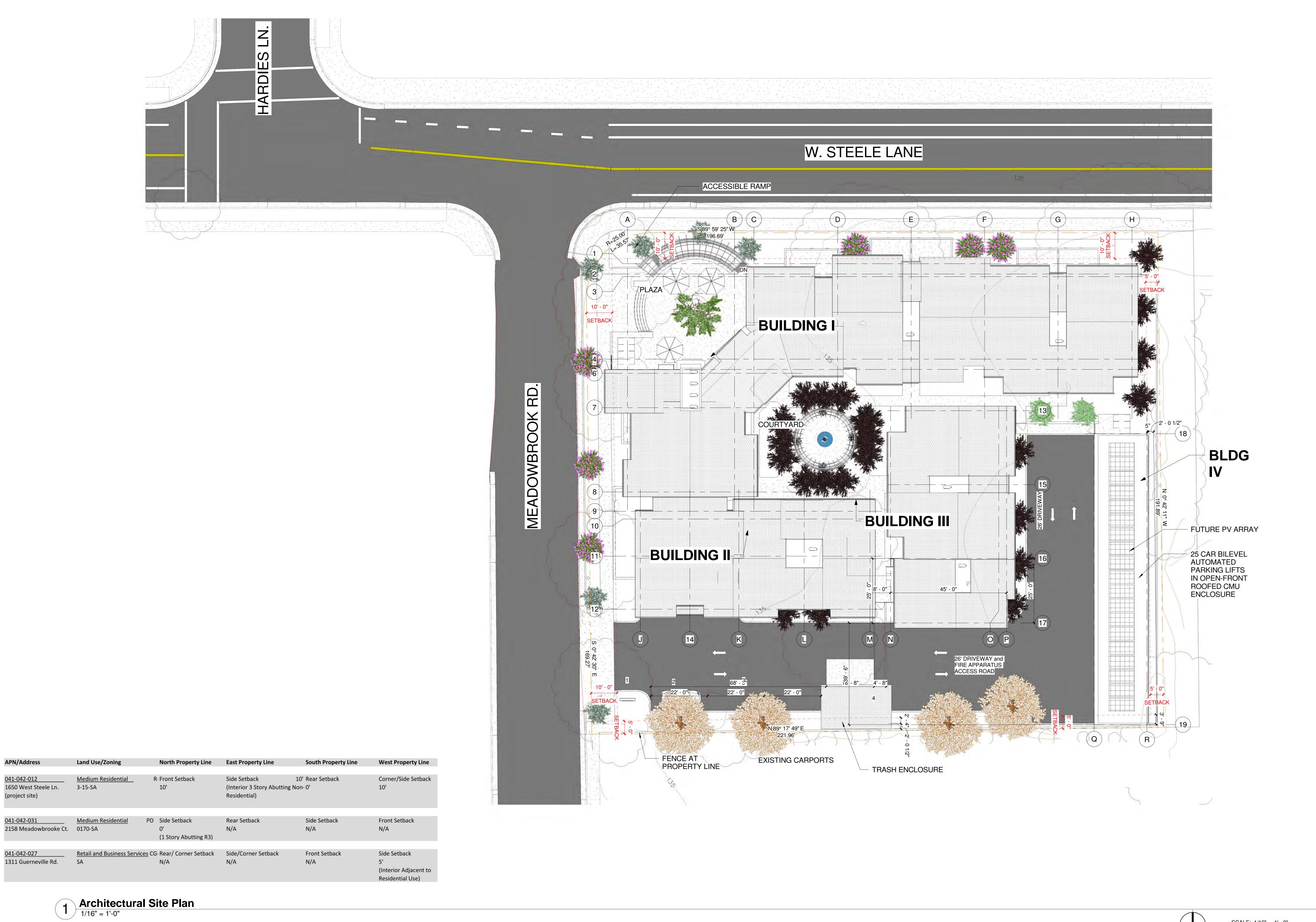
Apartment Buildings at southwest end of Meadowbrook Court







Existing and Surrounding Land Uses



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Revisions

Job Number

Project Number

Project Architect

Checker

Drawn By

Date

1/20/20

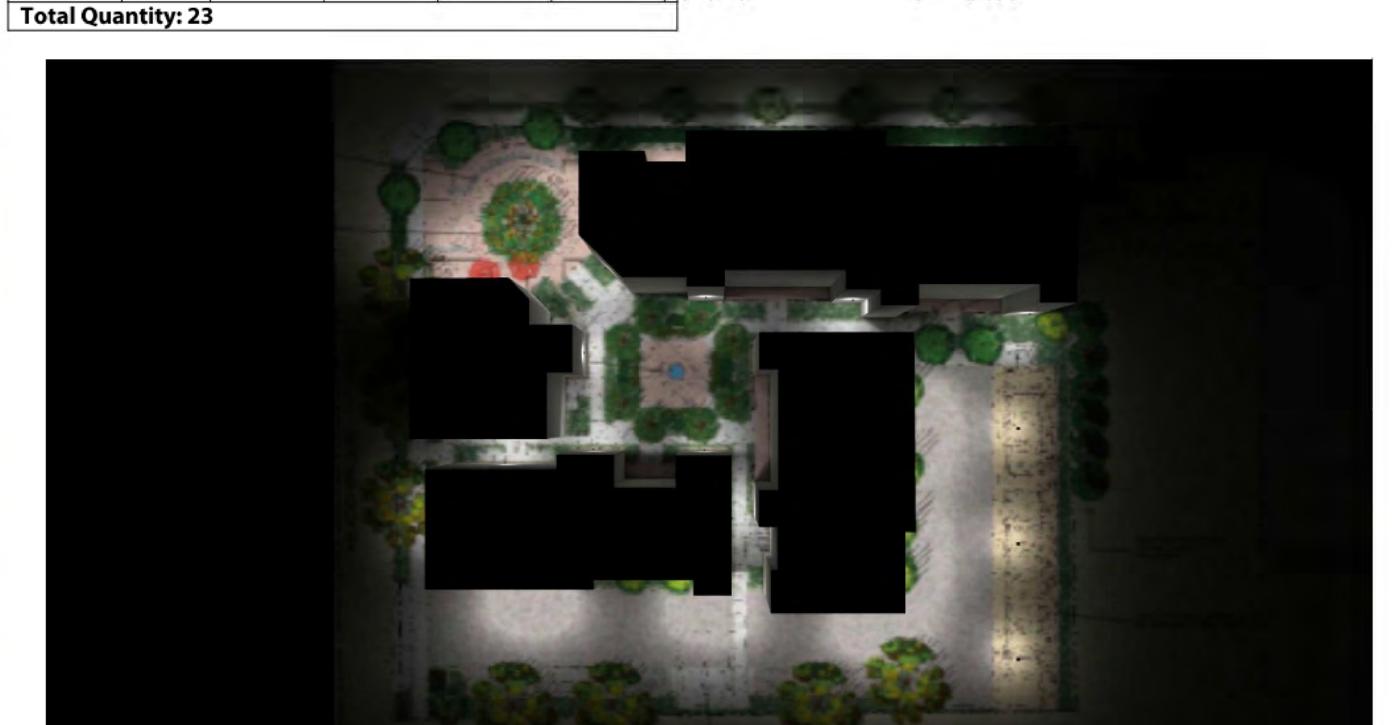
Sheet

**A1** 

Luminair	Luminaire Schedule										
Symbol	Qty	Tag	Label	Lum. Lumens	LLF	Description	Lum. Watts	Total Watts	Filename	BUG Rating	
	7	Α	WPLEDFC80Y	9207	1.000	Wallpack 80W Full Cutoff 3000K	83	581	WPLEDFC80Y - RAB02588.IES	B2-U0-G1	
<del>-</del>	13	В	SLIM12Y	1915	1.000	Wallpack 12W Full cutoff 3000K	15.9	206.7	SLIM12Y-RAB04264.IES	B1-U0-G0	
•	3	c	VANLED10YFFR	1450	1.000	Canopy 10W Full Cutoff 3000K	13.1	39.3	VANLED10YFFR - Warm - RAB02997.IES	B1-U0-G0	

10 2 2 14 1 1 2 2 0 15 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0.2 p.2 p.3 p.4 p.5 p.7 p.6 p.4 p.4 p.4 p.4 p.5 p.5 p.7 p.5 p.2 p.1 p.2 p.4 p.4 p.2 p.1 p.0 p.1
13 12 12 14 15 17 12 15 18 18 50 18 13 15 143 18 15 3 15 15 17 1 18 50 17 17 14 18 18 50 18 13 15 15 10 17 17 19 18 18 50 18 17 17 14 10 10 15 15 10 18 13 10 10 10 10 10 10 10 10 10 10 10 10 10	dork enot
12 22 3A 5 1 12 4 2 Government and a add recessed can light, employing or RIAB VO.  13	03 05 109 16/35 35 36 30 0 16 65 18 B
The state of the s	
30 74 33 90 75 88 Burlace mounted follows  10 10 10 10 10 10 10 10 10 10 10 10 10 1	recessed can light, strip lighting or RAB IVG
The control of the co	3.0 7.4 9.5 9.0 15.4 9.8 surface mounted fixture
The second of th	1 33 142 195 86 59 54
Discording recessed    10   10   10   10   10   10   10   1	2.4 9.0 E3 0.9 0.3 T. 0.5 0.3 0.3 0.3
00	0.1 to corner 12 37 20 17 74 32 13 07 15 40 3B 194 06 08 20
00	183 3.6 17 3-15 1.5 1.5 1.7 1.5 1.7 1.5 1.5 1.7 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5
31	0.0
15	0.1 16.4 10.4 3.4 4.8 1.9 1.9
18	0.7 0.7 0.7 0.7 0.7 0.7 0.7
04	B 47 5.0 25 15 \ 0.2
07 28 11.6 18.8 6.9 1.8 1.3 3.5 14.3 18.T 5.3 1.5 1.5 7.1 18.0 11.7 4.9 1.8 1.4 0.6 hot spot	06
19 170 7,6 24 20 170 7,6 24 20 107 28 11.6 18.8 6.9 1.8 1.3 3.5 14.3 18.1 5.3 1.5 1.5 7,1 180 11.7 4.9 1.8 1.1 0.6 1.0 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0	B Duilding recessed here
5.2    11.6   18.8   6.9   1.8   1.3   3.5   14.3   18.1   5.3   1.5   1.5   7.1   18.0   11.7   4.9   1.8   1.1   0.6   0.6   0.6   0.6   0.6   0.7   0.5   0.6   0.6   0.7   0.5   0.6   0.7   0.5   0.6   0.7   0.5   0.6   0.7   0.5   0.6   0.7   0.5   0.6   0.7   0.5   0.6   0.7   0.5   0.6   0.7   0.5   0.6   0.7   0.5   0.6   0.7   0.5   0.6   0.7   0.5   0.6   0.7   0.5   0.6   0.7   0.5   0.6   0.7   0.5   0.6   0.7   0.5   0.6   0.7   0.5   0.6   0.7   0.5	
hot spot    hot spot   hot spot	hot spot
0.1 0.2 0.3 0.4 0.5 0.4 0.4 0.4 0.4 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5	hot spot hot spot
0.2 0.3 0.4 0.5 0.4 0.4 0.4 0.5 0.6 0.6 0.7 1.0 1.1 1.0 0.7 0.6 0.7 0.5 0.6 0.4 0.2 0.2 0.3 0.4 0.4 0.4 0.4 0.4 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.6 0.7 0.7 0.6 0.6 0.4 0.2 add light in trash	add at least 1
0.1 - 0.2 0.2 0.3 0.4 0.4 0.4 0.4 0.5 0.5 0.5 0.5 0.5 0.6 0.7 0.8 0.7 0.7 0.6 0.6 0.4 0.2 add light in trash	0.2   - 0.4 0.9 1.4 1.6 - 1.3 0.9 0.8 1.2 1.8 19 1.4 1.1 1.6 2.8 3.9 3.0 1.8 1.4 4.4 1.8
add light in trash	0.1 0.2 0.3 0.4 0.5 0.4 0.4 0.4 0.5 0.6 0.6 0.6 0.7 1.0 1.1 1.0 0.7 0.6 0.7 0.5 0.4
and a more out	add light in trash
motion sensor	

Expande	d Lumin	aire Locatio	n Summar	У		
LumNo	Tag	X	Υ	MTG HT	Orient	NOTES:
1	В	143.65	310.45	10	90	* The light loss factor (LLF) is a product of many variables, only lamp lumen depreciation (LLD)
2	В	199.75	305.95	10	90	has been applied to the calculated results unless otherwise noted. The LLD is the result (quotient)
3	В	109.1	301.5	10	90	of mean lumens / initial lumens per lamp manufacturers' specifications.
4	Α	82.65	291.775	14	180	* Illumination values shown (in footcandles) are the predicted results for planes of calculation
5	В	89.834	273.134	14	225	either horizontal, vertical or inclined as designated in the calculation summary. Meter orientation is normal to the plane of calculation.
6	Α	49.95	268.875	14	90	The coloules of accuse of this limbely a simulation accused an auticineted and distinct of accessors
7	В	120.675	264.2	14	270	* The calculated results of this lighting simulation represent an anticipated prediction of system performance. Actual measured results may vary from the anticipated performance and are subject
8	В	165.85	263.35	14	270	to means and methods which are beyond the control of RAB Lighting Inc.
9	В	221.85	259.5	10	270	* Mounting height determination is job site specific, our lighting simulations assume a mounting
10	В	83.1	247.225	14	0	height (insertion point of the luminaire symbol) to be taken at the top of the symbol for ceiling
11	С	218.35	223.75	10	0	mounted luminaires and at the bottom of the symbol for all other luminaire mounting configurations.
12	Α	182.15	223.225	14	0	* It is the Owner's responsibility to confirm the suitability of the existing or proposed poles and bases
13	В	86.05	217.45	14	90	to support the proposed fixtures, based on the weight and EPA of the proposed fixtures and the owner's site soil conditions and wind zone. It is recommended that a professional engineer licensed to practice
14	В	120.25	217.25	14	90	in the state the site is located be engaged to assist in this determination.
15	В	58.925	213.35	14	90	* The landscape material shown hereon is conceptual, and is not intended to be an accurate
16	В	128.8	196.4	14	0	representation of any particular plant, shrub, bush, or tree, as these materials are living objects,
17	В	39.25	195.3	10	180	and subject to constant change. The conceptual objects shown are for illustrative purposes only.  The actual illumination values measured in the field will vary.
18	С	218.35	187.75	10	0	+ Dhatamatula madal alamanta ayah as huildin na saama alamta fiyosiahin na saama ayahita atuusi
19	Α	179.5	182.85	14	0	* Photometric model elements such as buildings, rooms, plants, furnishings or any architectural details which impact the dispersion of light must be detailed by the customer documents for inclusion
20	Α	64.3	176.55	14	270	in the RAB lighting design model. RAB is not responsible for any inaccuracies caused by incomplete
21	Α	122.55	174.85	14	270	information on the part of the customer, and reserves the right to use best judgement when translating customer requests into photometric studies.
22	Α	176.55	169.7	14	270	PARTichtics has been been and made and account decisions are contacted and active and between the collections.
23	С	218.35	151.75	10	0	* RAB Lighting Inc. luminaire and product designs are protected under U.S. and International intellectual property laws. Patents issued or pending apply.



		design	348.	imption ted, nor any d and	al purposes	
		The Lighting Analysis, ezLayout, Energy Analysis and/or Visual Simulation ("Lighting Design") provided by RAB Lighting system performance based upon design parameters and information contriled by others these design parameters and information consided by others these design parameters and information consided by others.	not been field verified by RAB and therefore actual measured results may vary from the actual field conditions.  RAB recommends that design parameters and other information be field verified to reduce variation.	RAB neither warranties, either implied or stated with regard to actual measured light levels or energy consumption levels as compared to those illustrated by the Lighting Design. RAB neither warranties, either implied or stated, no represents the appropriateness, completeness or suitability of the Lighting Design intent as compliant with any applicable regulatory code requirements with the exception of those specifically stated on drawings created and	submitted by RAB. The Lighting design is issued, in whole or in part, as advisory documents for informational purpose and is not intended for construction nor as being part of a project's construction documentation package.	
_		"Lighting ystem pe	ary from rified to	ured ligh warranti Design i ically sta	sory doc ction doc	Т
	BUG Rating	ulation ( ghting sy	ts may v.	al measi i neither Lighting se specifi	t, as advi construi	
	B2-U0-G1	sual Sim tion of li-	ed result	d to acts ign. RAB y of the I	x in part project's	1
	B1-U0-G0	ad/or Vi	measur	th regar ing Desi ultabilit exceptio	whole c art of a p	1
	B1-U0-G0	alysis a ticipatex	e actual ind othe	sated with Light less or sith the city	sued, in being p	1
		ut, Energy Ar resents an an	and therefor	r implied or s lustrated by t ss, completer quirements w	submitted by RAB. The Lighting design is issued, in whole or in part and is not intended for construction nor as being part of a project's	
	NOTES:  * The light loss factor (LLF) is a product of many variables, only lamp lumen depreciation (LLD)	ezLaye B") rep	by RAE	s, eithe those il rriatene code re	e Lighti r constr	1
	has been applied to the calculated results unless otherwise noted. The LLD is the result (quotient) of mean lumens / initial lumens per lamp manufacturers' specifications.	Lighting Analysis, Lighting Inc. ("RA	ld verified sends that	warrantie npared to he approp egulatory	y RAB. The tended fo	ı
	* Illumination values shown (in footcandles) are the predicted results for planes of calculation either horizontal, vertical or inclined as designated in the calculation summary. Meter orientation is normal to the plane of calculation.	The Lighting RAB Lighting	not been fiel RAB recomm	RAB neither levels as con represents the applicable in	submitted b and is not in	
	* The calculated results of this lighting simulation represent an anticipated prediction of system performance. Actual measured results may vary from the anticipated performance and are subject to means and methods which are beyond the control of RAB Lighting Inc.	 		A.AGI		
	* Mounting height determination is job site specific, our lighting simulations assume a mounting height (insertion point of the luminaire symbol) to be taken at the top of the symbol for ceiling mounted luminaires and at the bottom of the symbol for all other luminaire mounting configurations.	ECT #162961	#529889	ane 529889A.AGI		

© Hedgpeth Architects

Hedgpeth

ARCHITECTS

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Santa Rosa, California

95405-8536

Phone 707 523 7010

Fax 707 542 2328

Drawn By: Shaun Fillion, LC

Scale: 1 inch= 16 Ft.

**A1.1** 

Revisions

Job Number

**Project Number** 

Project Architect

Checker

Drawn By **Author** 

1/20/20

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1650 W. Steele Ln. Santa Rosa, CA 95403 A.P.N. 041-042-012

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Revisions

Job Number

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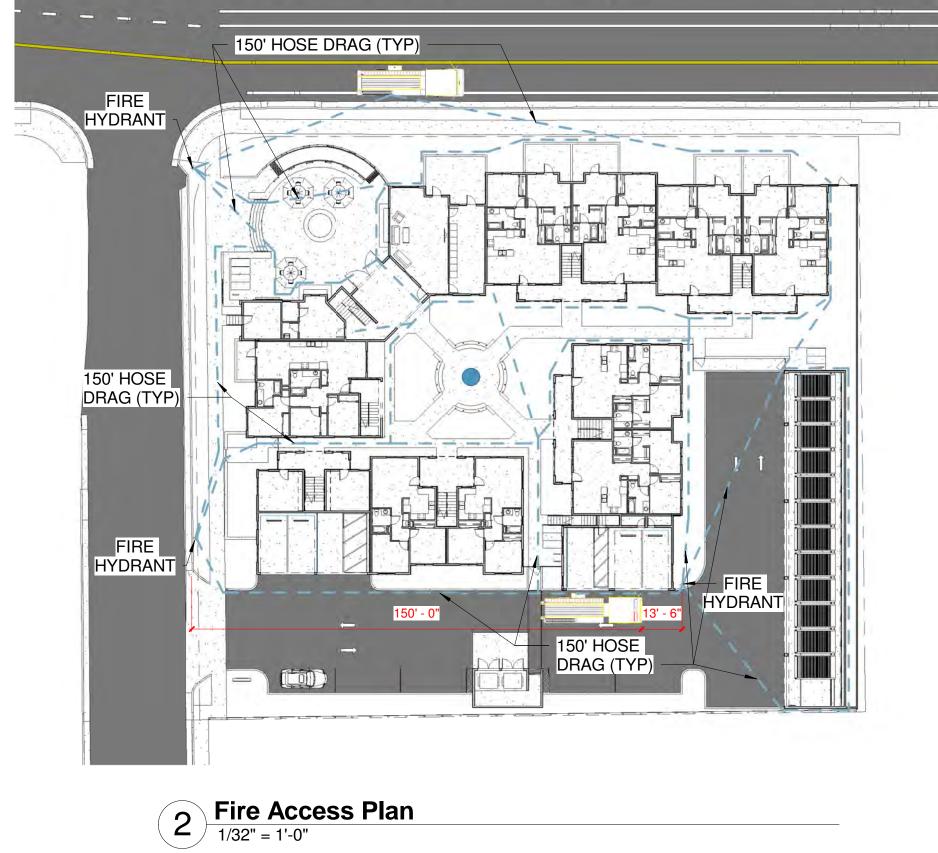
Project Architect Checker

Drawn By Author

1/20/20



First Floor Plan
1/16" = 1'-0"



### **Density Bonus Key**

MR- Market Rate

BMR- Below Market Rate

Number	Name	Unit Type	Notes
			1.000
Level 1			
1	Type C	3B/1B Acc Mobility	Affordable, Mobility Impai
2	Type G	1B+/1B Acc Mobility	Mobility Impaired
3	Type B	2B/1B Acc Mobility	Mobility Impaired
4	Type A	2B/2B AccVision	Vision Impaired
5	Type A	2B/2B Acc Hearing	Hearing Impaired
6	Type A	2B/2B	Adaptable
7	Type A	2B/2B	Adaptable
8	Type A	2B/2B	Adaptable
9	Type A	2B/2B	Adaptable
37	Elect		
38	Storage		
39	Utility		
40	Leasing Office		
41	Lounge		
42	Laundry		
Level 2			
10	Type E	1B/1B	Affordable
11	Type C	3B/2B	
12	Type F	1B/1B	Affordable
13	Type F	1B/1B	
14	Type B	2B/1B	
15	Type B	2B/1B	
16	Type B	2B/1B	
17	Type A	2B/2B	
18	Type A	2B/2B	
19	Type A	2B/2B	
20	Type A	2B/2B	
21	Type A	2B/2B	
22	Type A	2B/2B	
23	Type D	2B/2B	
			·
Level 3			
24	Type E	1B/1B	Affordable
25	Type C	3B/2B	
26	Type F	1B/1B	
27	Type F	1B/1B	
28	Type B	2B/1B	
29	Type B	2B/1B	
30	Type A	2B/2B	
31	Type A	2B/2B	
32	Type A	2B/2B	
33	Type A	2B/2B	
34	Type A	2B/2B	
35	Type A	2B/2B	
36	Type D	2B/2B	

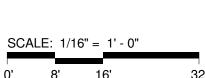
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Second Floor Plan

1/16" = 1'-0"

**Density Bonus Key** 

MR- Market Rate BMR- Below Market Rate

Number	Name	Unit Type	Notes
Laval 1			
Level 1 1	Type C	3B/1B Acc Mobility	Affordable, Mobility Impaired
2	Type G	1B+/1B Acc Mobility	Mobility Impaired
3	Type B	2B/1B Acc Mobility	Mobility Impaired
4	Type A	2B/2B AccVision	Vision Impaired
5	Type A	2B/2B Acc Hearing	Hearing Impaired
6	Type A	2B/2B	Adaptable
7	Type A	2B/2B	Adaptable
8	Type A	2B/2B	Adaptable
9	Type A	2B/2B	Adaptable
37	Elect		
38	Storage		
39	Utility		
40	Leasing Office		
41	Lounge		
42	Laundry		

	, ,		
evel 2			
0	Type E	1B/1B	Affordable
1	Type C	3B/2B	
2	Type F	1B/1B	Affordable
3	Type F	1B/1B	
4	Type B	2B/1B	
5	Туре В	2B/1B	
6	Туре В	2B/1B	
7	Туре А	2B/2B	
8	Type A	2B/2B	
9	Type A	2B/2B	
0	Type A	2B/2B	
1	Type A	2B/2B	
2	Type A	2B/2B	
2	Type D	2D/2D	

Type E	1B/1B	Affordable	
Type C	3B/2B		
Type F	1B/1B		
Type F	1B/1B		
Type B	2B/1B		
Type B	2B/1B		
Type A	2B/2B		
Type D	2B/2B		



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rd Floor Plan

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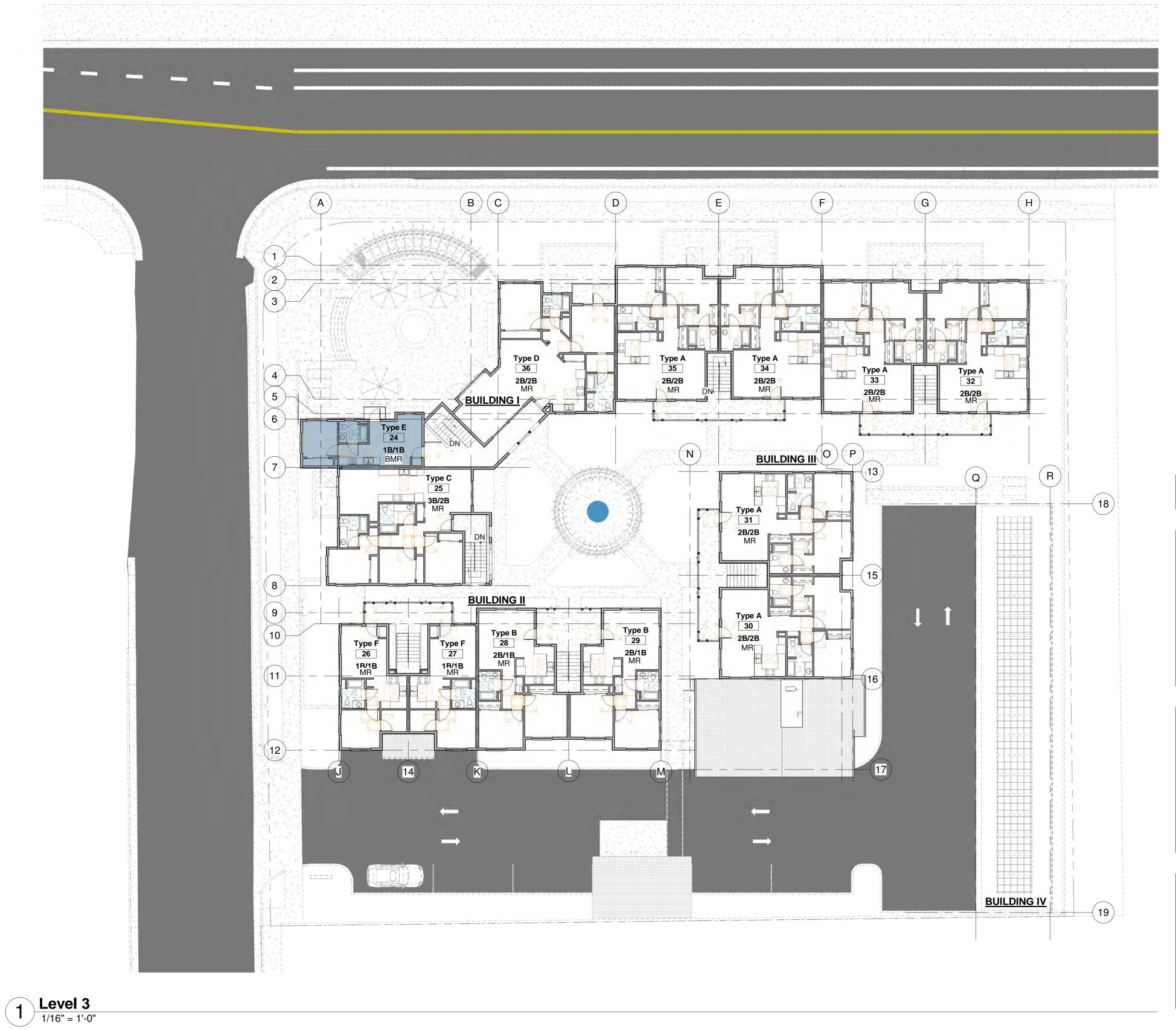
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A4



Density Bonus Key

MR- Market Rate

BMR- Below Market Rate

Density Bonus Unit Map- Table of Units					
Number	Name	Unit Type	Notes		
Level 1					
1	Type C	3B/1B Acc Mobility	Affordable, Mobility Impaired		
2	Type G	1B+/1B Acc Mobility	Mobility Impaired		
3	Type B	2B/1B Acc Mobility	Mobility Impaired		
4	Type A	2B/2B AccVision	Vision Impaired		
5	Type A	2B/2B Acc Hearing	Hearing Impaired		
6	Type A	2B/2B	Adaptable		
7	Type A	2B/2B	Adaptable		
8	Type A	2B/2B	Adaptable		
9	Type A	2B/2B	Adaptable		
37	Elect				
38	Storage				
39	Utility				
40	Leasing Office				
41	Lounge				
42	Laundry				
Level 2					
10	Typo E	1 D/1 D	Affordable		

T_	Lauriury		
Level 2			
10	Type E	1B/1B	Affordable
11	Type C	3B/2B	
12	Type F	1B/1B	Affordable
13	Type F	1B/1B	
14	Туре В	2B/1B	
15	Туре В	2B/1B	
16	Туре В	2B/1B	
17	Туре А	2B/2B	
18	Type A	2B/2B	
19	Туре А	2B/2B	
20	Type A	2B/2B	
21	Туре А	2B/2B	
22	Type A	2B/2B	
23	Type D	2B/2B	

20	Турс Б	20/20	
Level 3			
24	Type E	1B/1B	Affordable
25	Type C	3B/2B	
26	Type F	1B/1B	
27	Type F	1B/1B	
28	Type B	2B/1B	
29	Type B	2B/1B	
30	Type A	2B/2B	
31	Type A	2B/2B	
32	Type A	2B/2B	
33	Type A	2B/2B	
34	Type A	2B/2B	
35	Type A	2B/2B	
36	Type D	2B/2B	

SCALE: 1/16" = 1' - 0" 0' 8' 16'

oof Plan

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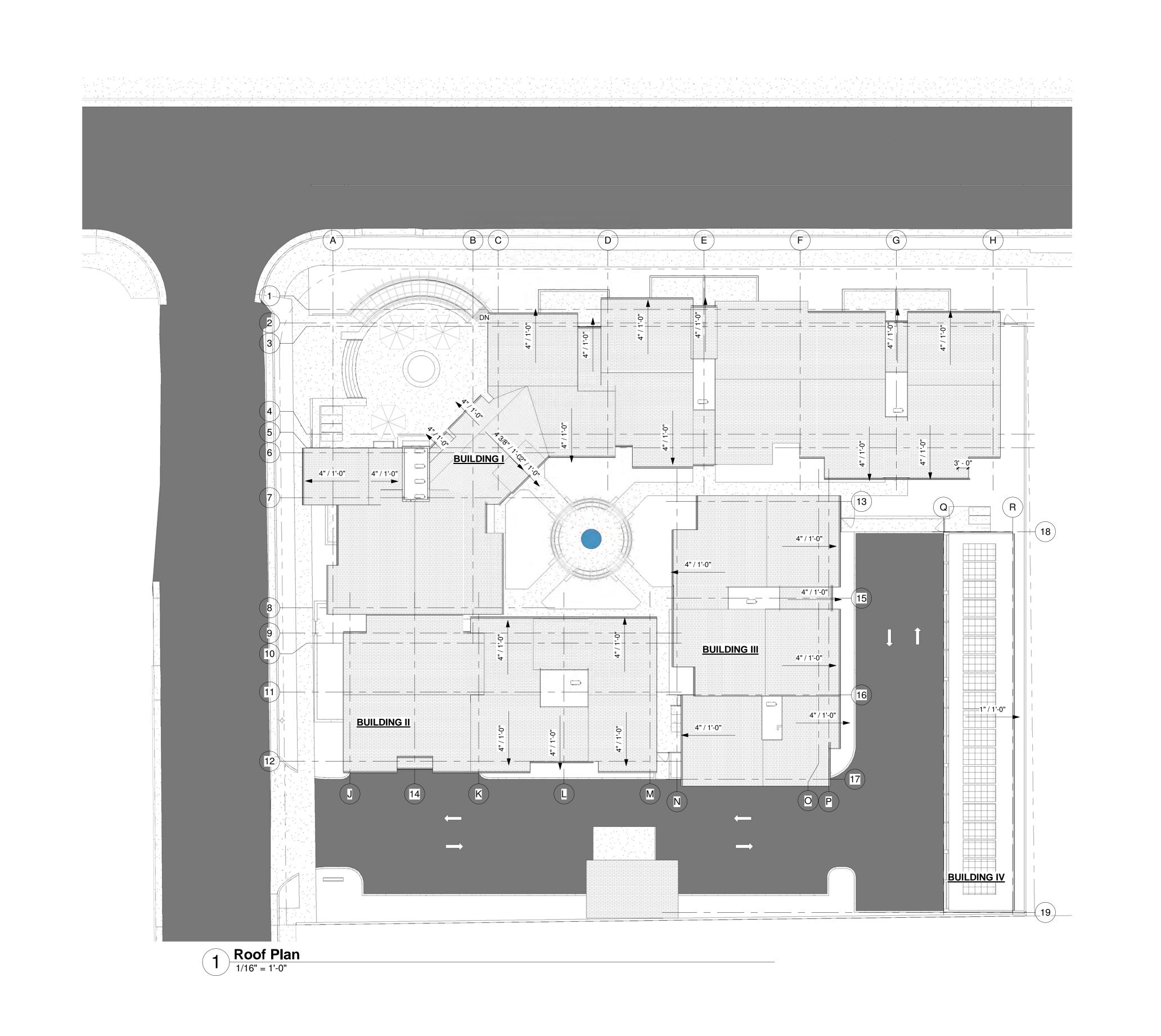
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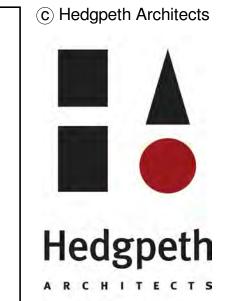
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Sheet

A5



SCALE: 1/16" = 1' - 0" 0' 8' 16'



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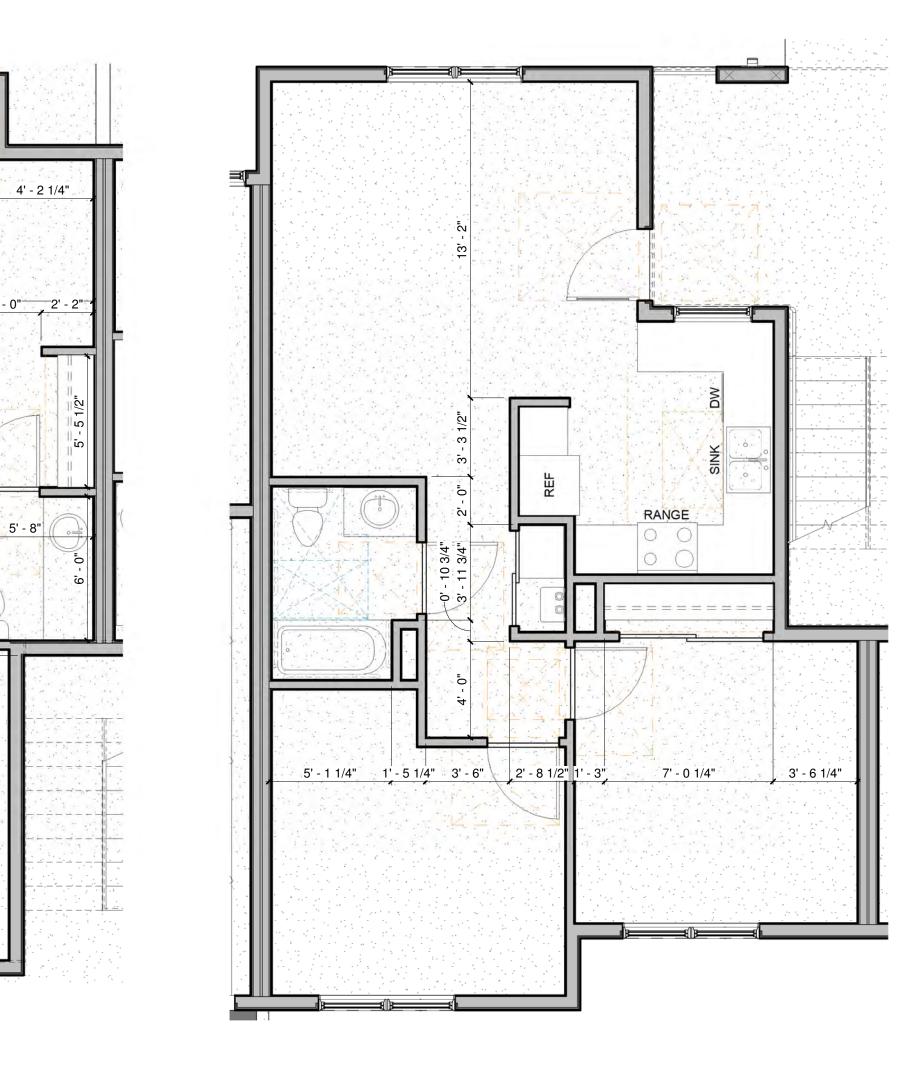
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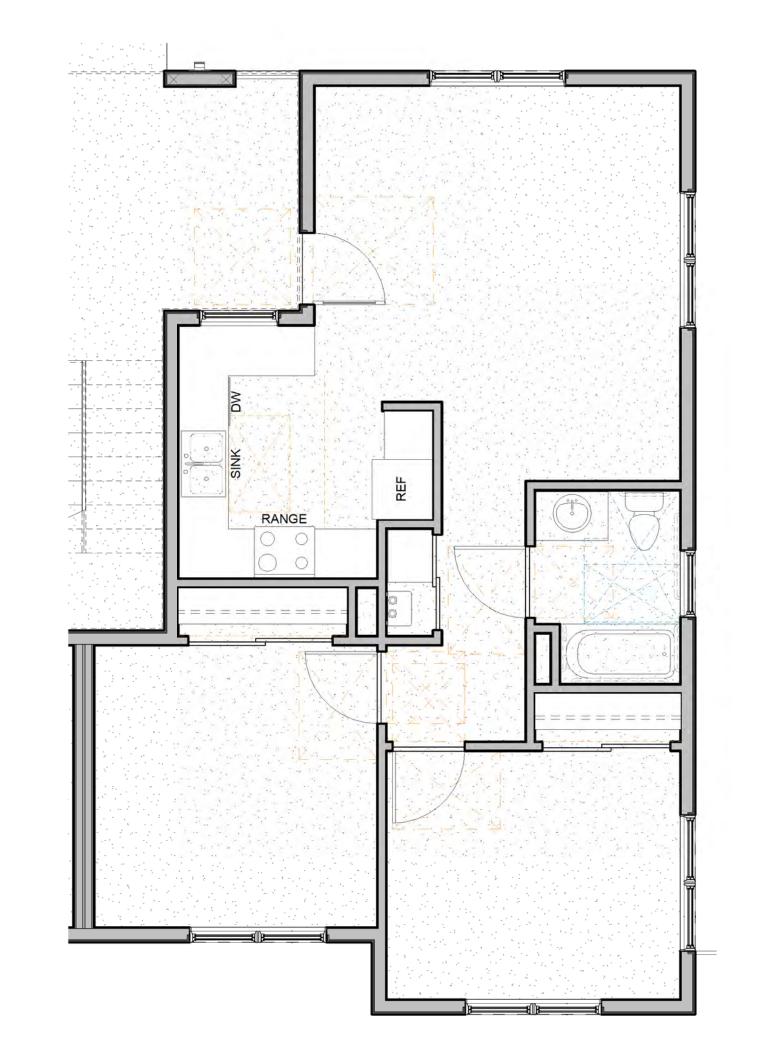
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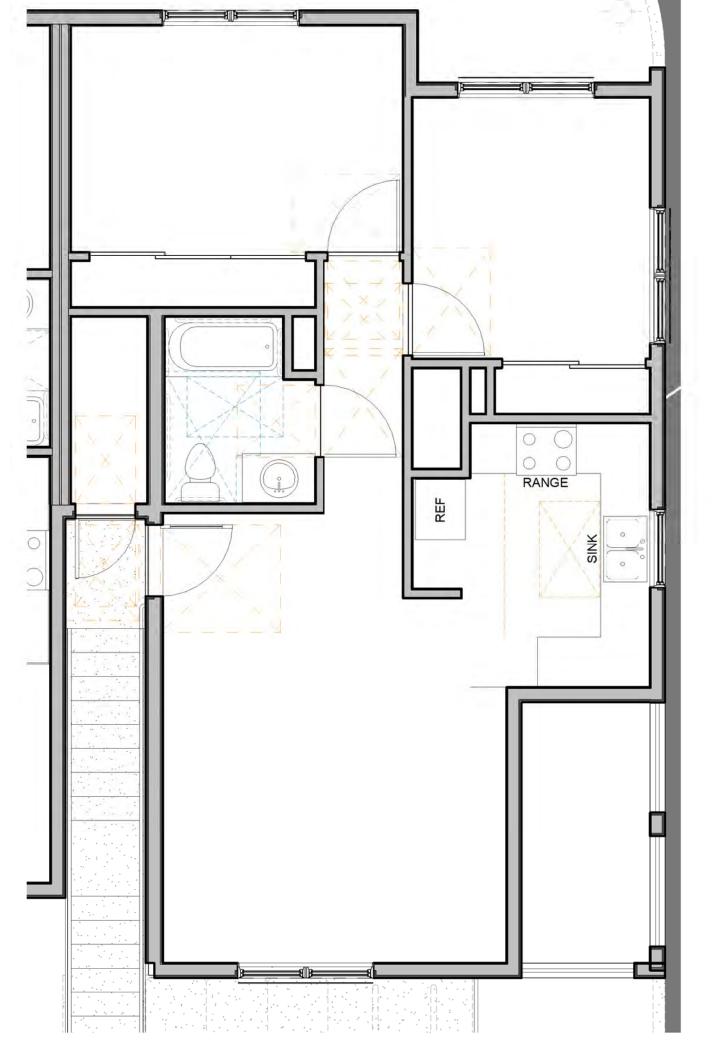
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Sheet **A6** 







4 Level 2- Unit B3 - 779 SF

1 Level 1 - Unit Type A - 952 SF

10' - 4 3/4"



3 Level 1 - Unit Type B1 & B2 - 777 SF

1 Level 1 - Unit Type C1 - 1110 SF

2 Level 2- Unit D1 - 1185

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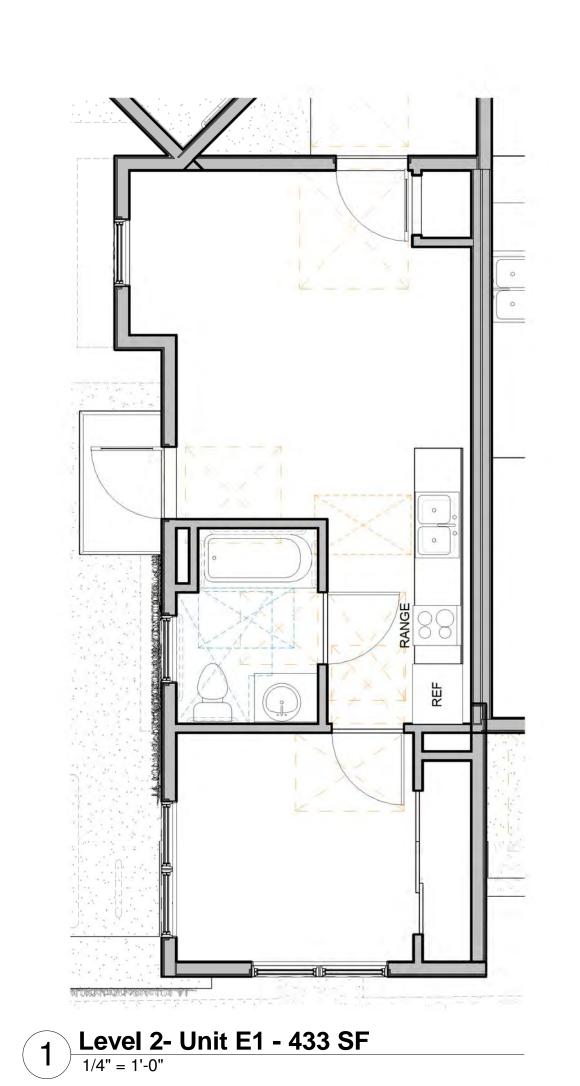
Revisions

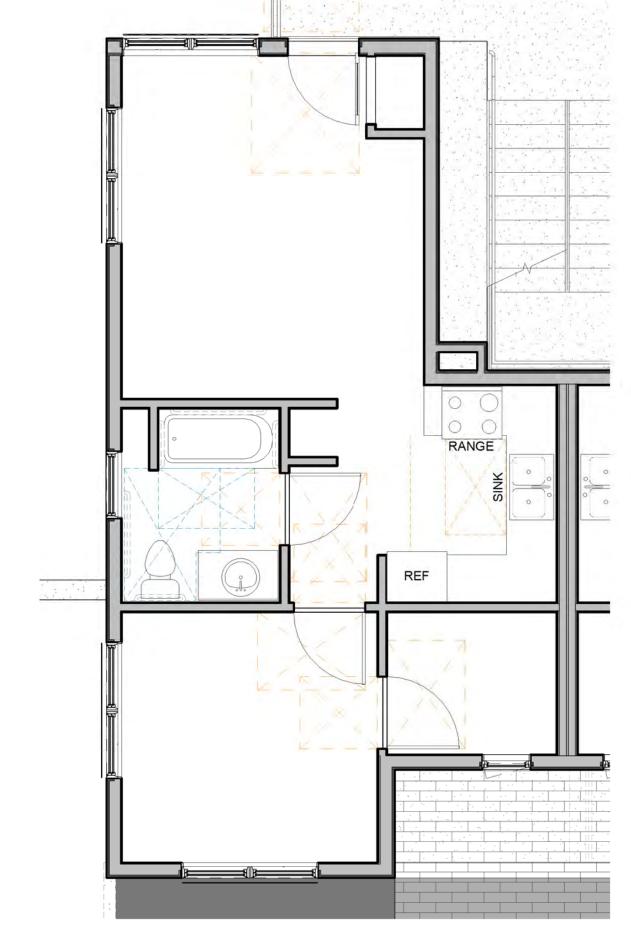
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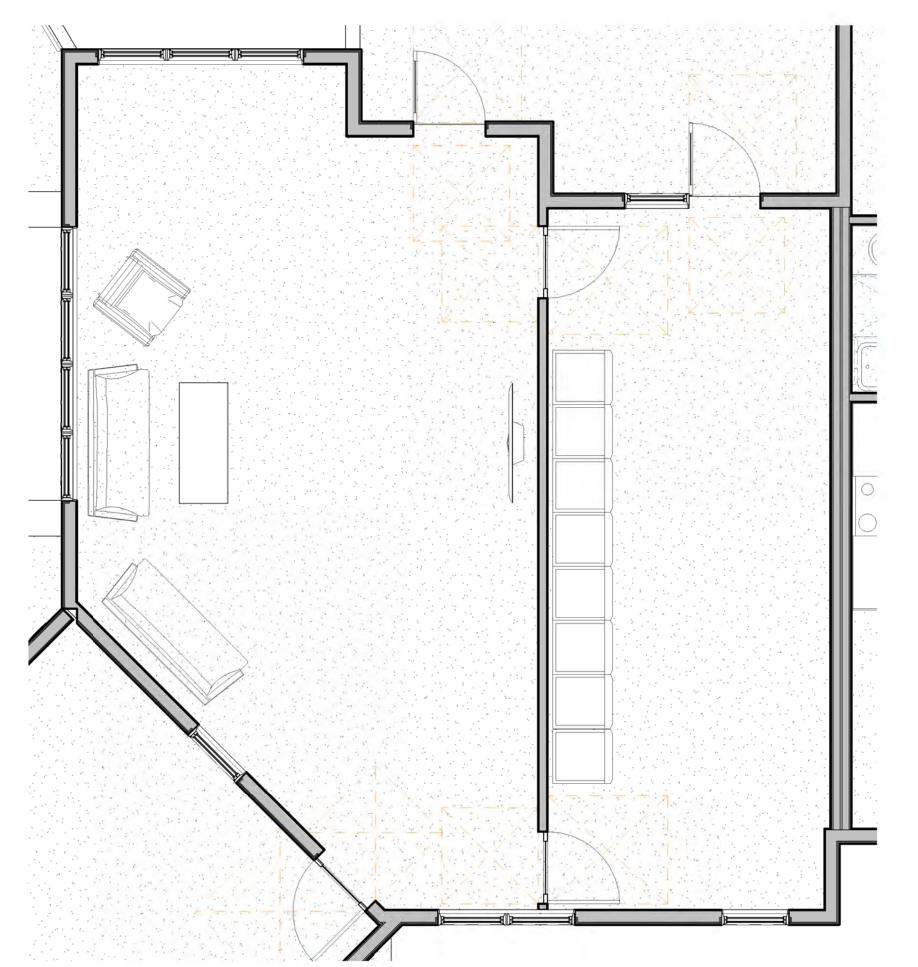
1/20/20

**A8** 









3 Level 1 - Community Room and Laundry - 942 SF



22 10:58:52 AM



Lithonia LED ADA D Series Area Light



Lithonia LED ADA D Series Bollard

Lithonia LED ADA D Series Wall Pack Light



Luminis SQ500.Syrios Square LED Wall Down Light



Luminis Scirocco Wall Sconce SR115T



SANTA BARBARA FINISH AT EXTERIOR CEMENT PLASTER STUCCO

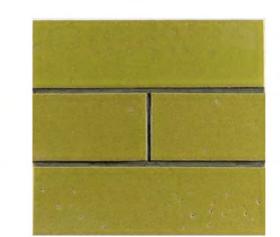


CEMENT PLASTER STUCCO LA HABRA - FALLBROOK

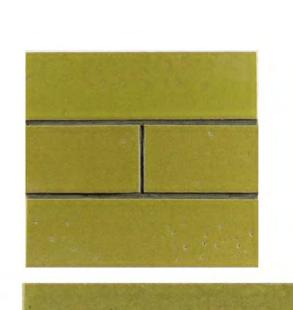


2 1/4"\_\_\_\_\* Tile Width

TRIKEENAN- BONEYARD BRICK GLAZED CERAMIC BRICK TILE COLOR - DIAMOND SPRINGS SIZE - NORMAN 2.25" X 11 5/8"



TRIKEENAN- BONEYARD BRICK GLAZED CERAMIC BRICK TILE COLOR - PARAKEET SIZE - NORMAN 2.25" X 11 5/8"





GARAGE ACCESSORY BUILDING - LASER CUT ALUMINUM SCREEN PANEL AT LEVEL 2 MOZ DESIGNS ARCHITECTURAL METALS PATTERN - LIMESTONE, COLOR - BRONZE SAND



COMPOSITE CLADDING WOOD TONED SIDING, FIBERON - COLOR "MERGANTI" OR EQUAL

TRIKEENAN- BONEYARD BRICK

GLAZED CERAMIC BRICK TILE COLOR - MOREL

SIZE - NORMAN 2.25" X 11 5/8"

TRIKEENAN- BONEYARD BRICK GLAZED CERAMIC BRICK TILE COLOR - JUS WHITE

SIZE - NORMAN 2.25" X 11 5/8"

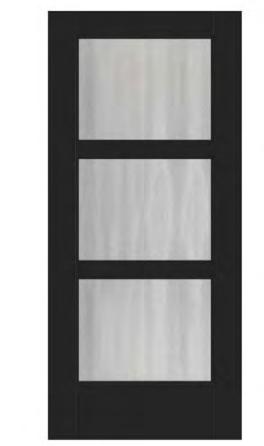


**BUILDING "1" INTERIOR OF COURTYARD AT** BUILDING "1" ENTRY PLAZA
ARCHED ENTRY INTO RESIDENTIAL COURTYARD ARCHED ENTRYWAY





**ALUMINUM RAILING** ANODIZED BRONZE



THERMA TRU FULL LITE FLUSH-GLAZED STYLE NO. S5700XJ-SDLF2 ONYX



MARVIN 4-LITE DOUBLE HUNG WINDOW **BLACK VINYL** 



THIN BRICK CERAMIC TILE

CERTAINTEED COMPOSITION SHINGLE **COLOR - WEATHERED WOOD** 

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1650

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A10.1



2 Site Section 'B'
1/8" = 1'-0"

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**A11** 

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1 View from Steele Ln & Hardies Ln





5 View from Meadowbrooke

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Sheet **A12.2** 



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A12.3



Perspective from Courtyard

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pective Rendering from Steele

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Sheet **A12.4** 



Perspective Rendering from Steele Lane

Project Architect

Drawn By

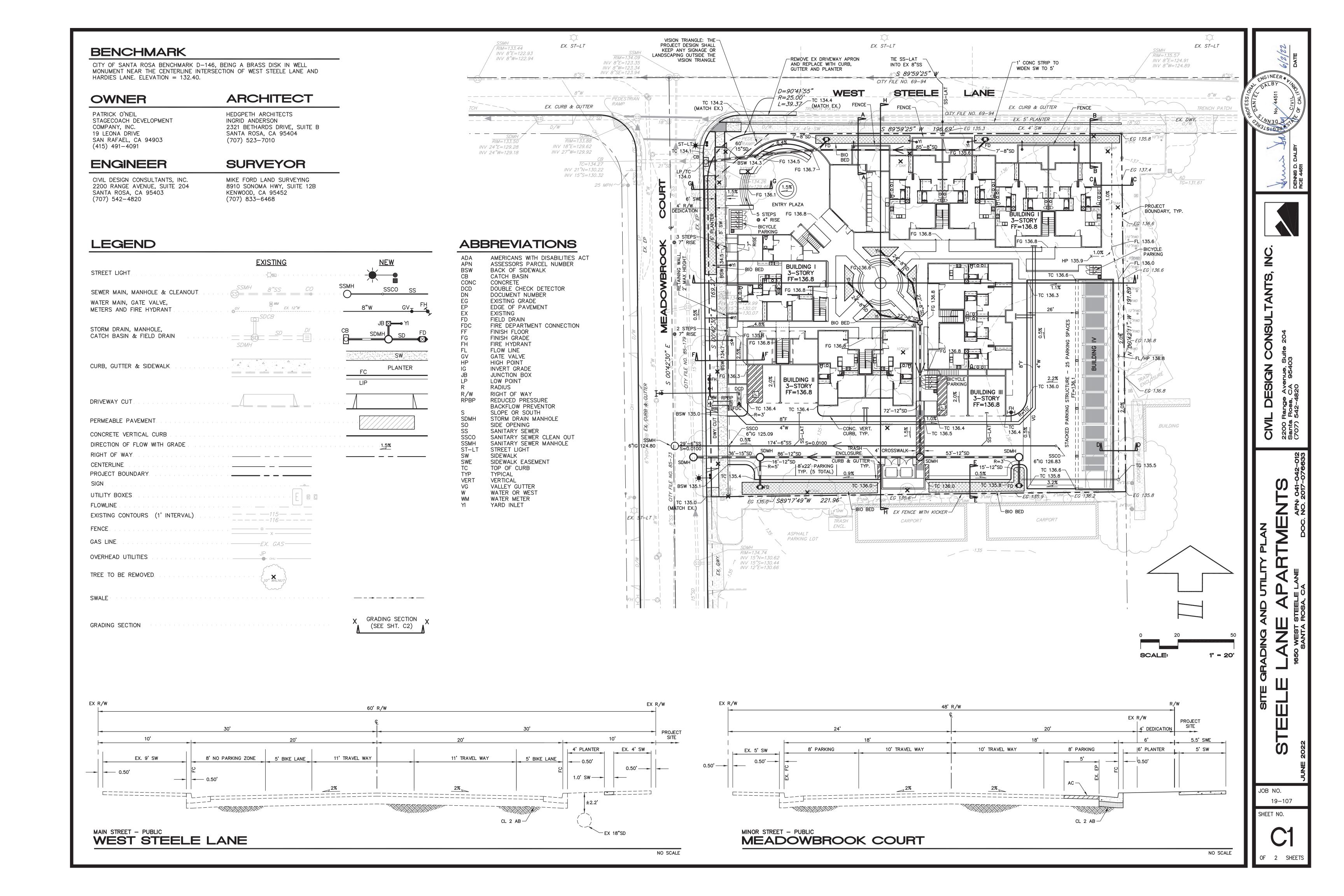
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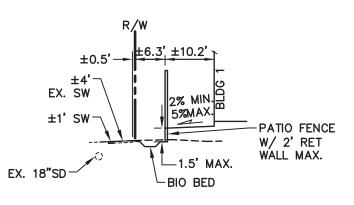
A12.5



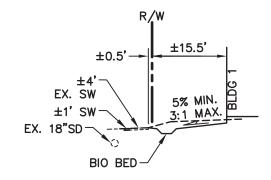
Perspective Rendering from Meadowbrook Court



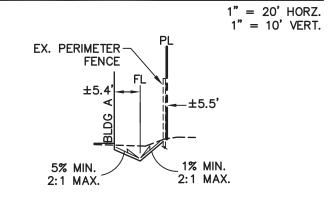
1" = 20' HORZ. 1" = 10' VERT.



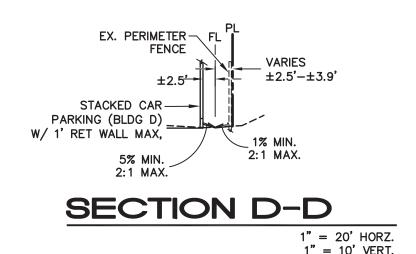
## SECTION A-A 1" = 20' HORZ. 1" = 10' VERT.



### SECTION B-B

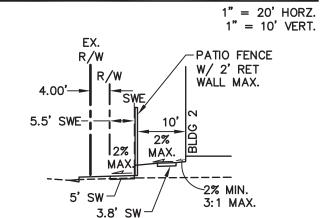


# SECTION C-C 1" = 20' HORZ. 1" = 10' VERT.

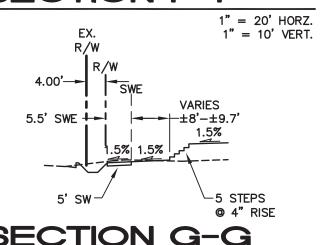


# EX. PERIMETER PL FENCE WITH KICKER 1.5% MIN. 5% MAX. BIO BED PL VARIES ±6.8'-±8.5

### SECTION E-E



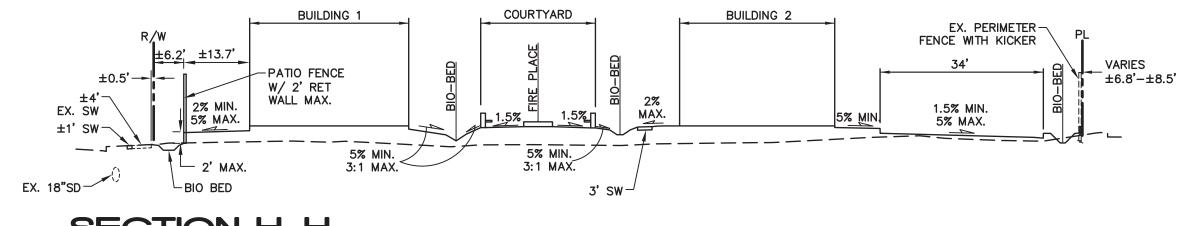
## SECTION F-F



SECTION G-G

1" = 20' HORZ
1" = 10' VERT

GRADING SECTIONS



SECTION H-H

EX. BUILDING 3

EX. PERIMETER FL.

4.00'—

SWE

55' SWE

4' SW

BUILDING 3

EX. PERIMETER FL.

26' PARKING

STRUCTURE

±2.5'-±3.9'

±2.5'-±3.9'

STACKED CAR

PARKING STRUCTURE

W/ 1' RET WALL MAX,

SECTION 1-1

SITE/BUILDING SECTIONS

1" = 20' HORZ. 1" = 10' VERT.

INSTALL IN 6" VALVE BOX @ END OF CIRCUIT

INSTALL UPSTREAM FROM SUBMETER

nstall Per Manufacturer's Specs

Size by pipe load; 2" PVC minimum

REVISIONS

5/18/22 SITE PLAN COORDINATION BASED ON CITY COMMENTS

Mount at roof eave with clear view of sky.

Use with non-potable water

Required

(4 TOTAL)

INSTALL IN 6" VALVE BOX @ HIGH POINT OF CIRCUIT

2022 MACNAIR LANDSCAPE ARCHITECTURE, NOT FOR ENERAL USE OR PUBLICATION, ALL RIGHTS RESERVED.

ESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY

SCALE: 1" = 16'

DRAWN:

NDSCAPE ARCHITECTURE IS NOT RESPONSIBLE FOR THE CCURACY OF ANY PLANS OR SURVEYS NOT DIRECTLY REPARED BY THEM. SITE DIMENSIONS, GRADES, WATER PRIOR TO BEGINNING OF ANY WORK ON SITE. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED REMARKS One per tree, typical One per tree, typical





don@macnairlandscapes.com

REFER TO SHEET L3 FOR LANDSCAPE WATER USE CALCULATIONS

### IRRIGATION NOTES

IRRIGATION LEGEND

RZMS-18-25-CV

MSBN-25Q

AVR-075

BF 18" X 30" X 30"

\_F009M2-PC-QT

PVC Schedule 40 PVC Schedule 40

PVC Schedule 40

LF-T10-N01

133-DNP

ICM-600

MANUFACTURER

Hunter

Hunter

Rain Bird

Hunter

Hunter

Netafim Hunter Industries(R) Hunter Industries(R)

Matts

Rainbird

CST

Hunter

Hunter Industries(R) | ICZ-101-LF-25

Hunter Industries(R) ICV-1016

EQUIPMENT

Root Zone Watering System

Automatic Line Flush Valve

Isolation Valve - Ball Valve

Backflow Preventer Enclosure

3/4" Quick Coupling Valve

Solar Sync Sensor - Wireless

Backflow Preventer Enclosue

VALVE STATION AND SEQUENCE ELECTRIC CONTROL VALVE GALLONS PER MINUTE

Pipe and Mire Sleeve

rrigation Controller - 6 Station

5 Station Plug-In Expansion Module

" Reduced Pressure Backflow Preventer

Hunter Stream Bubbler

\_andscape Dripline

Air Relief Valve

SEE DETAIL Continuous Acting Air Vent

Eco-Mat

Master Valve

Flow Sensor

Lateral

👅 🐞 💣 😝 Poly to PVC Header

SYMB*O*L

SEE DETAIL

E -

8.9 /17

- 1. ALL SPRINKLER HEADS SHALL BE SET PERPENDICULAR TO FINISH GRADE OF THE AREA TO BE IRRIGATED UNLESS OTHERWISE NOTED ON THE PLANS.
- 2. THE SPRINKLER SYSTEM DESIGN IS BASED ON THE MINIMUM STATIC PRESSURE OF 35 PSI AT THE VALVES AND THE MAXIMUM FLOW DEMAND SHOWN ON THE IRRIGATION DRAWINGS AT THE POINT OF CONNECTION. THE IRRIGATION CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION OF THE IRRIGATION SYSTEM. IF THE WATER PRESSURE SHOWN ON THE DRAWINGS DIFFERS FROM THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY. IN THE EVENT PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO THE START OF CONSTRUCTION, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
- 3. THE LOCATION OF THE CONTROLLER TO BE VERIFIED BY OWNER. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR CONNECTING ALL PROPOSED STATIONS TO THE CONTROLLER. CONTROLLER TO BE CONFIGURED TO OPERATE 20 STATIONS. CONTROLLER SHALL BE HUNTER IC-600-M WITH THREE ICM-600 EXPANSION MODULES.
- 4. ALL CONSTRUCTION IS TO BE PER THE LATEST EDITION OF THE UNIFORM BUILDING CODE. 5. THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ROOT BARRIERS, ETC. SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION ONLY. INSTALL PIPING AND VALVES IN PLANTING AREAS WHERE POSSIBLE, AND LOCATE
- ELECTRIC CONTROL AND QUICK COUPLING VALVES IN GROUND COVER/SHRUB AREAS, 6" TO 12" AWAY FROM HARDSCAPE OR TURF AREA FOR EASY ACCESS. 6. THE IRRIGATION CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS FOR OPTIMUM PERFORMANCE AND TO PREVENT OVER SPRAY ONTO WALKS, ROADWAYS, AND/OR BUILDINGS. THIS SHALL INCLUDE SELECTING THE
- BEST DEGREE OF ARC TO FIT THE EXISTING SITE CONDITIONS AND THROTTLING THE FLOW CONTROL AT EACH VALVE TO OBTAIN THE OPTIMUM OPERATING PRESSURE FOR EACH SYSTEM.
- 7. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE THEMSELF WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, STRUCTURES, AND UTILITIES. THE IRRIGATION CONTRACTOR SHALL EXERCISE EXTREME CARE, AND BE RESPONSIBLE FOR ANY DAMAGE IN EXCAVATING AND WORKING NEAR UTILITIES. CONTRACTOR SHALL COORDINATE ALL WORK WITH THE GENERAL CONTRACTOR AND OTHER SUB-CONTRACTORS FOR THE LOCATION OF UTILITIES AND THE INSTALLATION OF PIPE SLEEVES THROUGH WALLS, UNDER ROADWAYS, AND NEAR STRUCTURES. PRIOR TO CONSTRUCTION, CONTACT ALL APPLICABLE AGENCIES AND U.S.A. AT 1-800-642-2444 TO FIELD LOCATE ALL EXISTING UTILITIES.
- 8. FIELD ADJUSTMENTS MAY BE REQUIRED TO PROVIDE OPTIMUM OPERATING EFFICIENCY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE LANDSCAPE ARCHITECT TO REVIEW FIELD ADJUSTMENTS PRIOR TO INSTALLATION. IN THE EVENT THAT NO CONTACT IS MADE WITH THE LANDSCAPE ARCHITECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REVISIONS.
- 9. SLEEVE ALL IRRIGATION PIPE AND CONTROL WIRES UNDER STREETS AND CONCRETE WALKWAYS WITH THE PROPER SIZE CLASS 200 PVC PIPE TO DEPTH AS SPECIFIED.
- 10. FOR ADDITIONAL INFORMATION, SEE PROJECT DETAILS AND SPECIFICATIONS.
- 11. ALL WORK SHALL CONFORM TO ALL APPLICABLE CITY OF SANTA ROSA CONSTRUCTION STANDARDS.
- 12. NO GALVANIZED IRON PIPE OR FITTINGS SHALL BE ALLOWED.
- 13. A BALL VALVE IN A SEPARATE ROUND VALVE BOX IS TO BE INSTALLED IMMEDIATELY UPSTREAM FROM EACH REMOTE CONTROL VALVE OR GHROUP OF VALVES. VALVE SHALL BE SIZED TO MAINLINE SUPPLY AT THE RC VALVE. SEE DETAIL.
- 14. INSTALL 3" WIDE DETECTABLE TAPE (#3" DTP, AS MANUFACTURED BY T. CHRISTY). TAPE SHALL BE INSTALLED 6" ABOVE THE IRRIGATION MAIN.
- 15. INSTALL ALL LANDSCAPE DRIPLINE BENEATH MULCH. INSTALL ALL TUBING 3" BELOM GRADE, PARALLEL AT SPACING INDICATED. USE LANDSCAPE STAPLES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS TO SECURE TUBING TO GROUND.
- 16. A SIGNED CERTIFICATE OF COMPLETION IS REQUIRED PRIOR TO FINAL ACCEPTANCE BY THE CITY OF SANTA ROSA. IF THE INSTALLATION OF THE LANDSCAPE DOES MEET OR SUBSTANTIALLY COMPLY WITH THE APPROVED LANDSCAPE CONSTRUCTION DOCUMENTS, THE CERTIFICATE OF COMPLETION WILL NOT BE SIGNED OR APPROVED BY THE LANDSCAPE ARCHITECT OF RECORD.

BIORETENTION AREAS	

-FLOW SENSOR

(OPTIONAL)

IRRIGATION POC

SCHEMATIC

REDUCED PRESSURE

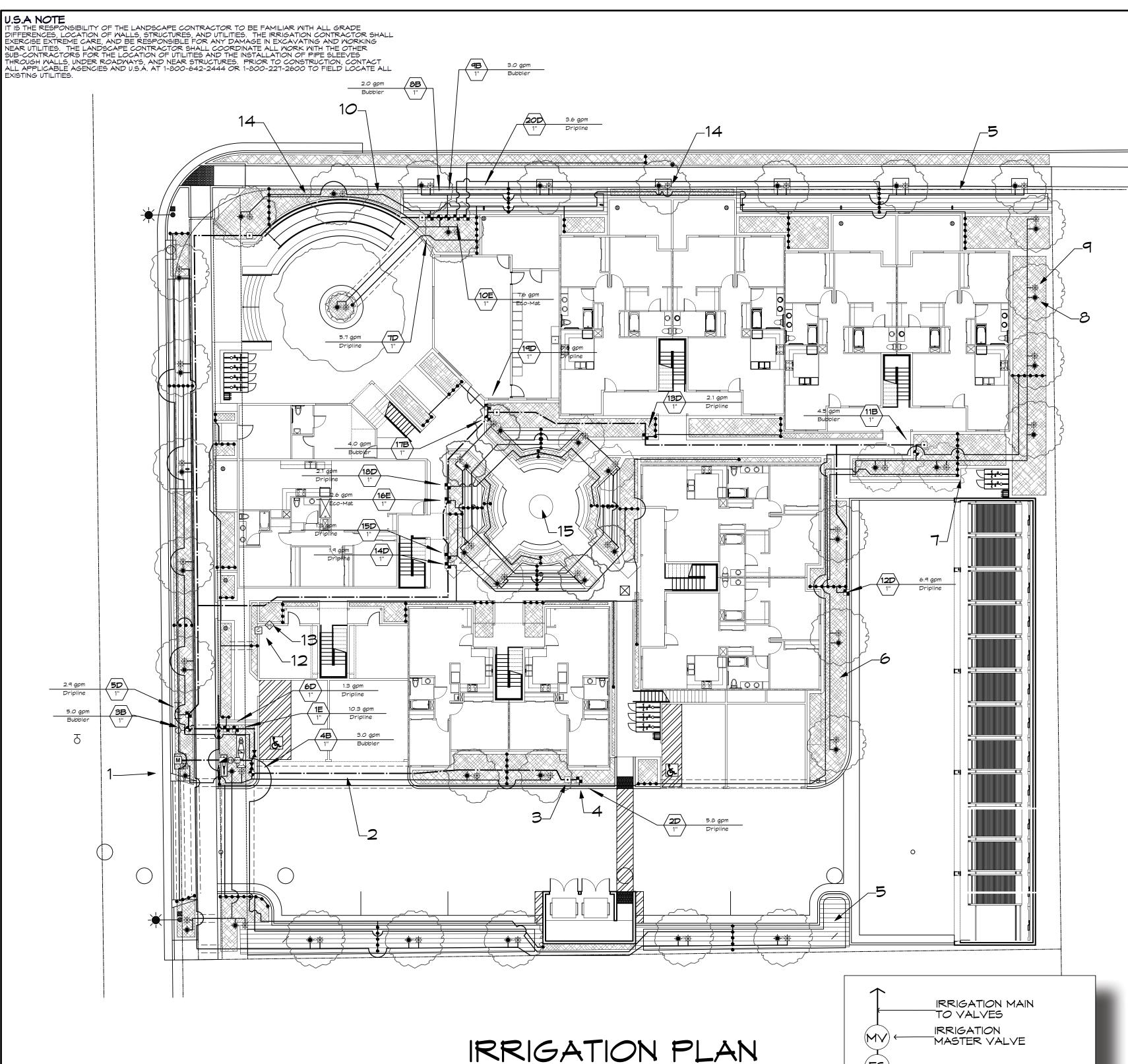
-IRRIGATION METER

BACKFLOW PREVENTER

PRESSURE REGULATOR

### SUPPLEMENTAL TEMPORARY IRRIGATION

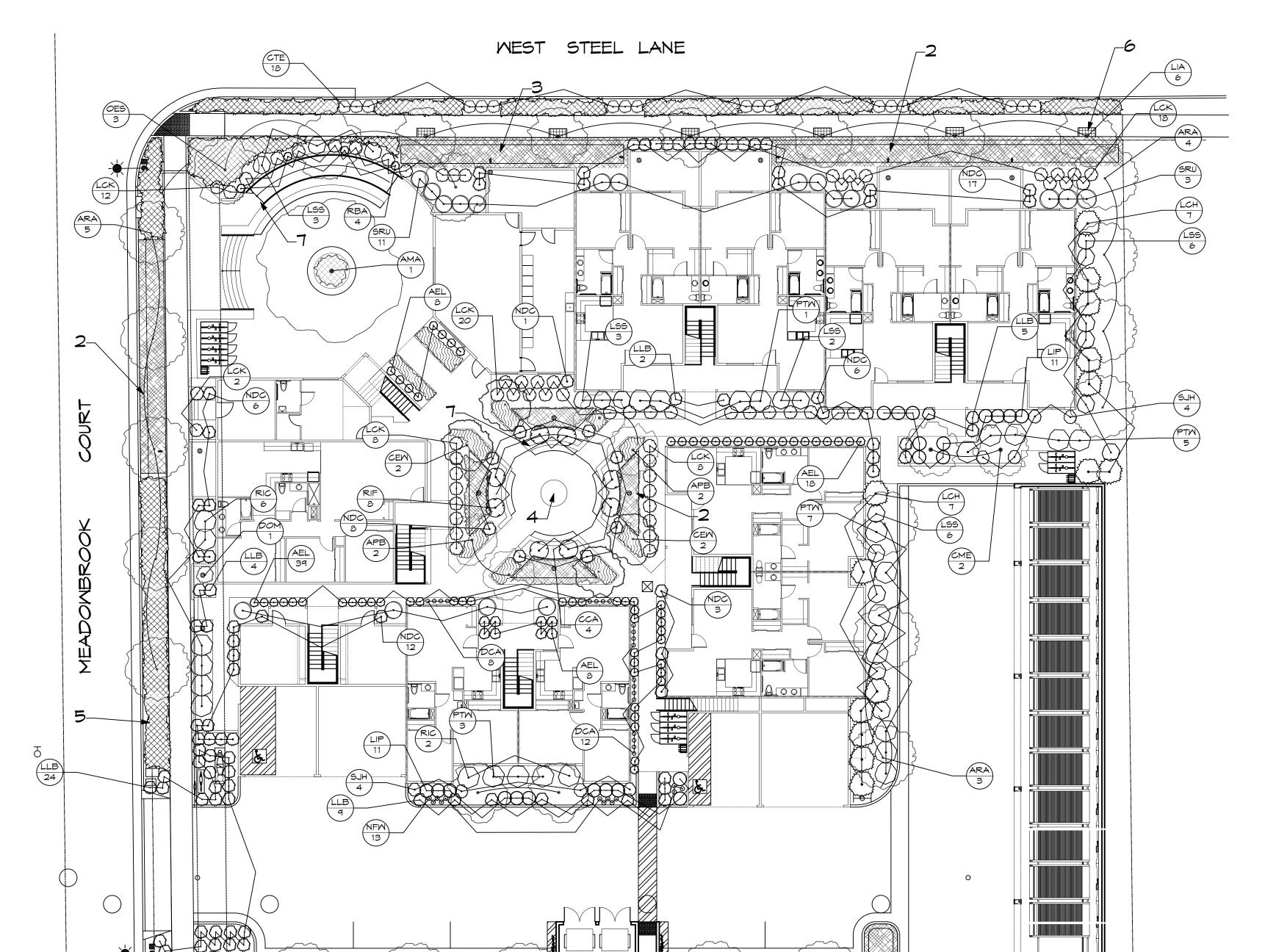
CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY SUPPLEMENTAL IRRIGATION OF ALL BIO-RETENTION AREAS THROUGH THE SOD OR PLANT ESTABLISHMENT PERIOD. METHOD OF IRRIGATION APPLICATION IS DISCRETIONARY AND MAY INCLUDE HAND WATERING OR INSTALLATION OF A TEMPORARY, ABOVE GRADE OVERHEAD SPRAY CIRCUIT. ANY REPLACEMENT NECESSARY FOR LOSS OR DAMAGE TO SOD OR PLANTS DUE TO LACK OF WATER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT CONTRACTOR'S EXPENSE.



### Scale: 1/16" = 1'-0" IRRIGATION KEYNOTES

- 1. POC AT DEDICATED IRRIGATION WATER METER; REFER TO SCHEMATIC DRAWING THIS SHEET 2. TYPICAL IRRIGATION SLEEVE BENEATH PAVEMENT; SIZE SLEEVE TO CONTAIN PIPE AND WIRE PER DETAIL; MINIMUM SIZE NO LESS THAN 2" DIAMETER
- 3. QUICK COUPLER, TYPICAL
- 4. DRIPLINE VALVE, TYP.
- 5. PARALLEL LINE HATCH INDICATES ECO-MAT
- 6. CROSS LINE HATCH INDICATE LANDSCAPE DRIPLINE ZONES
- 7. POLY TUBING TO PVC CONNECTION, TYPICAL
- 5. TREE BUBBLERS, TWO PER TREE , TYPICAL. ONE ABOVE GRADE STREAM BUBBLER AND ONE SUB-SUFACE BUBBLER
- 9. TREE AREA IS CALCULATED AT A WETTED DIAMETER OF 6 FT. OR EQUIVALENT AREA. THE SAME AREA IS REMOVED FROM THE HYDROZONE BELOW THE TREE AND THE HIGHER WATER USE IS APPLIED IN THE ETMU CALCULATION.
- 10. INSTALL DRIPLINE 3" BELOW GRADE IN ALL PLANTING AREAS AT 18" OC TYPICAL; ALL DRIPLINE SHALL BE INSTALLED PARALLEL , GENERALLY FOLLOWING CONTOURS. HOLD DRIPLINE BACK FROM EDGE 1/2 THE ROW SPACING. MINIMUM OF ONE DRIP IN NARROW SPACES.
- 11. TREE BUBBLER VALVE, TYP.
- 12. CONTROLLER LOCATION: MOUNT AT EYE LEVEL; SUBJECT TO OWNER APPROVAL
- 13. SOLAR SYNC SENSOR, ROOF MOUNT WITH CLEAR ACCESS TO SKY
- 14. IRRIGATION LAYOUT IS DIAGRAMMATIC. INSTALL ALL MAIN LINE, LATERALS AND CONTROL WIRE IN LANDSCAPE AREAS. DO NOT INSTALL IN PUBLIC RIGHT OF WAY. WHEN LAYOUT REQUIRES INSTALLATION UNDER PAVING, USE IRRIGATION SLEEVES PER DETAIL SHEET L-3.
- 15. MATER FEATURE

IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO BE FAMILIAR WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, STRUCTURES, AND UTILITIES. THE IRRIGATION CONTRACTOR SHALL EXERCISE EXTREME CARE, AND BE RESPONSIBLE FOR ANY DAMAGE IN EXCAVATING AND WORKING NEAR UTILITIES. THE LANDSCAPE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE OTHER SUB-CONTRACTORS FOR THE LOCATION OF UTILITIES AND THE INSTALLATION OF PIPE SLEEVES THROUGH WALLS, UNDER ROADWAYS, AND NEAR STRUCTURES. PRIOR TO CONSTRUCTION, CONTACT ALL APPLICABLE AGENCIES AND U.S.A. AT 1-800-642-2444 OR 1-800-227-2600 TO FIELD LOCATE ALL EXISTING UTILITIES.



PLANTING PLAN

Scale: 1/16" = 1'-0"

### PLANTING KEYNOTES

- TRAIN VINES UP WALL
- 2. BIO-FILTRATION SOD, TYPICAL
- 3. NO MULCH IN BIOSMALES
- 4. MATER FEATURE
- 5. 3" DEEP MULCH, ALL LANDSCAPE AREAS
- 6. 2' X 4' RECTANGULAR TREE GRATES AT BACK OF SIDEWALK
- 7. TRAIN VINES ON ARBOR

THESE DRAWINGS COMPLY WITH THE CRITERIA OF THE ORDINANCE. ORDINANCE REQUIREMENTS HAVE BEEN APPLIED FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN AND THE LANDSCAPE DESIGN PLAN."

SYMBOL	SIZE	BOTANICAL NAME	COMMON NAME	WATER USE PER WUCOLS IV	QUANTITY	COMMENTS
:es		<u> </u>	<b>I</b>			
APB	#24	Acer palmatum var. atropurpureum 'Bloodgood'	Bloodgood Japanese Maple	.6	4	Multi-Trunk
ARA	#24	Acer rubrum 'Armstrong'	Armstrong Maple	.6	17	
AMA	#24	Arbutus x 'Marina'	Marina Strawberry Tree	.3	1	
CME	#24	Citrus limon 'Meyer Improved'	Improved Meyer Lemon	.6	2	
CEM	#24	Cornus florida X nuttallii 'Eddies White Wonder'	Eddies White Wonder Dogwood	.6	4	
LIA	#24	Lagerstroemia indica x faueri 'Arapaho'	Arapaho Crape Myrtle	.3	8	
OES	#24	Olea europaea ' Swan Hill'	Fruitless Olive	.1	3	
ubs						
DOM	#5	Daphne odora 'Aureo-marginata'	Variegated Minter Daphne	.3	1	T
L55	#5	Liqustrum sinense 'Sunshine'	Sunshine Chinese Privet	.3	20	
LCK	#5	Loropetalum chinense 'Kurenai'	Jazz Hands® Dwarf Pink Chinese Fringe-flower		68	
LCH	#5	Loropetalum chinense 'Razzleberri'	Razzleberri Fringe Flower	.3	14	
NDC	#5	Nandina domestica 'Compacta'	Dwarf Heavenly Bamboo	.3	53	
RIC	#5	Rhaphiolepis indica 'Clara'	Clara Indian Hawthorn	.3	10	
RIF	#5	Rosa x 'Iceberg' Floribunda Rose	Iceberg Rose	.6	8	
SRU	#5	Sarcococca ruscifolia	Fragrant Sweet Box	.3	18	
ennials				1		
AEL	#1	Aspidistra elatior	Cast Iron Plant	.3	74	
LIP	#5	Lavandula x intermedia 'Phenomenal'	Phenomenal French Lavender	.3	22	
NFM	#1	Nepeta x faassenii 'Walker's Low'	Malker's Low Catmint	.3	13	
HLR	#5	Salvia x jamensis 'Hot Lips'	Hot Lips Autumn Sage	.3	8	
PTG	#5	Parthenocissus tricuspidata 'Green Showers'	Green Showers Boston Ivy	.3	1	
RBA	#5	Rosa banksiae 'Alba Plena'	White Lady Banks Rose	.3	4	Train on Arbor
CCA	#5	Clytostoma callistegioides	Lavender Trumpet Vine	.6		Train on Arbor
- OOA			Lavender Trumpet vine	.0	_	Train on Arbor
undcover				<u> </u>		
CDC	#1	Cotoneaster dammeri 'Coral Beauty'	Coral Beauty Cotoneaster	.3	30	6' OC, Triangular Spacing
555555555555555555555555555555555555555	#1	Ophiopogon formosanum	Taiwan Mondo Grass	.6	35	
amental Gr	^ass					
CTE	#1	Chondropetalum tectorum	Cape Rush	.3	18	
DCA	#1	Deschampsia caespitosa	Tufted Hair Grass	.3	20	
LLB	#1	Lomandra longifolia 'Breeze'	Breeze™ Dwarf Mat Rush	.3	44	
retention A	Areac					<u> </u>
retention A	Sod	Bioflitration Sod	"Biofiltration Sod"	0.3		Delta Bluegrass (CA Natives)
<u> </u>	200	SIGNISI ABION 304	Die Hei abien sea	0.5		DOING DINGGI ADD (OFT HALIYED)
er		1		I	l	<u> </u>
		Mulch: Fir Bark 1-1/2" Minus	Medium Walk-On Bark			3" Depth, All Landscape Areas
ee Detail		Linear Root Barrier	Root Solutions , or Equal	<u> </u>		24" Depth, Continuous

### PLANTING NOTES

- 1. ALL GROUND COVER TO BE SPACED IN A TRIANGULAR PATTERN. CONTRACTOR RESPONSIBLE FOR COMPLETE COVERAGE.
- 2. SUPPLY AGRIFORM 21 GRAM TABLETS AS FOLLOMS: 5-15 GAL., 3-5 GAL., 1-1 GAL.

COMPLETION WILL NOT BE SIGNED OR APPROVED BY THE LANDSCAPE ARCHITECT OF RECORD.

3. DIG PLANTING PITS 2 TIMES THE DIAMETER AND EQUAL THE HEIGHT OF ROOTBALL

CITY REQUIRED NOTES

DEVELOPMENT SERVICES INSPECTOR A COMPLETED AND SIGNED "CERTIFICATE OF COMPLETION"

2. THE CERTIFICATE OF COMPLETION SHALL BE ACCOMPANIED BY AN IRRIGATION AUDIT, IRRIGATION

3. A FINAL CITY INSPECTION SHALL BE PERFORMED. THE INSTALLATION CONTRACTOR SHALL ATTEND

COMPLETION FROM THE CITY. TO SCHEDULE AN INSPECTION, CONTACT ENGINEERING DEVELOPMENT

4. A MINIMUM OF 8" OF NON-MECHANICALLY COMPACTED SOIL SHALL BE AVAILABLE FOR WATER

MINIMUM RATE OF 8 CUBIC YARDS PER 1000 SQUARE FEET OR PER SPECIFIC AMENDMENT

5. INCORPORATE COMPOST OR NATURAL FERTILIZER INTO THE SOIL TO A MINIMUM DEPTH OF 8" AT A

6. A MINIIMUM 3" LAYER OF MULCH SHALL BE APPLIED ON ALL EXPOSED SOIL SURFACES OF PLANTING

AREAS EXCEPT IN TURF AREAS, CREEPING OR ROOTING GROUNDCOVERS OR DIRECT SEEDING

THIS INSPECTION AND MAKE ALL REQUIRED REPAIRS AND ADJUSTMENTS TO ACHIEVE APPROVAL AND

1. UPON COMPLETION OF INSTALLATION, CONTRACTOR SHALL SUBMIT TO THE ENGINEERING

SCHEDULE AND A MAINTENANCE SCHEDULE, AS DESCRIBED IN THE CITY ORDINANCE.

STATING THE PROJECT HAS BEEN INSTALLED AS DESIGNED.

ABSORPTION AND ROOT GROWTH IN PLANTED AREAS.

RECOMMENDATIONS FROM A SOILS LABORATORY REPORT.

SERVICES AT (707) 543-4611.

APPLICATIONS.

- 4. BACKFILL PITS WITH 2/3 EXISTING SOIL, 1/3 ORGANIC AMENDMENT
- 5. ALL PLANTS TO BE SPOTTED IN THE FIELD BY LANDSCAPE ARCHITECT PRIOR TO PLANTING. 6. WHEN LANDSCAPING IN EXISTING PLANTED AREAS, CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE OR DESTROY ANY EXISTING PLANT MATERIAL OR IRRIGATION. EXISTING PLANT MATERIAL AND IRRIGATION THAT IS DAMAGED SHALL BE REPLACED WITH LIKE, SIZE, QUALITY, ETC.
- BY THE CONTRACTOR AT HIS EXPENSE. 7. SPECIAL ATTENTION IS TO BE PAID TO THE PLANTING AREAS SURROUNDING THE BUILDINGS. COMPACTED SOIL IS TO BE SUFFICIENTLY EXCAVATED TO ALLOW FOR PROPER ROOT GROWTH AND DRAINAGE OF ALL AREAS. CHECK SOIL FOR PROPER DRAINAGE PRIOR TO
- PLANTING. AUGER THROUGH COMPACTED SOIL WHERE NECESSARY. DO NOT PLANT IN THE DRAINAGE SWALES. 8. ALL CONSTRUCTION IS TO BE PER ALL APPLICABLE AND PREVAILING CITY OF SANTA ROSA CONSTRUCTION STANDARDS.
- 9. A SIGNED CERTIFICATE OF COMPLETION IS REQUIRED PRIOR TO FINAL ACCEPTANCE BY THE CITY OF SANTA ROSA. IF THE INSTALLATION OF THE LANDSCAPE DOES MEET OR SUBSTANTIALLY COMPLY WITH THE APPROVED LANDSCAPE CONSTRUCTION DOCUMENTS, THE CERTIFICATE OF

### (ITEMS TO BE INCLUDED WITH CERTIFICATE OF COMPLETION)

CITY REQUIREMENT OF DOCUMENT OF COMPLIANCE

- A. PROJECT APPLICANT MUST SUBMIT DOCUMENTATION VERIFYING IMPLEMENTATION OF SOIL ANALYSIS REPORT RECOMMENDATIONS TO THE CITY WITH CERTIFICATE OF COMPLETION B. THE CERTIFICATE OF COMPLETION MUST BE ACCOMPANIED BY AN IRRIGATION AUDIT THAT CONTAINS THE FOLLOWING:
- ♦ OPERATING PRESSURE OF THE IRRIGATION SYSTEM
- ♦ DISTRIBUTION UNIFORMITY OF OVERHEAD IRRIGATION ♦ PRECIPITATION RATE OF OVERHEAD IRRIGATION
- ♦ REPORT OF ANY OVERSPRAY OR BROKEN IRRIGATION EQUIPMENT
- ♦ IRRIGATION SCHEDULE INCLUDING:
- 1. PLANT ESTABLISHMENT IRRIGATION SCHEDULE
- 2. REGULAR IRRIGATION SCHEDULE BY MONTH (SEE ORDINANCE FOR DETAILS) 3. VERIFICATION THAT A DIAGRAM OF THE IRRIGATION PLAN SHOWING HYDROZONES IS KEPT WITH THE IRRIGATION CONTROLLER FOR SUBSEQUENT
- MANAGEMENT PURPOSES . ♦ ALL LANDSCAPE IRRIGATION AUDITS MUST BE CONDUCTED BY A CITY CERTIFIED
- LANDSCAPE IRRIGATION AUDITOR OR A THIRD PARTY CERTIFIED LANDSCAPE IRRIGATION AUDITOR. AN IRRIGATION MAINTENANCE SCHEDULE TIMELINE MUST BE ATTACHED TO THE
- CERTIFICATE OF COMPLETION (SEE ORDINANCE FOR DETAILS)
- C. IRRIGATION AUDIT: AN IN-DEPTH EVALUATION OF THE PERFORMANCE OF AN IRRIGATION SYSTEM CONDUCTED BY A CERTIFIED LANDSCAPE IRRIGATION AUDITOR (SEE ORDINANCE FOR DETAILS). THE AUDIT MUST BE CONDUCTED IN A MANNER CONSISTENT WITH THE IRRIGATION ASSOCIATION'S LANDSCAPE IRRIGATION AUDITOR CERTIFICATION PROGRAM OR OTHER U.S. EPA "WATERSENSE" LABELED AUDITING PROGRAM.

### REVISIONS

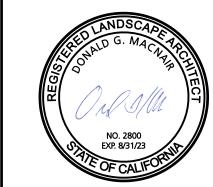
5/18/22 SITE PLAN COORDINATION BASED ON CITY COMMENTS

12/18/21 MLA JOB #: 2019-14 SCALE: 1" = 20'

DRAWN: DM

SHEET L2 OF 4

C2022 MACNAIR LANDSCAPE ARCHITECTURE, NOT FOR GENERAL USE OR PUBLICATION, ALL RIGHTS RESERVED. IESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF MACNAIR LANDSCAPE ARCHITECTURE. MACNAIR LANDSCAPE ARCHITECTURE IS NOT RESPONSIBLE FOR THE ACCURACY OF ANY PLANS OR SURVEYS NOT DIRECTLY PREPARED BY THEM. SITE DIMENSIONS, GRADES, WATER PRESSURES AND GENERAL CONDITIONS SHALL BE VERIFIED PRIOR TO BEGINNING OF ANY WORK ON SITE. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED





POST OFFICE BOX 251 KENWOOD, CALIFORNIA 95452 don@macnairlandscapes.com

DATE: 12/18/21 MLA JOB #: 2019-14 As Shown

SHEET L3 OF 4

OF MACNAIR LANDSCAPE ARCHITECTURE. MACNAIR LANDSCAPE ARCHITECTURE IS NOT RESPONSIBLE FOR THE ACCURACY OF ANY PLANS OR SURVEYS NOT DIRECTLY PREPARED BY THEM. SITE DIMENSIONS, GRADES, WATER PRESSURES AND GENERAL CONDITIONS SHALL BE VERIFIED PRIOR TO BEGINNING OF ANY WORK ON SITE. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED

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HESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY





1) CENTER VALVE BOX OVER VALVE ASSEMBLY. 2) LOCATE VALVE BOXES IN GROUND COVER/SHRUB AREAS WHEN POSSIBLE. 3) SET VALVE BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE.

VALVE BOX LAYOUT

MAMA AND ETMU CALCULATIONS

0.45 = the additional ET adjustment factor for Special Landscape Area (1.0 - 0.55 = 0.45) (Commercial) 0.55 = the additional ET adjustment factor for Special Landscape Area (1.0 - 0.45 = 0.55) (Residential)

0.45

0.55

Adjustment Factor

4,326 sf

Adjustment Factor

6.81 (Effective Rainfall)

Sum of Adjusted Landscape Area = 4,326.15 sf

Sum of Adjusted Landscape Area = 3,239.19 sf

39.23

= 4,326.15 sf

= 0.00 sf

= 105,210 gal/yr

= 39.23 sf

0.00 sf

2,536.87 sf

682.68 sf

19.63 sf

98,469 gal/yr

DM

SLA = Portion of the landscape area identified as Special Landscape Area (square feet)

Net Evapotranspiration Calculation = Annual ETo - Effective Rainfa

Net Evapotranspiration Calculation = Annual ETo - Effective Rainfall

1) Maximum Applied Mater Allowance (MAMA)

0.45 = ET Adjustment Factor (Commercial) 0.55 = ET Adjustment Factor (Residential) LA = Landscaped Area (square feet)

A) Net Evapotranspiration Calculation

27.22"/yr

(Annual Rainfall)

(Landscape Area)

0.00 sf

39.225

A) Net Evapotranspiration Calculation

0.00 sf

8,456 sf

Low Mater Use

Moderate Water Use

19.63 sf

High Mater Use

Square Footage of Landscape on Drip 9,613.67 sf

Total Square Footage of Landscape 9,613.67 sf

**Square Footage of Landscape on Spray** 0.00 sf

Very Low Mater Use

B) Adjusted Landscape Area Calculation

(Special Landscape Are

B) Adjusted Landscape Area Calculation 9,614 sf

Local Reference ETo 46.03

Commercial (C) or Residential (R)

MAWA = (ET0) (0.62) [(0.55 X LA) + (0.45 X SLA)]

ETo = Annual Net Reference Evapotranspiration (Inches)

0.62 = Conversion factor (to gallons per sauare foot)

—Ball √alve Valve Boxes. \_Concrete Curb, Walk Or PLAN VIEW

\_Quick Coupler (where Specified)

7) INSTALL ONE BALL VALVE IN BOX IMMEDIATELY UPSTREAM FROM EACH REMOTE CONTROL VALVE. ELECTRIC CONTROL YALVE WITH SHUT OFF

12" MIN./24"

MAX.

Finish Grade Before

Male Adaptor

\_To Sprinkler - Angle Pipe To \_Specified Depth Mith 45° Ells

—Electric Control Valve

\_\_Pvc Union, Both Sides \_\_Of Rc Valve

1) INSTALL CONTROL VALVES A MINIMUM OF 18" FROM STRUCTURES OR HARDSCAPING.

4) INSTALL VALVE BOX SO THAT TOP OF BOX IS FLUSH WITH ADJACENT HARDSCAPING.

6) INSTALL VALVE BOXES SO THAT TOP OF BOX IS FLUSH WITH ADJACENT HARDSCAPE.

3) PLACE VALVE BOX AT RIGHT ANGLES TO STRUCTURES OR HARDSCAPING.

2) INSTALL VALVES IN PLANT BEDS WHEREVER POSSIBLE.

5) PLACE AGGREGATE PRIOR TO INSTALLATION OF VALVE BOX.

——Pig Tail Expansion Loop (Min. 18")

PVC 5ch 80

"Snap-Tite" Waterproof

POP-UP SPRINKLER DETAIL B INCLUDES 4", 6" AND 12"

1) LOCATE HEAD 6" FROM ALL EDGES IN LAWN AREAS. LOCATE HEAD 12"

2) LOCATE STREAM SPRAY AND BUBBLERS HEADS 6" FROM ALL EDGES.

1/2" In Seed, 1" In Sod &\_ Planting Beds

Cap Side Inlet Do\_ Not Use

FROM ALL EDGES IN SHRUB AREAS.

3) USE TEFLON PASTE ON ALL MALE THREADS.

3/4" Sch 80 PVC Nipple

(Adapt Length To Fit), 1/2"-Sch 80 Okay On 1/2" Inlets

NOTES

——3" – 12" Pop-Up Sprinkler

\_\_\_Level of Mulch

Finish Grade Before

Finish Grade Before

Planting

3/4" Washed Crushed Aggregate Base

\_Planting

Non-Pressure Lateral

asco Pre-Fabricated 3/4"

3-May Swing Joint Assembly

Line & Fitting

QUICK COUPLER DETAIL

—PVC Main Line

—PVC Tee or Ell

12" Sch 80 PVC Nipple

Quick Couple Valve, Install 2" Below Finish Grade in

Lasco Pre-Fabricated 3/4" 3-Way Swing Joint Assembly

10" Dia. Poly Box as Specified

—Sch 80 PVC Riser

–2 Common Bricks

### ---FINISH PLANTING GRADE CLEAN BACKFILL, 90% COMPACTION REQ'D NON-PRESSURE LATERAL LINE, SNAKE PIPE IN TRENCH \_PRESSURE SUPPLY LINE, \_SNAKE PIPE IN TRENCH CONTROL WIRES - BUNDLE AND TAPE AT 10'-0" O.C. AND INSTALL ADJACENT TO & BELOW PRESSURE SUPPLY PROVIDE 2" OF

CLEAN BACKFILL

Square Plastic Valve Box With Bolt Down Cover, And Box Extension If

\_2", Typical All Valve Boxes

3/4" Mashed Crushed

Control & Common Wires

Aggregate |

Req'D. Heat Brand Controller Station

Number On Box Cover.

NOTE: 1) PIGTAIL AND LOOP CONTROL WIRE AT ALL CHANGES IN DIRECTION. 2) PROVIDE 18" EXPANSION LOOP AT ALL 90° ANGLES, AND EVERY 100' OF STRAIGHT CURVE RUN.

\_#1 or #5 Size Containerized Plant Material

5et Rootball Crown 1" above

3" Tall Earth Berm, Do Not

Backfill Mix and Fertilizer. See Specifications.

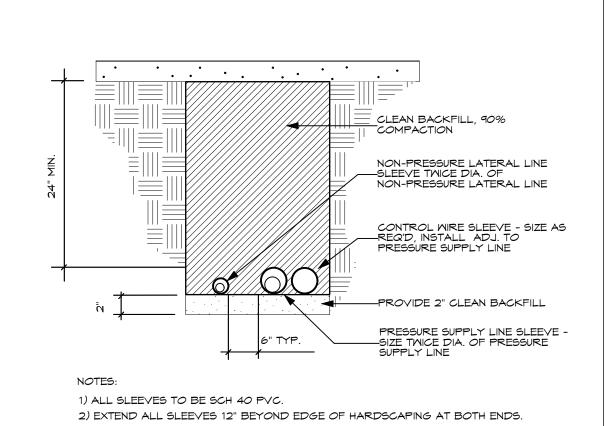
Dig Hole 2 Times the Rootball Diameter and Equal the

PIPE INSTALLATION

IN PLANTED AREA NTS

2 X ROOTBALL

MIDTH



Plastic Valve Box And Locking —Cover W/ G.V. Heat Branded On Cover, Refer To Specifications.

Ball Valve,

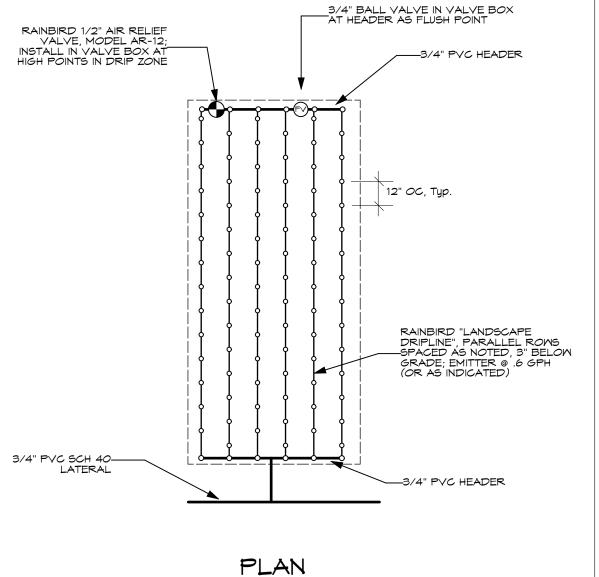
\_PVC Union

3/4" Washed Crushed

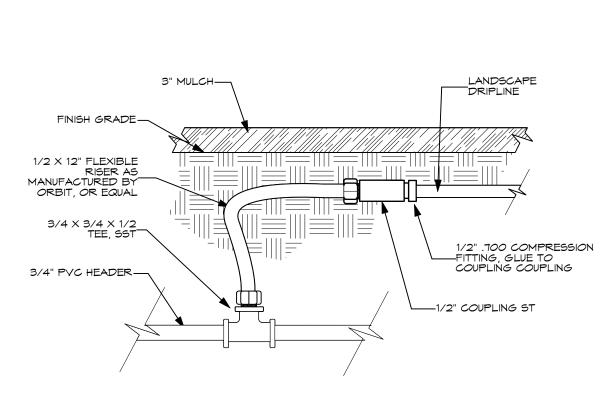
Aggregate Base

See Legend

F PIPE INSTALLATION UNDER PAVING



DRIP CIRCUIT LAYOUT



POLY TO PVC COMPRESSION FITTING DETAIL

DETAIL HYDROZONE TABLE

# 24" ROOT CONTROL BARRIER. INSTALL WHERE TREE IS 7" OR LESS OF ANY HARDSCAPE EDGE. SEE— PLAN FOR ADDITIONAL LOCATIONS OF BARRIERS SET CROWN OF ROOTBALL 1" ABOVE FINISH GRADE EXISTING OR NEW CONCRETE PAVEMENT \_\_\_\_\_ 3/4" to 1-1/2" GRAVEL OR ∏GRUSHED ROCK — BACKFILL MIX AND FERTILIZER.

1) DO NOT PLACE MULCH IN TREE BASIN. 2) PLANTING HOLE TO BE TESTED FOR DRAINAGE PRIOR TO PLANTING. IF HOLES DO NOT DRAIN WITHIN 4 HOURS CONTACT LANDSCAPE ARCHITECT. 3) INSTALL ROOT BARRIER ON ALL FOUR SIDES OF PLANTER.

Name	Method	Mater Use	Mater Use Value	Hydrozone Area in SF	% of Landscape
1E	Eco-Mat	Low	0.3	1,012.12 sf	10.5%
2D	Sub-Surface Dripline	Low	0.3	998.13 sf	10.4%
3B	Root Watering System	Moderate	0.6	282.74 sf	2.9%
4B	Root Watering System	Low	0.3	169.64 sf	1.8%
5D	Sub-Surface Dripline	Low	0.3	477.43 sf	5.0%
6D	Sub-Surface Dripline	Low	0.3	321.92 sf	3.3%
70	Sub-Surface Dripline	Low	0.3	970.22 sf	10.1%
8B	Root Watering System	Low	0.3	113.10 sf	1.2%
9B	Root Watering System	Low	0.3	96.00 sf	1.0%
10E	Eco-Mat	Low	0.3	893.94 sf	9.3%
11B	Root Watering System	Moderate	0.3	254.47 sf	2.6%
12D	Sub-Surface Dripline	Low	0.3	1,095.59 sf	11.4%
13D	Sub-Surface Dripline	Low	0.3	481.13 sf	5.0%
14D	Sub-Surface Dripline	Low	0.3	486.82 sf	5.1%
15D	Sub-Surface Dripline	Low	0.3	280.70 sf	2.9%
16E	Eco-Mat	Low	0.3	301.95 sf	3.1%
17B	Root Watering System	Moderate	0.6	226.19 sf	2.4%
18D	Sub-Surface Dripline	Moderate	0.6	237.01 sf	2.5%
19D	Sub-Surface Dripline	Moderate	0.6	137.40 sf	1.4%
20D	Sub-Surface Dripline	Low	0.3	757.54 sf	7.9%
21	Mater Feature	High	1	19.63 sf	0.2%
I			1	9,614 sf	100%

Ad	justed Irrigation Efficiency Factor	0.81	
	PLANT TYPE	AREA	% OF LANDSCAPE
	Very Low	0.00	0%
	Low	8,456.23	88%
	Moderate	1,137.81	12%
	High	19.63	0%
	Total	9,613.67	100%

PRECIPITATION RATES BY VALVE						
VALVE ID	FLOW IN GPM	PRECIPITATION RATE IN INCHES PER HOUR				
1E	10.3 GPM	0.98				
2D	5.8 GPM	0.56				
3B	5.0 GPM	1.70				
4B	3.0 GPM	1.70				
5D	2.9 GPM	0.58				
6D	1.3 GPM	0.38				
7D	5.7 GPM	0.56				
<i>8</i> B	2.0 GPM	1.70				
9B	3.0 GPM	3.01				
10E	7.6 GPM	0.82				
11B	4.5 GPM	1.70				
12D	6.9 GPM	0.61				
13D	2.1 GPM	0.42				
14D	1.9 GPM	0.37				
15D	1.3 GPM	0.44				
16E	2.6 GPM	0.83				
17B	4.0 GPM	1.70				
18D	2.1 GPM	0.84				
19D	0.6 GPM	0.41				
20D	3.6 GPM	0.46				

REVISIONS

SITE PLAN COORDINATION BASED ON CITY COMMENTS

DRAMN:

### TREE PLANTING DETAIL SHRUB PLANTING DETAIL NTS

PREVAILING WIND

2-8' X 2" DIA. PRESSURE

TREATED LODGEPOLE STAKES;
TOP OF STAKES

3 - 22" CORDED RUBBER TREE TIES. NAIL TO STAKE. STAKE TO —BE 12" INTO UNDISTURBED SOIL AND A MINIMUM OF 3'-0" IN THE

SET CROWN OF ROOTBALL 1" ABOVE FINISH GRADE

-4" TALL EARTH BERM

BACKFILL MIX AND FERTILIZER.

DIG HOLE 2 TIMES THE ROOTBALL DIAMETER AND EQUAL

## 1) DO NOT PLACE MULCH IN TREE BASIN. 2) DETAIL NOT TO SCALE.

SECTION 02750

1. Furnish and install complete irrigation system. 2. Trenching and backfilling

3. Sleeves for irrigation piping and remote control valve wiring under pavements and walls as noted.

B. Related Work in Other Sections: The following items of associated work are included in other sections of these specifications:

1. Landscaping, Section 02800

C. By Others: The following items of work will be performed by others and are not included in the contract.

1. Electrical stub-out for irrigation controller. Water stub-out(s) for irrigation system.

1.02 INSPECTION OF CONDITIONS: Examine related work and surfaces before starting work of this section. Report to the landscape architect, in writing, conditions which will prevent the proper provision of this work. Beginning the work of this section without reporting unsuitable conditions to the landscape architect constitutes acceptance of conditions by the contractor. Any required removal, repair, or replacement of this work caused by unsuitable conditions to be done at no additional cost to the

1.03 CODES, RULES AND SAFETY ORDERS

A. All work and materials to be in full accordance with the latest rules and regulations of safety orders of Division of Industrial Safety: the Uniform Plumbing Code published by the Western Plumbing Officials' Association: and other applicable laws or regulations, including the presiding local plumbing code. Nothing in these drawings or specifications is to be construed to permit work not conforming to these codes. Should the construction documents, or instructions, be at variance with the aforementioned rules and regulations, notify the landscape architect and get instructions before proceeding with the work affected.

B. Furnish and maintain all warning signs, shoring, barricades, red lanterns etc., as required by the Safety Orders of the Division of Industrial Safety and local ordinances.

C. Contact U.S.A. for location of underground utilities.

1.04 STANDARDS: American Society of Testing and Materials (ASTM).

1.05 PERMITS AND FEES: Obtain all permits and pay required fees to any governmental agency having jurisdiction over the work. Arrange inspections required by local agencies and ordinances during the course of

1.06 APPROVAL: Wherever the terms "approve", "approval", or "approved" are used in the specifications, they mean approval of landscape

1.07 WORK SCHEDULE: Submit a proposed work schedule to landscape architect at least 5 days prior to start of work under this Section. After approval, no modification shall be made to this schedule with out written authorization by the landscape architect.

1.08 OBSERVATION SCHEDULE Schedule a job start meeting with the landscape architect at least 5 days before beginning work under this Section. All requests for observation must be made 72 hours in advance.

C. Pre-maintenance

The purpose of this conference is to review questions the contractor may have regarding the work, administrative procedures during construction and project work schedule.

B. Irrigation installation and hydrostatic tests

Observation of installation and hydrostatic test results to be made by the landscape architect prior to backfilling of trenches.

When all work has been completed a pre-maintenance walk-through will be conducted. If approved, the 90 calendar day maintenance period will begin. D. Final Observation

Final Observation will be after the 90 calendar day maintenance period and all required work is completed. Please give 1 week notice for this

1.09 SUBSTITUTIONS

A. Specific reference to manufacturer's names and products specified in this Section are used as standards, but this implies no right to substitute other material or methods without written approval of the landscape architect.

B. Installation of any approved substitution is contractor's responsibility. Any changes required for installation of any approved substitution must be made to the satisfaction of the landscape architect and without additional cost to

1.10 PROTECTION OF EXISTING CONDITIONS

A. Contractor shall acquaint themself with all site conditions. Should utilities or other work not shown on the plans be found during excavations. contractor shall promptly notify landscape architect for instructions as to further action. Failure to do so will make contractor liable for any and all damage thereto arising from their operations subsequent to discovery of such utilities not shown on plans.

1.11 COORDINATION: Coordinate and cooperate with other contractors to enable the work to proceed as rapidly and efficiently as

1.12 PRODUCT HANDLING: Protect work and materials under this Section from damage during construction and storage. Protect polyviny chloride (PVC) pipe and fittings from direct sunlight. Beds on which PVC is stored must be full length of pipe. Do not use any pipe or fitting that has been damaged or dented.

1.13 SAMPLES: Landscape architect reserves the right to take and analyze samples of materials for conformity to specifications at any time. Contractor shall furnish samples upon request by the landscape architect. Rejected material shall be removed from the site immediately and replaced at the contractors expense. Cost of testing materials not meeting specifications shall be paid by contractor.

1.14 HYDROSTATIC TESTS A. Make hydrostatic tests when welded PVC joints have cured at least 24 hours. Apply continuous static water pressure of 100 psi as follows:

1. All piping on the pressure side of control valves shall be tested for two 2. At completion of hydrostatic test, mainline shall be opened at farthest

most point from the location of the pump to verify continuity of the mainline B. Leaks resulting from tests shall be repaired and tests repeated until system passes tests.

1.15 "AS-BUILT" IRRIGATION DRAWINGS: Contractor shall furnish Record Drawings of the complete irrigation system. Procure from the landscape architect full sized sepias of Contract Drawings. Construction drawings shall be on the construction site at all times while the irrigation system is being installed. Actual location of valves and all irrigation and drainage piping shall be shown on the prints by dimensions from easily identified permanent features, such as buildings, curbs, fences, walks or property lines. Drawings shall show approved substitutions, if any, of material including manufacturer's name and catalog number. The drawings shall be at scale and all indications shall be neat. All information noted or the print shall be transferred to the prints by contractor and all indications shall be recorded in a neat, orderly way. The record drawings shall be turned over to the landscape architect at or before the Final Acceptance of

the project. 1.16 CONTROLLER CHARTS

1. As-built drawings shall be approved by the landscape architect before charts are prepared. 2. Provide one controller chart for each controller supplied.

3. The chart shall show the area controlled by automatic controller and shall be the maximum size controller door will allow. 4. The chart is to be reduced drawing of the actual as-built system. However, in the event the controller sequence is not legible when the drawing is reduced, it shall be enlarged to a size that will be readable when 5. Chart shall be black line print and a different color shall be used to show area of coverage for each station 6. The chart shall be mounted using Velcro, or an approved equal. 7. When completed and approved, the chart shall be hermetically sealed between two pieces of plastic, each piece being a minimum 20 mils. thick 8. These charts shall be completed and approved prior to final inspection of the irrigation system.

1.17 MATERIALS TO BE FURNISHED A. Prior to final inspection the contractor shall furnish the following materials

Two wrenches for disassembling and adjusting each type of sprinkler head supplied. Two kevs for each automatic controller Four keys for loose key hose bibs and/or hose bibs.

4. Twelve 12 inch pop-up sprinkler bodies.

1.18 CLEAN-UP: Keep all areas of work clean, neat and orderly at all times. Keep paved areas clean during installation. Clean up and remove all debris from the entire work area prior to Final Acceptance to satisfaction of landscape architect.

1.19 FINAL ACCEPTANCE: Work under this Section will be accepted by landscape architect upon satisfactory completion of all work. Upon Final Acceptance, owner will assume responsibility for maintenance of the work. Said assumption does not relieve contractor of obligations under Warranty.

1.20 WARRANTY: In addition to manufacturer's guarantees or warranties, all work shall be warranted for one year from the date of Final Acceptance against defects in material, equipment and workmanship by contractor. Warranty shall also cover repair of damage to any part of the premises resulting from leaks or other defects in materials, equipment and workmanship to the satisfaction of the owner.

PART 2 MATERIALS

to the owner:

GENERAL: Materials throughout the system shall be new and in perfect condition. At least 14 days prior to beginning work, submit for approval 2 copies of manufacturer's catalog cuts, specifications, and operating instructions of the complete list of materials and assemblies to be installed. Quantities of materials and equipment need not be included. No deviations from the specifications shall be allowed. The decision of the landscape architect shall be final in the determination of the quality of materials and equipment.

2.02 WATER METERS: Shall be provided by others.

2.03 PIPE Mainline piping on pressure side of irrigation control valves:

1. 2" size and greater to be Polyvinyl Chloride (P.V.C.) 1120-1220. Class 315 and shall conform to ASTM D 2241-73 and D 2672-73. 2. Up to and including 1-1/2" size to be Polyvinyl Chloride (P.V.C.) 1120-1220, Schedule 40 and shall conform to ASTM D 1785-73. 3. Galvanized Steel: Standard wall, Schedule 40, capable of

working pressure up to 600 psi shall run from the point of connection to back flow prevention device. 4. Piping from the point of connection to the back flow prevention device shall be as approved by local code.

Lateral line piping on non-pressure side of irrigation control

1. 2" size and greater to be Polyvinyl Chloride (P.V.C.) 1120-1220. Class 315 and shall conform to ASTM D 2241-73 and D 2672-73. 2. Up to and including 1-1/2" size to be Polyvinyl Chloride (P.V.C.) 1120-1220, Schedule 40 and shall conform to ASTM D 1785-73.

A. PVC Fittings: Schedule 40, Polyvinyl Chloride, high impact weight, as manufactured by Sloane, Lasco, medium or approved equal.

B. Fittings for Galvanized Steel Pipe: Schedule 40, standard weight as manufactured by Grinnell, or approved equal.

C. Connections between main and valves shall be PVC Schedule 80 nipples

2 05 SLEEVE MATERIALS

A. For Control Wires: PVC 1120-1220, Class 200 pipe or heavy wall galvanized steel conduit.

B. For Water Lines: PVC 1120-1220, Class 200 pipe or heavy wall galvanized steel conduit.

2.06 IRRIGATION CONTROLLERS

A. Controller to be as shown on plans and is to be installed as per detail and manufacturer's specifications.

2.07 IRRIGATION CONTROL VALVES

A. Remote Control Valves: Valves to be as shown on plans and installed per details and manufacturer's specifications

2.08 CONTROL WIRE

A. Wire: Solid copper wire, U.L. approved for direct burial in ground. A. Install control wires with sprinkler mains and laterals in common Minimum gauge: #14. Common ground wire shall be white. trenches wherever possible. Lay to the side of pipe line. Provide looped slack at valves of 18" and snake wires in trench to allow for B. Splicing Materials: Wire connectors shall be Pentite or snap connectors. contraction of wires. Tie wires in bundles at 10 ft. intervals. Provide expansion loop at all 90 degree angles, and every 100' of straight wire C. All wires shall be labeled with the valve number at the controller and

B. Control wire splices at remote control valves to be crimped and D. 120 wiring shall be as required by local code and installed by an sealed with specified splicing materials. Line splices will be allowed only on runs of more than 500 ft. All line splices to be in separate electrician. It shall not be on a switched circuit.

E. Common wire shall be white. Control wires shall be other than white. Use a different color control wire for each controller.

3.11 CLOSING OF PIPE AND FLUSHING OF LINES 2.09 VALVE BOXES A. Remote Control Valves: To be Brooks, Green or approved equal, one per A. Thoroughly flush out all water lines before installing heads, valves and other hydrants.

B. Gate Valves and Control Wire Stub-out Locations: To be Brooks, Green or approved equal, one per valve or stub-out location.

2.10 QUICK-COUPLING VALVES

A. Quick coupling valves to be as per plans and details.

B. Furnish 2 valve keys fitted with hose valve assembly. C. All valve boxes shall be purple in color or clearly labeled by the manufacturer to designate reclaimed water.

2.11 LANDSCAPE DRIP-LINE: Tubing as shown in legend and

Install in parallel and consistent rows at spacing indicated in all specified areas. Install 3" below grade.

2.12 SPRINKLER HEADS Heads as shown in legend and drawings.

2.13 BACK-FLOW PREVENTION ASSEMBLIES A. Back-flow prevention device as shown in legend and drawings.

PART 3 EXECUTION

A. Layout work as accurately as possible to drawings. Drawings are diagrammatic to the extent that swing joints, offsets and all fittings are not

B. Full and complete coverage is required. Contractor shall make any necessary minor adjustments to layout required to achieve full coverage of irrigated areas at no additional cost to owner.

C. Dig trenches wide enough to allow a minimum of 6 in. between parallel pipe lines. Trenches shall be of sufficient depth to provide minimum cover from finish grade as follows:

1. Over PVC pipe on pressure side of irrigation control valve, control wires and guick coupling valves: 18 inches. 2. Over pipe on non-pressure side of irrigation control valve:

3.03 BACK FLOW PREVENTION DEVICE INSTALLATION A. Install according to local code and manufacturer's instructions.

B. Install with union on discharge side for servicing, or with flanges, as required.

3.04 SLEEVING A. Where pipes or wires must be installed under paving place them in sleeves with a 24" minimum depth and sufficient size to accommodate irrigation lines and/or wires

B. Lack of pipe chase coordination does not relieve the contractor from installing the pipes and control wire shown on the drawing. In the event pipe chases were not installed prior to paving the contractor shall bore under the paving to accommodate pipes and wires.

C. All control wire shall be in Schedule 40 conduit from trench to controller. When valves are grouped together allow 12" between valve boxes, each valve in a separate box, (not to be placed in drainage swales, but kept in ground cover areas.)

3.05 PIPE LINE ASSEMBLY

B. Solvent weld all PVC pipe and fittings using solvents (including primer) and methods as recommended by the manufacturer, except where screw connections are required. Clean pipe and fittings of dirt and moisture before assembly. PVC pipe may be assembled on ground surface beside trench. Snake pipe from side to side of trench bottom to allow for expansion and contraction. Make all connections between PVC pipe and metal valves or pipe with threaded fittings using PVC male adapters.

A. Install pipe in accordance with manufacturer's instructions.

C. Use Teflon tape on all threaded fittings.

water pressure.

convenient access.)

a minimum of 3".

A. Install heads as per details.

3.09 AUTOMATIC CONTROLLER

recommendations and as per local code.

3.10 CONTROL WIRING

A. Install per local code and manufacturer's instructions.

B. Grounding of Irrigation controller shall be as per manufacturer's

C. Install one continuous ground wire and one extra wire to all valves.

A. The contractor shall partially backfill, leaving all fittings exposed

B. Cap all valve openings and test the mainline pipe at full line working

A. After system is operating and required tests and inspections have

been made, backfill excavations and trenches with clean soil, free of

rubbish. All pipe shall have a bedding of 2" under and 4" over of select,

B. Backfill for all trenches, regardless of the type of pipe covered, shall

be compacted to minimum 95% density under pavements, 85% under

C. Compact trenches in areas to be planted by thoroughly flooding the

E. Any settling more than 1" which may occur during the guarantee

A. Work Included: Perform all work necessary and required for the

1. Site preparation including weed and rubble removal.

construction of the project as indicated. Such work includes but is not

B. Related Work: The following items of associated work are included

period shall be brought to finish grade by the contractor at his expense.

backfill. Jetting process may be used in those areas.

END OF SECTION 02750

D. Dress off all areas to finish grades.

installed as per detail.

B. Test as specified

before testing.

**SECTION 02800** 

LANDSCAPING

1.01 SCOPE

PART 1 GENERAL

limited to the following:

5. Soil amendment

2. Laboratory soil analysis.

3. Furnishing and spreading topsoil.

4. Finish grading of planted areas.

in other sections of these specifications

1. Section 02750: Underground Irrigation System.

3.12 PRESSURE TESTS

pressure and visually check all fittings.

3.13 BACKFILL AND COMPACTING

D. Thrust blocks shall be installed where the irrigation main changes direction as at ells and tees and where the irrigation main terminates Pressure tests shall not be made for a period of 36-48 hours following the completion of pouring of the thrust blocks. Concrete thrust blocks for supply mains shall be sized and placed in strict accordance with the pipe manufacturer's specifications and shall be of an adequate size and so placed as to take all thrust created by the maximum internal

3.06 IRRIGATION CONTROL VALVES:

A. Install control valves in valve boxes where shown and group together where practical. Place no closer than 18 in. to walk edges, buildings and walls and other valves. Valve boxes shall be placed in relation to finish grade as follows:

1. 1" above grade when no mulch is used 2. 1/2" with seeded lawn 1 1/2" with sod lawr 4. 2" with plant beds

stenciled letters with the value number as designated on the plan. C. Clearance between the highest part of the valve and the bottom of the valve box lid shall be 2" minimum and 4" maximum. (Lid must not rest on any part of valve and valves must not be buried too deep for

B. The contractor shall paint on the cover of each valve box in 2" white

D. Clearance between the top of the piping and the bottom of the valve box and/or the valve box knock outs, shall be a minimum of 2". (The box must not rest on the piping.)

E. Clearance between the valve and the sides of the valve box shall be A. Do not store materials or equipment, permit burning, or operate or park

equipment within designated plant protection zones as specified on the 3.07 SPRINKLER HEADS B. Notify landscape architect in any case where contractor feels grading or

C. Use Teflon tape on all threaded fittings.

1. Section 02750: Underground Irrigation System.

preclude rejection of plants at project site.

1.02 REQUIREMENTS OF REGULATORY AGENCIES

authorities in furnishing, transporting and installing materials

A. Perform work in accordance with all applicable laws, codes, and

B. Certificates of inspection required by law for transportation shall

certificates with landscape architect after acceptance of material.

accompany the invoice for each shipment of plants. File copies of

regulations required by authorities having jurisdiction over such work and

provide for all inspections and permits required by federal, state, and local

nspections of federal and state governments at place of growth does not

1.03 SELECTION, TAGGING AND ORDERING OF PLANT MATERIAL

A. Submit documentation to landscape architect at least 7 days prior to start

of work under this section that all plant material has been ordered. Arrange

architect at place of growth or upon delivery for conformity to specifications.

Such approval shall not impair the right of observation and rejection during

material at place of growth to landscape architect. Written request shall

observed. Landscape architect reserves the right to refuse observation at

this time if in his judgment a sufficient number of plants are not available

C. Substitution of plant material will not be permitted unless authorized in

writing by landscape architect. If proof is submitted that any plant specified

equivalent size or variety with corresponding adjustment of contract price.

1.04 COORDINATION: Contractor shall coordinate and cooperate with

other contractors to enable the work to proceed as rapidly and efficiently as

1.05 INSPECTION OF SITE: Contractor shall visit site and inspect

conditions as they exist prior to submitting bid. Site dimensions, water

pressure and general conditions shall be verified prior to beginning of any

1.06 INTENT OF DRAWINGS AND SPECIFICATIONS: It is the intent

of the drawings and specifications to provide planting with plants in vigorous

frawings or called for in the specifications, but normally required to conform

APPROVAL: Wherever the terms "approve", "approval" or

"approved" are used herein, they mean approval of landscape architect in

A. Furnish standard products in manufacturer's standard containers bearing

original labels showing quantity, analysis and name of manufacturer.

would damage or impair the effectiveness of the product.

B. Store products with protection from weather or other conditions which

PROTECTION OF EXISTING PLANTS TO REMAIN

growth, ready for owner's use. Any items not specifically shown in the

with such intent, are to be considered as part of the work. Written

dimensions take precedence over scale dimensions.

PRODUCT HANDLING

is not obtainable, a proposal will be considered for use of the nearest

procedure for observation with landscape architect at time of submission.

B. Plants shall be subject to observation and approval by landscape

progress of the work. Submit written request for observation of plant

state the place of growth and the quantity and variety of plants to be

for observation or not in the landscape architect's contract.

of these specifications.

are not included in the contract.

D. Thrust blocks shall be installed where the irrigation main changes

mains shall be sized and placed in strict accordance with the pipe

direction as at ells and tees and where the irrigation main terminates.

manufacturer's specifications and shall be of an adequate size and so

placed as to take all thrust created by the maximum internal B. Related

Work: The following items of associated work are included in other sections.

C. By Others: The following items of work will be performed by others and

Pressure tests shall not be made for a period of 36-48 hours following the

completion of pouring of the thrust blocks. Concrete thrust blocks for supply

other construction called for by Contract Documents may damage existing B. Nozzles may be changed to control precipitation rate and G.P.M. plants to remain. Do not proceed with such work until directed by landscape with approval from the landscape architect. 3.08 QUICK COUPLING VALVES: Quick coupling valves to be

C. If existing plants are damaged during construction, contractor shall replace such plants of the same species and size as those damaged at no plant shall rest solely with landscape architect.

1.10 GRADING A. Prior to planting grading will be brought to within .10 + foot of finish grade with soil suitable for planting by the landscape contractor. It is the responsibility of the landscape contractor to verify that no conflict exists with the grading plan. Fine finish grading will be done by the landscape

B. Finish grade in ground cover areas shall be 2 inches below surrounding concrete or asphalt. In lawn areas, sodded areas shall be 2 inches and seeded areas shall be 1 inch below sidewalks, header boards, or mow strips and examined by the landscape architect, owner, or his representative. CLEAN-UP: Keep all areas of work clean, neat and orderly at all times. Keep all paved areas clean during planting and maintenance

operations. Clean up and remove all deleterious materials and debris from the entire work area prior to Final Acceptance to the satisfaction of landscape architect. The landscape contractor shall bear final responsibility for proper surface drainage of planted areas. Any prior work done by another party or obstructions on the site which the contractor feels precludes establishing proper drainage shall be brought to the attention of the landscape architect, owner or his representative for correction or the relief of responsibility.

1.12 SAMPLES, TESTS AND SUBMITTALS: Landscape architect reserves the right to take and analyze samples of materials for conformity to specifications at any time. Contractor shall furnish samples and/or manufacturer's specification sheets for any construction material or item upon request by the landscape architect. Rejected materials shall be immediately removed from the site at contractor's expense. The cost of testing materials not meeting specifications shall be paid by the contractor.

1.13 PROJECT SCHEDULE: Contractor shall submit for approval a complete work schedule indicating tentative dates for inspections. This schedule is to be submitted prior to the job start meeting. 1.14 OBSERVATION SCHEDULE: Schedule a job start meeting with

the landscape architect at least 5 days before beginning work under this Section. All requests for observation must be made 72 hours in advance. A. Job Start Meeting The purpose of this conference is to review questions the contractor may have regarding the work, administrative procedures during construction and

3. Planting - Fine Grading and Soil Preparation The fine grading and soil preparation of all planting areas must be observed prior to installation of plant material. C. Plant Material Landscape architect shall observe plant material for quality prior to planting. Plants shall be subject to observation and approval at place of growth or

upon delivery for quality, size and variety; such approval shall not impair the

right of inspection and condition of ball and roots, latent defects or injuries. Rejected plants shall be removed immediately from site. D. Plant Layout Layout plants (in containers) in locations shown on drawings. Landscape architect will check location of plants in the field and adjust to exact position before planting begins. Landscape architect reserves the right to refuse inspection if, in his opinion, an insufficient quantity of plants is available for

lavout check. E. Pre-maintenance When all work has been completed a pre-maintenance walk-through will be conducted. If approved, the 90 calendar day maintenance period will begin. F. Final Observation Final Observation will be after the 90 calendar day maintenance period and all required work is completed. Please give 1 week notice for this

1.15 MAINTENANCE

observation meeting.

A. All landscape areas shall be substantially weed free at beginning of maintenance period and at final acceptance. B. Begin maintenance after each plant and each portion of lawn or ground

cover is installed and continue until Final Acceptance C. Maintenance Period shall begin upon inspection and approval by landscape architect and shall be for 90 calendar days.

D. Maintenance of new planting shall consist of watering, cultivating, weeding, fertilizing, mulching, re-staking, tightening and repairing of guys, resetting plants to proper grades or upright position, restoration of the plant saucer, and furnishing and applying such sprays and fertilizers as are necessary to keep the plants free of insects and disease and in thriving

F Protect planting areas and plants at all times against damage of all kinds for duration of maintenance period. Maintenance includes temporary protection fences barriers and signs as required for protection. If any plants become damaged or injured, treat or replace as directed by landscape architect at no additional cost to owner.

1.16 FINAL ACCEPTANCE: Work under this Section will be accepted by landscape architect upon satisfactory completion of all work, including maintenance, but exclusive of replacement of plant materials under the Warranty Period. Upon Final Acceptance, the owner will assume responsibility for maintenance of the work.

1.17 WARRANTY PERIOD AND REPLACEMENTS

A. Contractor shall warrant that all plant material except annual color planted under this contract will be healthy and in flourishing condition of active growth one year from date of Final Acceptance.

B. Any delay in completion of planting operations which extends the planting

period shall extend the Maintenance and Warranty Periods correspondingly. C. Replace, without cost to owner, and as soon as weather conditions permit, all dead plants and all plants not in vigorous, thriving condition, as determined by landscape architect during and at the end of Warranty Period. Plants shall be free of dead or dying branches and branch tips, and

shall bear foliage of a normal density, size and color. Replacements shall

closely match adjacent specimens of the same species and shall be subject

D. Contractor shall not be held responsible for failures due to neglect by owner, vandalism, or acts of god, etc., during Warranty Period. Report such conditions to landscape architect in writing.

PART 2 MATERIALS

are not met.

landscape architect.

to all requirements of this specification.

A Plant Quality: Plants shall be fresh, well established, vigorous, of normal habit of growth free of disease insects insect eggs and larvae. Roots shall be healthy and extend to the bottom and sides of the container, and rooting shall be extensive enough to hold the rood ball together during planting, but not so dense as to discourage root establishment into surrounding soils. Roots shall not show any signs of restriction due to kinked, circular, or distorted growth. No trees will be accepted that will not stand on their own trunks after the nursery stakes have been removed. All plants will be inspected prior to planting and may be rejected if noted quality standards

B. Plant Quantity: Plant materials shall be furnished in size, quantities, species and at the spacing indicated or as noted on the plans. Ground cover material shall be provided in quantity adequate to fill the entire ground cover areas at the spacing shown.

C. Plant Spacing: No planting, except for ground covers, espaliers and vines shall be placed closer than two feet to pavement, structures or other landscape edges. Ground covers adjacent to pavement, structures or landscape edges shall be no closer to these than 75% of their spacing. No plants that would obstruct the sprinkler coverage shall be placed closer than 30% of the radius of the sprinkler throw as specified by the sprinkler manufacturer at the optimum operating pressure unless approved by the

2.02 LANDSCAPE AREA PLANTING SOILS

A. Soil to be tested by testing agency as per specifications. B. All landscape area planting soils shall be equal or coarser in texture to the original on-site topsoil. All landscape area soils shall be free from stones larger than 1 in. in size, sub-soil, refuse, plants or roots, clods, weeds, sticks, or other extraneous material. All landscape area soils shall be tested by an approved soils laboratory for horticultural suitability and verified to be capable of sustaining healthy plant life. Landscape area planting soils may

be obtained through stockpiling of existing topsoil or imported soil of equa texture and quality as determined by approved soil laboratory analysis. C. Soil Chemistry: All planting soils shall meet the following soil chemistry parameters

> Reaction - pH of saturated paste = 5.5 to 7.5 Salinity (Electrical conductivity in mmho/cm) = <4.0 Sodium Adsorption Ratio (SAR) = <6.0 Sodium = <5.0 milliequivalents per liter Chloride = <5.0 milliequivalents per liter Boron (Parts Per Million in extract) = <1.0

calcium, and magnesium shall be available to support healthy plant growth. Soil shall be analyzed for fertility and any deficiencies shall be treated with inorganic fertilizer amendments prior to planting.

E. Lime Treated Soil: If lime is used for soil compaction in landscape areas, all lime treated soil shall be removed to a depth equal or more to the depth of the treated soil. Soil shall be replaced with import soil as described in the landscape specifications

2.03 PREPARATION OF LANDSCAPE AREA PLANTING SOILS A. Prior to any work in planting areas all construction debris shall be

B. Structural fill and/or compacted engineered fill and/or any other soil deemed unsuitable for horticultural use as defined by Sections 2.2-A, 2.2-B and 2.2-C, shall be excavated and removed to a depth of 12 inches in landscape planting areas by the landscape contractor. Replacement planting soil shall be equal or coarser to the on-site soil in texture. This may be obtained through stockpiling of existing topsoil or imported soil of equal quality as determined by approved soil laboratory analysis. It shall be free from stones larger than 1 in. in size, sub-soil, refuse, plants or roots, clods. weeds, sticks, or other extraneous material. It shall be capable of sustaining healthy plant life.

C. All landscape area soils shall be ripped in two directions to a depth of 12 inches. In areas not accessible by large equipment, ripping shall be accomplished by small backhoe or manually to thoroughly cultivate the soil to a depth of 12 inches.

D. Landscape area planting soil, imported or otherwise, shall be spread evenly over the site. Minimum depth of friable soil shall be 12 inches deep in all landscape planting areas and finish surface shall be within one inch of finish grade. Import topsoil shall be supplied by the landscape contractor to meet this requirement and shall meet all specifications as defined Sections 2.2-A, 2.2-B and 2.2-C. Imported landscape area planting soils shall be compacted to 85%± relative compaction. Never apply the topsoil when the site or the topsoil is wet.

2.04 COMMERCIAL FERTILIZER A. Pre-plant fertilizer for soil incorporation shall consist of the following percent by weight

> 6% Nitrogen 20% Phosphoric Acid 20% Potash

8% Phosphoric Acid

B. Post Planting/Surface Application Fertilizer: 16% Nitrogen

C. Fertilizer requirement is subject to change based on soil testing for horticultural suitability.

2.05 SOIL AMENDMENTS

Organic Amendment: Shall be nitrolized and derived from fir wood

Physical Properties: 1/2" minus fir bark, nitrolized fortified or Chemical Amendments: As required by soil analysis with approval of landscape architect.

2.06 STAKING MATERIALS A. Contractor shall use staking materials necessary to meet requirements of specifications, subject to approval of landscape architect.

stakes through the rootball). Use 2 stakes per tree.

C. Tree Ties: Corded rubber tree ties, 18" without wire. 2.07 ROOT BARRIERS

B. Tree Stakes: 2" x 2" X 8' lodgepole pine pressure treated stakes

A. "Root Solutions" control planter, or equal. Install according to local code and manufacturer's instructions. Use in all areas where tree is

Construction heart grade. (Do not drive

within 7 feet of any walkway, wall, building or other structural edge. Linear type barrier shall be used in all cases. Linear barriers shall be installed a minimum of 7 feet to either side of tree's relative position to sidewalk or

B. All root barriers to be 24" deep, interlocking linear panels.

C. All root barriers shall be installed 4" from the back of curb or other hardscape edge with 4" of 3/4" gravel drain rock 24" deep on the root barrier side away from the tree.

2.08 WATER: Furnished by owner. Transport as required.

2.09 MULCH: Fir bark 1" to 2", free of sticks, dirt, dust and other debris, as approved, to a depth of 3" to be placed in all landscaped areas except where flats have been planted or annual beds and drainage swales Fir bark, 1/2" minus, free of sticks, dirt, dust and other debris, as approved. to a depth of 1" to be placed in all landscaped areas where flats have been planted or in annual beds. Shredded bark mulch shall be used in conjunction with jute netting on all slopes greater than 6:1.

2.10 PRE-EMERGENT WEED CONTROL: All herbicides used to control weeds shall comply with all governmental regulations and shall be appropriate to weed species. Contact the local county agricultural agent or pest control advisor for proper herbicide recommendations. Follow manufacturers instructions carefully

PART 3 EXECUTION

structural edge.

3.01 HANDLING OF PLANT MATERIAL

A. Canned stock shall be removed carefully after cans have been cut on two sides. Do not use spade to cut cans. Do not lift or handle container plants by tops, stems, or trunks at any time.

3.02 PREPARATION OF SUB-GRADE AND/OR EXISTING SOILS A. Prior to any work in planting areas by landscape contractor, the general

accessible by large equipment, ripping shall be accomplished by small backhoe or manually. 3.03 SPREADING OF TOPSOIL

contractor shall clear all construction debris from planting areas.

B. Soil shall be ripped in two directions to a depth of 12". In areas not

B. Topsoil should be spread evenly over the site. Minimum depth of friable to be 12 inches within five feet of all structures and 24 inches deep in all other areas. If this condition does not exist on the site, the balance of topsoi shall be imported by the landscape contractor to meet this requirement. Import soil shall be compacted to 85% relative compaction. Never apply the

A After sub-grade has been prepared, the landscape contractor shall be

responsible for furnishing and installing topsoil to within (1) inches of finish

3.04 AMENDMENT OF SOIL

topsoil when the site or the topsoil is wet.

A. Apply amendments to all planting and lawn areas at the following rates per 1,000 sq.ft. at zero to eight inches depth:

8 cubic yards organic amendment as specified. 20 pounds pre-plant fertilizer Additional amendments as determined from soil test B. Incorporate thoroughly with top 8 in. soil layer and remove stones over 1

in. in diameter, roots, clods, weeds, and other extraneous material. Bring

Documents. Do not work soils under frozen or muddy conditions. 3.05 SURFACE DRAINAGE OF PLANTED AREAS: Landscape Contractor shall bear final responsibility for proper surface drainage of planted areas. Any discrepancy in the drawings or specifications, obstructions on the site, or prior work done by another party, which contractor feels precludes establishing proper drainage shall be bought to

the attention of landscape architect in writing for correction or relief of said

amended soil to finish grades and elevations shown on Contract

3.06 EXCAVATION OF PLANTING AREAS

2. The depth should be equal to the root ball height.

dimensions: 1. Two times as large in diameter as the original growing container (Rhododendron and azaleas 3 times the diameter)

A. Excavate container grown tree, shrub, and vine pits to the following

Scarify all sides of planting hole. Auger through structural fill, compacted soil or hardpan if encountered or as directed by landscape 3.07 DRAINAGE, DETRIMENTAL SOIL AND OBSTRUCTIONS

A. Notify landscape architect in writing of all soil or drainage conditions

contractor considers detrimental to growth of plant material. State condition and submit proposal and cost estimate for correcting condition.

3.08 PLANTING OPERATIONS A. Protect plants at all times from sun or drying winds. Plants that cannot be planted immediately on delivery shall be kept in the shade, well protected, and shall be kept well watered

B. Planting Soil (excluding trees):

eliminating all air pockets.

2/3 Existing Soil 1/3 Organic Amendments

C. Prior to planting test hole for drainage by filling with water, if hole does not drain within four hours, do not plant. Contact landscape architect. D. Use planting soil to backfill plant pits. Crown of root ball shall be 1" above finished grade. Set plant plumb and brace rigidly in position until planting soil has been tamped solidly around the ball and roots. When plant pits have been backfilled approximately 2/3 full, water thoroughly, saturating rootball, before installing remainder of the planting soil to top of pit,

E. Smooth planting areas to conform to specified grades after full settlement F. Form saucer with 4 in. high berm around tree and shrub pits 12 inches

G. Water all plants immediately after planting. 3.09 STAKING A. Staking shall be completed immediately after planting. Plants shall stand

B. Locate stakes in position relative to the prevailing wind as shown on

plumb after staking.

wider that the root ball diameter.

C. Attach tree straps as per details. D. Need for auxiliary stake shall be determined in the field by the landscape architect and shall only be used when trees are exceptionally spindly. If necessary, place auxiliary stake adjacent to tree leader and tie with polyethylene nursery tape at 10 inch intervals. Auxiliary stake to be bamboo

3.10 PRUNING: Prune plants only at the time of planting and according to standard horticultural practices to preserve the natural character of the plant. Trees shall be pruned at the direction of the landscape architect in accordance with current I.S.A. Standards. Remove all dead wood, suckers and broken or badly bruised branches. Use only clean sharp tools. Do not prune to compensate for root loss. Landscape contractor is responsible for replacement of all improperly pruned plant

3.11 GROUND COVER PLANTING

from leaves of plant materials.

3.12 SOD BED PREPARATION

A. Plant ground cover plant at optimum depth for proper growth. Do not bury deeper than the original soil level which was established in the nursery can Avoid air pockets.

B. Apply post plant or surface application fertilizer at the rate of 5 lbs. per

1000 sq.ft. Water bed thoroughly after fertilizer application. Wash all fertilizer

3.11 BIOSWALE SOD A. To be "Biofiltration Sod" as produced by Delta Bluegrass Company, or

A. Roll amended soil with 200 lb. water ballast roller. B. Sod immediately thereafter, provided the sod bed has remained in a 3.13 SODDING OPERATIONS

A. Sod must be delivered to site within 24 hours of cutting. Lay sod so that adjacent strips butt tightly with no spaces between strips. Lay sod on slopes and mounds with strips parallel to contours. Stagger joints and do not overlap seams. Sodded areas shall be flush with adjoining seeded areas.

B. Tamp and roll sod thoroughly to make contact with sod bed.

C. Apply post planting fertilizer at a rate of 5 lbs. per 1000 s.f. D. Water sod thoroughly.

E. No portion of the sod lawn will be allowed to dry out until the sod is well

F. Supplemental Temporary Irrigation: Contractor shall be responsible for temporary supplemental irrigation of all bio-retention areas through the sod establishment period. Method of irrigation application is discretionary and may include hand watering or installation of a temporary, above grade overhead spray circuit. Any replacement of sod necessary for loss or damage to sod due to lack of water shall be the responsibility of the contractor at contractor's expense.

PART 4 TREE PRESERVATION

minimize impact on the area.

to minimize damage to the existing trees.

4.01 CONSTRUCTION IMPACT: The impact of construction within the project area will be minimal when appropriate protection measures are implemented. The following specifications have been developed to

A. The landscape architect shall be called to inspect and verify staked location of trenches within the project zone. No trenching, pruning or tree removal shall take place without the approval of the landscape architect. B. The smallest possible equipment shall be used for all construction work

C. If the installation of storm drains or irrigation lines is to occur within the drip line of any major tree, a professional arborist shall be called upon to inspect the tree and determine whether head pruning will be necessary to balance the projected loss of roots.

D. Following completion of grading, all soil shall be brought back to original grade. No additional soil shall be allowed to remain at the base of any shrub or tree, and grade shall not be changed to allow collection of surface drainage at the base of any shrub or tree

installation of pipe lines. The mainlines are to be set 18" below grade. F. Trenches shall be the minimum width possible to accommodate the specified diameter of pipe.

necessary to remove any limbs from remaining trees the following

E. Minimal disturbance to the natural setting is to occur during trenching and

G. Existing foliage shall be preserved wherever possible. When it becomes

quidelines shall be followed: No branches shall be damaged or broken. Prior to installation of lines it shall be determined what foliage needs to be removed and pruning shall be done using a sharp saw. 3. Limbs shall be removed back to the nearest lateral branch or trunk, using

4. All cuts shall be painted with a commercial asphaltic compound designed

specifically for covering pruning wounds. H. No roots over 2" in diameter shall be torn or damaged. When it becomes necessary to remove any major roots over 2" in diameter, a sharp saw shall be used and the wound treated as described in G-4 above.

brought back to the original grade. No soil shall be allowed to remain at the base of any tree or shrub, and grade shall not be changed to allow collection of surface drainage at the base of any tree or shrub. J. All pruning and plant debris associated with the installation shall be removed from the site and disposed in an appropriate manner.

I. Following the installation of the pipelines all soil from the trenches shall be

4.02 IMPACT OF GRADING :Protection of all existing trees within the construction zone is to be given the highest priority. As described in the following section, the trees within the project area will be protected by a temporary construction fence during all construction phases, including rough and final grading. Grade changes will be prevented around the base of these trees by this fence, and the impact of grading will be negligible as it will occur outside the drip line of all trees.

4.03 MEASURES TO PROTECT VEGETATION FROM

indicating a protected area. As shown on the irrigation plan the cyclone fence will be placed around all existing trees to be saved. The purpose of this fence is to discourage the parking of vehicles under the trees and prevent grading or storage of material too close to the tree trunks.

END OF SECTION 02800

CONSTRUCTION ACTIVITIES: A minimum six foot cyclone fence shall be

to the beginning of any construction activities, including grading. General

Contractor shall direct all equipment, subcontractors and personnel to

erected aRound the drip line of all trees located within the project area prior

remain outside the fenced area. Warning signs shall be posted on the fence

REVISIONS

SITE PLAN COORDINATION BASED ON CITY COMMENTS

SCALE: N/A

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ACCURACY OF ANY PLANS OR SURVEYS NOT DIRECTL PREPARED BY THEM. SITE DIMENSIONS, GRADES, WATER

PRESSURES AND GENERAL CONDITIONS SHALL BE VERIFIED

DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED

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