© Hedgpeth Architects

SHEET INDEX

AG1.1	Project Information
A1.1	Architectural Site Plan
A1.2	Neighborhood Analysis
A1.3	Aerial Views Existing Conditions
A1.4	Site Survey
A2.1	Building A Floor Plans
A2.2	Building B Floor Plans
A2.3	Building C Floor Plans
A2.4a	Building D Overall Floor Plans
A2.4b	Building D Floor Plans- Level 1
A2.4c	Building D Floor Plans- Level 2
A2.4d	Building D Floor Plans- Level 3
A2.4e	Building D Floor Plans- Roof
A2.5a	Unit Plans-BLDG 'A'
A2.5b	Unit Plans-BLDG 'B'
A2.5c	Unit Plans-BLDG 'C'
A2.5d	Unit Plans- BLDG 'D'
A5.1	Elevations - BLDG 'A'
A5.2	Elevations - BLDG 'B'
A5.3	Elevations - BLDG 'C'
A5.4a	Elevations - BLDG 'D'
A5.4b	Elevations - BLDG 'D'
A5.4c	Elevations - BLDG 'D'
A5.5	Perspective Views
A5.6	Colors and Materials
A9.1	Accessibility Details and Dimensions
A9.2	Accessible Parking and Signage
A9.3	Fire Rated Assemblies Floors and Walls
A9.4	Fire Rated Assemblies Through Penetrations
A9.6	Fire Rated Assemblies Floors and Walls
A9.7	Interior Cabinets and Interior Walls
A9.8	Exterior Patios and Decks
A9.9	Roofing Details
A9.10	Window Assembly
A9.11	Door Details
A9.12	Interior Wood Stairs
A9.13	Exterior Site Details
1	Site Photometric Lighting Plan
C1.0	Overall Site Plan
C2.0	Grading, Drainage, and Utility Plan
C2.1	Grading, Drainage, and Utility Plan
C3.0	Site Sections
C4.0	Construction Details
L1	Irrigation Plan
L2.1	Illustrative Planting Plan
L2.2	Planting Plan
L3	Landscape Details
L4	Lanscape Specifications



LAGO FRESCA APARTMENTS - 4730 HOEN AVENUE, SANTA ROSA, CA 95405

PROJECT TEAM

OWNER
Auxon Lago Fresca, LLC
73 St. James Drive
Santa Rosa, CA 95403
707-541-0700
janver@hollyandassociates.com

AGENT
Janver Holly
707-541-0700
Matthew Passanisi
(707) 364-6278
mattvpass@gmail.com

GENERAL CONTRACTOR
Holly & Associates, Inc.
73 St. James Dr.
Santa Rosa, CA 95403
707-541-0700

ARCHITECT
Hedgpeth Architects
2321 Bethards Drive, Suite B
Santa Rosa, CA 95405
707-523-7010
Warren Hedgpeth
warren@hedgpetharchitects.com
Ingrid Anderson
ingrid@hedgpetharchitects.com

CIVIL
Adobe Engineers
1220 North Dutton Avenue
Santa Rosa, CA 95401
707-541-2300
James Jensen
JJensen@adobeinc.com

LANDSCAPE
MacNair Landscape Architecture
P.O. Box 251
Kenwood, CA 95452
707-833-2288
707-
don@macnairlandscapes.com

STRUCTURAL
MECHANICAL
PLUMBING
ELECTRICAL
PHOTOVOLTAIC
ENERGY & T-24, CALGreen
FIRE SPRINKLER

APPLICABLE CODES

A. CODES AND AUTHORITIES

1. The Work shall comply with the following Codes:

2019 CALIFORNIA BUILDING CODES, VOLUMES 1 & 2
2019 CALIFORNIA PLUMBING CODE
2019 CALIFORNIA MECHANICAL CODE
2019 CALIFORNIA ELECTRICAL CODE
2019 CALIFORNIA FIRE CODE
2019 CALIFORNIA ENERGY CODE
2019 CALIFORNIA GREEN CODE
2019 UNIFORM ADMINISTRATIVE CODE
2019 CALIFORNIA REFERENCED STANDARDS CODE PART 12
TITLE 24, PART 12
APPLICABLE CODES AND REGULATIONS OF THE CITY OF SANTA ROSA

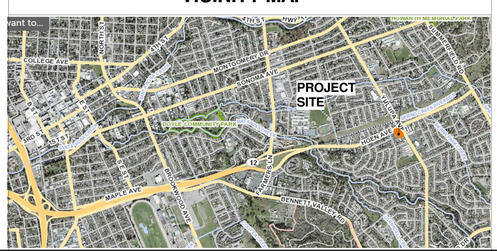
2. The Work shall also comply with all applicable regulations, codes and ordinances of the governing jurisdiction.

3. The designs depicted in these construction documents comply substantially with the requirements set forth in TITLE 24 of the CALIFORNIA ENERGY CODE.
Also, mandatory energy saving features for this project, whether or not shown or stated in these construction documents, must be incorporated into the project as outlined in the TITLE 24 energy documentation prepared for this project.

BUILDING AREA ANALYSIS

Building A residential -	Total Area (gross)	= 7,556 sf
Building A garage -	Total Area (gross)	= 2,968 sf
Building B residential -	Total Area (gross)	= 8,691 sf
Building B garage -	Total Area (gross)	= 5,495 sf
Building C -	Total Area (gross)	= 8,814 sf
Building D -	Total Area (gross)	= 39,012 sf
Total Area of Construction -		= 72,535 sf (not including balconies)

VICINITY MAP



PROJECT DATA AND INFORMATION

DWELLING UNIT MIX:

20	ONE BEDROOM,
22	TWO BEDROOM
4	THREE BEDROOM
4	FOUR BEDROOM
50	TOTAL UNITS

PARKING ANALYSIS:

City of Santa Rosa - Market Rate (MR)
18 ONE BEDRM MR x 1.5 stalls = 27 stalls
22 TWO BEDRM MR x 2.5 stalls = 55 stalls
4 THREE BEDRM MR X 2.5 stalls = 10 stalls

City of Santa Rosa - Below Market Rate (BMR)
2 ONE BEDRM AFF x 1 stall = 2 stalls
4 FOUR BEDRM AFF x 2.5 stalls = 10 stalls
50 UNITS total required = 104 stalls

Gov. Code 65915 State Density Bonus Law
20 ONE BEDRM MR x 1 stall = 20 stalls
22 TWO BEDRM MR x 1.5 stalls = 33 stalls
4 THREE BEDRM MR X 1.5 stalls = 6 stalls
2 ONE BEDRM BMR x 1 stall = 2 stalls
4 FOUR BEDRM BMR x 2 stalls = 8 stalls
total required = 69 stalls per State Density Bonus

65 stalls provided
3 of which are accessible (1 van accessible)
16 of which are equipped for future EV charging

SITE COVERAGE:

BUILDING A FOOTPRINT	=2,968 SF
BUILDING B FOOTPRINT	=5,495 SF
BUILDING C FOOTPRINT	=2,859 SF
BUILDING D FOOTPRINT	=13,004 SF
TOTAL BUILDING COVERAGE	=24,326 SF
SITE AREA	=56,531.5 SF
24,326 SF / 56,531.5 SF	=43% BUILDING FOOTPRINTS
MAX. ALLOWABLE SITE COV.	=65% LOT COVERAGE
ACTUAL SITE COVERAGE	=43% < 65% MAXIMUM
AREA OF SURFACE PARKING AND DRIVEWAY	=14,431 SF
14,431 SF / 56,531.5 SF	=26%
AREA OF LANDSCAPING AND WALKWAYS	=17,774.5 SF
17,774.5 / 56,531.5 SF	=31%

SETBACKS: 3 Concessions to reduce setbacks in 3 locations are requested
FRONT YARD - 15 FEET MINIMUM REQUIRED
Concessions 1 & 2 -reduction of front yard setbacks
Hoen - reduced by 6 ft to 9 ft setback at Bldgs A, B
Summerfield - reduced by 7 ft to 8 ft setback at Bldgs C, D
SIDE YARD - 5 FEET MINIMUM REQUIRED
REAR YARD - 15 FEET MINIMUM REQUIRED
Concession 3 -reduction of rear yard setback
Rear yard -reduced by 4 ft to 11 ft setback at Building D

PROJECT TITLE: LAGO FRESCA APARTMENTS

PROJECT ADDRESS: 4744 HOEN AVENUE
SANTA ROSA CA 95405

APN: 2445 SUMMERFIELD RD - 014-361-029
4744 HOEN AV. - 014-361-028

TOTAL PARCEL AREA: 2445 SUMMERFIELD RD - 37,914 SF / .88
4730 HOEN AV. - 18,617.5 SF / .43
TOTAL - 56,531 SF / 1.31 acres

JURISDICTION: CITY OF SANTA ROSA

FIRE DISTRICT: CITY OF SANTA ROSA

ZONING: CO (OFFICE COMMERCIAL), R-2 WITH CUP

LAND USE: OFFICE

DENSITY (GROSS ALLOWABLE): 30 UNITS TO THE ACRE

DENSITY (PROPOSED): 36 UNITS TO THE ACRE

LOT COVERAGE (MAX. ALLOWABLE): 1 UNIT/1,450 SF SITE AREA, 75%

MAXIMUM ALLOWABLE HEIGHT: 35 FEET

PROPOSED HEIGHT: Waiver of standard to increase building height to 45' is requested
28'-0" FEET MAXIMUM TO TOP of STRUCTURAL PLATE AT BUILDING "D"
41'-2" TO TOP OF RIDGE AT BUILDING "D"

PROPOSED STORIES: 3 STORIES

OCCUPANCY: A-3, S, R-2

CONSTRUCTION TYPE: **TYPE VA, Sprinkled NFPA13**

HOUSING CODE: CA GOV. CODE 65915

DENSITY BONUS CALCULATION:
TOTAL COMBINED LOT AREA: 56,531.5 SF
BASE DENSITY - 3O UNITS / ACRE
56,531.5 SF / 1,450 SF PER UNIT = 38.98 OR 39 UNITS
PROPOSED DENSITY - 38.17 UNITS / ACRE = 50 UNITS
STATE DENSITY BONUS OF 27.5%
39 UNITS X 127.5% = 50 UNITS 50 / 39 = 1.275
27.5% (11 MARKET RATE UNITS) DENSITY BONUS IS PROPOSED
15% BASE DENSITY DESIGNATED FOR VERY LOW INCOME RESIDENTS
15% X 39 UNITS = 6 OF THE 39 BASE UNITS ARE AFFORDABLE UNITS ALLOCATED FOR VERY LOW INCOME RESIDENTS

PROJECT DESCRIPTION

Lago Fresca is a 50 unit multi-family apartment project comprising four 3-story buildings and a Community Room, in 73,263 square feet of new construction. The mix of units is (20) One Bedroom Units, (22) Two Bedroom Units, (4) Three Bedroom Units and (4) Four Bedroom Units. The project requests a State Density Bonus of 27.5% over base density. 15% of the base density or (6) of the units are designated Affordable for Very Low Income Residents. A concession for waiver of standard of two front and one rear yard setbacks is requested. The project requests a reduction of the front yard setback at Hoen Avenue from 15 feet to 8 feet and at Summerfield Road from 15 feet to 9 feet. A reduction of the rear yard setback at Building D from 15 feet to 11 feet is requested.

A 26 foot wide 2 way driveway from Hoen Avenue provides emergency vehicle access to the site.

A Community Room with a Kitchenette and Rest Room is located at the ground floor of Building C, with pedestrian access from Summerfield Road. Two Trash Enclosures are located in an accessible central area on the site. Outdoor amenities for the residents include a landscaped arbor at the Summerfield Road parcel boundary, which is a focal point for the project as well as a pedestrian entry into a central courtyard garden featuring a fountain and an outdoor barbecue and seating area.

65 parking stalls are provided, 34 of which are covered and secured assigned parking spaces. Site Development includes a 26 foot wide, 2 lane driveway with egress and entry to and from Hoen Avenue and off site frontage improvements of sidewalks and parkway planters on Hoen and Summerfield. A concession for waiver of parking provision from the State Density Bonus standard of 69 stalls, to 65 stalls is requested. Density bonus projects may also request a pre-approved concession to reduce parking by 38%% from the city's parking standard, which would require a parking provision of105 stalls, to 69 stalls. See Project Narrative, pages 7-8. As part of the parking management plan, a placard will be required to park on site whether the vehicle belongs to a guest or resident, and in all stalls, both assigned and unassigned, covered or surface stalls. A secure long term bicycle parking space is provided at each unit, and 4 short term bicycle stalls are provided at the Community Room.

An Engineering Variance from City street standards, to align the sidewalks and planters with existing conditions on Hoen and Summerfield is requested.

Ornamental shade-canopy, accent trees and a 6 foot high privacy fence screen at all project boundaries adjacent to neighboring properties is proposed. The central courtyard is a mediterranean style low summer water and drought tolerant landscaped common open space that features a dry stream bed - bioretention rain garden. A wall fountain at the Summerfield pedestrian entry mitigates the impact of traffic noise from the street on the residences.

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Suite B
Santa Rosa, California
95405-8536
Phone 707 523 7010
Fax 707 542 2328

Lago Fresca Apartments
4744 Hoen Ave. Santa Rosa, CA 95405

Project Information

LICENSED ARCHITECT
WARREN J. HEDGPETH
C-14601
10-09-2021
RENEWAL DATE
STATE OF CALIFORNIA

Revisions

Job Number
2016

Project Architect
IA

Drawn By
JA , KM

Date
May 5, 2021

Sheet
AG1.1

2/22/2022 2:01:06 PM



1 **Architectural Site Plan**
1/16" = 1'-0"

Gross Area - Buildings

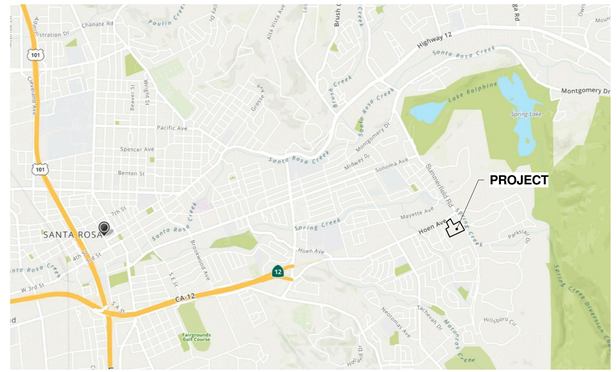
Floor	Area
Building 'A' Garage	
1	2965 SF
	2965 SF
Building 'A'.	
2	3776 SF
3	3776 SF
	7552 SF
Building 'B' Garage	
1	5390 SF
	5390 SF
Building 'B'.	
2	4996 SF
3	3561 SF
	8557 SF
Building 'C' Garage	
1	891 SF
	891 SF
Building 'C'.	
1	2198 SF
2	3074 SF
3	3074 SF
	8346 SF
Buyilding 'D'	
1	13187 SF
2	13187 SF
3	13187 SF
	39561 SF
Grand Total	73263 SF

Net Area - Units

Number	Area
Building 'D'	
Floor 1	
Unit 15	933 SF
Unit 16	597 SF
Unit 17	934 SF
Unit 18	597 SF
Unit 19	934 SF
Unit 20	597 SF
Unit 21	627 SF
Unit 22	597 SF
Unit 23	934 SF
Unit 24	597 SF
Unit 25	934 SF
Unit 26	934 SF
Floor 2	
Unit 27	934 SF
Unit 28	597 SF
Unit 29	934 SF
Unit 30	597 SF
Unit 31	934 SF
Unit 32	597 SF
Unit 33	627 SF
Unit 34	597 SF
Unit 35	934 SF
Unit 36	597 SF
Unit 37	934 SF
Unit 38	934 SF
Floor 3	
Unit 39	934 SF
Unit 40	597 SF
Unit 41	934 SF
Unit 42	597 SF
Unit 43	934 SF
Unit 44	597 SF
Unit 45	627 SF
Unit 46	597 SF
Unit 47	934 SF
Unit 48	597 SF
Unit 49	934 SF
Unit 50	934 SF
Building 'D'	27640 SF
Grand total	48593 SF

Net Area - Units

Number	Area
Building 'A'	
Floor 2	
Unit 01	790 SF
Unit 02	794 SF
Unit 03	787 SF
Unit 04	794 SF
Floor 3	
Unit 01	879 SF
Unit 02	878 SF
Unit 03	881 SF
Unit 04	880 SF
Building 'A'	6683 SF
Building 'B'	
Floor 2	
Unit 05	1079 SF
Unit 06	1081 SF
Unit 07	1079 SF
Unit 08	1078 SF
Floor 3	
Unit 05	830 SF
Unit 06	726 SF
Unit 07	721 SF
Unit 08	825 SF
Building 'B'	7420 SF
Building 'C'	
Floor 1	
Unit 09	634 SF
Unit 10	489 SF
Floor 2	
Unit 11	1432 SF
Unit 12	1432 SF
Floor 3	
Unit 13	1432 SF
Unit 14	1432 SF
Building 'C'	6850 SF



VICINITY MAP

TRUE

SCALE: 0.01" = 1.00'
0' 8' 16' 32'

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Suite B
Santa Rosa, California
95405-8536
Phone 707 523 7010
Fax 707 542 2328

Lago Fresca Apartments
4744 Hoen Ave. Santa Rosa, CA 95405

Architectural Site Plan

LICENSED ARCHITECT
WARREN J. HEDGPETH
C-14601
10-09-2021
RENEWAL DATE
STATE OF CALIFORNIA

Revisions

Job Number
2016

Project Architect
Checker

Drawn By
JA

Date
May 5, 2021

Sheet
A1.1

2/22/2022 2:01:05 PM



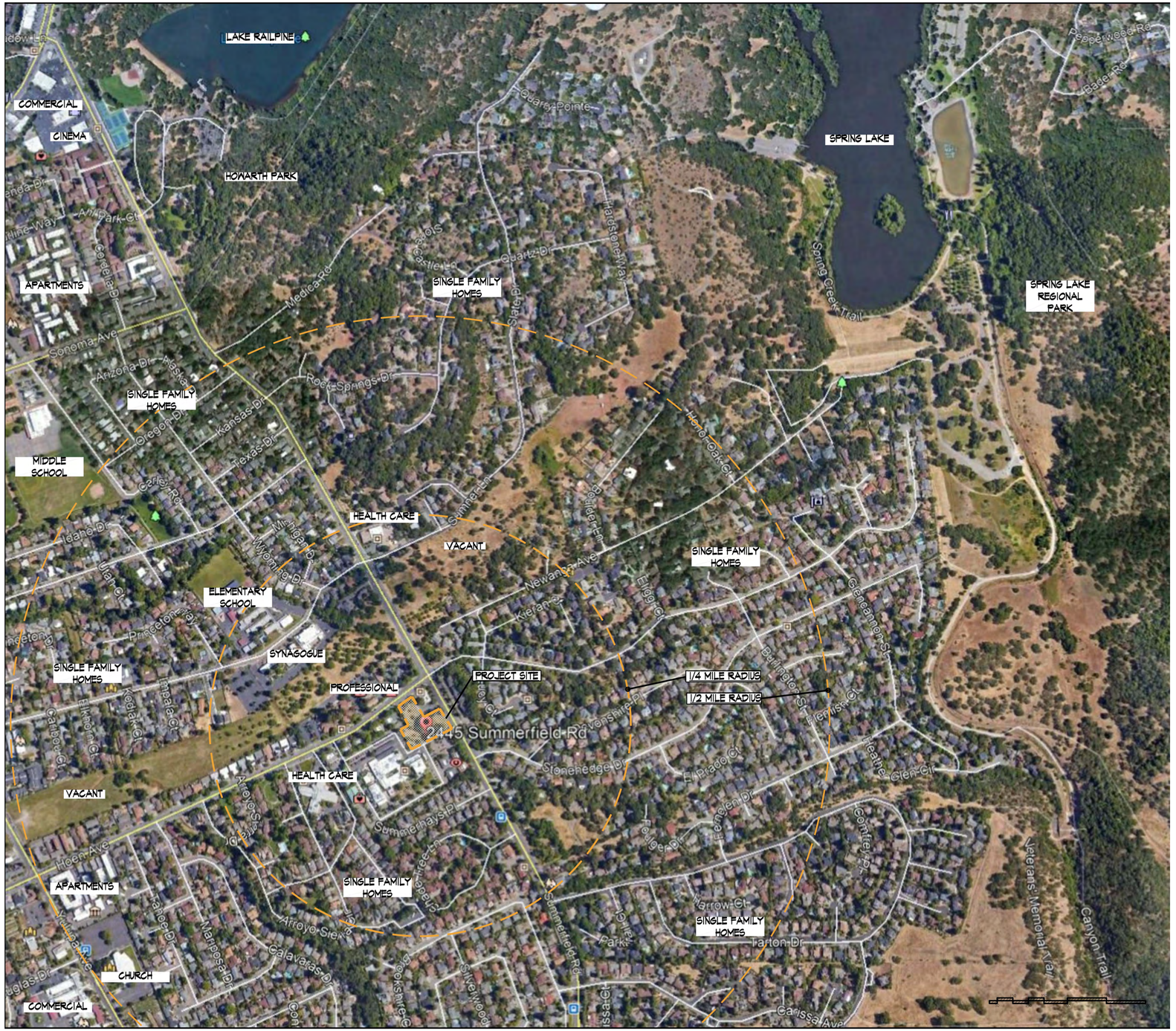
Neighborhood Context Map

TRUE



Site Map

TRUE



Neighborhood Context Vicinity Map

TRUE

12/16/2021 7:26:56 PM

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Suite B
Santa Rosa, California
95405-8536
Phone 707 523 7010
Fax 707 542 2328

Lago Fresca Apartments

4744 Hoen Ave. Santa Rosa, CA 95405

Neighborhood Analysis

LICENSED ARCHITECT
WARREN J. HEDGPETH
C-14601
10-09-2021
RENEWAL DATE
STATE OF CALIFORNIA

Revisions

Job Number
2016

Project Architect
Checker

Drawn By
Author

Date
May 5, 2021

Sheet
A1.2

© Hedgpeth Architects



Professional/Commercial



Driveway Encroachment on Property



Residential Single Family Homes



Professional/Commercial





View from Site Looking North West

TRUE



Sutter Medical Center



View from Site Looking South East



Bus Stop- South of Site

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Suite B
Santa Rosa, California
95405-8536
Phone 707 523 7010
Fax 707 542 2328

Lago Fresca Apartments
4744 Hoen Ave. Santa Rosa, CA 95405

Aerial Views Existing Conditions

LICENSED ARCHITECT
WARREN J. HEDGPETH
C-14601
10-09-2021
RENEWAL DATE
STATE OF CALIFORNIA

Revisions

Job Number
2016

Project Architect
Checker

Drawn By
Author

Date
May 5, 2021

Sheet
A1.3

12/16/2021 7:26:57 PM

NOTES

THE CONTENT OF THIS MAP WAS DEFINED BY CONTRACT AT THE SPECIFIC REQUEST OF THE CLIENT(S) AND/OR THEIR CONSULTANT(S). THE SURVEYOR ACCEPTS NO LIABILITY FOR USE OF THIS MAP BY ANY ONE OTHER THAN THE CLIENT(S) AND/OR CONSULTANTS FOR WHOM IT WAS PREPARED.

LESCURE ENGINEERS IS NOT RESPONSIBLE OR LIABLE FOR CHANGES MADE BY THE CLIENT, HIS/HER CONTRACTORS OR SUBCONTRACTORS TO ANY MAP, PLAN, SPECIFICATION OR OTHER CONSTRUCTION DOCUMENT PREPARED BY LESCURE ENGINEERS WITHOUT OBTAINING LESCURE ENGINEERS' PRIOR WRITTEN CONSENT.

ANY BOUNDARY INFORMATION SHOWN HEREON IS RECORD DATA FOR REFERENCE ONLY. THIS MAPPING DOES NOT REPRESENT A BOUNDARY SURVEY OR RECORD OF SURVEY BY THE SURVEYOR FOR RECORDING PURPOSES.

HORIZONTAL DATUM: NAD 83. CALIFORNIA STATE PLANE ZONE 2. OBTAINED BY GPS OBSERVATION.
VERTICAL DATUM: NAVD 1988. OBTAINED BY GPS OBSERVATION. BENCHMARKS AS SHOWN ON PLAN.

UNDERGROUND UTILITIES IF SHOWN ARE APPROXIMATE BASED ON FOUND STRUCTURE SURFACE LOCATIONS ONLY. THE CLIENT & CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATION & DEPTH OF ALL UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.

INFORMATION SHOWN HEREON HAS BEEN DERIVED FROM COLLECTED DATA AND PROCESSED IN ELECTRONIC FILE 20058– 4730 Hoen–TOPO3exp.dwg. AN ELECTRONIC FORMAT OF THIS MAP HAS BEEN PROVIDED AS A COURTESY AND SHALL BE CONSIDERED SUPPLEMENTAL TO THE SIGNED AND SEALED PAPER ORIGINAL. THE SIGNED ORIGINAL MAILED TO THE CLIENT CONSTITUTES THE DELIVERY PRODUCT OF PROFESSIONAL SERVICES AS PER OUR CONTRACT.

SURVEYOR'S STATEMENT

I, JOHN C. PAWSON, A LICENSED LAND SURVEYOR IN THE STATE OF CALIFORNIA, DO HEREBY STATE THAT THIS MAP WAS PREPARED BY ME, OR UNDER MY DIRECTION, AS REQUESTED BY THE CLIENT.

DATED: 12/20/2020

JOHN C. PAWSON LS 9077

LIDAR NOTE

ELEVATION CONTOURS OBTAINED FROM SONOMA COUNTY VEGETATION MAPPING AND LIDAR PROGRAM THROUGH NASA GRANT NNX13AP69G AND THE UNIVERSITY OF MARYLAND. DATUM: NAVD 1988.

REFERENCES, SONOMA COUNTY RECORDS

SUB. MAP– BOOK 397 PAGE 43
SUB. MAP– BOOK 476 PAGE 40
SUBJECT DEED 2016 O.R. 121033

LEGEND

- SUBJECT BOUNDARY
- ADJOINER BOUNDARY
- RECORD ROAD CENTERLINE
- EASEMENT BOUNDARY
- 460 ELEVATION CONTOURS
- EDGE OF PAVEMENT
- CURB
- G UNDERGROUND GAS LINE
- E UNDERGROUND ELECTRIC LINE
- C UNDERGROUND COMMUNICATION LINES
- W WATER LINE
- OH OVERHEAD LINES
- S SEWER LINE
- STORM DRAIN
- WOOD FENCE
- TS UNDERGROUND TRAFIIC SIGNAL
- 24" OAK TREE – TRUNK DIAMETER, SPECIES
- TREE CANOPY, SHRUB OR HEDGE
- SEWER CLEAN OUT
- POWER/UTILITY POLE
- SIGN
- WATER VALVE
- FIRE HYDRANT
- WM WATER METER
- IR IRRIGATION BOX
- LIGHT POLE
- STREET LIGHT POLE
- EV ELECTRICAL VAULT
- T TRAFFIC SIGNAL VAULT
- SIGNAL POLE
- SIGNAL POLE W/ARM
- SURVEY CONTROL BENCHMARK
- FOUND MONUMENT AS NOTED
- FOUND WELL MONUMENT WITH PUNCH MARK

ABBREVIATIONS

SSMH	SEWER MANHOLE
CB	CATCH BASIN
DI	DROP INLET
T	TRAFFIC SIGNAL VAULT
EV	ELECTRICAL VAULT
IR	IRRIGATION VAULT
EP	EDGE OF PAVEMENT
TFC	TOP FACE OF CURB
TEL	TELEPHONE/COMM. VAULT
DS	DOWNSPOUT
CDR	CEDAR
MPL	MAPLE
WLNT	WALNUT
UNK	TREE– UNKNOWN SPECIES

NORTH

0 20 40

SCALE: 1" = 20'

COPYRIGHT © 2020 ALL RIGHTS RESERVED BY LESCURE ENGINEERS, INC. Plot date=Dec 28, 2020 – 2:20:15PM Printed by=jpawson File=20058– 4730 Hoen–TOPO3exp.dwg

DESIGNED DATE

DRAWN DATE
AFF 12/15/20

CHECKED DATE
JCP 12/15/20

REVISIONS

LICENSED LAND SURVEYOR JOHN C. PAWSON No. 9077 STATE OF CALIFORNIA

LESCURE ENGINEERS, INC
5468 SKYLANE BLVD. SANTA ROSA, CA 95403
(707) 575-3427 le@lescure-engineers.com

BOUNDARY AND TOPOGRAPHIC MAP

4730 HOEN AVE.
2445 SUMMERFIELD RD.
SANTA ROSA, CA

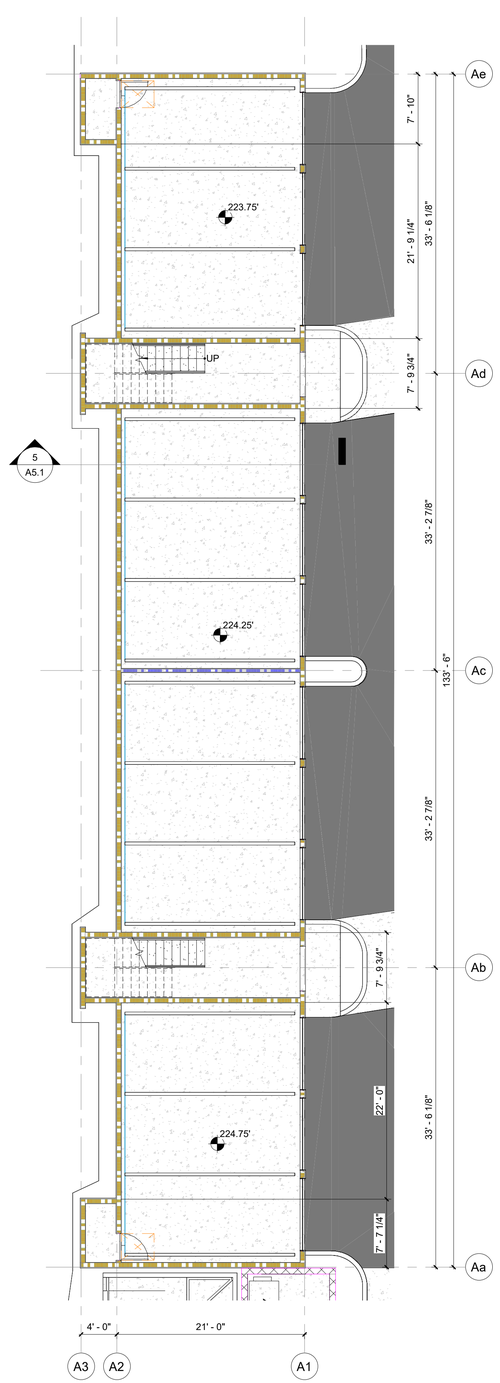
APN: 014–361–028 / 014–361–029

PREPARED FOR:
LAGO FRESCA, LLC

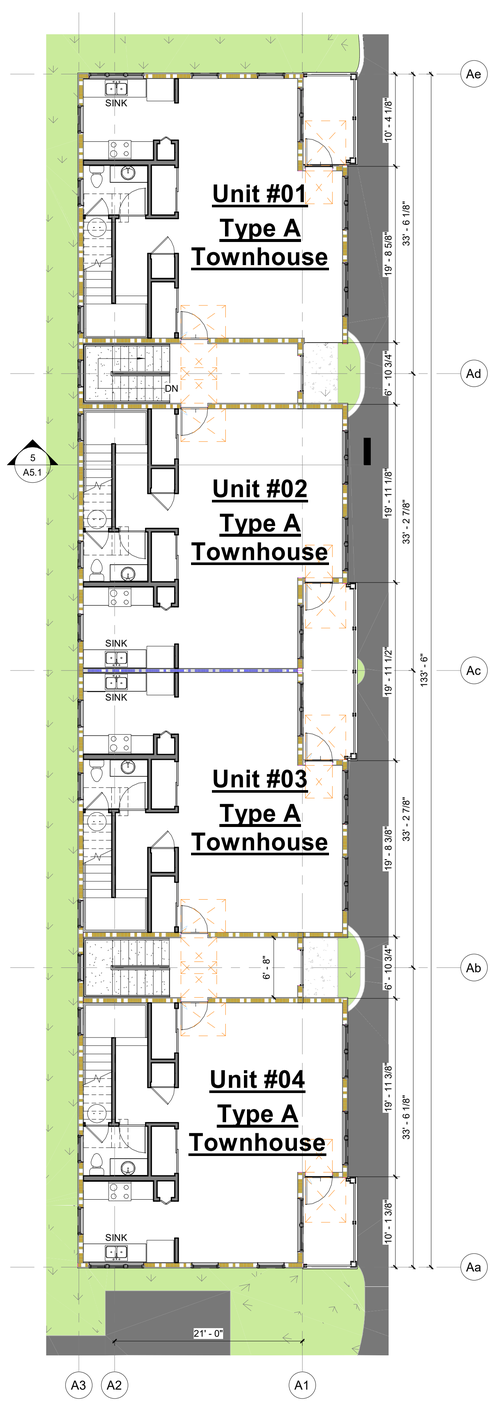
PROJECT NO.
20058

SHEET NO.
1 OF 1

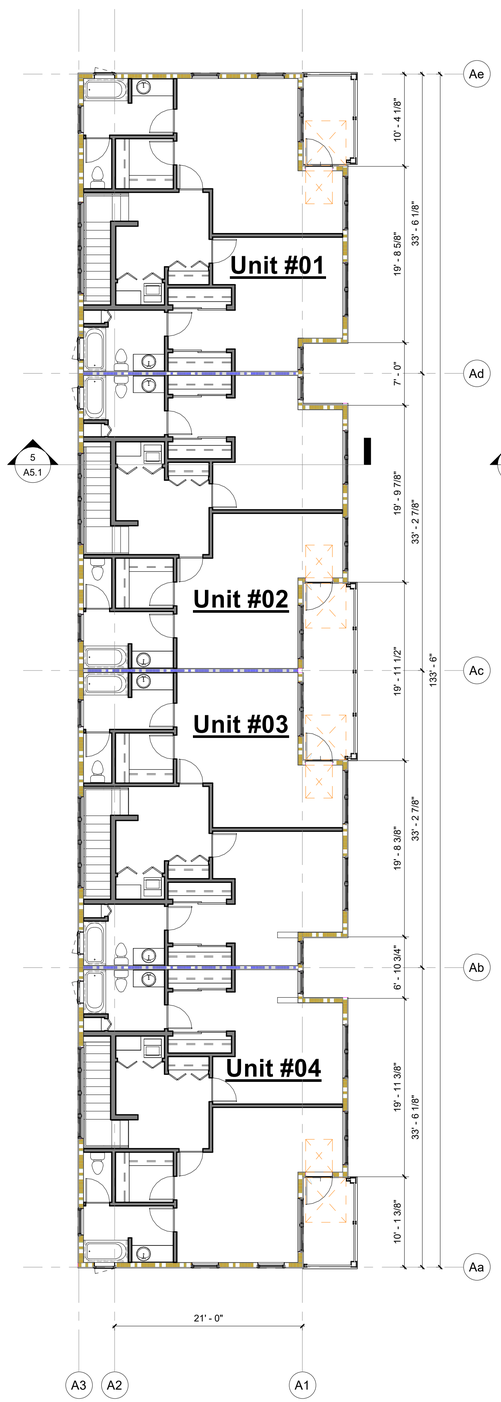
© Hedgpeth Architects



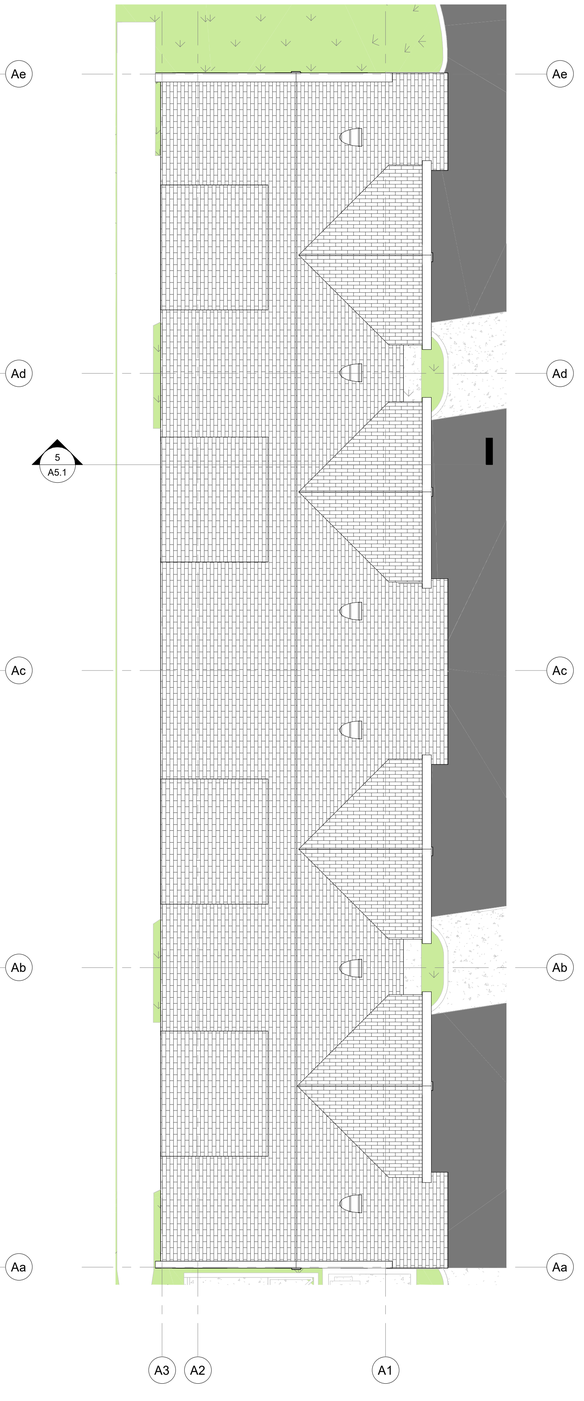
1 **Level A1**
1/8" = 1'-0"



2 **Level A2**
1/8" = 1'-0"



3 **Level A3**
1/8" = 1'-0"



4 **Roof A**
1/8" = 1'-0"

TRUE

SCALE: 0.01' = 1.00'
0' 4' 8' 16'

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Suite B
Santa Rosa, California
95405-8536
Phone 707 523 7010
Fax 707 542 2328

Lago Fresca Apartments
4744 Hoen Ave. Santa Rosa, CA 95405

Building A Floor Plans

LICENSED ARCHITECT
WARREN J. HEGDETH
C-14601
10-09-2021
RENEWAL DATE
STATE OF CALIFORNIA

Revisions

Job Number
2016

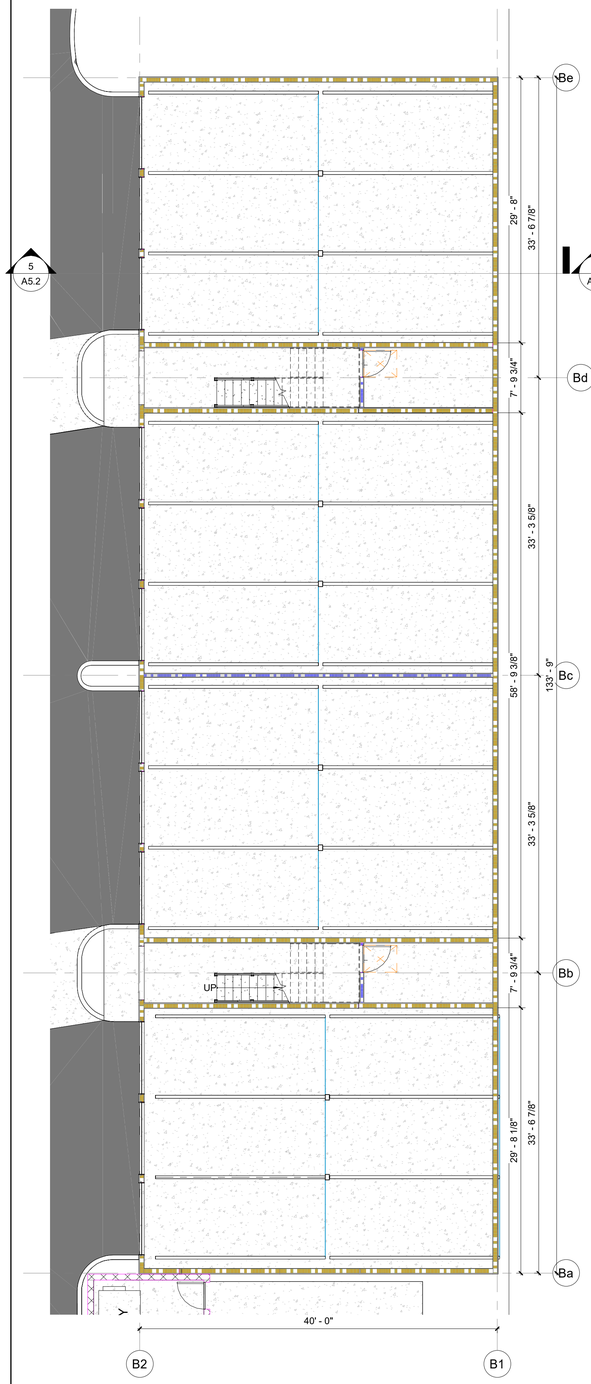
Project Architect
Checker

Drawn By
Author

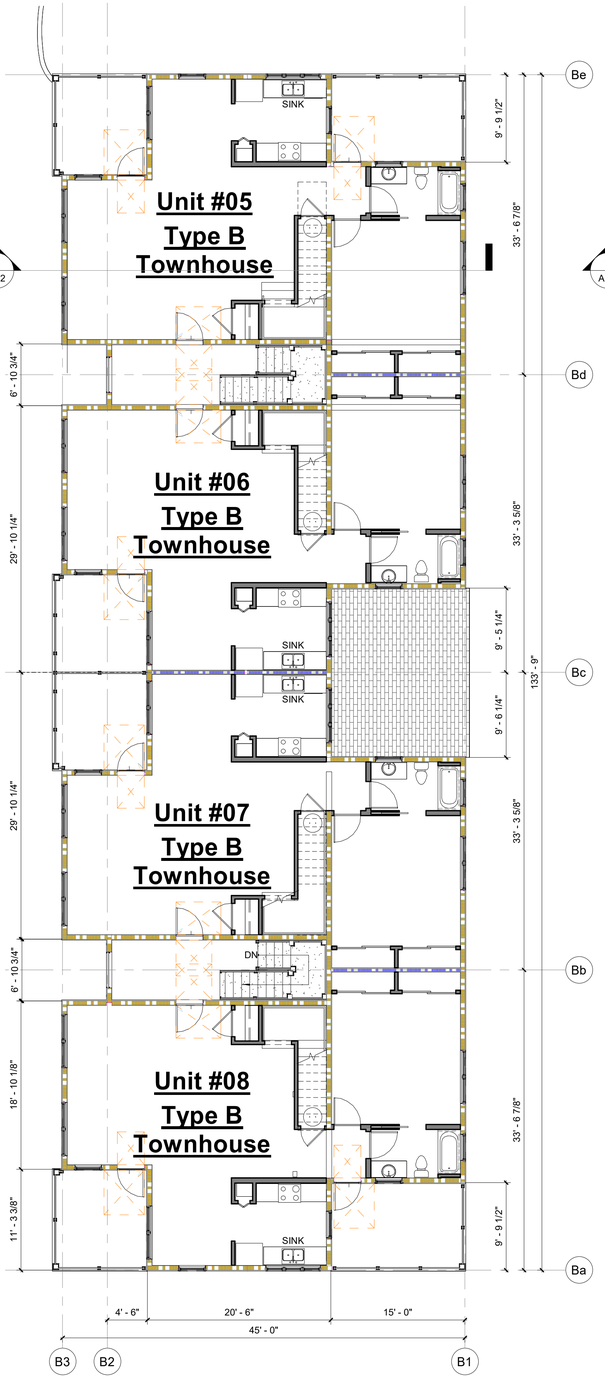
Date
May 5, 2021

Sheet
A2.1

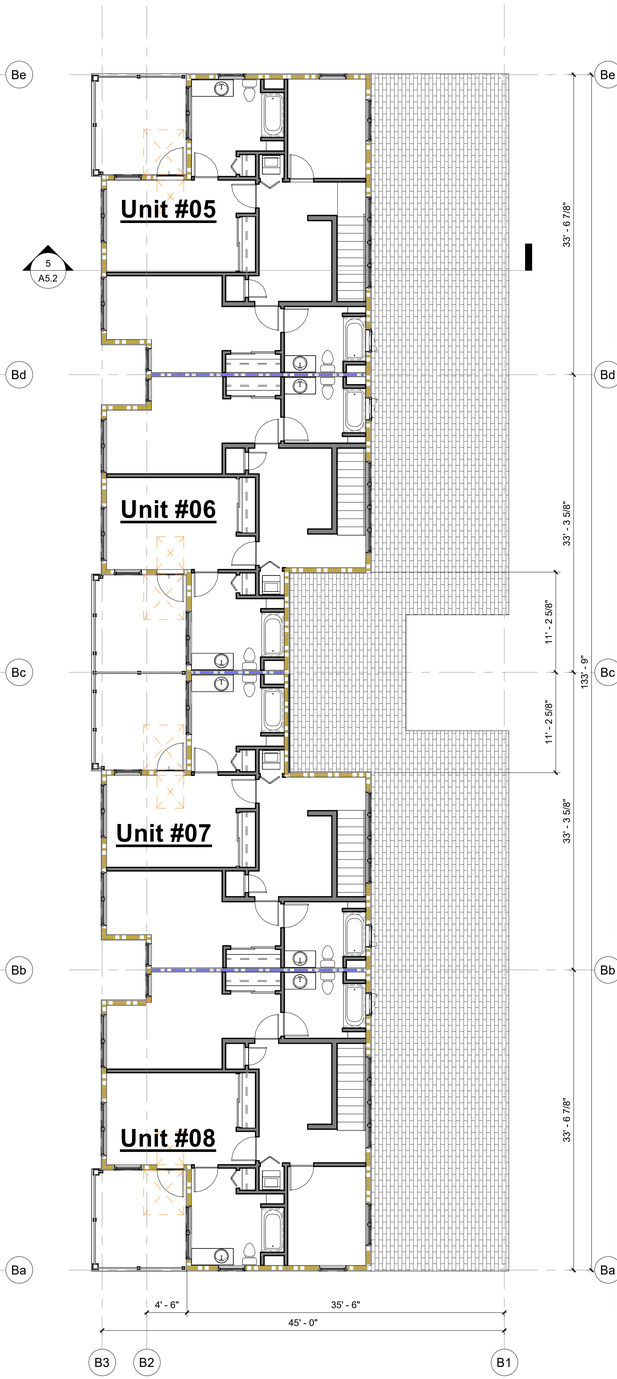
12/16/2021 7:27:03 PM



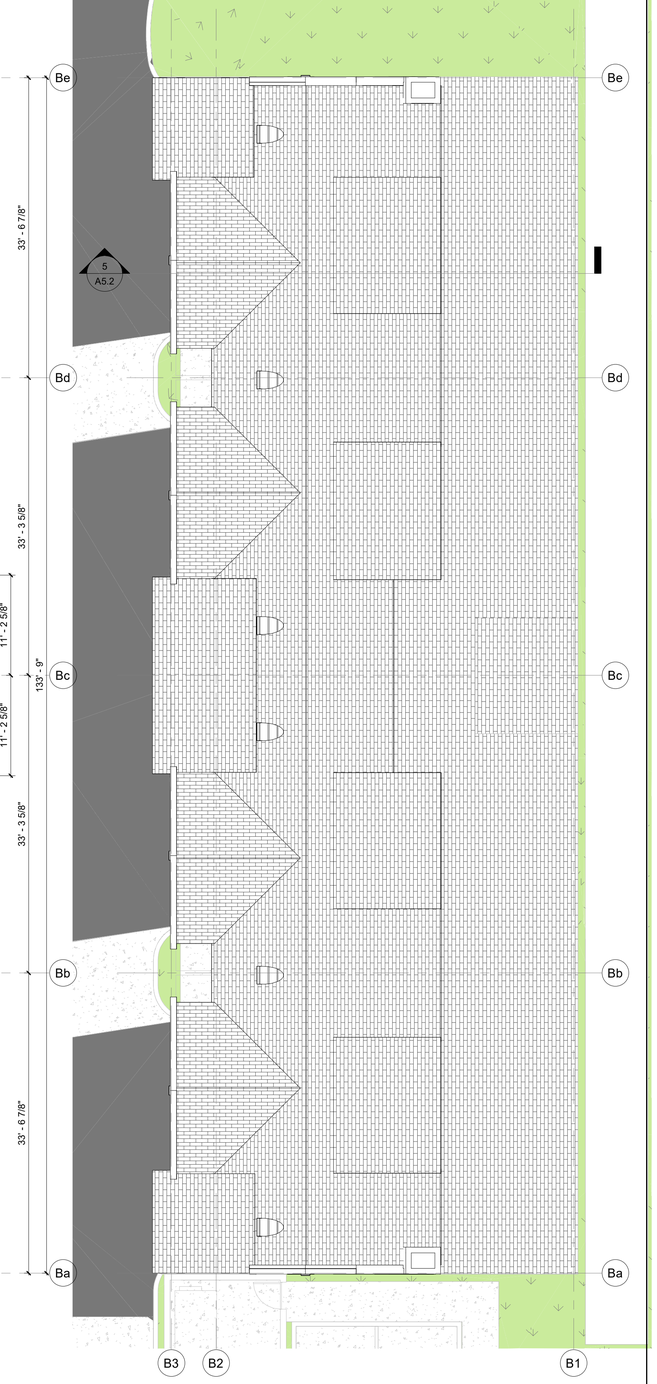
1 **Level B1**
1/8" = 1'-0"



2 **Level B2**
1/8" = 1'-0"



3 **Level B3**
1/8" = 1'-0"



4 **Roof B**
1/8" = 1'-0"

TRUE

SCALE: 0.01' = 1.00'
0' 4' 8' 16'

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Suite B
Santa Rosa, California
95405-8536
Phone 707 523 7010
Fax 707 542 2328

Lago Fresca Apartments
4744 Hoen Ave. Santa Rosa, CA 95405

Building B Floor Plans

LICENSED ARCHITECT ★ WARREN J. HEDGPETH ★
C-14601
10-09-2021
RENEWAL DATE
STATE OF CALIFORNIA

Revisions

Job Number
2016

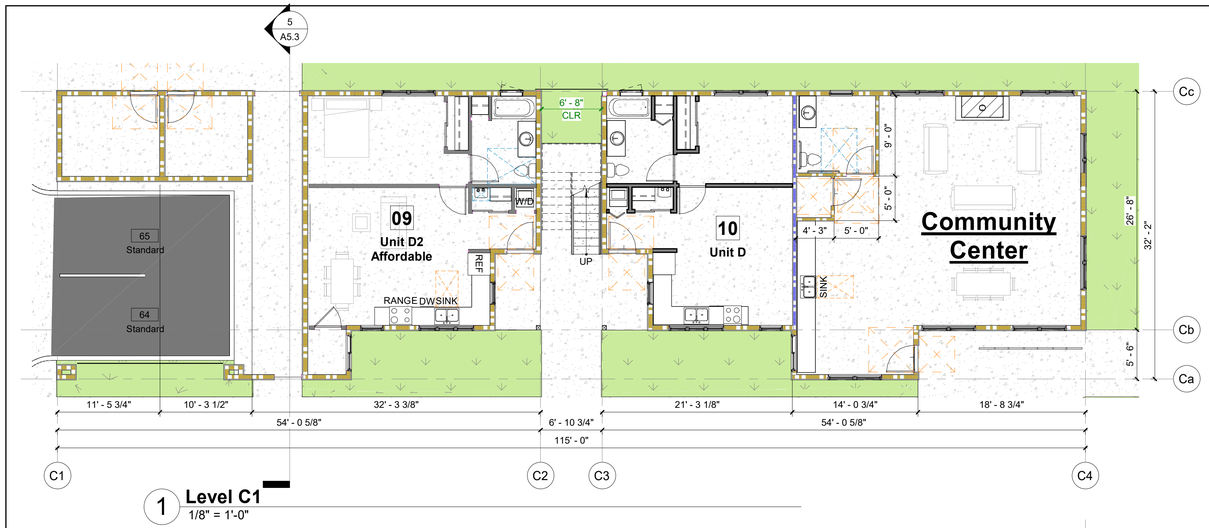
Project Architect
Checker

Drawn By
Author

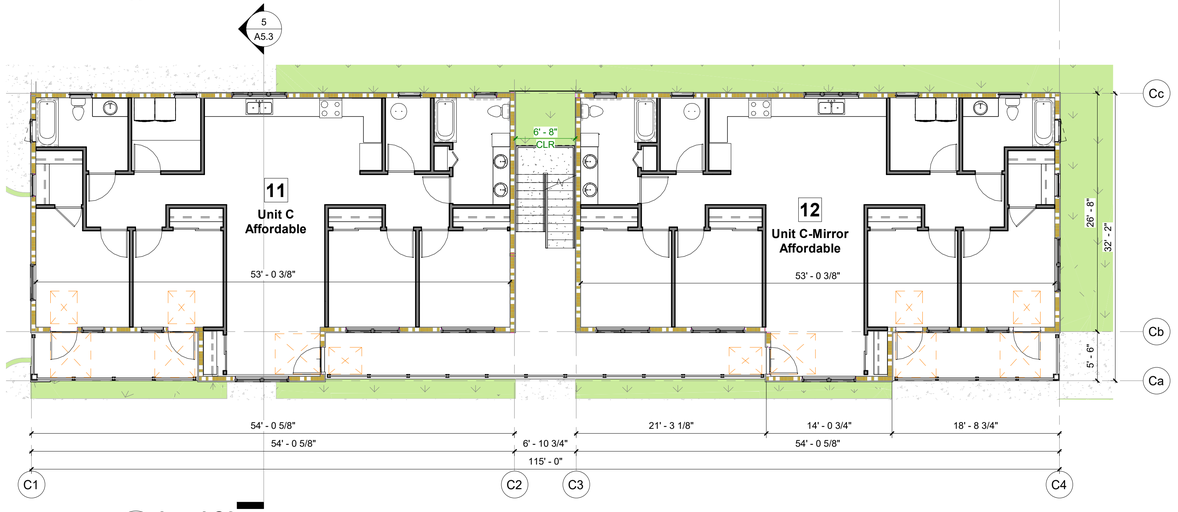
Date
May 5, 2021

Sheet
A2.2

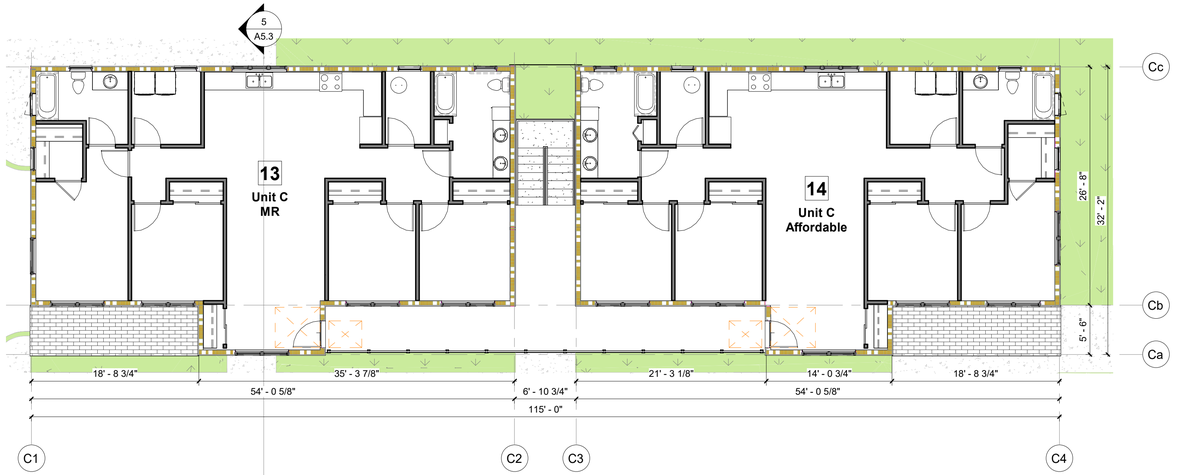
12/16/2021 7:27:08 PM



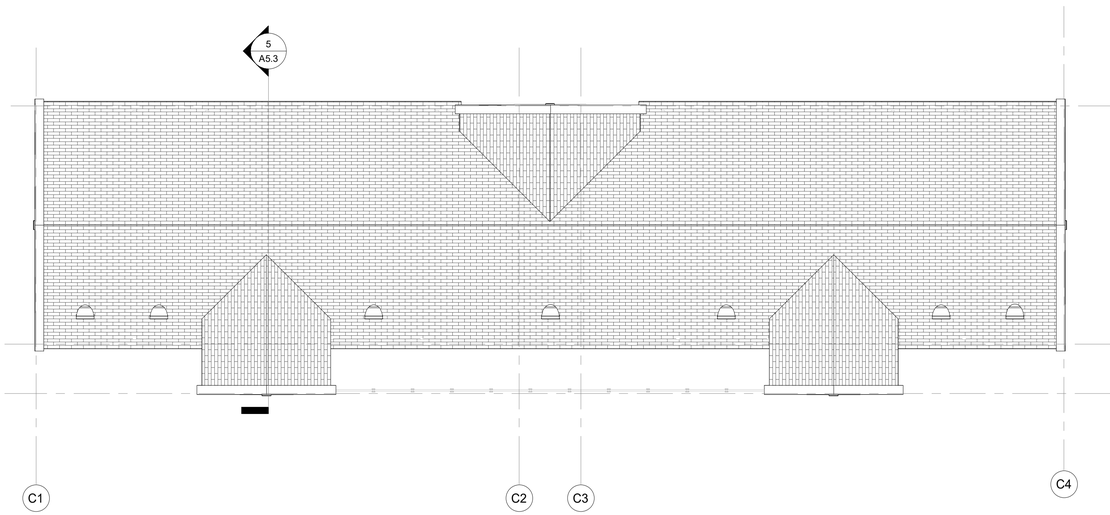
1 **Level C1**
1/8" = 1'-0"



2 **Level C2**
1/8" = 1'-0"



3 **Level C3**
1/8" = 1'-0"



4 **Roof C**
1/8" = 1'-0"

TRUE

SCALE: 0.01' = 1.00'
0' 4' 8' 16'

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Suite B
Santa Rosa, California
95405-8536
Phone 707 523 7010
Fax 707 542 2328

Lago Fresca Apartments
4744 Hoen Ave. Santa Rosa, CA 95405

Building C Floor Plans

LICENSED ARCHITECT
WARREN J. HEDGPETH
C-14601
10-09-2021
RENEWAL DATE
STATE OF CALIFORNIA

Revisions

Job Number
2016

Project Architect
Checker

Drawn By
Author

Date
May 5, 2021

Sheet
A2.3

12/16/2021 7:27:10 PM



3 **Level D3**
1/16" = 1'-0"



2 **Level D2**
1/16" = 1'-0"



1 **Level D1**
1/16" = 1'-0"

12/16/2021 7:27:16 PM

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Suite B
Santa Rosa, California
95405-8536
Phone 707 523 7010
Fax 707 542 2328

Lago Fresca Apartments
4744 Hoen Ave. Santa Rosa, CA 95405

Building D Overall Floor Plans

LICENSED ARCHITECT
WARREN J. HEDGPETH
C-14601
10-09-2021
RENEWAL DATE
STATE OF CALIFORNIA

Revisions

Job Number
2016

Project Architect
Checker

Drawn By
Author

Date
May 5, 2021

Sheet
A2.4a



1 **Level D1**
1/8" = 1'-0"



2 **Level D1**
1/8" = 1'-0"

12/16/2021 7:27:20 PM

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Suite B
Santa Rosa, California
95405-8536
Phone 707 523 7010
Fax 707 542 2328

Lago Fresca Apartments
4744 Hoen Ave. Santa Rosa, CA 95405

Building D Floor Plans- Level 1

LICENSED ARCHITECT
WARREN J. HEDGPETH
C-14601
10-09-2021
RENEWAL DATE
STATE OF CALIFORNIA

Revisions

Job Number
2016

Project Architect
Checker

Drawn By
Author

Date
May 5, 2021

Sheet
A2.4b



1 **Level D2 - East**
1/8" = 1'-0"



2 **Level D2 - West**
1/8" = 1'-0"

12/16/2021 7:27:23 PM

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Suite B
Santa Rosa, California
95405-8536
Phone 707 523 7010
Fax 707 542 2328

Lago Fresca Apartments
4744 Hoen Ave. Santa Rosa, CA 95405

Building D Floor Plans- Level 2

LICENSED ARCHITECT
WARREN J. HEDGPETH
C-14601
10-09-2021
RENEWAL DATE
STATE OF CALIFORNIA

Revisions

Job Number
2016

Project Architect
Checker

Drawn By
Author

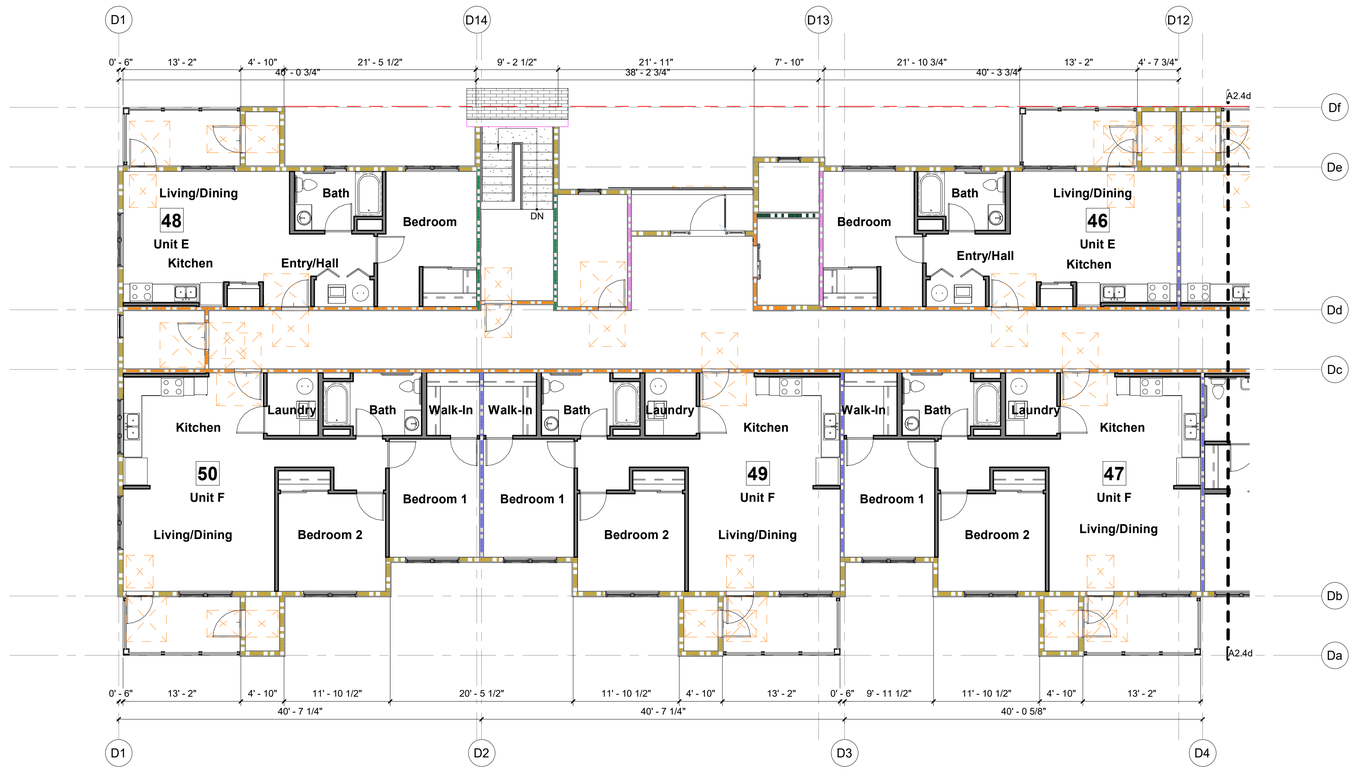
Date
May 5, 2021

Sheet
A2.4c

© Hedgpeth Architects



1 **Level D3 - East**
1/8" = 1'-0"



2 **Level D3 - West**
1/8" = 1'-0"

12/16/2021 7:27:26 PM

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Suite B
Santa Rosa, California
95405-8536
Phone 707 523 7010
Fax 707 542 2328

Lago Fresca Apartments
4744 Hoen Ave. Santa Rosa, CA 95405

Building D Floor Plans- Level 3

LICENSED ARCHITECT
WARREN J. HEDGPETH
C-14601
10-09-2021
RENEWAL DATE
STATE OF CALIFORNIA

Revisions

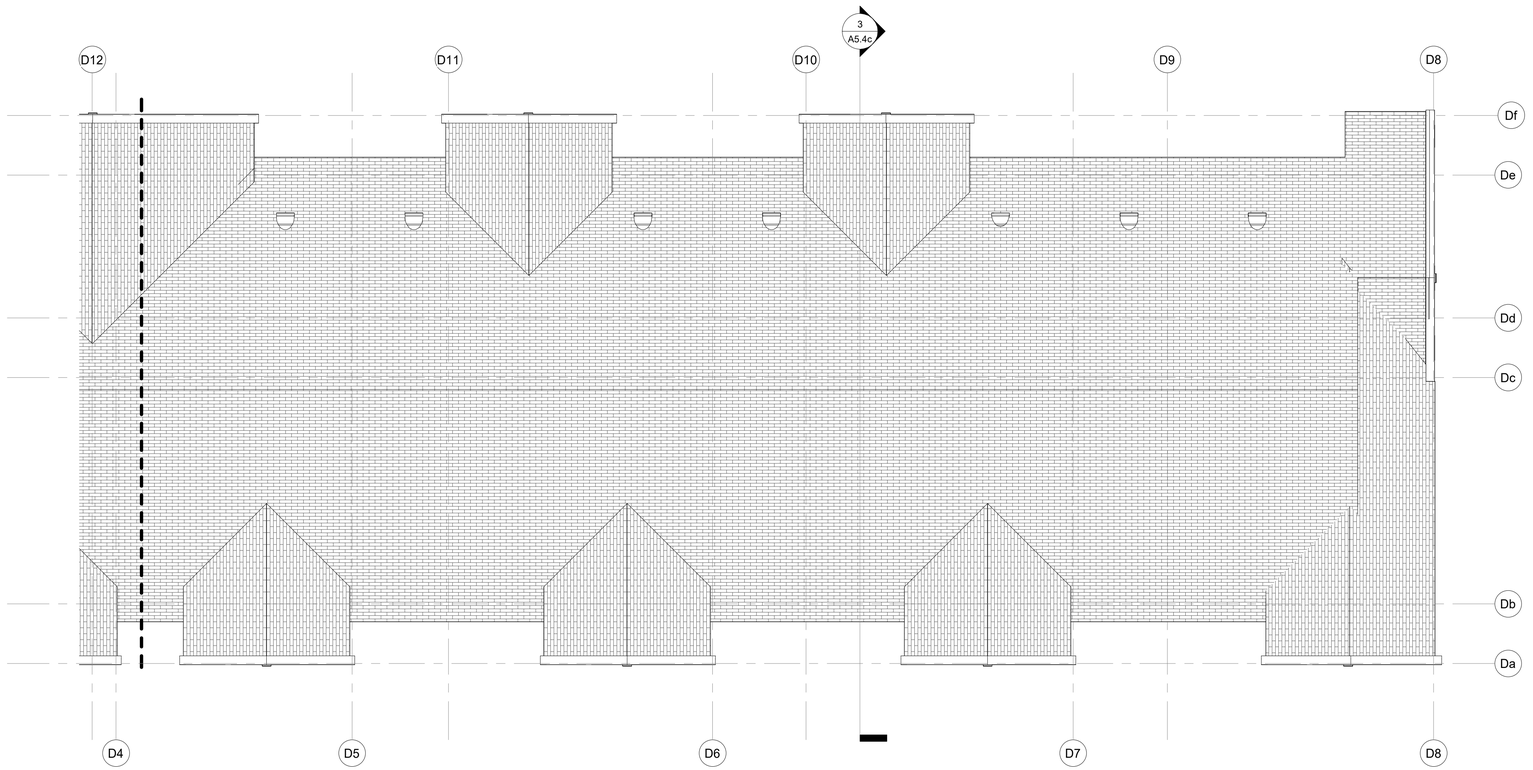
Job Number
2016

Project Architect
Checker

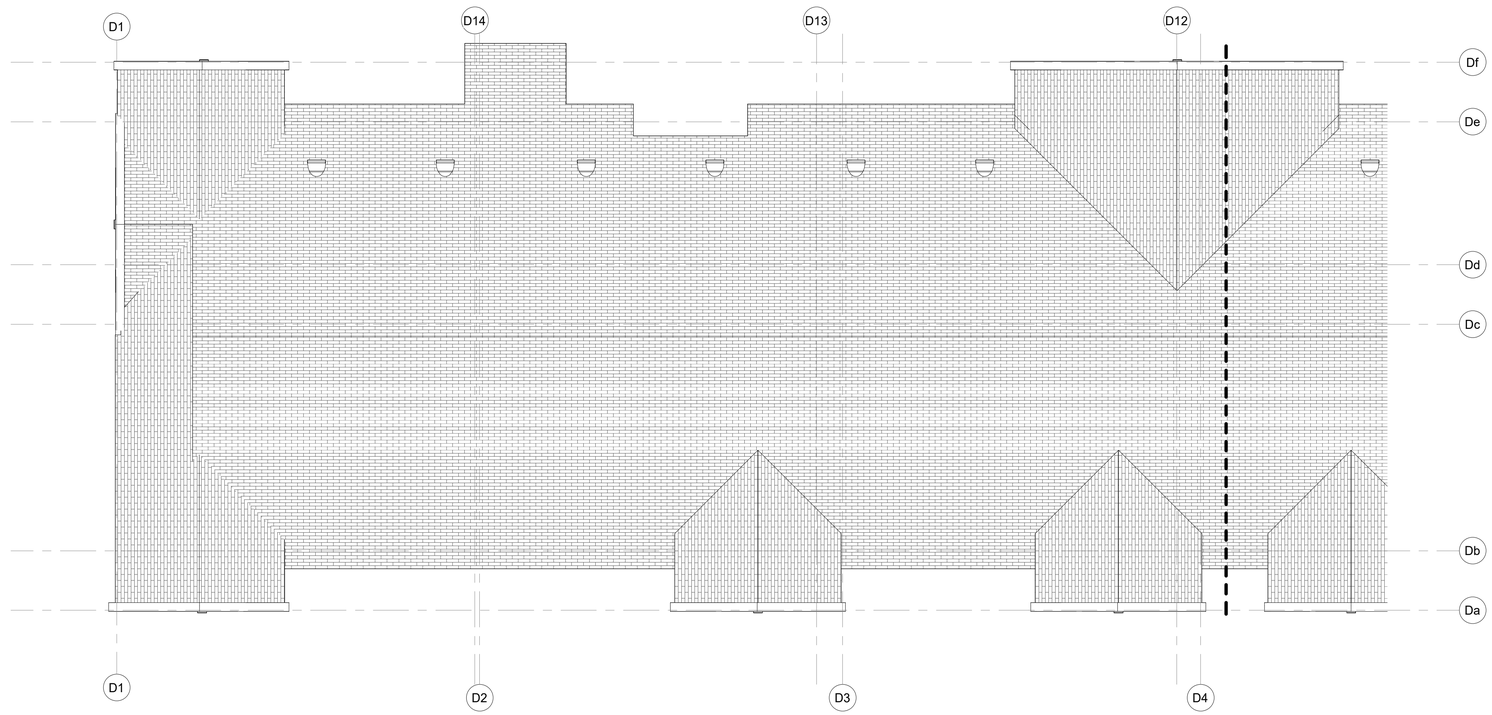
Drawn By
Author

Date
May 5, 2021

Sheet
A2.4d



1 **Roof D- East**
1/8" = 1'-0"



2 **Roof D- West**
1/8" = 1'-0"

12/16/2021 7:27:27 PM

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Suite B
Santa Rosa, California
95405-8536
Phone 707 523 7010
Fax 707 542 2328

Lago Fresca Apartments
4744 Hoen Ave. Santa Rosa, CA 95405

Building D Floor Plans- Roof

LICENSED ARCHITECT
WARREN J. HEDGPETH
C-14601
10-09-2021
RENEWAL DATE
STATE OF CALIFORNIA

Revisions

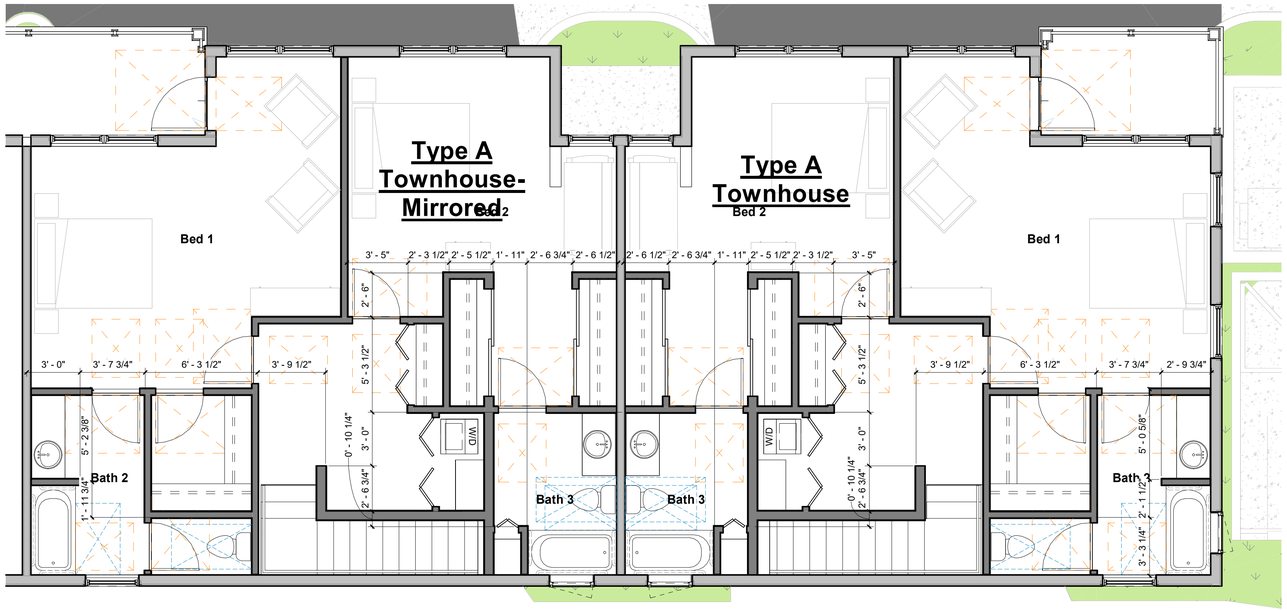
Job Number
2016

Project Architect
Checker

Drawn By
Author

Date
May 5, 2021

Sheet
A2.4e



1 **Type A Townhouse-Level 2**
1/4" = 1'-0"



2 **Type A Townhouse-Level 1**
1/4" = 1'-0"

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Suite B
Santa Rosa, California
95405-8536
Phone 707 523 7010
Fax 707 542 2328

Lago Fresca Apartments
4744 Hoen Ave. Santa Rosa, CA 95405

Unit Plans-BLDG 'A'

LICENSED ARCHITECT
WARREN J. HEDGPETH
C-14601
10-09-2021
RENEWAL DATE
STATE OF CALIFORNIA

Revisions

Job Number
2016

Project Architect
Checker

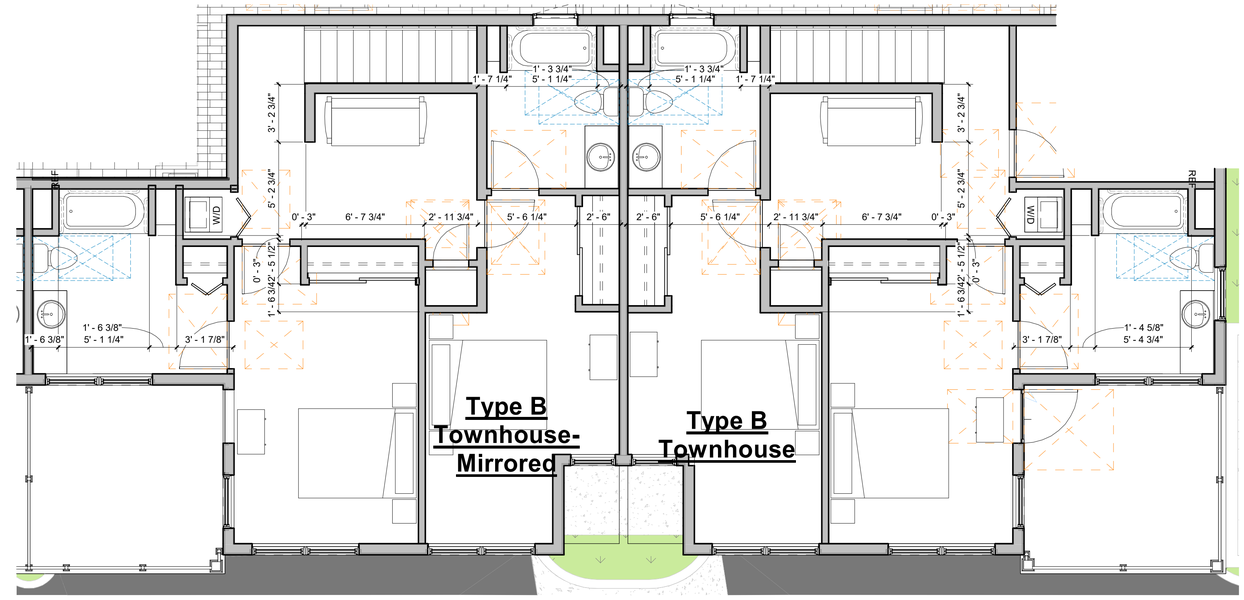
Drawn By
Author

Date
May 5, 2021

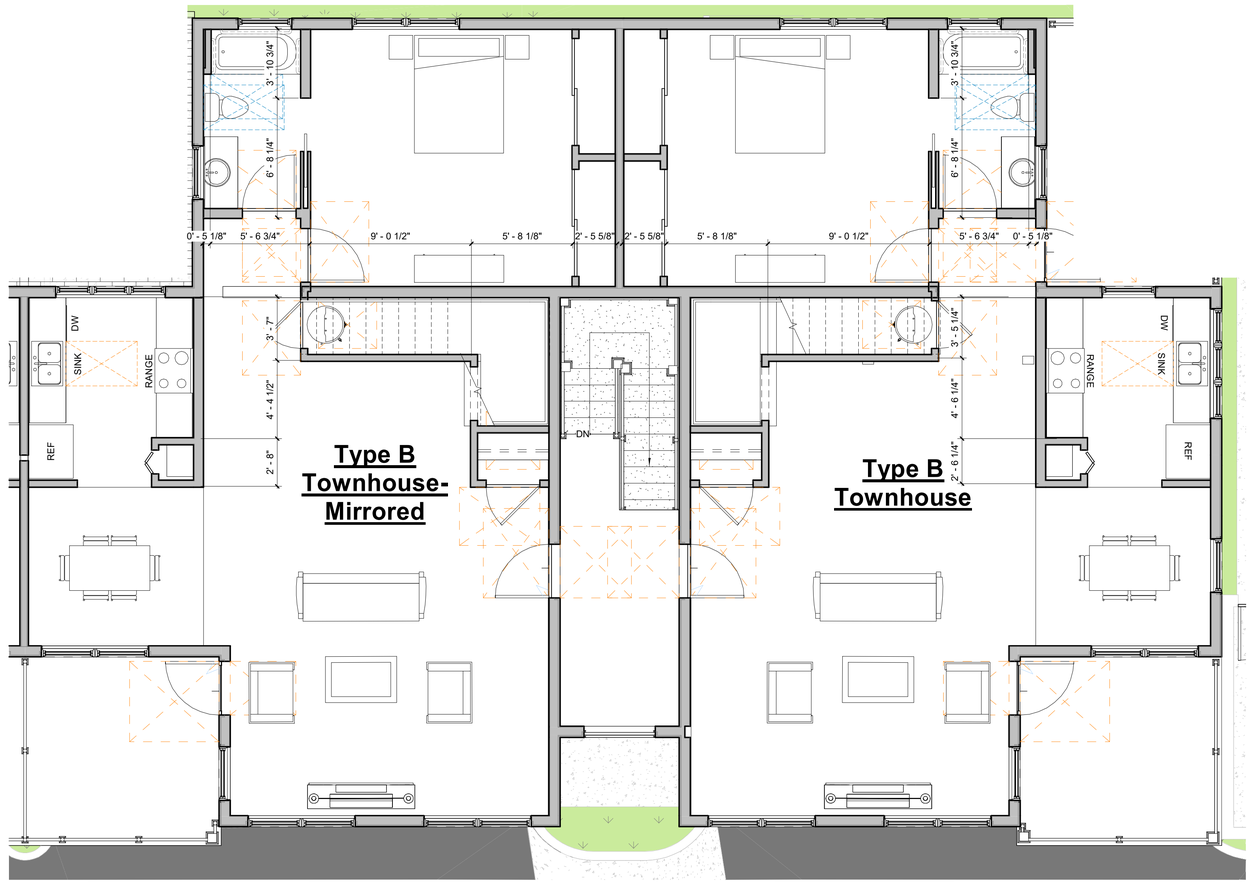
Sheet
A2.5a

12/16/2021 7:27:29 PM

© Hedgpeth Architects



2 **Type B Townhouse-Level 2**
1/4" = 1'-0"



1 **Type B Townhouse-Level 1**
1/4" = 1'-0"

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Suite B
Santa Rosa, California
95405-8536
Phone 707 523 7010
Fax 707 542 2328

Lago Fresca Apartments
4744 Hoen Ave. Santa Rosa, CA 95405

Unit Plans-BLDG 'B'

LICENSED ARCHITECT
WARREN J. HEDGPETH
C-14601
10-09-2021
RENEWAL DATE
STATE OF CALIFORNIA

Revisions

Job Number
2016

Project Architect
Checker

Drawn By
Author

Date
May 5, 2021

Sheet
A2.5b

12/16/2021 7:27:33 PM



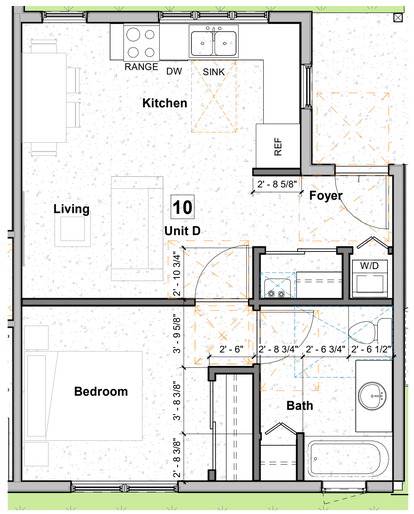
3 **Type C Flat-Affordable Mirrored**
1/4" = 1'-0"



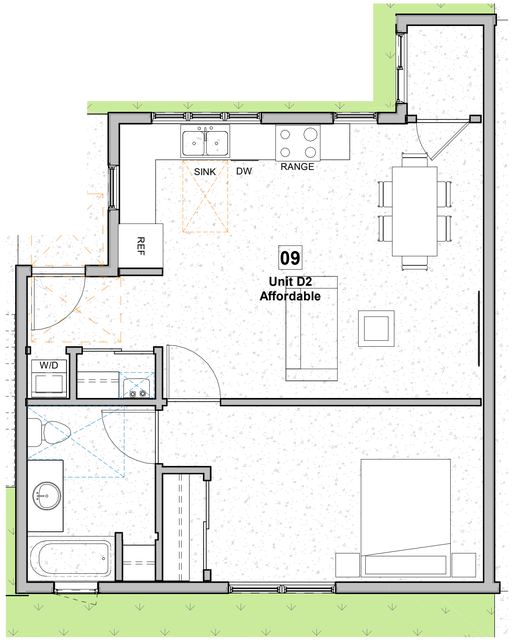
5 **Type C Flat-Affordable**
1/4" = 1'-0"



4 **Type C Flat-Market Rate**
1/4" = 1'-0"



2 **Type D Flat**
1/4" = 1'-0"



1 **Type D2 Flat**
1/4" = 1'-0"

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Suite B
Santa Rosa, California
95405-8536
Phone 707 523 7010
Fax 707 542 2328

Lago Fresca Apartments
4744 Hoen Ave. Santa Rosa, CA 95405

Unit Plans-BLDG 'C'

LICENSED ARCHITECT
WARREN J. HEDGPETH
C-14601
10-09-2021
RENEWAL DATE
STATE OF CALIFORNIA

Revisions

Job Number
2016

Project Architect
Checker

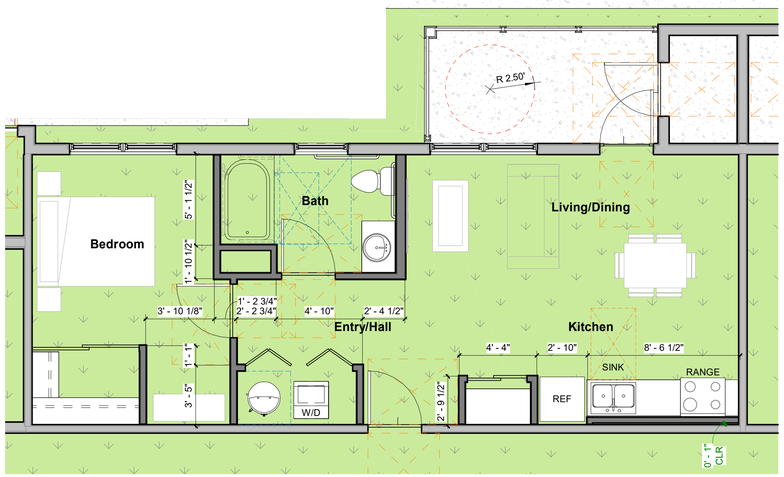
Drawn By
Author

Date
May 5, 2021

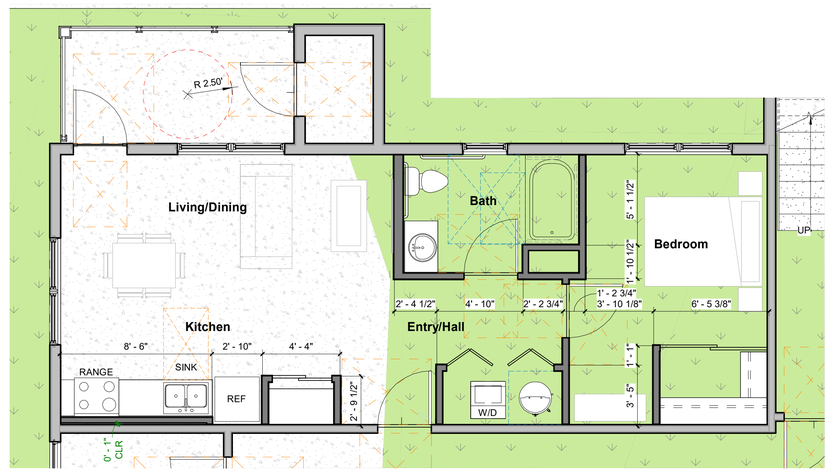
Sheet
A2.5c

12/16/2021 7:27:36 PM

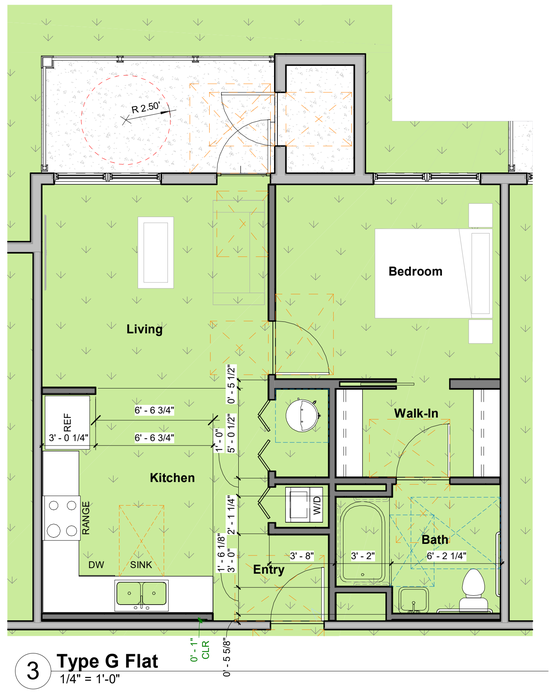
© Hedgpeth Architects



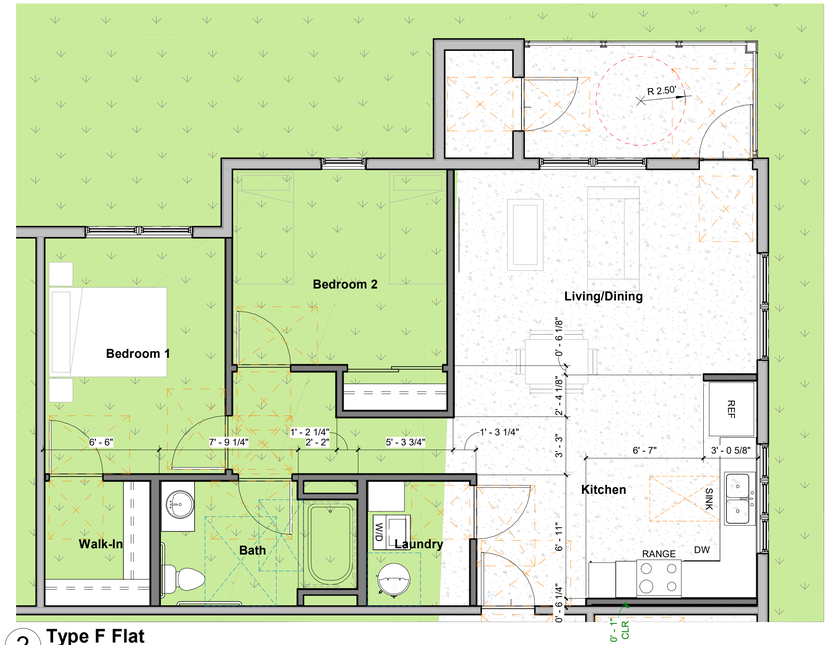
4 **Type E Flat**
1/4" = 1'-0"



1 **Type E Flat**
1/4" = 1'-0"



3 **Type G Flat**
1/4" = 1'-0"



2 **Type F Flat**
1/4" = 1'-0"

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Suite B
Santa Rosa, California
95405-8536
Phone 707 523 7010
Fax 707 542 2328

Lago Fresca Apartments
4744 Hoen Ave. Santa Rosa, CA 95405

Unit Plans- BLDG 'D'

LICENSED ARCHITECT
WARREN J. HEDGPETH
C-14601
10-09-2021
RENEWAL DATE
STATE OF CALIFORNIA

Revisions

Job Number
2016

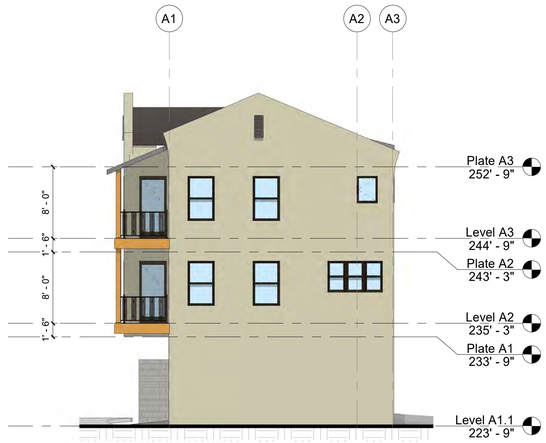
Project Architect
Checker

Drawn By
Author

Date
May 5, 2021

Sheet
A2.5d

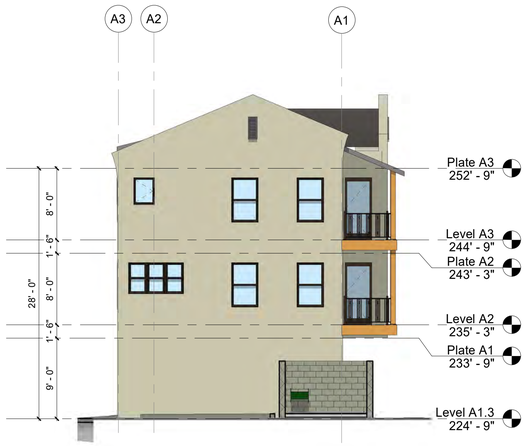
12/16/2021 7:27:38 PM



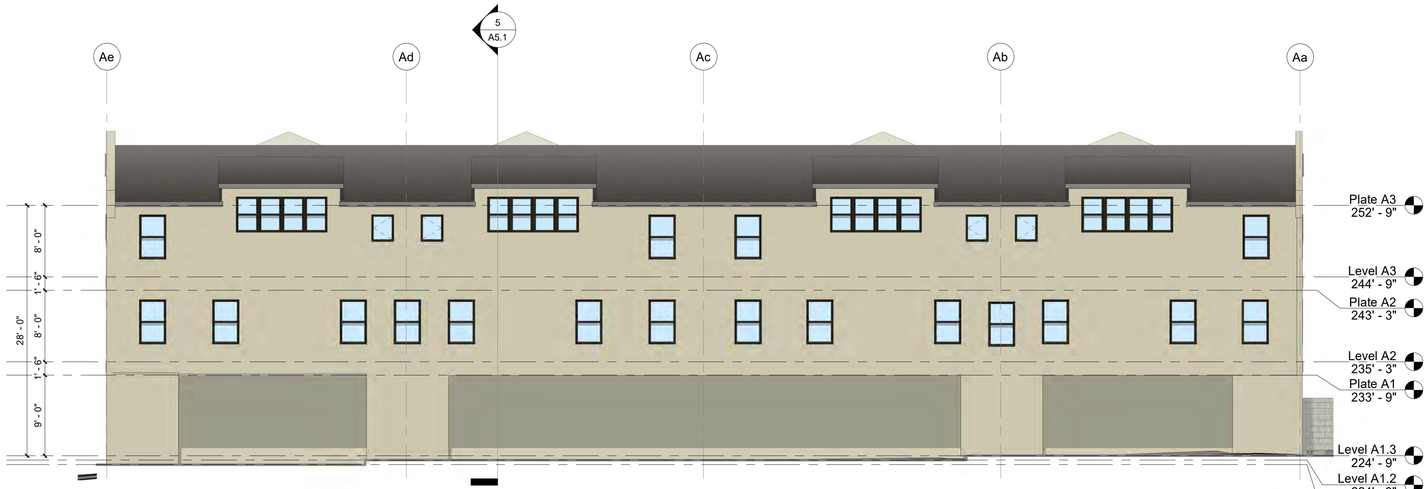
2 BLDG A - North Elevation
1/8" = 1'-0"



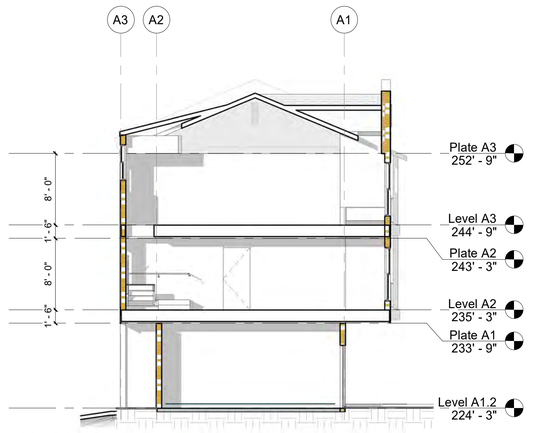
1 BLDG A - East Elevation
1/8" = 1'-0"



3 BLDG A - South Elevation
1/8" = 1'-0"



4 BLDG A - West Elevation
1/8" = 1'-0"



5 BLDG A - Cross Section
1/8" = 1'-0"

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Suite B
Santa Rosa, California
95405-8536
Phone 707 523 7010
Fax 707 542 2328

Lago Fresca Apartments

4744 Hoen Ave. Santa Rosa, CA 95405

Elevations - BLDG 'A'

LICENSED ARCHITECT
WARREN J. HEDGPETH
C-14601
10-09-2021
RENEWAL DATE
STATE OF CALIFORNIA

Revisions

Job Number
2016

Project Architect
Checker

Drawn By
Author

Date
May 5, 2021

Sheet
A5.1

12/16/2021 7:27:46 PM



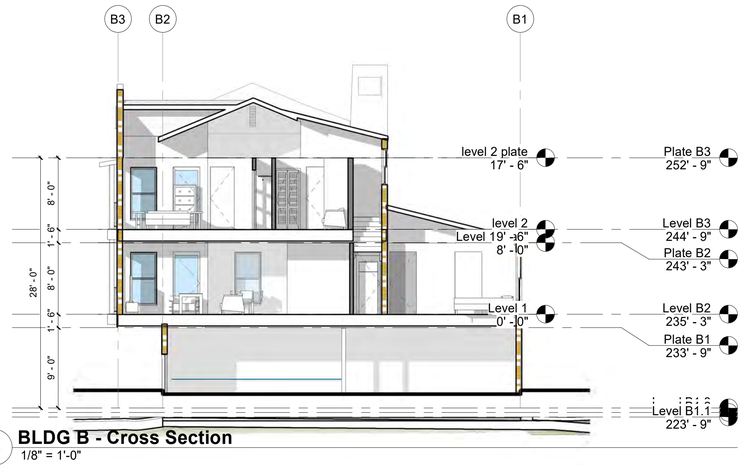
2 BLDG B - North Elevation
1/8" = 1'-0"



1 BLDG B - East Elevation
1/8" = 1'-0"

3 BLDG B - South Elevation
1/8" = 1'-0"

4 BLDG B - West Elevation
1/8" = 1'-0"



5 BLDG B - Cross Section
1/8" = 1'-0"

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Suite B
Santa Rosa, California
95405-8536
Phone 707 523 7010
Fax 707 542 2328

Lago Fresca Apartments
4744 Hoen Ave. Santa Rosa, CA 95405

Elevations - BLDG 'B'

LICENSED ARCHITECT ★ WARREN J. HEDGPETH ★ C-14601 10-09-2021 RENEWAL DATE STATE OF CALIFORNIA

Revisions

Job Number
2016

Project Architect
Checker

Drawn By
Author

Date
May 5, 2021

Sheet
A5.2

12/16/2021 7:28:06 PM

© Hedgpeth Architects



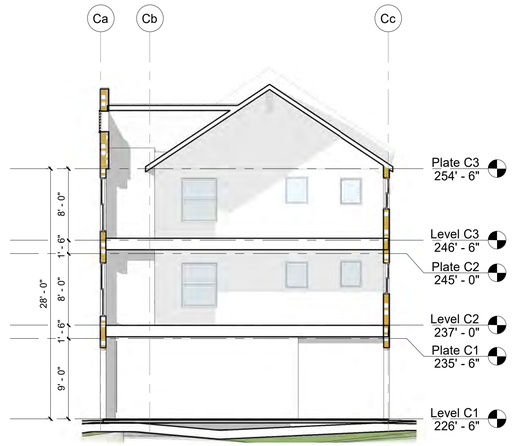
1 **BLDG C - East Elevation**
1/8" = 1'-0"



2 **BLDG C - North Elevation**
1/8" = 1'-0"

4 **BLDG C - West Elevation**
1/8" = 1'-0"

3 **BLDG C - South Elevation**
1/8" = 1'-0"



5 **BLDG C - Cross Section**
1/8" = 1'-0"

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Suite B
Santa Rosa, California
95405-8536
Phone 707 523 7010
Fax 707 542 2328

Lago Fresca Apartments
4744 Hoen Ave. Santa Rosa, CA 95405

Elevations - BLDG 'C'

LICENSED ARCHITECT
WARREN J. HEDGPETH
C-14601
10-09-2021
RENEWAL DATE
STATE OF CALIFORNIA

Revisions

Job Number
2016

Project Architect
Checker

Drawn By
Author

Date
May 5, 2021

Sheet
A5.3

12/16/2021 7:28:16 PM



2 **BLDG D - North Elevation-East**
1/8" = 1'-0"



1 **BLDG D - North Elevation -West**
1/8" = 1'-0"

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Suite B
Santa Rosa, California
95405-8536
Phone 707 523 7010
Fax 707 542 2328

Lago Fresca Apartments
4744 Hoen Ave. Santa Rosa, CA 95405

Elevations - BLDG 'D'

LICENSED ARCHITECT
WARREN J. HEDGPETH
C-14601
10-09-2021
RENEWAL DATE
STATE OF CALIFORNIA

Revisions

Job Number
2016

Project Architect
Checker

Drawn By
Author

Date
May 5, 2021

Sheet
A5.4a

12/16/2021 7:28:22 PM

© Hedgpeth Architects



1 **BLDG D - South Elevation -East**
1/8" = 1'-0"



2 **BLDG D - South Elevation -West**
1/8" = 1'-0"

12/16/2021 7:28:30 PM

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Suite B
Santa Rosa, California
95405-8536
Phone 707 523 7010
Fax 707 542 2328

Lago Fresca Apartments
4744 Hoen Ave. Santa Rosa, CA 95405

Elevations - BLDG 'D'

LICENSED ARCHITECT
WARREN J. HEDGPETH
C-14601
10-09-2021
RENEWAL DATE
STATE OF CALIFORNIA

Revisions

Job Number
2016

Project Architect
Checker

Drawn By
Author

Date
May 5, 2021

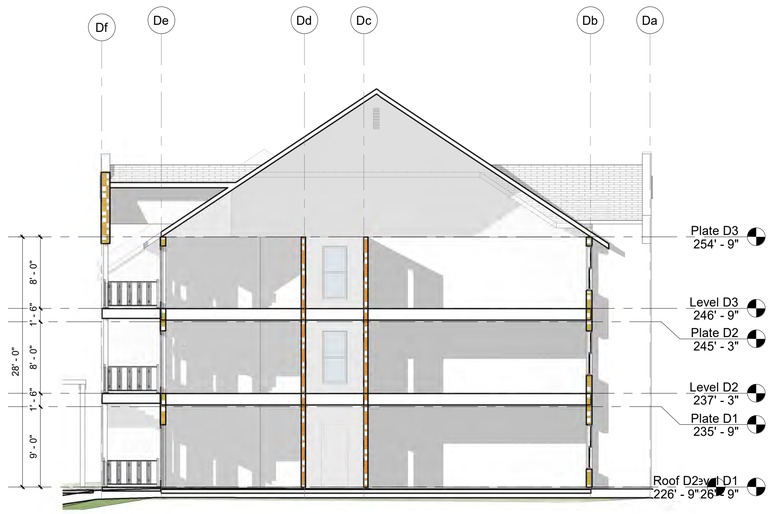
Sheet
A5.4b



1 **BLDG D - East Elevation**
1/8" = 1'-0"



2 **BLDG D - West Elevation**
1/8" = 1'-0"



3 **BLDG D - Cross Section**
1/8" = 1'-0"

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Suite B
Santa Rosa, California
95405-8536
Phone 707 523 7010
Fax 707 542 2328

Lago Fresca Apartments
4744 Hoen Ave. Santa Rosa, CA 95405

Elevations - BLDG 'D'

LICENSED ARCHITECT
WARREN J. HEDGPETH
C-14601
10-09-2021
RENEWAL DATE
STATE OF CALIFORNIA

Revisions

Job Number
2016

Project Architect
Checker

Drawn By
Author

Date
May 5, 2021

Sheet
A5.4c

12/16/2021 7:28:41 PM



BIRD'S EYE VIEW FROM HOEN / SUMMERFIELD



GROUND VIEW FROM COURTYARD



GROUND VIEW FROM HOEN AVENUE



GROUND VIEW FROM SUMMERFIELD ROAD

© Hedgpeth Architects

Hedgpeth
ARCHITECTS

2321 Bethards Drive
Suite B
Santa Rosa, California
95405-8536
Phone 707 523 7010
Fax 707 542 2328

Lago Fresca Apartments

4744 Hoen Ave. Santa Rosa, CA 95405

Perspective Views

LICENSED ARCHITECT
WARREN J. HEGDETH
C-14601
10-09-2021
RENEWAL DATE
STATE OF CALIFORNIA

Revisions

Job Number
2016

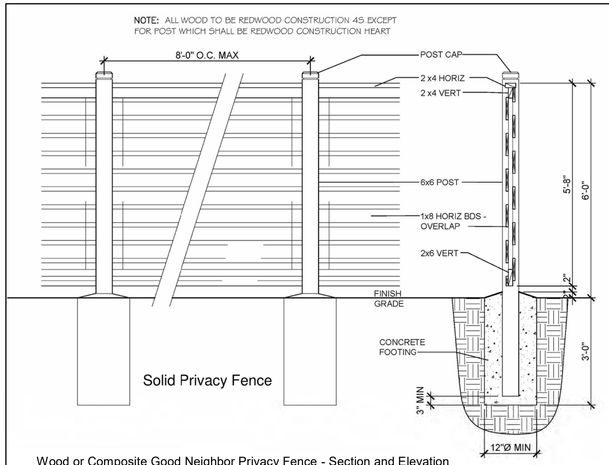
Project Architect
Checker

Drawn By
Author

Date
May 5, 2021

Sheet
A5.5

12/16/2021 7:28:41 PM



Wood or Composite Good Neighbor Privacy Fence - Section and Elevation



Luminis SQ500.Syrios Square LED Wall Down Light



Luminis Scirocco Wall Sconce SR115T



Lithonia LED ADA
D Series Area Light



Lithonia LED ADA
D Series Bollard



Lithonia LED ADA
D Series Wall Pack



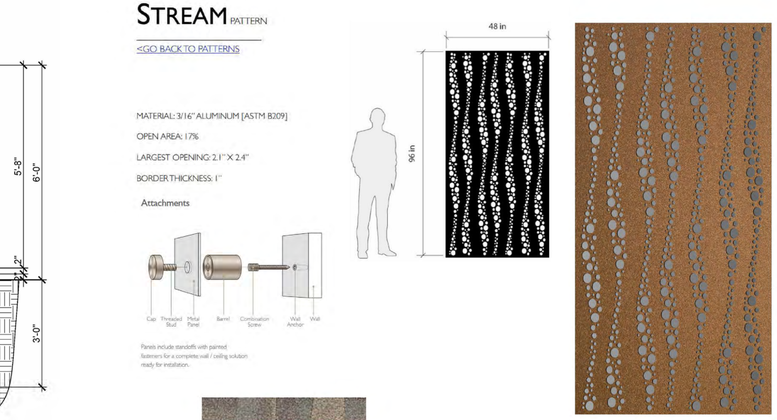
Certainteed Composition Shingle
Color - Weathered Wood



Exterior Aluminum Railing
at Patios and Balconies - representative view



Fiberon Composite Decking & Rim Joist -
Wildwood "Meranti" or equal



Moz Metals and Architectural Products Laser Cut Aluminum Screens
Pattern - "Stream"
Color - Rusted Copper

La Habra Allegro Cement Plaster
830 Clay (40 Base 200
Santa Barbara Finish



Dunn Edwards "Moss Stone"
Eaves, Fascia, Flush Doors, Garage Doors



Dunn Edwards
"Espresso Macchiato"
Garage Doors, Railings and
Guardrails, Roof and Attic Vents,
Patio and Entry Doors, Windows



1 **BLDG C - South Elevation Colors and Materials**
3/32" = 1'-0"



2 **BLDG A - East Elevation Colors and Materials**
3/32" = 1'-0"

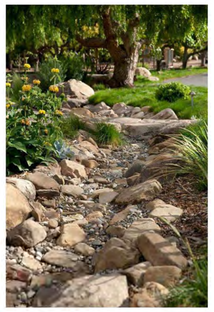


Entry Door System - Aluminum Bldgs. A, B, C, D

Single Hung
Window



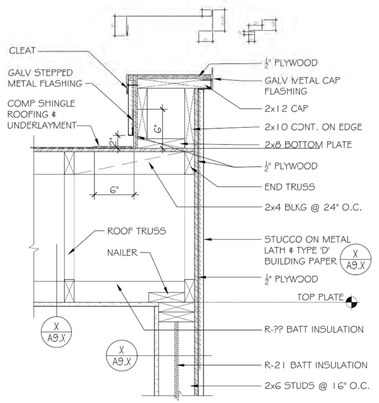
Casement
Window



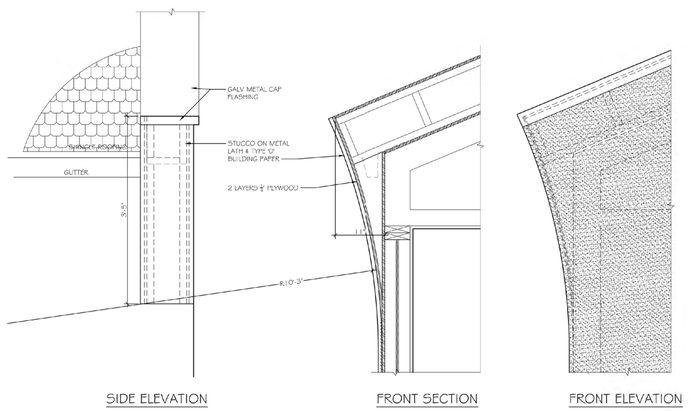
Dry Creek Bed and Bioretention



Olive Trees Flanking Entry and Path



Cap Flashing at Sloped Parapet Gable End Wall - Detail



Cove at Stucco Sloped Parapet Gable End Wall - Elevation and Section Views



Lemon Arbor
Wall Fountain
Arched Steel Arbor at Summerfield Road Pedestrian Entrance to Lago Fresca

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Suite B
Santa Rosa, California
95405-8536
Phone 707 523 7010
Fax 707 542 2328

Lago Fresca Apartments
4744 Hoen Ave. Santa Rosa, CA 95405

Colors and Materials

LICENSED ARCHITECT
WARREN J. HEDGPETH
C-14601
10-09-2021
RENEWAL DATE
STATE OF CALIFORNIA

Revisions

Job Number
2016

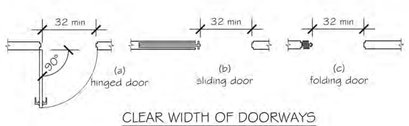
Project Architect
Checker

Drawn By
Author

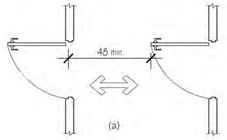
Date
May 5, 2021

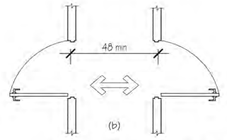
Sheet
A5.6

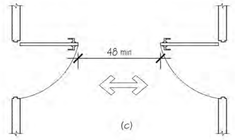
12/16/2021 7:28:45 PM



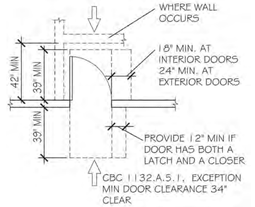
CLEAR WIDTH OF DOORWAYS

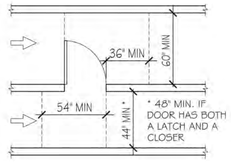


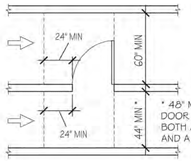


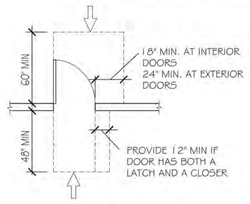


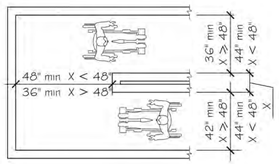
DOORS AND GATES IN SERIES

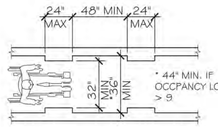


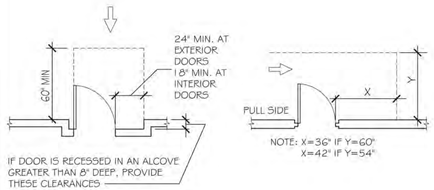


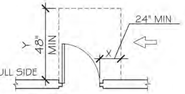


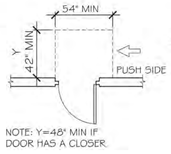


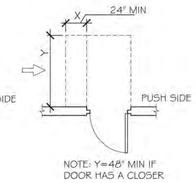


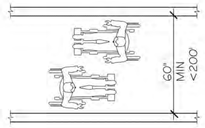


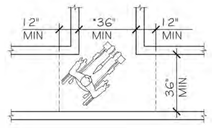






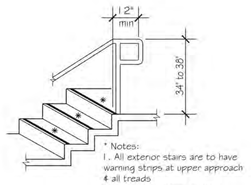




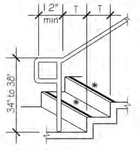


6 DOOR and CORRIDOR CLEARANCES

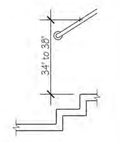
SCALE: NTS



Top Handrail Extension at Stairs



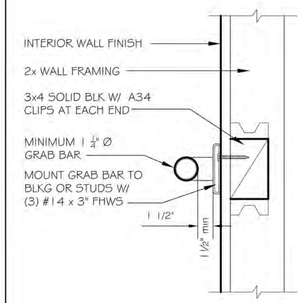
Bottom Handrail Extension at Stairs



Handrail at Stairs within Dwelling Units

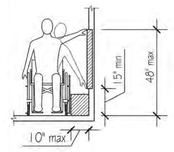
7 HANDRAIL EXTENSIONS

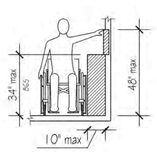
SCALE: NTS



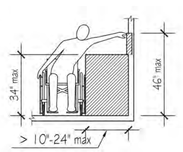
5 GRAB BAR ATTACHMENT

SCALE: NTS

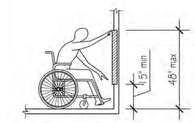


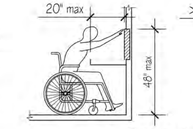


SIDE REACH

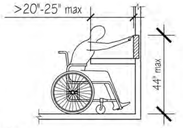


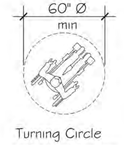






FRONT REACH



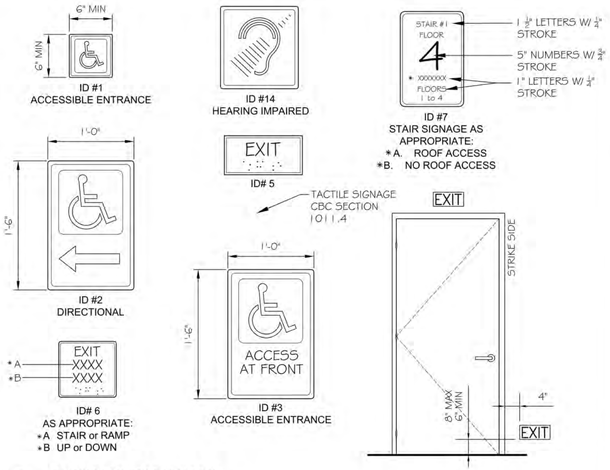


Turning Circle

TURNING SPACE

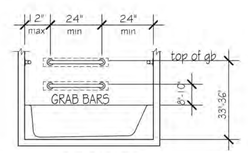
3 ACCESSIBLE REACH

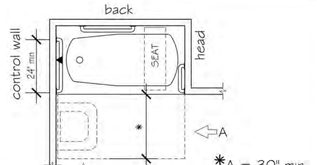
SCALE: NTS

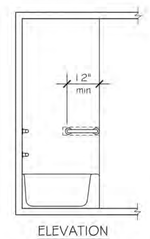


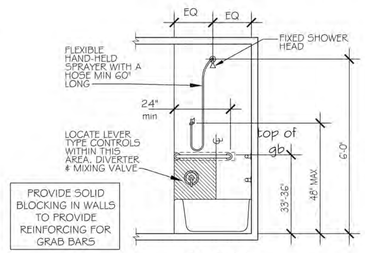
1 ACCESSIBILITY SIGNAGE

SCALE: NTS



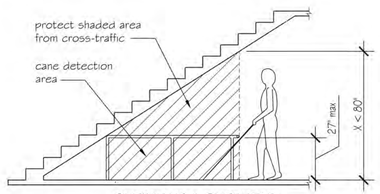




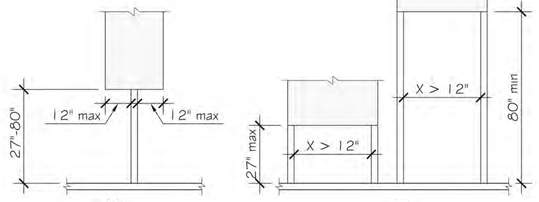


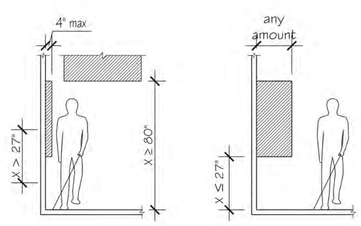
2 ACCESSIBLE TUB/SHOWER

SCALE: NTS

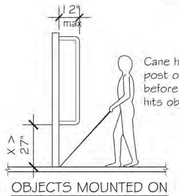


OVERHANG & OVERHEAD PROTECTION

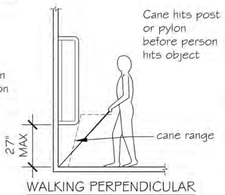




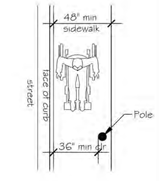
PROTRUDING OBJECTS

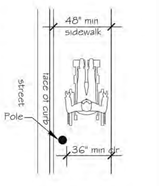


OBJECTS MOUNTED ON POLES OR PYLONS



WALKING PERPENDICULAR TO WALL

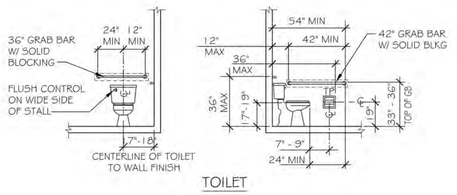




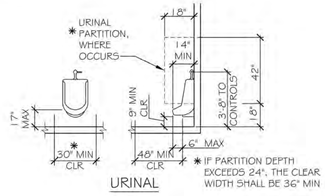
EXTERIOR SIDEWALKS

8 PROTRUDING OBJECTS

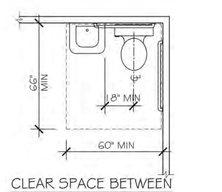
SCALE: NTS



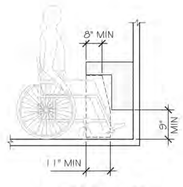
TOILET



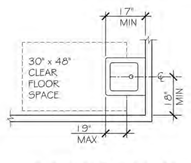
URINAL



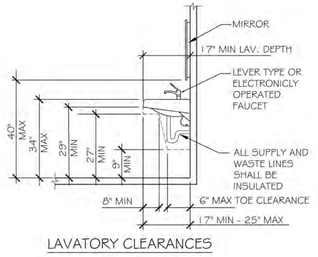
CLEAR SPACE BETWEEN LAVATORY & TOILET



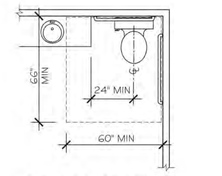
LAVATORY KNEE SPACE



CLEAR FLOOR SPACE AT LAVATORIES



LAVATORY CLEARANCES



CLEAR SPACE BETWEEN VANITY & TOILET

4 ACCESSIBLE SIGNAGE NOTES

SCALE: NTS

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Santa Rosa, California
95405
Phone 707 523 7010
Fax 707 542 2328

LARGO FRESCA APARTMENTS

4744 HOEN AVENUE
SANTA ROSA, CALIFORNIA 95405

ACCESSIBILITY DETAILS AND DIMENSIONS

LICENSED ARCHITECT
WARREN J. HEDGPETH
No. C 14601
REN. 10-21
STATE OF CALIFORNIA

Revisions

Job Number
2016

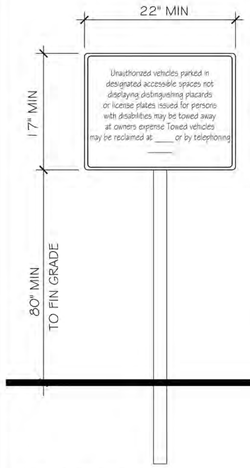
Project Designer
INGRID ANDERSON

Drawn By
RGB

Date
October 19, 2021

Sheet
A9.1
of -

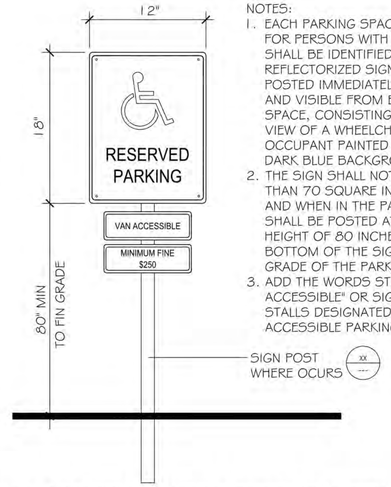
NOT FOR CONSTRUCTION



NOTES:
1. AN ADDITIONAL SIGN SHALL BE POSTED IN A CONSPICUOUS PLACE AT EITHER EACH ENTRANCE TO AN OFF-STREET PARKING FACILITY OR IMMEDIATELY ADJACENT TO ON-STREET ACCESSIBLE PARKING AND VISIBLE FROM EACH PARKING SPACE.
2. THE ADDITIONAL SIGN SHALL NOT BE LESS THAN 17" WIDE BY 22" HIGH.
3. BLANK SPACE ARE TO BE FILLED IN WITH APPROPRIATE INFORMATION AS A PERMANENT PART OF THE SIGN.
4. REFER TO CBC SECTION 11B-502.8.2 FOR OTHER SPECIFIC REQUIREMENTS, DETAILS AND INSTALLATION.

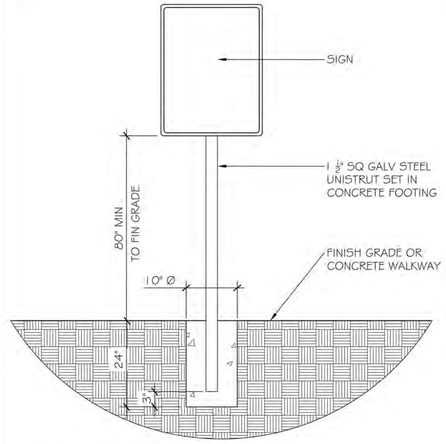
"UNAUTHORIZED VEHICLES PARKED IN DESIGNATED ACCESSIBLE SPACES NOT DISPLAYING DISTINGUISHING PLACARDS OR LICENSE PLATES ISSUED FOR PERSONS WITH DISABILITIES WILL BE TOWED AWAY AT OWNERS EXPENSE TOWED VEHICLES MAY BE RECLAIMED AT ____ OR BY TELEPHONING ____"

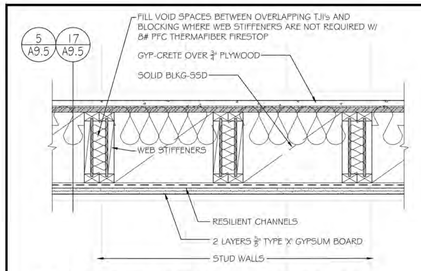
11 TOW-AWAY SIGN
SCALE: NTS



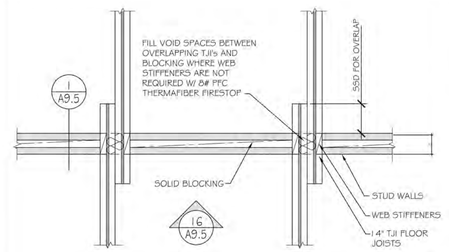
NOTES:
1. EACH PARKING SPACE RESERVED FOR PERSONS WITH DISABILITIES SHALL BE IDENTIFIED BY A REFLECTORIZED SIGN PERMANENTLY POSTED IMMEDIATELY ADJACENT TO AND VISIBLE FROM EACH STALL OR SPACE, CONSISTING OF A PROFILE VIEW OF A WHEELCHAIR WITH OCCUPANT PAINTED IN WHITE ON A DARK BLUE BACKGROUND.
2. THE SIGN SHALL NOT BE SMALLER THAN 70 SQUARE INCHES IN AREA AND WHEN IN THE PATH OF TRAVEL, SHALL BE POSTED AT A MINIMUM HEIGHT OF 80 INCHES FROM THE BOTTOM OF THE SIGN TO THE FINISH GRADE OF THE PARKING SPACE.
3. ADD THE WORDS STATING: "VAN ACCESSIBLE" OR SIGN AS SHOWN AT STALLS DESIGNATED FOR VAN ACCESSIBLE PARKING.

8 ACCESSIBLE/VAN VEHICLE PARKING STALL SIGN
SCALE: NTS

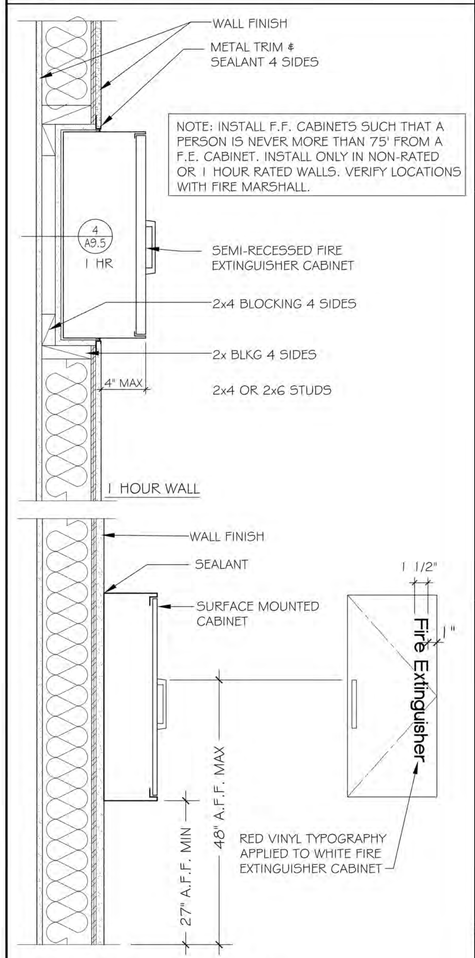

SIGN
1 ¾" SQ GALV STEEL UNISTRUT SET IN CONCRETE FOOTING
80" MIN TO FIN GRADE
FINISH GRADE OR CONCRETE WALKWAY
10" Ø
22"
4"
4"
4



16 TJI FLOOR JOIST LAP AT WALLS - SECTION
SCALE: 1" = 1'-0"



17 TJI FLOOR JOIST LAP AT WALLS - PLAN
SCALE: 1" = 1'-0"

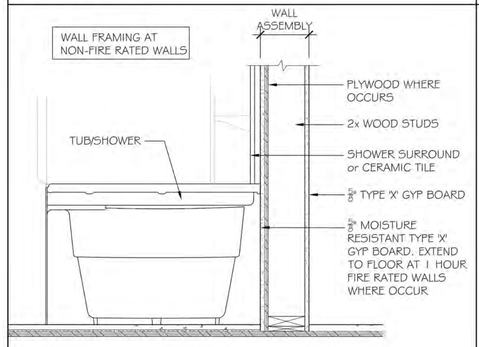


18 FIRE EXTINGUISHER CABINETS
SCALE: NTS

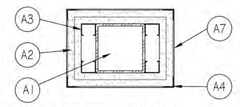
12 NOT USED
SCALE: NTS

13 NOT USED
SCALE: NTS

14 NOT USED
SCALE: NTS



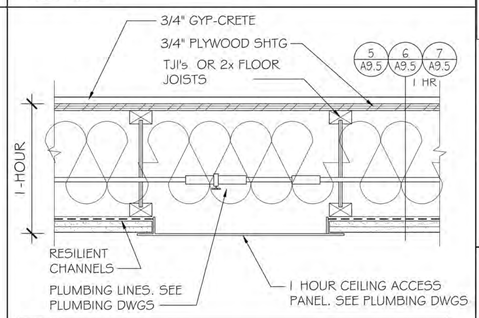
15 TUB/SHOWER AT 1 HOUR WALL
SCALE: NTS



1-HOUR RATED TUBE STEEL COLUMN
UL DESIGN NUMBER X528

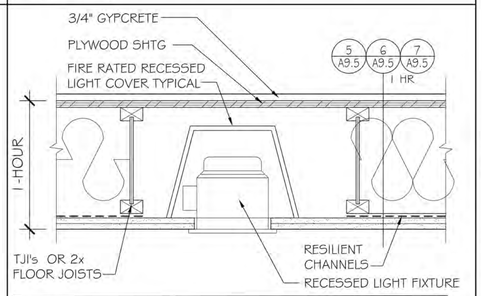
A1: 5 ½" x 5 ½" HSS TUBE STEEL COLUMN
A2: (2) LAYERS ⅝" TYPE 'X' GLASS FACED GYPSUM SHEATHING. FIRST LAYER - ATTACH WALLBOARD TO STEEL STUDS W/ #6 x1 ¼" PHILLIPS HEAD, SELF-TAPPING, DOUBLE LEAD SCREWS @ 24" O.C.
SECOND LAYER - ATTACH WALLBOARD TO STEEL STUDS W/ #6 x 2 ¼" OF THE SAME TYPE SPACED @ 12" O.C.
A3: STEEL STUDS-1 ⅝" W x 1 ⅝" 4D 1 ⅝" LEGS HAVING A ¼" FOLDED FLANGE, 25 GA GALV. STEEL. LENGTH TO BE " LESS THAN THE ASSEMBLY HEIGHT.
A4: 28 GA METAL CORNER BEAD W/ 1 1/4" LEGS TO BE ATTACHED TO THE GYPSUM BOARD W/ #6 x 1" SCREWS @ 12" O.C. MAX.
A5: No. 18 SWG STEEL WIRE SPACED @ 24" O.C. USED W/ THE SECOND LAYER OF WALLBOARD. (NOT SHOWN)
A6: JOINT COMPOUND APPLIED OVER CORNER BEADS TO A THICKNESS OF 1/16".

8 1 HOUR TUBE STEEL COLUMN ASSEMBLY
SCALE: NTS



NOTES:
1. PROVIDE FIRE CAULKING AT ALL PENETRATIONS THROUGH LINER.
2. ACCESS PANEL CERTIFICATION UL # 20100329-R10806A.

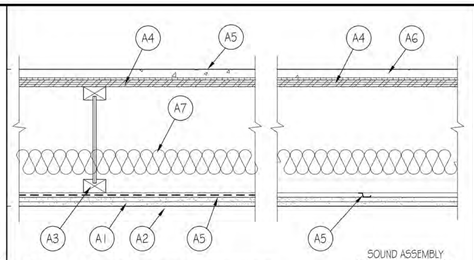
9 1 HOUR CEILING ACCESS PANEL
SCALE: NTS



NOTES:
1. RECESSED LIGHT FIXTURE IN 1 HOUR FIRE RATED ENCLOSURE. UL R25019
2. PROVIDE FIRE CAULKING AT ALL PENETRATIONS THROUGH LINER.

10 1 HOUR RECESSED LIGHT FIXTURE
SCALE: NTS

11 NOT USED
SCALE: NTS

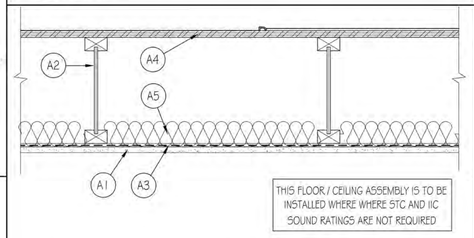


1-HOUR FIRE FLOOR/CEILING ASSEMBLY
ICC-ESR EVALUATION REPORT #ESR-2994
ASSEMBLY B, OPTION 2

SOUND ASSEMBLY
STC 55 VINYL PLANK FLOORING
STC 50 CARPET & PAD
IIC 54 CARPET & PAD

A1. BASE LAYER - ⅝" TYPE 'X' GYPSUM BOARD W/ 1" TYPE 'S' SCREWS @ 12" O.C.
A2. FACE LAYER - ⅝" TYPE 'X" GYPSUM BOARD W/ 1 ⅝" TYPE 'S' SCREWS @ 12" O.C. @ JOINTS & INTERMEDIATE JOISTS & 1 ¼" TYPE 'G' DRYWALL SCREWS @ 12" O.C. IN FIELD & 8" O.C. @ BUTT JOINTS. 1 ¼" TYPE 'G' SCREWS MUST BE SPACED @ 8" O.C. & 6" O.C. FROM EACH SIDE OF TRANSVERSE JOINT OF THE SECOND LAYER. FINISH W/ JOINT TAPE & COMPOUND.
A3. "TJI" WOOD FLOOR JOISTS.
A4. ¾" T & G EXTERIOR GRADE PLYWOOD FLOOR SHEATHING @ RIGHT ANGLES TO JOISTS. APPLY ADHESIVE TO TOP CHORD OF TRUSS PRIOR TO PLACING SHEATHING. ALL BUTT JOINTS MUST BE LOCATED OVER FRAMING MEMBERS. SEE STRUCTURAL FOR ATTACHMENTS. FILL VOIDS & CRACKS TO PREPARE FOR GYP-CRETE INSTALLATION.
A5. RESILIENT CHANNELS (WHEN JOISTS @ 24" O.C.) or 24" O.C. (WHEN JOISTS @ 16" O.C.) ATTACHED RIGHT ANGLES TO JOISTS W/ 1" LONG TYPE 'S' SCREWS.
A6. ¾" THICK GYP-CRETE TOPPING OVER ¼" ACOUSTICAL MAT. EXPANSION JOINTS IN ALL TYPES OF WORK SHALL BE BROUGHT THROUGH THE UNDERLAYMENT.
A7. MINIMUM 3 ½" ACOUSTIC INSULATION BETWEEN HABITABLE UNITS or R-19 THERMAL INSULATION OVER NON-HABITABLE or UNCONDITIONED ROOMS or 5 PACES.

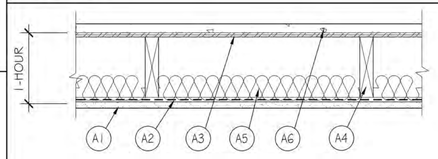
5 1 HOUR FLOOR/CEILING ASSEMBLY - TJI's
SCALE: NTS



1-HOUR FIRE FLOOR/CEILING ASSEMBLY
ICC-ESR-1153, ASSEMBLY F

A1. ⅝" TYPE 'X' GYPSUM BOARD W/ 1" TYPE 'W' or 'S' SCREWS @ 24" O.C. IN FIELD & 8" O.C @ BUTT JOINTS.
A2. 14" DEEP "TJI" WOOD FLOOR JOISTS.
A3. RESILIENT CHANNELS. SPACE @ 16" O.C. (WHEN JOISTS @ 24" O.C.) or 24" O.C. (WHEN JOISTS @ 16" O.C.) W/ 1 ⅝" TYPE 'S' DRYWALL SCREWS. TWO CHANNELS MUST BE PROVIDED @ EACH GYPSUM BOARD BUTT JOINT & EXTEND TO THE NEXT JOIST BEYOND THE LONGITUDINAL JOINTS.
A4. ¾" T & G EXTERIOR GRADE PLYWOOD FLOOR SHEATHING @ RIGHT ANGLES TO JOISTS W/ 10d COMMON NAILS @ MAXIMUM 6" O.C. ALONG BOUNDRY & EDGES and 12' O.C IN FIELD.- SEE STRUCTURAL FOR ATTACHMENT.
A5. MINIMUM 1 ½" MINERAL WOOL, MINIMUM 2.5 PCF.

6 1 HOUR FLOOR/CEILING ASSEMBLY - TJI's
SCALE: NTS

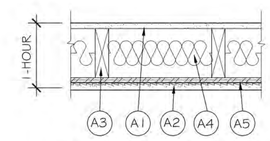


1 - HOUR FIRE FLOOR / CEILING ASSEMBLY
GYPSUM ASSOCIATION FILE # FC 5508

A1. ⅝" TYPE 'X' GYPSUM BOARD W/ 1" TYPE 'S' DRYWALL APPLIED @ RIGHT ANGLES TO RESILIENT CHANNELS 12" O.C. W/ 1" TYPE 'S' @ 8" O.C. @ END JOINTS LOCATED MIDWAY BETWEEN CONTINUOUS CHANNELS and ATTACHED TO ADDITIONAL PIECES OF CHANNEL 60" LONG W/ SCREWS @ 8" O.C.
A2. RESILIENT CHANNELS APPLIED @ RIGHT ANGLES TO JOISTS (WHEN JOISTS @ 24" O.C.) or 24" O.C. (WHEN JOISTS @ 16" O.C.) W/ 1" TYPE 'S' DRYWALL SCREWS.
A3. ¾" T&G EXTERIOR GRADE PLYWOOD SHEATHING GLUE APPLIED @ RIGHT ANGLES TO TOP OF JOISTS. SSD FOR ATTACHMENTS.
A4. MINIMUM 2x10 JOISTS @ 24" O.C.
A5. MINIMUM 3 ½" GLASS or MINERAL FIBER INSULATION LOOSE-LAID ON RESILIENT CHANNELS.
A6. MINIMUM ¾" GYP-CRETE OVER ¼" ACOUSTICAL MAT.

THIS FLOOR / CEILING ASSEMBLY IS TO BE INSTALLED WHERE WHERE STC AND IIC SOUND RATINGS ARE NOT REQUIRED.

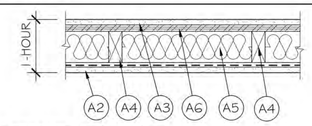
7 1 HOUR FLOOR/CEILING ASSEMBLY - 2x JOISTS
SCALE: NTS



1 HOUR FIRE RATED EXTERIOR WALL
CBC TABLE 721.1(2), ITEM NO. 15-1.3

A1. ⅝" TYPE 'X' INTERIOR GYPSUM BOARD APPLIED PARALLEL OR AT RIGHT ANGLES TO STUDS W/ 1 ¼" TYPE 'W' SCREWS @ 12" O.C.
A2. ⅞", 3-COAT CEMENT PLASTER OVER METAL SELF-FURRING LATH, 2 LAYERS BUILDING PAPER W/ DRAINABLE FACE. PLASTER MIX 1:4 FOR SCRATCH COAT & 1:5 BROWN COAT, BY VOLUME , CEMENT TO SAND.
A3. 2x6 STUDS @ 16" O.C.
A4. R-21 THERMAL BATT INSULATION.
A5. ½" PLYWOOD SHEATHING.

1 1 HOUR EXTERIOR WALL ASSEMBLY
SCALE: NTS

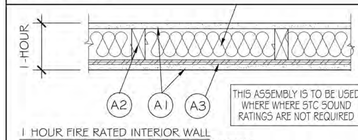


1 HOUR FIRE RATED INTERIOR WALL
GA FILE NO. WP 3242-GENERIC (UL DESIGN 309)
STC 50 - 54
NRCC TL-93-098, IRC-IR, 3-98

A1: 25 GA. RESILIENT CHANNELS @ 24" O.C. AT RIGHT ANGLES TO STUDS W/ 1 ¼" TYPE 'S' DRYWALL SCREWS.
A2. ⅝" TYPE 'X' GYPSUM BOARD APPLIED RIGHT ANGLES TO CHANNELS W/ 1" TYPE 'S' DRYWALL SCREWS @ 8" O.C. W/ VERTICAL JOINTS LOCATED MIDWAY BETWEEN STUDS.
A3. ⅝" TYPE 'X' GYPSUM BOARD APPLIED PARALLEL or RIGHT ANGLES TO STUDS W/ 6d CEMENT COATED NAILS, 1 ⅞" LONG, 0.0915" SHANK, 15/64" HEADS at @ 7" O.C.
A4. 2x4 or 2x6 STUDS @ 16" or 24" O.C.
A5. MINIMUM 3" THICK FIBERGLASS ACOUSTIC BATTS.
A6. ½" PLYWOOD SHEATHING WHERE OCCURS. SEE NOTE BELOW.
A7. COVER WALLBOARD JOINTS AND SCREW HEADS W/ PAPER TAPE and JOINT COMPOUND. (NOT SHOWN)

NOTE: IN ALL CASES WHERE THERE IS PLYWOOD SHEATHING INSTALLED BETWEEN THE GYPSUM BOARD AND THE FRAMING, FASTENER (SCREW OR NAIL) LENGTHS SHALL BE INCREASED BY THE THICKNESS OF THE SHEATHING.

2 1 HOUR INTERIOR DEMISING WALLS
SCALE: NTS



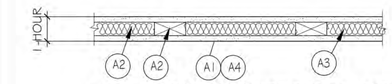
1 HOUR FIRE RATED INTERIOR WALL

A. GA FILE NO. WP3614 - SCREWS - GENERIC
A1. ⅝" TYPE 'X' GYPSUM WALLBOARD APPLIED PARALLEL OR AT RIGHT ANGLES TO EACH SIDE OF STUDS W/ 1 ¼" TYPE 'W' SCREWS @ 12" O.C.
A2. 2x4 OR 2x6 STUDS @ 16" O.C. - SSD.
A3. ½" PLYWOOD SHEATHING - WHERE OCCURS.
A4. 3 ½" THICK ACOUSTIC BATTS.

B. GA FILE NO. WP3510 - NAILS - GENERIC
A1. ⅝" TYPE 'X' GYPSUM WALLBOARD W/ 6 d COATED NAILS, 1 ⅞" LONG, 0.0915" SHANK, ½" HEAD @ 7" O.C. JOINTS STAGGERED ON OPPOSITE SIDES.
A2. 2x4 OR 2x6 STUDS @ 16" O.C. - SSD
A3. ½" PLYWOOD SHEATHING - WHERE OCCURS.
A4. 3 ½" THICK ACOUSTIC BATTS.

NOTE: IN ALL CASES WHERE THERE IS PLYWOOD SHEATHING INSTALLED BETWEEN THE GYPSUM BOARD AND THE FRAMING, FASTENER (SCREW OR NAIL) LENGTHS SHALL BE INCREASED BY THE THICKNESS OF THE SHEATHING.

3 1 HOUR INTERIOR WALL ASSEMBLY
SCALE: NTS



1-HOUR INTERIOR FIRE NON-BEARING WALL ASSEMBLY
UL NO. U338

A1. ⅝" TYPE 'X' GYPSUM BOARD APPLIED HORIZONTALLY OR VERTICALLY W/ VERTICAL JOINTS CENTERED ON STUDS AND NAILED TO STUDS & BEARING PLATES 7" O.C. W 6d COATED NAILS, 1 ⅞" LONG. 0.0915 IN. SHANK DIAMETER AND ¼" DIAMETER HEAD. AS AN ALTERNATE, #6 BULGE HEAD DRYWALL SCREWS 1 ⅝" LONG, MAY BE SUBSTITUTED FOR THE 6d NAILS.
A2. NOMINAL 2x4 STUDS FLAT @ 24" O.C. MAX, EFFECTIVELY FIRESTOPPED.
A3. 1" THICK MAX UL APPROVED GLASS OR MINERAL FIBER BATT INSULATION.
A4. WALLBOARD JOINTS OF OUTER LAYER TO BE COVERED W/ TAPE AND JOINT COMPOUND. NAIL HEADS OF OUTER LAYER COVERED W/ JOINT COMPOUND.

4 1 HOUR INTERIOR FLAT WALL ASSEMBLY
SCALE: NTS

© Hedgpeth Architects

Hedgpeth
ARCHITECTS

2321 Bethards Drive
Santa Rosa, California
95405
Phone 707 523 7010
Fax 707 542 2328

LARGO FRESCA APARTMENTS
4744 HOEN AVENUE
SANTA ROSA, CALIFORNIA 95405

FIRE RATED ASSEMBLIES
FLOORS & WALLS

LICENSED ARCHITECT
WARREN J. HEDGPETH
No. C 14601
REN. 10-21
STATE OF CALIFORNIA

Revisions

Job Number
2016

Project Designer
INGRID ANDERSON

Drawn By
RGB

Date
October 19, 2021

NOT FOR CONSTRUCTION

Sheet
A9.3
of -

EXTERIOR WALL NOTES:

1. EXTERIOR PLASTER:
   A. APPLIED OVER WOOD FRAMING - PORTLAND CEMENT PLASTER SHALL BE NOT LESS THAN THREE COATS (7/8") WHEN APPLIED OVER 2 LAYERS BUILDING PAPER W/ DRAINABLE FACE LAYER & METAL LATH or GYPSUM BOARD BACKING AS SPECIFIED IN SECTION 2510.5
   B. APPLIED OVER MASONRY - PORTLAND CEMENT PLASTER SHALL NOT BE LESS THAT TWO COATS WHEN APPLIED OVER MASONRY OR CONCRETE. PROVIDED THE TOTAL THICKNESS IS AS SET FORTH IN ASTM C926. [CBC 2512.1]

INTERIOR PARTITION NOTES:

1. REFER TO SPECIFICATIONS & TO THE TITLE 24 ENERGY REPORT FOR THERMAL & SOUND BATT INFORMATION.
2. REFER TO UL or GYPSUM ASSOCIATION FIRE RESISTANCE/SOUND CONTROL MANUALS FOR FIRE RATED APPROVAL NUMBERS. SEE GYPSUM ASSOCIATION FIRE RESISTANCE/SOUND CONTROL MANUAL FOR 'WP' SOUND RATED APPROVALS. SEE EACH RESPECTIVE MANUAL FOR COMPLETE DESCRIPTION of PARTITION CONSTRUCTION ON NECESSARY TO ACHIEVE REQUIRED RATINGS, CONTRACTOR RESPONSIBLE FOR COORDINATING PARTITION TYPE W/ UL or GA ASSEMBLY.
3. WHERE INTERIOR PARTITION TERMINATES AGAINST THE CONCRETE STRUCTURE - SEAL TO CONCRETE TO PROVIDE CONTINUITY of FIRE & SOUND RATING.
4. All PENETRATIONS THROUGH RATED WALL ASSEMBLIES SHALL BE ENTIRELY SEALED W/ FIRESTOP SEALANT or APPROVED ALTERNATE INTUMESCENT CAULKING.
5. METAL OUTLET BOXES SHALL BE PERMITTED TO BE INSTALLED IN WOOD STUD INTERIOR PARTITIONS HAVING GYPSUM BOARD FACINGS & CLASSIFIED AS TWO- HOUR OR LESS W/O AFFECTING THE FIRE RESISTANCE RATING. THE SURFACE AREA of INDIVIDUAL BOXES SHALL NOT EXCEED 16 SQUARE INCHES. THE AGGREGATE SURFACE AREA of THE BOXES SHALL NOT EXCEED 100 SQUARE INCHES IN ANY100 SQ (SQUARE FEET). BOXES LOCATED ON OPPOSITE SIDES or INTERIOR PARTITIONS SHALL BE SEPARATED BY A MINIMUM HORIZONTAL DISTANCE OF 24 INCHES.
6. ALL GYPSUM WALLBOARDS at BATHROOM WALLS SHALL BE MOISTURE RESISTANT GYPSUM BOARD. USE ⅝" TYPE 'X' MOISTURE RESISTANT GYPSUM BOARD at FIRE RATED WALLS.
7. ALL GYPSUM WALLBOARD at EXTERIOR SIDE OF EXTERIOR WALLS TO BE FOR EXTERIOR USE ONLY.
8. IN COMBUSTIBLE CONSTRUCTION. FIRE BLOCKING SHALL BE INSTALLED TO CUT OFF CONCEALED DRAFT OPENINGS (BOTH VERTICAL & HORIZONTAL) & SHALL FORM AN EFFECTIVE BARRIER BETWEEN FLOORS. BETWEEN A TOP STORY AND A ROOF or ATTIC SPACE. FIREBLOCKING SHALL BE INSTALLED IN THE LOCATIONS SPECIFIED IN SECTIONS 718.2.2. THOUGH 718.2.7 [C.B.C. 718.2].
   A. CONCEALED WALL SPACES:
      FIREBLOCKING SHALL BE PROVIDED IN CONCEALED SPACES or STUD WALLS & PARTITIONS, INCLUDING FURRED SPACES, & PARALLEL ROWS OF STUDS or STAGGERED STUDS,AS FOLLOWS [C.B.C. 718.2.2]:
      1. VERTICALLY AT THE CEILING & FLOOR LEVELS,
      2. HORIZONTALLY at INTERVALS NOT EXCEEDING 10 FEET.
   B. CONNECTIONS BETWEEN HORIZONTAL & VERTICAL SPACES:
      FIREBLOCKING SHALL BE PROVIDED at INTERCONNECTIONS BETWEEN CONCEALED VERTICAL STUD WALL or PARTITION SPACES AND CONCEALED HORIZONTAL SPACES CREATED BY AN ASSEMBLY or FLOOR JOISTS or TRUSSES, AND BETWEEN CONCEALED VERTICAL & HORIZONTAL SPACES SUCH as OCCUR at SOFFITS, DROP CEILINGS, COVE CEILINGS AND SIMILAR LOCATIONS [C.B.C 718.2.3].
   C. FIREBLOCKING SHALL BE PROVIDED IN CONCEALED SPACES BETWEEN STAIR STRINGERS at THE TOP & BOTTOM or THE RUN. ENCLOSED SPACES UNDER STAIRS SHALL ALSO COMPLY W/ SECTION 1011.7.3 [C.B.C. 718.2.4].
   D. CEILING & FLOOR OPENINGS:
      WHERE REQUIRED BY SECTION 712.18, EXCEPTION 1 OF CBC 714.4.1.2. or CBC 714.5, FIREBLOCKING or THE ANNULAR SPACE AROUND VENTS, PIPES, DUCTS, at CEILINGS & FLOOR LEVELS SHALL BE INSTALLED W/ A MATERIAL SPECIFICALLY TESTED IN THE FORM & MANNER INTENDED FOR USE to DEMONSTRATE IT'S ABILITY to REMAIN IN PLACE & RESIST THE FREE PASSAGE or FLAME & THE PRODUCTS of COMBUSTION [C.B.C. 718.2.5].
   E. EXTERIOR WALL COVERINGS;
      FIREBLOCKING SHALL BE INSTALLED WITH IN CONCEALED SPACES or EXTERIOR WALL COVERINGS & OTHER EXTERIOR ARCHITECTURAL ELEMENTS WHERE PERMITTED TO BE or COMBUSTIBLE CONSTRUCTION AS SPECIFIED IN SECTION 1406 or WHERE ERECTED W/ COMBUSTIBLE FRAMES. FIREBLOCKING SHALL BE INSTALLED AT MAXIMUM INTERVALS or 20 FEET IN EITHER DIRECTION SO THAT THERE WILL BE NO OPEN SPACE EXCEEDING 100 SQUARE FEET BETWEEN BLOCKING. WHERE WOOD FURRING STRIPS ARE USED, THEY SHALL BE APPROVED WOOD of NATURAL DECAY RESISTANCE or PRESERVATIVE-TREATED WOOD. IF NON-CONTINUOUS, SUCH ELEMENTS SHALL HAVE CLOSED ENDS, W/ AT LEAST 4 INCHES or SEPARATION BETWEEN SECTIONS [C.B.C. 718.2.6]

SOUND TRANSMISSION NOTES:

1. AIR-BORNE SOUND: : WALLS, PARTITIONS & FLOOR/CEILING ASSEMBLIES SEPARATING DWELLING UNITS & SLEEPING UNITS FROM EACH OTHER or FROM PUBLIC SERVICE AREAS SHALL HAVE A SOUND TRANSMISSION CLASS of NOT LESS THAN 50, or NOT LESS THAN 45 IF FIELD TESTED, FOR AIR-BORNE NOISE WHEN TESTED IN ACCORDANCE WITH ASTM E90. PENETRATIONS or OPENINGS IN CONSTRUCTION ASSEMBLIES FOR PIPING; ELECTRICAL DEVICES; RECESSED CABINETS; BATHTUBS; SOFFITS; or HEATING, VENTILATING or EXHAUST DUCTS SHALL BE SEALED, LINED, INSULATED or OTHERWISE TREATED TO MAINTAIN THE REQUIRED RATINGS. THIS REQUIREMENT SHALL NOT APPLY TO ENTRANCE DOORS; HOWEVER SUCH DOORS SHALL BE TIGHT FITTING TO THE FRAME & SILL. [CBC 1207.2]
2. ALLOWABLE INTERIOR NOISE LEVELS: INTERIOR NOISE LEVELS ATTRIBUTABLE TO EXTERIOR SOURCES SHALL NOT EXCEED 45dB IN ANY HABITABLE ROOM. THE NOISE METRIC SHALL BE EITHER THE DAY-NIGHT AVERAGE SOUND LEVEL (Ldn) or THE COMMUNITY NOISE EQUIVALENT LEVEL (CNEL), CONSISTENT W/ THE NOISE ELEMENT of THE LOCAL GENERAL PLAN. [CBC 1207.4]
3. PROVIDE ACOUSTICAL CAULKING TO SEAL GAPS, WALL PERIMETERS, PENETRATIONS & ALL AIR GAPS THAT WILL ALLOW SOUND TO TRANSFER FROM UNIT TO UNIT VIA FLANKING PATHS.

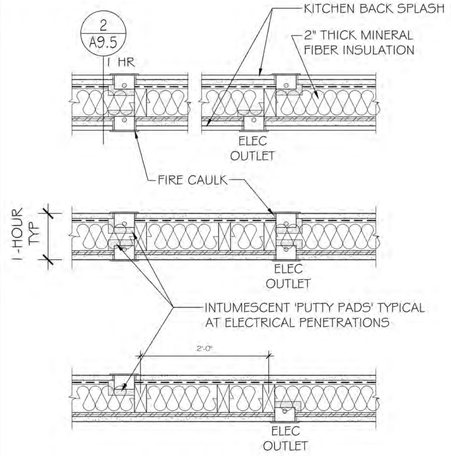
12 EXTERIOR WALL AND INTERIOR PARTIOTION NOTES
SCALE: NTS

THROUGH PENETRATION GENERAL NOTES:

1. FIRE RESISTANCE RATED WALL THROUGH PENETRATIONS:
   PENETRATIONS INTO OR THROUGH FIRE WALLS, FIRE BARRIERS, SMOKE BARRIER WALLS & FIRE PARTITIONS SHALL COMPLY W/ CBC 714.3.1 THROUGH 714.3.3. SMOKE BARRIER WALLS SHALL COMPLY WITH CBC 714.5.
2. FIRE RESISTANCE RATED WALLS THROUGH PENETRATION FIRESTOP SYSTEM:
   THROUGH PENETRATIONS SHALL BE PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE W/ ASTM E814 OR UL 1479, W/ A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH OF WATER & SHALL HAVE AN 'F' RATING OF NOT LESS THAN THE REQUIRED FIRE RESISTANCE RATING OF THE WALL PENETRATED. [CBC 714.3.1.2]
3. HORIZONTAL ASSEMBLIES THROUGH PENETRATIONS [CBC 714. 4.1]
   EXCEPTION 1:
      PENETRATIONS BY STEEL, FERROUS OR COPPER CONDUITS, PIPES, TUBES, VENTS, CONCRETE OR MASONRY ITEMS THROUGH A SINGLE FIRE RESISTANCE RATED FLOOR ASSEMBLY WHERE THE ANNULAR SPACE IS PROTECTED W/ MATERIALS THAT PREVENT THE PASSAGE OF FLAME & HOT GASES SUFFICIENT TO FOR THE TIME PERIOD EQUIVALENT TO THE FIRE-RESISTANCE RATING OF THE CONSTRUCTION PENETRATED. PENETRATING ITEMS W/ A MAXIMUM 6 INCH NOMINAL DIAMETER SHALL NOT BE LIMITED TO THE PENETRATION OF A SINGLE FIRE-RESISTANCE- RATED FLOOR ASSEMBLY, P PROVIDED THE AGGREGATE AREA OF THE OPENINGS THROUGH THE ASSEMBLY DOES NOT EXCEED 144 SQUARE INCHES IN ANY 100 SQUARE FEET OF FLOOR AREA.
4. HORIZONTAL ASSEMBLIES INSTALLATION:
   THROUGH PENETRATIONS SHALL BE INSTALLED AS TESTED IN THE APPROVED FIRE-RESISTANCE-RATED ASSEMBLY. [CBC 714.4.1.1]
5. HORIZONTAL ASSEMBLIES THROUGH PENETRATION FIRESTOP SYSTEM:
   THROUGH PENETRATIONS SHALL BE PROTECTED BY AN APPROVED THROUGH PENETRATION FIRESTOP SYSTEM INSTALLED & TESTED IN ACCORDANCE W/ ASTM E814 OR UL1479, W/ A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH OF WATER. THE SYSTEM SHALL HAVE AN 'F'- RATING/ 'T'- RATING OF NOT LESS THAN 1- HOUR BUT NOT LESS THAN THE REQUIRED RATING OF THE FLOOR PENETRATED. [CBC 714.4.1.2]
   EXCEPTION 1:
      FLOOR PENETRATIONS CONTAINED & LOCATED WITHIN THE CAVITY OF A WALL ABOVE THE FLOOR OR BELOW THE FLOOR DO NOT REQUIRE A 'T'- RATING.
   EXCEPTION 2:
      FLOOR PENETRATIONS BY FLOOR DRAINS, TUB DRAINS OR SHOWER DRAINS CONTAINED & LOCATED WITHIN THE CONCEALED SPACE OF A HORIZONTAL ASSEMBLY DO NOT REQUIRE A 'T'- RATING.
   EXCEPTION 3:
      FLOOR PENETRATIONS OF MAXIMUM 4-INCH NOMINAL DIAMETER PENETRATING DIRECTLY INTO METAL ENCLOSED ELECTRICAL POWER SWITCHGEAR DO NOT REQUIRE A 'T'- RATING.
6. WHERE WALLS OR PARTITIONS ARE REQUIRED TO HAVE A FIRE-RESISTANT RATING, RECESSED FIXTURES SHALL BE INSTALLED SUCH THAT THE REQUIRED FIRE-RESISTANCE WILL NOT BE REDUCED. [CBC 5E7 14.3.1]
7. PENETRATIONS OF A FIRE-RESISTANCE RATED FLOOR, FLOOR/CEILING ASSEMBLY OF THE CEILING MEMBRANE OF A ROOF/CEILING ASSEMBLY NOT REQUIRED TO BE ENCLOSED IN A SHAFT SHALL BE PROTECTED [CBC 714.4.1 THROUGH 714.4.4]
8. PENETRATIONS OF MEMBRANES THAT ARE PART OF A HORIZONTAL ASSEMBLY SHALL COMPLY W/ CBC 714.4.1.1 OR 714.4.1.2. WHERE FLOOR/CEILING ASSEMBLIES ARE REQUIRED TO HAVE A FIRE-RESISTANCE RATING, RECESSED FIXTURES SHALL BE INSTALLED SUCH THAT THE REQUIRED FIRE-RESISTANCE WILL NOT BE REDUCED. [CBC 714.3.1]
9. PENETRATIONS INTO OR THROUGH FIRE WALLS, FIRE BARRIERS, SMOKE BARRIER WALLS & FIRE PARTITION SHALL COMPLY W/ SECTIONS 714.3.1 THROUGH 714.3.3. PENETRATIONS IN SMOKE BARRIER WALLS SHALL ALSO COMPLY W/ SECTION 714.5.
10. PENETRATIONS OF A FIRE RESISTANCE RATED FLOOR, FLOOR/CEILING ASSEMBLY OR THE CEILING MEMBRANE OF A ROOF/CEILING ASSEMBLY NOT REQUIRED TO BE ENCLOSED IN A SHAFT BY SECTION 712.1 SHALL BE PROTECTED IN ACCORDANCE W/ SECTIONS 714.4.1 THROUGH 714.4.4
11. FOR OUTLET BOXES REQUIRING PROTECTION, USE ONLY WALL OPENING PROTECTIVE MATERIALS, CATEGORY 'CLIV' AS CLASSIFIED BY UNDERWRITER'S LABORATORIES, FIRE RESISTANCE DIRECTORY (VOLUME 1.)

10 THROUGH PENETRATION NOTES
SCALE: NTS

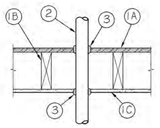
11 NOT USED
SCALE: NTS



7 STAGGERED ELEC OUTLETS IN DEMISING WALL
SCALE: NTS

8 NOT USED
SCALE: NTS

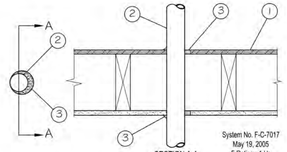
9 NOT USED
SCALE: NTS



System No. F-C-1902
September 03, 2004
(Formerly System No. 169)
F Ratings - 1 and 2 Hr (See Item 1)
T Rating - 1 Hr

1. Floor-Ceiling Assembly - The 1 or 2 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the UL Fire Resistance Directory. The 1 hr fire rated assembly shall be constructed as specified in Design No. L501, L512 or L537. The 2 hr fire rated assembly shall be constructed as specified in Design No. L505, L511 or L536. The F Rating of the firestop system is equal to the fire rating of the floor-ceiling assembly. The general construction details of the floor-ceiling assembly are summarized below:
   A. Flooring System - Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design. Max diameter of opening is 1 in. larger than outside diameter of penetration.
   B. Wood Joists - Nom 2 by 10 in. lumber joists spaced 16 in. O.C. with nom 1 by 3 in. lumber bridging and with ends firestopped.
   C. Furring Channels (Not Shown) - Resilient galv steel furring channels installed perpendicular to wood joists between first and second layers of wallboard (Item 1D) in 2 hour fire rated assembly. Furring channels spaced max 24 in. O.C.
   D. Gypsum Board* - Nom 4 ft wide by 5/8 in. thick as specified in the individual Floor-Ceiling Design. First layer of wallboard nailed to wood joists. Second layer of wallboard (2 hr fire rated assembly only) screw-attached to furring channels. Max diameter of opening is 1 in. larger than outside diameter of penetrantion.
1.1 Chase Wall (Optional, not shown) - The through penetrants (Item No. 2) may be routed through a fire-rated single, double or staggered wood stud/gypsum wallboard chase wall having a fire rating consistent with that of the floor-ceiling assembly. The chase wall shall be constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. Studs - Nom 2 by 6 in. or double nom 2 by 4 in. lumber studs.
   B. Sole Plate - Nom 2 by 6 in. or parallel 2 by 4 in. lumber plates, tightly butted.
   C. Top Plate - The double top plate shall consist of two nom 2 by 6 or two sets of parallel 2 by 4 lumber plates, tightly butted. Max diameter of opening is 5 in.
   D. Gypsum Board* - Thickness, type, number of layers and fasteners shall be as specified in individual Wall and Partition Design.
2. Through Penetrants - One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min 0 in. (point contact) to max 1 in. Pipe, conduit or tubing to be rigidly supported on both sides of floor assembly. The following types and sized of metallic pipe, conduit or tubing may be used:
   A. Steel Pipe - Nom 10 in. diameter (or smaller) Schedule 40 (or heavier) steel pipe.
   B. Iron Pipe - Nom 10 in. diameter (or smaller) cast or ductile iron pipe.
   C. Conduit - Nom 6 in. diameter (or smaller) steel conduit, or nom 4 in. (or smaller) steel electrical metallic tubing.
   D. Copper Tubing - Nom 4 in. diameter (or smaller) Type L (or heavier) copper tubing.
   E. Copper Pipe - Nom 4 in. diameter (or smaller) Regular (or heavier) copper pipe.
3. Fill,Void or Cavity Material* - Caulk or Sealant - Min 3/4 in. thickness of fill material applied within the annulus, flush with top surface of floor or sole plate. Min 5/8 in. or 1-1/4 in. thickness of fill material, for 1 and 2 hr rated assemblies, respectively, applied within the annulus, flush with bottom surface of ceiling or top plate. An additional min 1/4 in. crown of fill material applied to perimeter of penetrantion at its egress from the top of flooring and underside of ceiling or from top of sole plate and underside of top plate.
   3M COMPANY - CP 25WB+ caulk or FB-3000 WT sealant.
   *Bearing the UL Classification Mark

4 METAL PIPE THROUGH WOOD FLOOR/CEILING
SCALE: NTS



System No. F-C-7017
May 19, 2005
F Rating - 1 Hr
T Rating -1 Hr

1. Floor-Ceiling Assembly - The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction details of the floor-ceiling assembly are summarized below:
   A. Flooring System - Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design. Max diameter of opening is 5 in.
   B. Wood Joists - Nom 10 in. deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or StructuralWood Members* with bridging as required and with ends firestopped.
   C. Gypsum Board* - Nom 4 ft wide by 5/8 in. thick as specified in the individual Floor-Ceiling Design. Gypsum board secured to wood joists or furring channels as specified in the individual Floor-Ceiling Design. Max of opening is 6 in. by 5-1/2 in.
1.1 Chase Wall (Optional, not shown) - The duct (Item 2) may be routed through a fire-rated single- double or staggered wood stud/gypsum board chase wall having a fire rating consistent with that of the floor-ceiling assembly. The chase wall shall be constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. Studs - Nom 2 in. by 6 in. or double nom 2 in. by 4 in. lumber studs.
   B. Sole Plate - Nom 2 in. by 6 in. or parallel 2 in. by 4 in. lumber plates, tightly butted.
   C. Top Plate - The double top plate shall consist of two nom 2 in. by 6 in. or two sets of parallel 2 in. by 4 in. lumber plates, tightly butted. Max of opening is 6 in. by 5-1/2 in.
   D. Gypsum Board* - Thickness, type, number of layers and fasteners shall be as specified in individual Wall and Partition Design.
2. Steel Duct - Nom 4 in. diameter (or Smaller) No. 30 gauge (or heavier) galv steel duct to be installed eccentrically or concentrically within the firestop system. The annular space between the duct and the periphery of opening shall be min 0 in. (point contact) to max 2 in. Duct to be rigidly supported on both sides of the Floor-Ceiling assembly.
3. Fill,Void or Cavity Materials* - Caulk or Sealant - Min 3/4 in. thickness of caulk applied within the annulus, flush with top surface of floor or sole plate. Min 5/8 in. thickness of caulk applied within annulus, flush with bottom surface of ceiling or top plate. An additional min 1/4 in. crown of fill material applied to perimeter of duct at its egress from the top of flooring and underside of ceiling or from top of sole plate and underside of top plate.
   3M COMPANY - CP 25WB+ caulk or FB-3000 WT sealant.
   *Bearing the UL Classification Mark

1 STEEL DUCT THROUGH WOOD FLOOR/CEILING
SCALE: NTS



System No. F-C-7001
September 03, 2004
(Formerly System No. 169)
F Rating - 1 Hr
T Rating - 1/2 Hr

1. Floor-Ceiling Assembly - The 1 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory, as summarized below:
   A. Flooring System - Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design. Max diameter of opening is 11 in.
   B. Wood Joists - Nom 2 by 10 in. lumber joists spaced 16 in. O.C with nom 1 by 3 in. lumber bridging and with ends firestopped.
   C. Gypsum Board* - Nom 4 ft wide by 5/8 in. thick as specified in the individual Floor-Ceiling Design. Max diameter of opening is 11 in.
2. Steel Vent Duct - Nom 4 in. diameter (or smaller) No. 30 gauge (or heavier) galv steel vent duct or nom 10 in. diameter (or smaller) No. 28 gauge (or Heavier) galv steel vent duct. Diameter of openings to be max 1 in. larger than outside diameter of duct. Duct to be installed approx midway between wood joists and installed either concentrically or eccentrically in opening. The annular space between the duct and the periphery of opening shall be min 0 in. (point contact) to max 1 in. Duct to be rigidly supported on both sides of floor-ceiling assembly.
3. Fill,Void or Cavity Materials* - Caulk or Sealant - Min 3/4 in. thickness of fill material applied within the annulus, flush with top surface of floor or sole plate. Min 5/8 in. thickness of fill material applied within the annulus, flush with bottom surface of ceiling or top plate. An additional min 1/4 in. crown of fill material applied to perimeter of duct at its egress from the top of flooring and underside of ceiling or from top of sole plate and underside of top plate.
   3M COMPANY - CP 25WB+ caulk or FB-3000 WT sealant
   *Bearing the UL Classification Marking

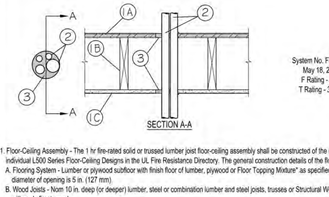
5 STEEL VENT DUCT THROUGH WOOD FLOOR/CEILING
SCALE: NTS



System No. F-C-1015
July 16, 1996
F Railings - 1 and 2 Hr (See Item 1)
T Rating - 1 Hr

1. Floor-Ceiling Assembly - The 1 or 2 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the UL Fire Resistance Directory. The 1 hr fire rated assembly shall be constructed as specified in Design No. L505, L511 or L536. The F Rating of the firestop system is equal to the fire rating of the floor-ceiling assembly. The general construction details of the floor/ceiling assembly are summarized below:
   A. Floor System - Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design. Max diameter of opening in flooring to accommodate piping is 1-3/4 in.
   B. Wood Joists - Nom 2 by 10 in. lumber joists spaced 16 in. O.C. with nom 1 by 3 in. lumber bridging and with ends firestopped.
   C. Furring Channels - (Not Shown) - Resilient galv steel furring channels installed perpendicular to wood joists between first and second layers of wallboard (Item 1D) in 2 hour fire rated assembly. Furring channels spaced max 24 in. O.C.
   D. Gypsum Board* - Nom 4 ft wide by 5/8 in. thick as specified in the individual Floor-Ceiling Design. First layer of wallboard nailed to wood joists. Second layer of wallboard (2 hr fire rated assembly only) screw-attached to furring channels. Max diameter of opening is 1-3/4 in.
2. Through Penetrating Product* - Flexible Metal Piping - Nom 1 in. diameter or smaller) Steel Flexible Metal piping. Max one flexible metal piping to be installed in the opening. Circular openings hole sawed through flooring system and through gypsum wallboard ceiling to be 1/2 in. larger than outside diameter of pipe. Piping to be installed approx midway between wood joists and centered in circular openings such that a 1/4 in. annular space is present around its perimeter at each through opening location. Flexible metal piping to be rigidly supported on both sides of floor assembly. Plastic covering on piping shall be removed for a distance of 2 ft on both sides of floor.
   TITEFLEX CORP. A BUNDY CO
3. Fill,Void or Cavity Material* - Caulk - Caulk fill material forced into annular spaces to fill spaces to max extent possible and with a min 1/4 in. high by 3/8 in. wide bead of caulk applied to the perimeter of the flexible piping at its egress from the finished floor and ceiling.
   3M COMPANY - CP-25 WB+
   *Bearing the UL Classification Marking

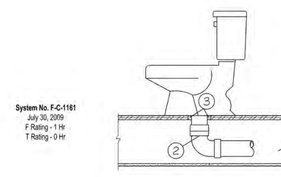
2 FLEXIBLE CONDUIT THROUGH WOOD FLOOR/CEILING
SCALE: NTS



System No. F-C-1095
May 18, 2005
F Rating - 1 Hr
T Rating - 3/4 Hr

1. Floor-Ceiling Assembly - The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction details of the floor-ceiling assembly are summarized below:
   A. Flooring System - Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design. Max diameter of opening is 5 in. (127 mm).
   B. Wood Joists - Nom 10 in. deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members* with bridging as required and with ends firestopped.
   C. Gypsum Board* - Nom 4 ft wide by 5/8 in. thick as specified in the individual Floor-Ceiling Design. Max diameter of opening is 5 in.
1.1 Chase Wall (Optional, not. shown) - The through penetrants (Item No. 2) may be routed through a fire-rated single, double or staggered wood stud/gypsum board chase wall having a fire rating consistent with that of the floor-ceiling assembly. The chase wall shall be constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. Studs - Nom 2 in. by 6 in. or double nom 2 in. by 4 in. lumber studs.
   B. Sole Plate - Nom 2 in. by 6 in. or parallel 2 in. by 4 in. lumber plates, tightly butted. Max diameter of opening is 5 in.
   C. Top Plate - The double top plate shall consist of two nom 2 in. by 6 in. or two sets of parallel 2 by 4 in. lumber plates, tightly butted. Max diameter of opening is 5 in.
   D. Gypsum Board* - Thickness, type, number of layers and fasteners shall be as specified in individual Wall and Partition Design.
2. Through Penetrants - One or more metallic pipes, conduits, tubes or flexible metal pipes installed concentrically or eccentrically within opening. Annular space between penetrants and periphery of opening to be min 0 in. (point contact) to max 1-1/2 in. Space between penetrants to be min 1/4 in. to max 2 in. Penetrants to be rigidly supported on both sides of floor-ceiling. The following types and sizes of penetrants may be used:
   A. Steel Pipe - Nom 2 in. diameter (or smaller) Schedule 5 (or heavier) steel pipe.
   B. Iron Pipe - Nom 2 in. diameter (or smaller) cast or ductile iron pipe.
   C. Conduit - Nom 2 in. diam eteior smaller) steel electrical metallic tubing (EMT) or nom 6 in. rigid steel conduit.
   D. Copper Tubing - Nom 1-1/2 in. diameter (or smaller) Type L (or heavier) copper tubing.
   E. Copper Pipe - Nom 1-1/2 in. diameter (or smaller) Regular (or heavier) copper pipe.
   F. Through Penetrating Product* - Flexible Metal Piping-The following types of steel flexible metal gas piping may be used:
      1) Nom 1 in. diameter (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.
      OMEGA FLEX INC.
      2) Nom 1 in. diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.
      TITEFLEX CORP A BUNDY CO.
      3) Nom 1 in. diameter (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.
   WARD MFG INC.
3. Fill,Void or Cavity Materials* - Caulk or Sealant - Min 3/4 in. thickness of caulk applied within annulus, flush with top surface of floor or sole plate. Min 5/8 in. thickness of caulk applied within annulus, flush with bottom surface of ceiling or top plate. Min 1/4 in. (6 mm) diameter bead of caulk applied at point contact locations at penetrantfloor or sola plate interface on top surface of floor or sola plate and at penetrant/ceiling or top plate interface.
   3M COMPANY - IC 15WB+, CP 25WB+ caulk or FB-3000 WT sealant.
   *Bearing the UL Classification Marking

6 MULTIPLE METAL PIPES THROUGH WOOD FLR/CLG
SCALE: NTS



System No. F-C-1161
July 30, 2009
F Rating - 1 Hr
T Rating - 0 Hr

1. Floor-Ceiling Assembly - The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction details of the floor-ceiling assembly are summarized below:
   A. Flooring System - Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design. Diameter of opening shall be 1 in. larger than diamter of pipe. Max diameter of opening is 5-1/2 in.
   B. Wood Joists - Nom 10 in. deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members* with bridging as required and with ends firestopped.
   C. Gypsum Board* - Nom 4 ft wide by 5/8 in. thick as specified in the individual Floor-Ceiling Design. Diam of opening shall be 1 in. larger than diam of pipe. Max diam of opening is 5-1/2 in.
2. Metallic Pipe - One metallic drain pipe with max 4 in. diam toilet flange installed within the firestop system. The annular space between drain pipe and periphery of opening shall be min 1/2 in. to max 1-1/2 in. Pipe to be rigidly supported on lower side of floor assembly. The following types and sizes of metallic pipes, fittings and flanges may be used:
   A. Iron Pipe - Nom 4 in. diam (or smaller) Schedule 40 cast iron pipe for use in vented (drain, waste or vent) piping system. Pipe and elbow reliably supported above ceiling.
   B. Copper Pipe - Nom 4 in. diam (or smaller) Type DWV copper pipe for use in vented (drain, waste or vent) piping systems. Pipe and elbow reliably supported above ceiling.
3. Fill, Void or Cavity Materials* - Caulk or Sealant - Min 1/2 in. thickness of caulk applied within annular space around perimeter of ABS Pipe (Item 2), flush with top surface of floor.
   3M COMPANY - IC 15WB+, CP 25WB+, FB-3000WT
4. Water Closet - Floor mounted vitreous china water closet.
*Bearing the UL Classification Mark

3 METAL W/C PIPE THROUGH WOOD FLOOR/CEILING
SCALE: NTS

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Santa Rosa, California
95405
Phone 707 523 7010
Fax 707 542 2328

LARGO FRESCA APARTMENTS
4744 HOEN AVENUE
SANTA ROSA, CALIFORNIA 95405

FIRE RATED ASSEMBLIES
THROUGH PENETRATIONS

LICENSED ARCHITECT
WARREN J. HEDGPETH
No. C 14601
REN. 10-21
STATE OF CALIFORNIA

Revisions

Job Number
2016

Project Designer
INGRID ANDERSON

Drawn By
RGB

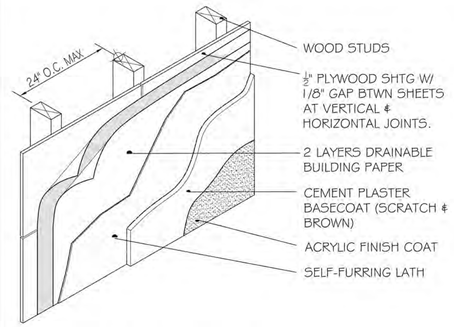
Date
October 19, 2021

NOT FOR CONSTRUCTION

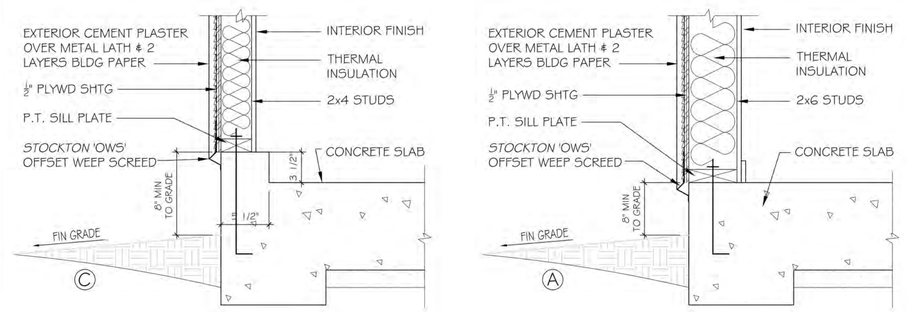
Sheet
A9.4
of -

13 NOT USED
SCALE: NTS

9 NOT USED
SCALE: NTS

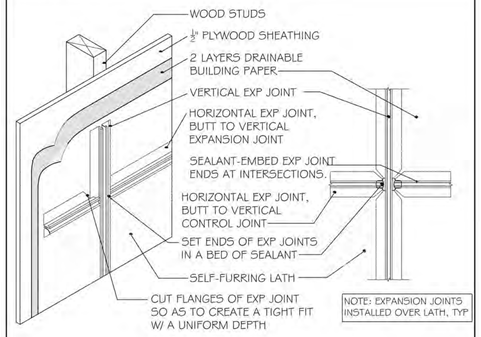


5 EXTERIOR STUCCO LAYERS
SCALE: NTS

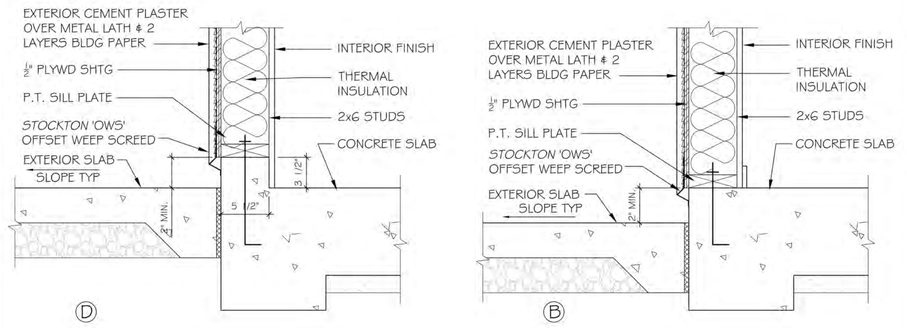


14 NOT USED
SCALE: NTS

10 NOT USED
SCALE: NTS



6 STUCCO EXPANSION JOINTS
SCALE: NTS

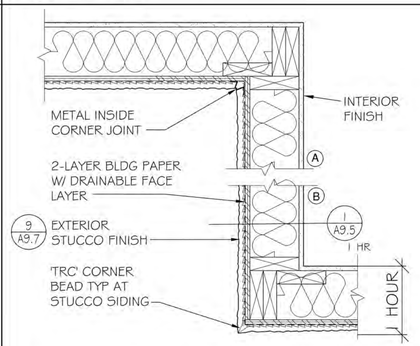


3 FIRE LANE CURB PAINTING
SCALE: 1 1/2" = 1'-0"

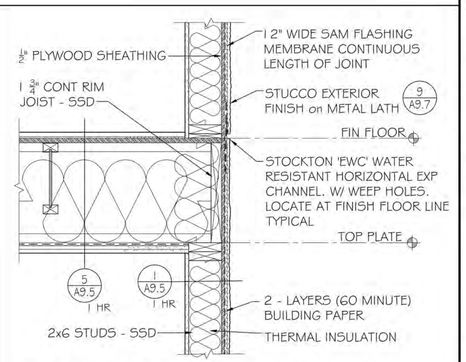
15 NOT USED
SCALE: NTS

11 NOT USED
SCALE: NTS

7 NOT USED
SCALE: NTS



4 STEPPED EXTERIOR WALL
SCALE: 1 1/2" = 1'-0"

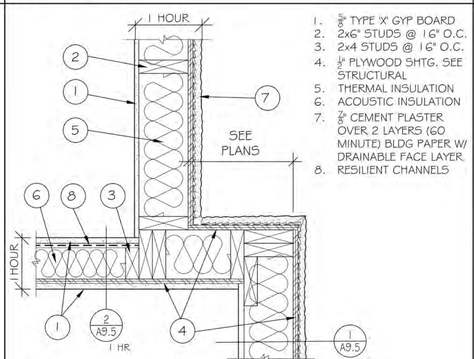


1 EXPANSION CHANNEL AT FLOOR LINES
SCALE: 1" = 1'-0"

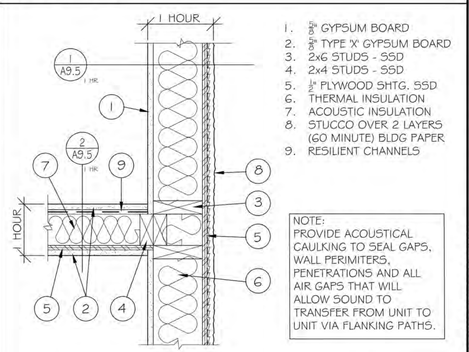
16 NOT USED
SCALE: NTS

12 NOT USED
SCALE: NTS

8 NOT USED
SCALE: NTS



5 STEPPED EXTERIOR WALL @ INTERIOR WALL
SCALE: 1 1/2" = 1'-0"



2 INTERIOR WALL INTERSECTION @ EXTERIOR WALL
SCALE: 1 1/2" = 1'-0"

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Santa Rosa, California
95405
Phone 707 523 7010
Fax 707 542 2328

LARGO FRESCA APARTMENTS
4744 HOEN AVENUE
SANTA ROSA, CALIFORNIA 95405

FIRE RATED ASSEMBLIES
FLOORS & WALLS

LICENSED ARCHITECT
WARREN J. HEDGPETH
No. C 14601
REN. 10-21
STATE OF CALIFORNIA

Revisions

Job Number
2016

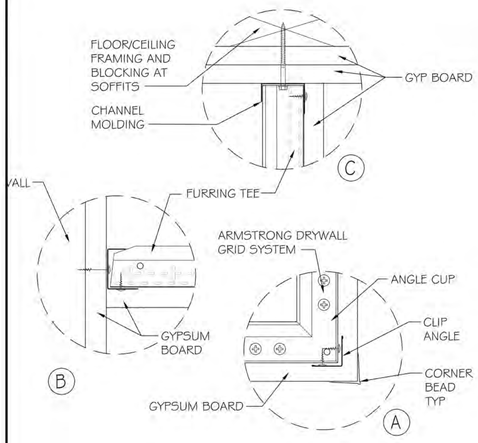
Project Designer
INGRID ANDERSON

Drawn By
RGB

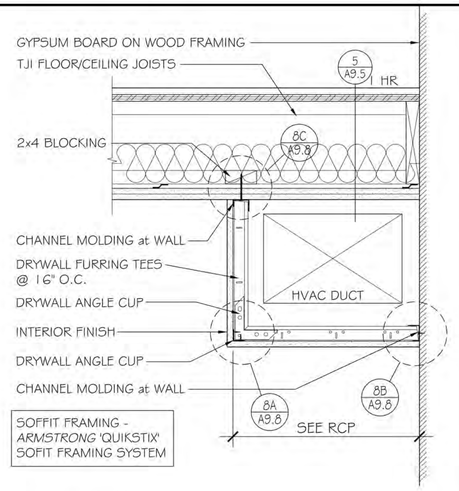
Date
October 19, 2021

Sheet
A9.6
of _

NOT FOR CONSTRUCTION



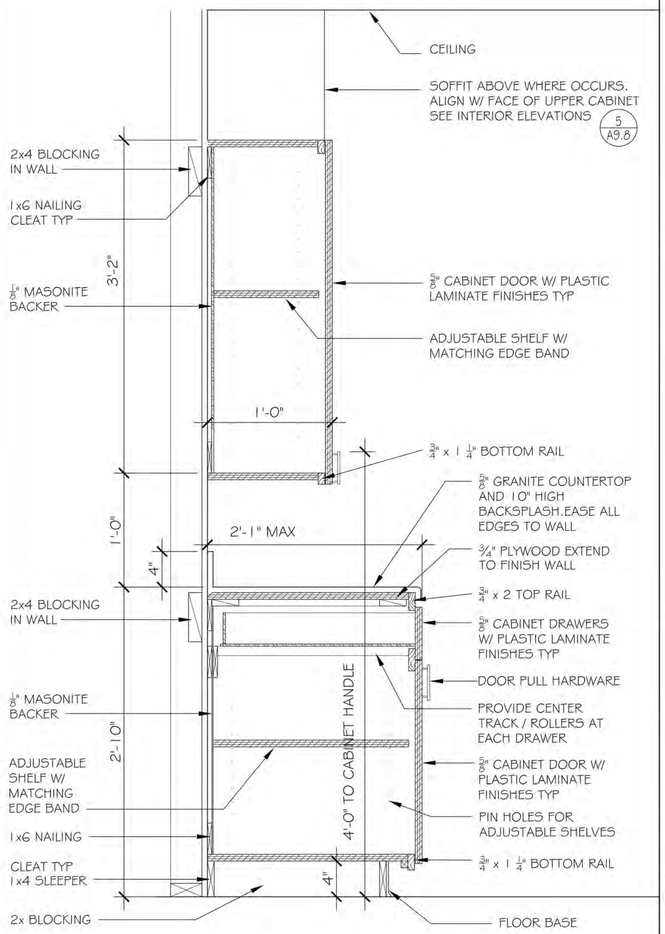
8 SOFFIT DETAILS
SCALE: NTS



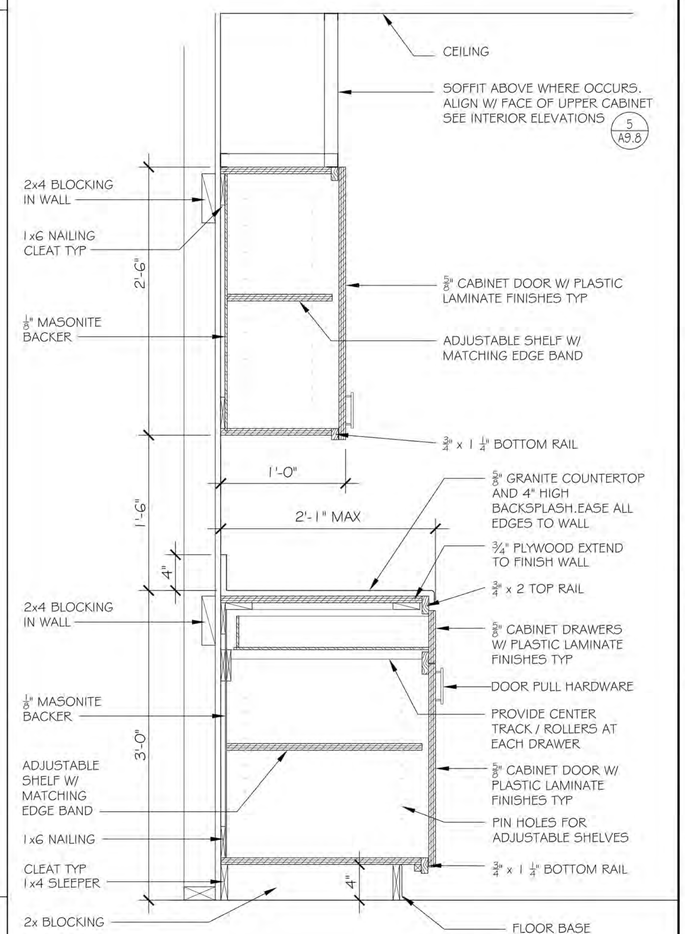
5 SOFFIT FRAMING
SCALE: 1 1/2" = 1'-0"

9 NOT USED
SCALE: 1 1/2" = 1'-0"

6 NOT USED
SCALE: 1 1/2" = 1'-0"



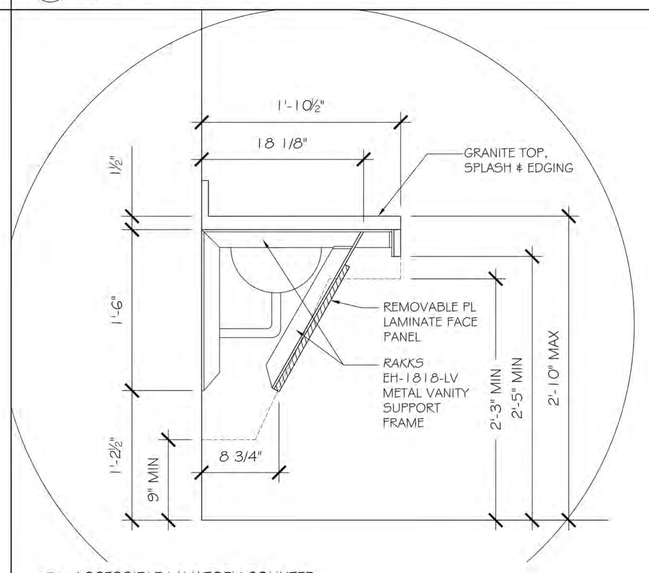
3 KITCHEN CABINETS AT ADAPTABLE AND NON-ACCESSIBLE UNITS UNITS
SCALE: 1 1/2" = 1'-0"



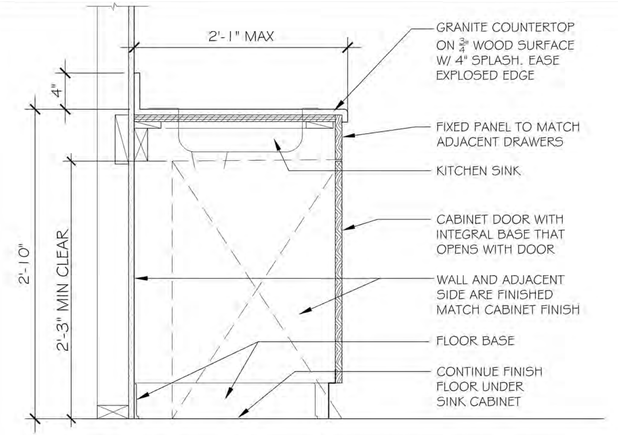
1 KITCHEN CABINETS AT ACCESSIBLE UNITS
SCALE: 1 1/2" = 1'-0"

10 NOT USED
SCALE: 1 1/2" = 1'-0"

7 NOT USED
SCALE: 1 1/2" = 1'-0"



4 ACCESSIBLE LAVATORY COUNTER
SCALE: 1 1/2" = 1'-0"



KITCHEN SINK:
1. A MINIMUM LINEAR LENGTH OF 30 INCHES OF COUNTERTOP SHALL BE PROVIDED FOR THE KITCHEN SINK INSTALLATION.
2. PROVIDE KITCHEN SINK WITH OFFSET DRAIN TO BE INSTALLED IN THE DESIGNATED FULLY ACCESSIBLE RESIDENTIAL APARTMENT UNITS.
3. GARBAGE DISPOSAL PLUMBING LINE SHALL BE LOCATED THE TO ALLOW FOR ACCESSIBILITY CLEARANCE REQUIREMENTS
4. PROVIDE MINIMUM 27" HIGH x 19" DEEP CLEAR SPACE UNDER SINK.

2 BASE CABINET AT ACCESSIBLE KITCHEN SINK
SCALE: 1 1/2" = 1'-0"

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Santa Rosa, California
95405
Phone 707 523 7010
Fax 707 542 2328

LARGO FRESCA APARTMENTS
4744 HOEN AVENUE
SANTA ROSA, CALIFORNIA 95405

INTERIOR CABINETS
INTERIOR WALLS

LICENSED ARCHITECT
WARREN J. HEDGPETH
No. C 14601
REN. 10-21
STATE OF CALIFORNIA

Revisions

Job Number
2016

Project Designer
INGRID ANDERSON

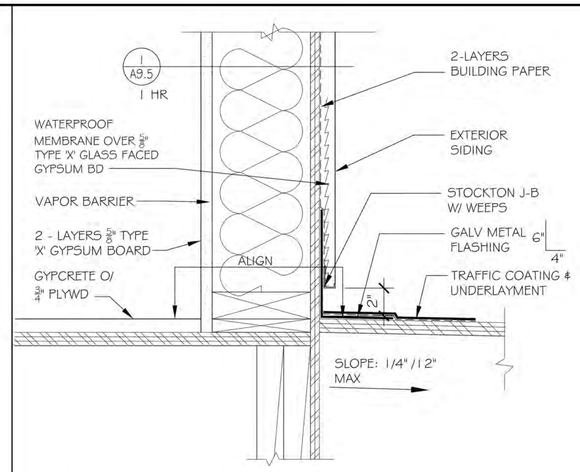
Drawn By
RGB

Date
October 19, 2021

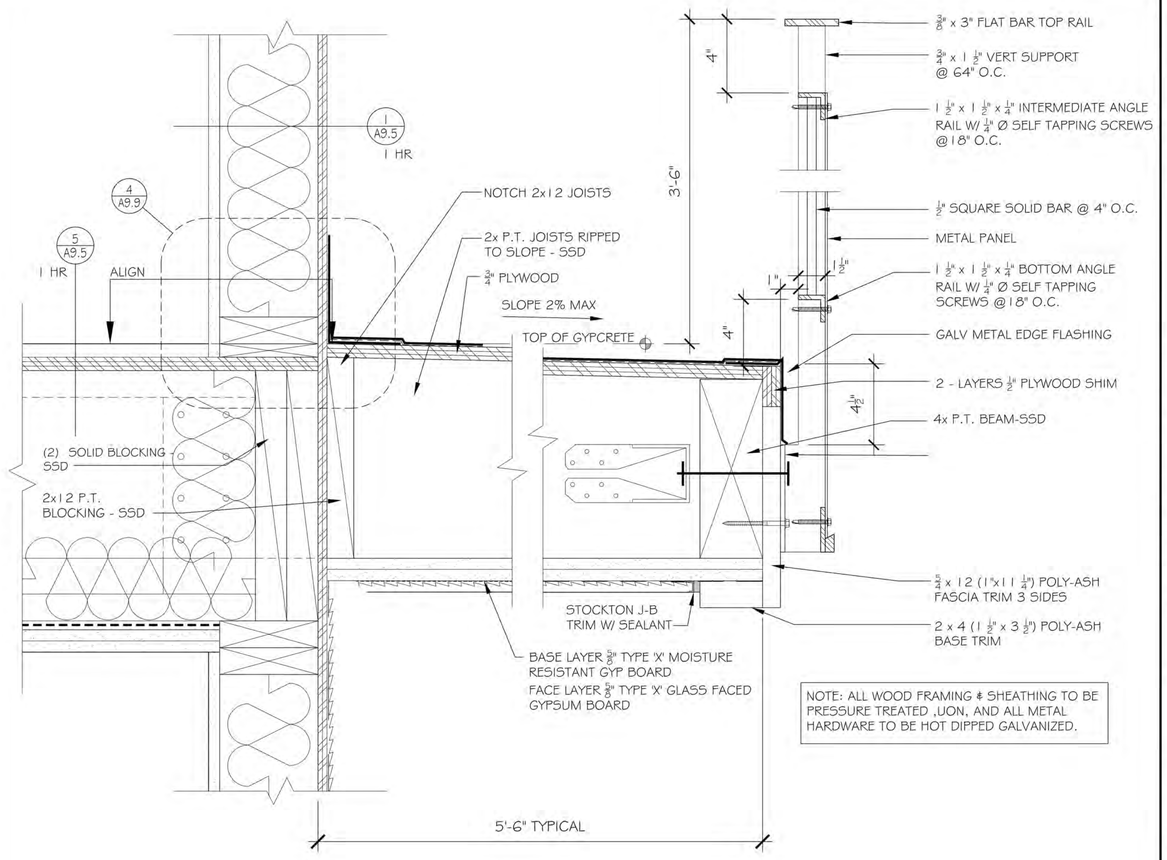
NOT FOR CONSTRUCTION

Sheet
A9.7
of

7 NOT USED
SCALE: 1 1/2" = 1'-0"



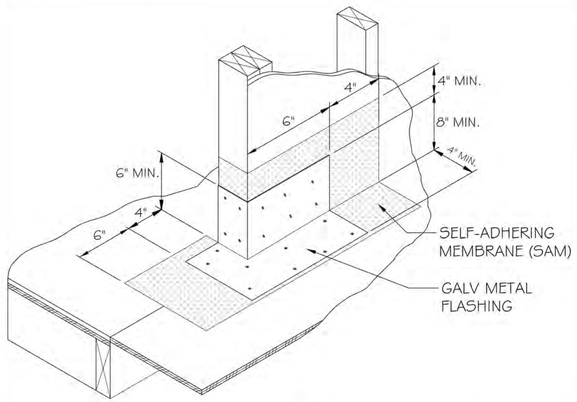
4 WALL FLASHING AT DECK
SCALE: 3" = 1'-0"



NOTE: ALL WOOD FRAMING & SHEATHING TO BE PRESSURE TREATED ,UON, AND ALL METAL HARDWARE TO BE HOT DIPPED GALVANIZED.

2 EXTERIOR DECK
SCALE: 3" = 1'-0"

8 NOT USED
SCALE: 1 1/2" = 1'-0"



NOTE:
INTERRELATED EDGE AND PERIMETER FLASHING NOT SHOWN FOR CLARITY

5 DOOR SILL FLASHING AT EXTERIOR DECKS
SCALE: NTS

9 NOT USED
SCALE: 1 1/2" = 1'-0"

6 FLASHING AT ROOF CRICKETT
SCALE: 1 1/2" = 1'-0"

3 NOT USED
SCALE: 1 1/2" = 1'-0"

1 NOT USED
SCALE: 1 1/2" = 1'-0"

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Santa Rosa, California
95405
Phone 707 523 7010
Fax 707 542 2328

LARGO FRESCA APARTMENTS
4744 HOEN AVENUE
SANTA ROSA, CALIFORNIA 95405

EXTERIOR PATIOS AND DECKS

LICENSED ARCHITECT
WARREN J. HEDGPETH
No. C 14601
REN. 10-21
STATE OF CALIFORNIA

Revisions

Job Number
2016

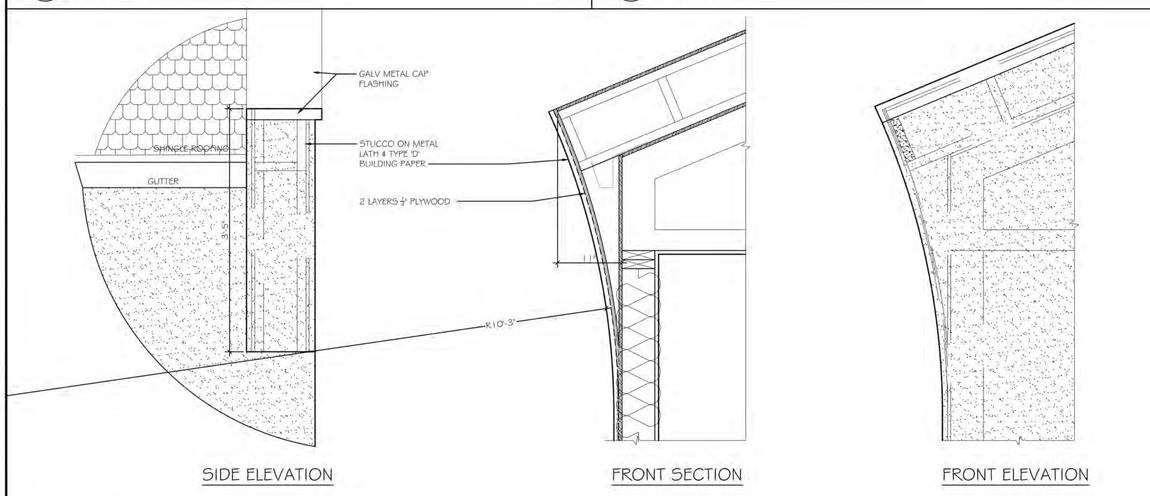
Project Designer
INGRID ANDERSON

Drawn By
RGB

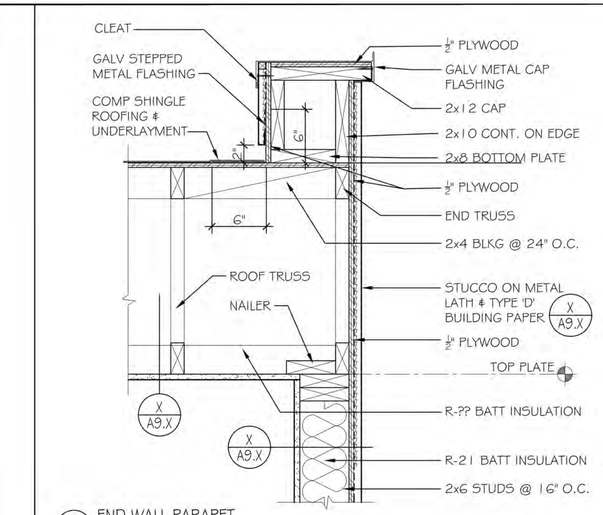
Date
October 19, 2021

NOT FOR CONSTRUCTION

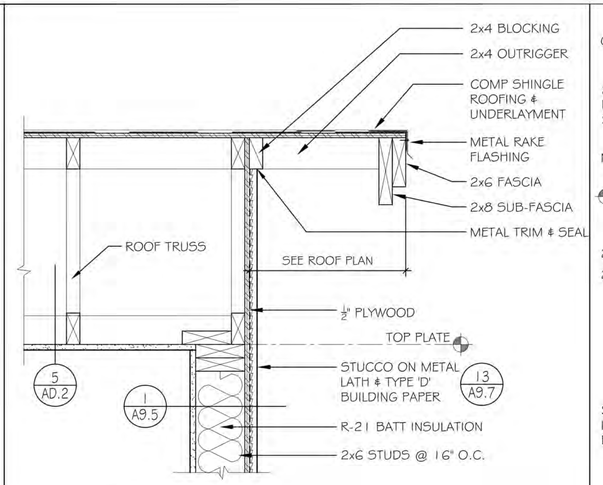
Sheet
A9.8
of .



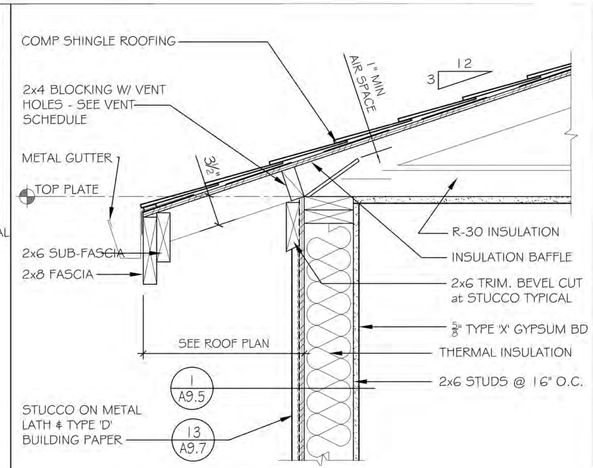
10 END WALL PARAPET FRAMING & FINISH SECTIONS
SCALE: 1" = 1'-0"



7 END WALL PARAPET
SCALE: 1 1/2" = 1'-0"



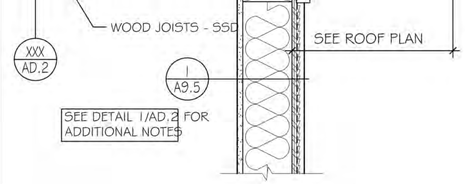
4 ROOF RAKE AT TRUSS
SCALE: 1 1/2" = 1'-0"



1 ROOF EAVE
SCALE: 1 1/2" = 1'-0"

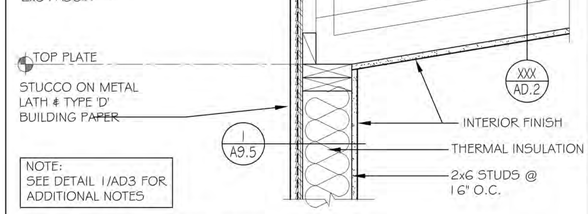
11 NOT USED
SCALE: 1 1/2" = 1'-0"

8 NOT USED
SCALE: 1 1/2" = 1'-0"



5 ROOF RAKE AT SOLID LUMBER JOISTS
SCALE: 1 1/2" = 1'-0"

6 NOT USED
SCALE: 1 1/2" = 1'-0"



2 ROOF EAVE W/ HEEL TRUSS
SCALE: 1 1/2" = 1'-0"

3 NOT USED
SCALE: 1 1/2" = 1'-0"

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Santa Rosa, California
95405
Phone 707 523 7010
Fax 707 542 2328

LARGO FRESCA APARTMENTS
4744 HOEN AVENUE
SANTA ROSA, CALIFORNIA 95405

ROOFING DETAILS

LICENSED ARCHITECT
WARREN J. HEDGPETH
No. C 14601
REN. 10-21
STATE OF CALIFORNIA

Revisions

Job Number
2016

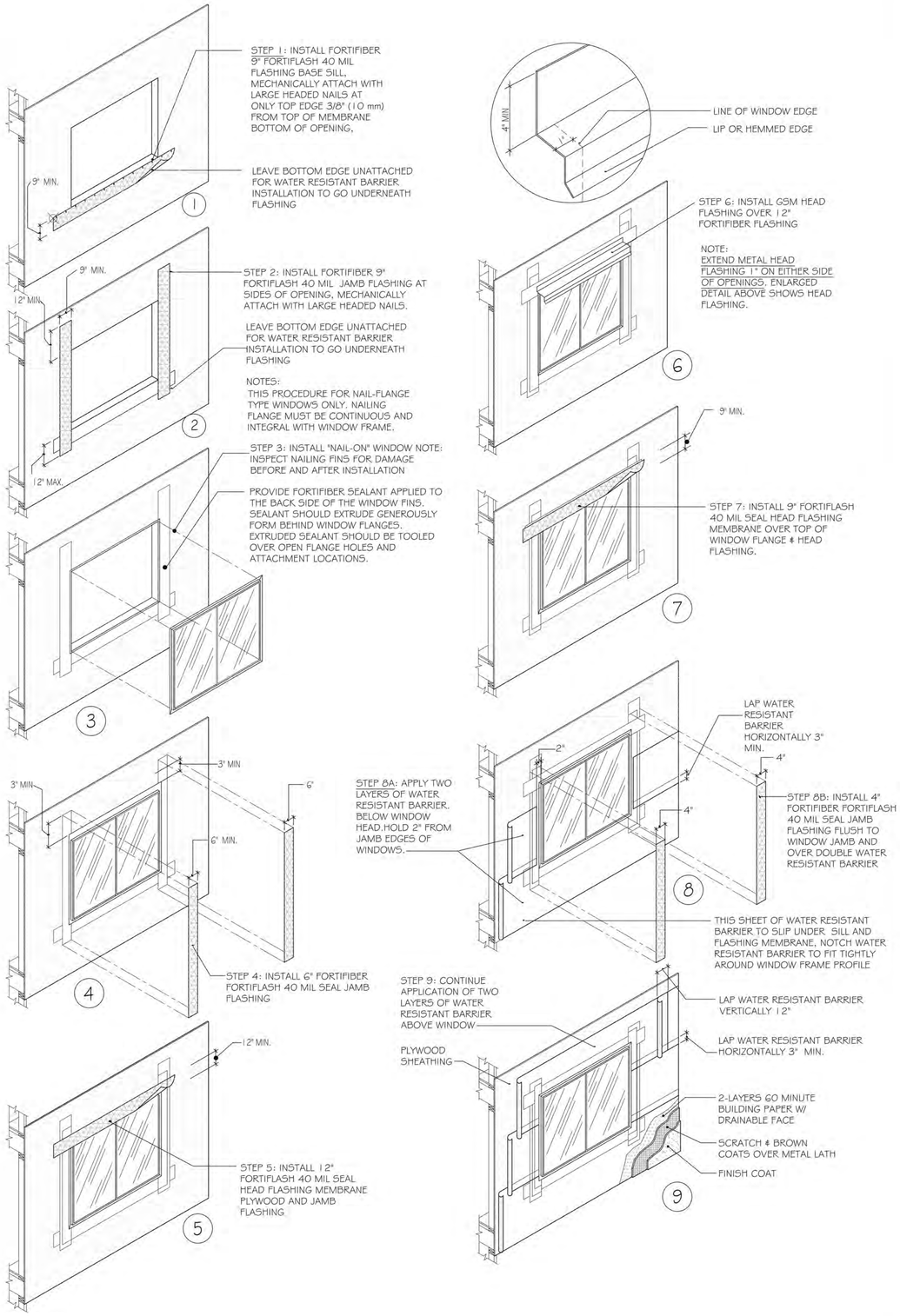
Project Designer
INGRID ANDERSON

Drawn By
RGB

Date
October 19, 2021

NOT FOR CONSTRUCTION

Sheet
A9.9
of -



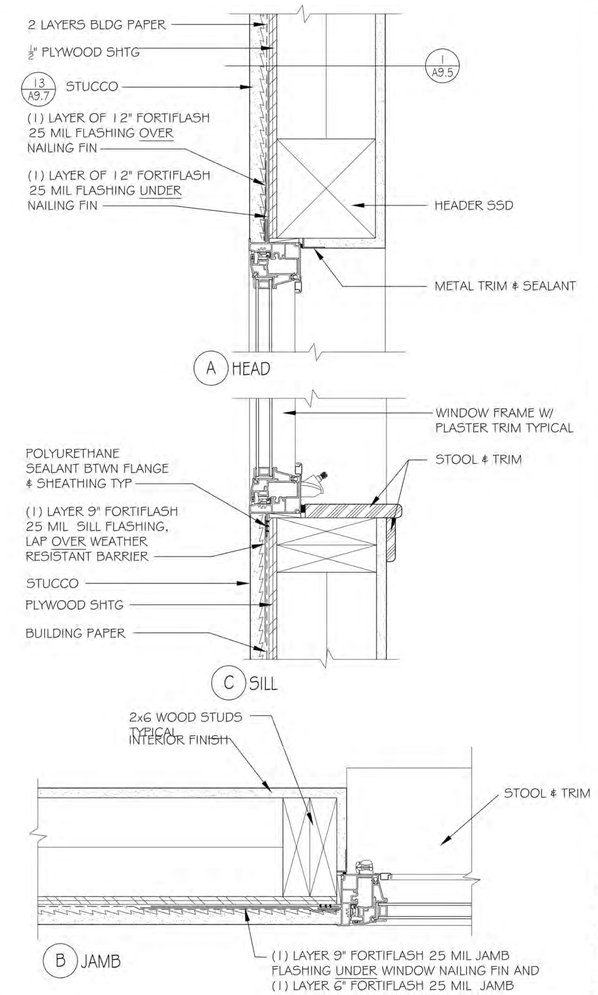
6 WINDOW FLASHING SEQUENCING
SCALE: NTS

3 NOT USED
SCALE: 1 1/2" = 1'-0"

4 NOT USED
SCALE: 1 1/2" = 1'-0"

5 NOT USED
SCALE: 1 1/2" = 1'-0"

1 VINYL WINDOW WITH NAILING FIN
SCALE: 3" = 1'-0"



2 VINYL WINDOW WITH NAILING FIN
SCALE: 3" = 1'-0"

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Santa Rosa, California
95405
Phone 707 523 7010
Fax 707 542 2328

LARGO FRESCA APARTMENTS
4744 HOEN AVENUE
SANTA ROSA, CALIFORNIA 95405

WINDOW ASSEMBLY

LICENSED ARCHITECT
WARREN J. HEDGPETH
No. C 14601
REN. 10-21
STATE OF CALIFORNIA

Revisions

Job Number
2016

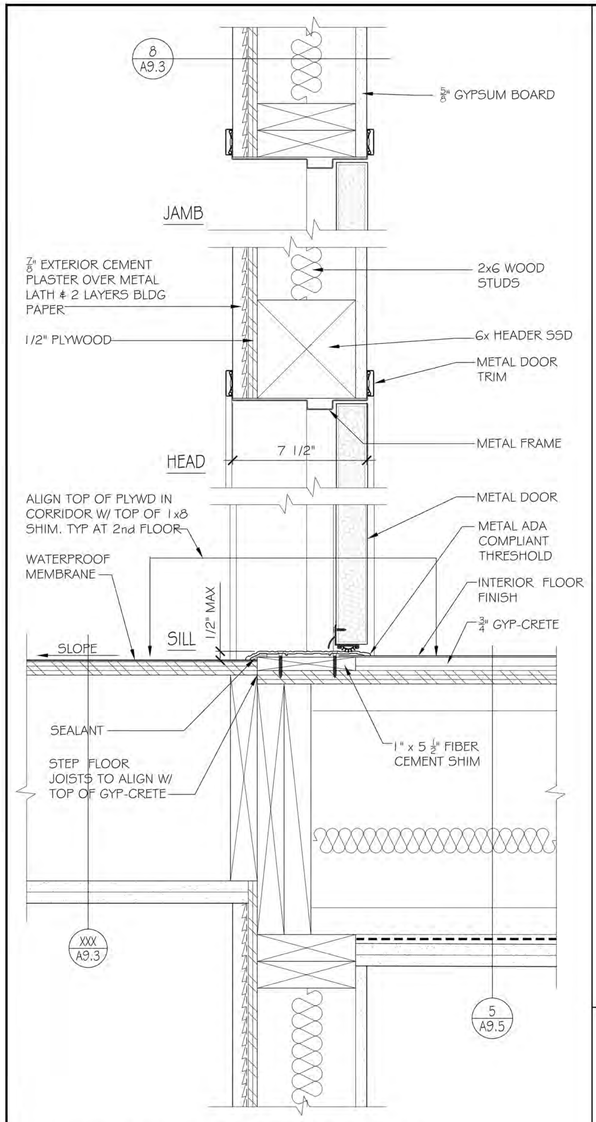
Project Designer
INGRID ANDERSON

Drawn By
RGB

Date
October 19, 2021

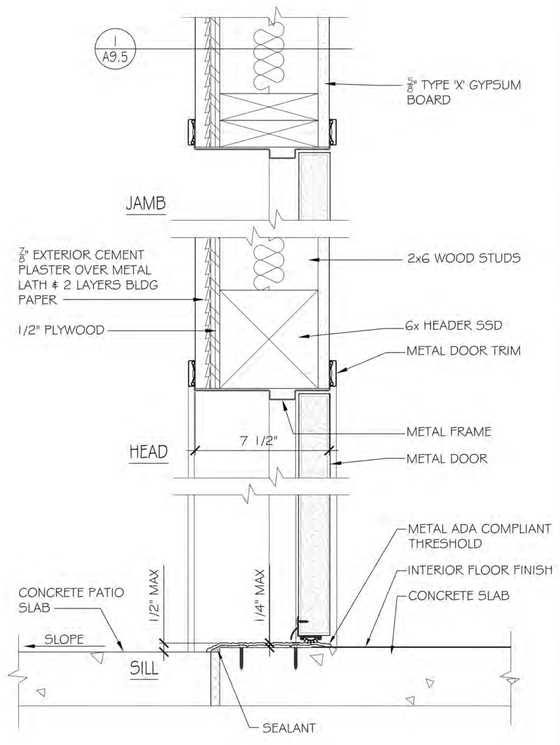
NOT FOR CONSTRUCTION

Sheet
A9.10
of .

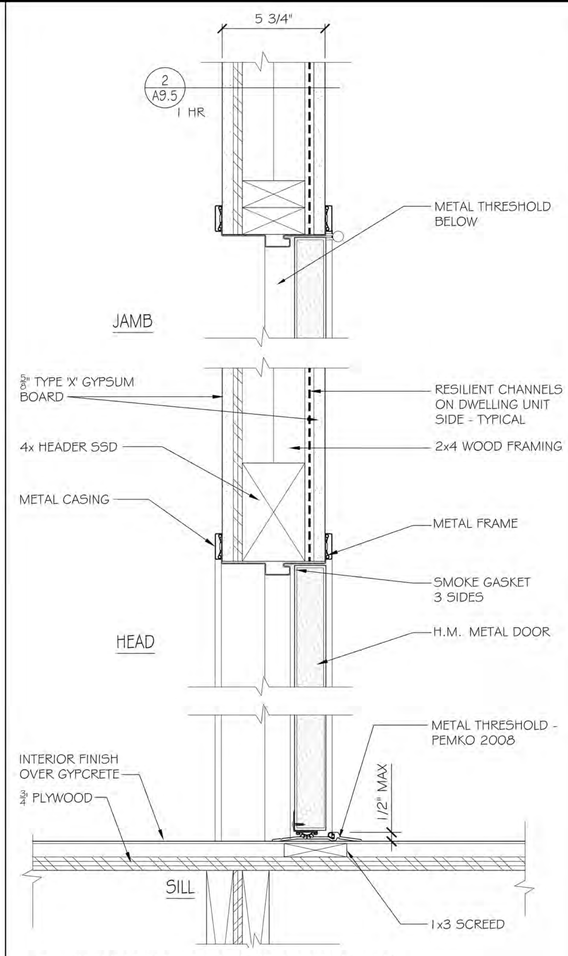


6 EXTERIOR DECK DOOR AT WOOD FLOOR FRAMING
SCALE: 3" = 1'-0"

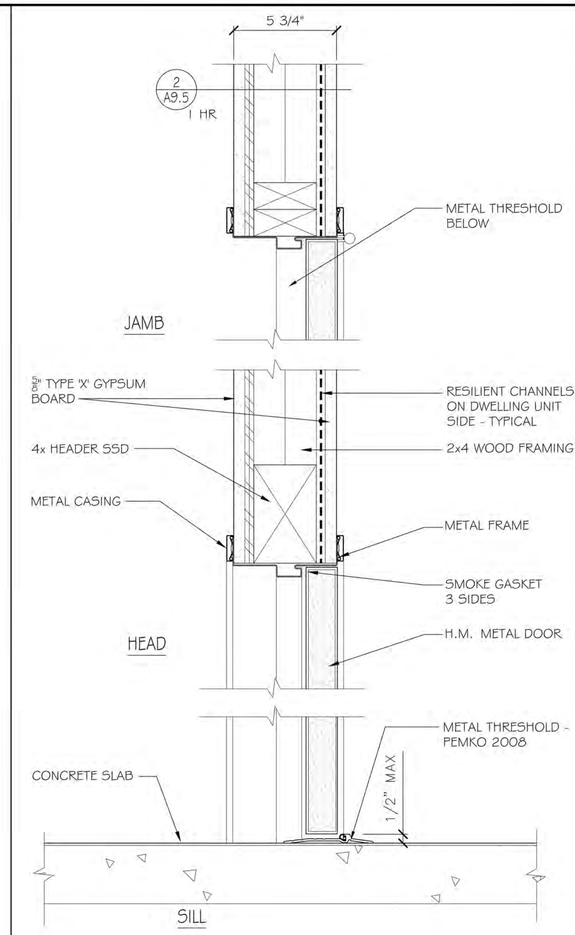
7 NOT USED
SCALE: 3" = 1'-0"



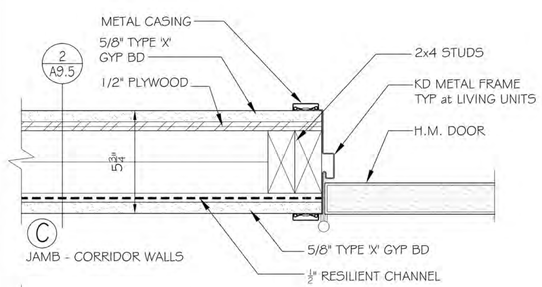
4 EXTERIOR PATIO DOOR AT CONCRETE SLAB
SCALE: 3" = 1'-0"

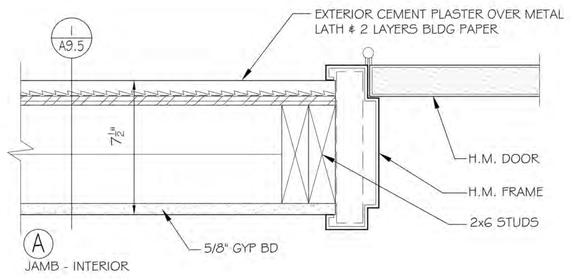


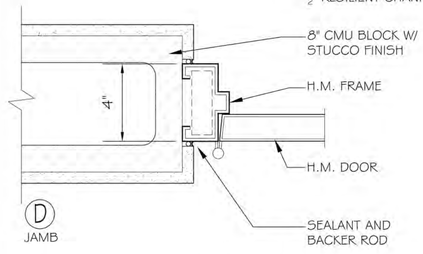
3 UNIT ENTRY DOOR AT WOOD FLOOR FRAMING
SCALE: 3" = 1'-0"

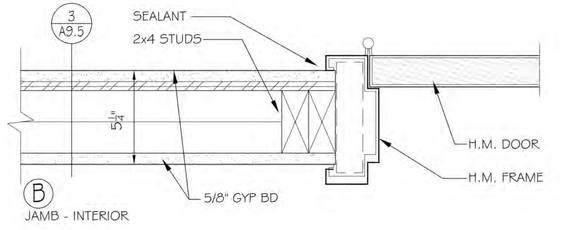


1 UNIT ENTRY DOOR AT CONCRETE SLAB
SCALE: 3" = 1'-0"

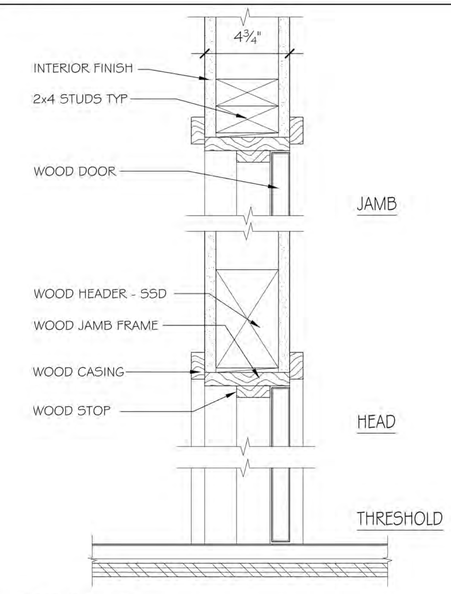








5 MISCELLANEOUS DOOR JAMBS
SCALE: 3" = 1'-0"



2 INTERIOR DOOR
SCALE: 3" = 1'-0"

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Santa Rosa, California
95405
Phone 707 523 7010
Fax 707 542 2328

LARGO FRESCA APARTMENTS
4744 HOEN AVENUE
SANTA ROSA, CALIFORNIA 95405

DOOR DETAILS

LICENSED ARCHITECT
WARREN J. HEDGPETH
No. C 14601
REN. 10-21
STATE OF CALIFORNIA

Revisions

Job Number
2016

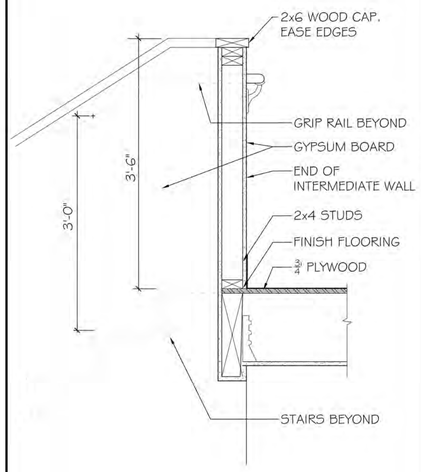
Project Designer
INGRID ANDERSON

Drawn By
RGB

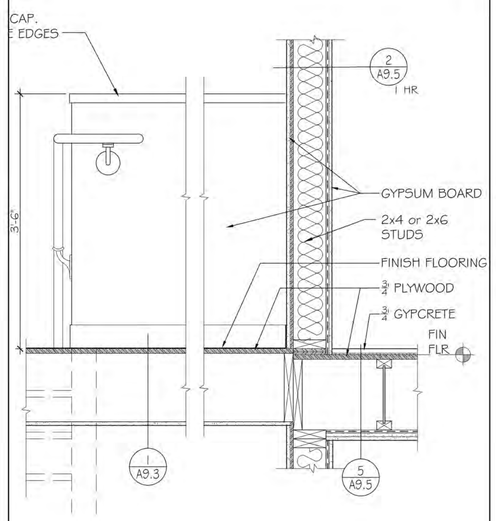
Date
October 19, 2021

Sheet
A9.11
of -

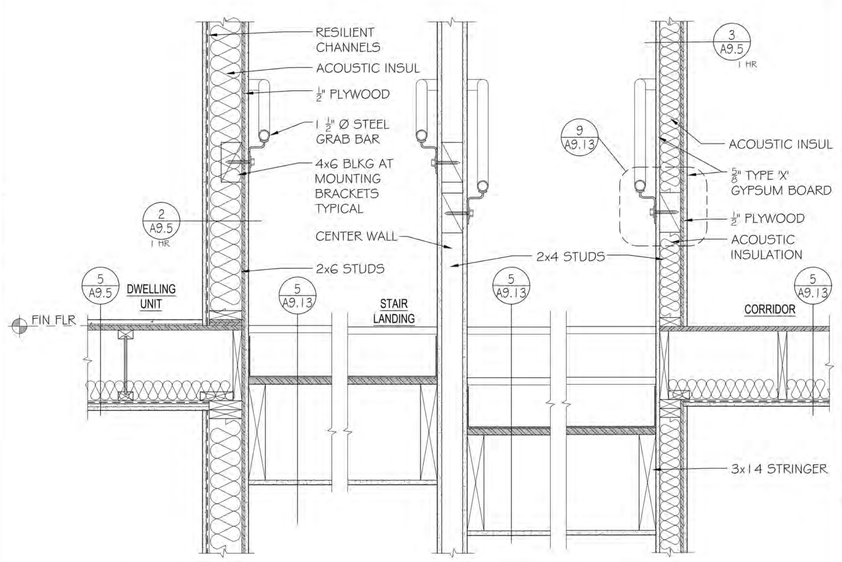
NOT FOR CONSTRUCTION



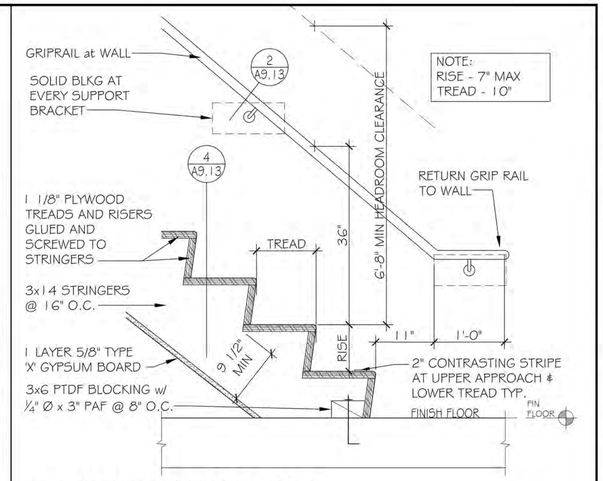
9 GUARD RAIL SECTION AT TOP LANDING
SCALE: 1" = 1'-0"



7 GUARD RAIL ELEVATION AT TOP LANDING
SCALE: 1" = 1'-0"



4 ROOF RAKE AT TRUSS
SCALE: 1" = 1'-0"



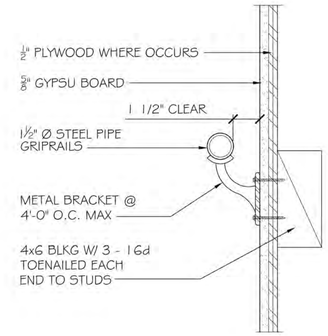
1 STAIR LANDING AT CONCRETE SLAB
SCALE: 1" = 1'-0"

10 NOT USED
SCALE: 1 1/2" = 1'-0"

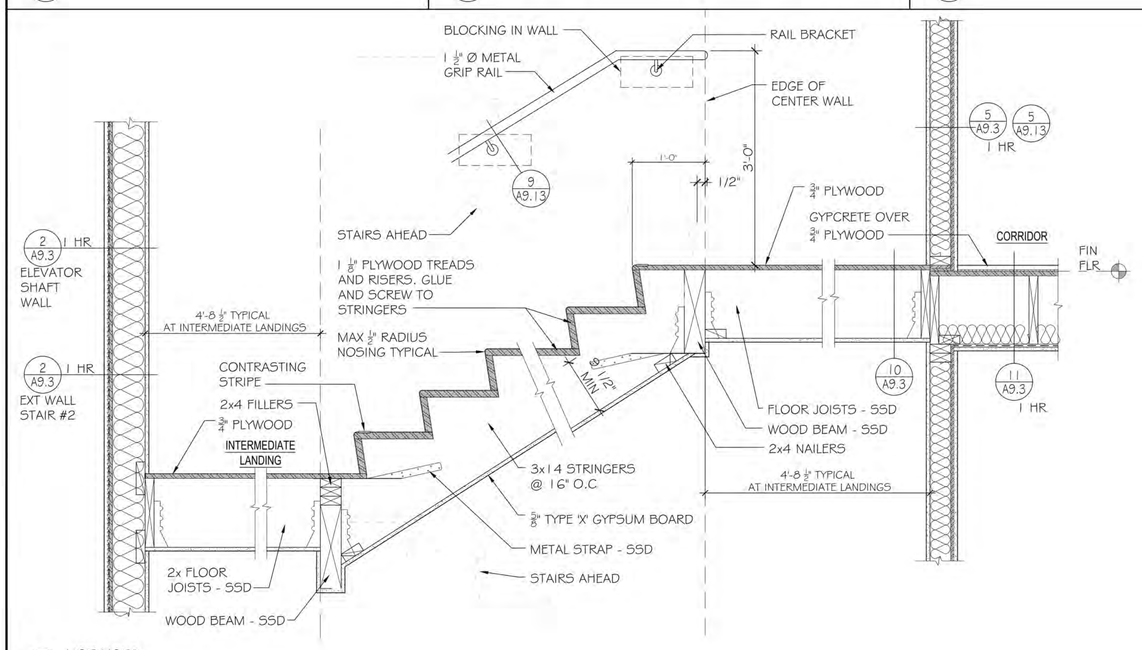
8 NOT USED
SCALE: 1 1/2" = 1'-0"

5 NOT USED
SCALE: 1 1/2" = 1'-0"

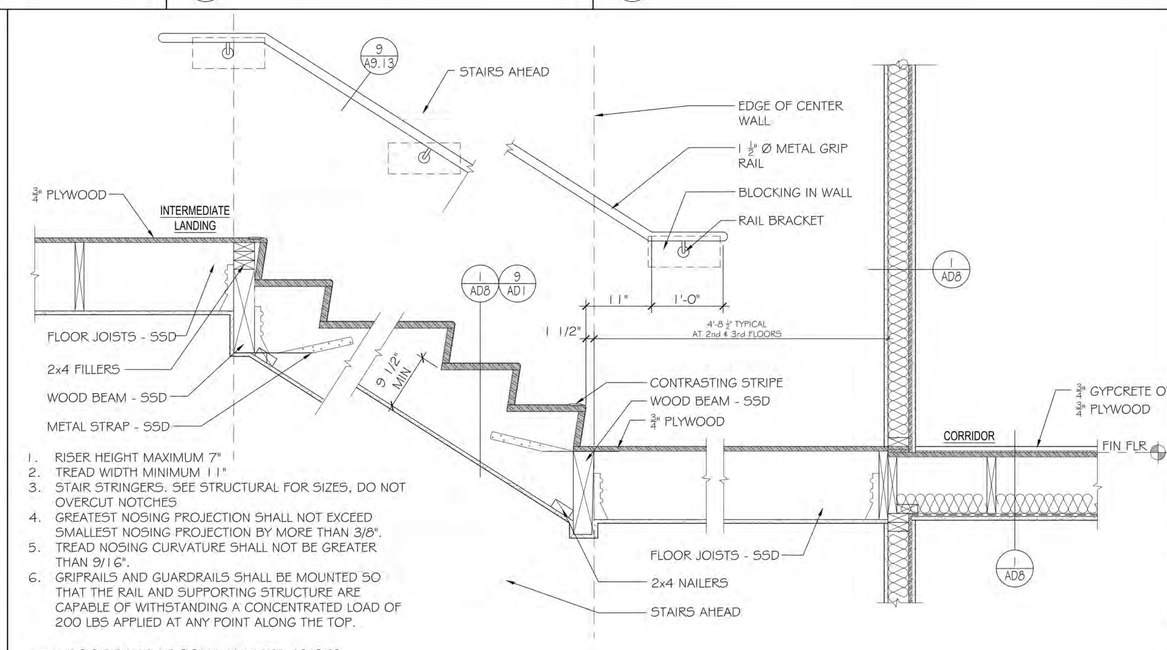
3 NOT USED
SCALE: 1 1/2" = 1'-0"



2 STAIR LANDING AT CONCRETE SLAB
SCALE: 1" = 1'-0"



11 NOT USED
SCALE: 1" = 1'-0"



1. RISER HEIGHT MAXIMUM 7"
2. TREAD WIDTH MINIMUM 11"
3. STAIR STRINGERS. SEE STRUCTURAL FOR SIZES, DO NOT OVERCUT NOTCHES
4. GREATEST NOSING PROJECTION SHALL NOT EXCEED SMALLEST NOSING PROJECTION BY MORE THAN 3/8".
5. TREAD NOSING CURVATURE SHALL NOT BE GREATER THAN 9/16".
6. GRIPRAILS AND GUARDRAILS SHALL BE MOUNTED SO THAT THE RAIL AND SUPPORTING STRUCTURE ARE CAPABLE OF WITHSTANDING A CONCENTRATED LOAD OF 200 LBS APPLIED AT ANY POINT ALONG THE TOP.

6 ROOF RAKE AT SOLID LUMBER JOISTS
SCALE: 1" = 1'-0"

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Santa Rosa, California
95405
Phone 707 523 7010
Fax 707 542 2328

LARGO FRESCA APARTMENTS
4744 HOEN AVENUE
SANTA ROSA, CALIFORNIA 95405

INTERIOR WOOD STAIRS

LICENSED ARCHITECT
WARREN J. HEDGPETH
No. C 14601
REN. 10-21
STATE OF CALIFORNIA

Revisions

Job Number
2016

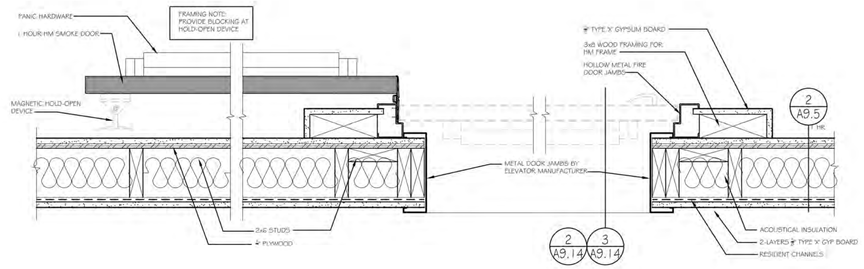
Project Designer
INGRID ANDERSON

Drawn By
RGB

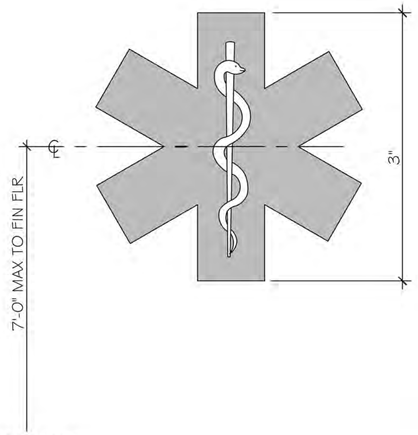
Date
October 19, 2021

NOT FOR CONSTRUCTION

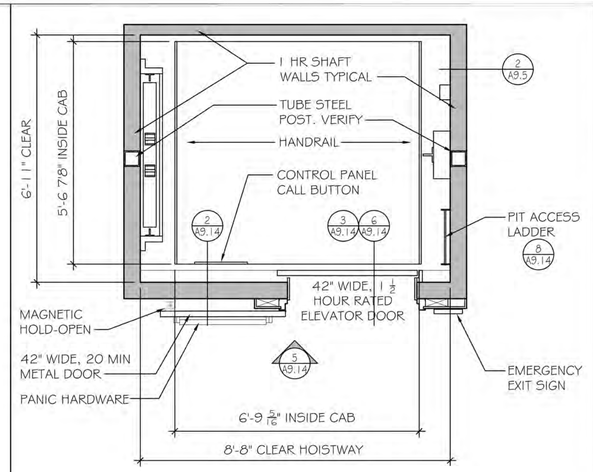
Sheet
A9.12
of -



9 SMOKE DOOR AT ELEVATOR
SCALE: 1 1/2" = 1'-0"



4 STAR OF LIFE
SCALE: NTS

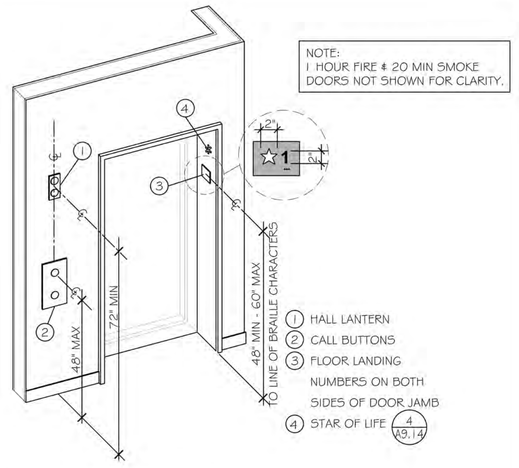


1 ELEVATOR SHAFT PLAN
SCALE: 1/2" = 1'-0"

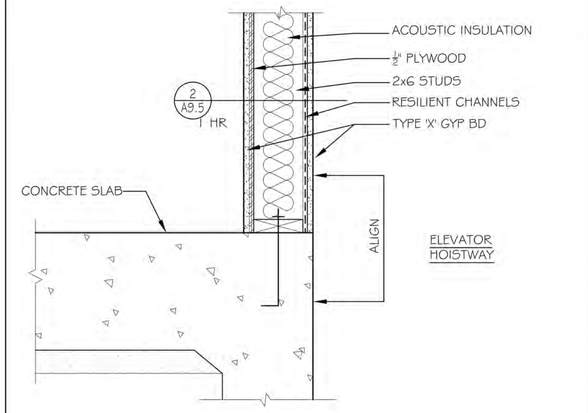
1. ELEVATORS AND ELEVATOR LOBBIES SHALL COMPLY W/ THE PROVISIONS OF CBC CHAPTER 30, SANTA ROSA MUNICIPAL CODE & THE 2019 BUILDING STANDARDS CODES & ARE REQUIRED TO BE ACCESSIBLE TO SERVE AS PART OF AN ACCESSIBLE MEANS OF EGRESS SHALL COMPLY W/ SECTION 1009 & EITHER CHAPTER 11A FOR APPLICATIONS LISTED IN SECTION 1.8.2.1.2 REGULATED BY THE DEPARTMENT OF HOUSING & COMMUNITY DEVELOPMENT OR CHAPTER 11B FOR APPLICATIONS LISTED IN SECTION 1.9.1 REGULATED BY THE DIVISION OF THE STATE ARCHITECT ACCESS COMPLIANCE [3001.3 CBC].
2. PROVIDE A CLEAR, PLUMB HOISTWAY OF THE SIZE SHOWN ON THE FINAL MANUFACTURERS LAYOUT. VARIATIONS MUST NOT EXCEED 1". (TOLERANCE = -0" + 1")
3. PROVIDE ADEQUATE SUPPORT FOR GUIDE RAIL BRACKETS FROM PIT FLOOR TO THE TOP OF THE HOISTWAY & NOT SPANNING FURTHER THAN ALLOWED BY THE GOVERNING CODE AUTHORITY. FIREPROOFING SHALL BE AFTER INSTALLATION OF ELEVATOR BRACKETS.
4. HOISTWAY VENTILATION SHALL BE PROVIDED PER CODE REQUIREMENTS.
5. PROJECTIONS REQUIRING BEVELING IN ACCORDANCE W/ CODE REQUIREMENTS SHALL BE BEVELED AT AN ANGLE NOT LESS THAN 75 DEGREES FROM THE HORIZONTAL.
6. PROVIDE REMOVABLE, OSHA COMPLIANT BARRICADES AROUND ALL HOISTWAY OPENINGS & BETWEEN ELEVATORS INSIDE OF THE HOISTWAY AS REQUIRED. PROVIDE TWO LIFELINE ATTACHMENTS AT THE TOP, FRONT OF THE HOISTWAY.
7. ARRANGE FOR ALL BLOCK OUT / CUTOUT OF OPENINGS TO INSTALL HALL PUSHBUTTONS, SIGNAL FIXTURES & HATCH DUCT.
8. PROVIDE A DRY PIT REINFORCED TO SUSTAIN VERTICAL FORCE FROM RAILS & BUFFERS. REFERENCE THE REACTION LOAD TABLES FOR VERTICAL FORCES. SUMPS AND / OR PUMPS (WHERE PERMITTED) LOCATED WITHIN THE PIT MAY NOT INTERFERE W/ THE ELEVATOR EQUIPMENT.
9. PROVIDE SUITABLE LIGHTING FOR THE MACHINE SPACE W/ A LIGHT SWITCH LOCATED IN THE HOISTWAY. PROVIDE A LIGHT FIXTURE & A SEPARATE GFCI PROTECTED DUPLEX CONVENIENCE OUTLET IN THE ELEVATOR PIT.
10. ENTRANCE WALLS ARE TO BE LEFT OPEN UNTIL THE ELEVATOR EQUIPMENT IS INSTALLED. ADEQUATE SUPPORT FOR ENTRANCE ATTACHMENT POINTS IS REQUIRED
11. AT ALL LANDINGS. ALL FINISHED FLOORING & GROUTING IS TO BE INSTALLED AFTER THE ENTRANCE FRAMES ARE INSTALLED.
12. LOCATE & INSTALL METAL PIT LADDER PER MANUFACTURERS FINAL LAYOUT DRAWINGS.
13. AN I-BEAM AND SAFETY LINE BEAM, PROVIDED BY MANUFACTURERS , MUST BE INSTALLED IN THE ELEVATOR HOISTWAY OVERHEAD PER MANUFACTURERS FINAL LAYOUT DRAWINGS. WHERE AN ELEVATOR HAS BOTH A FRONT & REAR OPENING, TWO SAFETY LINE BEAMS ARE REQUIRED.
14. FOR PROPER EQUIPMENT OPERATION, THE MACHINE SPACE AT THE TOP OF THE HOISTWAY MUST BE PROPERLY VENTED PER CODE REQUIREMENTS. MAX ALLOWED HUMIDITY IS 95% NON-CONDENSING. HOISTWAY MUST MAINTAIN A TEMPERATURE BETWEEN 41 F & 104 F.
15. THE ACCESS DOOR TO THE CONTROL SPACE OR THE CONTROL ROOM MUST BE SECURED AGAINST UNAUTHORIZED ACCESS. IT SHALL BE SELF-LOCKING & SELF-CLOSING.
16. PROVIDE A 15-AMP 102V AC FUSED SERVICE W/ GROUND (VIA EMERGENCY LIGHT SUPPLY IF AVAILABLE) CONNECTED TO EACH CONTROL CABINET FOR LIGHTING & FAN. PROVIDE DEDICATED ANALOG PHONE LINE TERMINATING AT THE ELEVATOR CONTROL CABINET.
17. FOR CONTROL SPACES LOCATED REMOTELY FROM THE ELEVATOR HOISTWAY, PROVIDE A GOVERNOR ACCESS DOOR OF SIZE & LOCATION PER MANUFACTURERS FINAL LAYOUT DRAWINGS. THE ACCESS DOOR SHALL BE SECURED AGAINST UNAUTHORIZED ACCESS.
18. FOR INTEGRATED CONTROL SPACE LOCATED IN SEISMIC AREA, PROVIDE A SEISMIC SWITCH ACCESS DOOR OF SIZE & LOCATION PER MANUFACTURERS FINAL LAYOUT DRAWINGS. THE ACCESS DOOR SHALL BE SECURED AGAINST UNAUTHORIZED ACCESS.
19. EVERY OPENING INTO AN ELEVATOR SHAFT ENCLOSURE SHALL BE PROTECTED BY A SELF-CLOSING OR AUTOMATIC CLOSING FIRE ASSEMBLY HAVING A 1-HOUR FIRE RATING IN 1-HOUR SHAFTS AND 1-1/2 HOURS IN 2-HOUR SHAFTS. [TABLE 716.5 & 716.5.9 CBC].
20. THE LEVEL OF ILLUMINATION AT THE CAR CONTROLS, PLATFORM, CAR THRESHOLD, AND CAR LANDING SILL SHALL BE 5 FOOT-CANDLES MINIMUM. [118-407.4.5 CBC]
21. AN APPROVED SIGN SHALL BE PERMANENTLY DISPLAYED IN THE ELEVATOR MACHINE ROOM, ELEVATOR MACHINERY SPACE, ELEVATOR CONTROL SPACE, OR ELEVATOR CONTROL ROOM IN A CONSPICUOUS LOCATION WITH A MINIMUM OF 1 LETTERS ON A CONTRASTING BACKGROUND, STATING:
NO COMBUSTIBLE STORAGE PERMITTED IN THIS ROOM BY ORDER OF THE FIRE MARSHAL [OR NAME OF FIRE AUTHORITY].

10 ELEVATOR NOTES
SCALE: NTS

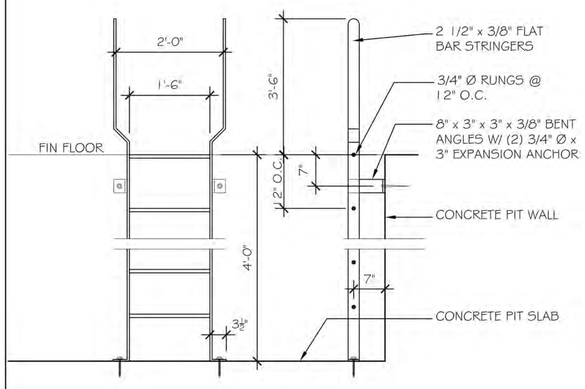
7 NOT USED
SCALE: 1 1/2" = 1'-0"



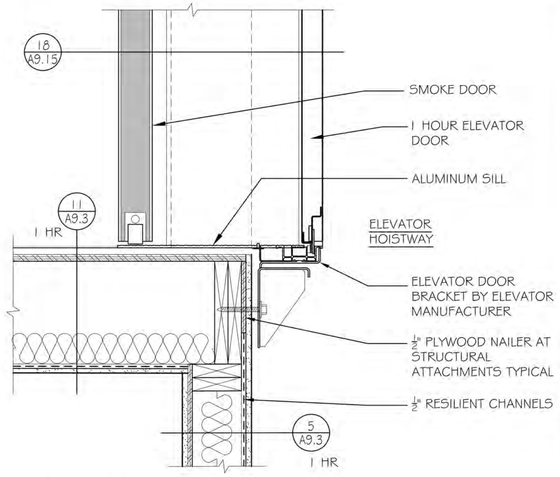
5 ELEVATOR CONTROLS AND SYMBOLS
SCALE: NTS



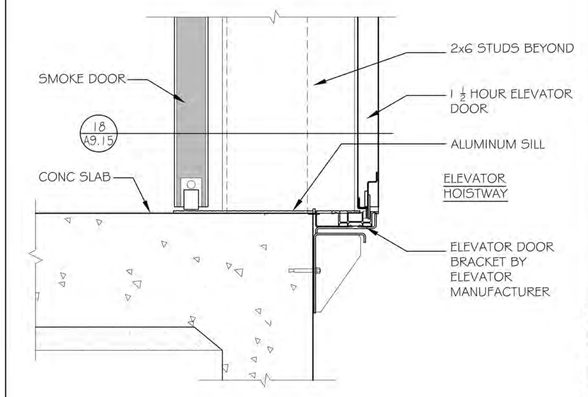
2 ELEVATOR SHAFT WALL AT CONCRETE SLAB
SCALE: 1 1/2" = 1'-0"



8 ELEVATOR PIT ACESS LADDER
SCALE: 3/4" = 1'-0"



6 ELEVATOR DOOR SILL AT FRAMED FLOORS
SCALE: 1 1/2" = 1'-0"



3 ELEVATOR DOOR SILL AT GROUND CONCRETE SLAB
SCALE: 1 1/2" = 1'-0"

© Hedgpeth Architects

Hedgpeth
ARCHITECTS
2321 Bethards Drive
Santa Rosa, California
95405
Phone 707 523 7010
Fax 707 542 2328

LARGO FRESCA APARTMENTS
4744 HOEN AVENUE
SANTA ROSA, CALIFORNIA 95405

EXTERIOR SITE DETAILS

LICENSED ARCHITECT
WARREN J. HEDGPETH
No. C 14601
REN. 10-21
STATE OF CALIFORNIA

Revisions

Job Number
2016

Project Designer
INGRID ANDERSON

Drawn By
RGB

Date
October 19, 2021

NOT FOR CONSTRUCTION

Sheet
A9.13
of -

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Sidewalk Hoen Ave 1 Floor level	+	1.9 fc	3.0 fc	1.3 fc	2.3:1	1.5:1
Sidewalk Hoen Ave Floor level 2	+	2.1 fc	14.1 fc	0.1 fc	141.0:1	21.0:1
Site and Parking area Floor level	+	2.9 fc	11.1 fc	1.0 fc	11.1:1	2.9:1
Courtyard Floor level	+	3.5 fc	18.5 fc	1.2 fc	15.4:1	2.9:1
Left side yard floor level	+	3.1 fc	4.0 fc	2.0 fc	2.0:1	1.6:1
Lower Left Side Yard Floor level	+	2.6 fc	3.1 fc	1.5 fc	2.1:1	1.7:1
Right Side yard Floor level	+	1.8 fc	2.8 fc	1.0 fc	2.8:1	1.8:1

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Lumens Per Lamp	Light Loss Factor	Wattage
	A	15	Lithonia Lighting	DSXW1 LED 20C 700 30K T4M MVOLT HS	DSXW1 LED WITH (2) 10 LED LIGHT ENGINES, TYPE T4M OPTIC, 3000K, @ 700mA WITH HOUSE-SIDE SHIELDS.	LED	3805	0.85	45.7
	C	8	Lithonia Lighting	VCPG LED P2 35K T5M MVOLT	VCPG LED WITH P2 - PERFORMANCE PACKAGE, 3500K, T5M OPTIC TYPE	LED	4740	0.85	33.96
	D	3	Lithonia Lighting	DSXB LED 12C 530 30K ASY	D-SERIES BOLLARD WITH 12 3000K LEDS OPERATED AT 530mA AND ASYMMETRIC DISTRIBUTION	LED	1719	0.85	22
	B	1	Lithonia Lighting	DSX0 LED P2 30K TFTM MVOLT HS	DSX0 LED P2 30K TFTM MVOLT with houseside shield	LED	4353	0.85	49
	E	12	Lithonia Lighting	DSXW1 LED 20C 530 30K T3S MVOLT	DSXW1 LED WITH (2) 10 LED LIGHT ENGINES, TYPE T3S OPTIC, 3000K, @ 530mA.	LED	4033	0.85	34.9
	F	3	LUMINIS CANADA POINTE CLAIRE, QUEBEC	SR620-L1W30	LUMINIS SCIROCCO SERIES LED LUMINAIRE WITH TRANSLUCENT JAR REFRACTOR, TRANSLUCENT CYLINDER, LOUVER, AND WHITE SHADE	ONE WHITE ARRAY LED. LUMEN OUTPUT = 1110 LMS.	1110	0.85	30
	G	4	Luminis Canada Inc.	SQ500-L1L10-R30	Syrios Square 5	(1) Bridgelux BXRC-40E2000-D-73 c/w Thomas Research-LED20W-57-C0350-D @ 120.00V	922	0.85	12.5

Ceiling Height: Varies
Luminaire Mounting Height: As noted
Calculation Point Height: As noted
Reflectances: Under the canopy 80% Ceiling, 50% Walls, 20% Floor

Luminaire illuminance values provided in this report, whether for normal, critical, or emergency applications, are for product application assistance only. These values were developed in collaboration with, and are subject to approval by, the design professional of record (architect/engineer/LC), and are NOT intended for construction. Because these values are approximate and based on limited application information provided to 16500, Inc. at the time of calculation, 16500, Inc. does not warrant the installed performance of the luminaire(s) will match that shown in this report. Please verify all data and conditions to assure the accuracy of the report. 16500 shall neither be responsible nor liable for design, approval, or results of emergency lighting under any circumstance.

THIS LIGHTING APPLICATION REQUIRES SPECIFIC LIGHTING CONTROL DEVICES OR SYSTEMS PER CALIFORNIA TITLE 24 PART 6.

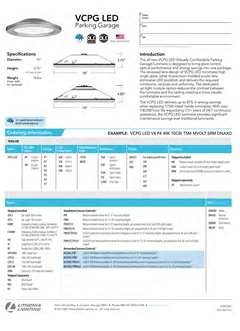
Therefore, this proposal includes:

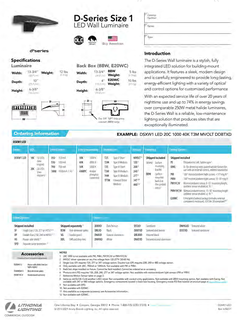
☐ SOLUTION: This proposal includes a complete lighting and control system either as an alternate to that specified, or as a recommendation based on the information provided, subject to your review and approval.

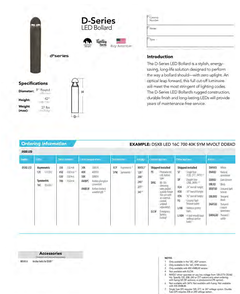
☐ SUPPLEMENT: This proposal includes lighting as requested/specified, as well as a proposed lighting control system for your review and approval.

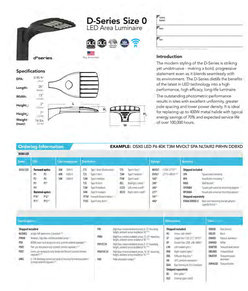
☒ ALERT: This proposal includes only lighting as requested/specified; however, the application likely requires compatible lighting controls to meet the following criteria. We are happy to provide a lighting control system if desired. Required:

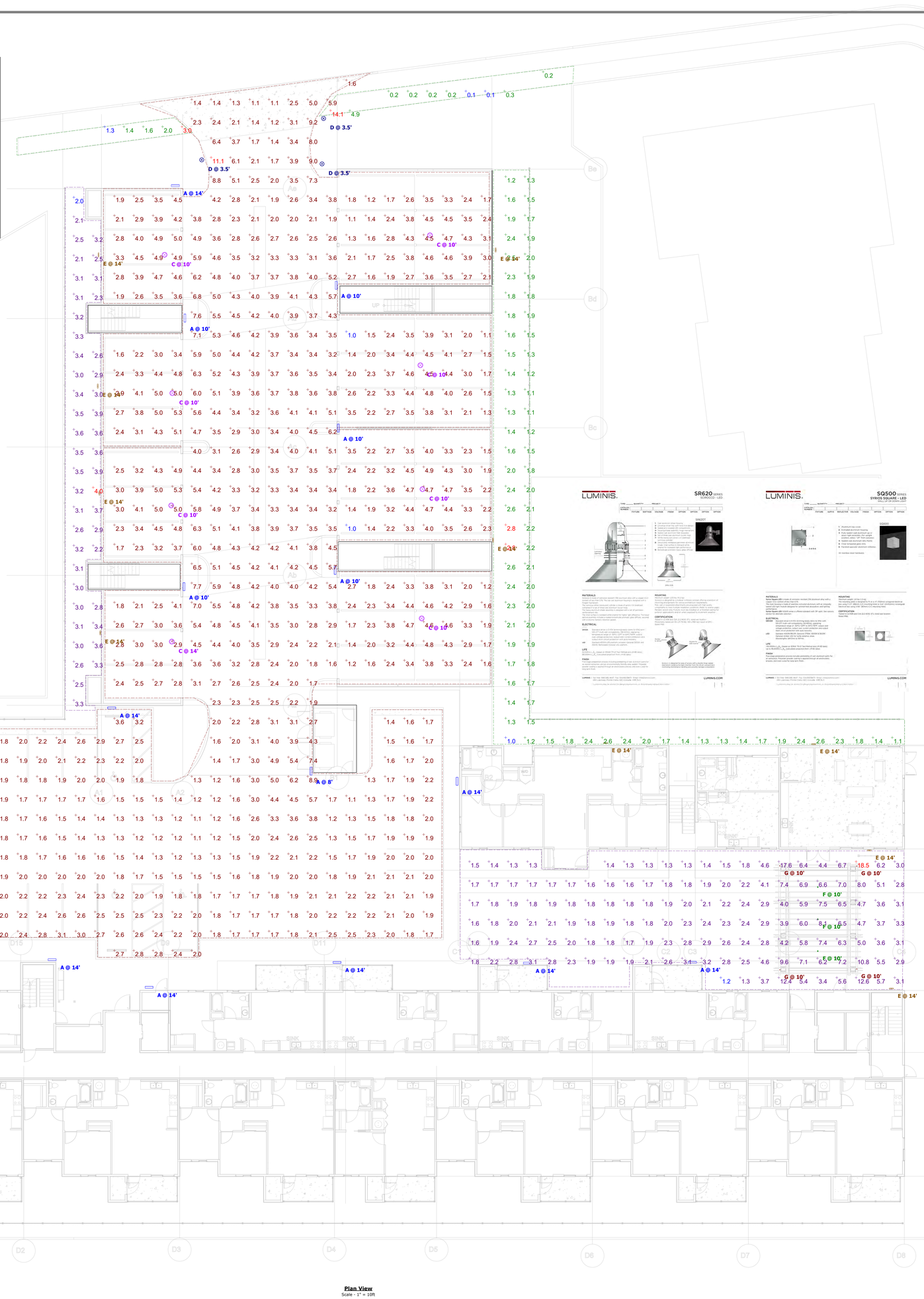
- Manual Switch(es)
- Automatic time switch (astronomical)
- Occupancy Sensor(s)
- Photosensor(s) / daylight harvest(s)
- Demand responsive / load shedding
- Controlled Receptacle(s)
- Motion Sensor(s) - Outdoor

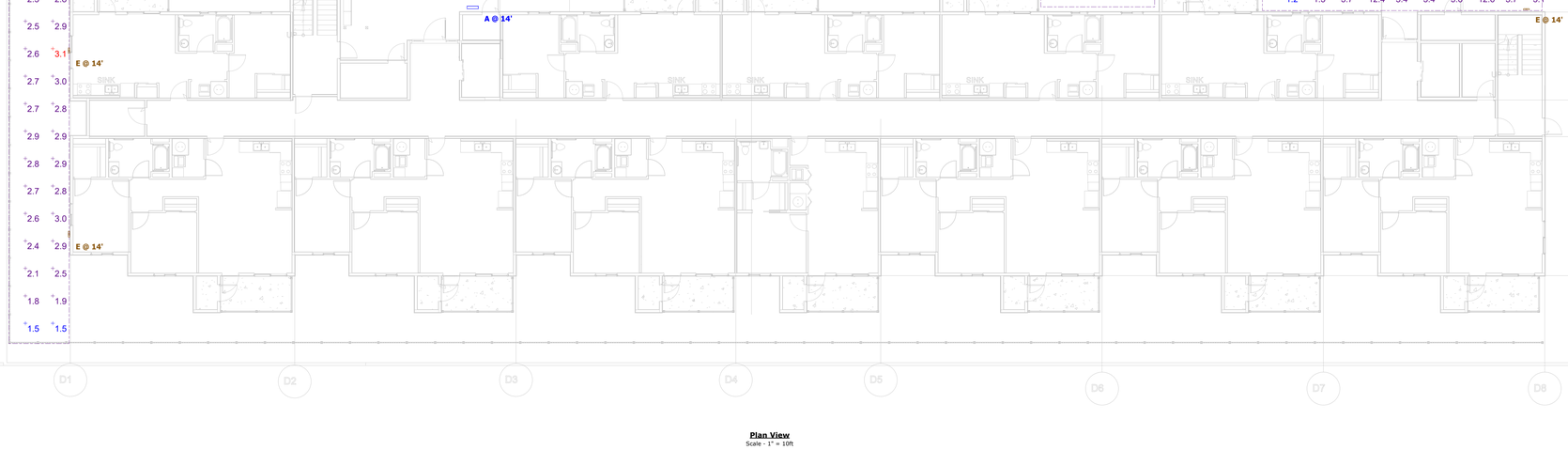










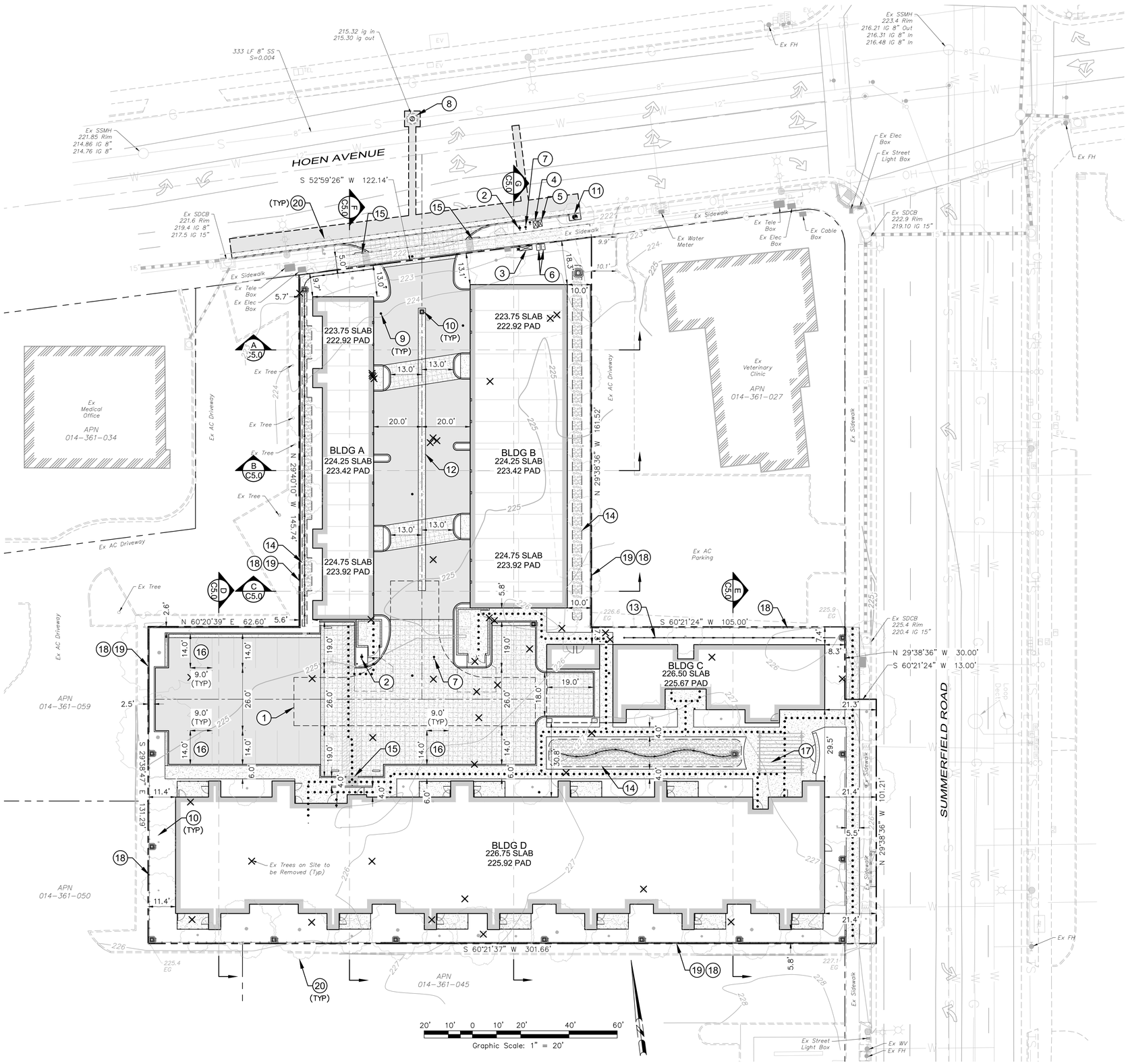


Plan View
Scale - 1" = 10ft

Lago Fresca Apartment | 4730 Hoen Ave | Santa Rosa | CA 95405
PC# 21-16088
Client: Brokaw Design

Designer	ST
Date	08/19/2021
Scale	Not to Scale
Drawing No.	RV02
Summary	

1 of 1



HATCHING LEGEND:

- 3" AC OVER 9" CL II AB
- 4" PCC OVER 4" CLII AB
- BIO-RETENTION AREA

PROPOSED FEATURES:

1. HAMMERHEAD TURNAROUND
2. FIRE HYDRANT
3. FIRE SERVICE DDCV W/FDC
4. DOMESTIC WATER METER
5. IRRIGATION WATER METER
6. BACKFLOW PREVENTOR
7. WATER VALVE
8. SANITARY SEWER MANHOLE
9. SANITARY SEWER CLEANOUT
10. STORM DRAIN DROP INLET
11. STORM DRAIN CATCH BASIN
12. CONCRETE VALLEY GUTTER
13. DRAINAGE FLOW LINE
14. BIORETENTION AREA
15. ACCESSIBLE RAMP
16. COMPACT PARKING W/2' OVERHANG
17. ACCESSIBLE PATH OF TRAVEL
18. PERIMETER FENCE (SAD)
19. RETAINING WALL (H=2' MAX)
20. PROPOSED TREE (SLD)

DEMOLITION LEGEND:

- EX TREE TO BE REMOVED

Revisions

No.	Date	Description	Approved

adobe associates, inc.
civil engineering | land surveying | wastewater
1220 N. Dutton Ave., Santa Rosa, CA 95401
P. (707) 541-2300 F. (707) 541-2301
Website: www.adobeinc.com
"A Service You Can Count On!"

Timothy L. Schram, RCE 67890
My license expires 6/30/2023

REGISTERED PROFESSIONAL ENGINEER TIMOTHY LEE SCHRAM No. 067890 Exp. 6/30/2023 CIVIL STATE OF CALIFORNIA

LAGO FRESCA, LLC
OVERALL SITE PLAN

4744 Hoen Avenue
Santa Rosa, California
APN XXX-XXX-XXX

SCALE: AS SHOWN
Date: DECEMBER 13, 2021
Design by: BPC
Drawn by: BPC/TS
Checked by: BPC

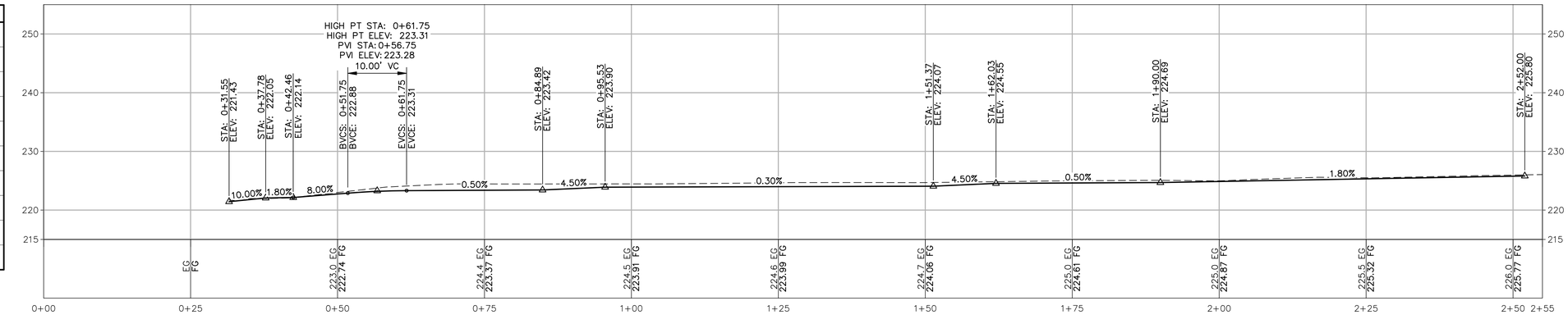
Sheet C1.0 of 5 Sheets
Job 17006.01

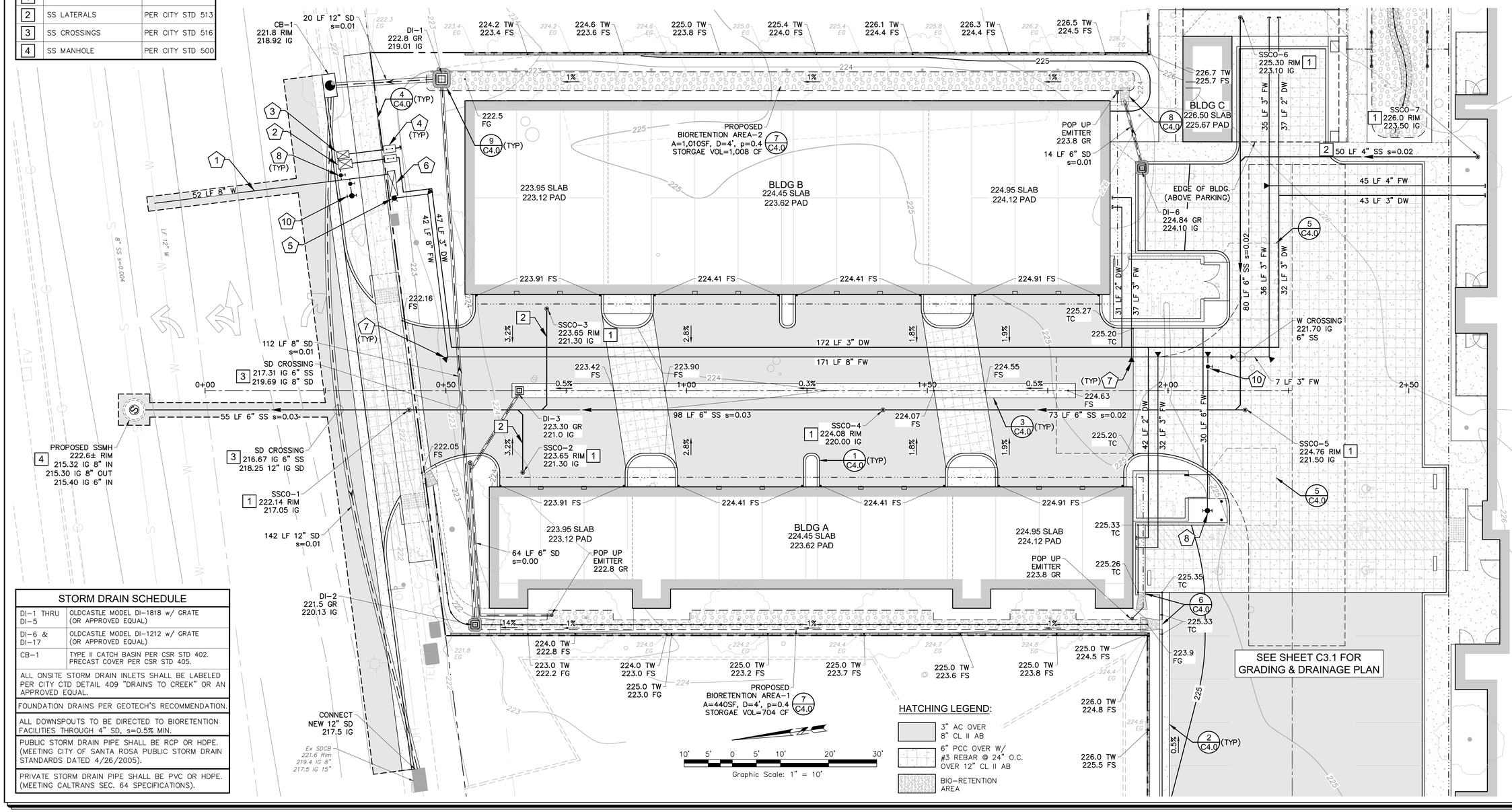
WATER LEGEND & SCHEDULE

1		8" WATER SERVICE PER CITY STD 866
2	⊠	2" WM PER CITY STD 865A
3	⊠	1" IRRIGATION WM PER CITY STD 863A
4	⊟	RPBD PER CITY STD 876
5	◖	FDC PER CITY STD 879
6	⊠	DDCV PER CITY STD 880
7	◀	THRUST BLOCK PER STD 854
8	⊢●	GATE VALVE PER STD 877
9	●	FIRE RISER
10	⊢●⊣	FIRE HYDRANT

SANITARY SEWER SCHEDULE

1	SSCO	PER CITY STD 513
2	SS LATERALS	PER CITY STD 513
3	SS CROSSINGS	PER CITY STD 516
4	SS MANHOLE	PER CITY STD 500





STORM DRAIN SCHEDULE

DI–1 THRU DI–5	OLDCASTLE MODEL DI–1818 w/ GRATE (OR APPROVED EQUAL)
DI–6 & DI–17	OLDCASTLE MODEL DI–1212 w/ GRATE (OR APPROVED EQUAL)
CB–1	TYPE II CATCH BASIN PER CSR STD 402. PRECAST COVER PER CSR STD 405.
ALL ONSITE STORM DRAIN INLETS SHALL BE LABELED PER CITY CTD DETAIL 409 "DRAINS TO CREEK" OR AN APPROVED EQUAL.	
FOUNDATION DRAINS PER GEOTECH'S RECOMMENDATION.	
ALL DOWNSPOUTS TO BE DIRECTED TO BIORETENTION FACILITIES THROUGH 4" SD, s=0.5% MIN.	
PUBLIC STORM DRAIN PIPE SHALL BE RCP OR HDPE. (MEETING CITY OF SANTA ROSA PUBLIC STORM DRAIN STANDARDS DATED 4/26/2005).	
PRIVATE STORM DRAIN PIPE SHALL BE PVC OR HDPE. (MEETING CALTRANS SEC. 64 SPECIFICATIONS).	

No.	Date	Description	Approved

Revisions

adobe associates, inc.
civil engineering | land surveying | wastewater
1220 N. Dutton Ave., Santa Rosa, CA 95401
P: (707) 541-2300 F: (707) 541-2301
Website: www.adobeinc.com
"A Service You Can Count On!"

Timothy L. Schram, RCE 67890
My license expires 6/30/2023

PROFESSIONAL ENGINEER * TIMOTHY LEE SCHRAM * No. 067890 * Lee 6/30/2023 * REGISTERED * STATE OF CALIFORNIA

LAGO FRESCA, LLC
GRADING, DRAINAGE & UTILITY PLAN

4744 Hoen Avenue
Santa Rosa, California
APN XXX–XXX–XXX

SCALE: AS SHOWN
Date: DECEMBER 13, 2021
Design by: BPC
Drawn by: BPC/TS
Checked by: BPC

Sheet
C2.0
of 5 Sheets
Job 17006.01

BLDG A
224.95 SLAB
224.12 PAD

BLDG B
224.95 SLAB
224.12 PAD

SEE SHEET C3.0 FOR GRADING, DRAINAGE & UTILITY PLAN

NOTE:
SEE SHEET C2.1 FOR UTILITY DESIGN INFO.

BLDG. C ROOF (ABOVE PARKING)

BLDG C
226.50 SLAB
225.67 PAD

BLDG D
226.75 SLAB
225.92 PAD

PROPOSED DRY CREEK BED (SLD)

PROPOSED BIORETENTION AREA, A=1,010SF, D=4', ρ=0.4 STORAGE VOL=1,008 CF (7 C4.0)

REMOVE AC PATH

PRIVATE ROAD

Ex Asphalt Parking

Ex Sidewalk

Ex SDCB 225.4 Rim 220.4 IG 15"

Ex FH

DI-1 224.7 GR 223.37 IG
DI-2 225.78 FS,ME
DI-3 225.86 FS,ME
DI-4 225.4 GR 220.45 IG
DI-5 226.0 GR 220.74 IG
DI-6 224.84 GR 224.10 IG
DI-7 226.0 GR 223.00 IG
DI-8 226.0 GR 221.00 IG
DI-9 226.0 GR 221.20 IG
DI-10 225.8 GR 221.46 IG
DI-11 225.8 GR 221.70 IG
DI-12 225.8 GR 221.94 IG
DI-13 225.8 GR 222.31 IG
DI-14 225.8 GR 222.61 IG
DI-15 225.2 GR 222.91 IG
DI-16 225.1 GR 223.15 IG
DI-17 224.7 GR 223.37 IG

13 LF 12" SD s=0.006
148 LF 12" SD s=0.006
42 LF 8" SD s=0.005
43 LF 8" SD s=0.006
32 LF 8" SD s=0.006
38 LF 6" SD s=0.006
38 LF 6" SD s=0.006
50 LF 8" SD s=0.006
50 LF 8" SD s=0.006
61 LF 8" SD s=0.006
39 LF 8" SD s=0.006
39 LF 8" SD s=0.006
42 LF 8" SD s=0.006

STORM DRAIN SCHEDULE	
DI-1 THRU DI-5	OLDCASTLE MODEL DI-1818 w/ GRATE (OR APPROVED EQUAL)
DI-6 & DI-17	OLDCASTLE MODEL DI-1212 w/ GRATE (OR APPROVED EQUAL)
CB-1	TYPE II CATCH BASIN PER CSR STD 402. PRECAST COVER PER CSR STD 405.
ALL ONSITE STORM DRAIN INLETS SHALL BE LABELED PER CITY CTD DETAIL 409 "DRAINS TO CREEK" OR AN APPROVED EQUAL.	
FOUNDATION DRAINS PER GEOTECH'S RECOMMENDATION.	
ALL DOWNSPOUTS TO BE DIRECTED TO BIORETENTION FACILITIES THROUGH 4" SD, s=0.5% MIN.	
PUBLIC STORM DRAIN PIPE SHALL BE RCP OR HDPE. (MEETING CITY OF SANTA ROSA PUBLIC STORM DRAIN STANDARDS DATED 4/26/2005).	
PRIVATE STORM DRAIN PIPE SHALL BE PVC OR HDPE. (MEETING CALTRANS SEC. 64 SPECIFICATIONS).	

10' 5' 0 5' 10' 20' 30'
Graphic Scale: 1" = 10'

HATCHING LEGEND:
- 3" AC OVER 8" CL II AB
- 6" PCC OVER W/ #3 REBAR @ 24" O.C. OVER 12" CL II AB
- BIO-RETENTION AREA

No.	Date	Description	Approved
		Revisions	

adobe associates, inc.
civil engineering | land surveying | wastewater
1220 N. Dutton Ave., Santa Rosa, CA 95401
P: (707) 541-2300 F: (707) 541-2301
Website: www.adobeinc.com
"A Service You Can Count On!"

Timothy L. Schram, RCE 67890
My license expires 6/30/2023

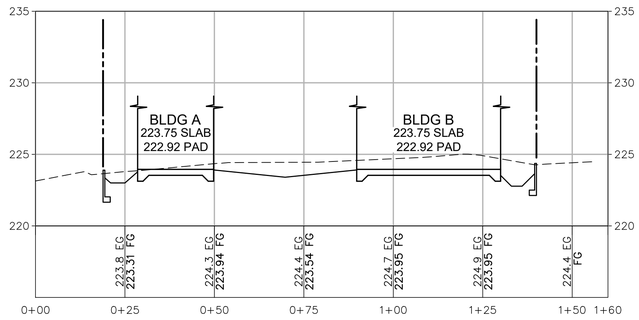
REGISTERED PROFESSIONAL ENGINEER TIMOTHY LEE SCHRAM No. C67890 Exp. 6/30/2023 CIVIL STATE OF CALIFORNIA

LAGO FRESCA, LLC
GRADING, DRAINAGE & UTILITY PLAN

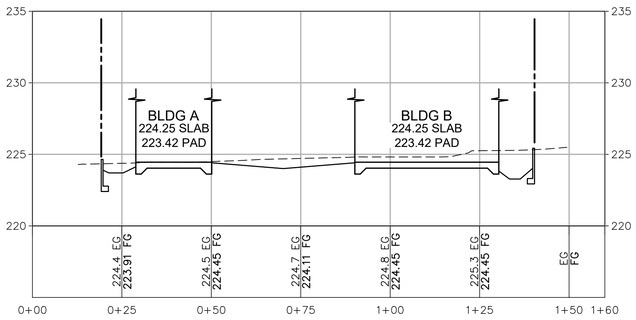
4744 Hoen Avenue
Santa Rosa, California
APN XXX-XXX-XXX

SCALE: AS SHOWN
Date: DECEMBER 13, 2021
Design by: BPC
Drawn by: BPC/TS
Checked by: BPC

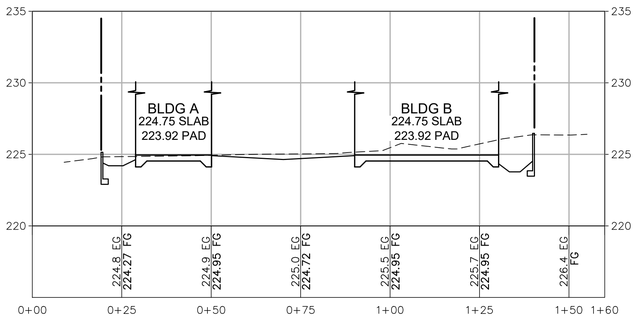
Sheet
C2.1
of 5 Sheets
Job 17006.01



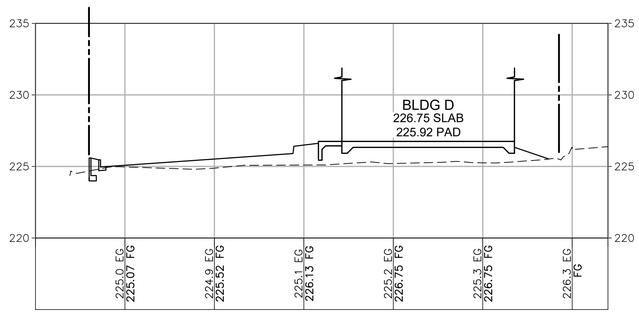
SECTION A



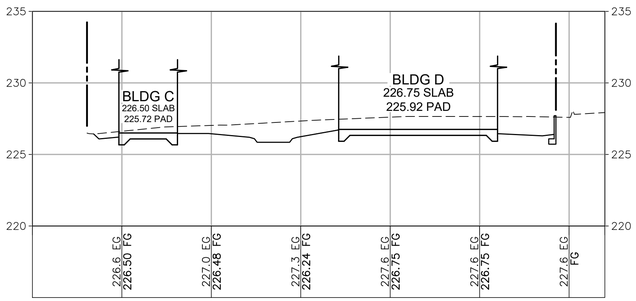
SECTION B



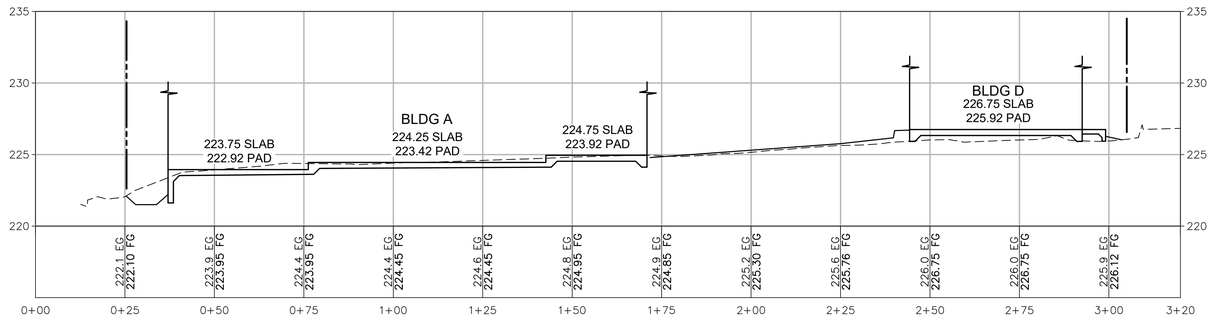
SECTION C



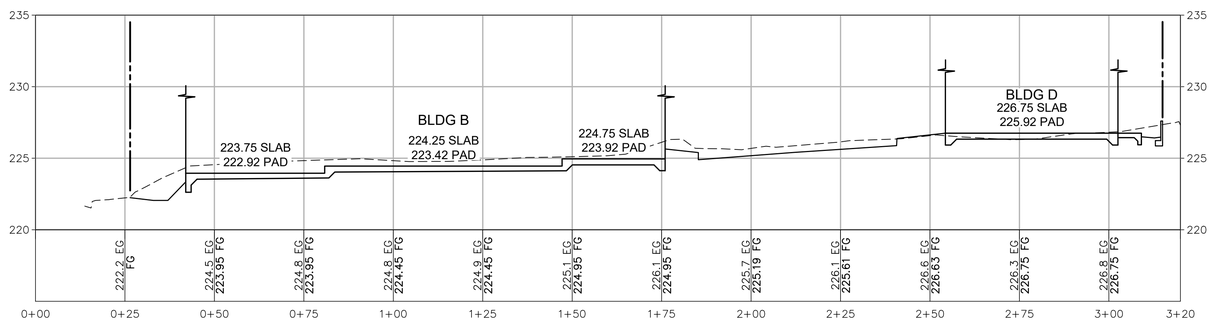
SECTION D



SECTION E



SECTION F



SECTION G

20' 10' 0 10' 20' 40' 60'

Graphic Scale: 1" = 20' Horizontal
1" = 5' Vertical

LEGEND:

FINISHED GRADE

EXISITNG GRADE

No.	Date	Revisions	Approved

adobe associates, inc.
civil engineering | land surveying | wastewater
1220 N. Dutton Ave., Santa Rosa, CA 95401
P. (707) 541-2300 F. (707) 541-2301
Website: www.adobeinc.com
"A Service You Can Count On!"

Timothy L. Schram, RCE 67890
My license expires 6/30/2023

REGISTERED PROFESSIONAL ENGINEER * TIMOTHY LEE SCHRAM * No. 067890 * Exp. 6/30/2023 * CIVIL * STATE OF CALIFORNIA

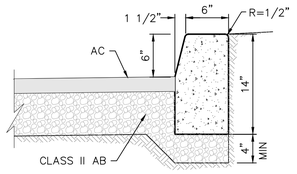
LAGO FRESCA, LLC

SITE SECTIONS

4744 Hoen Avenue
Santa Rosa, California
APN XXX-XXX-XXX

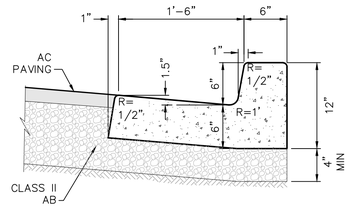
SCALE: AS SHOWN
Date: DECEMBER 13, 2021
Design by: BPC
Drawn by: BPC/TS
Checked by: BPC

Sheet
C3.0
of 5 Sheets
Job 17006.01



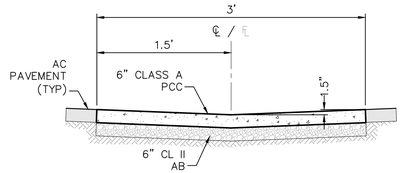
(FOR INSTALLATION AT THE EDGE OF PAVEMENT OF ONSITE DRIVES AND PARKING AREAS)

1 CONCRETE CURB DETAIL



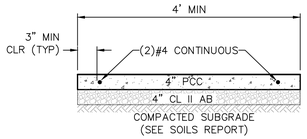
2 1.5-FT CONCRETE CURB & GUTTER

NTS



3 3.0-FT VALLEY GUTTER

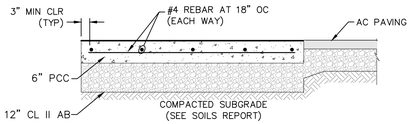
NTS



NOTE:
SEE LANDSCAPE PLANS FOR TEXTURE AND SCORING OF WALK

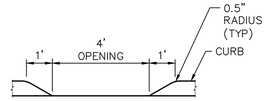
4 CONCRETE WALK

NTS



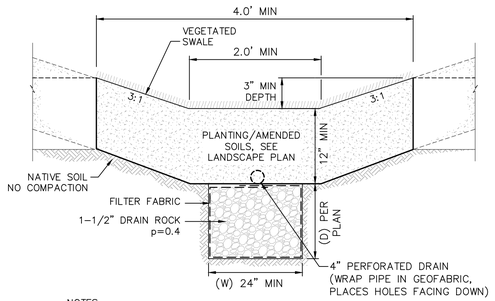
5 TRASH ENCLOSURE SLAB

NTS



6 CURB OPENING DETAIL

NTS



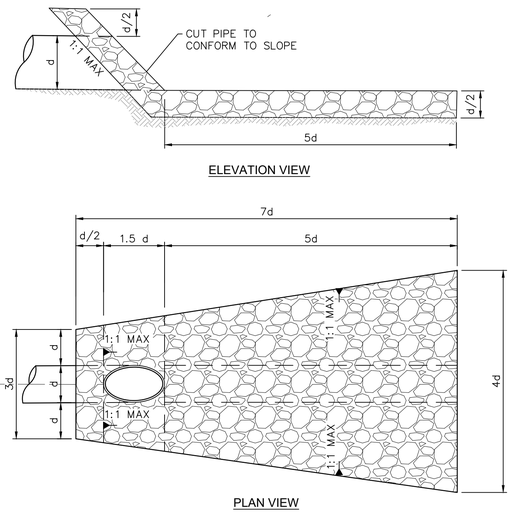
NOTES:

1. PLANTING MAY INCLUDE TREES. VEGETATION TO MEET SWLID STANDARDS. REFER TO SANTA ROSA LID LIST OF APPROVED PLANTS.
2. SEE APPORVED LANDSCAPE PLANS FOR PLANTING SPECIFICATIONS.
3. AT LEAST 50% OF THE BIORETENTION AREA SHALL REMAIN VEGETATED AT ALL TIMES.
4. PLANTING SOILS SHALL HAVE MINIMUM INFILTRATION RATE 5"/HR.
5. SEE SHEET C2.0 FOR DIMENSIONS, SLOPE, ELEVATIONS, AND OUTLET STRUCTURE.
6. BIORETENTION SWALE IS MODIFIED FROM DETAIL FOUND IN CITY OF SANTA ROSA LID TECHNICAL MANUAL.
7. DRAIN ROCK SHALL BE CLEAN 1-1/2" DRAIN ROCK IN ACCORDANCE WITH AASHTO #4 GRADATION SPECIFICATIONS, AS SHOWN BELOW:

SIEVE SIZE	% PASSING
2"	100%
1½"	90-100
1"	20-55
3/4"	0-15
3/8"	0-5

7 BIORETENTION BASIN

NTS

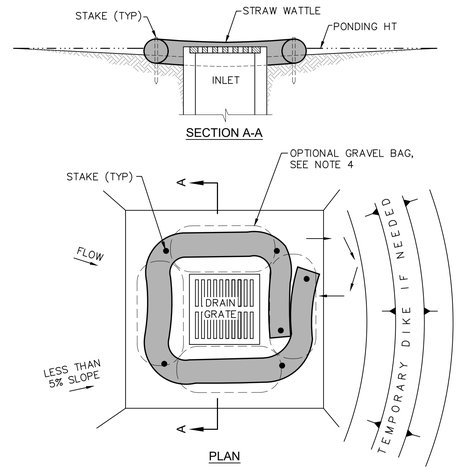


NOTE:

PLACE ROCK PER CALTRANS SECTION 72 METHOD B, (CLASS NO 3)

8 ROCK RIP-RAP STORM DRAIN OUTLET DETAIL

NTS



NOTES:

1. INLET SEDIMENT BARRIERS ARE TO BE USED FOR SMALL, NEARLY LEVEL DRAINAGE AREAS. (LESS THAN 5%)
2. USE 1X4 WOOD OR EQUIVALENT METAL STAKES, (3 FT MIN LENGTH).
3. THE TOP OF THE FRAME (PONDING HEIGHT) MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BY-PASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.
4. GRAVEL BAGS TO BE USED IN LIEU OF STRAW WATTLE AFTER PAVEMENT HAS BEEN INSTALLED.

9 INLET SEDIMENT BARRIER

NTS

P:\2017 PROJECTS\17006\dwg\Adobe-Design\Design Review\17006_C4.0_Details.dwg, Brendon Cymer, 12/13/2021 6:01:48 PM

Revisions			
No.	Date	Description	Approved

adobe associates, inc.
civil engineering | land surveying | wastewater
1220 N. Dutton Ave., Santa Rosa, CA 95401
P. (707) 541-2300 F. (707) 541-2301
Website: www.adobeinc.com
"A Service You Can Count On!"

Timothy L. Schram, RCE 67890
My license expires 6/30/2023

REGISTERED PROFESSIONAL ENGINEER TIMOTHY LEE SCHRAM No. 067890 Exp. 6/30/2023 CIVIL STATE OF CALIFORNIA

LAGO FRESCA, LLC
CONSTRUCTION DETAILS

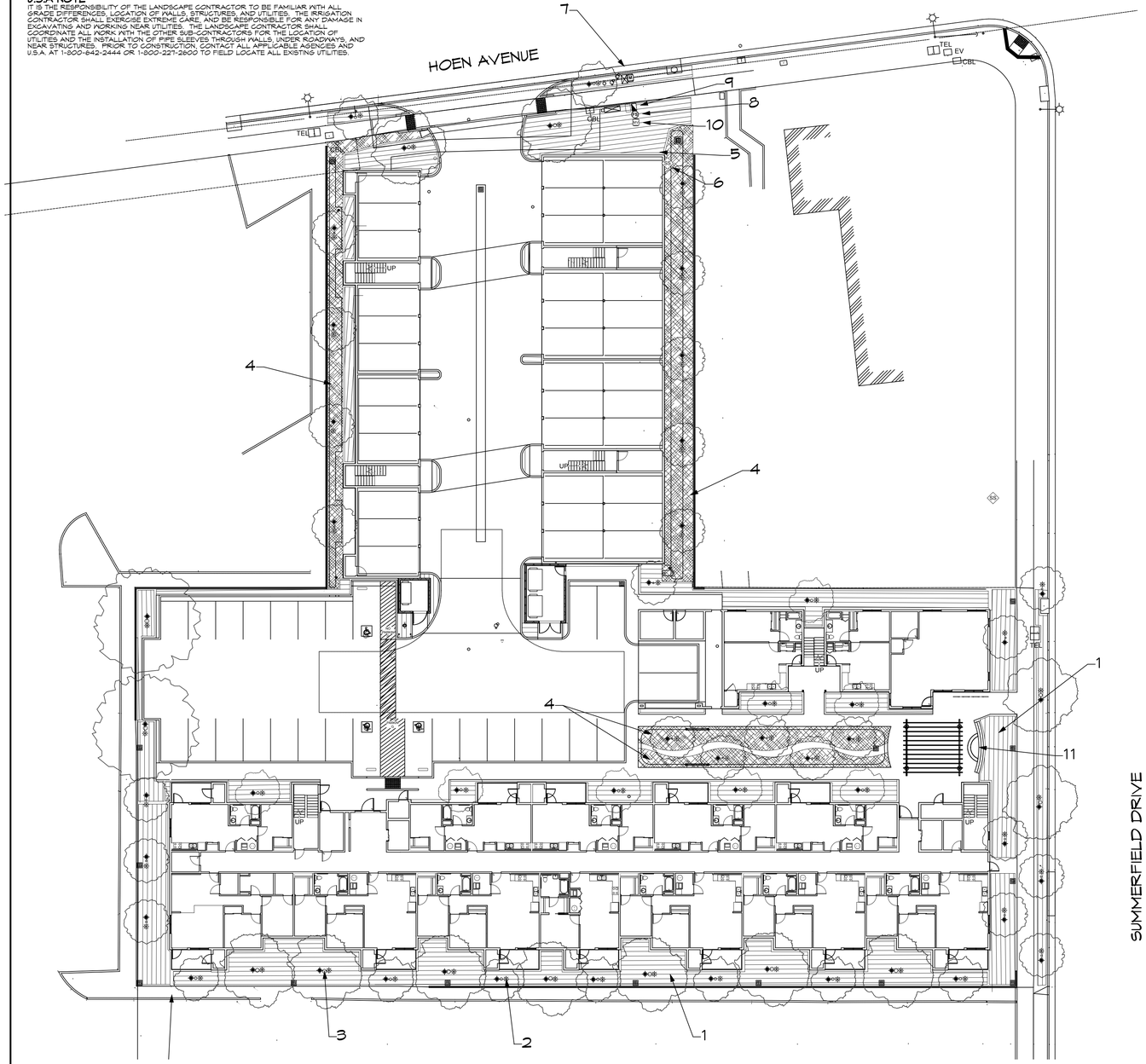
4744 Hoen Avenue
Santa Rosa, California
APN XXX-XXX-XXX

SCALE: AS SHOWN
Date: DECEMBER 13, 2021
Design by: BPC
Drawn by: BPC/TS
Checked by: BPC

Sheet
C4.0
of 5 Sheets
Job 17006.01

U.S.A NOTE

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.



IRRIGATION KEYNOTES

1. 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.
2. TREE BUBBLERS, TWO PER TREE , TYPICAL. ONE ABOVE GRADE STREAM BUBBLER AND ONE SUB-SUFACE BUBBLER
3. 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 ETWU CALCULATION.
4. ECO-MAT: INSTALL 4" BELOW GRADE IN BIORETENTION AREAS AT 14" OC; LOW WATER USE, TYPICAL
5. CONTROLLER LOCATION: MOUNT AT EYE LEVEL; SUBJECT TO OWNER APPROVAL
6. SOLAR SYNC SENSOR, ROOF MOUNT WITH CLEAR ACCESS TO SKY
7. POC AT DEDICATED IRRIGATION WATER METER; REFER TO CIVIL DRAWINGS
8. FLOW SENSOR
9. 1" REDUCED PRESSURE BACKFLOW PREVENTER
10. 1" MASTER VALVE
11. WATER FEATURE
12. LIMIT OF HYDROZONE

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."

MAWA AND ETWU CALCULATIONS

1) Maximum Applied Water Allowance (MAWA)

MAWA = (ETo) (0.62) ((0.55 X LA) + (0.45 X SLA))

Where:
ETo = Annual Net Reference Evapotranspiration (inches)
0.45 = ET Adjustment Factor (Commercial)
0.55 = ET Adjustment Factor (Residential)
LA = Landscaped Area (square feet)
0.62 = Conversion factor (to gallons per square foot)
SLA = Portion of the landscape area identified as Special Landscape Area (square feet)
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)

Commercial (C) or Residential (R) C

A) Net Evapotranspiration Calculation

Local Reference ETo						
39.60						
24.65"/yr (Annual Rainfall)	×	.25	=	7.41 (Effective Rainfall)		
Net Evapotranspiration Calculation = Annual ETo - Effective Rainfall					=	32.19

B) Adjusted Landscape Area Calculation

13,016 sf (Landscape Area)	×	0.45 Adjustment Factor	=	5,857.00 sf	
0.00 sf (Special Landscape Area)	×	0.55 Adjustment Factor	=	0.00 sf	
		Sum of Adjusted Landscape Area	=	5,857.00 sf	
MAWA= **32.188**	**× .62 ×**	**5,857 sf**	**=**	**116,884 gal/yr**	

2) Estimated Total Water Use (ETWU)

A) Net Evapotranspiration Calculation = 32.19 sf

Net Evapotranspiration Calculation = Annual ETo - Effective Rainfall

B) Adjusted Landscape Area Calculation

0.00 sf Very Low Water Use	X.01			0.00 sf
11,849 sf Low Water Use	X .03			3,564.62 sf
1,103 sf Moderate Water Use	X.06			661.81 sf
14.14 sf High Water Use	X .8			14.14 sf
		Sum of Adjusted Landscape Area	=	4,245.31 sf

ETWU =	**32.19**	**X .62 X**	**4,245 sf**	**/**	**0.81**	**=**	**105,902 gal/yr**

Irrigation Efficiency Factor

Square Footage of Landscape on Drip	13,015.56 sf
Square Footage of Landscape on Spray	0.00 sf
Total Square Footage of Landscape	13,015.56 sf
Adjusted Irrigation Efficiency Factor	0.01

CONCEPT HYDROZONE DETAIL TABLE

Name	Method	Water Use	Water Use Value	Hydrozone Area in SF	% of Landscape
1D	Sub-Surface Dripline	Low	0.3	1,329.13 sf	10.2%
2B	Root Watering System	Low	0.3	113.10 sf	0.9%
3E	Eco-Mat	Low	0.3	1,246.50 sf	9.6%
5B	Root Watering System	Moderate	0.6	164.64 sf	1.3%
6D	Sub-Surface Dripline	Low	0.3	404.71 sf	3.1%
7D	Sub-Surface Dripline	Low	0.3	747.21 sf	5.7%
8D	Sub-Surface Dripline	Low	0.3	1,098.96 sf	8.4%
9D	Sub-Surface Dripline	Low	0.3	458.61 sf	3.5%
10B	Root Watering System	Moderate	0.6	164.64 sf	1.3%
11B	Root Watering System	Low	0.3	56.55 sf	0.4%
12D	Sub-Surface Dripline	Low	0.3	368.24 sf	2.8%
13B	Root Watering System	Moderate	0.6	141.31 sf	1.1%
14E	Eco-Mat	Low	0.3	786.92 sf	6.0%
15D	Sub-Surface Dripline	Low	0.3	695.74 sf	5.3%
16B	Root Watering System	Moderate	0.6	164.64 sf	1.3%
17D	Sub-Surface Dripline	Low	0.3	2,267.54 sf	17.4%
18B	Root Watering System	Low	0.3	197.92 sf	1.5%
19B	Root Watering System	Moderate	0.6	282.74 sf	2.2%
20D	Sub-Surface Dripline	Low	0.3	911.58 sf	7.0%
21B	Root Watering System	Low	0.3	56.55 sf	0.4%
22E	Eco-Mat	Low	0.3	138.42 sf	1.1%
23D	Sub-Surface Dripline	Low	0.3	408.50 sf	3.1%
24B	Root Watering System	Moderate	0.6	113.10 sf	0.9%
Tree Bubblers	Root Watering System	Moderate	0.6	56.55 sf	0.4%
Water Feature	Water Feature	High	1	14.14 sf	0.1%
				13,016 sf	100%

CONCEPT SUMMARY HYDROZONE TABLE

PLANT TYPE	AREA	% OF LANDSCAPE
Very Low	0.00	0%
Low	11,845.72	91%
Moderate	1,102.69	8%
High	14.14	0%
Total	13,015.55	100%

IRRIGATION LEGEND

SYMBOL	EQUIPMENT	MANUFACTURER	MODEL	REMARKS
	STREAM BUBBLER: 6" POP-UP	HUNTER	PROS-06-CV-R-PRS30-MSBN-25Q	
	Hunter RZWS - 12 Bubbler	Hunter Industries(R)	PCN-25	
	Landscape Dripline	Rain Bird	XFS-06-12	
	Eco-Mat	Hunter	ECO-MAT 17MM	
SEE DETAIL	Automatic Line Flush Valve	Hunter	AFV-T	INSTALL IN 6" VALVE BOX @ END OF CIRCUIT
SEE DETAIL	Air Relief Valve	Hunter	AVR-075	INSTALL IN 6" VALVE BOX @ HIGH POINT OF CIRCUIT
SEE DETAIL	Continuous Acting Air Vent	NetaFim	65ARIS1	INSTALL UPSTREAM FROM SUBMETER
MV	Hunter ICV 1" Master Valve	Hunter Industries(R)	ICV-101G	
	Dripline	Hunter Industries(R)	ICZ-101-25	
	TREE BUBBLER	Hunter Industries(R)	ICV-101G-AS-ADJ	
	1" Watts Reduced Pressure Backflow Preventer	Watts	LF009M2-PC-QT 1	Required
FS	Hunter 1-1/2" Flow Sensor	CST	ELF-T10-NO1	
SS		Hunter	XSS-SEN	
C	Irrigation Controller	Hunter Industries(R)	IC-600-SS	
	6 Station Plug-in Expansion Module	Hunter	ICM-600	(3 TOTAL)
	Main Line		PVC Schedule 40	
	Lateral		PVC Schedule 40	
	Pipe and Wire Sleeve		PVC Schedule 40	See Plan for Size
8# 1D 1"	VALVE STATION AND SEQUENCE			
	ELECTRIC CONTROL VALVE			
	GALLONS PER MINUTE			

IRRIGATION CONCEPT PLAN

Scale: 1" = 20'-0"

©2021 MACNAIR LANDSCAPE ARCHITECTURE, NOT FOR GENERAL USE OR PUBLICATION, ALL RIGHTS RESERVED. THESE 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 DIMENSIONS.

REGISTERED LANDSCAPE ARCHITECT
DONALD G. MACNAIR
NO. 2800
EXP. 8/31/21
STATE OF CALIFORNIA

MACNAIR
LANDSCAPE ARCHITECTURE
POST OFFICE BOX 251
KENWOOD, CALIFORNIA 95452
TEL (707) 833-2288
RLA #2800
don@macnairlandscapes.com

IRRIGATION PLAN

LAGO FRESCA APARTMENTS
4744 HOEN AVENUE
SANTA ROSA, CA

DATE: 12/13/21
MLA JOB #: 2021-08
SCALE: 1" = 20'
DRAWN: DM

L1

SHEET L1 OF 5

©2021 MACNAIR LANDSCAPE ARCHITECTURE, NOT FOR GENERAL USE OR PUBLICATION, ALL RIGHTS RESERVED. THESE 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 DIMENSIONS.

REGISTERED LANDSCAPE ARCHITECT
DONALD G. MACNAIR
NO. 2800
EXP. 8/31/21
STATE OF CALIFORNIA

MACNAIR
LANDSCAPE ARCHITECTURE
POST OFFICE BOX 251
KENWOOD, CALIFORNIA 95452
TEL (707) 833-2288
RLA #2800
don@macnairlandscapes.com



ILLUSTRATIVE LANDSCAPE PLAN

Scale: 1" = 20'-0"

ILLUSTRATIVE PLANTING PLAN

LAGO FRESCA APARTMENTS

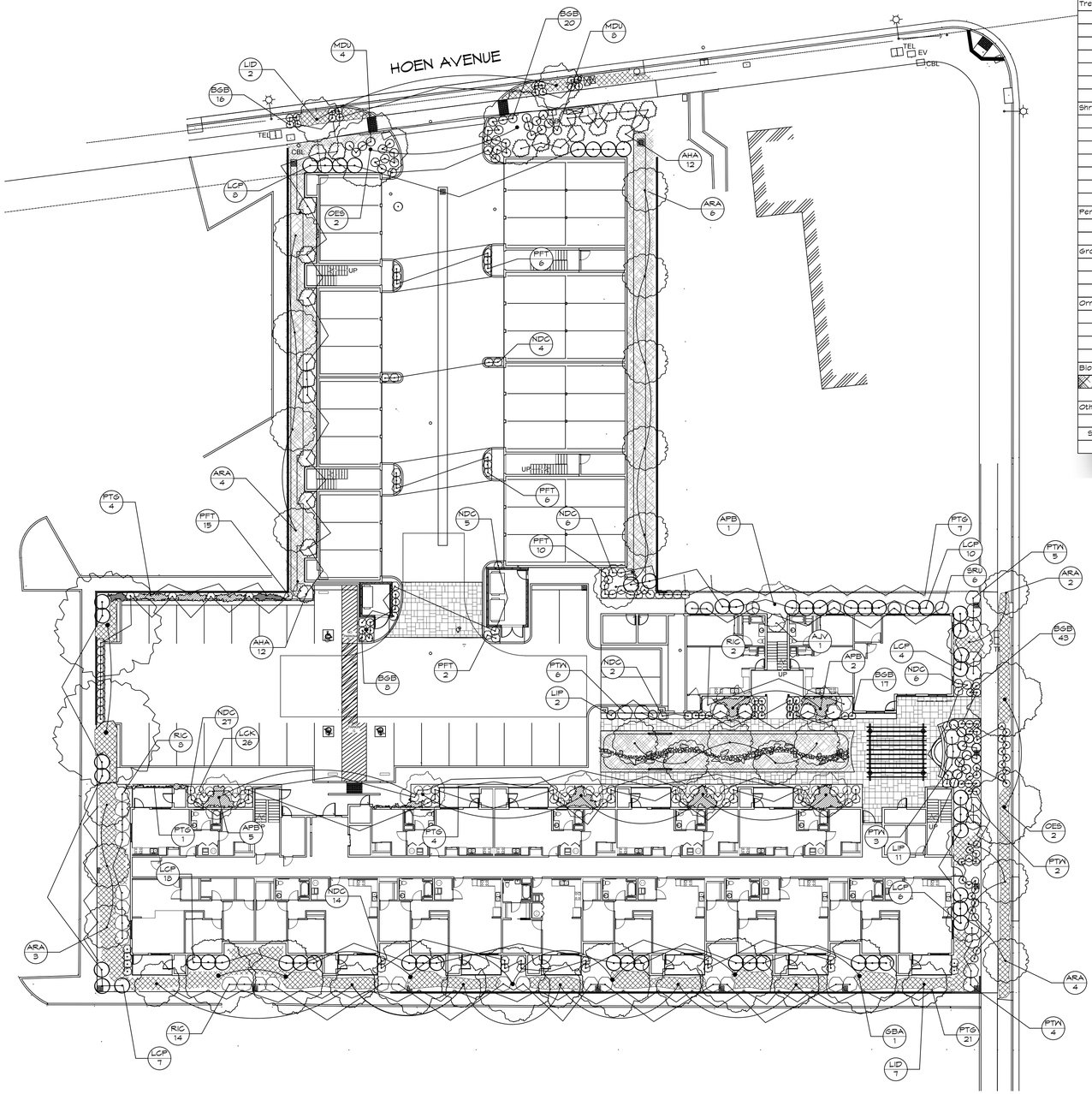
4744 HOEN AVENUE
SANTA ROSA, CA

DATE: 12/13/21
MLA JOB #: 2021-08
SCALE: 1" = 20'
DRAWN: DM

L2.1

U.S.A NOTE

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.



PLANT LEGEND

SYMBOL	SIZE	BOTANICAL NAME	COMMON NAME	WATER USE PER MUCOLS IV	QUANTITY	COMMENTS
Trees						
APB	#24	Acer palmatum var. atropurpureum 'Bloodgood'	Bloodgood Japanese Maple	.6	5	
ARA	#24	Acer rubrum 'Armstrong'	Armstrong Maple	.6	24	
GBA	#24	Ginkgo biloba 'Autumn Gold'	Autumn Gold Maidenhair Tree	.6	7	
LID	#24	Lagerstroemia indica 'Dynamite'	Dynamites Crape Myrtle	.3	9	
OES	#24	Olea europaea ' Swan Hill'	Fruitless Olive	.1	4	
PCK	#24	Pistacia chinensis 'Keith Davey'	Chinese pistache	.3	2	
Shrubs						
AHA	#5	Arctostaphylos densiflora 'Harmony'	Harmony Manzanita	.3	24	
LGK	#5	Loropetalum chinense 'Kurenai'	Jazz Hands® Dwarf Pink Chinese Fringe-flower	.3	26	
LCP	#5	Loropetalum chinense 'Pipa's Red'	Pipa's Red Chinese Fringe Flower	.3	55	
NDC	#5	Nandina domestica 'Compacta'	Dwarf Heavenly Bamboo	.3	60	
RIC	#5	Rhaphiolepis indica 'Clara'	Clara Indian Hawthorn	.3	25	
SRU	#5	Sarcococca ruscifolia	Fragrant Sweet Box	.3	6	
Perennials						
LIP	#5	Lavandula x intermedia 'Phenomenal'	Phenomenal French Lavender	.3	13	
Groundcover						
CDC	#1	Cotoneaster dammeri 'Coral Beauty'	Coral Beauty Cotoneaster	.3	94	6' OC, Triangular Spacing
EKA	#1	Erigeron karvinskianus	Santa Barbara Daisy	.3	37	36" OC, Triangular Spacing
Ornamental Grass						
BGB	#1	Bouteloua gracilis 'Blonde Ambition'	Blonde Ambition Ornamental Grass	.3	104	
MDU	#5	Muhlenbergia dubia	Pine Muhly	.3	12	
PFT	#1	Pennisetum 'Fairy Tails'	Fairy Tails Fountain Grass	.3	39	
Bioretention Areas						
	Sod	Biofiltration Sod	"Biofiltration Sod"	0.3		Delta Bluegrass (CA Natives)
Other						
		Mulch: Fir Bark 1-1/2" Minus	Medium Walk-On Bark			3" Depth, All Landscape Areas
See Detail		Linear Root Barrier	Root Solutions , or Equal			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 FOLLOWS: 5-15 GAL., 3-5 GAL., 1-1 GAL.
3. DIG PLANTING PITS 2 TIMES THE DIAMETER AND EQUAL THE HEIGHT OF ROOTBALL.
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 COMPLETION WILL NOT BE SIGNED OR APPROVED BY THE LANDSCAPE ARCHITECT OF RECORD.

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."

PRELIMINARY PLANTING PLAN

Scale: 1" = 20'-0"

©2021 MACNAIR LANDSCAPE ARCHITECTURE, NOT FOR GENERAL USE OR PUBLICATION, ALL RIGHTS RESERVED. THESE 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 DIMENSIONS.

REGISTERED LANDSCAPE ARCHITECT
DONALD G. MACNAIR
NO. 2800
EXP. 8/31/21
STATE OF CALIFORNIA

MACNAIR
LANDSCAPE ARCHITECTURE
POST OFFICE BOX 251
KENWOOD, CALIFORNIA 95452
TEL (707) 833-2288
RLA #2800
don@macnairlandscapes.com

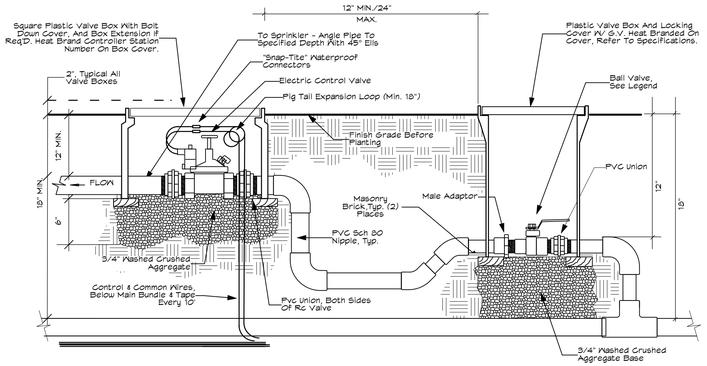
PLANTING PLAN

LAGO FRESCA APARTMENTS

4744 HOEN AVENUE
SANTA ROSA, CA

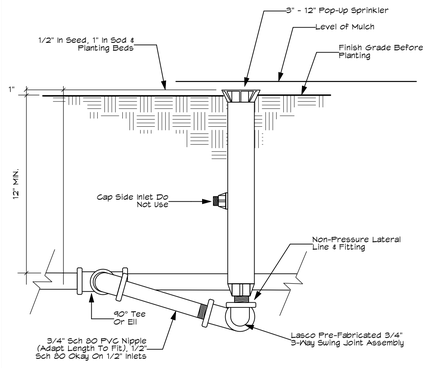
DATE: 12/13/21
MLA JOB #: 2021-08
SCALE: 1" = 20'
DRAWN: DM

L2.2



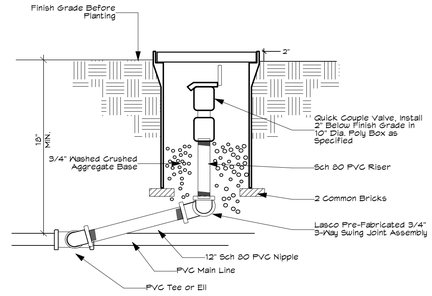
NOTES:
1) INSTALL CONTROL VALVES A MINIMUM OF 18" FROM STRUCTURES OR HARDSCAPING.
2) INSTALL VALVES IN PLANT BEDS WHEREVER POSSIBLE.
3) PLACE VALVE BOX AT RIGHT ANGLES TO STRUCTURES OR HARDSCAPING.
4) INSTALL VALVE BOX SO THAT TOP OF BOX IS FLUSH WITH ADJACENT HARDSCAPING.
5) PLACE AGGREGATE PRIOR TO INSTALLATION OF VALVE BOX.
6) INSTALL VALVE BOXES SO THAT TOP OF BOX IS FLUSH WITH ADJACENT HARDSCAPE.
7) INSTALL ONE BALL VALVE IN BOX IMMEDIATELY UPSTREAM FROM EACH REMOTE CONTROL VALVE.

A / L3 ELECTRIC CONTROL VALVE WITH SHUT OFF — NTS

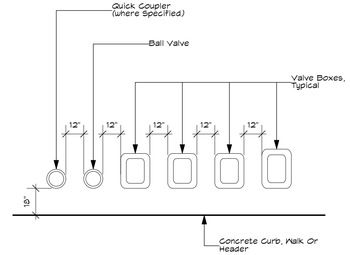


NOTES
1) LOCATE HEAD 6" FROM ALL EDGES IN LAWN AREAS. LOCATE HEAD 12" FROM ALL EDGES IN SHRUB AREAS.
2) LOCATE STREAM SPRAY AND BUBBLERS HEADS 6" FROM ALL EDGES.
3) USE TEFLON PASTE ON ALL MALE THREADS.

B / L3 POP-UP SPRINKLER DETAIL — INCLUDES 4", 6" AND 12" — NTS



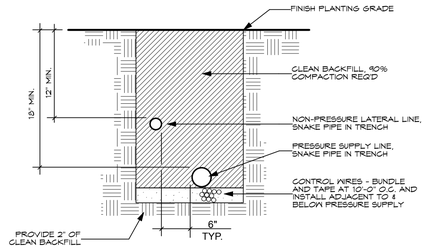
C / L3 QUICK COUPLER DETAIL — NTS



PLAN VIEW

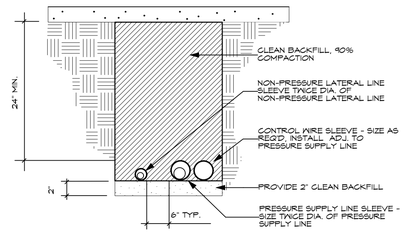
NOTES:
1) CENTER VALVE BOX OVER VALVE ASSEMBLY.
2) LOCATE VALVE BOXES IN GROUND COVER/SHRUB AREAS WHEN POSSIBLE.
3) SET VALVE BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE.

D / L3 VALVE BOX LAYOUT — NTS



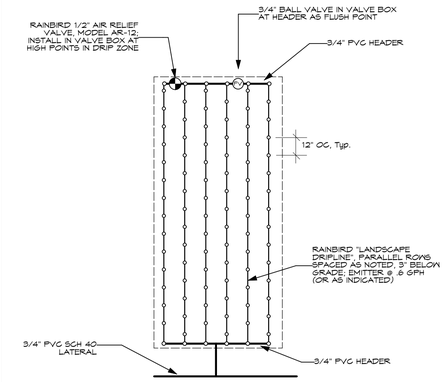
NOTE:
1) PIGTAIL AND LOOP CONTROL WIRE AT ALL CHANGES IN DIRECTION.
2) PROVIDE 18" EXPANSION LOOP AT ALL 90° ANGLES, AND EVERY 100' OF STRAIGHT CURVE RUN.

E / L3 PIPE INSTALLATION IN PLANTED AREA — NTS



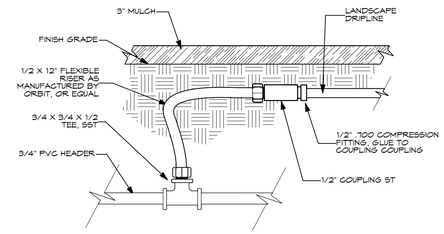
NOTES:
1) ALL SLEEVES TO BE SCH 40 PVC.
2) EXTEND ALL SLEEVES 12" BEYOND EDGE OF HARDSCAPING AT BOTH ENDS.

F / L3 PIPE INSTALLATION UNDER PAVING — NTS

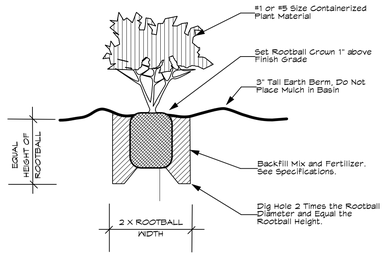


PLAN

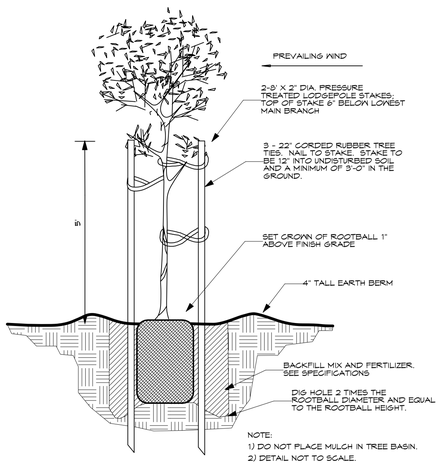
G / L3 DRIP CIRCUIT LAYOUT — NTS



H / L3 POLY TO PVC COMPRESSION FITTING DETAIL — NTS

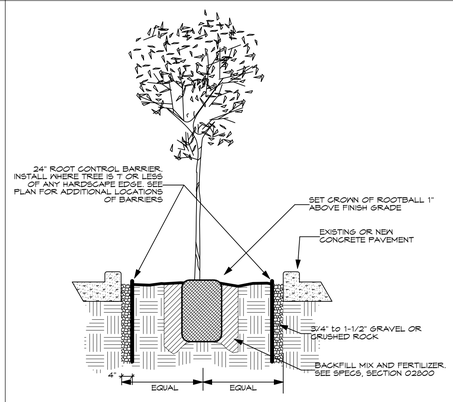


I / L3 SHRUB PLANTING DETAIL — NTS



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

J / L3 TREE PLANTING DETAIL — NTS



NOTE:
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.

K / L3 TREE WELL WITH ROOT BARRIER — NTS

©2021 MACNAIR LANDSCAPE ARCHITECTURE, NOT FOR GENERAL USE OR PUBLICATION, ALL RIGHTS RESERVED. THESE 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 DIMENSIONS.

REGISTERED LANDSCAPE ARCHITECT
DONALD G. MACNAIR
NO. 2800
EXP. 8/31/21
STATE OF CALIFORNIA

MACNAIR
LANDSCAPE ARCHITECTURE

POST OFFICE BOX 251
KENWOOD, CALIFORNIA 95452

TEL (707) 833-2288
RLA #2800
don@macnairlandscapes.com

LANDSCAPE DETAILS

LAGO FRESCA APARTMENTS
4744 HOEN AVENUE
SANTA ROSA, CA

DATE: 12/13/21
MLA JOB #: 2021-08
SCALE: 1" = 20'
DRAWN: DM

L3

DIVISION 2 SITE WORK
SECTION 02750

UNDERGROUND IRRIGATION SYSTEM

PART 1 GENERAL

1.01 SCOPE

A. Work Included: perform all work necessary and required for the construction of the project as indicated. Such work includes but is not limited to the following:

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.
2. Irrigation water meter.
3. 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 owner.

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 construction as required.

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

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.

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 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.

C. 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.

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 observation meeting.

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 the owner.

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 possible.

1.12 PRODUCT HANDLING: Protect work and materials under this Section from damage during construction and storage. Protect polyvinyl 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 hours.
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 on 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 reduced.

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 to the owner:

1. Two wrenches for disassembling and adjusting each type of sprinkler head supplied.
2. Two keys for each automatic controller.
3. 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 warrantees, 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

2.01 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

A. 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.

B. Lateral line piping on non-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.

2.04 FITTINGS

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 and fittings.

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. Minimum gauge: #14. Common ground wire shall be white.

B. Splicing Materials: Wire connectors shall be Pentite or snap connectors.

C. All wires shall be labeled with the valve number at the controller and valve.

D. 120 wiring shall be as required by local code and installed by an 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.

2.09 VALVE BOXES

A. Remote Control Valves: To be Brooks, Green or approved equal, one per valve.

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 drawings.

A. Install in parallel and consistent rows at spacing indicated in all specified areas.

B. Install 3" below grade.

2.12 SPRINKLER HEADS

A. 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

3.01 LAYOUT

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

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 quick coupling valves: 18 inches.
2. Over pipe on non-pressure side of irrigation control valve: 12 inches.

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

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

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.

C. Use Teflon tape on all threaded fittings.

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 water pressure.

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 sod lawn
3. 1 1/2" with sod lawn
4. 2" with plant beds

B. The contractor shall paint on the cover of each valve box in 2" white stenciled letters with the valve 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 convenient access.)

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 minimum of 3".

3.07 SPRINKLER HEADS

A. Install heads as per details.

B. Nozzles may be changed to control precipitation rate and G.P.M. with approval from the landscape architect.

3.08 QUICK COUPLING VALVES: Quick coupling valves to be installed as per detail.

3.09 AUTOMATIC CONTROLLER

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

B. Grounding of Irrigation controller shall be as per manufacturer's recommendations and as per local code.

3.10 CONTROL WIRING

A. Install control wires with sprinkler mains and laterals in common 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 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 run.

B. Control wire splices at remote control valves to be crimped and 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 valve box.

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

3.11 CLOSING OF PIPE AND FLUSHING OF LINES

A. Thoroughly flush out all water lines before installing heads, valves and other hydrants.

B. Test as specified.

3.12 PRESSURE TESTS

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

B. Cap all valve openings and test the mainline pipe at full line working pressure and visually check all fittings.

3.13 BACKFILL AND COMPACTING

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, rock free backfill.

B. Backfill for all trenches, regardless of the type of pipe covered, shall be compacted to minimum 95% density under pavements, 85% under planted areas.

C. Compact trenches in areas to be planted by thoroughly flooding the backfill. Jetting process may be used in those areas.

D. Dress off all areas to finish grades.

E. Any settling more than 1" which may occur during the guarantee period shall be brought to finish grade by the contractor at his expense.

END OF SECTION 02750

SECTION 02800
LANDSCAPING

PART 1 GENERAL

1.01 SCOPE

A. Work Included: Perform all work necessary and required for the construction of the project as indicated. Such work includes but is not limited to the following:

1. Site preparation including weed and rubble removal.
2. Laboratory soil analysis.
3. Furnishing and spreading topsoil.
4. Finish grading of planted areas.
5. Soil amendment.
6. Planting.

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

1. Section 02750: Underground Irrigation System.

C. Use Teflon tape on all threaded fittings.

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

1. Section 02750: Underground Irrigation System.

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

1.02 REQUIREMENTS OF REGULATORY AGENCIES

A. Perform work in accordance with all applicable laws, codes, and regulations required by authorities having jurisdiction over such work and provide for all inspections and permits required by federal, state, and local authorities in furnishing, transporting and installing materials.

B. Certificates of inspection required by law for transportation shall accompany the invoice for each shipment of plants. File copies of certificates with landscape architect after acceptance of material. Inspections of federal and state governments at place of growth does not preclude rejection of plants at project site.

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 procedure for observation with landscape architect at time of submission.

B. Plants shall be subject to observation and approval by landscape architect at place of growth or upon delivery for conformity to specifications. Such approval shall not impair the right of observation and rejection during progress of the work. Submit written request for observation of plant material at place of growth to landscape architect. Written request shall state the place of growth and the quantity and variety of plants to be observed. Landscape architect reserves the right to refuse observation at this time if, in his judgment, a sufficient number of plants are not available for observation or not in the landscape architect's contract.

C. Substitution of plant material will not be permitted unless authorized in writing by landscape architect. If proof is submitted that any plant specified is not obtainable, a proposal will be considered for use of the nearest 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 possible.

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 work.

1.06 INTENT OF DRAWINGS AND SPECIFICATIONS: It is the intent of the drawings and specifications to provide planting with plants in vigorous growth, ready for owner's use. Any items not specifically shown in the drawings or called for in the specifications, but normally required to conform with such intent, are to be considered as part of the work. Written dimensions take precedence over scale dimensions.

1.07 APPROVAL: Wherever the terms "approve", "approval" or "approved" are used herein, they mean approval of landscape architect in writing.

1.08 PRODUCT HANDLING

A. Furnish standard products in manufacturer's standard containers bearing original labels showing quantity, analysis and name of manufacturer.

B. Store products with protection from weather or other conditions which would damage or impair the effectiveness of the product.

1.09 PROTECTION OF EXISTING PLANTS TO REMAIN

A. Do not store materials or equipment, permit burning, or operate or park equipment within designated plant protection zones as specified on the plans.

B. Notify landscape architect in any case where contractor feels grading or other construction called for by Contract Documents may damage existing plants to remain. Do not proceed with such work until directed by landscape architect.

C. If existing plants are damaged during construction, contractor shall replace such plants of the same species and size as those damaged at no cost to owner. Determination of extent of damage and value of damaged 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 contractor.

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.

1.11 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 project work schedule.
B. 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 layout 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 observation meeting.

1.15 MAINTENANCE

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 condition.

E. 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 to all requirements of this specification.

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

2.01 PLANTS

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 root 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 are not met.

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 landscape architect.

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 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 equal texture and quality as determined by approved soil laboratory analysis.

C. Soil Chemistry: All planting soils shall meet the following soil chemistry parameters.

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

D. Soil Fertility: Adequate amounts of nitrogen, potassium, phosphorus, 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 removed.

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

B. Post Planting/Surface Application Fertilizer:

16% Nitrogen
8% Phosphoric Acid
8% Potash

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

2.05 SOIL AMENDMENTS

A. Organic Amendment: Shall be nitrolized and derived from fir wood residuals.

B. Physical Properties: 1/2" minus fir bark, nitrolized fortified or entranced.

C. 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.

B. Tree Stakes: 2" x 2" X 8' lodgepole pine pressure treated stakes. Construction heart grade. (Do not drive stakes through the rootball). Use 2 stakes per tree.

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

2.07 ROOT BARRIERS

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

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

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 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 accessible by large equipment, ripping shall be accomplished by small backhoe or manually.

3.03 SPREADING OF TOPSOIL

A. After sub-grade has been prepared, the landscape contractor shall be responsible for furnishing and installing topsoil to within (1) inches of finish grade.

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 topsoil shall be imported by the landscape contractor to meet this requirement. Import soil shall be compacted to 85% relative compaction. Never apply the topsoil when the site or the topsoil is wet.

3.04 AMENDMENT OF SOIL

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 amended soil to finish grades and elevations shown on Contract 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 responsibility.

3.06 EXCAVATION OF PLANTING AREAS

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

1. Two times as large in diameter as the original growing container (Rhododendron and azaleas 3 times the diameter)
2. The depth should be equal to the root ball height.

B. Scarify all sides of planting hole. Auger through structural fill, compacted soil or hardpan if encountered or as directed by landscape architect.

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):

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, eliminating all air pockets.

E. Smooth planting areas to conform to specified grades after full settlement has occurred.

F. Form saucer with 4 in. high berm around tree and shrub pits 12 inches wider that the root ball diameter.

G. Water all plants immediately after planting.

3.09 STAKING

A. Staking shall be completed immediately after planting. Plants shall stand plumb after staking.

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

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 or equal.

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 material.

3.11 GROUND COVER PLANTING

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 from leaves of plant materials.

3.11 BIOSWALE SOD

A. To be "Biofiltration Sod" as produced by Delta Bluegrass Company, or approved equal.

3.12 SOD BED PREPARATION

A. Roll amended soil with 200 lb. water ballast roller.

B. Sod immediately thereafter, provided the sod bed has remained in a friable condition.

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 rooted.

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

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 minimize impact on the area.

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 to minimize damage to the existing trees.

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.

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

G. Existing foliage shall be preserved wherever possible. When it becomes necessary to remove any limbs from remaining trees the following guidelines sh