ABBREVIATIONS - NOT ALL USED

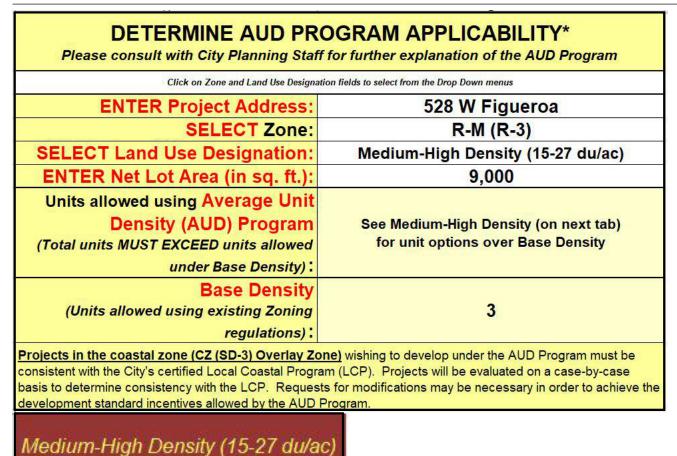
~ AFF	APPROXIMATELY ABOVE FINISHED FLOOR
APN	
ASF	ABOVE STRUCTURAL FLOOR
BTWN	BETWEEN
CBC	CALIFORNIA BUILDING CODE CALIFORNIA ELECTRICAL CODE
CEC CLG	CALIFORNIA ELECTRICAL CODE CEILING
CONC	
CMC	CALIFORNIA MECHANICAL CODE
CPC	
CRC	
CL	CENTERLINE
D	CLOTHES DRYER
	DEMOLISH / DEMOLITION
DIM	DIMENSION
DW	
(E)	
EL	ELEVATION
	ELECTRICAL
EQ	EQUAL
EXT FAU	EXTERIOR FORCED AIR UNIT
FAU	
FLR	FLOOR
GR	GROSS
GYP	GYPSUM BOARD
HVAC	
INT	INTERIOR
MAX	MAXIMUM
MEP	MECHANICAL, ELEC, PLUMBING

ECH FR IN	MANUFACTURER MINIMUM
)	NEW
	NOT IN CONTRACT
	NOT TO SCALE
C G	ON CENTER
	PROPERTY LINE
	PLAN PLYWOOD
	PRESSURE TREATED
	REQUIRE(D) / REQUIREMENT(S)
_Q D	ROUGH OPENING
ND	RED WOOD
3	SETBACK
CHD	SCHEDULE
ΞP	SEPARATE / SEPARATION
=	SQUARE FOOT / SQUARE FEET
-L	STRUCTURAL FLOOR LEVEL
G	STAIN GRADE
ΗT	SHEET
	SIMILAR
	SPECIFY / SPECIFICATION(S)
	TO BE DETERMINED
(P	TYPICAL
	UNLESS OTHERWISE NOTED
F	VERIFY IN FIELD
	VERSION
/	CLOTHES WASHER
1	

WITH W/OUT WITHOUT

MECH

AUD CALCULATIONS



Density du/ac	UNITS ALLOWED	Maximum Average Unit Size (Sq Ft)
15	3	1,450
16	3	1,360
17	3	1,280
18	3	1,210
19	3	1,145
20	4	1,090
21	4	1,040
22	4	1,005
23	4	985
24	4	965
25	5	945
26	5	925
27	5	905

Calculate the Average Unit Size

ENTER total number of units proposed (existing + new)?

Enter the square footage for each (existing and proposed new) unit below. (If the existing unit sizes are proposed to be changed, enter the new unit sizes):

Unit	Square Footage
Α	583
В	707
С	962
D	777
E	820
F	803
G	1,016
H	748

Average Unit Size	
proposed:	

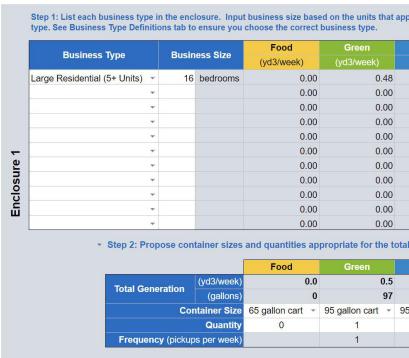
8

802

ACCESSIBILITY SUMMARY

CODE:	THIS PROJECT SHALL BE DESIGNED & BUILT TO CURRENT EDITION OF THE CALIFORNIA BUILDIN
PARKING:	2% OF UNITS/SPACES = 1 ACCESSIBLE SPACE MIN 25% ACCESSIBLE SPACES MUST BE VAN AC
ACCESSIBILITY:	CBC 1104A: ALL GROUND FLOOR DWELLING UN ACCESSIBLE ROUTE. ALL GROUND FLOOR UNIT ADAPTABLE & ACCESSIBLE THROUGHOUT THE ROUTE SHALL CONNECT TO THE PUBLIC WAY. SHALL BE ACCESSIBLE.

TRASH CALCULATIONS



FLOOD DETERMINATION

ZONE X PER FEMA MAP PANEL 06083C1387J

NOISE STUDY MITIGATION NOTES

BASED ON OUR ANALYSIS, NO MITIGATION IS REQUIRED FOR THE OUTDOOR BALCONY SPACES. SUFFICIENT MITIGATION FOR THE EXTERIOR FACADES OF THE SOUTHEAST UNITS (UNITS A AND E - PREVIOUSLY UNIT F) WOULD BE PROVIDED BY TYPICAL EXTERIOR WALLS, DOORS AND DOUBLE-PANE WINDOWS WITH MINIMUM STC 27 / OITC 22 OR BETTER IN ORDER TO MAINTAIN THE INTERIOR NOISE LEVELS OF NO MORE THAN 45 DBA CNEL. NO MITIGATION IS REQUIRED FOR THE OTHER UNITS.

ARCHAEOLOGICAL DISCOVERY CONDITION

ANY DISCOVERIES AND MITIGATIONS SHALL COMPLY WITH THE ARCHAEOLOGICAL REPORT PREPARED FOR THIS SITE.

PRIOR TO THE START OF ANY VEGETATION OR PAVING REMOVAL, DEMOLITION, TRENCHING OR GRADING, CONTRACTORS AND CONSTRUCTION PERSONNEL SHALL BE ALERTED TO THE POSSIBILITY OF UNCOVERING UNANTICIPATED SUBSURFACE ARCHAEOLOGICAL FEATURES OR ARTIFACTS ASSOCIATED WITH PAST HUMAN OCCUPATION OF THE PARCEL.

IF SUCH ARCHAEOLOGICAL RESOURCES ARE ENCOUNTERED OR SUSPECTED, WORK SHALL BE HALTED IMMEDIATELY. THE CITY ENVIRONMENTAL ANALYST SHALL BE NOTIFIED AND AN ARCHAEOLOGIST FROM THE MOST CURRENT CITY-QUALIFIED ARCHAEOLOGICAL RESOURCES CONSULTANT LIST SHALL BE RETAINED BY THE APPLICANT. THE LATTER SHALL BE EMPLOYED TO ASSESS THE NATURE, EXTENT AND SIGNIFICANCE OF ANY

DISCOVERIES AND TO DEVELOP APPROPRIATE MANAGEMENT RECOMMENDATIONS FOR ARCHAEOLOGICAL RESOURCE TREATMENT WHICH MAY INCLUDE, BUT ARE NOT LIMITED TO, REDIRECTION OF GRADING OR EXCAVATION ACTIVITIES, CONSULTATION OR MONITORING WITH A BARBAREÑO CHUMASH REPRESENTATIVE FROM THE MOST CURRENT CITY-QUALIFIED NATIVE AMERICAN SITE MONITORS LIST.

IF A DISCOVERY CONSISTS OF POSSIBLE HUMAN REMAINS, THE SANTA BARBARA COUNTY CORONER SHALL BE CONTACTED IMMEDIATELY. IF THE CORONER DETERMINES THAT THE REMAINS ARE NATIVE AMERICAN, THE CORONER SHALL CONTACT THE CALIFORNIA NATIVE AMERICAN HERITAGE COMMISSION. A BARBAREÑO CHUMASH REPRESENTATIVE FROM THE MOST CURRENT CITY-QUALIFIED NATIVE AMERICAN SITE MONITORS LIST SHALL BE RETAINED TO MONITOR ALL FURTHER SUBSURFACE DISTURBANCE IN THE AREA OF THE FIND. WORK IN THE AREA MAY ONLY PROCEED AFTER THE ENVIRONMENTAL ANALYST GRANTS AUTHORIZATION.

IF A DISCOVERY CONSISTS OF POSSIBLE PREHISTORIC OR NATIVE AMERICAN ARTIFACTS OR MATERIALS, A BARBAREÑO CHUMASH REPRESENTATIVE FROM THE MOST CURRENT NATIVE AMERICAN SITE MONITORS LIST SHALL BE RETAINED TO MONITOR ALL FURTHER SUBSURFACE DISTURBANCE IN THE AREA OF THE FIND. WORK IN THE AREA MAY ONLY PROCEED AFTER THE ENVIRONMENTAL ANALYST GRANTS AUTHORIZATION.

LOCAL DEVELOPMENT STANDARDS

	PROPOSED	ALLOWED/REQ	<u>NOTE</u>
HEIGHT SETBACK - FRT SETBACK - INT SETBACK - RR SETBACK - PARK OPEN YARD PRIV. OPEN YARD SOLAR ACCESS	28'-2 1/2" 10' 6' 3' VARIES VARIES COMPLIANT	45' 10' 6' 0-3' 15% VARIES APPLIES	20' AB(10' AB(10' AB(MAND/ MAND/ MAND/ SEE EI

PARKING

	<u>EXISTING</u>	PROPOSED
COVERED UNCOVERED	0 2	0 8
TOTAL	2	8

BIKE PARKING

	EXISTING	PROPOSED
COVERED UNCOVERED	0 0	8 0
TOTAL	0	8*

*SEE BIKE RACK SPEC ON SHEET A-7.0

O COMPLY WITH THE ING CODE CH. 11A.

ACCESSIBLE = 1 SPACE NITS SHALL BE ON AN ITS SHALL BE UNIT. AN ACCESSIBLE . COMMON USE AREAS

Recycle	Trash
(yd3/week)	(yd3/week)
2.42	1.93
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
jeneration of Recycle	each material. Trash
2.4	1.9
489	390
gallon cart 👻	95 gallon cart 👻
	_
3	2

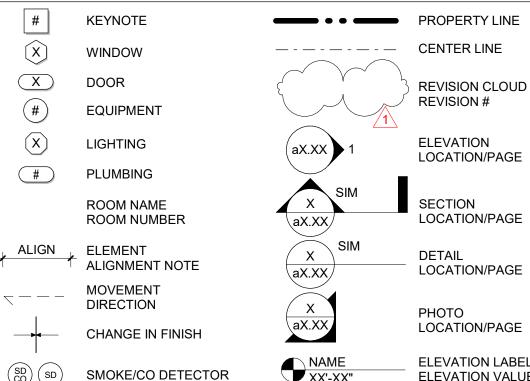
BOVE 2ND FLR BOVE 2ND FLR BOVE 2ND FLR DATORY CONCESSION DATORY CONCESSION DATORY CONCESSION ELEVATIONS

ALLOWED/REQ

1 PER UNIT

ALLOWED/REQ 1 / UNIT = 8

SYMBOL LEGEND



ELEVATION VALUE

CODE COMPLIANCE

ALL WORK SHALL BE PERFORMED AND ALL MATERIALS INSTALLED IN COMPLIANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES, AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES.

NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES. CODE REQUIREMENTS TAKE PRECEDENCE OVER THE DRAWINGS.

IT SHALL BE THE RESPONSIBILITY OF ANYONE PROVIDING LABOR OR MATERIALS TO CONFORM WITH THE CODE AND TO BRING TO THE ATTENTION OF THE ARCHITECT ANY DISCREPANCIES OR CONFLICTS BETWEEN THE CODES AND THE DRAWINGS.

APPLICABLE CODES: SANTA BARBARA CITY TITLE 28 ZONING ORDINANCE SANTA BARBARA CITY MUNICIPAL CODE SANTA BARBARA CITY DESIGN GUIDELINES 2019 CALIFORNIA ADMINISTRATIVE CODE 2019 CALIFORNIA BUILDING CODE (CBC) 2019 CALIFORNIA RESIDENTIAL CODE (CRC) 2019 CALIFORNIA ENERGY CODE 2019 CALIFORNIA ELECTRICAL CODE (CEC) 2019 CALIFORNIA PLUMBING CODE (CPC) 2019 CALIFORNIA MECHANICAL CODE (CMC) 2019 GREEN BUILDING CODE 2019 CALIFORNIA BUILDING CODE AMENDMENTS PER ORD. 5780 2019 SANTA BARBARA ELECTRICAL CODE AMENDMENTS 2019 SANTA BARBARA MECHANICAL CODE AMENDMENTS 2019 SANTA BARBARA PLUMBING CODE AMENDMENTS 2019 SANTA BARBARA GREEN BUILDING CODE AMENDMENTS 2019 SANTA BARBARA HOUSING CODE FEDERAL - OSHA

FEDERAL - AMERICANS WITH DISABILITIES ACT

SITE STATISTICS	EXISTING	PROPOSED
LOT % BLDG & IMPERM.	24%	62.3%
ON-SITE IMPERVIOUS AREA:		
NEW IMPERVIOUS REPLACED IMPERVIOUS REMOVED IMPERVIOUS		3,456 SF 2,153 SF 5 SF
OFF-SITE IMPERVIOUS AREA:		
NEW IMPERVIOUS REPLACED IMPERVIOUS REMOVED IMPERVIOUS		360 SF 120 SF 0 SF

UNDERGROUND DIG ALERT

CONTRACTOR TO CALL 811 PRIOR TO COMMENCEMENT OF CONSTRUCTION OR EXTERIOR SITE WORK.

WORK IN THE RIGHT-OF-WAY

ANY WORK IN THE PUBLIC RIGHT-OF-WAY REQUIRES A SEPARATE PERMIT FROM PUBLIC WORKS.

PHOTOVOLTAIC SYSTEM

PV SYSTEM:	EXISTING	PROPOSED
	NO	YES
PHOTOVOLTAIC SYSTEM TO BE DESIGN-BUILT UNDER SEPARATE PERMIT		

FIRE SPRINKLERS

SPRINKLERS:	EXISTING	PROPOSED
	NO	YES - NFPA 13
SPRINKLERS TO	BE DESIGN-BUILT UN	NDER SEPARATE PERMIT

302 MONTECITO REPLACEMENT UNIT

302 MONTECITO UNIT STATISTIC		528 FIGUEROA REPLACEMENT	ST UNIT STATISTICS
UNIT A: 2 BR	739 SF	UNIT A: 2 BR	583 SF
UNIT B: 2 BR	592 SF	UNIT B: 2 BR	707 SF
UNIT C: 2 BR	731 SF	UNIT C: 2 BR	962 SF
UNIT D: 2 BR	838 SF	UNIT D: 2 BR	777 SF
AVERAGE: 2 BR	, 725 SF	UNIT E: 2 BR	818 SF
		AVERAGE: 2 BF	R, 769 SF

STORMWATER BMP'S

[TBD BASED ON STORMWATER REPORT FROM CIVIL ENGINEER]

DRAWING INDEX

SHEET	DESCRIPTION	SHEET	DESCRIPTION
T-1.0	TITLE SHEET	A-9.3	SPECIFICATIONS
T-1.1	SOILS REPORT	E-0.1	ELECTRICAL NOTES &
T-1.2	CODE ANALYSIS	E-0.2	ELECTRICAL NOTES &
T-1.3	ACCESSIBILITY PLAN	E-1.0	ELECTRICAL SITE PLA
T-1.6	CAL GREEN	E-2.1	FIRST FLOOR POWER
T-1.7	CAL GREEN	E-2.2	SECOND FLOOR POWE
T-1.8	CAL GREEN	E-3.1	FIRST FLOOR LIGHTING
T-1.11	SOLAR PLAN	E3.2	SECOND FLOOR LIGHT
T-1.12	SOLAR PLAN	M-0.1	HVAC TITLE 24
C1	PUBLIC IMPROVEMENT PLANS	M-0.2	HVAC TITLE 24
C2	PUBLIC IMPROVEMENT PLANS	M-0.3	HVAC TITLE 24
C3	PUBLIC IMPROVEMENT PLANS	M-0.4	HVAC TITLE 24
C-1.0	GRADING & DRAINAGE PLAN	M-1.1	HVAC EQUIP. SCHED, I
C-2.0	UTILITY PLAN	M-1.2	HVAC EQUIP. SCHED, I
C-3.0	EROSION CONTROL PLAN	M-1.3	HVAC EQUIP. SCHED, I
C-4.0	DETAILS	M-2.1	HVAC FLOOR PLAN - 1
C-5.0	DETAILS	M-2.2	HVAC FLOOR PLAN - 2
A-1.0	(E) SITE PLAN	M-4.1	HVAC DETAILS
A-1.1	(E)/DEMO PLANS & ELEV'S	P-0.0	PLUMBING FRONT SHE
A-2.0	(N) SITE PLAN	P-0.1	PLUMBING DETAILS
A-2.1	(N) FIRST FLOOR PLAN	P-2.1	PLUMBING FLR PLAN -
A-2.2	(N) SECOND FLOOR PLAN	P-2.2	PLUMBING FLR PLAN -
A-2.3	(N) ROOF PLAN	P-2.3	PLUMBING FLR PLAN -
A-2.4	(N) REF'D CLG PLAN - 1ST FLR	P-2.4	PLUMBING ROOF PLAN
A-2.5	(N) REF'D CLG PLAN - 2ND FLR	S-1.1	STRUCTURAL TITLE SH
A-2.6	(N) DIMENSION PLANS	S-1.2	STRUCTURAL SPECIFIC
A-2.7	(N) DIMENSION PLANS	S-2.1	FOUNDATION PLAN
A-2.8	(N) DIMENSION ROOF PLANS	S-2.2	FLOOR FRAMING PLAN
A-5.0	(N) SECTIONS	S-2.3	ROOF FRMAING PLAN
A-5.1	(N) SECTIONS	S-3.1	STRUCTURAL DETAILS
A-6.0	(N) EXTERIOR ELEVATIONS	S-3.2	STRUCTURAL DETAILS
A-6.1	(N) EXTERIOR ELEVATIONS	S-3.3	STRUCTURAL DETAILS
A-7.0	SCHEDULES	L-1.0	LAYOUT & PLANTING F
A-9.0	DETAILS		PLANTING DETAILS
A-9.1	DETAILS	L-2.0	IRRIGATION PLAN
A-9.2	SPECIFICATIONS	L-2.1	IRRIGATION DETAILS

CONTACT LIST

OWNER 3M1W, LLC 831 CLIFF DRIVE SANTA BARBARA, CA 805.284.8488

ARCHITECT **KEITH NOLAN** ON DESIGN ARCHITECTS PO BOX 598 SANTA BARBARA, CA 93102 LIC. NO. C-22541

AGENT LONNIE ROY PO BOX 598 SANTA BARBARA, CA 93102 805.896.7896

SURVEYOR WATERS CARDENAS 5553 HOLLISTER AVE, NO 7&8 GOLETA, CA 93117 805.967.4416

P.O. BOX 4814

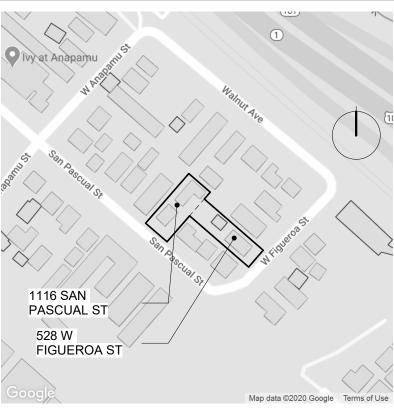
805.538.5115

CIVIL ENGINEER RRM DESIGN GROUP 10 E. FIGUEROA ST, STE. 200 SANTA BARBARA, CA 93101 ATT: MICHAEL C. HAMILTON, P.E.

805.963.8283

LANDSCAPE ON DESIGN ARCHITECTS PO BOX 598 SANTA BARBARA, CA 93102

VICINITY MAP



RATE PERMIT	528 W FIGUEROA ST Google
	_
г	
STATS	
	_



T-1.0

BEACON GEOTECHNICAL, INC

December 31, 2020

St. George and Associates 831 Cliff Drive, Suite 100 Santa Barbara, CA 93109

Project:	Proposed Residential Structure
	528 Figueroa Street
	Santa Barbara, California

Subject: Geotechnical Engineering Report

As authorized, we have performed a Geotechnical Study for the above referenced project. The accompanying Geotechnical Engineering Report presents the results of our subsurface exploration, laboratory-testing program and conclusions and recommendations for geotechnical engineering aspects of project design. Our services were performed using the standard of care ordinarily exercised in this locality at the time this report was prepared.

Based on our study, it is our opinion that the site is suitable for the proposed development from a geotechnical engineering standpoint provided the recommendations of this report are successfully implemented.

We have appreciated this opportunity to be of service to you on this project. Please call if you have any questions, or if we can be of further service.

Respectfully submitted Beacon Geotechnical, Inc.

DMg Greg McKay Project Manager

Copies: 3-St. George and Associates



Nicholas A. McClure Geotechnical Engineer

P.O. Box 4814 • Paso Robles, CA 93447 Phone: (805) 239-9457 • Fax: (805) 237-9098 • Email: beacongeotechnical@gmail.com

F-102566

December 31, 2020 F-102566

- 6.2.3 Areas outside the building area to receive fill, exterior slabs-on-grade, sidewalks, and paving should be overexcavated to a depth of one (1) exposed surface should be scarified, moisture conditioned and recompacted.
- 6.2.4 On-site soils may be used for fill once they are cleaned of all organic 6.5 <u>Structural Design Foundations</u> material, rock, debris, and irreducible material larger than eight (8) inches
- 6.2.5 Although not encountered in our borings, should any trash, debris or subsurface structures be encountered during grading, removals will be necessary to adequate depths and horizontal limits as recommended by this firm at the time of grading.
- 6.2.6 Grading inspections shall be performed in accordance with the 2019 California Building Code Table 1705.6. See Appendix B for project specific grading observation requirements.

6.3 <u>Slope Construction</u>

- 6.3.1 All hillside grading and construction of fill slopes should conform to the 6.5.6 minimum standards listed in Chapter 18 of the 2019 California Building Code. It is recommended that a representative of this firm review the grading plans prior to grading and site development.
- 6.3.2 Fill slopes should be keyed and benched into firm natural ground when 6.5.7 the existing slope to receive fill is 10:1, horizontal to vertical, or steeper. The keys should be tilted into the slope, should be a minimum of one equipment width wide, and should extend a minimum of three (3) feet deep at the outside edge.
- 6.3.3 Fill slopes should be overfilled, compacted, and cut back to planned 6.5.8 configurations. This will yield better compaction on the slope faces than other methods.
- 6.3.4 Lined drainage swales and down drains should be provided at the tops of all cut and fill slopes to divert drainage away from the slope faces. 6.3.5 Cut and fill slopes should not be constructed steeper than 2:1
- maintained as per the 2019 California Building Code. 6.4 <u>Utility Trenches</u>
- 6.4.1 Utility trench backfill should be governed by the provisions of this report relating to minimum compaction standards. In general, service lines inside of the property lines may be backfilled with native soils and compacted to a minimum of 90% of maximum dry density. Backfill of offsite service lines will be subject to the specifications of the jurisdictional agency or this report, whichever is more stringent.

7

F-102566

1. INTRODUCTION

This report presents results of a Geotechnical Engineering Study performed for F-102566 the proposed residential structure project to be located in Santa Barbara, California.

1.1 <u>Description</u>

- 1.1.1. It should be noted that grading and foundation plans were not provided for the purpose of this report. Prior to any construction, this **4 SITE CONDITIONS** firm should review the grading and foundation plans to verify or modify the recommendations offered herein. We anticipate that the site will be developed by building at or near existing grade. 1.1.2. The proposed structure is assumed to be one (1) or two (2) stories of
- wood framed construction.
- 1.1.3. Structural considerations for maximum wall loads of 1.75 kips per basis for the recommendations of this report. If actual loads vary significantly from these assumed loads, Beacon Geotechnical, Inc. should be notified as re-evaluation of the recommendations contained 4.2 Groundwater herein may be required.

2 SCOPE OF WORK

- 2.1 The purpose of the geotechnical investigation that led to this report was to evaluate the soil conditions of the site with respect to the proposed development. These conditions include surface and subsurface soil types. expansion potential, settlement potential, bearing capacity, and presence or absence of subsurface water. The scope of our work included:
- Reconnaissance of the site. • Drilling, sampling, and logging of two (2) borings to investigate soils and 5.1 <u>Nearby Faults</u> groundwater conditions.
- Laboratory testing of soil samples obtained from subsurface exploration to determine their physical and engineering properties.
- Geotechnical analysis of the data obtained.
- Consultation with owner representatives and design professionals. Preparation of this report.

2.2 Contained in the report are:

- Discussions on local soil and groundwater conditions. Results of laboratory and field tests. • Conclusions and recommendations pertaining to site grading and
- structural design.

foot below finish subgrade or existing grade whichever is deeper. The 6.4.2 A representative of this firm is to monitor compliance with these 6.6 <u>Slabs on Grade</u> recommendations.

- 6.5.1 Conventional continuous footings may be used for support of the 6.6.2 structure.
- Footings should bear entirely into firm recompacted soils. Based on the project soil conditions, it is assumed that the footings will 6.5.3 extend a minimum of eighteen (18) inches below lowest adjacent
- 6.5.4 Conventional continuous footings may be designed based on an allowable bearing value of 1750 psf.
- 6.5.5 Allowable bearing values are net (weight of footing and soils surcharge may be neglected) and are applicable for dead plus reasonable live 6.6.5
- Bearing values may be increased by one-third when transient loads 6.6.6 such as wind and/or seismicity are incorporated into designs using the alternate load combinations in 2019 California Building Code Section 1605.3.2.
- Lateral loads may be resisted by soils friction on floor slabs and 6.7 <u>Structural Design Lateral Resistance Parameters</u> foundations and by passive resistance of the soils acting on foundation 6.7.1 stem walls. Lateral capacity is based on the assumption that any required backfill adjacent to foundations and grade beams is properly compacted.
- For structures to be constructed above slopes, the outside faces at the 6.7.2 bottom of footings should provide a minimum horizontal distance of ten (10) feet from the slope face.
- Conventional continuous footings for buildings where the ground 6.5.9 6.7.3 surface slopes at 10:1, horizontal to vertical, or steeper should be stepped so that both top and bottom are level.
- (horizontal to vertical). Setbacks of structures from slopes should be 6.5.10 Reinforcement of footings bottomed in soils in the "Very Low" expansion range should be designed by the Project Structural Engineer to properly resist the structural design load reactions. Additionally, soils should be lightly moistened immediately prior to placement of concrete.
 - 6.5.11 Foundation excavations should be observed by a **representative of Beacon Geotechnical, Inc. after excavation,** 6.8.3 The majority of settlement should occur during construction. Post but prior to placing reinforcing steel or forms.

December 31, 2020 F-102566

3 SITE SETTING

4.1.1 Evaluation of the subsurface indicates that soils are generally light brown silty slightly clayey sand overlain by dark brown silty sand. 4.1.2 Soils encountered at approximate bearing depths should be designed as Site Classification D in accordance with the local building code. square foot and maximum point loads of 25.0 kips were used as a 4.1.3 Expansion determination indicates that the bearing soils lie in the 5.3 Landslide Hazards "Very Low" range.

This portion of Central California is subject to significant seismic hazards from moderate to large earthquake events. Ground shaking resulting from earthquakes is the primary geologic hazard at the project site. Ground displacement resulting from faulting is a potential hazard at or near faults.

5.1.1 The site does not lie within an Earthquake Fault Zone identified on a State of California Earthquake Fault Zone Map. 5.1.2 Faults closest to the site, which would most affect the proposed project:

5.2 Liquefaction

site.

5.4 <u>Seismic Design Parameters</u>

have a relative density of less than 70%.

5.2.1 Based on the quality and conditions of the in-place soils and the

5.3.1 The site topography and exposed soils types indicate that the potential

The following estimated ground motion parameters have been established using

acceleration contour maps provided by the U.S. Geological Survey (USGS) and

the National Earthquake Hazards Reduction Program (NEHRP-2015). These

ground motion parameters represent the Maximum Considered Earthquake

(MCE) spectral response of seismic events experiencing 5 percent damped

2019 California Building Code Seismic Parameters

the methods outlined in the 2019 California Building Code with reference to the

previous landslides was observed at the site.

absence of groundwater in our boring explorations, it is our opinion

for landslides is minimal at this site. Furthermore, no evidence of

3.1 The site of the proposed development is located in Santa Barbara, Earthquake-induced vibrations can be the cause of several significant 6 CONCLUSIONS AND RECOMMENDATIONS California, with the approximate geographical coordinates 34°24′59.50″N phenomena, including liquefaction in fine sands and silty sands. Liquefaction and 119°42'36.00"W. See the Vicinity Map in Appendix A. 3.2 The site is relatively level and contains an existing residence to be removed overturn if it occurs in the bearing zone. If liquefaction occurs beneath sloping engineering standpoint provided the recommendations contained herein are prior to developing the site for the new proposed project.

4.1 Soil Conditions

4.2.1 Groundwater was not encountered to a maximum depth of twenty-four (24) feet.

5 SEISMIC HAZARDS

each way.

Approximate Distance (km)	Magnitude M _w
3.1	6.8
5.2	7.4
6.2	6.7
7.8	7.3
	3.1 5.2 6.2

December 31, 2020 F-102566

period.

Parameter

Site Class

Seismic Design Category

Short period site coefficient, Fa

1-second period site coefficient, Fv

Short Period Spectral Acceleration, S_s

1-second period spectral acceleration, S₁

Adjusted short period spectral acceleration, Sms

Short period design spectral acceleration, S_{DS}

Adjusted 1-second period spectral acceleration, S_{m1}

-second period design spectral acceleration, S_D

6.9 Structural Design – Retaining Walls

6.9.1 Conventional cantilever retaining walls bearing in soils prepared in 6.6.1 Concrete slabs shall be a minimum of four (4) inches thick, reinforced accordance with the "Grading Pads - Site Development and Foundation Excavations" sections with a minimum of #3 bars spaced at eighteen (18) inches on center, Concrete slabs should be supported by compacted structural fill as

Acti	ve Case	35 pcf	
At R	est Case	55 pcf	
Pase	sive Case	275 pcf	
Max	. Toe Pressure	1750 psf	
Coe	fficient of Sliding Friction	0.33	

hould be (#/ft-ofdesigne base of wall) as the wall, where H is the height of the wall in feet. This seismic surcharge should be added to an active pressure design utilizing an active pressure of 35 psf.

6.9.3 It should be noted that where structural retaining walls would otherwise be designed based on an at-rest pressure case, the seismicand-active design results should be compared to the at-rest design 7 REFERENCES CITED results and the governing conditions should be used for the purpose of the project.

In addition to the static soil pressures described above, it is important Society, in Cooperation with California Geological Society (CGS), to note that the active pressure condition will only fully develop if the www.geohazards.usgs.gov/qfaults/ca/California.php retaining wall structure is allowed to move a sufficient distance. The necessary lateral movements required to establish the active pressure **8** ADDITIONAL SERVICES condition are shown below,

Non-Expansive Granular Soil Expansive Cohesive Soil

where H represents the height of the wall. At-rest pressures should be to check compliance with the recommendations given in this report. The used for design purposes where retaining wall systems connected or recommended tests and observations include, but are not necessarily limited to adjacent to building structures would be adversely affected by the the following: above referenced lateral displacements.

Design pressures noted above are applicable to a horizontally retained 8.1 Review of the building and grading plans during the design phase of the 6.9.5 surface behind the wall. Walls having a retained surface that slopes upward from the wall should be designed for an additional equivalent 8.2 Observation and testing during site preparation, grading, placing of fluid pressure of 1 pcf for the active case and 1.5 pcf for the at-rest case, for every two degrees of slope inclination. Walls positioned on or 8.3 Consultation as required during construction. near descending slopes should be evaluated by this firm on an individual basis.

10

ground, a phenomenon known as lateral spreading can occur. Liquefaction is properly implemented into the project. typically limited to the upper 50 feet of the subsurface soils and to soils that 6.1 General Grading

- 6.1.1 Grading, at a minimum, should conform to Chapter 18, and any additional locally approved appendices relating to grading, of the 2019 California Building Code. that the potential for liquefaction and/or lateral spreading is low at this 6.1.2 The existing ground surface should be initially prepared for grading by removing all vegetation, trees, large roots, debris, non-complying fill and all other organic material. Voids created by removal of such material should not be backfilled unless the underlying soils have been observed by a representative of this firm. The bottom of all excavations should be observed by a representative of this firm prior to processing or placing fill. 6.1.4 Fill and backfill placed at near optimum moisture in layers with loose thickness not greater than eight (8) inches should be compacted to a minimum of 90% of maximum dry density obtainable by the ASTM D 1557 Test Method. Import soils used to raise site grade should be equal to or better than
- geotechnical engineering firm. Final comments on the characteristics of the import soils will be offered after the material is at the project site. acceleration and having a 2 percent probability of exceedance within a 50 year 6.1.6 Roof draining systems should be designed so that water is not discharged onto bearing soils or near structures. 6.1.7 Final site grade should be such that all water is permanently diverted away from the structure and is not allowed to pond. The ground immediately adjacent to the building shall be sloped 5% for a minimum of ten (10) feet measured perpendicular to the face of the wall. All diverted water is to be directed to an approved drainage. Alternative grading methods can be found in 2019 California Building
 - Code Section 1804.4. 6.1.8 The above referenced site drainage conditions should be maintained over the course of the life of the structure. Proper long term performance of the foundation and building pad may be compromised if the surrounding site drainage and grading is adversely modified.

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Value

2.227

0.800

1.200

1.700

2.673

1.361

1.782

0.907

- 6.9.6 The pressures listed above were based on the assumption that determined by ASTM D 1557 Test Method. 6.9.7 The lateral earth pressure to be resisted by the retaining walls or similar structures should include the loads from any structures or temporary loads that influence the wall design. 6.9.8 A back drain or an equivalent system of backfill drainage should be incorporated into the retaining wall design. Backfill immediately behind the retaining structure should be a free-draining granular material. Alternatively, the back of the wall could be lined with a geodrain system 6.9.9 Compaction on the uphill side of the wall within a horizontal distance equal to one wall height should be performed by hand-operated or other lightweight compaction equipment. This is intended to reduce potential "locked-in" lateral pressures caused by compaction with 9.3
- heavy grading equipment. 6.9.10 Water should not be allowed to pond near the top of the wall. To accomplish this, the final backfill site grade should be such that all water is diverted away from the retaining wall.

0.001H - 0.004H This report is based on the assumption that an adequate program of monitoring 0.01H - 0.04H and testing will be performed by Beacon Geotechnical, Inc. during construction

- engineered fill, and foundation construction.

11

6.6.3 Reinforcement dowels shall be provided at the connection between 6.6.4 Slabs should be underlain with a minimum of four (4) inches of clean and free draining sand. Areas where floor wetness would be undesirable should be underlain with a 10mil moisture barrier to reduce moisture transmission from the subgrade soils to the slab. The 6.9.2 Retaining

membrane should be placed at mid-height in the clean sand. Reinforcement and slab thickness should be determined by the Project Structural Engineer Soils underlying slabs in the "Very Low" expansion range, as a minimum, should be lightly moistened immediately prior to placement

of concrete.

concrete slabs on grade and continuous footings.

recommended earlier in this report.

Resistance to lateral loading may be provided by friction acting on the base of foundations. A coefficient of friction of 0.33 may be applied to dead load forces. This value does not include a factor of safety.

Passive resistance acting on the sides of foundation stems equal to 275 pcf of equivalent fluid weight may be included for resistance to lateral load. This value does not include a factor of safety. A one-third increase in the quoted passive value may be used when considering transient loads such as wind and seismicity.

<u>Structural Design – Settlement Considerations</u>

6.8.1 Maximum expected settlements approximately 3/4 inches are anticipated for foundations and floor slabs designed as recommended. 6.8.2 Differential settlement between adjacent load bearing members should be less than one-half the total settlement.

construction settlement should be minimal.

	Max. Toe Pressure	1/50 pst
	Coefficient of Sliding Friction	0.33
ed t	walls extending greater thar for an additional seismic hori Imed to be acting at a heigh	zontal line load of 30H ² (

oundation Excavations" section of	^f this report and backfilled with
ompacted soils may be designed	for the lateral pressures listed
elow:	
Active Case	35 pcf
At Rest Case	55 pcf
Passive Case	275 pcf
Max. Toe Pressure	1750 psf
Coefficient of Sliding Frictic	•

ON DESIGN, LLC

Architecture

Planning

Interior Design

Keith Nolan

C -22541

- results in a complete loss of strength and can cause structures to settle or even The site is suitable for the proposed development from a geotechnical

Import soils can be evaluated, but will not be pre-gualified by the

- 6.1.9 It is recommended that Beacon Geotechnical, Inc. be retained t provide intermittent geotechnical engineering services during site development, grading, and foundation construction phases of the work to observe compliance with the design concepts, specifications, and recommendations, and to allow design changes in the event that subsurface conditions differ from those anticipated prior to the start of construction.
- 6.1.10 Plans and specifications should be provided to Beacon Geotechnical. Inc. prior to grading. Plans should include the grading plans, and foundation details. Structural loads should be shown on the foundation
- 5.1.11 Should soils become unstable during grading due to excessive subsurface moisture, alternatives to correct instability may include aeration or the use of gravels and/or geotextiles as stabilizing measures. Recommendations for stabilization should be provided by this firm as needed during construction.
- 1.12 All water associated with drainage and runoff should not be discharged onto slope faces. All outflow of drainage structures and drainage facilities should be designed by the project Civil Engineer to minimize erosion.
- 6.2 Specific Site Development, Grading Pads, and Foundation Excavations
- on-site soils in strength, expansion, and compressibility characteristics. 6.2.1 Due to the presence of low density soils at shallow bearing dept overexcavation and recompaction of soils in the building a (including covered deck areas) will be necessary to decrease potential for differential settlement and to provide more uniferential bearing conditions. Soils should be overexcavated to a depth of (2) feet below the bottom of footings, five (5) feet below exist grade, or 75% of the deepest fill thickness, whichever is greater. over-excavation should extend to a distance of five (5) feet beyond building perimeter. The resulting surface should be scarified to a dep of one (1) foot, moisture conditioned and recompacted to a minimum of 90% of maximum dry density. The intent of these recommendation is to provide a minimum of two (2) feet of compacted soils below t bottom of all footings, and recompact the loose topsoil.
 - Any excavated material from foundation and septic or draina systems should be properly recompacted in accordance with all recommendations for engineered fill. Alternatively, excavated soil n be hauled off site when adequate placement area is not available the project location.

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backfilled soils will be compacted to 90% of maximum dry density as 9 PROJECT LIMITATIONS AND UNIFORMITY OF CONDITIONS

- 9.1 The analysis and recommendations submitted in this report are based part upon the data obtained from the borings drilled on site. The nati and extent of variations between and beyond the borings may not become evident until construction. If variations then appear evident, it may necessary to re-evaluate the recommendations of this report.
- The scope of our services did not include environmental assessment geological study. The scope of services did not include investigation for t presence or absence of wetlands, hazardous or toxic materials in the surface water, groundwater, or air. Any statements in this report or on soil boring logs regarding odors, unusual or suspicious items or condition observed are strictly for the information of the client.
- Findings of this report are valid as of this date, however, changes in condition of a property can occur with passage of time whether they be to natural processes or works of man on this or adjacent properties. addition, changes in applicable or appropriate standard may occur whetl they result from legislation or broadening knowledge. Accordingly, findir of this report may be invalidated wholly or partially by changes outside control. Therefore, this report is subject to review and should not be rel upon after a period of one (1) year.
- USGS, Online, Geologic Hazards Science Center, United States Geological 9.4 In the event that any changes in the nature, design, or location of structure and other improvements are planned, the conclusions recommendations contained in this report shall not be considered va unless the changes are reviewed and conclusions of this report modified verified in writing.
 - 9.5 This report is issued with the understanding that it is the responsibility the owner or his representatives to insure the information recommendations offered herein are called to the attention of the proj architect and engineers. It is also the responsibility of the owner or representatives to insure the information and recommendations offer herein are incorporated into the project plans and specifications and t necessary steps are taken to see that the contractor and subcontract carry out such recommendations in the field.
 - 9.6 Beacon Geotechnical, Inc. has prepared this report for the exclusive use the client and authorized agents. This report has been prepared accordance with generally accepted geotechnical engineering practices. other warranties, either expressed or implied, are made as to professional advice provided under the terms of this agreement.

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December 31, 2020 DINITIONS is report are based in do n site. The nature are vident, it may be report. mental assessment or is iters or conditions owever, changes in a e whether they be due diacent properties. In the may occur whether s, Accordingly, findingsry y changes outside our di should not be relied gn, or location of the the conclusions and this report modified or is the responsibility of the information and ty of the owner or his somendations offered specifications and the regreement. December 31, 2020 the provided the s may be property critections. If Beacon ge of making this responsibility for the information in order s may be property critections. If Beacon ge of making this responsibility for Project Manager Designer Scale PrintDate 327/2024 4:39:13 PM T-1.1	ation Excavations hallow bearing depths, in the building area sary to decrease the provide more uniform ted to a depth of two b) feet below existing chever is greater. The ve (5) feet beyond the be scarified to a depth hpacted to a minimum nese recommendations pacted soils below the topsoil. d septic or drainage cordance with all the ly, excavated soil may rea is not available at	ON de sign LLC • P.O. BOX 598 • Santa Barbara • California • 9
Is report are based in do not be relied to report. Since the vestigation for the conclusions of wever, changes in the soil, in this report or on the usitems or conditions. Sowever, changes in a e whether they be due diacent properties. In the conclusions and the or and subcontractors or the exclusive use of as been prepared in gineering practices. Notare made as to the agreement. December 31, 2020 Accordingly findings, the property conclusions. If Beacong of making this responsibility for seponsibility for the specifications. If Beacong of making this responsibility for the specifications. If Beacong of making this responsibility for the specifications. If Beacong of making this responsibility for the specifications. If Beacong of the specifications. If Beacong of the specifications in orders is may be properly configure the property	December 31, 2020	
are made as to the agreement. December 31, 2020 nc. be provided the specifications in order s may be properly coffications. If Beacon ge of making this responsibility for Project Manager Designer Scale PrintDate 3/27/2024 4:39:13 PM	is report are based in id on site. The nature rings may not become ar evident, it may be sreport. mental assessment or le investigation for the c materials in the soil, n this report or on the us items or conditions owever, changes in a e whether they be due djacent properties. In and may occur whether e. Accordingly, findings by changes outside our ad should not be relied gn, or location of the the conclusions and t be considered valid this report modified or is the responsibility of the information and ttention of the project y of the owner or his ommendations offered specifications and the or and subcontractors	FIGUEROA APARTMENTS 528 W FIGUEROA ST SANTA BARBARA, CA 93101 SOILS REPORT
Designer Scale PrintDate 3/27/2024 4:39:13 PM	December 31, 2020 nc. be provided the specifications in order s may be properly ecifications. If Beacon ge of making this	$\frac{1}{2} \frac{PLN #2}{PLN #4} \frac{1}{2} \frac{PLN #2}{2} \frac{1}{2} \frac{PLN #2}{2} \frac{1}{2} \frac{PLN #2}{2} \frac{1}{2} \frac{PLN #4}{2} \frac{PLN #4}$
T-1.1		Designer Scale PrintDate
		T-1.1

F-102566

9.7 It is recommended that Beacon Geotechnical, Inc. be provided opportunity for a general review of final design and specifications in orc that earthwork and foundation recommendations may be prope interpreted and implemented in the design and specifications. If Beac Geotechnical, Inc. is not accorded the privilege of making recommended review, we can assume no responsibility misinterpretation of our recommendations.

END OF TEXT Appendices

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December 31, 2020 F-102566

REQUIRED: NFPA 13R [CBC 903.2.8] EXISTING: NONE

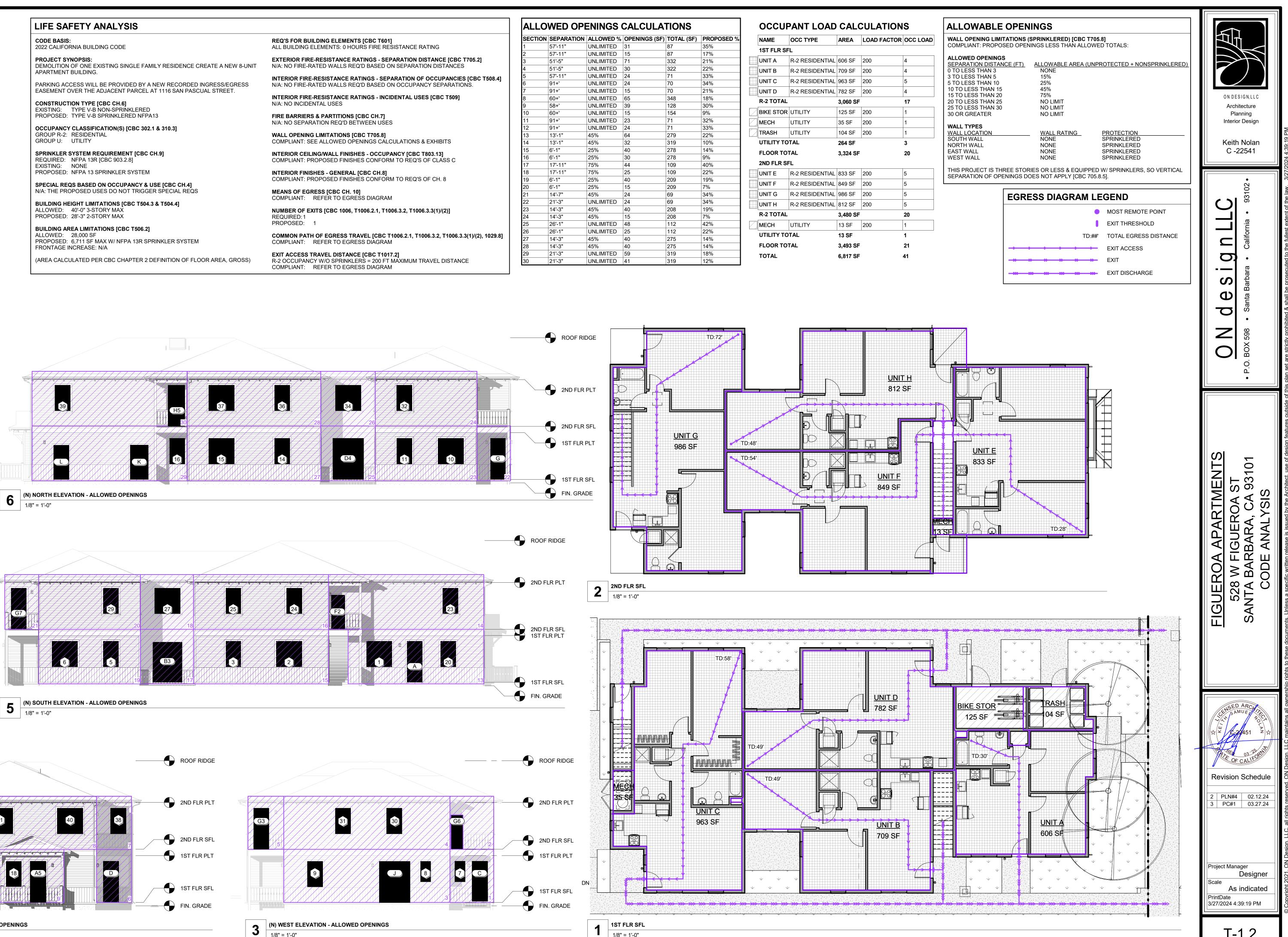
SPECIAL REQS BASED ON OCCUPANCY & USE [CBC CH.4] N/A: THE PROPOSED USES DO NOT TRIGGER SPECIAL REQS

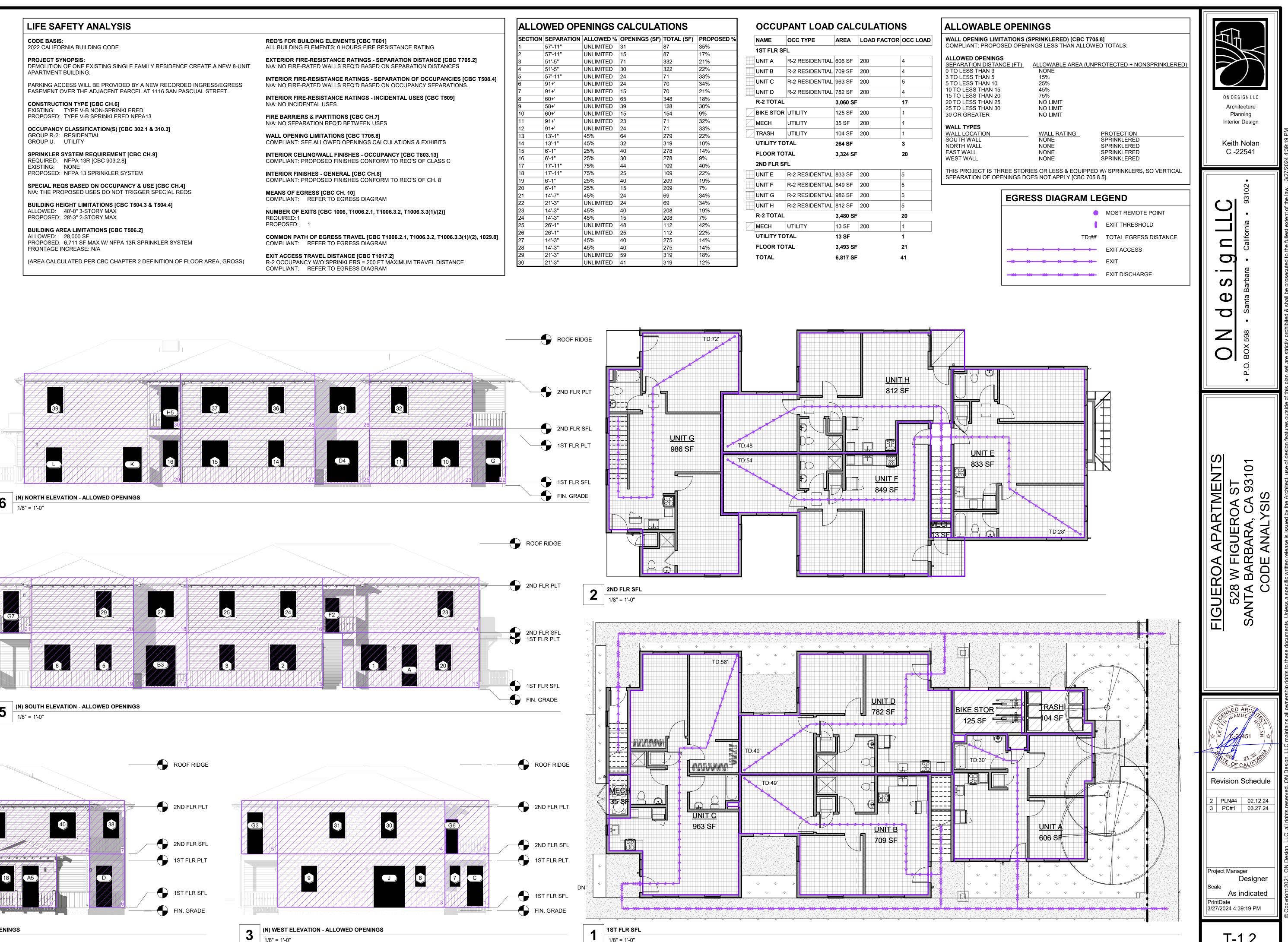
ALLOWED: 28,000 SF PROPOSED: 6,711 SF MAX W/ NFPA 13R SPRINKLER SYSTEM FRONTAGE INCREASE: N/A

N/A: NO INC

N/A: NO SEF

COMMON P COMPLIANT

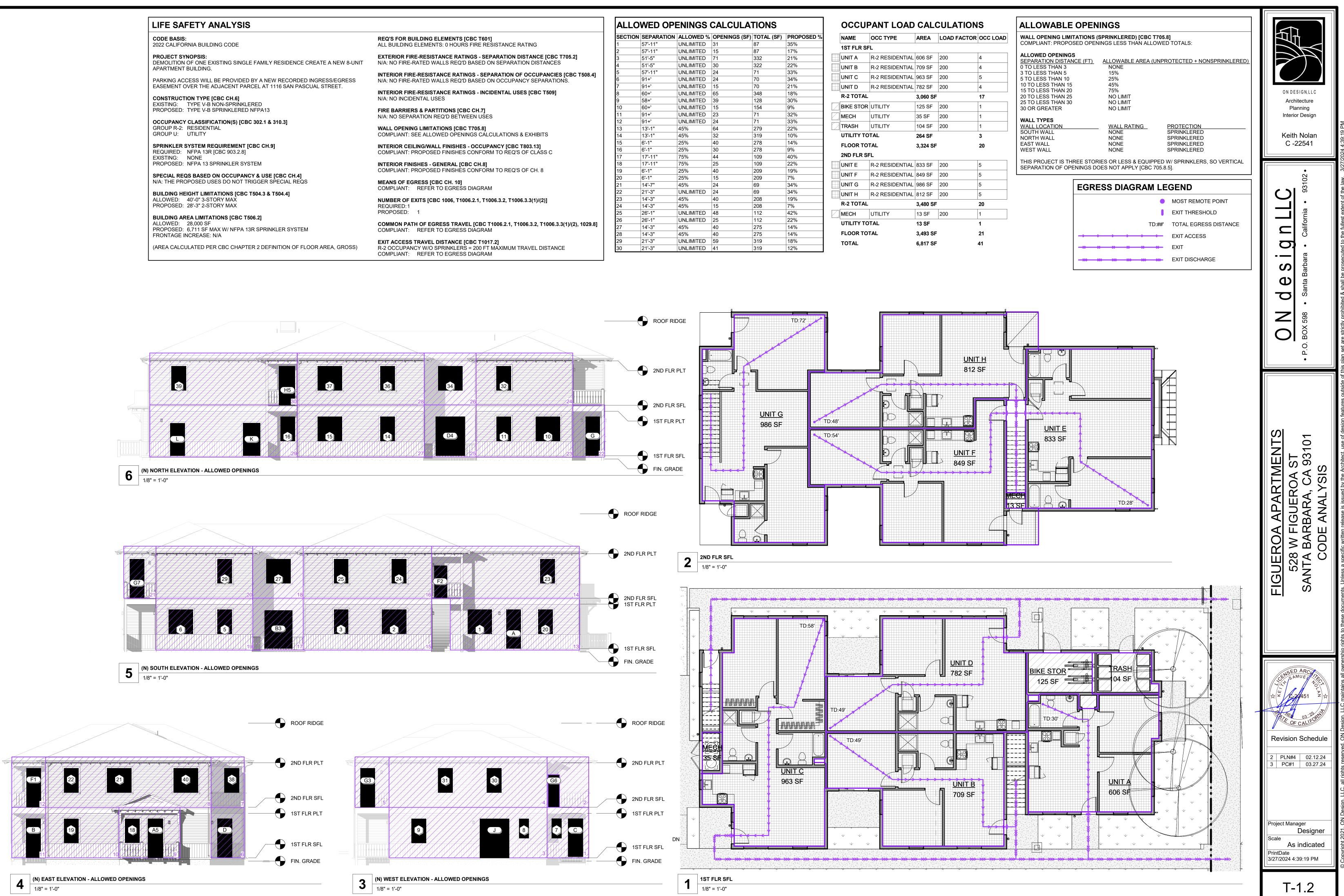






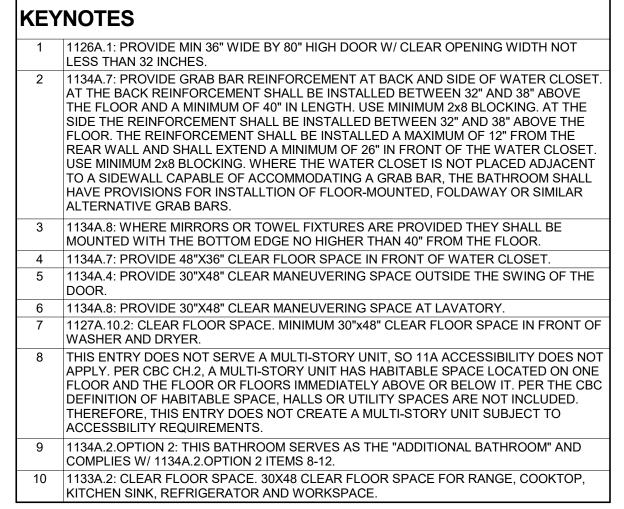




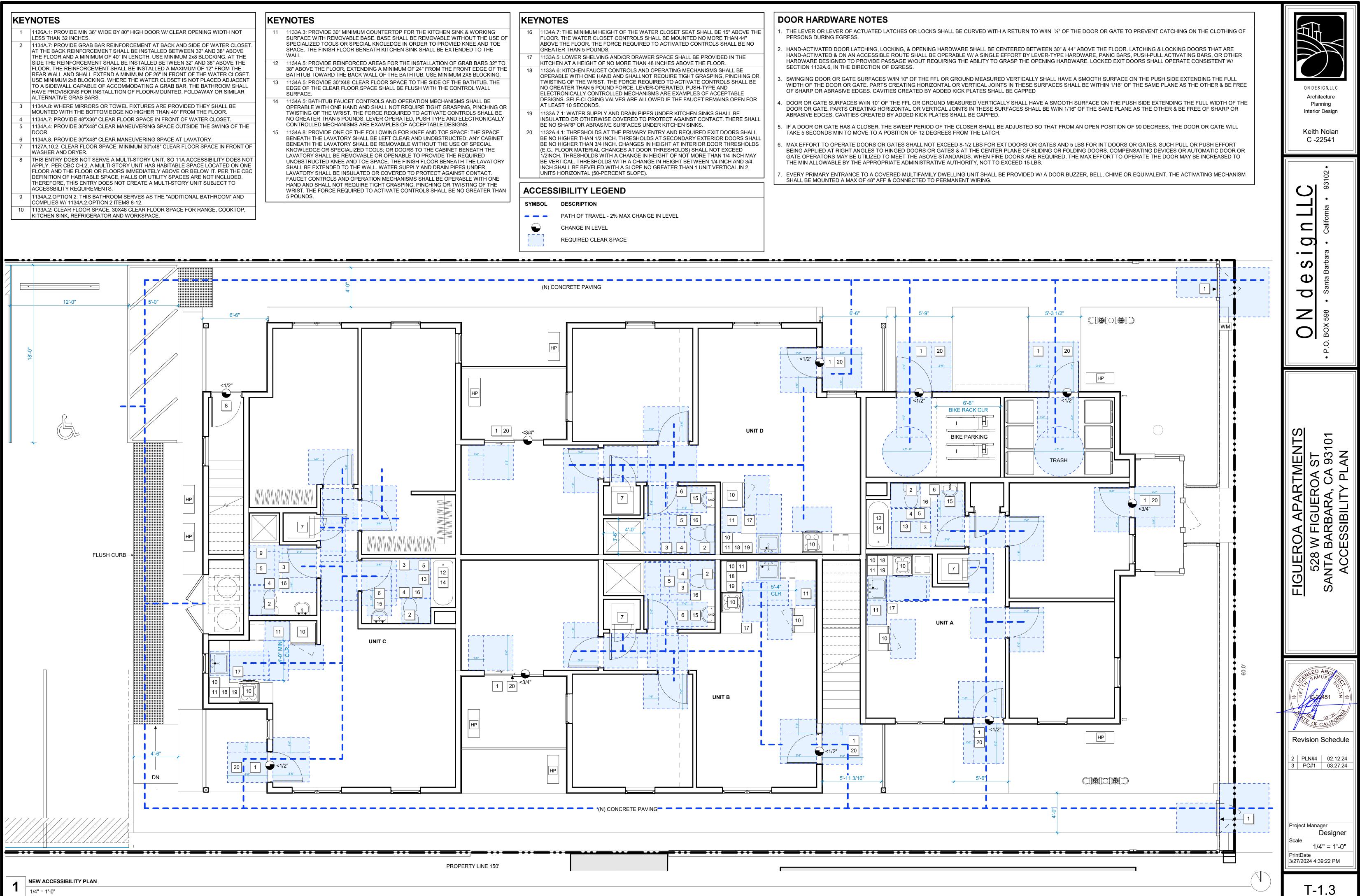


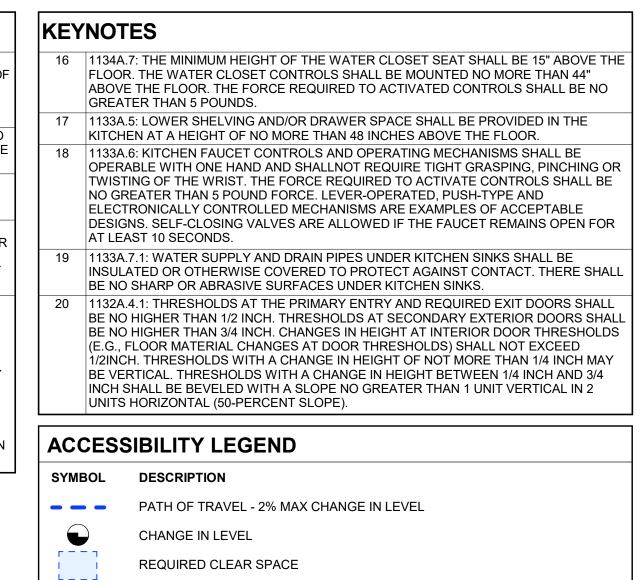
	SECTION	SEPARATION	ALLOWED %	OPENINGS (SF)	TOTAL (SF)	PROPOSED %
ING ELEMENTS [CBC T601] MENTS: 0 HOURS FIRE RESISTANCE RATING	1	57'-11"	UNLIMITED	31	87	35%
	2	57'-11"	UNLIMITED	15	87	17%
ESISTANCE RATINGS - SEPARATION DISTANCE [CBC T705.2]	3	51'-5"	UNLIMITED	71	332	21%
ED WALLS REQ'D BASED ON SEPARATION DISTANCES	4	51'-5"	UNLIMITED	30	322	22%
	5	57'-11"	UNLIMITED	24	71	33%
SISTANCE RATINGS - SEPARATION OF OCCUPANCIES [CBC T508.4] ED WALLS REQ'D BASED ON OCCUPANCY SEPARATIONS.	6	91+'	UNLIMITED	24	70	34%
	7	91+'	UNLIMITED	15	70	21%
SISTANCE RATINGS - INCIDENTAL USES [CBC T509]	8	60+'	UNLIMITED	65	348	18%
AL USES	9	58+'	UNLIMITED	39	128	30%
DARTITIONS (OR OU 7)	10	60+'	UNLIMITED	15	154	9%
PARTITIONS [CBC CH.7] ION REQ'D BETWEEN USES	11	91+'	UNLIMITED	23	71	32%
ION NEQ D'ELIVEEN 03E3	12	91+'	UNLIMITED	24	71	33%
IMITATIONS [CBC T705.8]	13	13'-1"	45%	64	279	22%
ALLOWED OPENINGS CALCULATIONS & EXHIBITS	14	13'-1"	45%	32	319	10%
	15	6'-1"	25%	40	278	14%
G/WALL FINISHES - OCCUPANCY [CBC T803.13] POSED FINISHES CONFORM TO REQ'S OF CLASS C	16	6'-1"	25%	30	278	9%
COSED FINISHES CONFORM TO REQ 5 OF CLASS C	17	17'-11"	75%	44	109	40%
ES - GENERAL [CBC CH.8]	18	17'-11"	75%	25	109	22%
POSED FINISHES CONFORM TO REQ'S OF CH. 8	19	6'-1"	25%	40	209	19%
	20	6'-1"	25%	15	209	7%
SS [CBC CH. 10] FER TO EGRESS DIAGRAM	21	14'-7"	45%	24	69	34%
FER TO EGRESS DIAGRAM	22	21'-3"	UNLIMITED	24	69	34%
S [CBC 1006, T1006.2.1, T1006.3.2, T1006.3.3(1)/(2)]	23	14'-3"	45%	40	208	19%
	24	14'-3"	45%	15	208	7%
	25	26'-1"	UNLIMITED	48	112	42%
E EOREOS TRAVEL IORO TANOS 2.4 TANOS 2.2 TANOS 2.2(4)(0) 4020 01	26	26'-1"	UNLIMITED	25	112	22%
F EGRESS TRAVEL [CBC T1006.2.1, T1006.3.2, T1006.3.3(1)/(2), 1029.8] FER TO EGRESS DIAGRAM	27	14'-3"	45%	40	275	14%
	28	14'-3"	45%	40	275	14%
VEL DISTANCE [CBC T1017.2]	29	21'-3"	UNLIMITED	59	319	18%
W/O SPRINKLERS = 200 FT MAXIMUM TRAVEL DISTANCE	30	21'-3"	UNLIMITED	41	319	12%

	NAME	OCC TYPE	AREA
	1ST FLR SF	L	
	UNIT A	R-2 RESIDENTIAL	606 SF
	UNIT B	R-2 RESIDENTIAL	709 SF
	UNIT C	R-2 RESIDENTIAL	963 SF
	UNIT D	R-2 RESIDENTIAL	782 SF
	R-2 TOTAL		3,060 SF
	BIKE STOR	UTILITY	125 SF
$\langle \rangle$	MECH	UTILITY	35 SF
	TRASH	UTILITY	104 SF
	UTILITY TO	TAL	264 SF
		.,.=	204 01
	FLOOR TO		3,324 SF
		ΓAL	
	FLOOR TO	ΓAL FL	
	FLOOR TO 2ND FLR SF	ΓAL FL	3,324 SF 833 SF
	FLOOR TO 2ND FLR SF UNIT E	FAL FL R-2 RESIDENTIAL	3,324 SF 833 SF
	FLOOR TO 2ND FLR SF UNIT E UNIT F	FAL R-2 RESIDENTIAL R-2 RESIDENTIAL	3,324 SF 833 SF 849 SF
	FLOOR TOT 2ND FLR SF UNIT E UNIT F UNIT G	FAL R-2 RESIDENTIAL R-2 RESIDENTIAL R-2 RESIDENTIAL	3,324 SF 833 SF 849 SF 986 SF
	FLOOR TOT 2ND FLR SF UNIT E UNIT F UNIT G UNIT H	FAL R-2 RESIDENTIAL R-2 RESIDENTIAL R-2 RESIDENTIAL	3,324 SF 833 SF 849 SF 986 SF 812 SF
	FLOOR TO 2ND FLR SF UNIT E UNIT F UNIT G UNIT H R-2 TOTAL	TAL R-2 RESIDENTIAL R-2 RESIDENTIAL R-2 RESIDENTIAL R-2 RESIDENTIAL UTILITY	3,324 SF 833 SF 849 SF 986 SF 812 SF 3,480 SF
	FLOOR TO 2ND FLR SF UNIT E UNIT F UNIT G UNIT H R-2 TOTAL MECH	TAL R-2 RESIDENTIAL R-2 RESIDENTIAL R-2 RESIDENTIAL R-2 RESIDENTIAL UTILITY TAL	3,324 SF 833 SF 849 SF 986 SF 812 SF 3,480 SF 13 SF
	FLOOR TOT 2ND FLR SF UNIT E UNIT F UNIT G UNIT H R-2 TOTAL MECH UTILITY TO	TAL R-2 RESIDENTIAL R-2 RESIDENTIAL R-2 RESIDENTIAL R-2 RESIDENTIAL UTILITY TAL	3,324 SF 833 SF 849 SF 986 SF 812 SF 3,480 SF 13 SF 13 SF



- WALL
- SURFACE.





2022 CALIFORNIA GREEN BUILDING STANDARDS CODE NONRESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2023)

Y N//	A RESPON. PARTY	CHAPTER 3 GREEN BUILDING		[™] N/A	PARTY	5.106.2 STORMWATER POLLUT LAND. Comply with all lawfully en
		 SECTION 301 GENERAL 301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the 				more of land, or (2) disturb less that Note: Projects that (1) disturb one larger common plan of developmen applicable National Pollutant Disch
		 application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7. 301.3 NONRESIDENTIAL ADDITIONS AND ALTERATIONS. [BSC-CG] The provisions 				Associated with Construction and the Lahontan Regional Water Qua The NPDES permits require postc
		of individual sections of Chapter 5 apply to newly constructed buildings, building additions of 1,000 square feet or greater, and/or building alterations with a permit valuation of \$200,000 or above (for occupancies within the authority of California Building Standards Commission). Code sections relevant to additions and alterations shall only apply to the portions of the building being added or altered within the scope of the permitted work.				(pre-project hydrology) with the ins permits emphasize runoff reduction through nonstructural controls, suc Stormwater volume that cannot be practices and be approved by the
		A code section will be designated by a banner to indicate where the code section only applies to newly constructed buildings [N] or to additions and/or alterations [A]. When the code section applies to both, no banner will be used.				Refer to the current applicable per www.waterboards.ca.gov/construc should be given during the initial d
		301.3.1 Nonresidential additions and alterations that cause updates to plumbing fixtures only:	•		Α	5.106.4 BICYCLE PARKING. For specified in Section 103, comply w
		Note: On and after January 1, 2014, certain commercial real property, as defined in Civil Code Section 1101.3, shall have its noncompliant plumbing fixtures replaced with appropriate water-conserving plumbing fixtures under specific circumstances. See Civil Code Section 1101.1 <i>et seq.</i> for definitions, types of commercial real property affected, effective dates, circumstances necessitating				Architect pursuant to Section 105, 5.106.4.1 Bicycle parking.
		replacement of noncompliant plumbing fixtures, and duties and responsibilities for ensuring compliance.				applicable local ordinance, v 5.106.4.1.1 Short-te to generate visitor tra
		301.3.2 Waste Diversion. The requirements of Section 5.408 shall be required for additions and alterations whenever a permit is required for work.				entrance, readily visib added, with a minimu Exception: Ad
		301.4 PUBLIC SCHOOLS AND COMMUNITY COLLEGES. (see GBSC) 301.5 HEALTH FACILITIES. (see GBSC) SECTION 302 MIXED OCCUPANCY BUILDINGS				5.106.4.1.2 Long-tern tenant-occupants, pro
		302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.				spaces with a minimu 5.106.4.1.3 For additi provide secure bicycle minimum of one bicycle
		SECTION 303 PHASED PROJECTS				5.106.4.1.4 For new s anticipated tenant-oc
		303.1 PHASED PROJECTS. For shell buildings and others constructed for future tenant improvements, only those code measures relevant to the building components and systems considered to be new construction (or newly constructed) shall apply.				5.106.4.1.5 Acceptab be convenient from th
		303.1.1 Initial Tenant improvements. The provisions of this code shall apply only to the initial tenant improvements to a project. Subsequent tenant improvements shall comply with the scoping provisions in Section 301.3 non-residential additions and alterations.				 Covered, loc Lockable bio Lockable, po
		ABBREVIATION DEFINITIONS: HCD Department of Housing and Community Development o = OWNER				Note: Addition Sacramento Ar
		BSCCalifornia Building Standards CommissionGC=GENERAL CONTRACTORDSA-SSDivision of the State Architect, Structural SafetyA=ARCHITECTOSHPDOffice of Statewide Health Planning and DevelopmentL=LANDSCAPE ARCHITECT				5.106.4.2 Bicycle parking. 5.106.4.2.1 and 5.106.4.2.2
		LRLow RiseC=CIVIL ENGINEERHRHigh RiseS=STRUCTURAL ENGINEERAAAdditions and AlterationsM=MECHANICAL ENGINEER				5.106.4.2.1 Student accessed with a minin
		N New E = ELECTRICAL ENGINEER P = PLUMBING ENGINEER C = CIVIL ENGINEER				5.106.4.2.2 Staff bic with a minimum of two shall be convenient fr
		NONRESIDENTIAL MANDATORY MEASURES DIVISION 5.1 PLANNING AND DESIGN				1. Covered, loc 2. Lockable bio 3. Lockable, po
		SECTION 5.101 GENERAL 5.101.1 SCOPE The provisions of this chapter outline planning, design and development methods that include environmentally			Α	5.106.5.3 Electric vehicle (EV) electric vehicle charging shall co regulations in the California Bui
		responsible site selection, building design, building siting and development to protect, restore and enhance the environmental quality of the site and respect the integrity of adjacent properties. SECTION 5.102 DEFINITIONS				Exceptions: 1. On a case this section
		5.102.1 DEFINITIONS The following terms are defined in Chapter 2 (and are included here for reference)				a. Whe b. Whe c. Whe
		CUTOFF LUMINAIRES. Luminaires whose light distribution is such that the candela per 1000 lamp lumens does not numerically exceed 25 (2.5 percent) at an angle of 90 degrees above nadir, and 100 (10 percent) at a vertical angle of 80 degrees above nadir. This applies to all lateral angles around the luminaire.				local Sect 2. Parking s
		LOW-EMITTING AND FUEL EFFICIENT VEHICLES. Eligible vehicles are limited to the following:				required 5.106.5.3.1 EV cap
		 Zero emission vehicle (ZEV), enhanced advanced technology PZEV (enhanced AT ZEV) or transitional zero emission vehicles (TZEV) regulated under CCR, Title 13, Section 1962. High-efficiency vehicles, regulated by U.S. EPA, bearing a fuel economy and greenhouse gas rating od 9 oe 10 as regulated under 40 CFR Section 600 Subpart D. 				[N] EV capable spa requirements: 1. Raceway diameter the area,
		NEIGHBORHOOD ELECTRIC VEHICLE (NEV). A motor vehicle that meets the definition of "low-speed vehicle" either in Section 385.5 of the Vehicle Code or in 49CFR571.500 (as it existed on July 1, 2000), and is certified to zero-emission vehicle standards.				and into a used to s 2. A service capacity
		TENANT-OCCUPANTS. Building occupants who inhabit a building during its normal hours of operation as permanent occupants, such as employees, as distinguished from customers and other transient visitors.				capable s 3. The elect to supply
		VANPOOL VEHICLE. Eligible vehicles are limited to any motor vehicle, other than a motortruck or truck tractor, designed for carrying more than 10 but not more than 15 persons including the driver, which is maintained and used primarily for the nonprofit work-related transportation of adults for the purpose of ridesharing.				4. The servi protective permaner
		Note: Source: Vehicle Code, Division 1, Section 668 ZEV. Any vehicle certified to zero-emission standards.				Note: A parking spa charging space sha complying with any
X 🗆	GC	SECTION 5.106 SITE DEVELOPMENT 5.106.1 STORM WATER POLLUTION PREVENTION FOR PROJECTS THAT DISTURB LESS THAN ONE ACRE OF LAND. Newly constructed projects and additions which disturb less than one acre of land, and are not part of a				agency. See vehicl TABLE 5.106.5.3.1
		larger common plan of development or sale, shall prevent the pollution of storm water runoff from the construction activities through one or more of the following measures: 5.106.1.1 Local ordinance. Comply with a lawfully enacted storm water management and/or erosion control				TOTAL NUMBER OF ACT PARKING SPACES
		ordinance. 5.106.1.2 Best Management Practices (BMPs). Prevent the loss of soil through wind or water erosion by				0-9
		implementing an effective combination of erosion and sediment control and good housekeeping BMPs. 1. Soil loss BMPs that should be considered for implementation as appropriate for each project include,				10-25 26-50
		 but are not limited to, the following: a. Scheduling construction activity during dry weather, when possible. b. Preservation of natural features, vegetation, soil, and buffers around surface waters. 				51-75 76-100
		 c. Drainage swales or lined ditches to control stormwater flow. d. Mulching or hydroseeding to stabilize disturbed soils. e. Erosion control to protect slopes. 				101-150 151-200
		 f. Protection of storm drain inlets (gravel bags or catch basin inserts). g. Perimeter sediment control (perimeter silt fence, fiber rolls). h. Sediment trap or sediment basin to retain sediment on site. 				201 AND OVER
		 i. Stabilized construction exits. j. Wind erosion control. k. Other soil loss BMPs acceptable to the enforcing agency. 2. Good housekeeping BMPs to manage construction equipment, materials, non-stormwater discharges 				 Where there is The number of the total number of
		and wastes that should be considered for implementation as appropriate for each project include, but are not limited to, the following: a. Dewatering activities. b. Material bandling and waste management				5.106.5.3.2 Electric vehi EV capable spaces sh 5.106.5.3.1. The EVC
		 b. Material handling and waste management. c. Building materials stockpile management. d. Management of washout areas (concrete, paints, stucco, etc.). e. Control of vehicle/equipment fueling to contractor's staging area. 				Level 2 and Direct Cur provided.
		 f. Vehicle and equipment cleaning performed off site. g Spill prevention and control. h. Other housekeeping BMPs acceptable to the enforcing agency. 				One EV charger with r permitted if the electric accumulatively supplie
						The installation of eac capable spaces without
						service panel or subpa

AL PROJECT NUMBER: 2203

5.106.5.3.3 Use of automatic load management systems (ALMS). N/A RESPON. ALMS shall be permitted for EVCS. When ALMS is installed, the required electrical load capacity ION PREVENTION FOR PROJECTS THAT DISTURB ONE OR MORE ACRES OF specified in Section acted stormwater discharge regulations for projects that (1) disturb one acre or 5.106.5.3.1 for each EVCS may be reduced when serviced by an EVSE controlled by an ALMS. Each EVSE controlled by an ALMS shall deliver a minimum 30 amperes to an EV when charging one vehicle nan one acre of land but are part of a larger common plan of development sale. and shall deliver a minimum 3.3 kW while simultaneously charging multiple EVs. acre or more of land, or (2) disturb less than one acre of land but are part of the ent or sale must comply with the post-construction requirements detailed in the 5.106.5.3.4 Accessible EVCS. harge Elimination System (NPDES) General permit for Stormwater Discharges When EVSE is installed, accessible EVSC shall be provided in accordance with the California Building and Disturbance Activities issued by the State Water Resources Control Board or Code, Chapter 11B, Section 11B-228.3. Note: For EVCS signs, refer to Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehic ity Control Board (for projects in the Lake Tahoe Hydrologic Unit). Signs and Pavement Markings) or its successor(s). onstruction runoff (post-project hydrology) to match the preconstruction runoff tallation of postconstruction stormwater management measures. The NPDES 5.106.5.4 Electric Vehicle (EV) charging: medium-duty and heavy-duty. [N] Construction shall comply with section 5.106.5.4.1 to facilitate future installation of electric vehicle supply through on-site stormwater use, interception, evapotranspiration, and infiltration ch as Low Impact Development (LID) practices, and conversation design measures. equipment (EVSE). Construction for warehouses, grocery stores and retail stores with planned off-street loading addressed using nonstructural practices is required to be captured in structural spaces shall also comply with Section 5.106.5.4.1 for future installation of medium- and heavy-duty EVSE. enforcing agency. Exceptions: 1. On a case-by-case basis where the local enforcing agency has determined compliance with this section is not feasible based upon one of the following conditions: mits on the State Water Resources Control Board website at: tionstormwater. Consideration to the stormwater runoff management measures a. Where there is no local utility power supply. esign process for appropriate integration into site development. b. Where the local utility is unable to supply adequate power. c. Where there is evidence suitable to the local enforcing agency substantiating that buildings within the authority of California Building Standards Commission as additional local utility infrastructure design requirements, directly related to the implementation vith Section 5.106.4.1. For buildings within the authority of the Division of the State of Section 5.106.5.3, may adversely impact the construction cost of the project. comply with Section 5.106.4.2 When EVSE(s) is/are installed, it shall be in accordance with the California Building Code, the California Electrical Code and as follows: [BSC-CG] Comply with Sections 5.106.4.1.1 and 5.106.4.1.2; or meet the vhichever is stricter. 5.106.5.4.1 Electric vehicle charging readiness requirements for warehouse, grocery stores and retail store with planned off-street loading spaces. rm bicycle parking. If the new project or an addition or alteration is anticipated [N] In order to avoid future demolition when adding EV charging supply and distribution equipment, spare raceways(s) or busway(s) and adequate capacity for transformers(s), service panels(s) or subpanel(s) shall be added as a service panels and a service pan affic, provide permanently anchored bicycle racks within 200 feet of the visitors' ble to passers-by, for 5% of new visitor motorized vehicle parking spaces being installed at the time of construction in accordance with the California Electrical Code. Construction plans and um of one two-bike capacity rack. specifications shall include but are not limited to, the following: ditions or alterations which add nine or less visitor vehicular parking spaces. 1. The transformer, main service equipment and subpanel shall meet the minimum power requirement in Table 5.106.5.4.1 to accommodate the dedicated branch circuits for the future rm bicycle parking. For new buildings with tenant spaces that have 10 or more installation of EVSE. ovide secure bicycle parking for 5 percent of the tenant-occupant vehicular parking 2. The construction documents shall indicate on or more location(s) convenient to the planned um of one bicycle parking facility. offstreet loading space(s) reserved for medium-and heavy-duty ZEV charging cabinets and charging dispensers, and a pathway reserved for routing of conduit from the termination of the ons or alterations that add 10 or more tenant-occupant vehicular parking spaces, raceway(s) or busway(s) to the charging cabinet(s) and dispenser(s) as shown in Table e parking for 5 percent of the tenant vehicular parking spaces being added, with a 5 106 5 4 1 cle parking facility. 3. Raceway(s) or busway(s) originating at a main service panel or a subpanel(s) serving the area where potential future medium-and heavy-duty EVSE will be located and shall terminate in clos shell buildings in phased projects provide secure bicycle parking for 5 percent of the proximity to the potential future location of the charging equipments for medium- and heavy-dut cupant vehicular parking spaces with a minimum of one bicycle parking facility. vehicles 4. The raceway(s) or busway(s) shall be sufficient size to carry the minimum additional system loa ble bicycle parking facility for Sections 5.106.4.1.2, 5.106.4.1.3, and 5.106.4.1.4 shall to the future location of the charging for medium- and heavy-duty ZEVs as shown in Table he street and shall meet one of the following: 5.106.5.4.1. ckable enclosures with permanently anchored racks for bicycles; cycle rooms with permanently anchored racks; or ermanently anchored bicycle lockers. TABLE 5.106.5.4.1 RACEWAY CONDUIT AND PANEL POWER nal information on recommended bicycle accommodations may be obtained from REQUIREMENTS FOR MEDIUM- AND HEAVY-DUTY EVSE [N] rea Bicycle Advocates. [DSA-SS] For public schools and community colleges, comply with Sections ADDITIONAL CAPACITY NUMBER OF REQUIRED (KVA) bicycle parking. Provide permanently anchored bicycle racks conveniently BUILDING SIZE (SQ. FT.) BUILDING TYPE OFF-STREET FOR RACEWAY & mum of four two-bike capacity racks per new building. LOADING SPACES BUSWAY AND cycle parking. Provide permanent, secure bicycle parking conveniently accessed **TRANSFORMER &** o staff bicycle parking spaces per new building. Acceptable bicycle parking facilities PANEL om the street or staff parking area and shall meet one of the following: ckable enclosures with permanently anchored racks for bicycles; 1 or 2 200 10,000 to 90,000 cycle rooms with permanently anchored racks; or Grocery 3 or Greater 400 ermanently anchored bicycle lockers. Greater than 90,000 1 or Greater 400 charging. [N] Construction to provide electric vehicle infrastructure and facilitate mply with Section 5.106.5.3.1 and shall be provided in accordance with 1 or 2 200 10,000 to 135,000 ding Code and the California Electrical Code. 400 Retail 3 or Greater Greater than 135,000 1 or Greater 400 e-by-case basis where the local enforcing agency has determined compliance with 200 1 or 2 ion is not feasible based upon one of the following conditions: 20,000 to 256,000 ere there is no local utility power supply 3 or Greater 400 ere the local utility is unable to supply adequate power. Warehouse ere there is evidence suitable to the local enforcement agency substantiating the l utility infrastructure design requirements, directly related to the implementation of 400 Greater than 256,000 1 or Greater tion 5.106.5.3, may adversely impact the construction cost of the project. paces accessible only by automated mechanical car parking systems are not to comply with this code section 5.106.8 LIGHT POLLUTION REDUCTION. [N]. | Outdoor lighting systems shall be designed and installed to comply with the following: bable spaces. 1. The minimum requirements in the California Energy Code for Lighting Zones 0-4 as defined in Chapter 10, aces shall be provided in accordance with Table 5.106.5.3.1 and the following Section 10-114 of the California Administrative Code; and 2. Backlight (B) ratings as defined in IES TM-15-11 (shown in Table A-1 in Chapter 8); s complying with the California Electrical Code and no less that 1-inch (25 mm) 3. Uplight and Glare ratings as defined in California Energy Code (shown in Tables 130.2-A and 130.2-B in shall be provided and shall originate at a service panel or a subpanel(s) serving Chapter 8) and , and shall terminate in close proximity to the proposed location of the EV capable 4. Allowable BUG ratings not exceeding those shown in Table 5.106.8, [N] or Comply with a local ordinance suitable listed cabinet, box,enclosure or equivalent. A common raceway may be lawfully enacted pursuant to Section 101.7, whichever is more stringent. serve multiple EV charging spaces. e panel or subpanel (s) shall be provided with panel space and electrical load Exceptions: [N] for a dedicated 208/240 volt, 40-ampere minimum branch circuit for each EV space, with delivery of 30-ampere minimum to an installed EVSE at each EVCS. Luminaires that qualify as exceptions in Sections 130.2 (b) and 140.7 of the California Energy Code. trical system and any on-site distribution transformers shall have sufficient capacity Emergency lighting. 3. Building facade meeting the requirements in Table 140.7-B of the California Energy Code. Part 6. y full rated amperage at each EV capable space. vice panel or subpanel circuit directory shall identify the reserved overcurrent 4. Custom lighting features as allowed by the local enforcing agency, as permitted by Section 101.8 devices space(s) as "EV CAPABLE". The raceway termination location shall be Alternate materials, designs and methods of construction. ntly and visibly marked as "EV CAPABLE." 5. Luminaires with less than 6,200 initial luminaire lumens. ace served by electric vehicle supply equipment or designed as a future EV all count as at least one standard automobile parking space only for the purpose of applicable minimum parking space requirements established by an enforcement TABLE 5.106.8 [N] MAXIMUM ALLOWABLE BACKLIGHT. le Code Section 22511.2 for further details. UPLIGHT AND GLARE (BUG) RATINGS 1,2 LIGHTING LIGHTING LIGHTING LIGHTING LIGHTING ALLOWABLE RATING NUMBER OF EVCS (EV ZONE ZONE LZ1 ZONE LZ2 ZONE LZ3 ZONE LZ4 NUMBER OF REQUIRED EV TUAL CAPABLE SPACES LZ0 CAPABLE SPACES PROVIDED WITH EVSE)^2 MAXIMUM ALLOWABLE **BACKLIGHT RATING 3** 0 0 Luminaire greater than 2 2 0 mounting heights (MH) from N/A No Limit No Limit No Limit No Limit property line 8 2 Luminaire back hemisphere is 13 3 N/A B4 B2 B3 B4 1-2 MH from property line 17 4 Luminaire back hemisphere is N/A B2 B1 B3 B3 25 6 0.5-1 MH from property line 35 9 Luminaire back hemisphere is B0 B0 less than 0.5 MH from property N/A B1 B2 25% of EV capable spaces¹ 20% of total¹ insufficient electrical supply. MAXIMUM ALLOWABLE required EVCS (EV capable spaces provided with EVSE) in column 3 count towards UPLIGHT RATING (U) required EV capable spaces shown in column 2. For area lighting 3 N/A U0 U0 UO U0 icle charging stations (EVCS) For all other outdoor hall be provided with EVSE to create EVCS in the number indicated in Table N/A U1 U2 U3 UR lighting, including decorative CS required by Table 5.106.5.3.1 may be provided with EVSE in any combination of luminaires irrent Fast Charging (DCFC), except that at least one Level 2 EVSE shall be

multiple connectors capable of charging multiple EVs simultaneously shall be ical load capacity required by Section 5.106.5.3.1 for each EV capable space is ied to the EV charger.

ch DCFC EVSE shall be permitted to reduce the minimum number of required EV out EVSE by five and reduce proportionally the required electrical load capacity to the panel

					Y N/A RE S PON. PART	= YES = NOT AP Y = RESPO	PLICABLE NSIBLE F PARTY (in: AR	CHITECT ENGINEER.		
Т	Y N/A	RESPON.	MAXIMUM ALLOWABLE		RESPON. PARI	OWNER	R, CONTRACTOR, INSP	CHITECT, ENGINEER, ECTOR ETC.)		
┟		PARTY	GLARE RATING 5 (G)	N/A	G1	G2	G3	G4	▕║┖	
			GLARE RATING 6 (G)	N/A	G0	G1	G1	G2		ON DESIGN,LLC Architecture
			GLARE RATING 5 (G)	N/A	G0	G0	G1	G1		Planning Interior Design
le			GLARE RATING 5 (G)	N/A	G0	G0	G0	G1		Keith Nolan
			GLARE RATING ₅ (G) 1. IESNA Lighting Zones 0 and 5							C -22541
g			Code and Chapter 10 of the Calli 2. For property lines that abut pu	fornia Administrat	ive Code.	-				
s on			 2. For property lines that usual percent considered to be 5 feet beyond the property lines that abut public roadway of section. 3. General lighting luminaires in a ratings. Decorative luminaries loce 	ne actual property adways and public or public transit co areas such as outo	line for purpose transit corridors, prridor for the purp door parking, sale	of determining of , the property lin pose of determine es or storage lot	compliance with the may be consident ning compliance the shall meet the	this section. For dered to be the with this se reduced		LLC nia • 93102 •
es be			5.106.8.1 Facing- Backlight Luminaries within 2MH of a pr and shall comply with the back the nearest point of that prope Exception: Corners. If tw to the luminaire, then the	klight rating specifi rty line. ⁄o property lines (c	ed in Table 5.106 or two segments o	5.8 based on the of the same prop	lighting zone ar perty line) have e	nd distance to equidistant point		G D L California
			directly behind the lumina lines to determine the req 5.106.8.2 Facing-Glare. For luminaires covered by 5.10	ire. The luminaire uired backlight rati	shall still use the ing.	distance to the	nearest points(s)) on the property		Barbara
			2MH of the luminaire then the 5.106.8 based on the lighting a hemisphere. Note: [N]	luminaire shall con zone and distance	mply with the more to the nearest po	re stringent glare pint on the neare	e rating specified st property line v	l in Table within the front		
e y id			 See also California Buildin parking facilities and walkwa 2.Refer to Chapter 8 (Comp A-1, California Energy Code 3. Refer to the California Bu 	iys. liance Forms, Wor Tables 130.2-A a <i>iilding Code</i> for red	rksheets and Refe nd 130.2-B. quirements for ad	erence Material) Iditions and alter	for IES TM-15-1 rations.	1 Table		0 N BOX 598
ļ		C	5.106.10 GRADING AND PAVING manage all surface water flow water include, but are not limit 1. Swales.	s to keep water fro	om entering buildi					0. 4. •
			 Water collection and disposed French drains. Water retention gardens. Other water measures whe Exception: Additions 	ich keep surface v			l in groundwater	recharge.		
ļ	X 🗆	L	5.106.12 SHADE TREES [DSA-S and 5.106.12.3. Percentages necessary to establish and ma	shown shall be me	asured at noon o	on the summer s	olstice. Landsca			
			5.106.12.1 Surface parking a to provide shade over 50 perc				er size or equal, s	shall be installed		
			Exceptions: Surfac materials that comply lieu of shade tree pla	with Table A5.10 nting.	6.11.2.2 in Appe	ndix A5 shall be	permitted in wh	ole or in part in	NEN.	ST 931(
			5.106.12.2 Landscape areas provide shade of 20% of the la Exceptions: Playfie	indscape area with	hin 15 years.		·			N CA
			5.106.12.3. Hardscape areas provide shade over 20 percen				ze or equal shall	be installed to	PAF	UER ARA, REE
			Exceptions: 1. Walks, hardscape areas materials that comply wit of shade tree planting. 2. Designated and marked p	h Table A5.106.11	1.2.2 in Appendix	A5 shall be per	mitted in whole	or in part in lieu	A A C	r FIGU ARBA
			DIVISION 5.2 ENE SECTION 5.201 GENER 5.201.1 Scope [BSC-CG]. Califor standards in this code, the Californ	RGY EFFI	[DSA-SS]. For t	the purposes of	mandatory energ	gy efficiency	GUFRC	528 W SANTA BA CA
				TER EFFIC					ا ت	A A
			SECTION 5.301 GENER 5.301.1 Scope. The provisions of and in wastewater conveyance.	AL						၂ လ
			SECTION 5.302 DEFINI 5.302.1 Definitions. The following EVAPOTRANSPIRATION ADJUS reference evapotranspiration that a	terms are defined	(ETAF) [DSA-S	S]. An adjustme	ent factor when a	pplied to		
			the amount of water that needs to FOOTPRINT AREA [DSA-SS]. The not including exterior areas such a	be applied to the lane total area of the	andscape. e furthest exterior	wall of the struc	-			SED ARCIA
			METERING FAUCET. A self-closi volume or cycle duration can be fix		penses a specific	volume of water	for each actuati	on cycle. The		SAMUE IIRCA
			GRAYWATER. Pursuant to Health has not been contaminated by any bodily wastes, and does not present operating wastes. "Graywater" income washbasins, clothes washing mach dishwashers.	toilet discharge, h nt a threat from co ludes, but is not lir	nas not been affeo ntamination by u mited to wastewa	cted by infectiou nhealthful proce ter from bathtub	s, contaminated ssing, manufactu s, showers, bath	, or unhealthy uring, or uroom		$\frac{1}{2} \frac{C_{-22451}}{C_{-22451}} \stackrel{2}{}_{A}$
			MODEL WATER EFFICIENT LAN design, installation and maintenan landscapes greater than 2500 squa climatological parameters.	ce practices that w are feet meet an ir	vill ensure comme rigation water but	ercial, multifamilı dget developed	y and other deve based on landsc	loper installed aped area and	1	vision Schedule PLN #2 04.11.23
			MODEL WATER EFFICIENT LAN (California Code of Regulations, Ti maintenance practices. Local age as effective as the MWELO.	tle 23, Division 2, ncies are required	Chapter 2.7), reg to adopt the upd	ulating landscap ated MWELO, o	e design, install r adopt a local o	ation and rdinance at least	2 3	PLN#4 02.12.24 PC#1 03.27.24
			POTABLE WATER. Water that is Water Standards. See definition in	the California Plu	mbing Code, Par	t 5.				
			POTABLE WATER. [HCD] Water U.S. Environmental Protection Age Having Jurisdiction. RECYCLED WATER. Water whic	ency (EPA) Drinkin	ig Water Standar	ds and the requi	rements of the H	lealth Authority	Proje	ct Manager Designer
			controlled use that would not other treated to remove waste matter att SUBMETER. [HCD 1] A secondar	wise occur [Water aining a quality tha y device beyond a	Code Section 13 at is suitable to us meter that meas	8050 (n)]. Simply se the water aga sures water cons	r put, recycled wa iin. umption of an in	ater is water dividual rental	Scale	;
			unit within a multiunit residential st 1954.202 (g) and Water code Sect	ructure or mixed-u ion 517 for additio	se residential and nal details.)	d commercial sti	ructure. (See Civ	ic Code Section		2024 4:39:23 PM
			WATER BUDGET. Is the estimate water allowance calculated in acco Ordinance (MWELO).							T-1 6

1-1.6

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE NONRESIDENTIAL MANDATORY MEASURES, SHEET 2 (January 2023)

Y N/A RESPON. PARTY				
			Y N/A RESPON. PARTY	
	SECTION 5.303 INDOOR WATER USE 5.303.1 METERS. Separate submeters or metering devices	shall be installed for the uses described in Sections		
	503.1.1 and 503.1.2.	shall be installed for the uses described in Sections		
	5.303.1.1 Buildings in excess of 50,000 square feet			SECTION 5.402 DEFI 5.402.1 DEFINITIONS. The fol
	more than 100 gal/day (380 L/day), including	enant space within the building projected to consume g, but not limited to, spaces used for laundry or cleaners, office, laboratory, or beauty salon or barber shop.		ADJUST. To regulate fluid flov a damper.
		ilding tenants are unfeasible, for water supplied to the		BALANCE. To proportion flow
		ere flow through is greater than 500 gpm (30 L/s). s greater than 6 gpm (0.04 L/s).		according to design quantities. BUILDING COMMISSIONING.
	c. Steam and hot water boilers with ene 5.303.1.2 Excess consumption. A separate submeter	ergy input more than 500,000 Btu/h (147 kW).		process, including verifying and tested, operated and maintaine
	within a new building or within an addition that is proje	cted to consume more than 1,000 gal/day.		ORGANIC WASTE. Food was soiled paper waste that is mixe
GC	5.303.3 WATER CONSERVING PLUMBING FIXTURES AN urinals) and fittings (faucets and showerheads) shall comply			TEST. A procedure to determ SECTION 5.407 WAT
GC	5.303.3.1 Water Closets. The effective flush volume flush. Tank-type water closets shall be certified to the Specification for Tank-Type toilets.	performance criteria of the U.S. EPA WaterSense		5.407.1 WEATHER PROTEC California Building Code Secti ordinance, whichever is more
	Note: The effective flush volume of dual flush toilets is two reduced flushes and one full flush.	s defined as the composite, average flush volume of	X □A&GC	5.407.2 MOISTURE CONTRO 5.407.2.1 Sprinklers. [
X	5.303.3.2 Urinals. 5.303.3.2.1 Wall-mounted Urinals. The effecti 0.125 gallons per flush.	ve flush volume of wall-mounted urinals shall not exceed		5.407.2.2 Entries and (
		tive flush volume of floor-mounted or other urinals shall		rain to prevent water int 5.407.2.2.1 Exte
GC	5.303.3.3 Showerheads. [BSC-CG]	a shall have a maximum flow rate of not more than 1.9		intrusion by usin such openings pl
		Is shall have a maximum flow rate of not more than 1.8 Il be certified to the performance criteria of the U.S. EPA		1. An inst 2. The do 3. The do
		e shower. When a shower is served by more than one howerheads and/or other shower outlets controlled by a		4. Other i
	single valve shall not exceed 1.8 gallons per min allow only one shower outlet to be in operation a	nute at 80 psi, or the shower shall be designed to at a time.		5.407.2.2.2 Flas
	Note: A hand-held shower shall be considered	a shuwennedu.		SECTION 5.408 CONS
GC	5.303.3.4 Faucets and fountains.	Lavatory faucets shall have a maximum flow rate of not	X 🗆 GC	5.408.1 CONSTRUCTION WA non-hazardous construction ar
	more than 0.5 gallons per minute at 60 psi.			meet a local construction and 5.408.1.1 Construction
	gallons per minute at 60 psi. Kitchen faucets ma	hall have a maximum flow rate of not more than 1.8 ay temporarily increase the flow above the maximum rate, si, and must default to a maximum flow rate of 1.8 gallons		demolition waste manag
	per minute at 60 psi.	hall have a maximum flow rate of not more than1.8		 Identifies the usage, recycl Determines if
	gallons per minute/20 [rim space (inches) at 60	psi].		bulk mixed (s 3. Identifies dive
		s shall not deliver more than 0.20 gallons per cycle. i ns. Metering faucets for wash fountains shall have a		4. Specifies that by weight or v
	maximum flow rate of not more than 0.20 gallon			5.408.1.2 Waste Mana documentation that the complies with this section
	reduction. 5.303.3.4.6 Pre-rinse spray value	,,,		Note: The owner or co will be diverted by a wa
	When installed, shall meet the requirements in t Efficiency Regulations), Section 1605.1 (h)(4) T	the <i>California Code of Regulations</i> , Title 20 (Appliance able H-2, Section 1605.3 (h)(4)(A), and Section 1607		Exceptions to Section
	(d)(7), and shall be equipped with an integral au FOR REFERENCE ONLY:The following table a	nd code section have been reprinted from the <i>California</i>		 Excavated so Alternate was
	Code of Regulations, Title 20 (Appliance Efficier 1605.3 (h)(4)(A).	ncy Regulations), Section 1605.1 (h)(4) and Section		facilities capa 3. Demolition wa and markets.
	TABLE H-2			5.408.1.3 Waste streat not exceed two pounds
	STANDARDS FOR COMMERCIA			not exceed the pounds
	VALUES MANUFACTURED ON C	DR AFTER JANUARY 28, 2019		5.408.1.4 Documentati compliance with Sectior
	VALUES MANUFACTURED ON C PRODUCT CLASS [spray force in ounce force (ozf)]	DR AFTER JANUARY 28, 2019 MAXIMUM FLOW RATE (gpm)		5.408.1.4 Documentati compliance with Sectior
	VALUES MANUFACTURED ON C	DR AFTER JANUARY 28, 2019		5.408.1.4 Documentati compliance with Sectior necessary and shall be Notes: 1. Sample forms
	VALUES MANUFACTURED ON C PRODUCT CLASS [spray force in ounce force (ozf)] Product Class 1 (≤ 5.0 ozf) Product Class 2 (> 5.0 ozf and ≤ 8.0 ozf) Product Class 3 (> 8.0 ozf)	DR AFTER JANUARY 28, 2019 MAXIMUM FLOW RATE (gpm) 1.00		5.408.1.4 Documentati compliance with Sectior necessary and shall be Notes: 1. Sample forms located www. Resources-Li management
×	VALUES MANUFACTURED ON C PRODUCT CLASS [spray force in ounce force (ozf)] Product Class 1 (≤ 5.0 ozf) Product Class 2 (> 5.0 ozf and ≤ 8.0 ozf) Product Class 3 (> 8.0 ozf) Product Class 3 (> 8.0 ozf) 5.303.4 COMMERCIAL KITCHEN EQUIPMENT.	MAXIMUM FLOW RATE (gpm) 1.00 1.20 1.28		5.408.1.4 Documentati compliance with Sectior necessary and shall be Notes: 1. Sample forms located www. Resources-Li management 2. Mixed constru Resources Re
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FINITIONS following terms are defined in Chapter 2 (and are included here for reference) 5.410.2 through 5.410.2.6 shall apply. low rate and air patterns at the terminal equipment, such as to reduce fan speed or adjust ows within the distribution system, including sub-mains, branches and terminals, Commissioning requirements shall include: A systematic quality assurance process that spans the entire design and construction 1. Owner's or Owner representative's project requirements. nd documenting that building systems and components are planned, designed, installed, 2. Basis of design. ned to meet the owner's project requirements. Commissioning measures shown in the construction documents. aste, green waste, landscape and pruning wste, nonhazardous wood waste, and food 4. Commissioning plan. Functional performance testing. xed in with food waste. 6. Documentation and training. mine quantitative performance of a system or equipment 7. Commissioning report. TER RESISTANCE AND MOISTURE MANAGEMENT Exceptions: CTION. Provide a weather-resistant exterior wall and foundation envelope as required by tion 1402.2 (Weather Protection), manufacturer's installation instructions or local . Unconditioned warehouses of any size. e stringent. unconditioned warehouses. OL. Employ moisture control measures by the following methods. 4. Open parking garages of any size, or open parking garage areas, of any size, within a structure. Design and maintain landscape irrigation systems to prevent spray on structures. openings. Design exterior entries and/or openings subject to foot traffic or wind-driven provide heating and or air conditioning. trusion into buildings as follows: Informational Notes: erior door protection. Primary exterior entries shall be covered to prevent water ing nonabsorbent floor and wall finishes within at least 2 feet around and perpendicular to olus at least one of the following: stalled awning at least 4 feet in depth. performance tests or to adjust and balance systems. door is protected by a roof overhang at least 4 feet in depth. oor is recessed at least 4 feet. methods which provide equivalent protection. shing. Install flashings integrated with a drainage plane. project begins. This documentation shall include the following: **ISTRUCTION WASTE REDUCTION, DISPOSAL AND** 1. Environmental and sustainability goals. 2. Building sustainable goals. 3. Indoor environmental quality requirements. ASTE MANAGEMENT. Recycle and/or salvage for reuse a minimum of 65% of the and demolition waste in accordance with Section 5.408.1.1, 5.408.1.2 or 5.408.1.3; or operation demolition waste management ordinance, whichever is more stringent. 5. Equipment and systems expectations. n waste management plan. Where a local jurisdiction does not have a construction and gement ordinance, submit a construction waste management plan that: construction and demolition waste materials to be diverted from disposal by efficient cover the following systems: cling, reuse on the project or salvage for future use or sale. f construction and demolition waste materials will be sorted on-site (source-separated) o 1. Renewable energy systems. single stream). 2. Landscape irrigation systems. ersion facilities where construction and demolition waste material collected will be taken. 3. Water reuse system. t the amount of construction and demolition waste materials diverted shall be calculated volume, but not by both. gement Company. Utilize a waste management company that can provide verifiable 1. General project information. percentage of construction and demolition waste material diverted from the landfill 2. Commissioning goals. a. An explanation of the original design intent. ractor shall make the determination if the construction and demolition waste materia b. Equipment and systems to be tested, including the extent of tests. aste management company. Functions to be tested. d. Conditions under which the test shall be performed. ns 5.408.1.1 and 5.408.1.2: e. Measurable criteria for acceptable performance. 4. Commissioning team information. oil and land-clearing debris. ste reduction methods developed by working with local agencies if diversion or recycle commissioning shall be included. able of compliance with this item do not exist. aste meeting local ordinance or calculated in consideration of local recycling facilities am reduction alternative. The combined weight of new construction disposal that does s per square foot of building area may be deemed to meet the 65% minimum requirement made. forcing agency. tion. Documentation shall be provided to the enforcing agency which demonstrates ns 5.408.1.1. through 5.408.1.3. The waste management plan shall be updated as e accessible during construction for examination by the enforcing agency. Title 8, Section 5142, and other related regulations. found in "A Guide to the California Green Building Standards Code (Nonresidential)" systems manual shall include the following: v.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission-.ist-Folder/CALGreen may be used to assist in documenting compliance with the waste 2. Site contact information. uction and demolition debris processors can be located at the California Department of Recycling and Recovery (CalRecycle). 4. Major systems. 5. Site equipment inventory and maintenance notes. E. [A] Additions and alterations to a building or tenant space that meet the scoping nonresidential additions and alterations, shall require verification that Universal Waste ups and ballast and mercury containing thermostats as well as other California prohibited disposed of properly and are diverted from landfills. A list of prohibited Universal Waste the construction documents. iversal Waste Rule link at: http://www.dtsc.ca.gov/universalwaste/ report and shall include the following: AND LAND CLEARING DEBRIS. 100 percent of trees, stumps, rocks and associated equipment it interfaces). primarily from land clearing shall be reused or recycled. For a phased project, such site until the storage site is developed. her on or off-site, of vegetation or soil contaminated by disease or pest infestation. tion by disease or pest infestation is suspected, contact the County Agricultural er and follow its direction for recycling or disposal of the material. representative. f know pest and/or disease quarantine zones, consult with the California Department of griculture. (www.cdfa.ca.gov) alteration subject to Section 303.1. 5.410.4.2 (Reserved) DING MAINTENANCE AND OPERATIONS CUPANTS. Provide readily accessible areas that serve the entire building and are storage and collection of non-hazardous materials for recycling, including (at a minimum) glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling systems. dictions that meet and apply for the exemption in Public Resources A) et seq. shall also be exempt from the organic waste portion of this section. All additions conducted within a 12-month period under single or multiple permits, 1. Renewable energy systems. 2. Landscape irrigation systems.

e of 30% or more in floor area, shall provide recycling areas on site. ditions within a tenant space resulting in less than a 30% increase in the tenant space

nance. Space allocation for recycling areas shall comply with Chapter 18, Part 3, Resources Code. Chapter 18 is known as the California Solid Waste Reuse and 1991 (Act).

ance for use by local agencies may be found in Appendix A of the document at the

Y N/A RESPON PARTY

5.410.2 COMMISSIONING. [N] New buildings 10,000 square feet and over. For new buildings 10,000 square and over, building commissioning shall be included in the design and construction processes of the building project verify that the building systems and components meet the owner's or owner representative's project requirements Commissioning shall be performed in accordance with this section by trained personnel with experience on project comparable size and complexity. For I-occupancies that are not regulated by OSHPD or for I-occupancies and L-occupancies that are not regulated y the California Energy Code Section 100.0 Scope, all requirements in Section

Note: For energy-related systems under the scope (Section 100) of the California Energy Code, including heating ventilation, air conditioning (HVAC) systems and controls, indoor lighting systems and controls, as well as water heating systems and controls, refer to California Energy Code Section 120.8 for commissioning requirements

- 2. Areas less than 10,000 square feet used for offices or other conditioned accessory spaces within
- 3. Tenant improvements less than 10,000 square feet as described in Section 303.1.1.

Note: For the purposes of this section, unconditioned shall mean a building, area, or room which does not

- 1. IAS AC 476 is an accreditation criteria for organizations providing training and/or certification of commissioning personnel. AC 476 is available to the Authority Having Jurisdiction as a reference for gualifications of commissioning personnel. AC 476 des not certify individuals to conduct functional
- 2. Functional performance testing for heating, ventilation, air conditioning systems and lighting controls must be performed in compliance with the California Energy Code.

5.410.2.1 Owner's or Owner Representative's Project Requirements (OPR). [N] The expectations and requirements of the building appropriate to its phase shall be documented before the design phase of the

- 4. Project program, including facility functions and hours of operation, and need for after hours
- 6. Building occupant and operation and maintenance (O&M) personnel expectations.

5.410.2.2 Basis of Design (BOD). [N] A written explanation of how the design of the building systems meet the OPR shall be completed at the design phase of the building project. The Basis of Design document sha

5.410.2.3 Commissioning plan. [N] Prior to permit issuance a commissioning plan shall be completed to document how the project will be commissioned. The commissioning plan shall include the following:

- 3. Systems to be commissioned. Plans to test systems and components shall include:

- 5. Commissioning process activities, schedules and responsibilities. Plans for the completion of

5.410.2.4 Functional performance testing. [N] Functional performance tests shall demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with th approved plans and specifications. Functional performance testing reports shall contain information address each of the building components tested, the testing methods utilized, and include any readings and adjustme

5.410.2.5 Documentation and training. [N] A Systems Manual and Systems Operations Training are requ including Occupational Safety and Health Act (OSHA) requirements in California Code of Regulations (CCR

5.410.2.5.1 Systems manual. [N] Documentation of the operational aspects of the building shall be completed within the systems manual and delivered to the building owner or representative. The

- 1. Site information, including facility description, history and current requirements.
- 3. Basic operations and maintenance, including general site operating procedures, basic troubleshooting, recommended maintenance requirements, site events log.
- 6. A copy of verifications required by the enforcing agency or this code.
- 7. Other resources and documentation, if applicable.

5.410.2.5.2 Systems operations training. [N] A program for training of the appropriate maintenance staff for each equipment type and/or system shall be developed and documented in the commissionin

1. System/equipment overview (what it is, what it does and with what other systems and/or

- 2. Review and demonstration of servicing/preventive maintenance.
- 3. Review of the information in the Systems Manual.
- 4. Review of the record drawings on the system/equipment.

5.410.2.6 Commissioning report. [N] A report of commissioning process activities undertaken through the design and construction phases of the building project shall be completed and provided to the owner or

5.410.4 TESTING AND ADJUSTING. New buildings less than 10,000 square feet. Testing and adjusting of systems shall be required for new buildings less than 10,000 square feet or new systems to serve an addition or

Note: For energy-related systems under the scope (Section 100) of the California Energy Code, including heating, ventilation, air conditioning (HVAC) systems and controls, indoor lighting system and controls, as w as water heating systems and controls, refer to California Energy Code Section 120.8 for commissioning requirements and Sections 120.5, 120.6, 130.4, and 140.9(b)3 for additional testing requirements of specific

5.410.4.2 Systems. Develop a written plan of procedures for testing and adjusting systems. Systems to be included for testing and adjusting shall include at a minimum, as applicable to the project:

Water reuse systems.

5.410.4.3 Procedures. Perform testing and adjusting procedures in accordance with manufacturer's specifications and applicable standards on each system.

5.410.4.3.1 HVAC balancing. In addition to testing and adjusting, before a new space-conditioning system serving a building or space is operated for normal use, the system shall be balanced in accordance with the procedures defined by the Testing Adjusting and Balancing Bureau National Standards; the National Environmental Balancing Bureau Procedural Standards; Associated Air Bala Council National Standards or as approved by the enforcing agency.

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ł			by the enforcing agency. DIVISION 5.5 ENVIRONMENTAL QUALITY SECTION 5.501 GENERAL Sol1.1 SCOPE. The provisions of this chapter shall outline means of reducing the quantity of air contaminants that are odorous, irritating, and/or harmful to the comfort and well-being of a building's installers, occupants and neighbors. SECTION 5.502 DEFINITIONS S502.1 DEFINITIONS. The following terms are defined in Chapter 2 (and are included here for reference) ARTERIAL HIGHWAY. A general term denoting a highway primarily for through traffic usually on a continuous route. A-WEIGHTED SOUND LEVEL (dBA). The sound pressure level in decibels as measured on a sound level meter using the internationally standardized A-weighting filter or as computed from sound spectral data to which A-weighting adjustments have been made. BTU/HOUR, British thermal units per hour, a lso referred to as Btu. The amount of heat required to raise one pound of water one degree Fahrenheit per hour, a common measure of heat transfer rate. A ton of refrigeration is 12,000 Btu, the amount of heat required to melt a ton (2,000 pounds) of ice at 32 ⁰ Fahrenheit. COMMUNITY NOISE EQUIVALENT LEVEL (CNEL). A metric similar to the day-night average sound level (Ldn), except that a 5 decibel adjustment is added to the equivalent continuous sound exposure level for evening hours (7pm to 10pm) in addition to the 10 dB nighttime adjustment used in the Ldn. COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardwood plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, timber, prefabricated wood I-joists or finger-jointed lumber, oriented strand board, glued laminated timber, timber, prefabricated wood I-joists or finger-jointed lumber, oriented strand board, glued laminated timber, timber, prefabricated wood I-joists or finger-jointed lumber, oriented strand board, glued laminated timber, timber, prefabricated	• P.O. BOX 598 • Santa Barbara • California • 93102•	s plan set are strictly prohibited & shall be prosecuted to the fullest extent of the law. 3/27/2024 4:39:23 PM
ect he ssing nents juired, R),			 trucks, vans, neighborhood electric vehicles, electric motorcycles, and the like, primarily powerd by an electric motor that draws current from a rechargeable storage battery, fuel cell, photovoltaic array, or other source of electric current. Plug-in hybrid electric vehicles (PHEV) are considered electric vehicles. For purposes of the <i>California Electrical Code</i>, off-road, self-propoelled electric vehicles, such as industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, boats, and the like, are not included. ELECTRIC VEHICLE CHARGING STATION(S) (EVCS)). One or more spaces intended for charging electric vehicles. ELECTRIC VEHICLE SUPPLY RQUIPMENT (EVSE). The conductors, including the ungrounded, grounded, and equipment grounding conductors and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle. ENERGY EQUIVALENT (NOISE) LEVEL (Leq). The level of a steady noise which would have the same energy as the fluctuating noise level integrated over the time of period of interest. EXPRESSWAY. An arterial highway for through traffic which may have partial control of access, but which may or may not be divided or have grade separations at intersections. FREEWAY. A divided arterial highway with full control of access and with grade separations at intersections. GLOBAL WARMING POTENTIAL (GWP) VALUE). A 100-year GWP value published by the Intergovernmental Panel on Climate Change (IPCC) in either its Second Assessment Report (SAR) (IPCC, 1995); or its Fourth Assessment A-3 Report (AR4) (IPCC). 2007). The SAR GWP values are found in column "SAR (100-yr)" of Table 2.14.; the AR4 GWP values are found in column "SAR (100-yr)" of Table 2.14.; the AR4 GWP values are found in column "SAR (100-yr)" of Table 2.14.; the AR4 GWP	FIGUEROA APARTMENTS 528 W FIGUEROA ST SANTA BARBARA, CA 93101 CAL GREEN CAL GREEN	maintains all ownership rights to these documents. Unless a specific written release is issued by the Architect, use of design features outside of this plan set are strictly prohibited & shall be
ic e	X	X GC	necessary to condition the building or areas of addition or alteration within the required temperature range for material and equipment installation. If the HVAC system is used during construction, use return air filters with a Minimum Efficiency Reporting Value (MERV) of 8, based on ASHRAE 52.2-1999, or an average efficiency of 30% based on ASHRAE 52.1-1992 Replace all filters immediately prior to occupancy, or, if the building is occupied during alteration, at the conclusion of construction.	ED ARC S AMUE Vor Value Value Value Value Value Value Value Value Value	© Copyright 2021, ON Design, LLC, all rights reserved. ON Design, LLC maintains all ownership
ance	<u>×</u>	GC	5.504.3 Covering of duct openings and protection of mechanical equipment during construction. At the time of rough installation and during storage on the construction site until final startup of the heating, cooling and ventilation equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of dust, water and debris which may enter the system.	T-1.7	

2022 CALIFORNIA G NONRESIDENTIAL MANDA

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					BITUMINOUS ROOF PRIM
		than 16 fluid ounces) shall comply with statewide VOC st	andards and other requirements, including		
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NOTE: FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THESE TABLES, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168. seq.). Those materials n Table 5.504.4.3 Paints and coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Coating Suggested Control Measure, as shown in Table 5.504.4.3, unless more stringen tocal limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 5.504.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Closs voc limit in Table 5.504.4.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Closs voc limit in Table 5.504.4.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Closs voc limit in Table 5.504.4.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Closs voc limit in Table 5.504.4.3 shall apply. State Astrice CR, Title 17 . Chaine and coatings. Aerosol paints and coatings shall meet the PWMIR Limits for Regulations, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8 Rule 49. TABLE 5.504.4.5 - 1 MAXIMUM FORMALDEH PRODUCT HARDWOOD PLYWOOD HARDWOOD PLYWOOD PARTICLE BOARD HARDWOOD PLYWOOD PARTICLE BOARD HARDWOOD PLYWOOD PARTICLE BOARD					composite wood products u
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 3. Product labele stringent local limits apply. The VOC content limit for coating is that do not meet the definitions for the specialty coatings categories listed in Table 5.504.4.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in Subsections 4.21, 4.36 and 4.37 of the 2007 California Air Resources Board Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 5.504.4.3 shall apply. 5.504.4.3.1 Aerosol Paints and coatings. Aerosol paints and coatings shall meet the PWMIR Limits for ROC in Section 94522(a)(3) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94520; and di (2) of <i>California Code of Regulations</i>. Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8 Rule 49. ARXIMUM FORMALDEH⁺ PRODUCT HARDWOOD PLYWOOD PARTICLE BOARD MEDIUM DENSITY FIBEF THIN MEDIUM DENSITY FIBEF THIN MEDIUM DENSITY FIBEF VALUES IN THIS TABLE AA TOXICS CONTROL MEASURE ADDITIONAL INFORMATION, 					 Product certificat Chain of custody
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Solution and Resolutes Board suggested Control Measure and the corresponding Plat, Normal of Nonflat-High Gloss VOC limit in Table 5.504.4.3 shall apply. Standards. Standards. Standards. Standards. S		or Nonflat-High Gloss coating, based on its gloss, as defined in	Subsections 4.21, 4.36 and 4.37 of the 2007		4. Exterior grade pr Engineered Woo
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ATORY M	EASURES,	Sł	-16	EET 3 (January 2023)		Y = YES N/A = NOT APPLICABLE RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, E OWNER, CONTRACTOR, INSPECTOR ETC		
- CONT.		Y N/A F			I/A RESPO			
ER OF COATING, LESS WATER & LESS EXEMP	CURRENT VOC LIMIT			Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specifications 01350)		utilize either refrigerated display cases, or walk-in coolers or freezers connected to remote compressor units or condensing units. The leak reduction measures apply to refrigeration systems containing high-global-warming potential (high-GWP) refrigerants with a GWP of 150 or greater. New refrigeration systems include both new facilities and the	Arch	ESIGN,LLC hitecture
ATINGS TY COATINGS	400			See California Department of Public Health's website for certification programs and testing labs. https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material		replacement of existing refrigeration systems in existing facilities. Exception: Refrigeration systems containing low-global warming potential (low-GWP) refrigerant with a GWP value less than 150 are not subject to this section. Low-GWP refrigerants are nonozone-depleting refrigerants		lanning ior Design
COATINGS	400 50 050			5.504.4.6.1 Verification of compliance. Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.		that include ammonia, carbon dioxide (CO ₂), and potentially other refrigerants. 5.508.2.1 Refrigerant piping. Piping compliant with the California Mechanical Code shall be installed to be		h Nolan -22541
	350 350			5.504.4.7 Thermal insulation Comply with the requirements of the California Department of Public Health, "Standard Method of the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers,		accessible for leak protection and repairs. Piping runs using threaded pipe, copper tubing with an outside diameter (OD) less than 1/4 inch, flared tubing connections and short radius elbows shall not be used in refrigerant systems except as noted below.		
Y SEALERS	350 100			"Version 1.2, January 1.2, January 2017 (Emission testing method for California Specification 01350). See California Department of Public Health's website for certification programs and testing labs. https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material		5.508.2.1.1 Threaded pipe. Threaded connections are permitted at the compressor rack. 5.508.2.1.2 Copper pipe. Copper tubing with an OD less than 1/4 inch may be used in systems with a		102•
	50 150			5.504.4.7.1 Verification of compliance. Documentation shall be provided verifying that thermal insulation materials meet the pollutant emission limits.		refrigerant charge of 5 pounds or less. 5.508.2.1.2.1 Anchorage. One-fouth-inch OD tubing shall be securely clamped to a rigid base to		•
ATINGS TINGS	350 350			5.504.4.8 Acoustical ceiling and wall panels. Comply with the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, "		keep vibration levels below 8 mils. 5.508.2.1.3 Flared tubing connections. Double-flared tubing connections may be used for pressure controls, valve pilot lines and oil.		fornia
	100 250			Version 1.2, January 2017 (Émission testing method for California Specification 01350). See California Department of Public Health's website for certification programs and testing labs.		Exception: Single-flared tubing connections may be used with a multiring seal coated with industrial sealant suitable for use with refrigerants and tightened in accordance with manufacturer's	D D	Cali
TINGS (SIGN PAINTS)	500 420			 5.504.4.8.1 Verification of compliance. Documentation shall be provided verifying that acoustical finish materials meet the pollutant emission limits. 5.504.5.3 Filters. In mechanically ventilated buildings, provide regularly occupied areas of the building with air 		recommendations. 5.508.2.1.4 Elbows. Short radius elbows are only permitted where space limitations prohibit use of long radius elbows.		oara ∙
VANCE COATINGS GS1	250 120			filtration media for outside and return air that provides at least a Minimum Efficiency Reporting Value (MERV) of 13. MERV 13 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual.		5.508.2.2 Valves. Valves Valves and fittings shall comply with the <i>California Mechanical Code</i> and as follows.	e S	la Barb
COATINGS	450 100			Exceptions: Existing mechanical equipment.		5.508.2.2.1 Pressure relief valves. For vessels containing high-GWP refrigerant, a rupture disc shall be installed between the outlet of the vessel and the inlet of the pressure relief valve.	о Ф	Sant
D COATINGS	500 250			5.504.5.3.1 Labeling. Installed filters shall be clearly labeled by the manufacturer indicating the MERV rating. 5.504.7 ENVIRONMENTAL TOBACCO SMOKE (ETS) CONTROL. Where outdoor areas are provided for smoking,		5.508.2.2.1.1 Pressure detection. A pressure gauge, pressure transducer or other device shall be installed in the space between the rupture disc and the relief valve inlet to indicate a disc rupture or discharge of the relief valve.		•
SH PRIMERS & UNDERCOATERS	420 100			prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows and within the building as already prohibited by other laws or regulations; or as enforced by ordinances, regulations or policies of any city, county, city and county, California Community College, campus of the California State University, or campus of the		5.508.2.2.2 Access valves. Only Schrader access valves with a brass or steel body are permitted for use.		BOX 5
TING SEALERS S	350 250			University of California, whichever are more stringent. When ordinances, regulations or policies are not in place, post signage to inform building occupants of the prohibitions. SECTION 5.505 INDOOR MOISTURE CONTROL		5.508.2.2.2.1 Valve caps. For systems with a refrigerant charge of 5 pounds or more, valve caps shall be brass or steel and not plastic.		O. O.
E COATINGS	50 250	× - (GC	5.505.1 INDOOR MOISTURE CONTROL. Buildings shall meet or exceed the provisions of California Building Code, CCR, Title 24, Part 2, Sections 1202 (Ventilation) and Chapter 14 (Exterior Walls). For additional measures, see Section 5.407.2 of this code.		5.508.2.2.2.2 Seal caps. If designed for it, the cap shall have a neoprene O-ring in place. 5.508.2.2.2.1 Chain tethers. Chain tethers to fit ovr the stem are required for valves		
	730		M	SECTION 5.506 INDOOR AIR QUALITY 5.506.1 OUTSIDE AIR DELIVERY. For mechanically or naturally ventilated spaces in buildings, meet the minimum		designed to have seal caps. Exception: Valves with seal caps that are not removed from the valve during stem operation.		
. SEALERS & UNDERCOATERS	550			requirements of Section 120.1 (Requirements For Ventilation) of the <i>California Energy Code</i> , or the applicable local code, whichever is more stringent, and Division 1, Chapter 4 of CCR, Title 8.		5.508.2.3 Refrigerated service cases. Refrigerated service cases holding food products containing vinegar and salt shall have evaporator coils of corrosion-resistant material, such as stainless steel; or be coated to prevent		
, 	250	X 🗆 (GC	5.506.2 CARBON DIOXIDE (CO₂) MONITORING. For buildings or additions equipped with demand control ventilation, CO ₂ sensors and ventilation controls shall be specified and installed in accordance with the requirements of the California Energy Code, Section 120(c)(4).		corrosion from these substances. 5.508.2.3.1 Coil coating. Consideration shall be given to the heat transfer efficiency of coil coating to maximize energy efficiency.	ပ	~
TS ATINGS	340			5.506.3 Carbon dioxide (CO2) monitoring in classrooms. (DSA-SS) Each public K-12 school classroom, as listed in Table 120.1-A of the <i>California Energy Code</i> , shall be equipped with a carbon dioxide monitor or sensor that meets the following requirements:		5.508.2.4 Refrigerant receivers. Refrigerant receivers with capacities greater than 200 pounds shall be fitted with a device tha indicates the level of refrigerant in the receiver.	Η Ζ	310,
OATINGS COATINGS	100 420			 The monitor or sensor shall be permanently affixed in a tamper-proof manner in each classroom between 3 and 6 feet (914 mm and 1829 mm) above the floor and at least 5 feet (1524 mm) away from door and operable windows. When the monitor or sensor is not integral to an Energy Management Control System (EMCS), the monitor or 		5.508.2.5 Pressure testing. The system shall be pressure tested during installation prior to evacuation and charging.	M M M M M M	- ()) 0 - √
EMBRANES	250 275			 sensor shall display the carbon dioxide readings on the device. When the sensor is integral to an EMCS, the carbon dioxide readings shall be available to and regularly monitored by facility personnel. A monitor shall provide notification though a visual indicator on the monitor when the carbon dioxide levels in the 		5.508.2.5.1 Minimum pressure. The system shall be charged with regulated dry nitrogen and appropriate tracer gas to bring system pressure up to 300 psig minimum.	RT N	
/ES	350 340			 classroom have exceeded 1,100ppm. A sensor integral to an EMCS shall provide notification to facility personnel through a visual and/or audible indicator when the carbon dioxide levels in the classroom have exceeded 1,100ppm. The monitor or sensor shall measure carbon dioxide levels at minimum 15- minute intervals and shall maintain a 		5.508.2.5.2 Leaks. Check the system for leaks, repair any leaks, and retest for pressure using the same gauge.	A H	BARA GRE
ITER OF COATING, INCLUDING WATER & EXE				 record of previous carbon dioxide measurements of not less than 30 days duration. 5. The monitor or sensor used to measure carbon dioxide levels shall have the capacity to measure carbon dioxide levels with a range of 400ppm to 2000ppm or greater. 		 5.508.2.5.3 Allowable pressure change. The system shall stand, unaltered, for 24 hours with no more than a +/- one pound pressure change from 300 psig, measured with the same gauge. 5.508.2.6 Evacuation. The system shall be evacuated after pressure testing and prior to charging. 		
E ARE DERIVED FROM THOSE SPECIFIED BY IGS SUGGESTED CONTROL MEASURE, FEB. IES BOARD.				 The monitor or sensor shall be certified by the manufacturer to be accurate within 75ppm at 1,000ppm carbon dioxide concentration and shall be certified by the manufacturer to require calibration no more frequently than once every 5 years. 		5.508.2.6.1 First vacuum. Pull a system vacuum down to at least 1000 microns (+/- 50 microns), and hold for 30 minutes.	ĺ Ô ≥	S B S S
ency. Documentation may include, but is r	nis section shall be provided at the request of not limited to, the following:		&GC	SECTION 5.507 ENVIRONMENTAL COMFORT 5.507.4 ACOUSTICAL CONTROL. Employ building assemblies and components with Sound Transmission Class		5.508.2.6.2 Second vacuum. Pull a second system vacuum to a minimum of 500 microns and hold for 30 minutes.		
acturer's product specification verification of on-site product containers ems.				(STC) values determined in accordance with ASTM E 90 and ASTM E 413, or Outdoor-Indoor Sound Transmission Class (OITC) determined in accordance with ASTM E 1332, using either the prescriptive or performance method in Section 5.507.4.1 or 5.507.4.2.		5.508.2.6.3 Third vacuum. Pull a third vacuum down to a minimum of 300 microns, and hold for 24 hours with a maximum drift of 100 microns over a 24-hour period.	<u>D</u>	SAN
nod for the Testing and Evaluation of Volat	ents of the California Department of Public tile Organic Chemical Emissions from Indoor 2017 (Emission testing method for California			Exception: Buildings with few or no occupants or where occupants are not likely to be affected by exterior noise, as determined by the enforcement authority, such as factories, stadiums, storage, enclosed parking structures and utility buildings.		CHAPTER 7 INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS		0,
nent of Public Health's website for certifica pv/Programs/CCDPHP/DEODC/EHLB/IAC				Exception: [DSA-SS] For public schools and community colleges, the requirements of this section and all subsections apply only to new construction.		702 QUALIFICATIONS 702.1 INSTALLER TRAINING. HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or		
bet cushion. All carpet cushion installed ir the California Department of Public Health	n the building interior shall meet the ,"Standard Method for the Testing and			5.507.4.1 Exterior noise transmission, prescriptive method. Wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall meet a composite STC rating of at least 50 or a composite OITC rating of no less than 40, with exterior windows of a minimum STC of		certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include but are not limited to the following:		
latile Organic Chemical Emissions from In ion 1.2, January 2017 (Emission testing m				40 or OITC of 30 in the following locations: 1. Within the 65 CNEL noise contour of an airport.		 State certified apprenticeship programs. Public utility training programs. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations. 		
epartment of Public Health's website for co w.cdph.ca.gov/Programs/CCDPHP/DEOD	C/EHLB/IAQ/Pages/VOC.aspx#material			Exceptions: 1. Ldn or CNEL for military airports shall be determined by the facility Air Installation Compatible		 Programs sponsored by manufacturing organizations. Other programs acceptable to the enforcing agency. 	VANSE NSE	DARCHITEC
bet adhesive. All carpet adhesive shall me wood products. Hardwood plywood, part cts used on the interior or exterior of the b	icleboard and medium density fiberboard			 Land Use Zone (AICUZ) plan. 2. Lan or CNEL for other airports and heliports for which a land use plan has not been developed shall be determined by the local general plan noise element. 		702.2 SPECIAL INSPECTION [HCD]. When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to	tr ¥ C-	22451 ² ☆
ied in ARB's Air Toxics Control Measure (ATCM) for Composite Wood (17 CCR 93120 et the specified emission limits, as shown in			 Within the 65 CNEL or Ldn noise contour of a freeway or expressway, railroad, industrial source or fixed-guideway source as determined by the Noise Element of the General Plan. 		other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector:	A TEN	F CALIFORNIE
umentation. Verification of compliance w enforcing agency. Documentation shall in fications and specifications.				5.507.4.1.1. Noise exposure where noise contours are not readily available. Buildings exposed to a noise level of 65 dB L _{eq} - 1-hr during any hour of operation shall have building, addition or alteration exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum STC of 40 (or OITC 30).		 Certification by a national or regional green building program or standard publisher. Certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors. Successful completion of a third party apprentice training program in the appropriate trade. 		n Schedule
tody certifications. led and invoiced as meeting the Composit 7, Section 93120, et seq.). le products marked as meeting the PS-1 o				5.507.4.2 Performance Method. For buildings located as defined in Section 5.507.4.1 or 5.507.4.1.1, wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does		 Other programs acceptable to the enforcing agency. Notes: 	1 PLN #2	
Wood Association, the Australian AS/NZS				not exceed an hourly equivalent noise level (Leq-1Hr) of 50 dBA in occupied areas during any hour of operation. 5.507.4.2.1 Site Features. Exterior features such as sound walls or earth berms may be utilized as		 Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code. HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate 	3 PC#1	03.27.24
FORMALDEHYDE LIMITS1				appropriate to the building, addition or alteration project to mitigate sound migration to the interior. 5.507.4.2.2 Documentation of Compliance. An acoustical analysis documenting complying interior sound levels shall be prepared by personnel approved by the architect or engineer of record.		homes in California according to the Home Energy Rating System (HERS). [BSC-CG] When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate		
IYDE EMISSIONS IN PARTS PER MILLI	ON CURRENT LIMIT			5.507.4.3 Interior sound transmission. Wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and tenant spaces and public places shall have an STC of at least 40.		compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from a recognized state, national or international association, as determined by the local agency. The	Project Mar	nager
) VENEER CORE) COMPOSITE CORE	0.05 0.05			Note: Examples of assemblies and their various STC ratings may be found at the California Office of Noise Control: www.toolbase.org/PDF/CaseStudies/stc_icc_ratings.pdf.		area of certification shall be closely related to the primary job function, as determined by the local agency. Note: Special inspectors shall be independent entities with no financial interest in the materials or the	Scale	Designer
RBOARD	0.09 0.11		GC	SECTION 5.508 OUTDOOR AIR QUALITY 5.508.1 Ozone depletion and greenhouse gas reductions. Installations of HVAC, refrigeration and fire suppression equipment shall comply with Sections 5.508.1.1 and 5.508.1.2.		project they are inspecting for compliance with this code. 703 VERIFICATIONS	PrintDate 3/27/2024 4	4:39:23 PM
FIBERBOARD2 RE DERIVED FROM THOSE SPECIFIED BY TH FOR COMPOSITE WOOD AS TESTED IN AC	0.13 IE CALIFORNIA AIR RESOURCES BOARD, AIR CORDANCE WITH ASTM E 1333. FOR			5.508.1.1 Chlorofluorocarbons (CFCs). Install HVAC, refrigeration and fire suppression equipment that do not contain CFCs.		703.1 DOCUMENTATION. Documentation used to show compliance with this code shall include but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which demonstrate substantial conformance. When specific documentation or special inspection is pecessary to verify compliance, that method of compliance will be specified in the appropriate		
	TITLE 17, SECTIONS 93120 THROUGH 93120.12.			5.508.1.2 Halons. Install HVAC, refrigeration and fire suppression equipment that do not contain Halons.		special inspection is necessary to verify compliance, that method of compliance will be specified in the appropriate section or identified applicable checklist.	T-	-1.8

KEYNOTES

1	SKYLIGHT	
2	UNIT ARRAY, 10 PANELS @ +/- 6'-7"X3'-4"	O'H/
3	UNIT ARRAY, 3 PANELS @ +/- 6'-7"X3'-4"	
4	UNIT ARRAY, 6 PANELS @ +/- 6'-7"X3'-4"	Superior At
5	3/4" SCHEDULE 80 CONDUIT TO SOLAR READY METER PANEL	
6	JUNCTION BOX W/ DROP INTO ATTIC	
7	3/4" SCHEDULE 80 COUNDUIT	1
8	ENPHASE IQ ENVOY (OR EQUAL) SOLAR POWER CENTER (EXTERIOR SURFACE MOUNT) REFERENCE LINE DIAGRAM FOR MORE INFO (SEE EDISON LABEL)	
9	60A UNTILITY DISCONNECT (SEE EDISION LABEL & LINE DIAGRAM CONNECTS TO 100A MAIN AC PANEL	O'Hagin promo
10	SEE T-1.12 FOR ADDITIONAL SIGNAGE	top Photovoltai

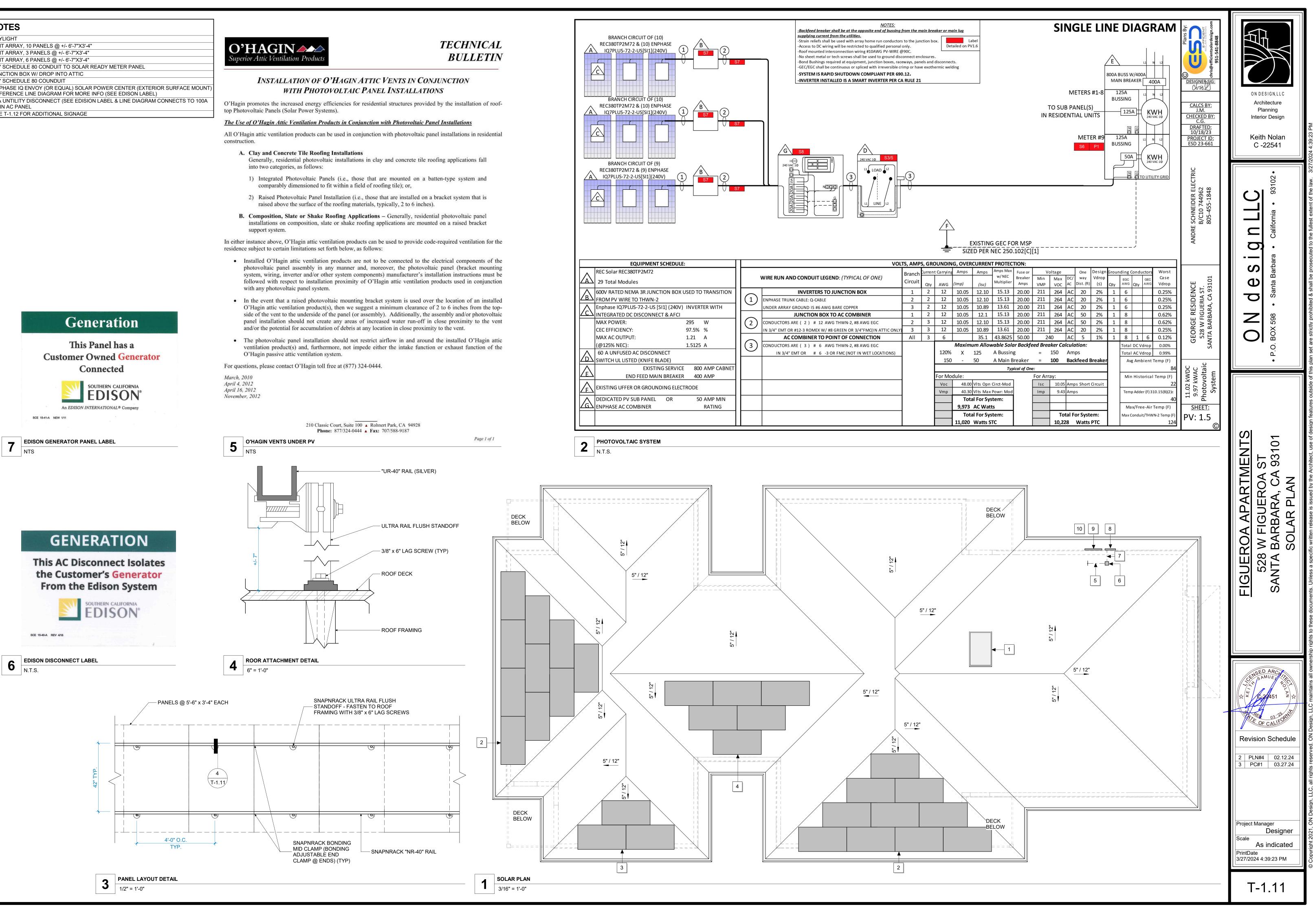
AGIN Ventilation Produce

aic Panels (Solar Power Systems).

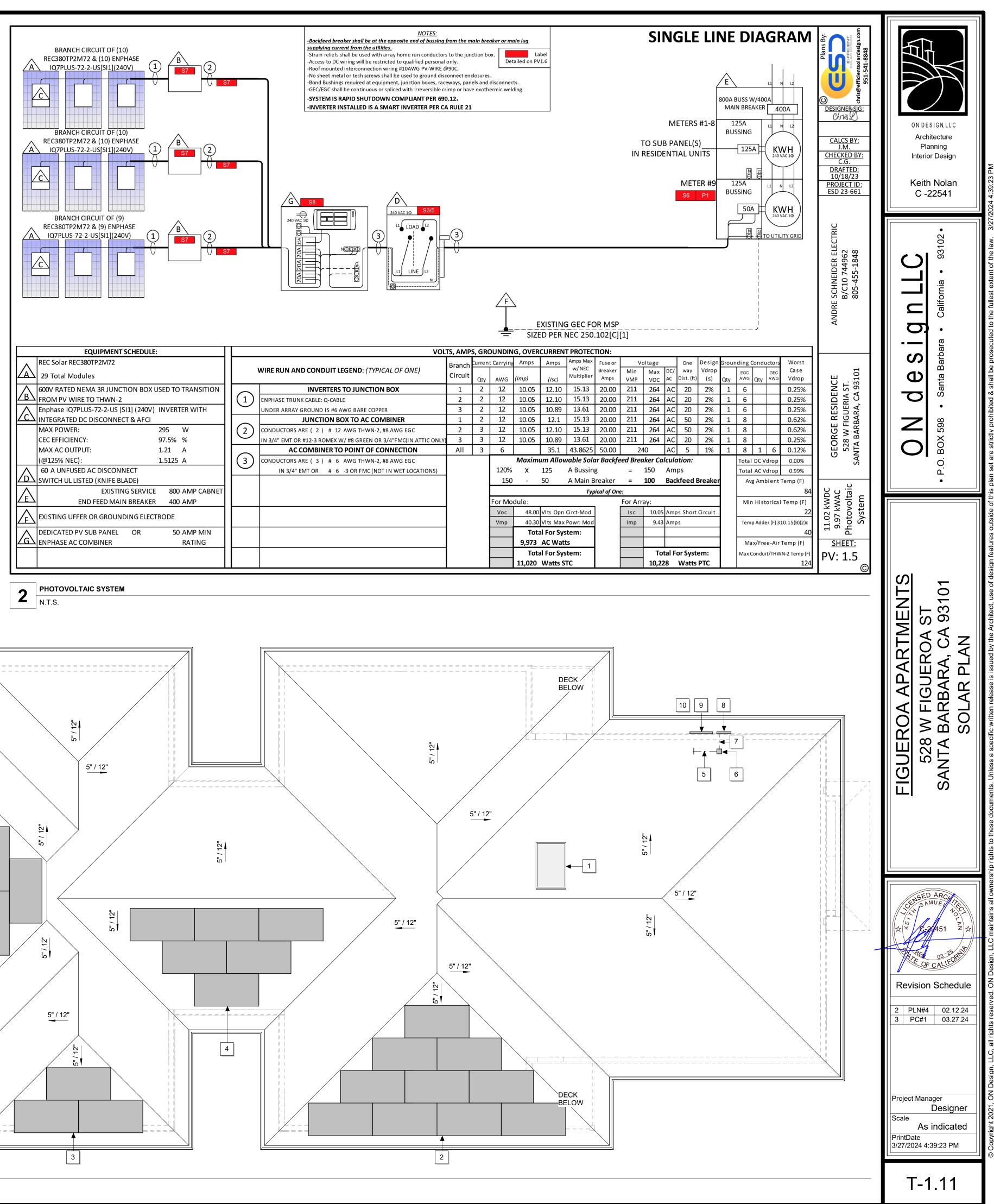
- into two categories, as follows:

- support system.

- with any photovoltaic panel system.
- O'Hagin passive attic ventilation system.







Enphase IQ 7 and IQ 7+ **Microinverters**

Enphase IQ 7 and IQ 7+ Microinverters

INPUT DATA (DC)	IQ7-60-2-US		IQ7PLUS-72-2					
Commonly used module pairings ¹	235 W - 350 W +		235 W - 440 W +					
Module compatibility	60-cell/120 half only	-cell PV modules	60-cell/120 half-cell and 72- cell/144 half-cell PV modules					
Maximum input DC voltage	48 V		60 V					
Peak power tracking voltage	27 V - 37 V		27 V - 45 V					
Operating range	16 V - 48 V		16 V - 60 V					
Min/Max start voltage	22 V / 48 V		22 V / 60 V					
Max DC short circuit current (module lsc)	15 A		15 A					
Overvoltage class DC port	II		11					
DC port backfeed current	0 A		0 A					
PV array configuration		d array; No additior on requires max 20						
OUTPUT DATA (AC)	IQ 7 Microinve	rter	IQ 7+ Microin	verter				
Peak output power	250 VA		295 VA					
Maximum continuous output power	240 VA		290 VA					
Nominal (L-L) voltage/range ²	240 V /	208 V /	240 V /	208 V /				
	211-264 V	183-229 V	211-264 V	183-229 V				
Maximum continuous output current	1.0 A (240 V)	1.15 A (208 V)	1.21 A (240 V)	1.39 A (208 V)				
Nominal frequency	60 Hz		60 Hz					
Extended frequency range	47 - 68 Hz		47 - 68 Hz					
AC short circuit fault current over 3 cycles	5.8 Arms	10 (000) (0 0)	5.8 Arms	11 (222) (4 2)				
Maximum units per 20 A (L-L) branch circuit ³	16 (240 VAC)	13 (208 VAC)	13 (240 VAC)	11 (208 VAC)				
Overvoltage class AC port	10 4		10 0					
AC port backfeed current	18 mA		18 mA					
Power factor setting	1.0	QElogging	1.0) of logging				
Power factor (adjustable) EFFICIENCY	0.85 leading 0		0.85 leading (
	@240 V	@208 V	@240 V	@208 V				
Peak efficiency	97.6 % 97.0 %	97.6 % 97.0 %	97.5 % 97.0 %	97.3 % 97.0 %				
CEC weighted efficiency MECHANICAL DATA	97.0 %	97.0 %	97.0 %	97.0 %				
	4000 to 16500							
Ambient temperature range	-40°C to +65°C	d en einer)						
Relative humidity range	4% to 100% (con	<i></i>	ditional O DOO E a	adamtar)				
Connector type Dimensions (HxWxD)		nol H4 UTX with ad Im x 30.2 mm (with		idapter)				
Weight	1.08 kg (2.38 lbs	1	out blacket)					
Cooling	Natural convecti							
Approved for wet locations	Yes							
	PD3							
Pollution degree	1 20							
Enclosure		nsulated, corrosion	resistant polyme	ricenciósure				
Environmental category / UV exposure rating	NEMA Type 6 / o	outdoor						
FEATURES								
Communication		munication (PLC)						
Monitoring	Both options red	ger and MyEnlighte quire installation of	an Enphase IQ Env	/oy.				
Disconnecting means		connectors have be ired by NEC 690.	been evaluated and approved by UL for use as the load-break					
CA Rule 21 (UL 1741-SA) UL 62109-1, UL1741/IEEE1547, FCC Part 15 Class B, ICES-0003 Class B, CAN/CSA-C22.2 NO. 107.1-01 This product is UL Listed as PV Rapid Shut Down Equipment and conforms with NEC 2014, 2017, and NEC 2020 section 690.12 and C22.1-2015 Rule 64-218 Rapid Shutdown of PV Syst								



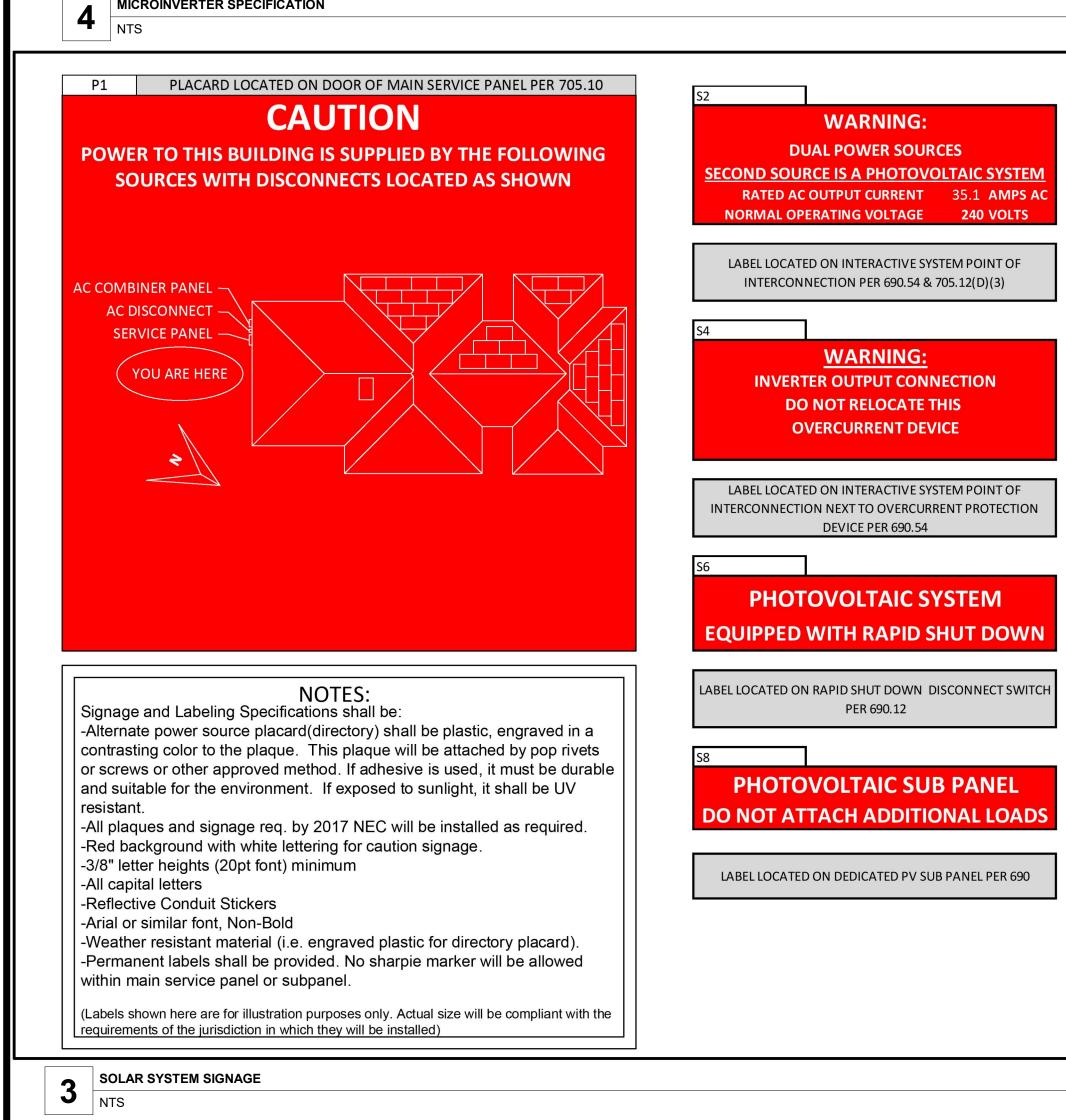
To learn more about Enphase offerings, visit **enphase.com**

MICROINVERTER SPECIFICATION

1. No enforced DC/AC ratio. See the compatibility calculator at <u>https://enphase.com/en-us/support/module-compatibility</u>. Nominal voltage range can be extended beyond nominal if required by the utility.
 Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.



ENPHASE. To learn more about Enphase offerings, visit **enphase.com** © 2020 Enphase Energy. All rights reserved. Enphase, the Enphase logo, Enphase IQ 7, Enphase IQ 7+, Enphase IQ Battery,



The high-powered smart grid-ready

achieving the highest system efficiency.

Part of the Enphase IQ System, the IQ 7 and

Enlighten™ monitoring and analysis software.

IQ Series Microinverters extend the reliability

warranty of up to 25 years.

Easy to Install

UL listed

Smart Grid Ready

grid requirements

Lightweight and simple

Productive and Reliable

cell/144 half-cell* modules

More than a million hours of testing

Class II double-insulated enclosure

frequency ride-through requirements

Configurable for varying grid profiles

• Meets CA Rule 21 (UL 1741-SA)

• Remotely updates to respond to changing

standards set forth by previous generations and

undergo over a million hours of power-on testing, enabling Enphase to provide an industry-leading

Faster installation with improved, lighter two-wire cabling

Optimized for high powered 60-cell/120 half-cell and 72-

• Built-in rapid shutdown compliant (NEC 2014 & 2017)

Complies with advanced grid support, voltage and

* The IQ 7+ Micro is required to support 72-cell/144 half-cell modules.

IQ 7+ Microinverters integrate with the Enphase

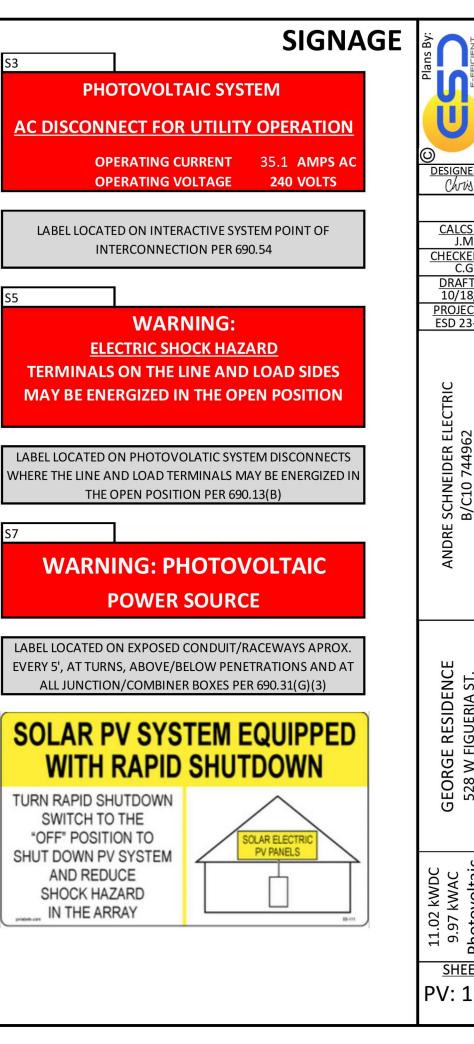
IQ Envoy™, Enphase IQ Battery™, and the Enphase

Enphase IQ 7 Micro[™] and Enphase IQ 7+ Micro[™]

dramatically simplify the installation process while

S		

2017, and NEC 2020 section 690.12 and C22.1-2015 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors, when installed according manufacturer's instructions.



Data Sheet Enphase Networking

Enphase IQ Combiner 3-ES/3C-ES X-IQ-AM1-240-3-ES X-IQ-AM1-240-3C-ES **ENPHAS**

X-IQ-AM1-240-3C-ES

LISTED

X-IQ-AM1-240-3-ES

The Enphase IQ Combiner 3-ES/3C-ES[™] with Enphase IQ Envoy[™] and integrated LTE-M1 cell modem (included only with IQ Combiner 3C-ES) consolidates interconnection equipment into a single enclosure and streamlines PV and storage installations by providing a consistent, pre-wired solution for residential applications. It offers up to four 2-pole input circuits and Eaton BR series busbar assembly.

Smart

- Includes IQ Envoy for communication and control Includes LTE-M1 cell modem (included only with
- IQ Combiner 3C-ES) • Includes solar shield to match Ensemble esthetics and
- deflect heat
- Flexible networking supports Wi-Fi,
- Ethernet, or cellular • Optional AC receptacle available for PLC bridge
- Provides production metering and consumption monitoring

Simple

- Reduced size from IQ Combiner+ (X-IQ-AM1-240-2) • Centered mounting brackets support single
- stud mounting
- Supports back and side conduit entry • Up to four 2-pole branch circuits for 240 VAC
- plug-in breakers (not included)
- 80 A total PV or storage branch circuits

Reliable

- Durable NRTL-certified NEMA type 3R enclosure
- Five-year limited warranty • Two years labor reimbursement program coverage
- included for both the Combiner SKU's
- UL listed



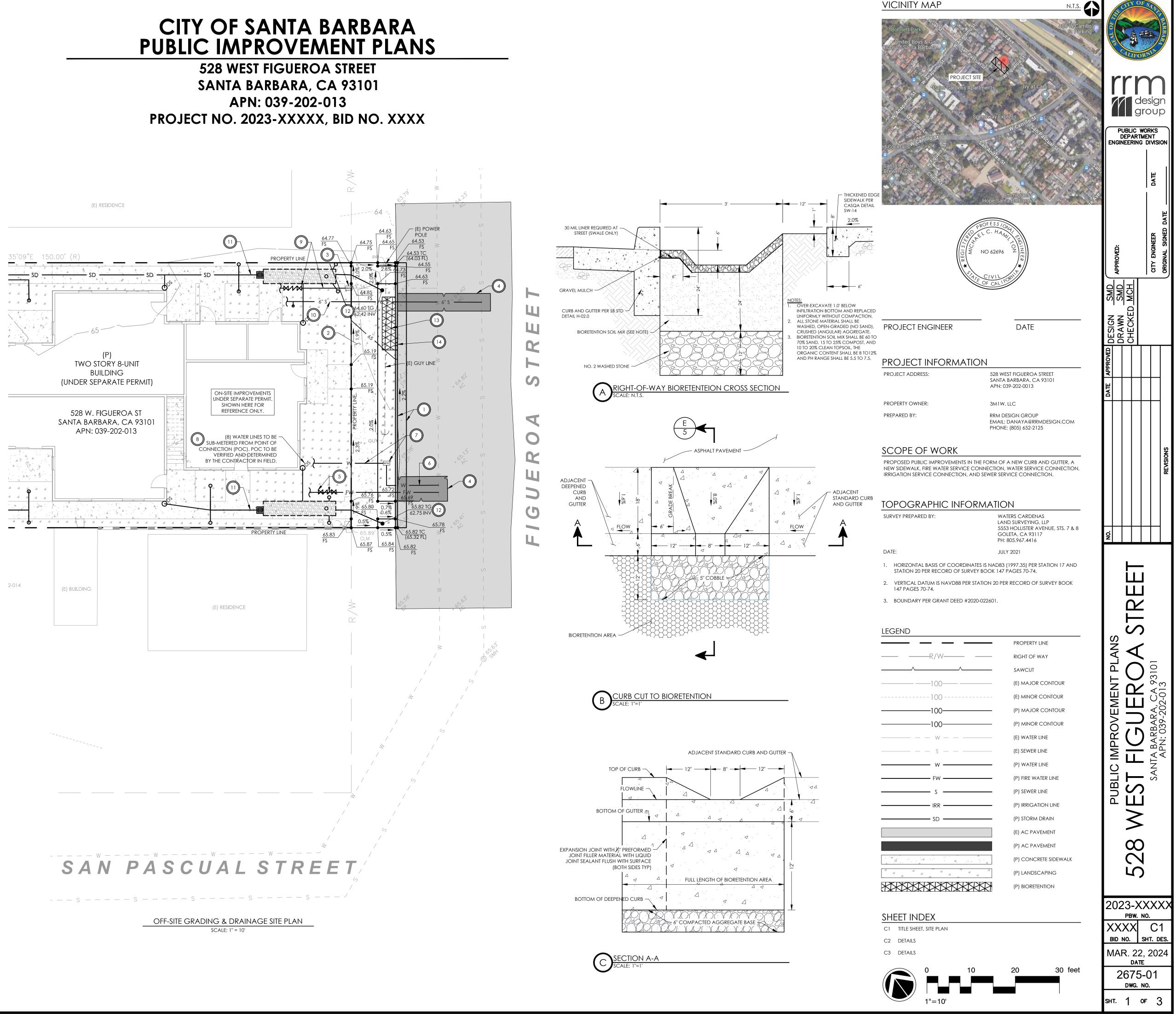
	LISTED To learn more about Enphase offerings, visi	t <u>enphase.com</u> \bigcirc ENPHASE.	. 0														ļ		н 1 1
sign.com	Enphase IQ Combiner 3-ES / 3	C-ES																ЫЩ	ר אַ אַ אַ אָ
arde	MODEL NUMBER			_	- 1 \	\// N	(I)-)-	$-\mathbf{A}$	K '		M		1 /	2 SE	_H)				$\overline{2}$
efficientsola 951-541-8	IQ Combiner 3-ES (X-IQ-AM1-240-3-ES)	IQ Combiner 3-ES with Enphase IQ Envoy printed circuit board for integrated revenue grade PV production metering (ANSI C12.20 +/- 0.5%) and consumption monitoring (+/- 2.5%). Includes a silver solar shield to match the Encharge storage system and Enpower smart switch and to deflect heat.				VVII		_/ \					J / 2	JL				AR	NA, A
IGNER SIG:	IQ Combiner 3C-ES (X-IQ-AM1-240-3C-ES)	IQ Combiner 3C-ES with Enphase IQ Envoy printed circuit board for integrated revenue grade PV production metering (ANSI C12.20 +/- 0.5%) and consumption monitoring (+/- 2.5%). Includes Enphase Mobile Connect LTE-M1 (CELLMODEM-M1), a plug-and-play industrial-grade cell modem for systems up to 60 microinverters. (Available in the US, Canada, Mexico, Puerto Rico, and the US Virgin Islands, where there is adequate cellular service in the installation area.) Includes a silver solar shield to match the Encharge storage system and Enpower smart switch and to deflect heat.	in "	28 [U]			2005 (7		+	460 [18)% EFFIC				A AP,	FIGUE
	ACCESSORIES and REPLACEMENT PARTS	(not included, order separately)	-						1200 [47]				20	YEAF	R PRODUC	T WARRANTY	/		
<u>LCS BY:</u> J.M.	Ensemble Communications Kit (COMMS-CELLMODEM-M1)	Includes COMMS-KIT-01 and CELLMODEM-M1 with 5-year data plan for Ensemble sites											25		R LINEAR				$\leq \mathbf{E} \leq$
<u>ECKED BY:</u> C.G. RAFTED: 0/18/23	Circuit Breakers BRK-10A-2-240 BRK-15A-2-240 BRK-20A-2P-240	Supports Eaton BR210, BR215, BR220, BR230, BR240, BR250, and BR260 circuit breakers. Circuit breaker, 2 pole, 10A, Eaton BR210 Circuit breaker, 2 pole, 15A, Eaton BR215 Circuit breaker, 2 pole, 20A, Eaton BR220	(axe) (axe)		L 11 [0.43	8]						1001 [394] ± 25	GENERAL D	АТА		RANTY		UEF	528 VTA
OJECT ID:	EPLC-01	Power line carrier (communication bridge pair), quantity - one pair			P [026]	V							Cell type:	144 na		is of 24 cells in series		C	
0 23-661	XA-SOLARSHIELD-ES	Replacement solar shield for Combiner 3-ES / 3C-ES	-		3 A C								Glass:		0.13" (3.2 r	nm) solar glass with	h		A V
	XA-PLUG-120-3	Accessory receptacle for Power Line Carrier in IQ Combiner 3-ES / 3C-ES (required for EPLC-01)		V . 1				<u> </u>	1200 [47]		±		Backsheet:			n surface treatment			S
	XA-ENV-PCBA-3	Replacement IQ Envoy printed circuit board (PCB) for Combiner 3-ES / 3C-ES	<u>e</u>	45 [18	3]		• 	0		0			Frame:	підпіу		ymeric construction Anodized aluminum		— I	
	ELECTRICAL SPECIFICATIONS	Replacement to Envoy printed circuit board (POB) for combiner 5-237 30-23		-	710 [28.0]		4	200 [77]		802.5 [31.6]		¥ω	Support ba			Anodized aluminum	n		
)		Continuous dutu											Junction bo	х: З-р	part, 3 bypass	s diodes, IP67 rated ordance with IEC 62790			
	Rating	Continuous duty	All measure	rements in mm	[in]								Cable:		4 mm² sola	ir cable, 1.2 m + 1.2 m	n		
52 18	System voltage	120/240 VAC, 60 Hz	ELECTR	RICAL DATA	@ STC			Product	ode*: RECx	xxTP2SM 72	2		Connectors			cordance with EN 50618 Cable01S-F (4 mm²)			
B/C10 744962 805-455-1848	Eaton BR series busbar rating	125 A	Nomina	alPower-P _{MF}	_{PP} (Wp)	370) 375	38) 385		395	400	Connectors			² 68 only when connected			
744 5-1	Max. continuous current rating	65 A		lass Sorting-		0/+5	5 0/+5	0/+	5 0/+5	0/+5	0/+5	0/+5	Origin:			Made in Singapore	<mark>)</mark>		
45	Max. continuous current rating (input from PV/storage)			al Power Volt			3 40.1	40.	3 40.5		40.9	41.1					/		
)5- 75	Max. fuse/circuit rating (output)	90 A		al Power Curr				9.4			9.66	9.73	MAXIMUM	RATINGS					
В/ 8(Branch circuits (solar and/or storage)	Up to four 2-pole Eaton BR series Distributed Generation (DG) breakers only (not included)	Open Cir	Circuit Voltag	e-V _{oc} (V)	47.0) 47.4	48.) 48.6	49.2	49.8	50.4	Operationa	ltemperature	e: -40+	185°F (-40 +85°C)	, I		
	Max. total branch circuit breaker rating (input)	80A of distributed generation / 95A with IQ Envoy breaker included		Circuit Currer		10.02	2 10.04	10.0	5 10.07	10.08	10.09	10.10	Maximumsy	stem voltage:		1000V/1500V			SED ARCA
	Envoy breaker	10A or 15A rating GE/Siemens/Eaton included	PanelEf	Efficiency (%)		18.4	4 18.7	18.	9 19.2	19.4	19.7	20.0	Design load			5.2 lbs/ft ² (3600 Pa)		CHEN.	SAMUE
	Production metering CT	200 A solid core pre-installed and wired to IQ Envoy				TC (airmass A№ and cell tempera						d	Maximumte			2.8 lbs/ft ² (5400Pa)*			10
	Consumption monitoring CT (CT-200-SPLIT)	A pair of 200 A split core current transformers	* xxx indic	icates the nomina	al power class (P	_{MPP}) at STC, and c	can be followed b	by the suffix λ	V for modules v	ith a 1500 V max	imum system rat	u. ting.	Design load Maximum te			3.4 lbs/ft² (1600 Pa)⁺ 0.1 lbs/ft² (2400 Pa)*			P ODALLA P
	MECHANICAL DATA												Max series f	.,		25A	e e		C-22451 Ź
	Dimensions (WxHxD)	37.5 x 49.5 x 16.8 cm (14.75" x 19.5" x 6.63"). Height is 21.06" (53.5 cm) with mounting brackets.	ELECTR	RICAL DATA	@ NMOT			Product	ode*: RECx	xxTP2SM 72	2		Maxreverse			25 A	Ę	H	
_	Weight	7.5 kg (16.5 lbs)	Nomina	alPower-P _{MF}	_{PP} (Wp)	276	5 280	28	3 287	290	295	298				ing a safety factor of 1.5 or mounting instructions		A A	OF CALIFORNIA
101	Ambient temperature range	-40° C to +46° C (-40° to 115° F)	Nomina	al Power Volt	age-V _{MPP} (V)) 37.	1 37.3	37.	5 37.7	37.9	38.1	38.3					ns sr		OF CALIFO!
5Т. 93	Cooling	Natural convection, plus heat shield		al Power Curr	*******************************	7.44	4 7.49	7.5	4 7.60	7.66	7.73	7.78	TEMPERAT	JRE RATINGS			catio		
ĕ ĕ	Enclosure environmental rating	Outdoor, NRTL-certified, NEMA type 3R, polycarbonate construction		Circuit Voltage		43.7		44.	7 45.3	45.8	46.4	46.9	Nominal Mo	dule Operatir	ng Temperatu	ure: 44.6°C (±2°C)	ecifi	Revis	ion Schedul
528 W FIGUERIA ST. NTA BARBARA, CA 93101	Wire sizes	 20 A to 50 A breaker inputs: 14 to 4 AWG copper conductors 60 A breaker branch input: 4 to 1/0 AWG copper conductors Main lug combined output: 10 to 2/0 AWG copper conductors Neutral and ground: 14 to 1/0 copper conductors 	Nominal o		temperature N	8.02 NOCT (800 W/r 9 _{MPP}) at STC, and c	m², AM 1.5, win	dspeed 1 m/				8.08 ting.	Temperatu	e coefficient o e coefficient o e coefficient o	ofV _{oc} : ofI _{sc} :	-0.37 %/°C -0.28 %/°C 0.04 %/°C	0.19	2 PL1	N#4 02.12.2
3AF		Always follow local code requirements for conductor sizing.	CERTIF	FICATION				WARRAM	ТҮ					*The temperat	ture coefficients	stated are linear values	e-B	3 PC	×#1 03.27.2
528 SANTA B	Altitude	To 2000 meters (6,560 feet)			$\overline{\mathbf{a}}$, ,	roduct war	,			MECHANIC	L DATA			23R		
N1 S					¥E∕					output warra sion of 0.5% p.a		n vear 1	Dimensions		x39.4"x12"(2005 x 1001 x 30 mm)	2-07		
SA	Integrated Wi-Fi	802.11b/g/n				0.100 °	100001		-	or fur ther deta			Area:		(,	21.6 ft ² (2.01 m ²)	· -		
	Cellular	CELLMODEM-M1-06 4G based LTE-M1 cellular modem (included only with IQ Combiner 3C-ES). Note that an Enphase Mobile Connect cellular modem is required for all Ensemble installations.	IEC 61215, IEC 61701	5, IEC 61730, IEC 01 (Salt Mist leve	C 62804 (PÌD), I el 6),	0 V XV): Type 2 (IEC 62716 (Amm							Weight:			48.5 lbs (22 kg)	147.1		
aic	Ethernet	Optional, 802.3, Cat5E (or Cat 6) UTP Ethernet cable (not included)	150 9001:	1: 2015, ISO 1400	J1: ∠UU4, UHSA!	J 10001:2007													
a H	COMPLIANCE Compliance, Combiner	UL 1741, CAN/CSA C22.2 No. 107.1, 47 CFR, Part 15, Class B, ICES 003	-														ļ		
Photovoltaic System	Compliance, Compliner	Production metering: ANSI C12.20 accuracy class 0.5 (PV production) Consumption metering: accuracy class 2.5															ļ	Project N	/anager Designe
h v	Compliance, IQ Envoy	UL 60601-1/CANCSA 22.2 No. 61010-1	_														ļ	Scale	2 coigno
										1.2				ja an o			[/		NTS
ET:	To learn more about Enphase offerings, visi									en	ergy company	Through integ	rated manufactu	vertically integra	to wafers		ļ	PrintDate	
1.6 ©	© 2021 Enphase Energy. All rights reserved. Enphase, the Enp are trademarks of Enphase Energy, Inc. Data subject to chang		3							is Blu he	orld with a reliat supported by t uestar Elkem o adquarters in S	ble source of cl the lowest wa company with Singapore. RE	lean energy. REC rranty claims ra headquarters i C employs arour	solutions, REC pr s renowned produ te in the industry n Norway and o d 2,000 people v	uct quality y. REC is a perational	😡 REC			4 4:39:24 PM
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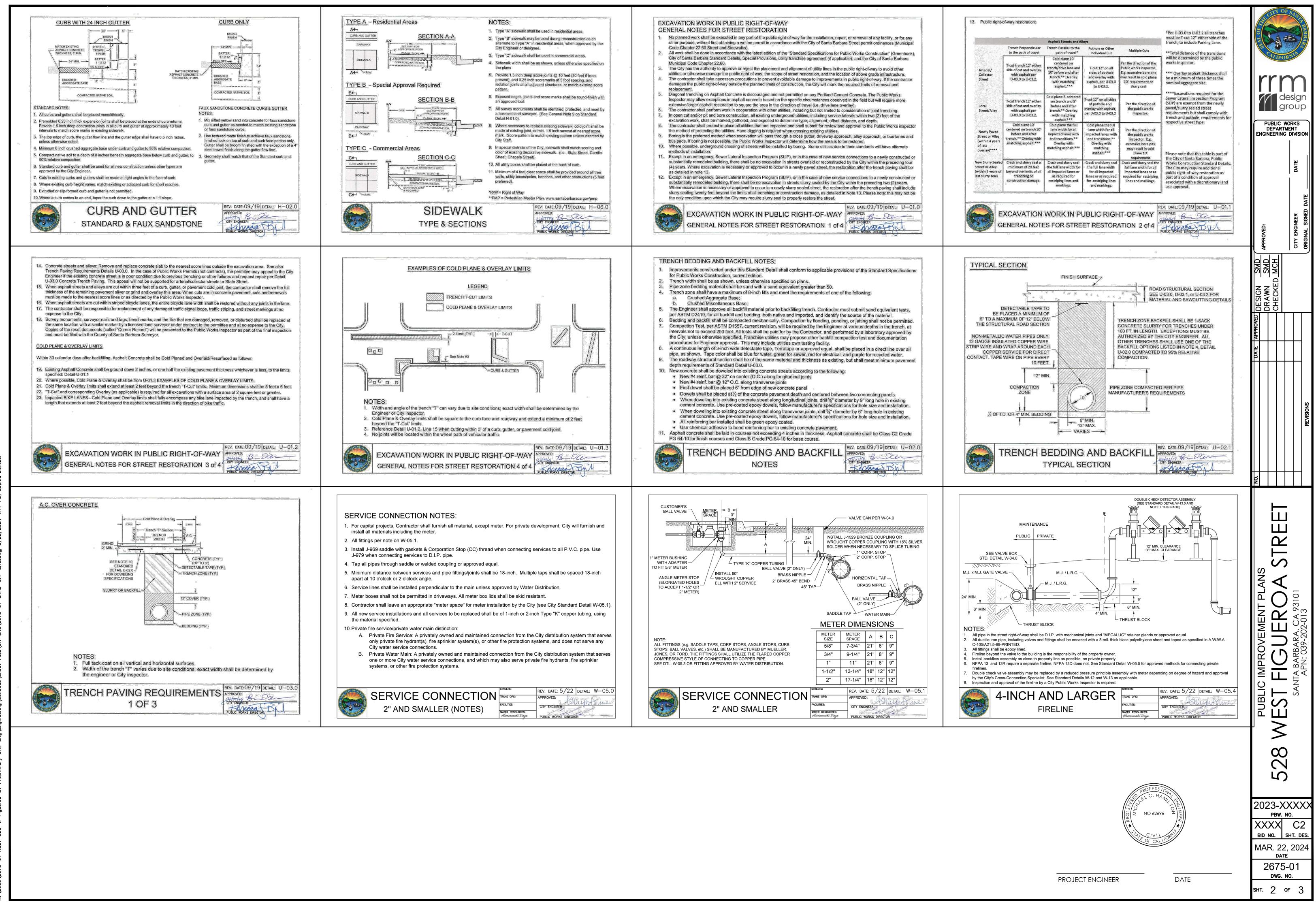


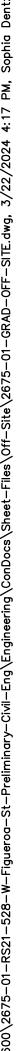
	ON DESIGN,LLC Architecture Planning Interior Design Keith Nolan C -22541
	• P.O. BOX 598 • Santa Barbara • California • 93102
2 SEERIES 0.0% EFFICIENCY VEAR PRODUCT WARRANTY VEAR PRODUCT WARRANTY VEAR PRODUCT WARRANTY VEAR PRODUCT WARRANTY VEAR INEAR POWER OUTPUT WARRANTY Pereine 144 half-cut monocrystalline PERC cells Strings of 24 cells in series O.13" (3.2 mm) solar glass with anti-reflection surface treatment anti-reflection surface treatment mactordance with IEC 62790 Mana Solar cable, 1.2 m + 1.2 m inaccordance with IEC 62790 Amma Solar cable, 1.2 m + 1.2 m inaccordance with IEC 62790 Amma Solar cable, 1.2 m + 1.2 m inaccordance with IEC 62790 Mana Solar cable, 1.2 m + 1.2 m inaccordance with IEC 62790 Comparison of the solar cable, 1.2 m + 1.2 m inaccordance with IEC 62790 Comparison of the solar cable, 1.2 m + 1.2 m inaccordance with IEC 62790 Comparison of the solar cable, 1.2 m + 1.2 m inaccordance with IEC 62790 Comparison of the solar cable, 1.2 m + 1.2 m inaccordance with IEC 62790 Comparison of the solar cable, 1.2 m + 1.2 m inaccordance with IEC 62790 Comparison of the solar cable, 1.2 m + 1.2 m inaccordance with IEC 62790 Comparison of the solar cable, 1.2 m + 1.2 m inaccordance with IEC 62790 Comparison of the solar cable, 1.2 m + 1.2 m inaccordance with IEC 62790 Comparison of the solar cable, 1.2 m + 1.2 m inaccordance with IEC 62790 Comparison of the solar cable, 1.2 m + 1.2 m inaccordance with IEC 62790 Comparison of the solar cable, 1.2 m + 1.2 m inaccordance with IEC 62790 Comparison of the solar cable, 1.2 m + 1.2 m inaccordance with IEC 62790 Comparison of the solar cable, 1.2 m + 1.2 m inaccordance with IEC 62790 Comparison of the solar cable, 1.2 m + 1.2 m inaccordance with IEC 62790 Comparison of the solar cable, 1.2 m + 1.2 m inaccordance with IEC 62790 Comparison of the solar cable, 1.2 m + 1.2 m inaccordance wi	• •
RUM RATINGS tional temperature: $-40 \dots +185^\circ F(-40 \dots +85^\circ C)$ um system voltage: $1000 \vee /1500 \vee$ load (+): $112.8 \ln b / ft^2 (3600 Pa)^2$ um test load (+): $112.8 \ln b / ft^2 (1600 Pa)^2$ um test load (-): $50.1 \ln b / ft^2 (1600 Pa)^2$ um test load (-): $50.1 \ln b / ft^2 (2400 Pa)^2$ um test load (-): $50.1 \ln b / ft^2 (2400 Pa)^2$ um test load (-): $50.1 \ln b / ft^2 (2400 Pa)^2$ rise fuse rating: $25A$ verse current: $25A$ + Calculated using a safety factor of 1.5 *See installation manual for mounting instructions RATURE RATINGS al Module Operating Temperature: $44.6^\circ C (\pm 2^\circ C)$ trature coefficient of P_{MPP} : $-0.37 \% ^\circ C$ trature coefficient of I_{SC} : $0.04 \% ^\circ C$ wrature coefficient of I_{SC} : $0.04 \% ^\circ C$ wrature coefficient of I_{SC} : $0.04 \% ^\circ C$ wrature coefficient of I_{SC} : $0.04 \% ^\circ C$ wrature coefficient of I_{SC} : $0.04 \% ^\circ C$ wrature coefficient of I_{SC} : $0.04 \% ^\circ C$ wrature: $78.9^\circ x 39.4^\circ x 1.2^\circ (2005 x 1001 x 30 mm)$ <	Revision Schedule 2 PLN#402.12.24 3 PC#103.27.24
ading vertically integrated solar ufacturing from silicon to wafers, solar solutions, REC provides the , REC's renowned product quality ms rate in the industry. REC is a ters in Norway and operational around 2,000 people worldwide, www.recgroup.com	Project Manager Designer Scale NTS PrintDate 3/27/2024 4:39:24 PM

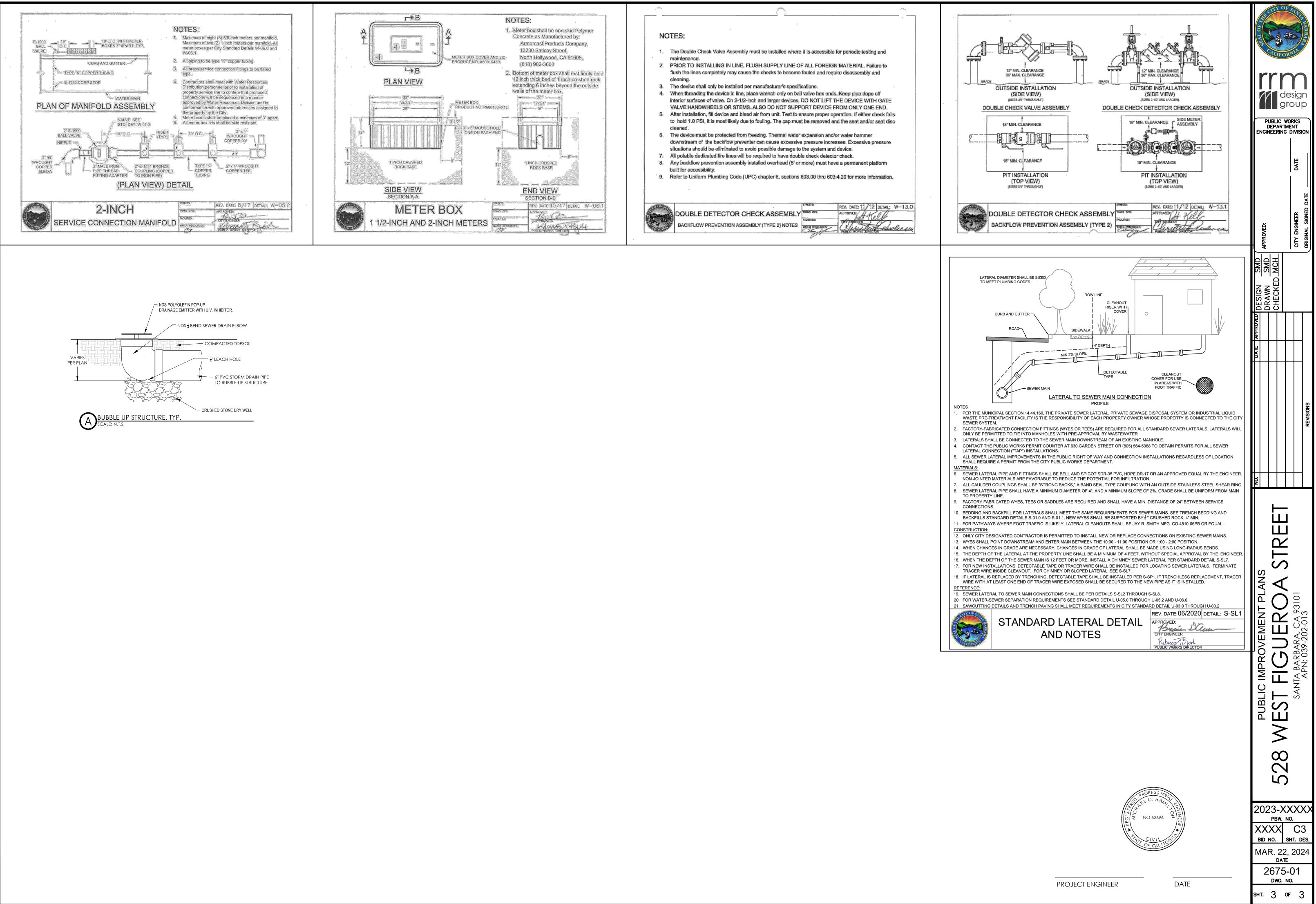
CONSTRUCTION NOTES

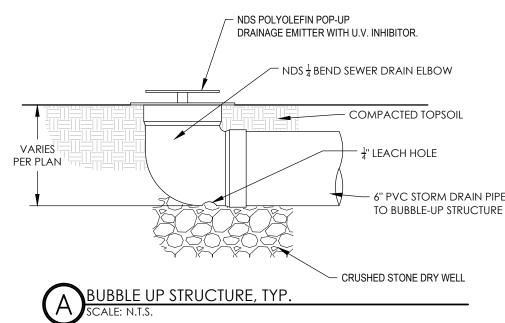
- CONSTRUCT 6" CURB AND 24" GUTTER PER CITY OF SANTA BARBARA STANDARD DETAIL H-02.0, SEE SHEET C2.
- CONSTRUCT CONCRETE SIDEWALK PER CITY OF SANTA BARBARA STANDARD DETAIL H-06.0, SEE SHEET C2.
- (3) PROTECT EXISTING ⁵" WATER METER SERVICE LATERAL FOR IRRIGATION.
- SAWCUT, TRENCH, AND BACKFILL UTILITIES PER CITY OF SANTA BARBARA STANDARD DETAILS U-01.0, U-01.1, U-01.2, U-01.3, U-02.0, U-.2.1 AND U-03.0, SEE SHEET C2.
- (5) CONSTRUCT 4" FIRE WATER SERVICE LINE CONNECTION TO EXISTING WATER MAIN PER CITY OF SANTA BARBARA STANDARD DETAIL W-05.4, SEE SHEET C2. CONSTRUCT 4" DOUBLE CHECK ASSEMBLY PER CITY OF SANTA BARBARA STANDARD DETAILS W-13.0 AND W-13.1, SEE SHEET C3. CITY TO TAP AND INSTALL VALVE AT MAIN.
- 6 CONSTRUCT 2" WATER SERVICE LINE CONNECTION TO EXISTING WATER MAIN PER CITY OF SANTA BARBARA STANDARD DETAILS W-05.0 AND W-05.1, SEE SHEET C2. CITY TO TAP AND INSTALL VALVE AT MAIN.
- CONSTRUCT 2" WATER SERVICE LINE AND MASTER 1 1 WATER METER PER CITY OF SANTA BARBARA 2" SERVICE CONNECTION STANDARD DETAIL W-05.1, SEE SHEET C2, AND METER BOX STANDARD DETAIL W-6.1, SEE SHEET C3.
- (8) CONSTRUCT EIGHT (8) 2" WATER SERVICE LINES SUB-METERED FROM MASTER WATER METER TO UNITS ON PARCEL 039-202-013. CONTRACTOR TO VERIFY
- POINT OF CONNECTIONS IN FIELD. CONSTRUCT IRRIGATION LINE CONNECTED TO EXISTING WATER METER WITH
- FEBCO LF825YA IRRIGATION BACKFLOW PREVENTER.
- REMOVE EXISTING 4" SEWER LATERAL AND CONSTRUCT 6" PVC SEWER CONNECTION TO SEWER MAIN PER CITY OF SANTA BARBARA STANDARD DETAIL S-SL1, SEE SHEET C3. CONTRACTOR TO VERIFY POINT OF CONNECTION IN FIELD.
- FURNISH AND INSTALL 6" PVC STORM DRAIN @ 1.0% SLOPE, AS AN EMERGENCY OVERFLOW TO STORM DRAIN SYSTEM ON PARCEL 039-202-013.
- FURNISH AND INSTALL 6" BUBBLE-UP STRUCTURE PER DETAIL 'A', SHEET C3, NDS OR APPROVED EQUIVALENT.
- ((13)) CONSTRUCT BIORETENTION AREA PER DETAIL A, THIS SHEET.
- (14) CONSTRUCT CURB CUT PER DETAIL B AND C, THIS SHEET.

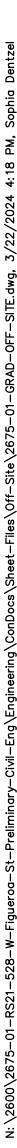


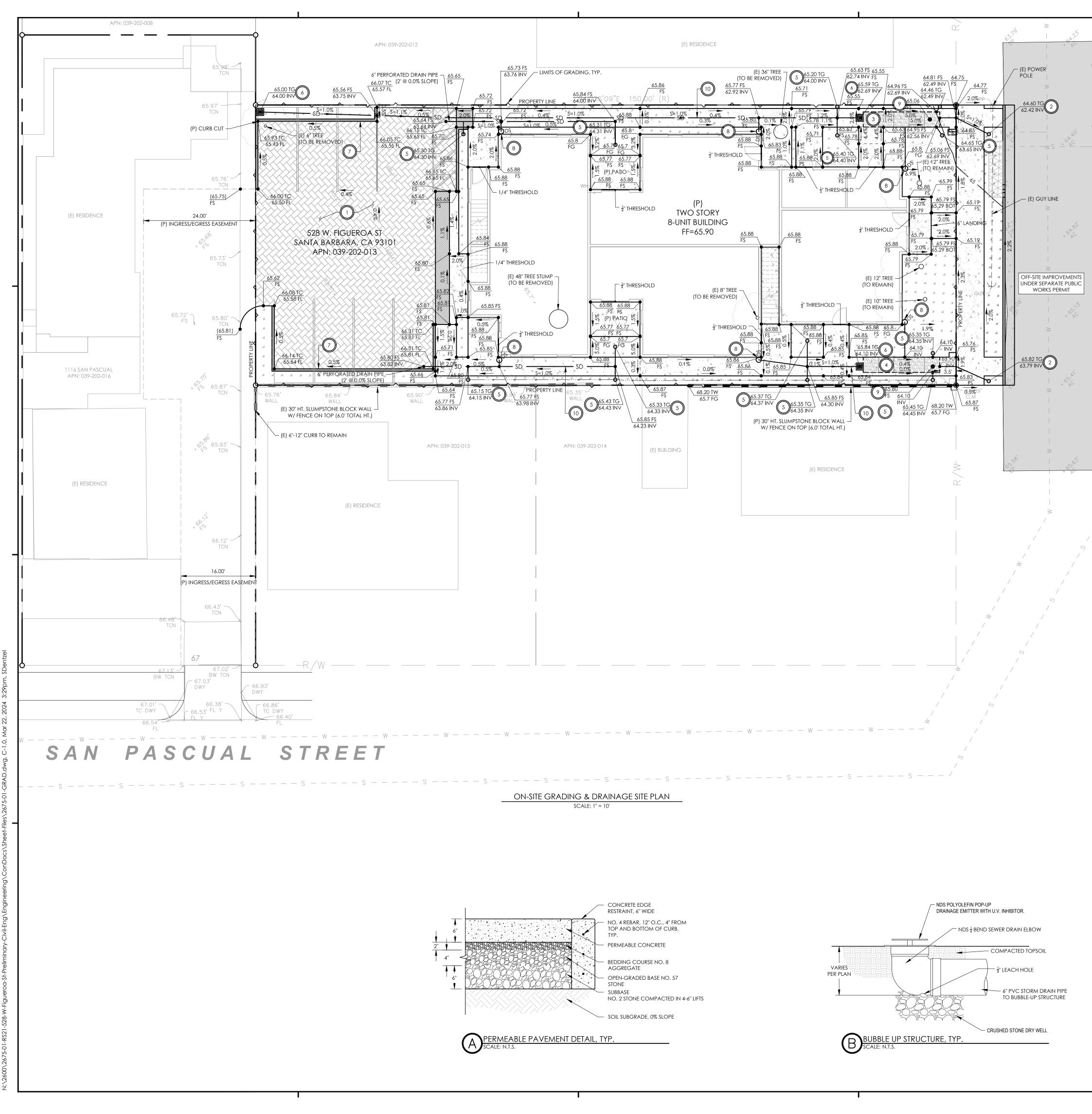












LEGEND
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a. 4
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PROPERTY LINE
(P) EASEMENT
RIGHT OF WAY
LIMITS OF GRADING
GRADE BREAK
(E) MAJOR CONTOUR
(E) MINOR CONTOUR
(P) MAJOR CONTOUR
(P) MINOR CONTOUR
(P) FLOWLINE
(P) STORM DRAIN
(E) WATER LINE
(E) SEWER LINE
(E) ASPHALT PAVEMENT
(P) CONCRETE PAVEMENT
(P) PERMEABLE PAVEMENT
(P) LANDSCAPING
(P) RAINSTORE 3 STORAGE

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AGENCY

CONSTRUCT PERMEABLE CONCRETE PER DETAIL 'A' THIS SHEET.
FURNISH AND INSTALL 6" BUBBLE-UP STRUCTURE PER DETAIL "B' THIS SHEET, NDS OR APPROVED EQUIVALENT.
CONSTRUCT RAINSTORE STORAGE PER DETAIL 'A' AND 'B' SHEET, C5. 5 STACKS OF 9 RAINSTORE UNITS. TOP OF RAINSTORE ELEVATION: 62.69 STORAGE PLAN DIMENSIONS: 3.28' BY 16.4'
CONSTRUCT RAINSTORE STORAGE PER DETAIL 'A' AND 'B' SHEET, C5. 5 STACKS OF 7 RAINSTORE UNITS. TOP OF RAINSTORE ELEVATION: 64.10 STORAGE PLAN DIMENSIONS: 3.28' BY 16.4'
5 FURNISH AND INSTALL 4" PVC RISER WITH 6" ATRIUM DRAIN INLET.
6 FURNISH AND INSTALL PRECAST 12"x12" CATCH BASIN, JENSEN OR APPROVED EQUIVALENT WITH GRATE.
CONSTRUCT 6" CONCRETE CURB PER CITY STANDARD DETAIL H 2.0, SHEET C- 4.0.
8 CONNECT DOWNSPOUT DIRECTLY TO STORM DRAIN.
9 INSTALL 9" MAINTENANCE PORT PER DETAIL 'B' ON SHEET, C5.
(10) FURNISH AND INSTALL 6" PVC STORM DRAIN.

EARTHWORK QUANTITIES

RAW CUT:	108 CF (4 CY)
RAW FILL:	4,131 CF (153 CY)
NET QTY:	4,023 CF (149 CY)
TOTAL DISTURBED AREA:	9,000 SF (0.21 AC)
THE RAW EARTHWORK QUAN	TITIES SHOWN HEREON REPRESENT THE ESTIMATED
VOLUMETRIC DIFFERENCE BET	WEEN THE PROPOSED ROUGH GRADE AND THE
LIMITED TOPOGRAPHIC EXISTI	NG GRADES. THESE ESTIMATES DO NOT MAKE
CONSIDERATIONS FOR LOSSES	s or bulking due to: shrinkage, soil
AMENDMENTS, STABILIZATION	, CONSTRUCTION TECHNIQUE, FOOTING &
TRENCHING SPOILS, ETC. THE	SE, IN ADDITION TO ACTUAL FIELD CONDITIONS

OT MAKE SOIL TING & ONDITIONS AND THE FINAL RECOMMENDATIONS OF THE SOILS ENGINEER MAY SIGNIFICANTLY EFFECT THE FINAL IMPORT/EXPORT QUANTITIES.

TOPOGRAPHIC INFORMATION SURVEY PREPARED BY:

WATERS CARDENAS LAND SURVEYING, LLP 5553 HOLLISTER AVENUE, STS. 7 & 8 GOLETA, CA 93117 PH: 805.967.4416

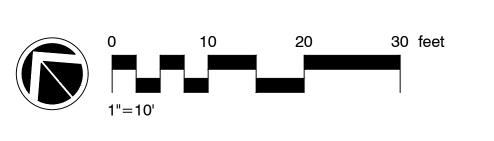
JULY 2021

- 1. HORIZONTAL BASIS OF COORDINATES IS NAD83 (1997.35) PER STATION 17 AND STATION 20 PER RECORD OF SURVEY BOOK 147 PAGES 70-74.
- 2. VERTICAL DATUM IS NAVD88 PER STATION 20 PER RECORD OF SURVEY BOOK 147 PAGES 70-74.
- 3. BOUNDARY PER GRANT DEED #2020-022601.

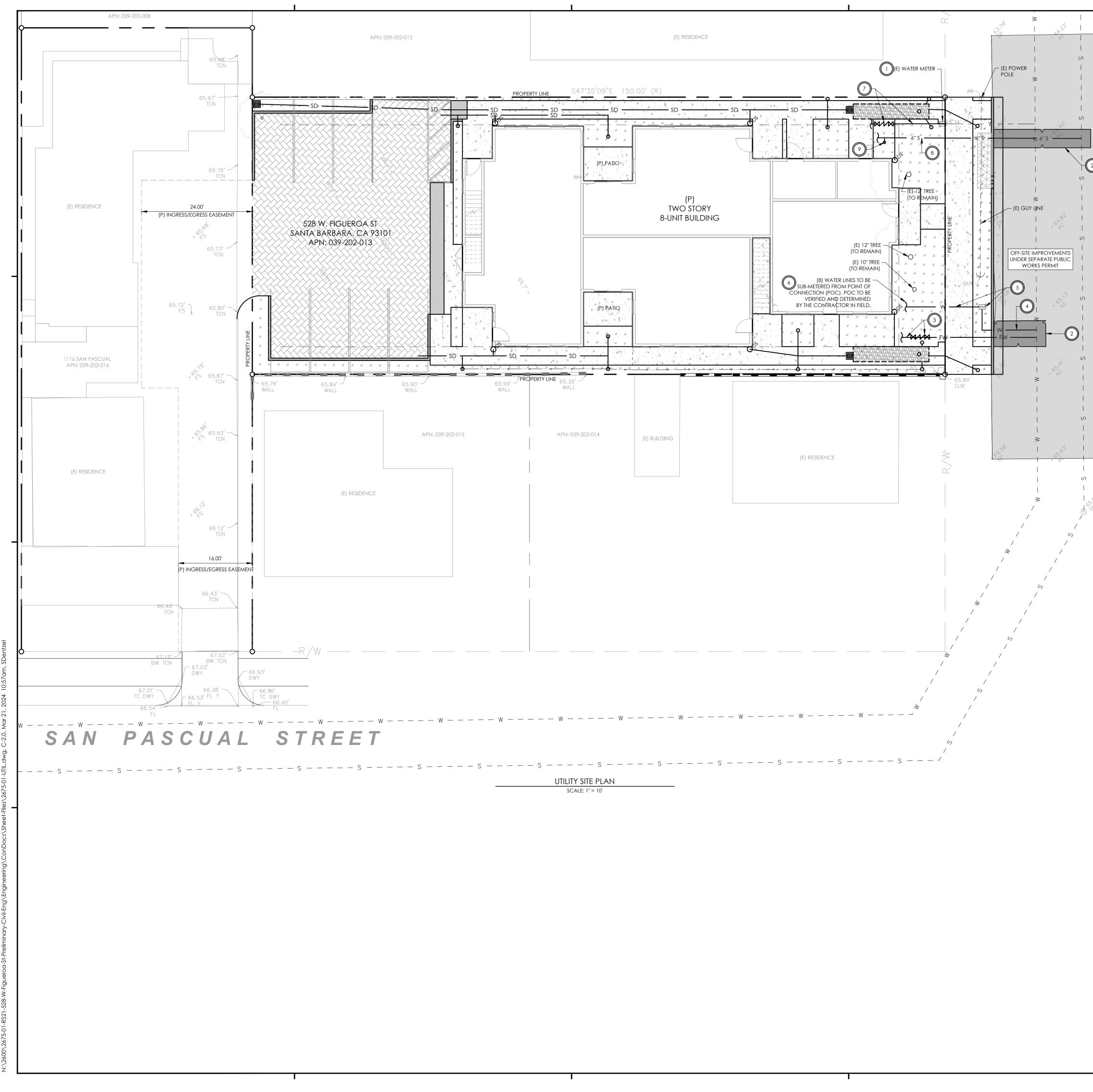
SHEET INDEX

DATE:

- C-1.0 ON-SITE GRADING & DRAINAGE PLAN C-2.0 UTILITY PLAN
- C-3.0 EROSION AND SEDIMENT CONTROL PLAN
- C-4.0 DETAILS
- C-5.0 DETAILS



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SI DATE M	N	 NO.	FIGHEROA APARTMENTS
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<u>мс</u> 24			APN: 039-202-013
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PROPERTY LINE
(P) EASEMENT
RIGHT OF WAY
SAWCUT
(E) WATER LINE
(E) SEWER LINE
(P) WATER LINE
(P) FIRE WATER LINE
(P) SEWER LINE
(P) IRRIGATION LINE
(P) STORM DRAIN
(E) AC PAVEMENT
(P) AC PAVEMENT
(P) PERMEABLE CONCRETE
(P) CONCRETE WALKWAY
(P) RAINSTORE 3 STORAGE

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AGENCY

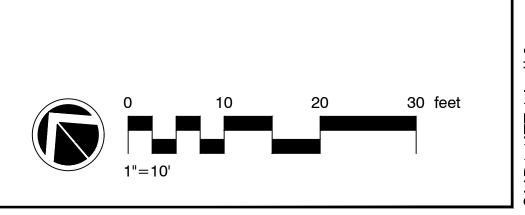
CONSTRUCTION NOTES

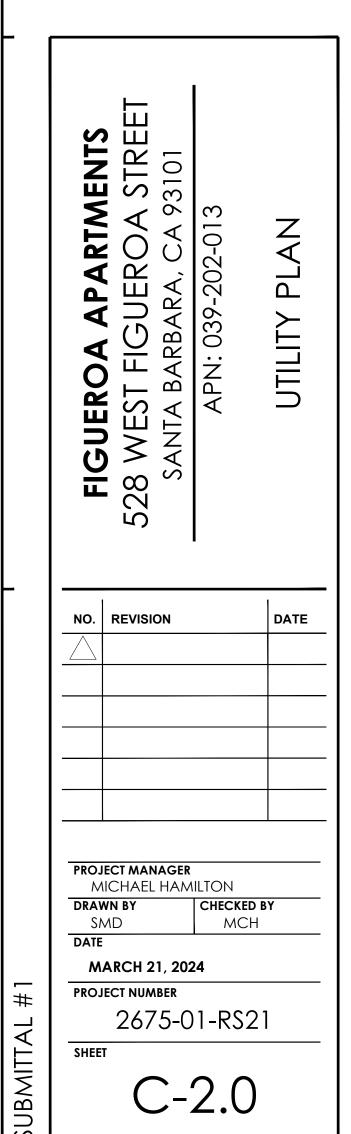
1) PROTECT EXISTING ⁵" WATER METER SERVICE LATERAL FOR IRRIGATION.

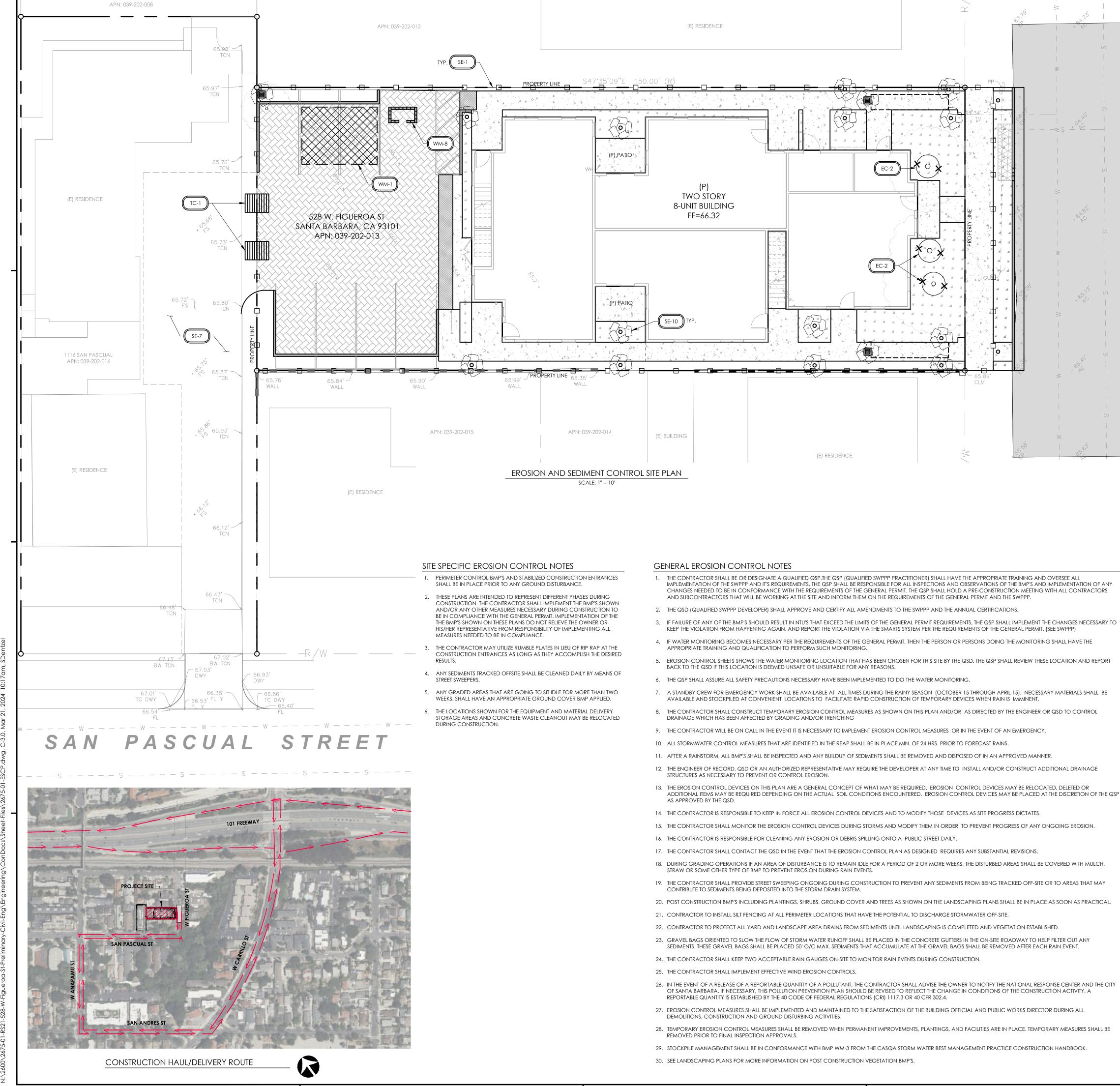
- SAWCUT, TRENCH, AND BACKFILL UTILITIES PER CITY OF SANTA BARBARA STANDARD DETAILS U-01.0, U-01.1, U-01.2, U-01.3, U-02.0, U-.2.1 AND U-03.0, SEE SHEET C-4.0.
- (3) CONSTRUCT 4" FIRE WATER SERVICE LINE CONNECTION TO EXISTING WATER MAIN PER CITY OF SANTA BARBARA STANDARD DETAIL W-05.4, SEE SHEET C-4.0. CONSTRUCT 4" DOUBLE CHECK ASSEMBLY PER CITY OF SANTA BARBARA STANDARD DETAILS W-13.0 AND W-13.1, SEE SHEET C-5.0. CITY TO TAP AND INSTALL VALVE AT MAIN.
- CONSTRUCT 2" WATER SERVICE LINE CONNECTION TO EXISTING WATER MAIN PER CITY OF SANTA BARBARA STANDARD DETAILS W-05.0 AND W-05.1, SEE SHEET C-4.0. CITY TO TAP AND INSTALL VALVE AT MAIN.
- Construct 2" water service line and master 1 $\frac{1}{2}$ " water meter per city of santa barbara 2" service connection standard detail W-05.1, and METER BOX STANDARD DETAIL W-6.1, SEE SHEET C-4.0.
- 6 CONSTRUCT EIGHT (8) 2" WATER SERVICE LINES SUB-METERED FROM MASTER WATER METER TO UNITS ON PARCEL 039-202-013. CONTRACTOR TO VERIFY POINT OF CONNECTIONS (POCs) IN FIELD.
- CONSTRUCT IRRIGATION LINE CONNECTED TO EXISTING WATER METER WITH FEBCO LF825YA IRRIGATION BACKFLOW PREVENTER.
- 8 REMOVE EXISTING 4" SEWER LATERAL AND CONSTRUCT 6" PVC SEWER CONNECTION TO SEWER MAIN PER CITY OF SANTA BARBARA STANDARD DETAIL S-SL1, SHEET C-4.0. CONTRACTOR TO VERIFY POINT OF CONNECTIONS IN FIELD.
- (9) INSTALL SANITARY SEWER CLEANOUT PER CITY OF SANTA BARBARA STANDARD DETAIL S-SL1, SHEET C-4.0.

GENERAL NOTES

- 1. ALL EXISTING UNDERGROUND UTILITY INFORMATION SHOWN IS GATHERED FROM BEST AVAILABLE SOURCES. ACCURACY OF HORIZONTAL AND VERIFIED.
- 2. CONTRACTOR SHALL VERIFY ALL UTILITY CONNECTION POINTS PRIOR TO CONSTRUCTION.
- 3. WATERLINES SHALL BE CONSTRUCTED WITH A MINIMUM 36" COVER UNLESS OTHERWISE NOTED.
- 4. DRY UTILITIES, IF ANY, ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
- EXACT LOCATIONS, MATERIALS, AND CONSTRUCTION SHALL BE VERIFIED. 5. SEE GRADING AND DRAINAGE PLAN FOR STORM DRAIN CONSTRUCTION.







- 20. POST CONSTRUCTION BMP'S INCLUDING PLANTINGS, SHRUBS, GROUND COVER AND TREES AS SHOWN ON THE LANDSCAPING PLANS SHALL BE IN PLACE AS SOON AS PRACTICAL.

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CASQA CONSTRUCTION SITE BEST MANAGEMENT PRACTICES (BMPs)

TEMPORARY SOIL STABILIZATION
EC-1: SCHEDULING

EC-1: SCHEDULING
EC-2: PRESERVATION OF EXISTING VEGETATION
EC-3: HYDRAULIC MULCH
EC-4: HYDROSEEDING
EC-5: SOIL BINDERS
EC-6: STRAW MULCH
EC-7: GEOTEXTILES, PLASTIC COVERS, & EROSION CONTROL BLANKETS/MATS
EC-8: WOOD MULCHING
EC-9: EARTH DIKES/DRAINAGE SWALES & LINED DITCHES
EC-10: OUTLET PROTECTION/VELOCITY DISSIPATION DEVICES
EC-11: SLOPE DRAINS
EC-12: STREAMBANK STABILIZATION
EC-13: RESERVED

EC-14: COMPOST BLANKET EC-15: SOIL PREPARATION/ROUGHENING EC-16: NON-VEGETATIVE STABILIZATION

NON-STORM WATER MANAGEMENT

NS-1: WATER CONSERVATION PRACTICES NS-2: DEWATERING OPERATIONS NS-3: PAVING & GRINDING OPERATIONS NS-4: TEMPORARY STREAM CROSSING NS-5: CLEAR WATER DIVERSION NS-6: ILLICIT CONNECTION/ILLEGAL DISHARGE DETECTION & REPORTING NS-7: POTABLE WATER/IRRIGATION NS-8: VEHICLE & EQUIPMENT CLEANING NS-9: VEHICLE & EQUIPMENT FUELING NS-10: VEHICLE & EQUIPMENT MAINTENANCE NS-11: PILE DRIVING OPERATIONS NS-12: CONCRETE CURING NS-13: CONCRETE FINISHING NS-14: MATERIAL OVER WATER NS-15: DEMOLITION OVER WATER NS-16: TEMPORARY BATCH PLANTS

SE-1: SILT FENCE SE-2: SEDIMENT/DESILTING BASIN SE-3: SEDIMENT TRAP SE-4: CHECK DAM SE-5: FIBER ROLLS SE-6: GRAVEL BAG BERM SE-7: STREET SWEEPING & VACUUMING SE-8: SANDBAG BARRIER SE-9: STRAW BALE BARRIER SE-10: STORM DRAIN INLET PROTECTION SE-11: ACTIVE TREATMENT SYSTEMS SE-12: MANUFACTURED LINEAR SEDIMENT CONTROLS (MLSC) SE-13: COMPOST SOCKS & BERMS SE-14: BIOFILTR BAGS

TEMPORARY SEDIMENT CONTROL

TRACKING CONTROL

TC-1: STABILIZED CONSTRUCTION ENTRANCE/EXIT TC-2: STABILIZED CONSTRUCTION ROADWAY TC-3: ENTRANCE/OUTLET TIRE WASH

WIND EROSION CONTROL WE-1: WIND EROSION CONTROL

WASTE MANAGEMENT &

MATERIALS POLLUTION CONTROL WM-1: MATERIAL DELIVERY & STORAGE

WM-2: MATERIAL USE WM-3: STOCKPILE MANAGEMENT WM-4: SPILL PREVENTION & CONTROL WM-5: SOLID WASTE MANAGEMENT WM-6: HAZARDOUS WASTE MANAGEMENT WM-7: CONTAMINATED SOIL MANAGEMENT WM-8: CONCRETE WASTE MANAGEMENT WM-9: SANITARY/SEPTIC WASTE MANAGEMENT WM-10: LIQUID WASTE MANAGEMENT

LEGEND	BMP*		<u>SYMBOL</u>
SE-1	SE-1: SILT FENCE		OO
TC-1	tc-1: Stabilized const entrance/exit	RUCTION	
WM-1	WM-1: MATERIAL DELIVE CONSTRUCTION STAGIN		\bigotimes
WM-8	WM-8: CONCRETE WAS	TE MANAGEMENT	
EC-2	EC-2: PRESERVATION OF VEGETATION	EXISTING	*
SE-10	SE-10: STORM DRAIN INL	ET PROTECTION	
	1P DESIGNATION GIVEN IN TI N HANDBOOK. SEE HANDBC		

FIGHEROA APARTMENTS	528 WEST FIGUEROA STREET SANTA BARBARA, CA 93101	APN: 039-202-013 EROSION & SEDIMENT	CONTROL PLAN
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SANTA BARBARA, CA 93101

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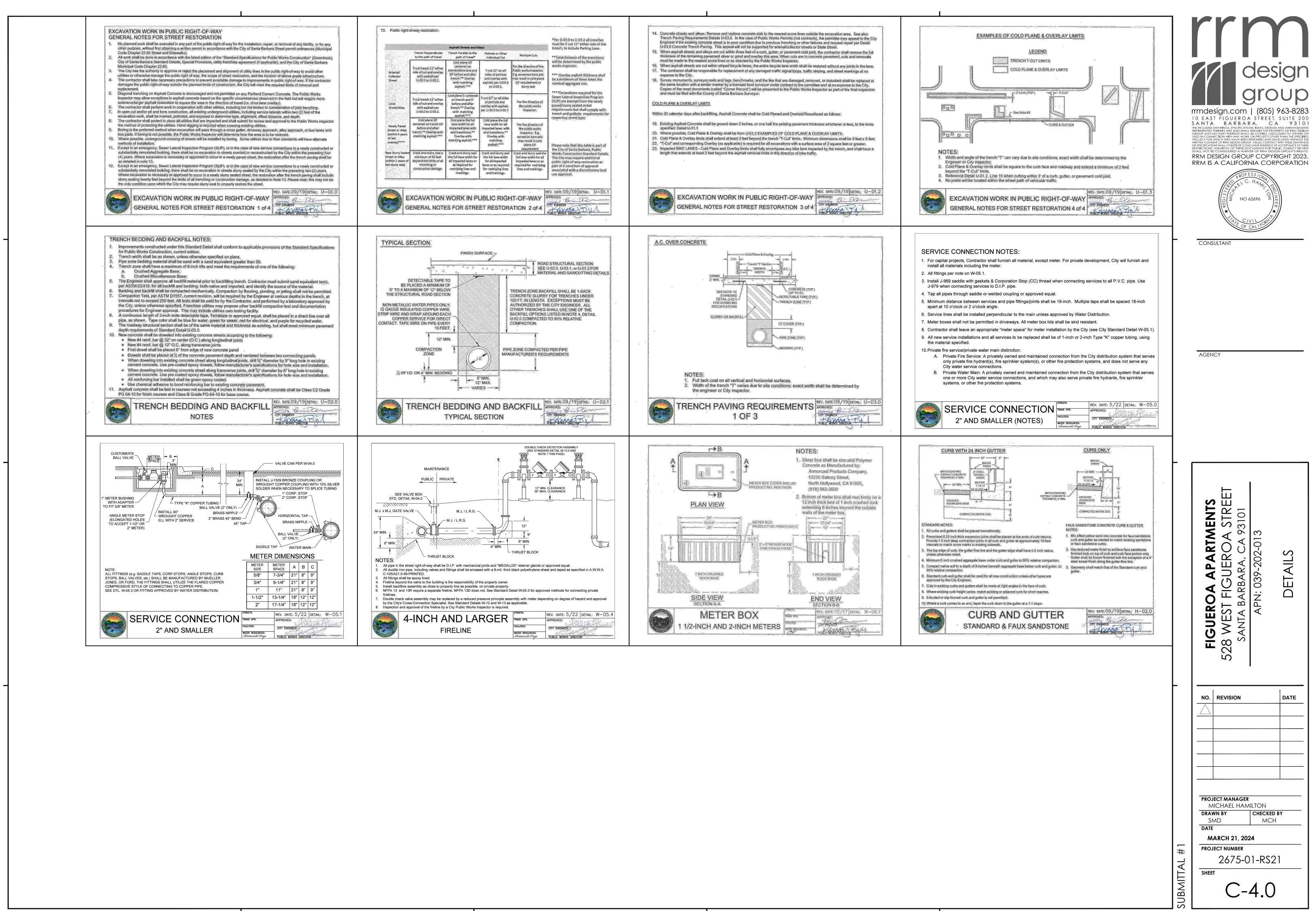
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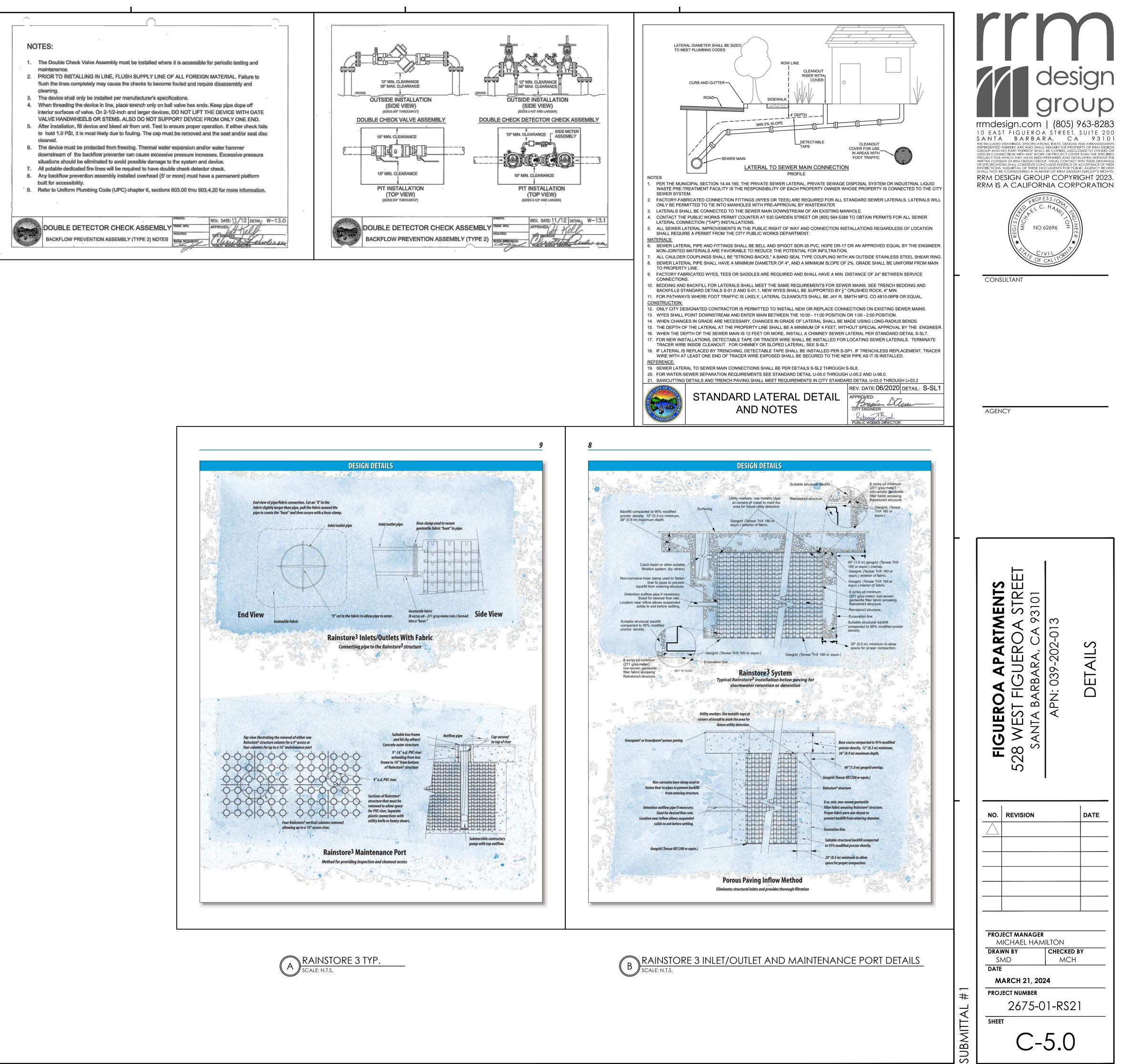
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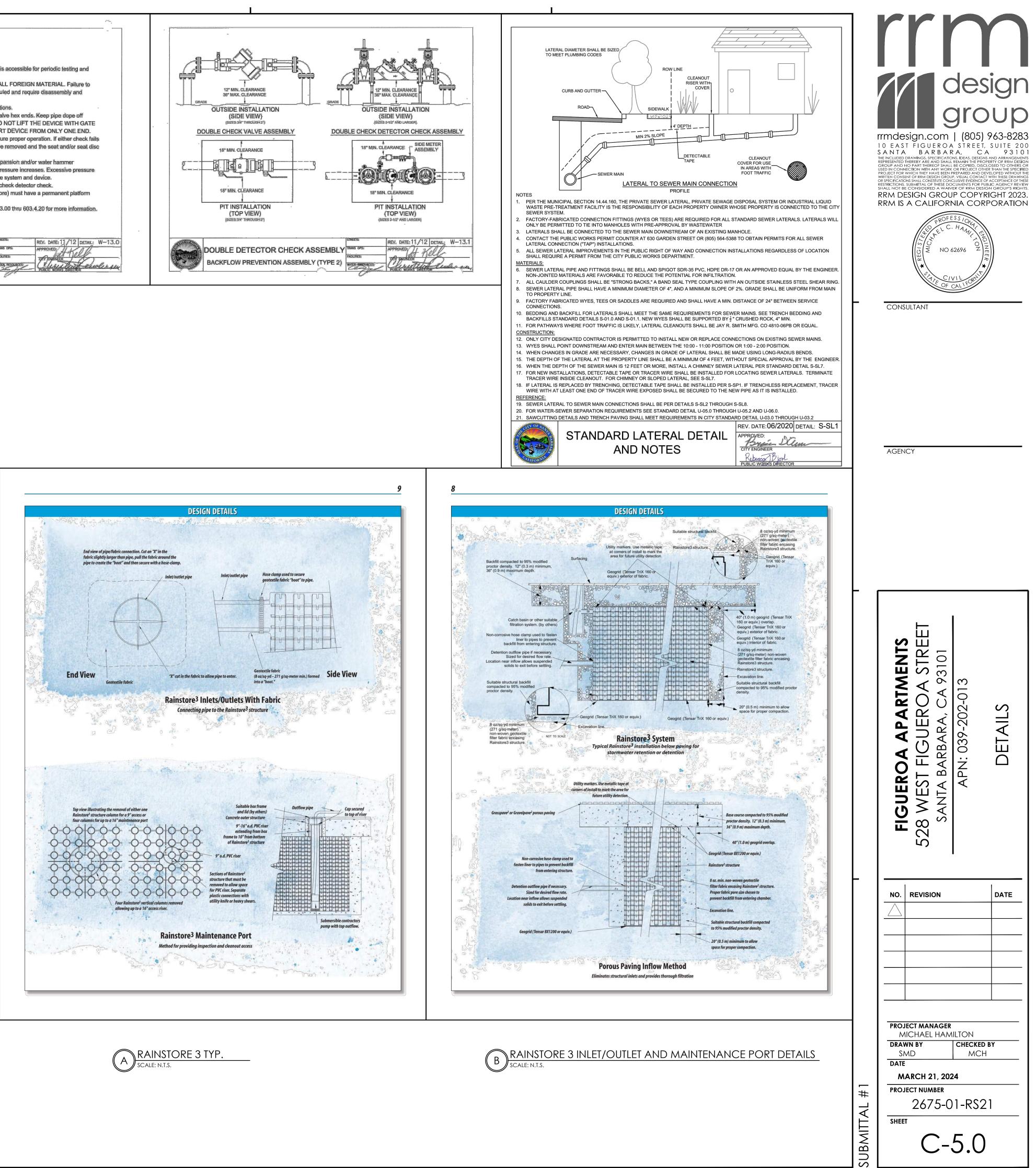
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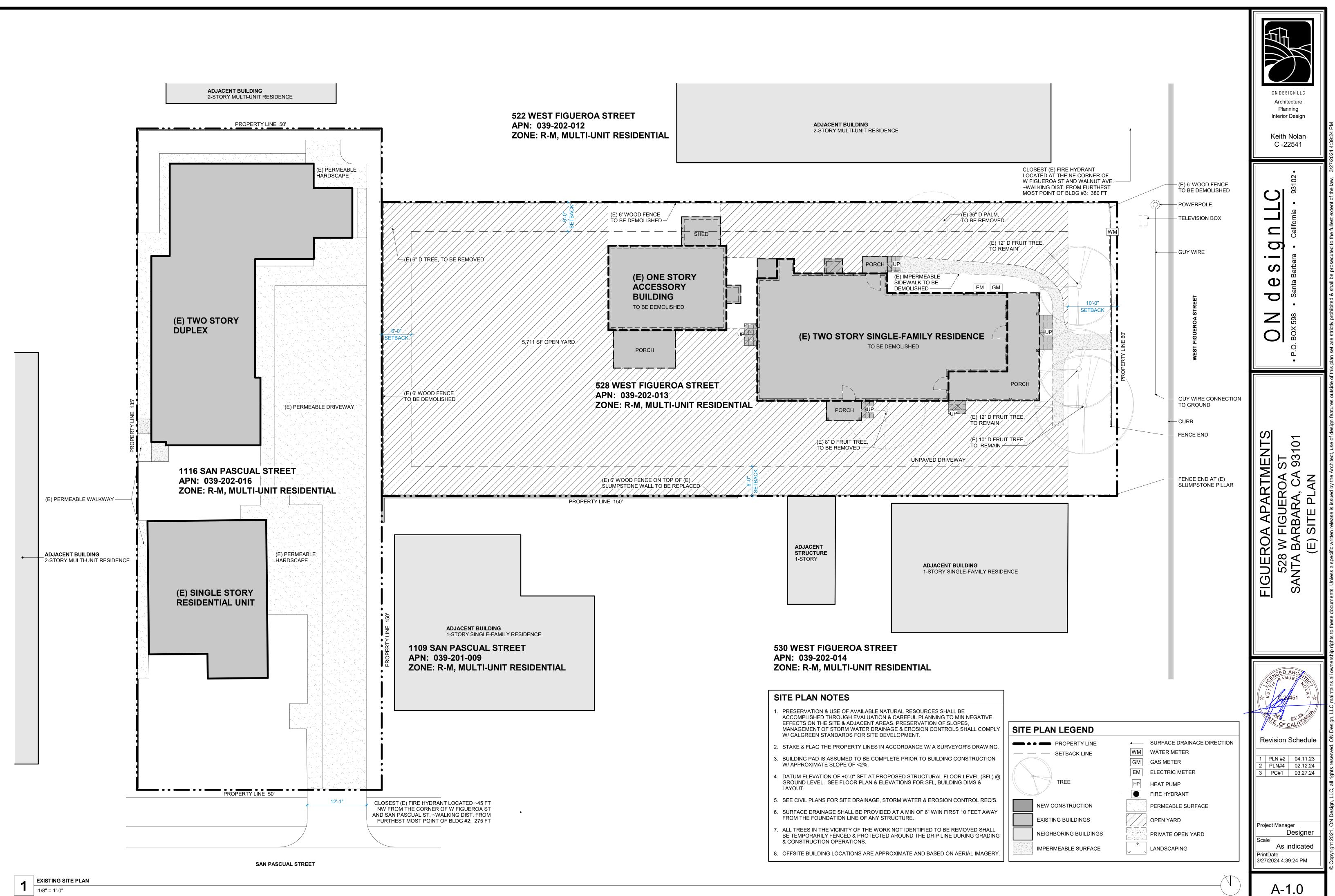
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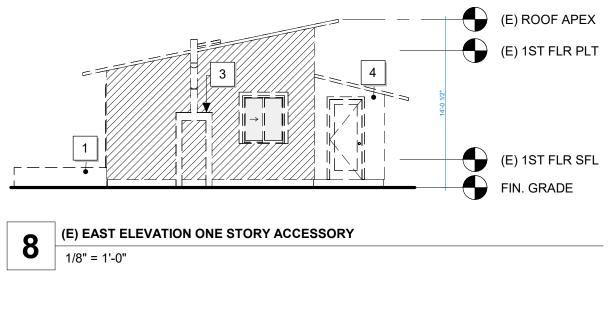


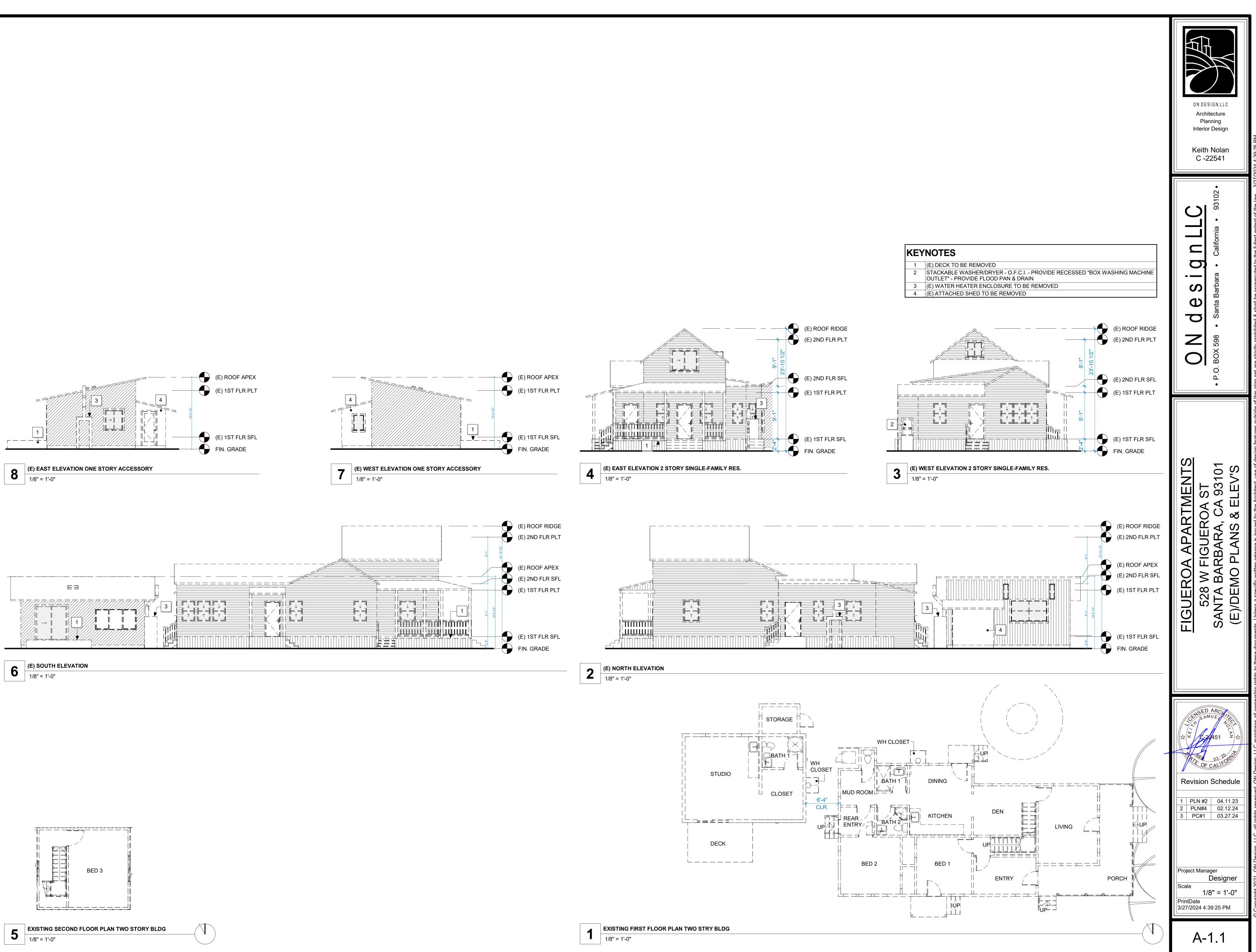


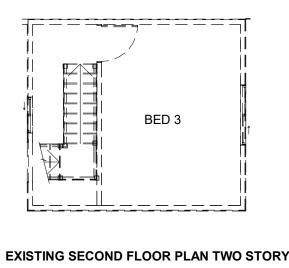


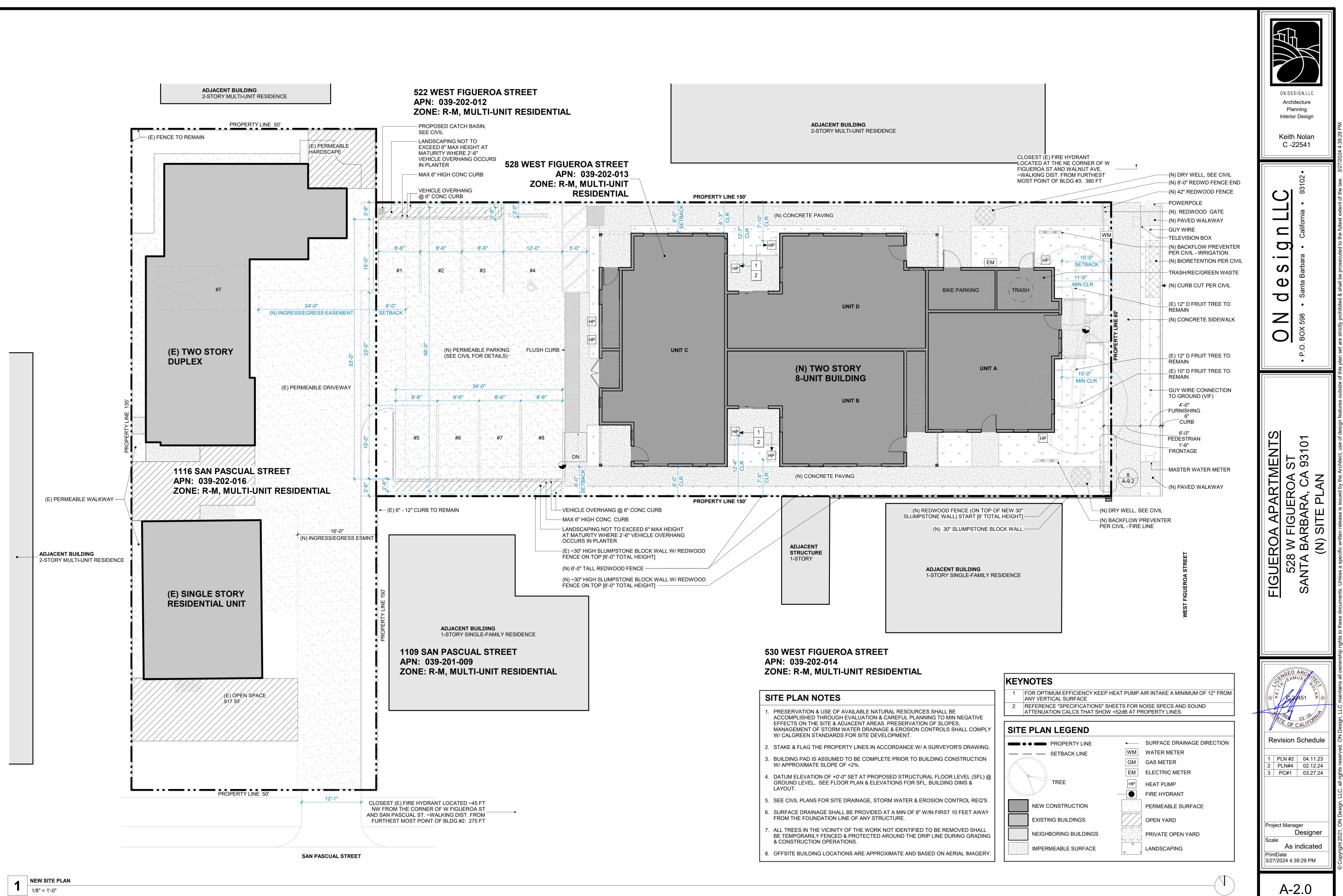












FLOOR PLAN NOTES

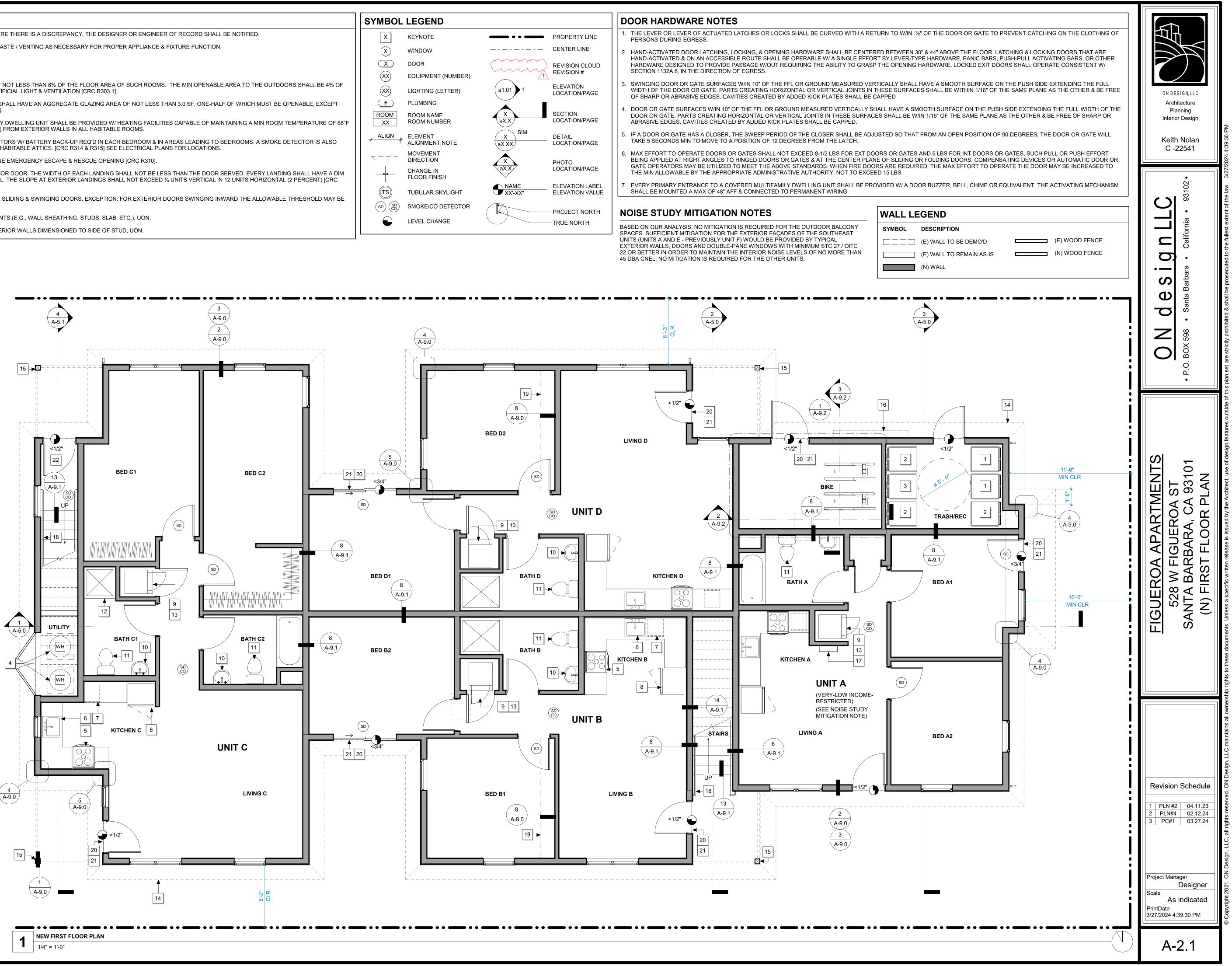
- FIELD MEASUREMENTS TAKE PRECEDENCE OVER WRITTEN DIMS. WHERE THERE IS A DISCREPANCY, THE DESIGNER OR ENGINEER OF RECORD SHALL BE NOTIFIED.
- THE CONTRACTOR SHALL PROVIDE GAS / ELECTRIC / WATER / DATA / WASTE / VENTING AS NECESSARY FOR PROPER APPLIANCE & FIXTURE FUNCTION.
- SEE DOOR & WINDOW SHEET NOTES FOR SAFETY GLAZING REQ'S.
- SHOWER STALL SHALL COMPLY W/ CONSTRUCTION REQ'S OF CPC 408.
- ALL HABITABLE ROOMS SHALL HAVE AN AGGREGATE GLAZING AREA OF NOT LESS THAN 8% OF THE FLOOR AREA OF SUCH ROOMS. THE MIN OPENABLE AREA TO THE OUTDOORS SHALL BE 4% OF THE FLOOR AREA BEING VENTILATED. EXCEPTIONS ALLOWED FOR ARTIFICIAL LIGHT & VENTILATION [CRC R303.1].
- BATHROOMS, WATER CLOSET COMPARTMENTS, & OTHER SIM ROOMS SHALL HAVE AN AGGREGATE GLAZING AREA OF NOT LESS THAN 3.0 SF, ONE-HALF OF WHICH MUST BE OPENABLE, EXCEPT WHEN ARTIFICIAL LIGHT & LOCAL EXHAUST ARE PROVIDED [CRC R303.3].
- WHEN THE WINTER DESIGN TEMPERATURE IS BELOW 60°F (16°C), EVERY DWELLING UNIT SHALL BE PROVIDED W/ HEATING FACILITIES CAPABLE OF MAINTAINING A MIN ROOM TEMPERATURE OF 68°F (20°C) AT A POINT 3 FEET (914 MM) ABOVE THE FLOOR & 2 FEET (610 MM) FROM EXTERIOR WALLS IN ALL HABITABLE ROOMS.
- HARDWIRED & INTERCONNECTED SMOKE & CARBON MONOXIDE DETECTORS W/ BATTERY BACK-UP REQ'D IN EACH BEDROOM & IN AREAS LEADING TO BEDROOMS. A SMOKE DETECTOR IS ALSO REQ'D AT EACH SEP STORY OF A DWELLING, INCLUDING BASEMENTS & HABITABLE ATTICS. [CRC R314 & R315] SEE ELECTRICAL PLANS FOR LOCATIONS.
- BASEMENTS, HABITABLE ATTICS, & SLEEPING ROOMS REQ AT LEAST ONE EMERGENCY ESCAPE & RESCUE OPENING [CRC R310].
-). THERE SHALL BE A LANDING OR FLOOR ON EACH SIDE OF EACH EXTERIOR DOOR. THE WIDTH OF EACH LANDING SHALL NOT BE LESS THAN THE DOOR SERVED. EVERY LANDING SHALL HAVE A DIM OF NOT LESS THAN 36 INCHES MEASURED IN THE DIRECTION OF TRAVEL. THE SLOPE AT EXTERIOR LANDINGS SHALL NOT EXCEED 1/4 UNITS VERTICAL IN 12 UNITS HORIZONTAL (2 PERCENT) [CRC R311.31
- . THRESHOLD SHALL NOT BE MORE THAN 1-1/2" BELOW THRESHOLD FOR SLIDING & SWINGING DOORS. EXCEPTION: FOR EXTERIOR DOORS SWINGING INWARD THE ALLOWABLE THRESHOLD MAY BE 7-3/4" [CRC R311.3.1.1 & R311.3.2]
- 2. ALL PLAN DIMENSIONS TAKEN FROM EDGE OF STRUCTURAL COMPONENTS (E.G., WALL SHEATHING, STUDS, SLAB, ETC.), UON.
- 3. EXTERIOR WALLS DIMENSIONED TO OUTSIDE OF SHEATHING, UON. INTERIOR WALLS DIMENSIONED TO SIDE OF STUD, UON.

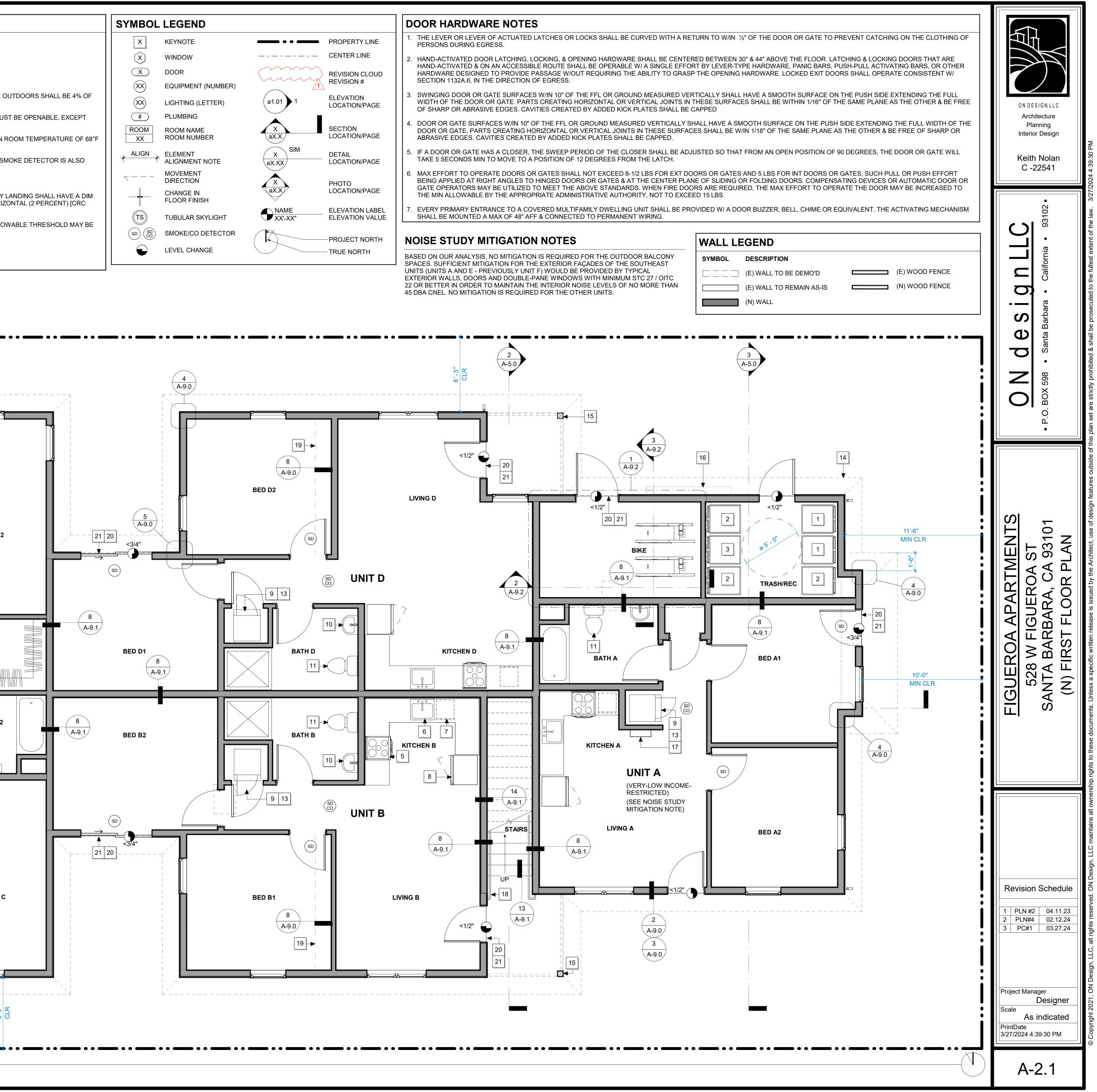
GREEN BULDING REQUIRMENTS

- JOINTS AND OPENINGS, ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, CONDUITS, OR OTHER OPENINGS IN PLATES AT EXTERIOR WALLS SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY OR SIMILAR METHOD ACCEPTABLE TO THE ENFORCING AGENCY.
- DUCT OPENINGS AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED DURING CONSTRUCTION.
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- CARPET AND CARPET SYSTEMS SHALL BE COMPLIANT WITH VOC LIMITS. A LETTER FROM THE CONTRACTOR SUBCONTRACTOR AND OR THE BUILDING OWNER CERTIFYING WHAT MATERIAL USED COMPLIES WITH THE CALIFORNIA GREEN BUILDING CODE. [CALGREEN 4.504.3]
- HARDWOOD PLYWOOD, PARTICLEBOARD, AND MEDIUM DENSITY FIBERBOARD (MDF)COMPOSITE WOOD PRODUCT USED ON THE INTERIOR OR EXTERIOR OF THE BUILDING SHALL MEET THE REQUIREMENTS FOR FORMALDEHYDE AS SPECIFIED IN ARB'S AIR TOXIC CONTROL MEASURE FOR COMPOSITE WOOD AS SPECIFIED IN CALGREEN 4.504.5 AND TABLE 4.504.5.
- BUILDING MATERIALS WITH VISIBLE SIGNS OF WATER DAMAGE SHALL NOT BE INSTALLED. WALLS AND FLOORS FRAMING SHALL NOT BE ENCLOSED WHEN FRAMING MEMBERS EXCEED 19% MOISTURE CONTENT.
- THE MOISTURE CONTENT OF BUILDING MATERIALS USED IN WALL AND FLOOR FRAMING IS CHECKED BEFORE ENCLOSURE. MOISTURE CONTENT SHALL BE VERIFIED BY EITHER A PROBE TYPE OR CONTACT TYPE MOISTURE METER [CALGREEN 4.505.3.1]
- EXHAUST FANS WHICH TERMINATE OUTSIDE THE BUILDING ARE PROVIDED IN EVERY BATHROOM THAT CONTAINS A SHOWER OR TUB. UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDISTAT WHICH CAN ADJUST BETWEEN 50 TO 80 PERCENT.

KEYNOTES

- TRASH CART, 95 GAL (29" X 34") RECYCLING CART, 95 GAL (29" X 34") GREEN WASTE CART, 95 GAL (29" X 34") 80 GALLON WATER HEATER, SEE PLUMBING FOR DETAILS & SPEC'S
- STOVE / OVEN / HOOD C.F.C.I. SINGLE BASIN SINK WITH DISPOSAL - C.F.C.I.
- DISHWASHER C.F.C.I.
- REFRIGERATOR C.F.C.I.
- STACKABLE WASHER/DRYER O.F.C.I. PROVIDE RECESSED "BOX WASHING MACHINE OUTLET" - PROVIDE FLOOD PAN & DRAIN PEDESTAL SINK O.F.C.I.
- TOILET O.F.C.I. PROVIDE 15" CLEAR TO WALL OR FIXTURE. PROVIDE
- 24" CLEAR IN FRONT OF WATER CLOSET. SHOWERS AND WALLS ABOVE BATHTUBS WITH SHOWER HEADS SHALL BE FINISHED WITH A NONABSORBENT SURFACE TO A HEIGHT NOT LESS THAN 6 FEET ABOVE THE FLOOR. (CRC R307.2)
- DRYER VENT UP THROUGH ROOF RAIN PROOF, BACKDRAFT PROTECTED TERMINATION - PROVIDE BACKER AS REQUIRED TO SUPPORT VENT ASSEMBLY. COMPLY WITH CMC 503 & 504
- ROOF OVERHEAD SUPPORT POST PER DETAILS. ALIGN POST TO STUDS
- ELECTRICAL METER BANK PER ELECTRICAL PLAN
- AIR PURIFIER, RABBIT AIR SPA-700A EXTERIOR STAIR HANDRAIL IN ACOURDANCE WITH CBC 1115A.6
- (SEE TYP. HANDRAIL ELEVATION IN DETAILS) MECH DUCT SOFFIT. ADJACENT WALL & ABOVE CEILING TO MAINTAIN FIRE RATING (NO PENETRATIONS OF RATED ASSEMBLIES)
- 1126A.1: PROVIDE MIN 36" WIDE BY 80" HIGH DOOR W/ CLEAR OPENING WIDTH NOT LESS THAN 32 INCHES.
- 1132A.4.1: THRESHOLDS AT THE PRIMARY ENTRY AND REQUIRED EXIT DOORS SHALL BE NO HIGHER THAN 1/2 INCH. THRESHOLDS AT SECONDARY EXTERIOR DOORS SHALL BE NO HIGHER THAN 3/4 INCH. CHANGES IN HEIGHT AT INTERIOR DOOR THRESHOLDS (E.G. FLOOR MATERIAL CHANGES AT DOOR THRESHOLDS) SHALL NOT EXCEED 1/2INCH. THRESHOLDS WITH A CHANGE IN HEIGHT OF NOT MORE THAN 1/4 INCH MAY BE VERTICAL. THRESHOLDS WITH A CHANGE IN HEIGHT BETWEEN 1/4 INCH AND 3/4 INCH SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1 UNIT VERTICAL IN 2 UNITS HORIZONTAL (50-PERCENT SLOPE).
- THIS ENTRY DOES NOT SERVE A MULTI-STORY UNIT, SO 11A ACCESSIBILITY DOES NOT APPLY. PER CBC CH.2, A MULTI-STORY UNIT HAS HABITABLE SPACE LOCATED ON ONE FLOOR AND THE FLOOR OR FLOORS IMMEDIATELY ABOVE OR BELOW IT. PER THE CBC DEFINITION OF HABITABLE SPACE, HALLS OR UTILITY SPACES ARE NOT INCLUDED. THEREFORE, THIS ENTRY DOES NOT CREATE A MULTI-STORY UNIT SUBJECT TO ACCESSBILITY REQUIREMENTS.



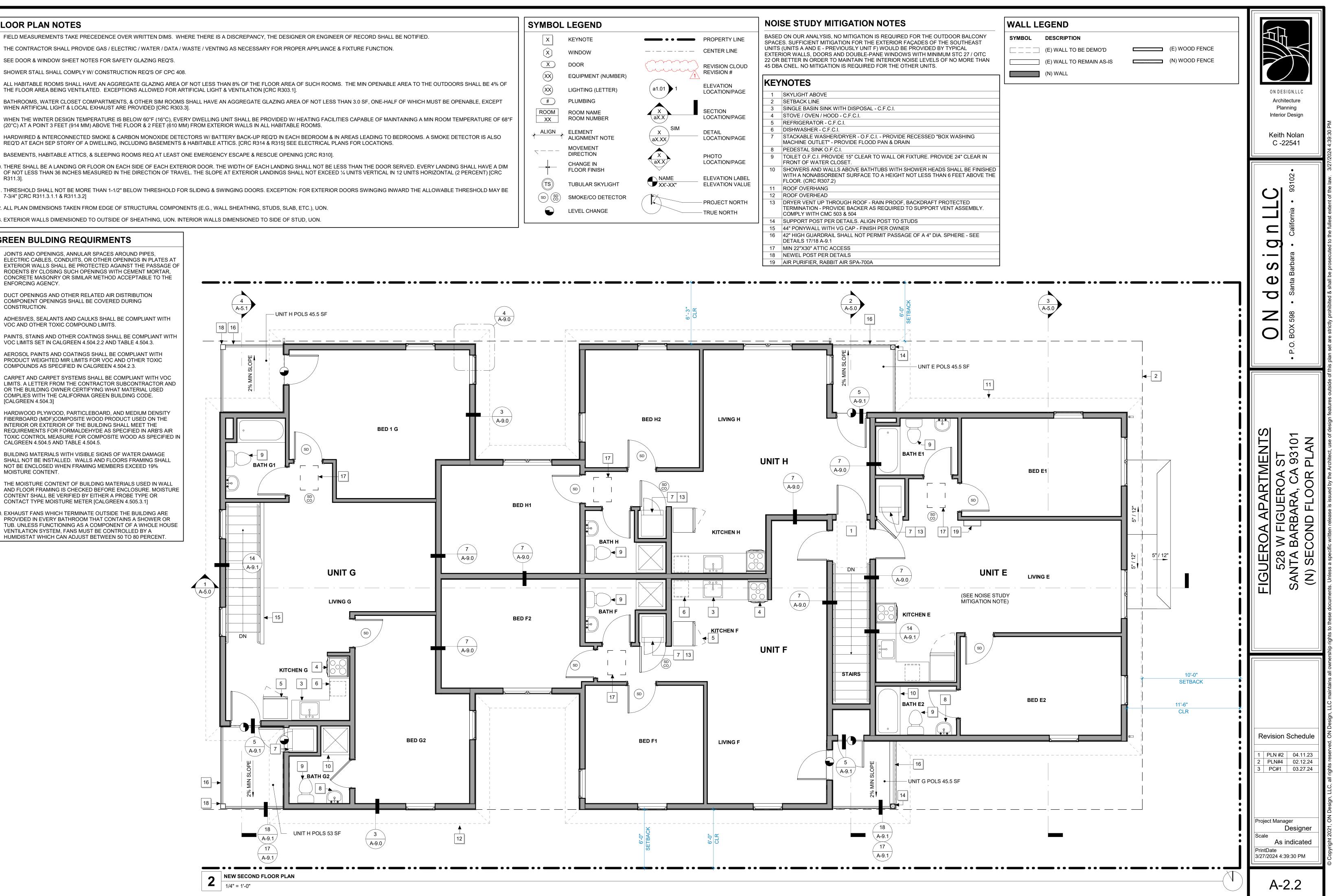


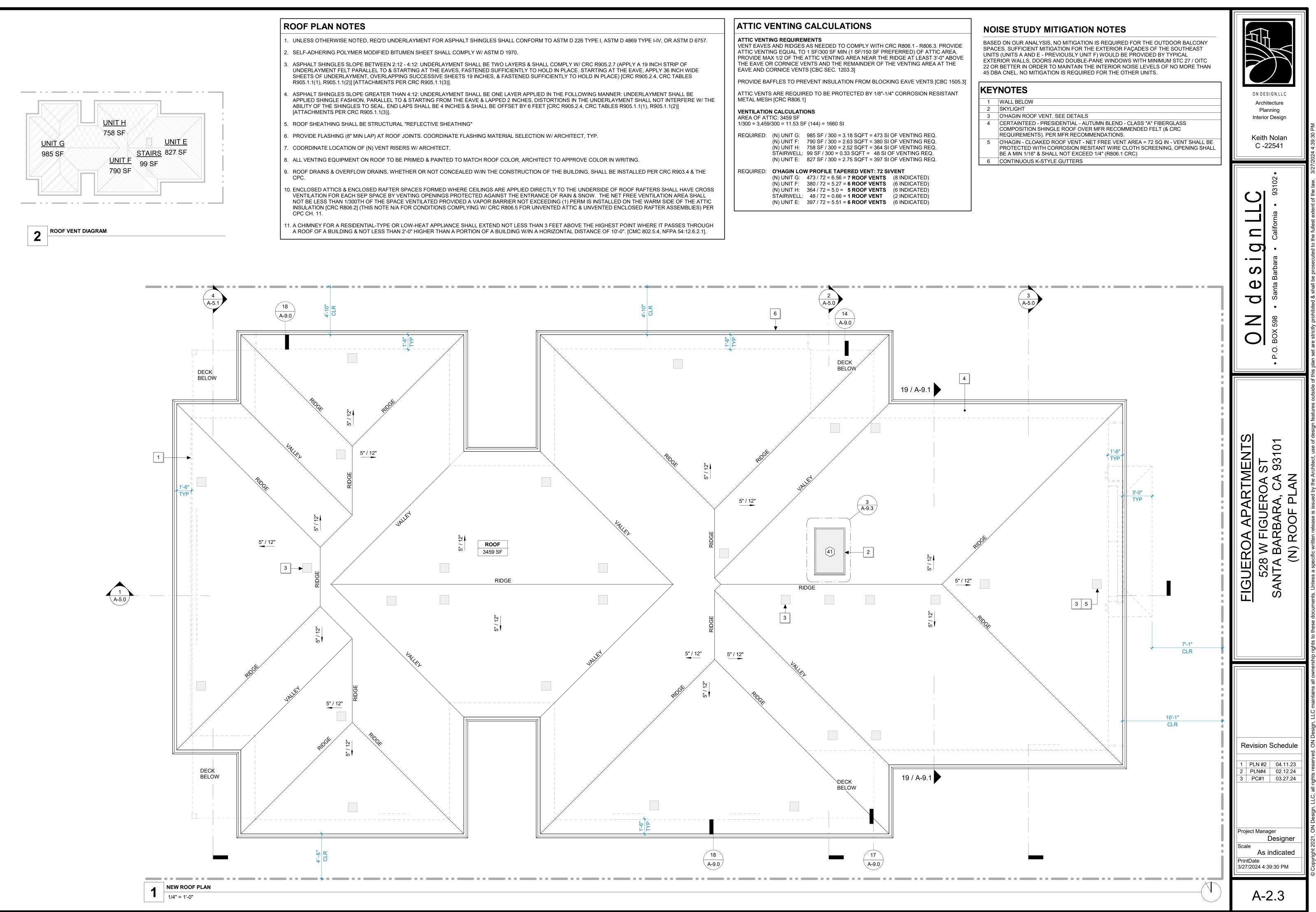
FLOOR PLAN NOTES

- FIELD MEASUREMENTS TAKE PRECEDENCE OVER WRITTEN DIMS. WHERE THERE IS A DISCREPANCY, THE DESIGNER OR ENGINEER OF RECORD SHALL BE NOTIFIED.
- THE CONTRACTOR SHALL PROVIDE GAS / ELECTRIC / WATER / DATA / WASTE / VENTING AS NECESSARY FOR PROPER APPLIANCE & FIXTURE FUNCTION.
- SEE DOOR & WINDOW SHEET NOTES FOR SAFETY GLAZING REQ'S.
- SHOWER STALL SHALL COMPLY W/ CONSTRUCTION REQ'S OF CPC 408.
- ALL HABITABLE ROOMS SHALL HAVE AN AGGREGATE GLAZING AREA OF NOT LESS THAN 8% OF THE FLOOR AREA OF SUCH ROOMS. THE MIN OPENABLE AREA TO THE OUTDOORS SHALL BE 4% OF THE FLOOR AREA BEING VENTILATED. EXCEPTIONS ALLOWED FOR ARTIFICIAL LIGHT & VENTILATION [CRC R303.1].
- BATHROOMS, WATER CLOSET COMPARTMENTS, & OTHER SIM ROOMS SHALL HAVE AN AGGREGATE GLAZING AREA OF NOT LESS THAN 3.0 SF, ONE-HALF OF WHICH MUST BE OPENABLE, EXCEPT WHEN ARTIFICIAL LIGHT & LOCAL EXHAUST ARE PROVIDED [CRC R303.3].
- WHEN THE WINTER DESIGN TEMPERATURE IS BELOW 60°F (16°C), EVERY DWELLING UNIT SHALL BE PROVIDED W/ HEATING FACILITIES CAPABLE OF MAINTAINING A MIN ROOM TEMPERATURE OF 68°F (20°C) AT A POINT 3 FEET (914 MM) ABOVE THE FLOOR & 2 FEET (610 MM) FROM EXTERIOR WALLS IN ALL HABITABLE ROOMS.
- REQ'D AT EACH SEP STORY OF A DWELLING, INCLUDING BASEMENTS & HABITABLE ATTICS. [CRC R314 & R315] SEE ELECTRICAL PLANS FOR LOCATIONS.
-). THERE SHALL BE A LANDING OR FLOOR ON EACH SIDE OF EACH EXTERIOR DOOR. THE WIDTH OF EACH LANDING SHALL NOT BE LESS THAN THE DOOR SERVED. EVERY LANDING SHALL HAVE A DIM OF NOT LESS THAN 36 INCHES MEASURED IN THE DIRECTION OF TRAVEL. THE SLOPE AT EXTERIOR LANDINGS SHALL NOT EXCEED 1/4 UNITS VERTICAL IN 12 UNITS HORIZONTAL (2 PERCENT) [CRC R311.3].
- . THRESHOLD SHALL NOT BE MORE THAN 1-1/2" BELOW THRESHOLD FOR SLIDING & SWINGING DOORS. EXCEPTION: FOR EXTERIOR DOORS SWINGING INWARD THE ALLOWABLE THRESHOLD MAY BE 7-3/4" [CRC R311.3.1.1 & R311.3.2]
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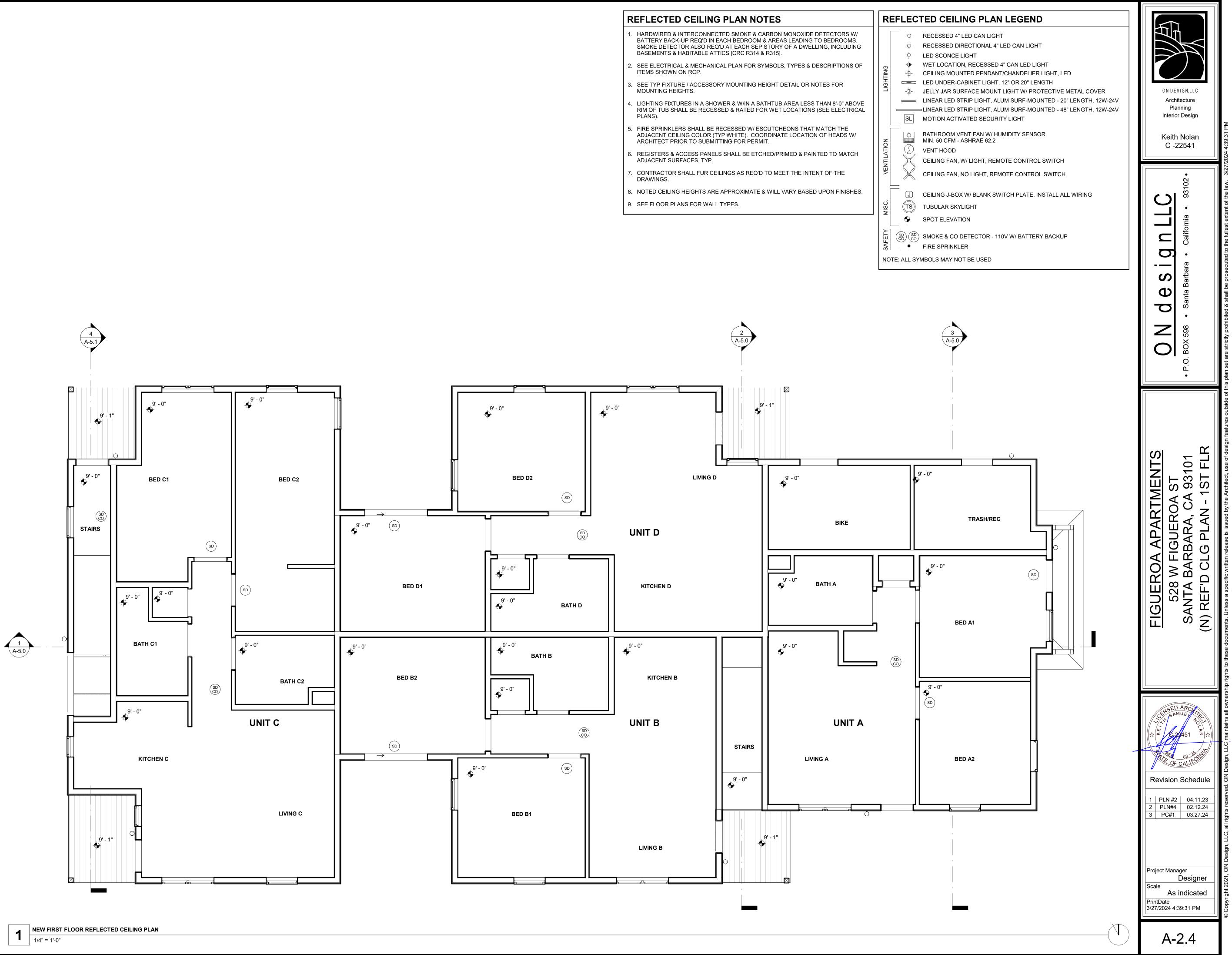
GREEN BULDING REQUIRMENTS

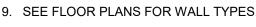
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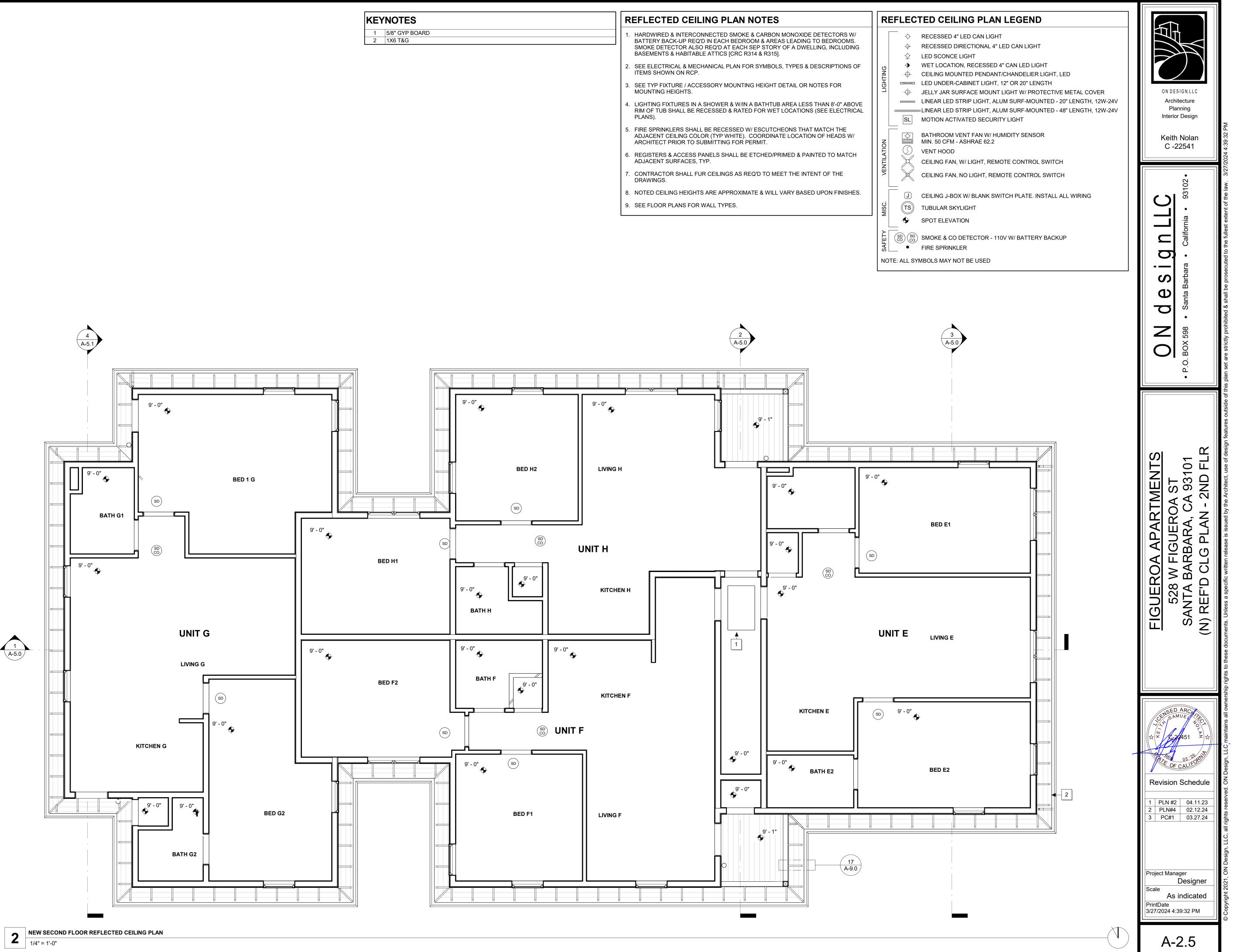


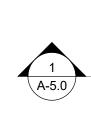


REQUIRED:	· · ·	985 SF / 300 = 3.18 SQFT = 473 790 SF / 300 = 2.63 SQFT = 380 758 SF / 300 = 2.52 SQFT = 364 99 SF / 300 = 0.33 SQFT = 48 S 827 SF / 300 = 2.75 SQFT = 397	SI OF VEI SI OF VEI I OF VEN
REQUIRED:	(N) UNIT G: (N) UNIT F: (N) UNIT H:	W PROFILE TAPERED VENT: 72 473 / 72 = 6.56 = 7 ROOF VENT 380 / 72 = 5.27 = 6 ROOF VENT 364 / 72 = 5.0 = 5 ROOF VENT 48 / 72 = 0.66 = 1 ROOF VENT 397 / 72 = 5.51 = 6 ROOF VENT	6 (8 INE 6 (6 INE 6 (6 INE 6 (6 INE (2 INE



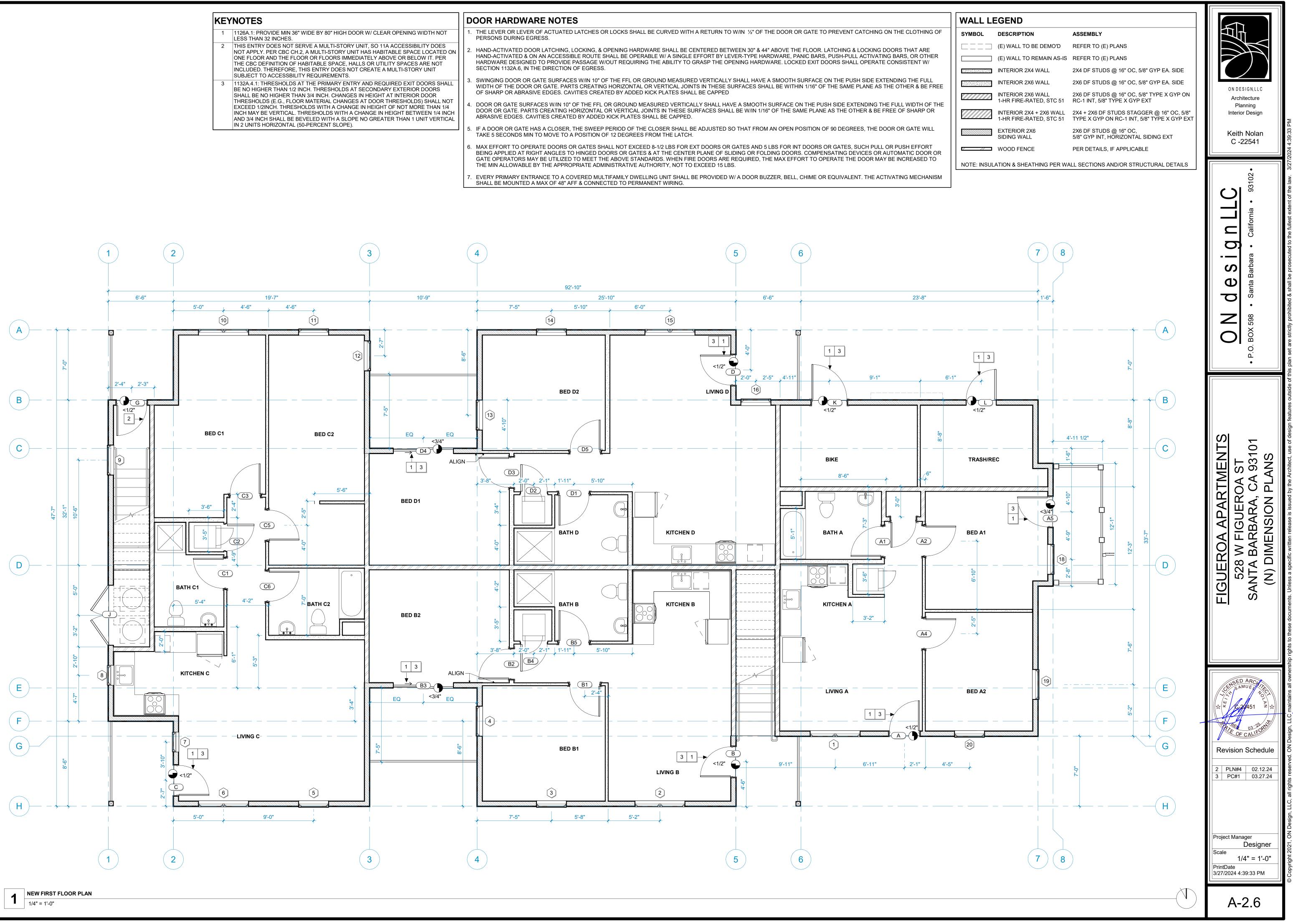


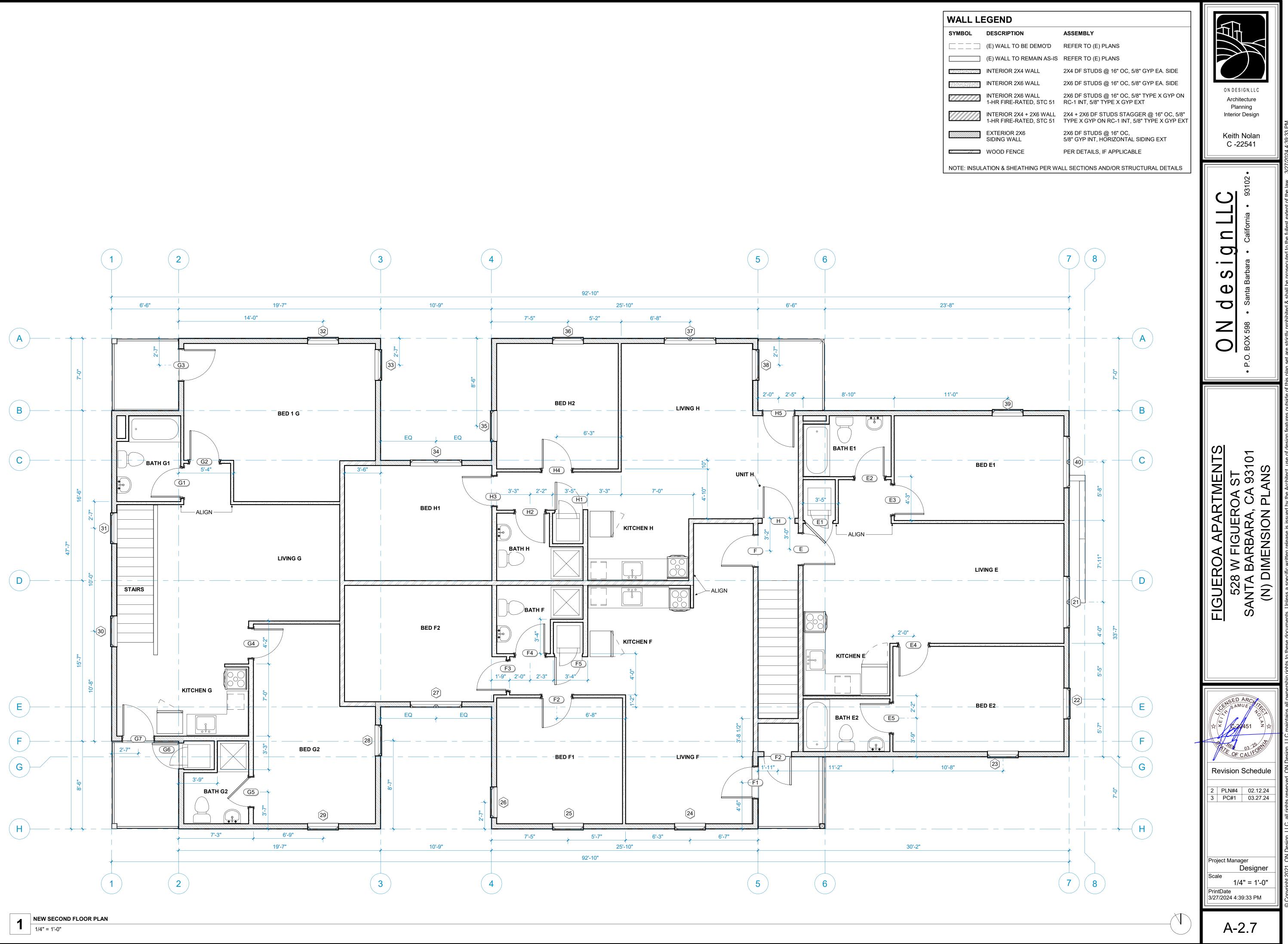


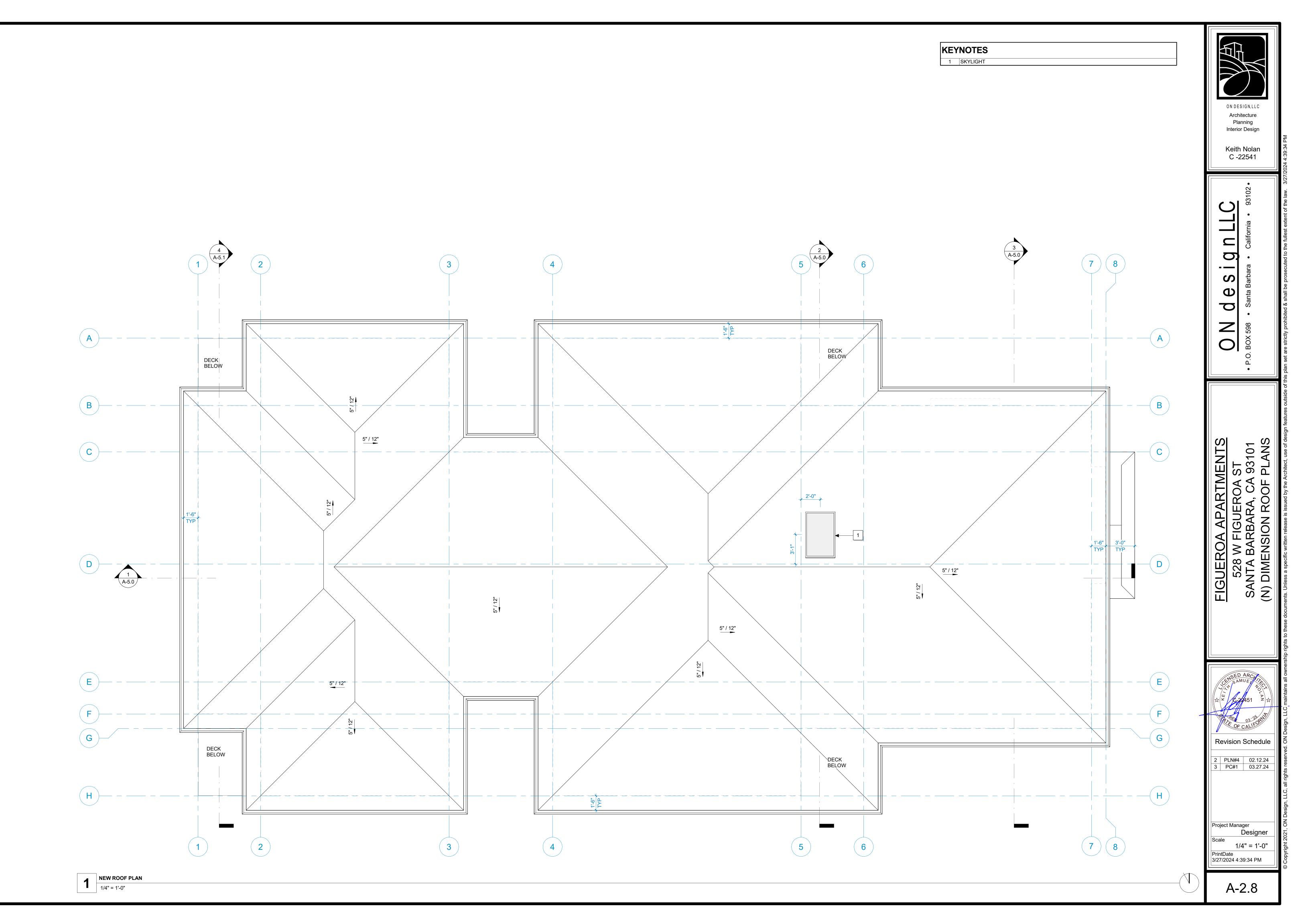




- LESS THAN 32 INCHES.

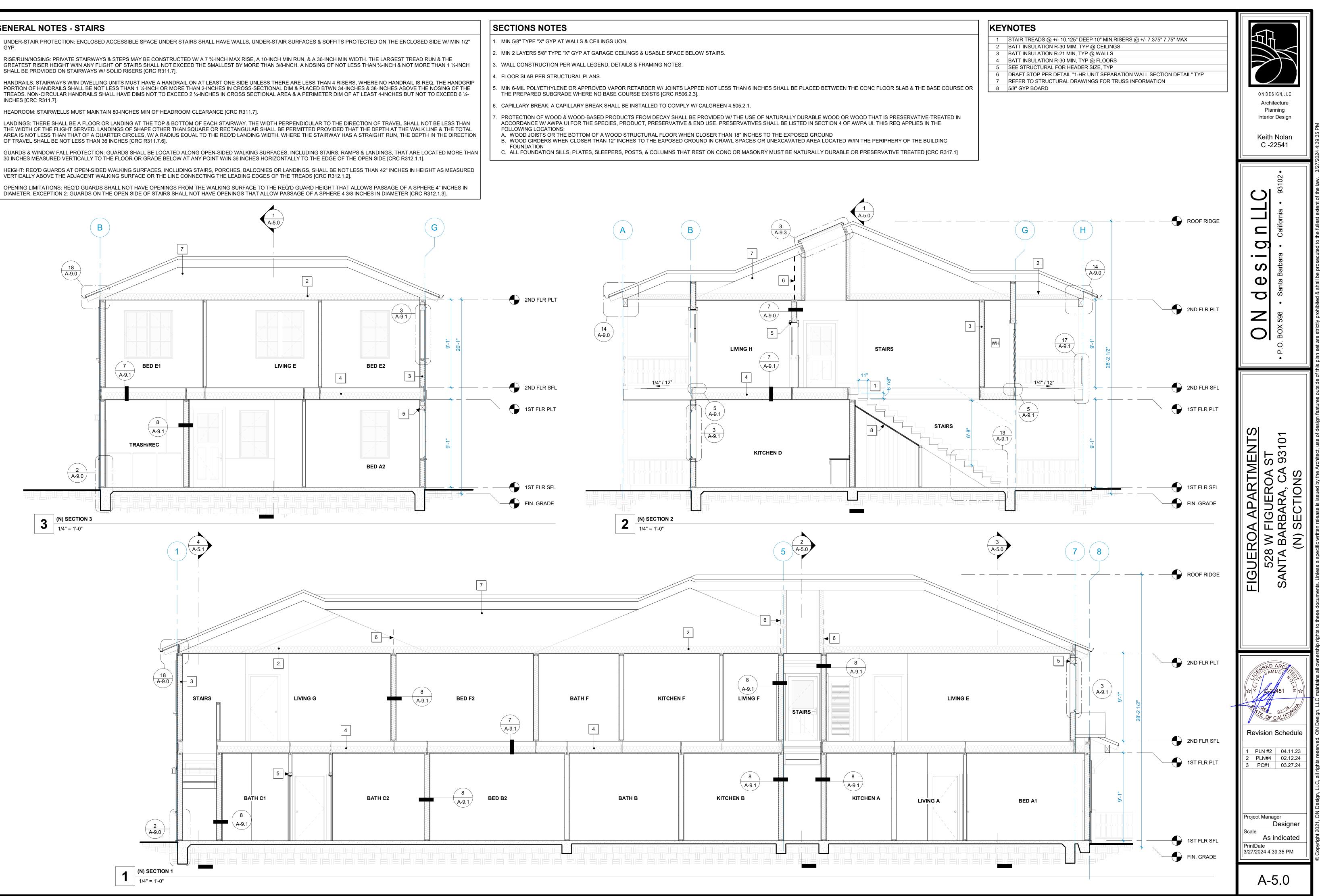






GENERAL NOTES - STAIRS

- GYP
- SHALL BE PROVIDED ON STAIRWAYS W/ SOLID RISERS [CRC R311.7].
- INCHES [CRC R311.7].
- HEADROOM: STAIRWELLS MUST MAINTAIN 80-INCHES MIN OF HEADROOM CLEARANCE [CRC R311.7].
- OF TRAVEL SHALL BE NOT LESS THAN 36 INCHES [CRC R311.7.6].
- 30 INCHES MEASURED VERTICALLY TO THE FLOOR OR GRADE BELOW AT ANY POINT W/IN 36 INCHES HORIZONTALLY TO THE EDGE OF THE OPEN SIDE [CRC R312.1.1].
- VERTICALLY ABOVE THE ADJACENT WALKING SURFACE OR THE LINE CONNECTING THE LEADING EDGES OF THE TREADS [CRC R312.1.2].
- DIAMETER. EXCEPTION 2: GUARDS ON THE OPEN SIDE OF STAIRS SHALL NOT HAVE OPENINGS THAT ALLOW PASSAGE OF A SPHERE 4 3/8 INCHES IN DIAMETER [CRC R312.1.3].



KEYNOTES

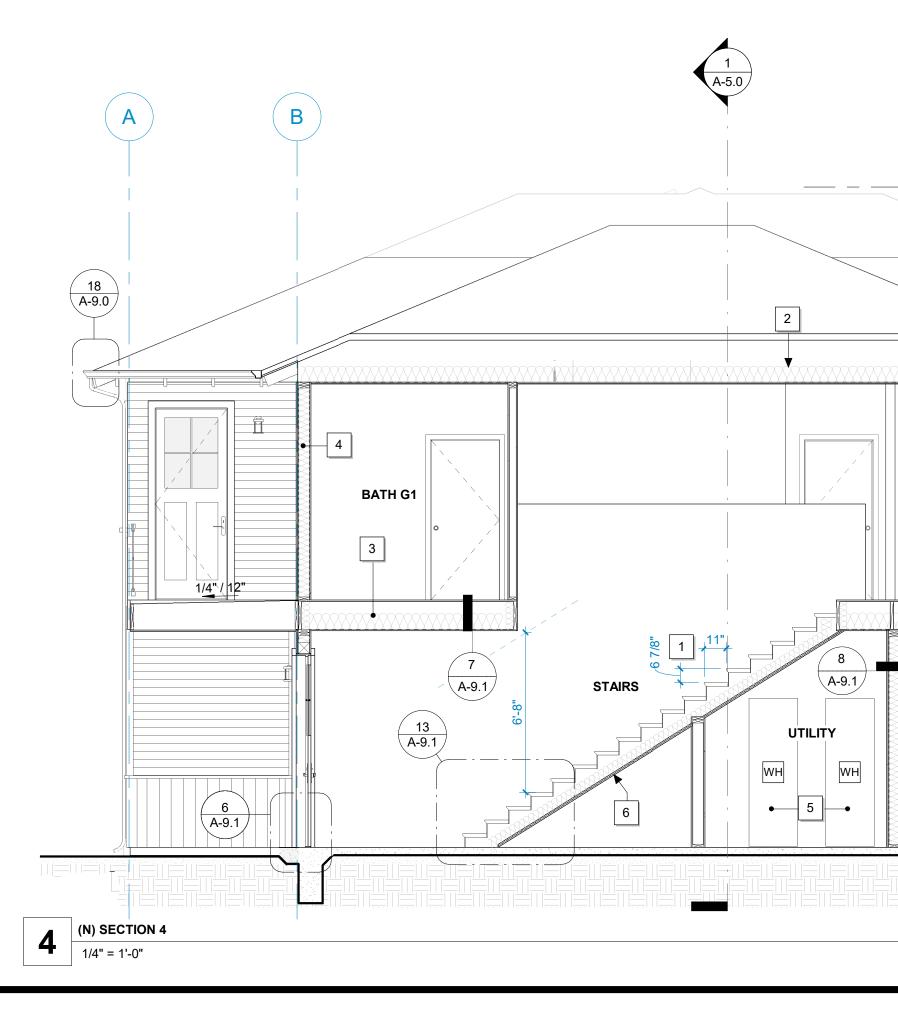
- 1 STAIR TREADS @ +/- 10.125" DEEP 10" MIN, RISERS @ +/- 7.375" 7.75" MAX
- 2 BATT INSULATION R-30 MIM, TYP @ CEILINGS 3 BATT INSULATION R-30 MIN, TYP @ FLOORS
- 4 BATT INSULATION R-21 MIN, TYP @ WALLS
- 5 80 GALLON WATER HEATER, SEE PLUMBING FOR DETAILS & SPEC'S
- 6 TWO LAYERS GYP TO PROVIDE ONE-HOUR FIRE SEPARATION AT UTILITY CLOSET CEILING

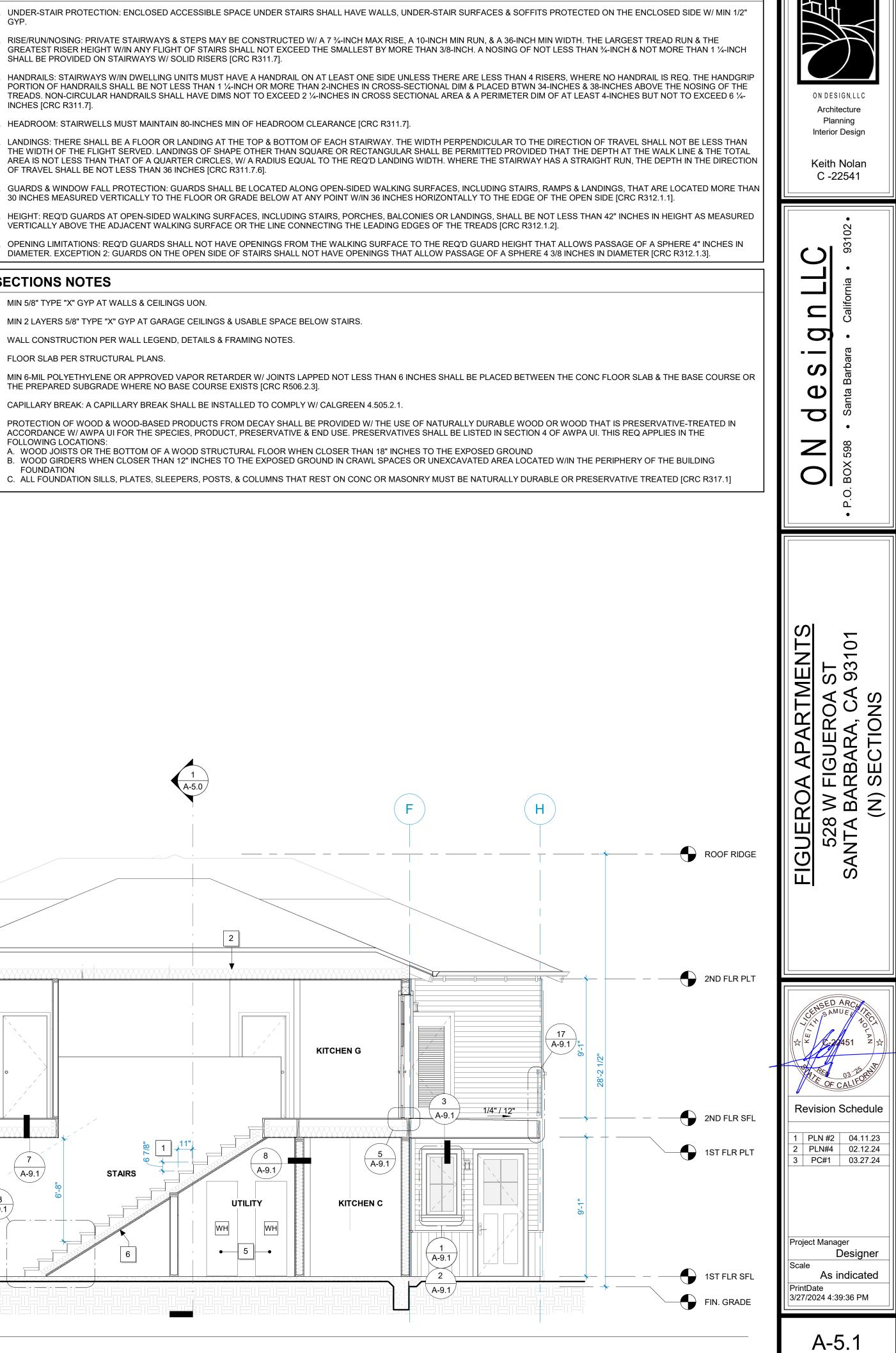
GENERAL NOTES - STAIRS

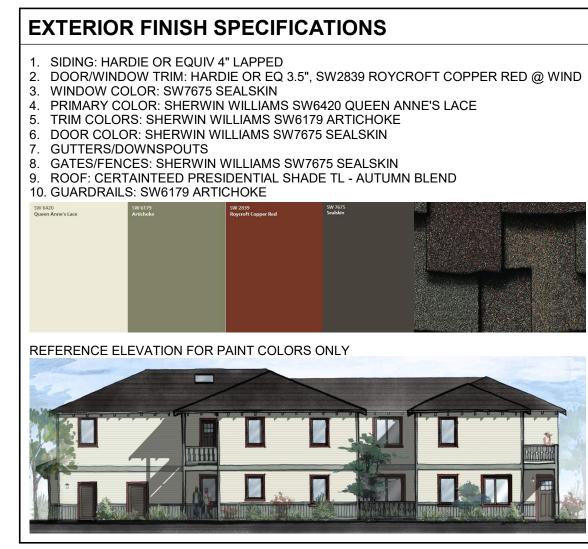
- GYP.
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- INCHES [CRC R311.7].
- HEADROOM: STAIRWELLS MUST MAINTAIN 80-INCHES MIN OF HEADROOM CLEARANCE ICRC R311.71.
- OF TRAVEL SHALL BE NOT LESS THAN 36 INCHES [CRC R311.7.6].
- VERTICALLY ABOVE THE ADJACENT WALKING SURFACE OR THE LINE CONNECTING THE LEADING EDGES OF THE TREADS [CRC R312.1.2].

SECTIONS NOTES

- . MIN 5/8" TYPE "X" GYP AT WALLS & CEILINGS UON.
- 2. MIN 2 LAYERS 5/8" TYPE "X" GYP AT GARAGE CEILINGS & USABLE SPACE BELOW STAIRS.
- WALL CONSTRUCTION PER WALL LEGEND, DETAILS & FRAMING NOTES.
- . FLOOR SLAB PER STRUCTURAL PLANS.
- THE PREPARED SUBGRADE WHERE NO BASE COURSE EXISTS [CRC R506.2.3].
- FOLLOWING LOCATIONS:
- FOUNDATION





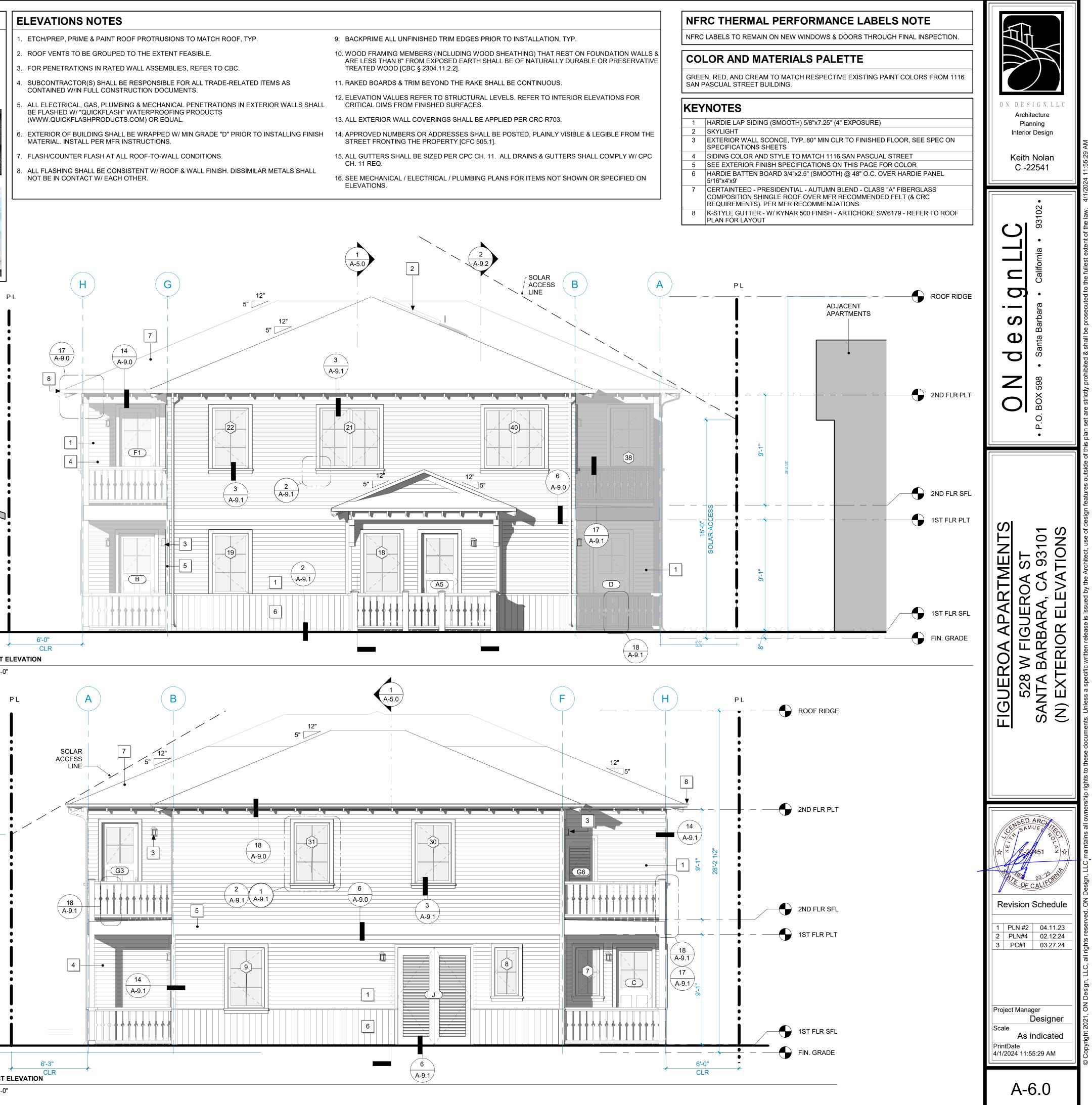


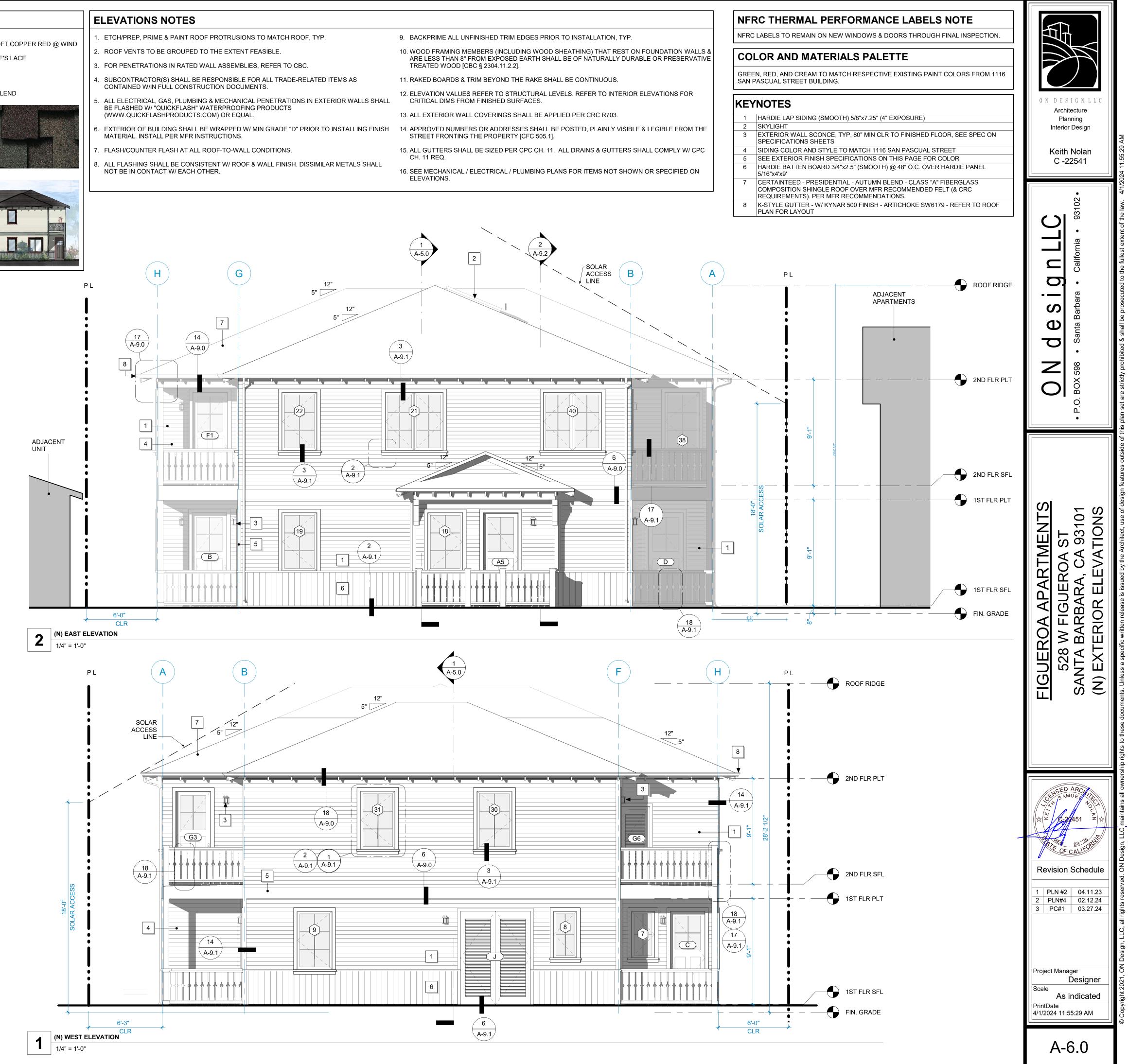


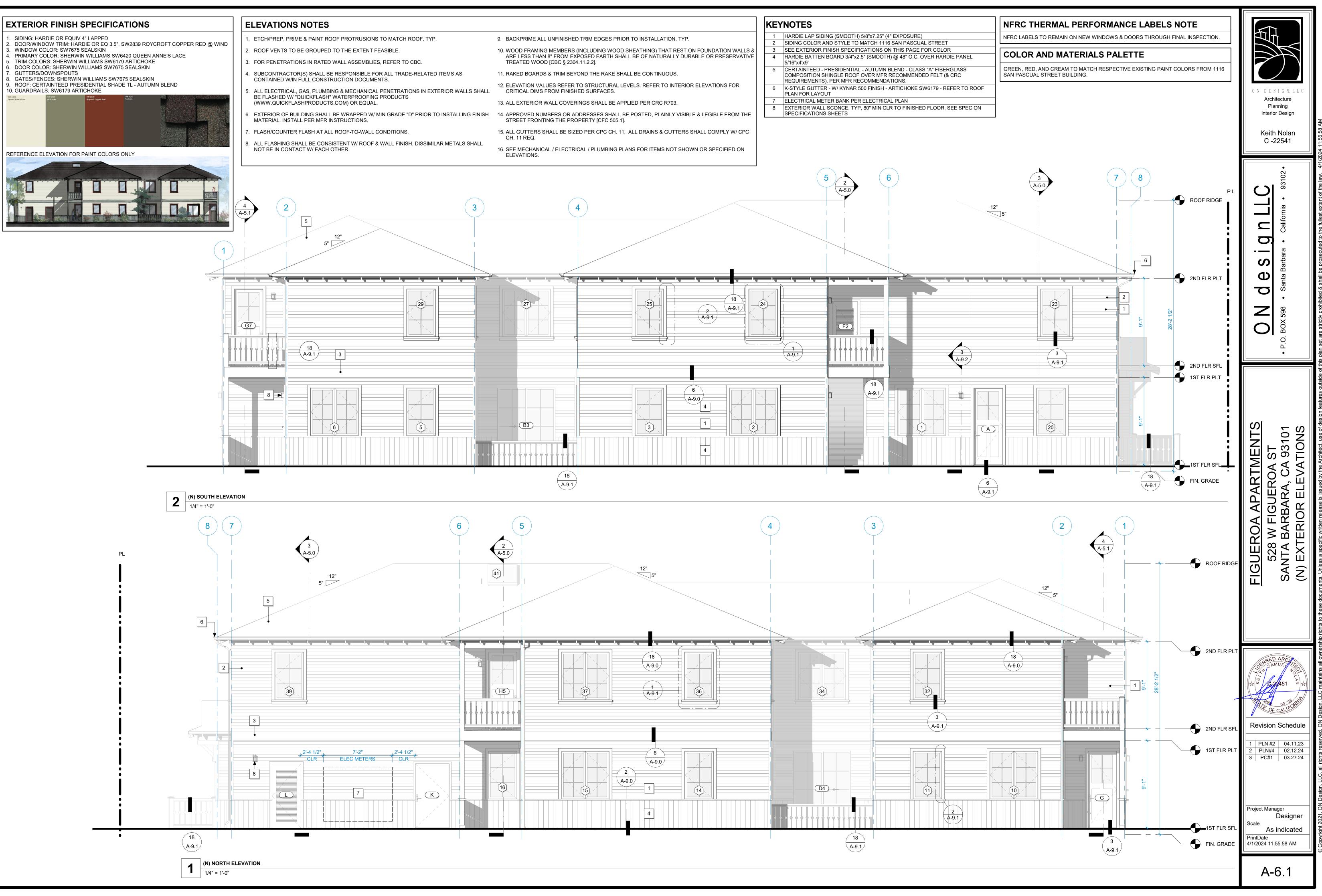
- 1. ETCH/PREP, PRIME & PAINT ROOF PROTRUSIONS TO MATCH ROOF, TYP.

- BE FLASHED W/ "QUICKFLASH" WATERPROOFING PRODUCTS
- MATERIAL. INSTALL PER MFR INSTRUCTIONS.

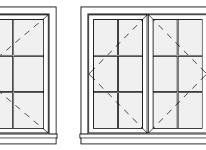
- STREET FRONTING THE PROPERTY [CFC 505.1].
- CH. 11 REQ.
- ELEVATIONS.







WINDOW TYPES



TYPE II

TYPE III

TYPE I

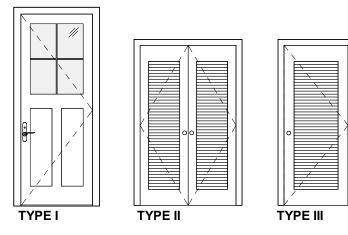
SILL

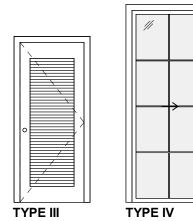
- NOTE:
- FIRST FLOOR VARATIONS WILL HAVE NO EXTERIOR
- PROVIDE EMERGENCY ESCAPE & RESCUE FROM BASEMENTS, HABITABLE ATTICS, & SLEEPING ROOM(S). NET CLEAR WINDOW OPENING AREA SHALL BE NOT LESS THAN 5.7 SF (5.0 SF @ GRADE LEVEL FLOOR). MIN NET WINDOW OPENING HEIGHT 24" CLEAR. MIN NET WINDOW OPENING WIDTH 20" CLEAR. BOTTOM OF CLEAR OPENING MAX 44" ABOVE FLOOR [CBC2019 1031.3].

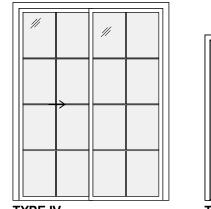
DOOR TYPES

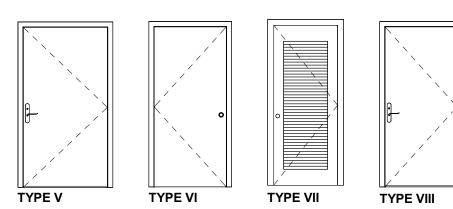
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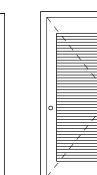
TYPE IX











O FIXED WINDOW P PAINT PIC PICTURE WINDOW PH PANIC HARDWARE PR PAIR PF PRE-FINISHED PL PASSAGE LOCK RM REMOVABLE MULLION RO ROUGH OPENING SC SOUD COPE

SC SOLID CORE SEC SECURITY REQUIRED SH SINGLE-HUNG SKY SKYLIGHT SL SLIDER WINDOW SS SMOKE SEAL

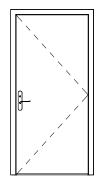
TR TRANSOM WINDOW

V/G VINTE / GLASS VGDF VERTICAL GRAIN DOUG FIR WD WOOD X OPERABLE WINDOW

SL SLIDER WIND SS SMOKE SEAL ST STAIN STL STEEL T TEMPERED

VINYL

V



NFRC THERMAL PERFORMANCE LABELS NOTE

NFRC LABELS TO REMAIN ON NEW WINDOWS & DOORS THROUGH FINAL INSPECTION.

DOOR/WINDOW ABBREVIATIONS

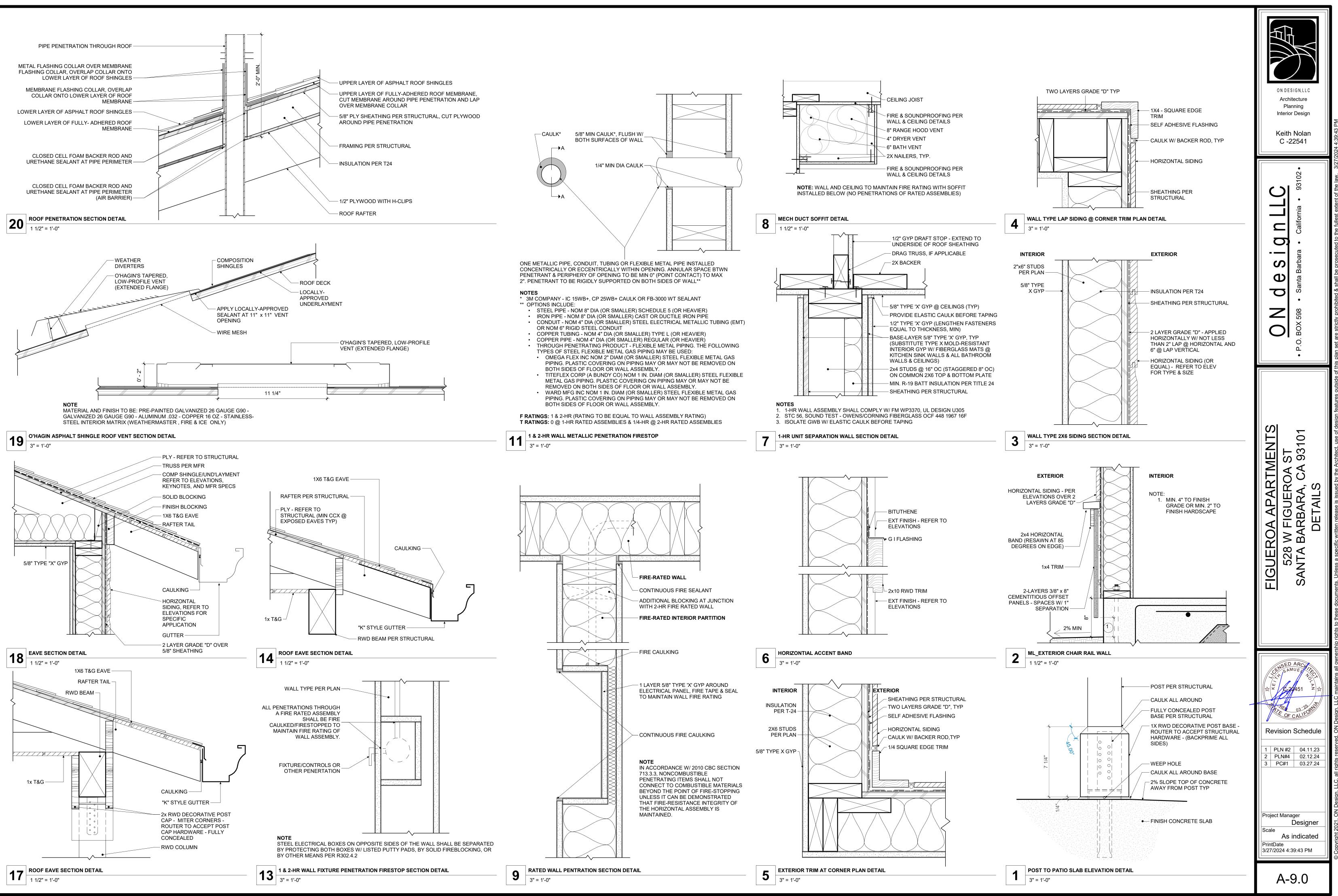
- AL ALUMINUM
- A AWNING
- B BAY BF BI-FOLD
- BL BED/BATH LOCK CMT CASEMENT
- CLRA CLEAR-ANNODIZED CLRA CLEAR-ANNODIZE CL CLOSET CP COPPER DBL DOUBLE DH DOUBLE-HUNG DG DUAL GLAZED DL DUMMY LATCH FX FIXED

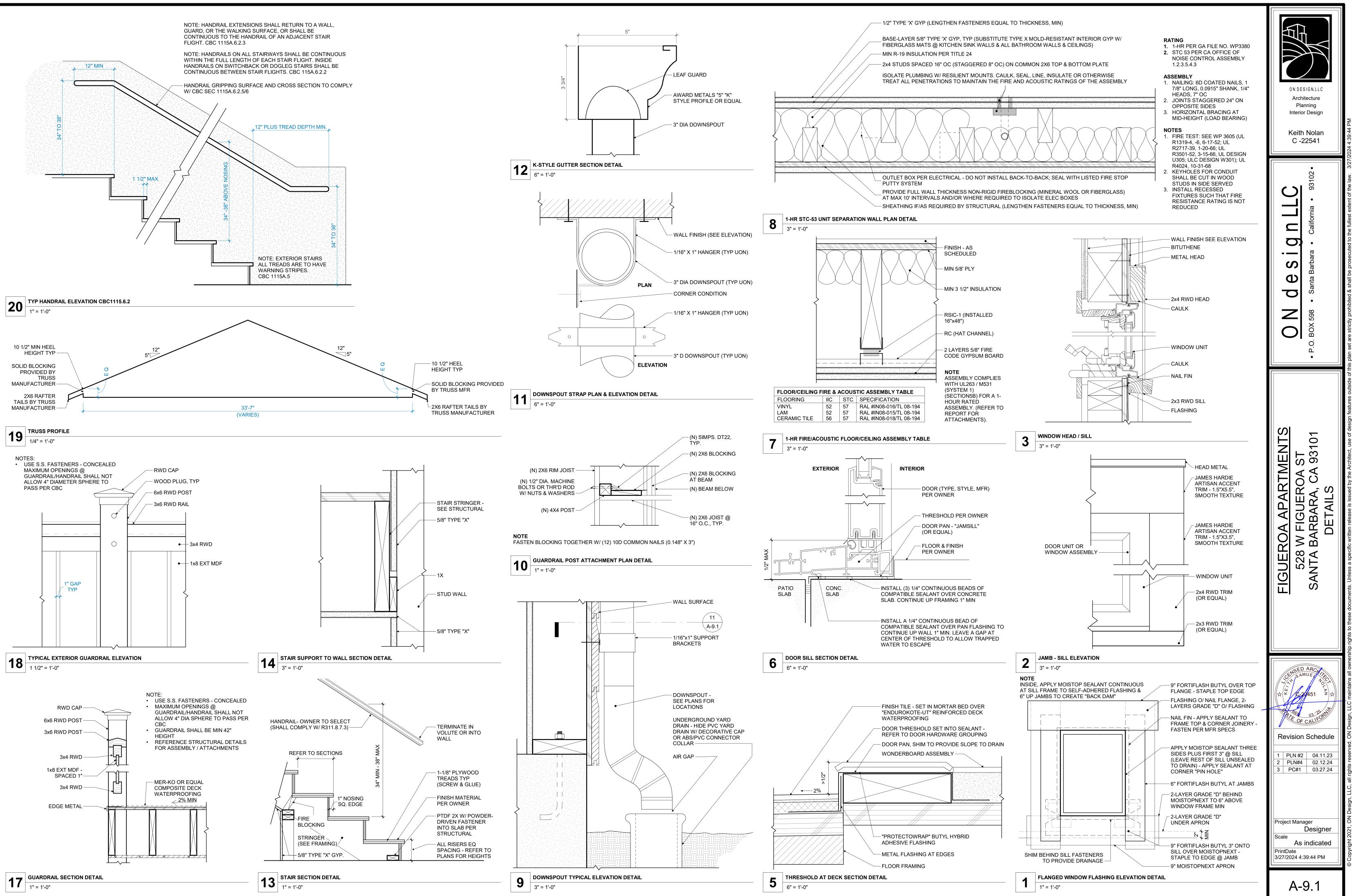
- GL GLASS H HOPPER HC HOLLOW CORE
- HM HOLLOW METAL
- J JALOUSIE KE KEYED ENTRY W/ DEADBOLT
- LG LAMINATED GLASS M METAL SKIN, SOLID CORE M/G METAL / GLASS

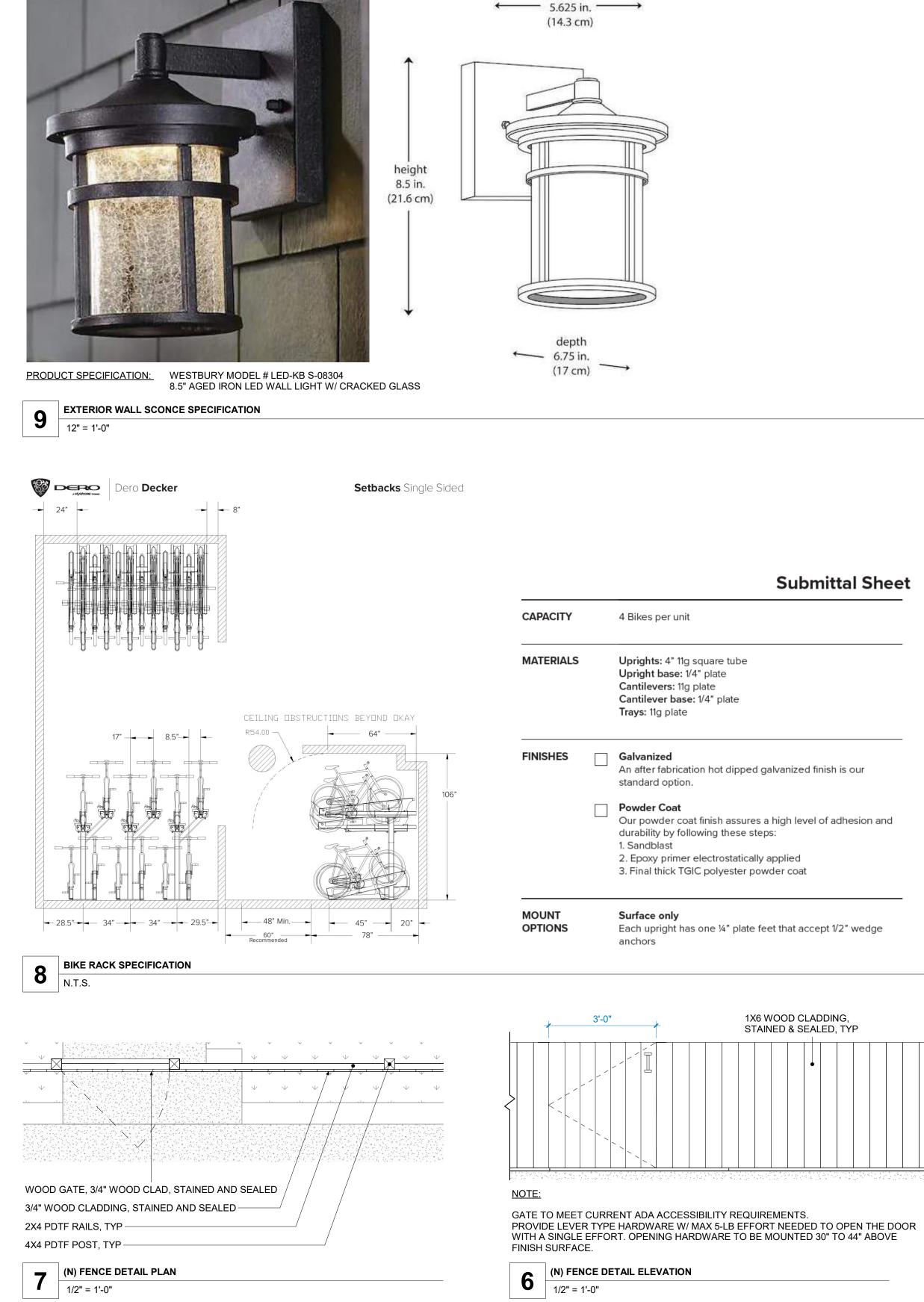
				DETAIL CALLO	UT							
M TYPE LOCATION		HEIGHT	HEAD HT	HEAD JAMB	SILL		MFR	MODEL	U-FAC	FINISH	HARDWARE	NOTES
1 II LIVING A	5' - 0" 5	5' - 0"	8' - 0"			DBL CMT						EGRESS
2 II LIVING B	5' - 0" 5	5' - 0"	8' - 0"			DBL CMT						
3 I BED B1	3' - 0" 5		8' - 0"			CMT						
4 I BED B1	3' - 0" 5		8' - 0"			CMT						EGRESS
5 I LIVING C	3' - 0" 5		8' - 0"			CMT						
6 II LIVING C	5' - 0" 5		8' - 0"			DBL CMT						
7 I LIVING C	2' - 0" 4		8' - 0"			CMT						SAFETY GLAZING, TYP [CBC 2406.4.2]
B I KITCHEN C	2' - 0" 4		8' - 0"			СМТ						
9 I STAIRS	3' - 0" 5		8' - 0"			CMT						
0 II BED C1	5' - 0" 5		8' - 0"			DBL CMT						EGRESS
1 I BED C2	3' - 0" 5		8' - 0"			CMT						
2 I BED C2	3' - 0" 5		8' - 0"			CMT						EGRESS
3 I BED D2	3' - 0" 5		8' - 0"			CMT						EGRESS
4 I BED D2	3' - 0" 5		8' - 0"			CMT						
5 II LIVING D	5' - 0" 5		8' - 0"			DBL CMT						
6 I LIVING D	3' - 0" 5		8' - 0"			CMT						SAFETY GLAZING, TYP [CBC 2406.4.2]
8 I BED A1	3' - 0" 5		8' - 0"			CMT						SAFETY GLAZING, TYP [CBC 2406.4.2]
9 I BED A2	3' - 0" 5		8' - 0"			CMT						505500
0 I BED A2	3' - 0" 5		8' - 0"			CMT						EGRESS
1 II LIVING E	5' - 0" 5		8' - 0"			DBL CMT						
2 I BED E2 3 I BED E2	3' - 0" 5		8' - 0"			CMT						
	3' - 0" 5		8' - 0"			CMT CMT						
I LIVING F 1 BED F1	3' - 0" 5 3' - 0" 5		8' - 0" 8' - 0"			CMT						
16 I BED F1	3'-0" 5		8' - 0"			CMT						EGRESS
7 II BED F2	5' - 0" 5		8' - 0"			DBL CMT						EGRESS
8 I BED G2	3' - 0" 5		8' - 0"			CMT						EGRESS
9 I BED G2	3' - 0" 5		8' - 0"			CMT						
0 I STAIRS	3' - 0" 5		8' - 0"			CMT						
1 I STAIRS	3' - 0" 5					CMT						
2 I BED 1 G	3' - 0" 5					CMT						
3 I BED 1 G	3' - 0" 5					CMT						
4 II BED H1	5' - 0" 5					DBL CMT						EGRESS
5 I BED H2	3' - 0" 5					CMT						EGRESS
6 I BED H2	3' - 0" 5					CMT						
67 II LIVING H	5' - 0" 5					DBL CMT						
18 I LIVING H	3' - 0" 5					CMT						
9 I BED E1	3' - 0" 5					CMT						EGRESS
0 II BED E1	5' - 0" 5					DBL CMT						
1 III STAIRS	5' - 0" 3					FX SKY						VELUX FIXED SKYLIGHT

DOOR SCHEDULE							
		DETAIL CALLOUTS					
YM TYPE LOCATION	WIDTH HEIGHT	HEAD	JAMB	SILL	MFR MODEL	U-FAC SHGC FINISH	HARDWARE NOTES
A I UNIT A	3' - 0" 8' - 0"						SAFETY GLAZING IN DOORS [CBC 2406.4.1]
1 VI BATH A	3' - 0" 6' - 8"						
2 VI BED A1	3' - 0" 6' - 8"						
4 VI LIVING A	3' - 0" 6' - 8"						
5 I BED A1	3' - 0" 8' - 0"						SAFETY GLAZING IN DOORS [CBC 2406.4.1]
B I UNIT B	3' - 0" 8' - 0"						SAFETY GLAZING IN DOORS [CBC 2406.4.1]
1 VI BED B1	3' - 0" 6' - 8"						
2 VI BED B2	3' - 0" 6' - 8"						
3 IV BED B2	6' - 0" 8' - 0"						SAFETY GLAZING IN DOORS [CBC 2406.4.1]
4 VII LAUNDRY	2' - 8" 6' - 8"						
5 VI BATH B	3' - 0" 6' - 8"						
C I UNIT C	3' - 0" 8' - 0"						SAFETY GLAZING IN DOORS [CBC 2406.4.1]
1 VI BATH C1	3' - 0" 6' - 8"						
2 VII LAUNDRY	2' - 8" 6' - 8"						
3 VI BED C1	3' - 0" 6' - 8"						
5 VI BED C2	3' - 0" 6' - 8"						
6 VI BATH C2	3' - 0" 6' - 8"						
D I UNIT D	3' - 0" 8' - 0"						SAFETY GLAZING IN DOORS [CBC 2406.4.1]
1 VI BATH D	3' - 0" 6' - 8"						
2 VII LAUNDRY	2' - 8" 6' - 8"						
3 VI BED D1	3' - 0" 6' - 8"						
4 IV BED D1	6' - 0" 8' - 0"						SAFETY GLAZING IN DOORS [CBC 2406.4.1]
	3' - 0" 6' - 8"						SAFETT GLAZING IN DOORS [CBC 2400.4.1]
5 VI BED D2 I UNIT E	3'-0" 6'-8"						
							SAFETY GLAZING IN DOORS [CBC 2406.4.1]
1 VII LAUNDRY	2' - 8" 6' - 8"						
2 VI BATH E1	2' - 10" 6' - 8"						
3 VI BED E1	2' - 10" 6' - 8"						
4 VI BED E2	2' - 10" 6' - 8"						
5 VI BATH E2	2' - 10" 6' - 8"						
I UNIT F	3' - 0" 6' - 8"						SAFETY GLAZING IN DOORS [CBC 2406.4.1]
1 I BALCONY	3' - 0" 8' - 0"						SAFETY GLAZING IN DOORS [CBC 2406.4.1]
2 III WATER HEATER	2' - 8" 6' - 8"						
2 VI BED F1	2' - 10" 6' - 8"						
3 VI BED F2	2' - 10" 6' - 8"						
4 VI BATH F	2' - 10" 6' - 8"						
5 VII LAUNDRY	2' - 8" 6' - 8"						
G I UNIT G	3' - 0" 8' - 0"						SAFETY GLAZING IN DOORS [CBC 2406.4.1]
1 VI BATH G1	2' - 10" 6' - 8"						
2 VI BED 1 G	2' - 10" 6' - 8"						
3 I BALCONY	3' - 0" 8' - 0"						SAFETY GLAZING IN DOORS [CBC 2406.4.1]
4 VI BED G2	2' - 10" 6' - 8"						
5 VI BATH G2	2' - 10" 6' - 8"						
6 VII LAUNDRY	2' - 6" 6' - 8"						
7 I BALCONY	3' - 0" 8' - 0"						SAFETY GLAZING IN DOORS [CBC 2406.4.1]
I UNIT H	3' - 0" 6' - 8"						SAFETY GLAZING IN DOORS [CBC 2406.4.1]
1 VII LAUNDRY	2' - 8" 6' - 8"						
2 VI BATH H	2' - 10" 6' - 8"						
3 VI BED H1	2' - 10" 6' - 8"						
4 VI BED H2	2' - 10" 6' - 8"						
5 I BALCONY	3' - 0" 8' - 0"						SAFETY GLAZING IN DOORS [CBC 2406.4.1]
	2' - 6" 6' - 8"						
	6' - 0" 8' - 0"						
K V BIKE	3' - 6" 6' - 8"						
L III TRASH/REC	3' - 0" 6' - 8"			<u> </u>			



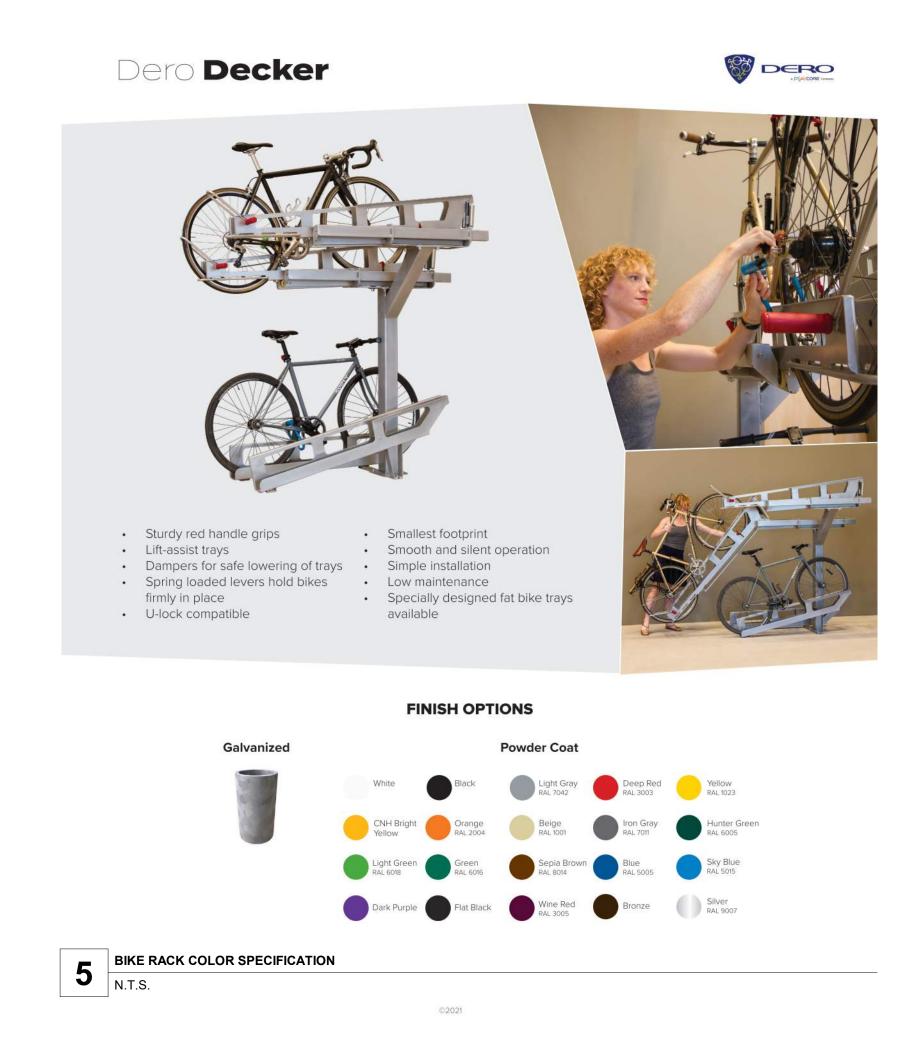






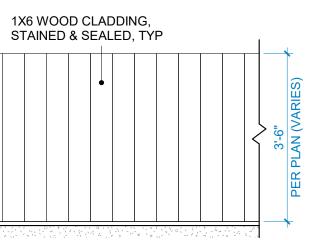
6 (N) FENCE DETAIL ELEVATION 1/2" = 1'-0"

widt





Submittal Sheet







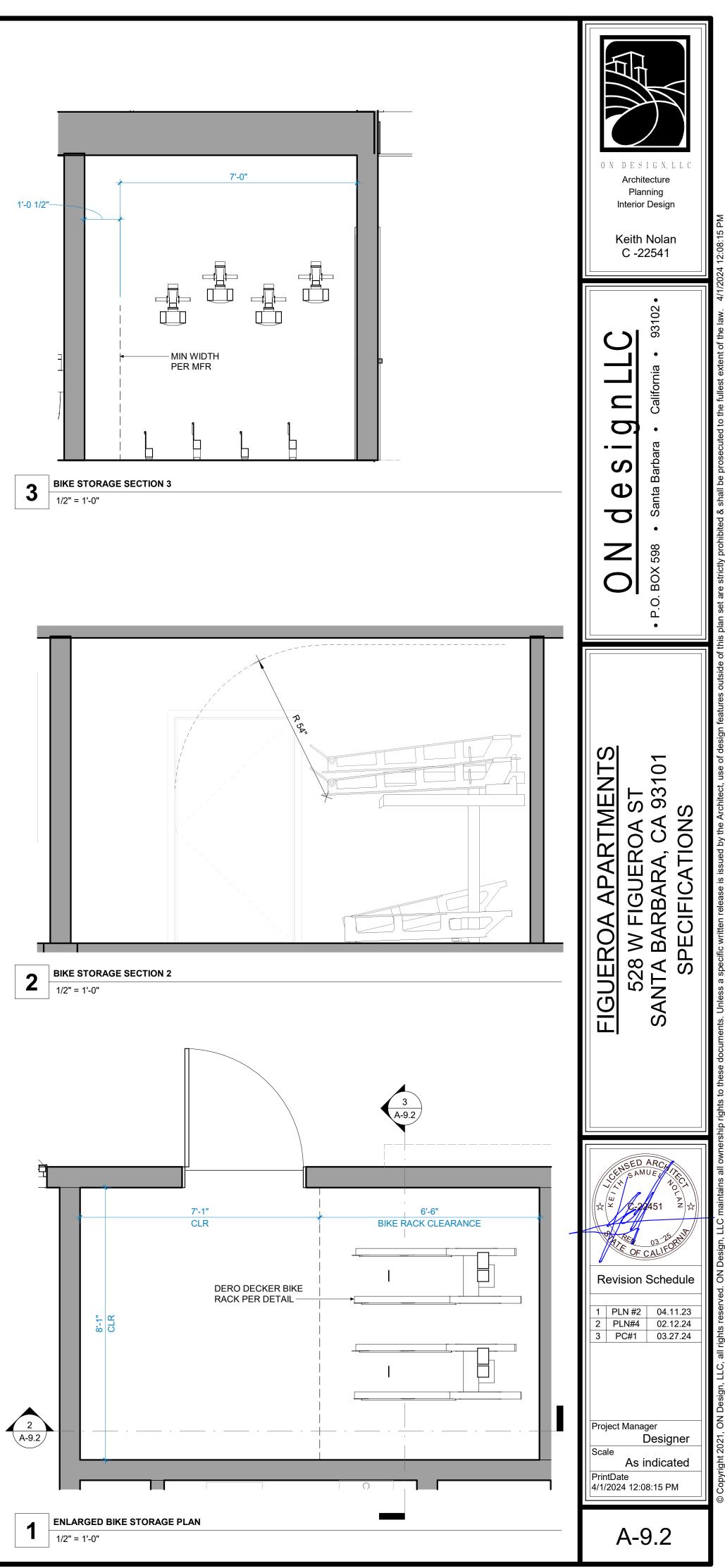
Patent #8,950,592

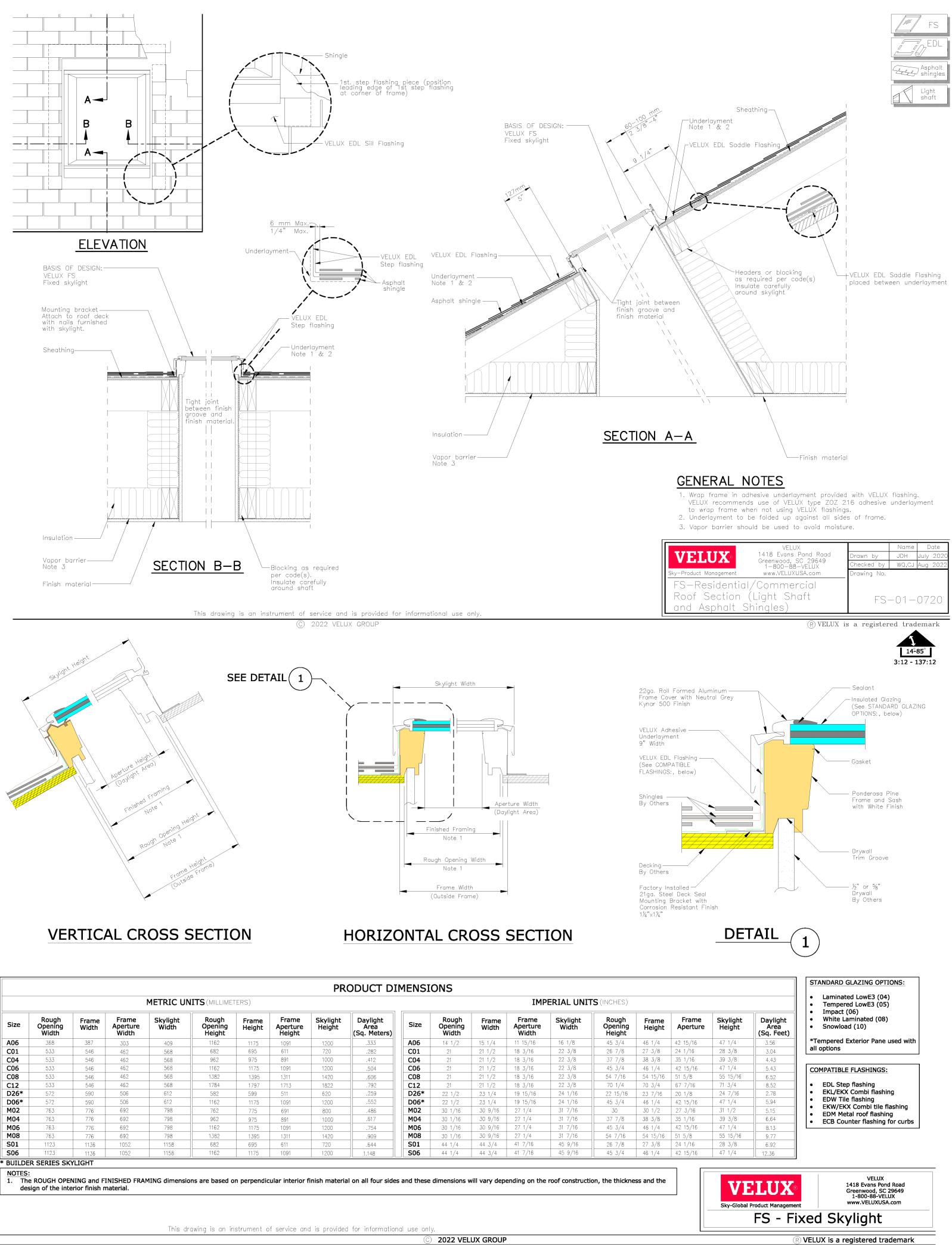
Derc Decker

The Dero Decker takes bike parking to the next level – literally. By stacking bikes on a two-tiered system, capacity doubles. Unlike other two-tier systems our lift-assist top trays slide down inches from the ground, thus requiring only minimal lifting of the bike into the tray. The Dero Decker has a front wheel safety locking lever and tray dampers to provide safe lowering of upper trays. The near vertical lowered trays also reduce the required aisle space, giving the Dero Decker the smallest footprint on the market.

©2021

BIKE STRUCTURE SPECIFICATION





VERTICAL	CROSS	SECTION

								PR	ODUCT DI	MENSI	ONS					
				METRIC UN	IITS (MILLIME	rers)							IMP	ERIAL UNIT	FS (INCHES)	
Size	Rough Opening Width	Frame Width	Frame Aperture Width	Skylight Width	Rough Opening Height	Frame Height	Frame Aperture Height	Skylight Height	Daylight Area (Sq. Meters)	Size	Rough Opening Width	Frame Width	Frame Aperture Width	Skylight Width	Rough Opening Height	Fra Hei
406	368	387	303	409	1162	1175	1091	1200	.333	A06	14 1/2	15 1/4	11 15/16	16 1/8	45 3/4	46 1
C01	533	546	462	568	682	695	611	720	.282	C01	21	21 1/2	18 3/16	22 3/8	26 7/8	27 3,
C04	533	546	462	568	962	975	891	1000	.412	C04	21	21 1/2	18 3/16	22 3/8	37 7/8	38 3/
C06	533	546	462	568	1162	1175	1091	1200	.504	C06	21	21 1/2	18 3/16	22 3/8	45 3/4	46 1,
C08	533	546	462	568	1382	1395	1311	1420	.606	C08	21	21 1/2	18 3/16	22 3/8	54 7/16	54 15
C12	533	546	462	568	1784	1797	1713	1822	.792	C12	21	21 1/2	18 3/16	22 3/8	70 1/4	70 3/
D26*	572	590	506	612	582	599	511	620	.259	D26*	22 1/2	23 1/4	19 15/16	24 1/16	22 15/16	23 7/
D06*	572	590	506	612	1162	1175	1091	1200	.552	D06*	22 1/2	23 1/4	19 15/16	24 1/16	45 3/4	46 1
M02	763	776	692	798	762	775	691	800	.486	M02	30 1/16	30 9/16	27 1/4	31 7/16	30	30 1/
M04	763	776	692	798	962	975	891	1000	.617	M04	30 1/16	30 9/16	27 1/4	31 7/16	37 7/8	38 3,
M06	763	776	692	798	1162	1175	1091	1200	.754	M06	30 1/16	30 9/16	27 1/4	31 7/16	45 3/4	46 1/
M08	763	776	692	798	1382	1395	1311	1420	.909	M08	30 1/16	30 9/16	27 1/4	31 7/16	54 7/16	54 15
S01	1123	1136	1052	1158	682	695	611	720	.644	S01	44 1/4	44 3/4	41 7/16	45 9/16	26 7/8	27 3/
	1123	1136	1052	1158	1162	1175	1091	1200	1.148	S06	44 1/4	44 3/4	41 7/16	45 9/16	45 3/4	46 1/



JavaScript Decibel Calculators Inverse Square Law * Power Ratios * Voltage Ratios * T and H-Pads combining Decibels * Atmospheric Absorption

Decibels and Distance

This calculator requires a JavaScript capable browser

This calculation will give you the amount of attenuation, in decibels, you can expect with a change in receiver distance, in a free field (outdoors). For example if you were standing 10 feet from a noise source, and were to move 100 feet away from that noise source, you would expect to see a drop in level of 20dB. Sound that is radiated from a point source drops in level at 6dB per doubling of distance. If you start at 50 feet from the source and move to 100 feet from the source you will have a 6dB drop in level. If you move from 500 feet to 1000 feet, you will have a 6dB drop in level. For the record, the formula to calculate this level drop is: *Decibels of Change*=20xlog(distance 1/distance 2), and you can calculate it on any scientific calculator. Reference listening New receiver distance in This is the number of

distance in feet or meters, from the noise source	feet or meters, from the source	decibels of level drop/rise vou would find
3.28	7	Calculate -6.58441597441
		HELP
	Jav	/aScript Help

This information is provided with no warranty of its accuracy, or applicability, and any use made of this information is done so at the sole risk of the user.

System Desi	116-5100 Anderson Way, 403 - 1240 Kensington R	t, North Vernon, d NW, Ca	Vancou BC V11 Igary, A	ver, BC. V7P 3P9 Ph 604-986-8181							
	OUTDOOR UNIT			RX12B							
Casing Colour				IVORY WHITE							
	High	CF		1051	966						
Sound Pressu		dB	A	<mark></mark>							
Fan Type				PROPELLER							
1 an	Drive			DIRECT							
	Туре			DIRECT CURRENT							
	Index of protection (IP)			24							
	Insulation Grade			E							
Fan Motor	Running Current (Rated)	A		0.61							
	Power Consumption (Rated)	w		46							
	Motor Output	W	/	26							
	Poles			8							
	Туре			HERMETIC SWING							
Compressor	Model			1YC23AUXDA							
Compressor	Oil type			DAPHNE FVC50K							
	Oil amount	oz (c	:m³)	12.4 (375)							
Heat Exchange				FIN TUBE							
Dimensions (H		inch (21-11/16 x 26-1/2 x 11-3/16 (550 x 67							
	ensions (H x W x D)	inch (24-1/64 x 31-3/8 x 15-1/8 (610 x 80	1 x 384)						
Weight		lbs (62 (28)							
Gross Weight		lbs (kg)	68 (31)							
Document No.	1			3D143595A							
	EING TESTED ACCORDING TO AHRI 210/ ONS ARE SUBJECTED TO CHANGE BY TI			RER WITHOUT PRIOR NOTICE.							
	COOLING			HEATING							
INDOOR: 80°F	DB (26.7°CDB) / 67°FWB (19.4°	CWB)		INDOOR: 70°FDB (21.1°CDB)							
	TDOOR: 95°FDB (35°CDB)		OUT	DOOR: 47°FDB (8.3°CDB) / 43°FWB (6.1°CWB)							



HEAT PUMP SPECIFICATION

RABBIT AIR SPA-700A

TECH SPECS

MinusA2	SPA-700A	SPA-780 SPA-780					
Weight	19.4	lbs.					
Dimension	20H × 21.4	N x 7D in.					
Power Cord Length	9.33	ft.					
Standard Coverage ⁶ (2 ACPH ⁷)	700 sq. ft.	81 <mark>5</mark> sq. f					
Allergy Sufferer ⁶ (4 ACPH ⁷)	350 sq. ft.	408 sq. f					
Power Consumption	7 to 47 watts	7 to 61 wa					
Noise Level	20.8 to 45.6 dBA	25.6 to 51.3					
Air Flow	47 to 187 CFM	58 to 218 (
CADR (Pollen)	171	200					
CADR (Dust)	173	193					
CADR (Smoke)	166	180					
Wifi Enabled (iOS and Android)	No	SPA-780N (
Annual Filter Cost	\$42.50 (12hr/d \$85.00 (24hr/d Learn more about f	ay operation)					
Power Requirements	120V AC	60 Hz					
California Residents	WARNING - California Prop 65						

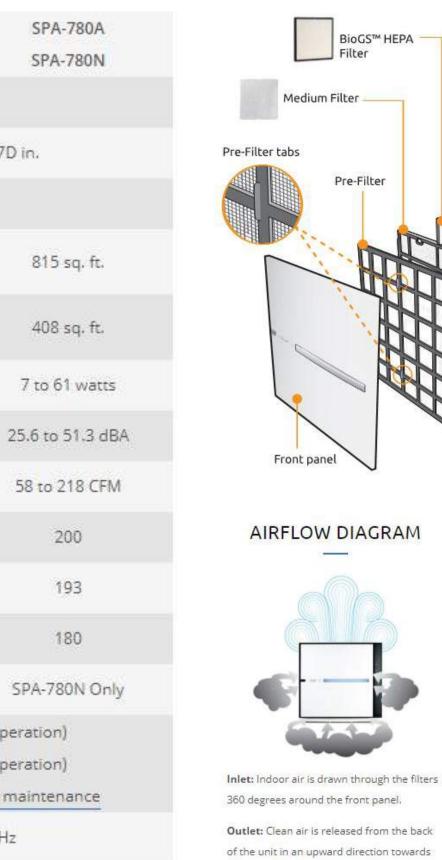
AIR FILTER SPECIFICATION



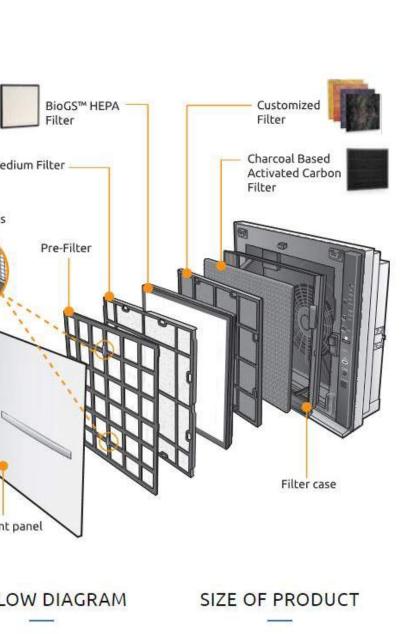
	OUTDOOR UNIT		RX1	18B							
Casing Colou	r		IVORY	WHITE							
Airflow Rate	High	CFM	1987	1952							
Sound Pressu	ire Level	dBA	<mark>54</mark>)								
Fan	Туре		PROPE	ELLER							
Fan	Drive		DIRE	ECT							
	Туре		DIRECT C	URRENT							
	Index of protection (IP)		2	-							
	Insulation Grade		E								
Fan Motor	Running Current (Rated)	A	1.3								
	Power Consumption (Rated)	W	8	-							
	Motor Output	w	5								
	Poles		8	,							
	Туре		HERMETI								
Compressor	Model		2Y147AKCX2A								
Compressor	Oil type		DAPHNE FVC50K								
	Oil amount	oz (cm ³)	21.5 (650)								
Heat Exchang			FIN T								
Dimensions (I		inch (mm)									
Packaged Din	nensions (H x W x D)	inch (mm)	29-7/8 x 42-3/8 x 18-7								
Weight		lbs (kg)	97 (
Gross Weight		lbs (kg)	106								
Document No			3D143595A								
	BEING TESTED ACCORDING TO AHRI 210/ IONS ARE SUBJECTED TO CHANGE BY TI										
	COOLING		HEATING								
	FDB (26.7°CDB) / 67°FWB (19.4°		INDOOR: 70°FDB (21.1°CDB)								
OL	JTDOOR: 95°FDB (35°CDB)	OU ⁻	TDOOR: 47°FDB (8.3°CDB) / 43°FWB	(6.1°CWB)							

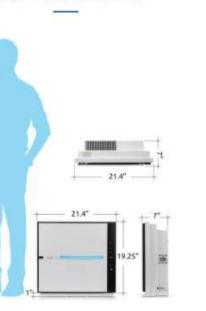
	OUTDOOR UNIT		RX09B									
Casing Colou	r		IVORY	WHITE								
Airflow Rate	High	CFM	1083	1103								
Sound Pressu	ire Level	dBA	46	48								
F	Туре		PROPELLER									
Fan	Drive		DIRECT									
	Туре		DIRECT CURRENT									
	Index of protection (IP)		24									
	Insulation Grade			E								
Fan Motor	Running Current (Rated)	A	0.60									
	Power Consumption (Rated)	W	3	2								
	Motor Output	W	2	6								
	Poles			8								
	Туре		HERMET	IC SWING								
Compressor	Model		1YC23AUXDA									
compressor	Oil type		DAPHNE FVC50K									
	Oil amount	oz (cm ³)	12.4 (375)									
Heat Exchang	er Type		FIN 1	ГИВЕ								
Dimensions (H	H x W x D)	inch (mm)	21-11/16 x 26-1/2 x 11	-3/16 (550 x 675 x 284)								
Packaged Dim	nensions (H x W x D)	inch (mm)	24-1/64 x 31-3/8 x 15	-1/8 (610 x 801 x 384)								
Weight		lbs (kg)	55 (25)									
Gross Weight		lbs (kg)	62 (28)									
Document No			3D143595A									
	BEING TESTED ACCORDING TO AHRI 210 IONS ARE SUBJECTED TO CHANGE BY T		RER WITHOUT PRIOR NOTICE.									
	COOLING		HEATING									

INDOOR: 80°FDB (26.7°CDB) / 67°FWB (19.4°CWB) OUTDOOR: 95°FDB (35°CDB) INDOOR: 70°FDB (21.1°CDB) OUTDOOR: 47°FDB (8.3°CDB) / 43°FWB(6.1°CWB)



the room.



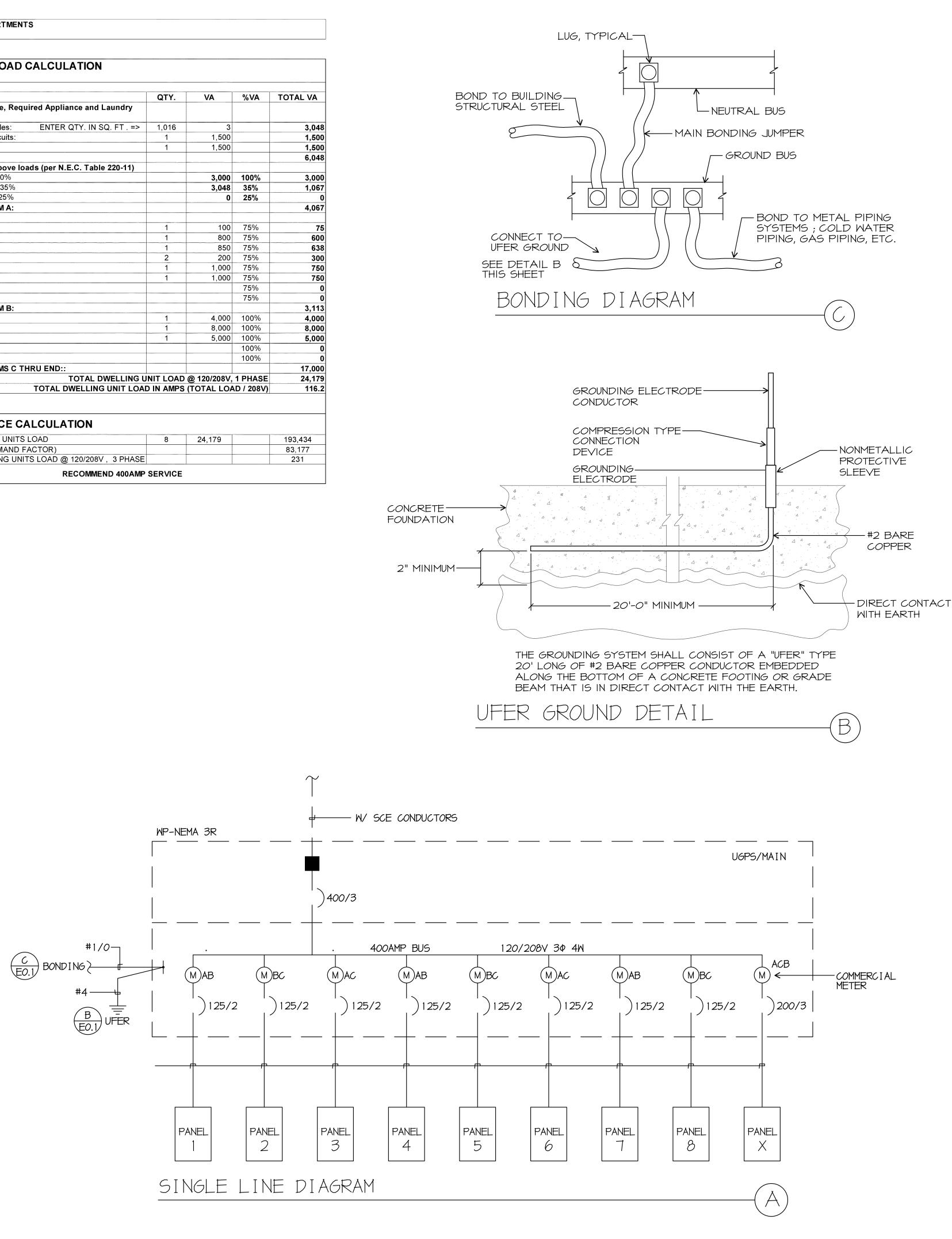


20.25H x 21.4W x 7D (inch)



	TYPICAL UNIT				
tem #	DESCRIPTION	QTY.	VA	%VA	TOTAL VA
Α.	Lighting & Receptacle, Required Appliance and Laundry Loads				
	1. Lighting & Receptacles: ENTER QTY. IN SQ. FT . =>	1,016	3		3,04
	2. Small Appliance Circuits:	1	1,500		1,50
	3. Laundry Circuits:	1	1,500		1,50
	SUBTOTAL				6,04
	N.E.C. Demand for above loads (per N.E.C. Table 220-11)				
	1. First 3,000 VA @ 100%		3,000	100%	3,00
	2. Next 117,000 VA @ 35%		3,048	35%	1,06
	3. Remaining Load @ 25%		0	25%	
	SUBTOTAL FOR ITEM A:				4,06
В.	Fixed appliances				
	Range Hood Fan	1	100	75%	7
	Microwave	1	800	75%	60
	Refrigerator	1	850	75%	63
	Bath Fan	2	200	75%	30
	Disposal	1	1,000	75%	75
	Dishwasher	1	1,000	75%	75
				75%	
				75%	
	SUBTOTAL FOR ITEM B:				3,11
C.	AC Units	1	4,000	100%	4,00
D.	Electric Range	1	8,000	100%	8,00
Ε.	Washer + Dryer	1	5,000	100%	5,00
F.	Gas Water Heater			100%	
G.				100%	
	SUBTOTAL FOR ITEMS C THRU END::				17,00
	TOTAL DWELLING U				24,17
	TOTAL DWELLING UNIT LOAD	<u>D IN AMPS (</u>	TOTAL LOA	D / 208V)	116.

2" MINIMUM-

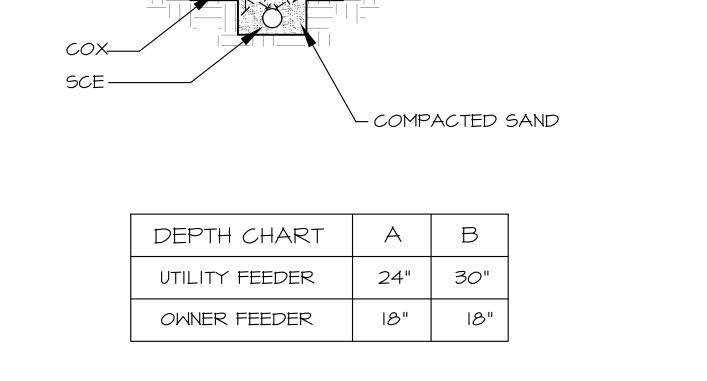


FOR: 528 FIGUEROA APARTMENTS

GENERAL NOTES

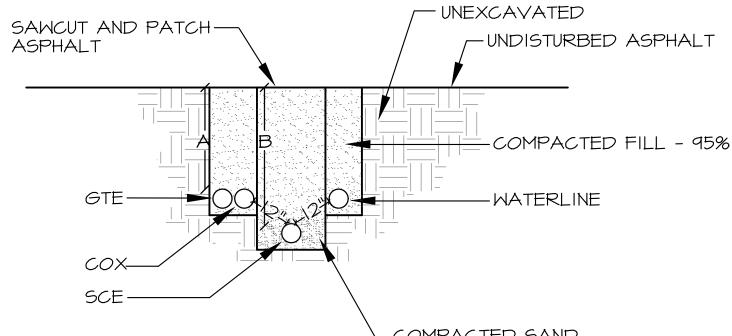
- 1. VISIT JOB SITE AND VERIFY EXISTING CONDITIONS
- 2. THE ELECTRICAL WORK SHALL BE INSTALLED IN ACCO 2022 CALIFORNIA ELECTRICAL CODE AND ALL APPLIC ORDINANCES. WHERE PLANS CALL FOR A HIGHER STAN APPLICABLE CODES, THE PLANS SHALL GOVERN.
- 3. CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY. EXACT BE DETERMINED IN THE FIELD TO SUIT FIELD CONDI
- 4. ALL ELECTRICAL EQUIPMENT, APPLIANCES AND LIGHT BE LISTED BY A RECOGNIZED TEST LAB AND BEAR TH APPROVAL.
- 5. CONTRACTOR SHALL FURNISH, INSTALL AND CONNECT EQUIPMENT FOR THIS WORK UNLESS OTHERWISE NOTED
- 6. FURNISH DISCONNECT SWITCHES AT REMOTE MOTORS.
- 7. ALL SPACES AS INDICATED ON PANELS OR SWITCHBOA COMPLETE WITH HARDWARE AND BUSSING FOR FUTURE SWITCH.
- 8. CHECK ARCHITECTURAL PLANS FOR DOOR SWINGS BEFO SWITCH OUTLETS.
- 9. GROUNDING AND BONDING SHALL BE PER CODE PLUS A PROVISIONS SPECIFIED OR SHOWN ON DRAWINGS.
- 10. ALL CONDUIT RUNS SHALL CONTAIN A CODE SIZED GR
- 11. THESE PLANS ARE NOT COMPLETE UNTIL APPROVED BY HAVING JURISDICTION.
- 12. ALL FEEDER CONDUCTORS SHALL BE IN CONDUIT. BRA BE NON-METALLIC SHEATHED CABLE.
- 13. ALL CONDUCTORS SHALL BE COPPER WITH TYPE THHN/
- 14. COORDINATE WITH SERVING ELECTRICAL UTILITY COM PROVISIONS FOR ELECTRICAL SERVICE ACCORDINGLY. SERVICE COSTS AND UTILITY COMPANY CHARGES IN B
- 15. COORDINATE WITH SERVING TELEPHONE UTILITY COMP PROVISIONS FOR TELEPHONE SERVICE ACCORDINGLY. SERVICE COSTS AND UTILITY COMPANY CHARGES IN E
- 16. COORDINATE WITH SERVING CABLE TELEVISION COMPA PROVISIONS FOR TELEPHONE SERVICE ACCORDINGLY. SERVICE COSTS AND UTILITY COMPANY CHARGES IN E
- 17. ALL PERMITS SHALL BE OBTAINED AND PAID FOR BY
- 18. ALL 120-VOLT, SINGLE PHASE, 15 AND 20 AMPERE E SUPPLYING OUTLETS OR DEVICES INSTALLED IN DWEL FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARL DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CL LAUNDRY AREAS, OR SIMILAR ROOMS OR AREAS SHALL BY A LISTED ARC-FAULT/BRANCH CIRCUIT INTERRUPT TYPE, A BRANCH/FEEDER TYPE, A LISTED SUPPLEMEN PROTECTION CIRCUIT BREAKER INSTALLED TO PROVID OF THE BRANCH CIRCUIT. [CEC 210.12(A)(1) THROUG
- 19. ALL NON-LOCKING TYPE 125-VOLT, 15 AND 20 AMPER IN A DWELLING UNIT SHALL BE LISTED TAMPER-RESI (EXCEPTIONS: (1) RECEPTACLE MORE THAN 5'-6" ABO (2) RECEPTACLES PART OF A LUMINAIRE OR APPLIANC RECEPTACLE OR A DUPLEX RECEPTACLE FOR TWO APPL NOT EASILY MOVED AND LOCATED WITHIN DEDICATED CORD-AND-PLUG CONNECTED AS PER CEC 400.10(A)(6 (A)(8), AND (4) NON-GROUNDING RECEPTACLES USED AS PERMITTED IN CEC 406.4(D)(2)(a), [CEC 406.12
- 20. SMOKE DETECTORS SHALL BE 120V, PHOTOELECTRIC/I UNITS WITH BATTERY BACK UP. THEY SHALL BE INTE
- 21. HALLWAY DETECTORS SHALL BE COMBINATION SMOKE MONOXIDE DETECTOR. THEY SHALL BE INTERCONNECTE DETECTORS.
- 22. LIGHT FIXTURES IN BATHTUB OR SHOWER AREAS SHAL "SUITABLE FOR DAMP LOCATIONS." CEC 410.10.
- 23. WP EXTERIOR RECEPTACLES SHALL HAVE HUBBELL #ML COVERS OR EQUAL. ALL RECEPTACLES IN DAMP OR WE SHALL BE LISTED WEATHER-RESISTANT TYPE AND BE
- 24. MANUFACTURER'S LITERATURE SHOWING THAT PROPOSE ARE HIGH EFFICACY AND CALIFORNIA CERTIFIED IS THE TIME OF FIELD INSPECTION. CALIFORNIA ENERG
- 25. AT LEAST ONE FIXTURE INSTALLED IN GARAGES, CLO AND UTILITY ROOMS SHALL BE CONTROLLED BY A VAC CALIFORNIA ENERGY CODE 150(K)2.
- 26. AT LEAST ONE LIGHT FIXTURE IN EACH BATHROOM SH BY A VACANCY SENSOR PER CALIFORNIA ENERGY CODE
- 27. TWO MINIMUM I" DIAMETER METALLIC CONDUITS SHAL ORIGINATE AT A READILY ACCESSIBLE ATTIC LOCATI A SOLAR ZONE AREA COMPLYING WITH CALIFORNIA EN 110.10 AND TERMINATE AT A MINIMUM 4" FROM THE THE ELECTRICAL JUNCTION BOX AND SEGMENT OF CON SHALL BE PERMANENTLY AND VISIBLY MARKED AS "FO PHOTOVOLTAIC".
- 28. RECESSED LUMINARIES INSTALLED IN INSULATED CEI I.C. RATING AND SHALL BE CERTIFIED AS AIR TIGH
- 29. LUMINARIES WITH SCREW BASE SOCKETS SHALL NOT E CEILING.
- 30. LUMINARIES WITH SCREW BASE SOCKETS SHALL BE MA COMPLIANT AND SHALL ONLY CONTAIN JA8 COMPLIANT
- 31. ALL JA& COMPLIANT LUMINARIES SHALL BE CONTROLL VACANCY SENSORS.
- 32. WHERE BRANCH-CIRCUIT WIRING IS MODIFIED, REPLA AREAS SPECIFIED IN CEC 210.12(A), THE BRANCH C PROTECTED BY EITHER A LISTED COMBINATION-TYPE ORIGIN OF THE BRANCH CIRCUIT OR A LISTED OUTLE AFCI LOCATED AT THE FIRST RECEPTACLE OF THE EX [CEC 210.12(D)]
- 33. ALL KITCHEN COUNTERTOP RECEPTACLES ARE TO BE G RECEPTACLES WITHIN 6 FEET FROM THE TOP INSIDE THE SINK, RECEPTACLES WITHIN 6 FEET OF THE OUT BATHTUB OR SHOWER STALL, AND RECEPTACLES IN LA GFCI PROTECTED. [CEC 210.8].

		<u>SYMBOLS</u>	
S PRIOR TO BID	<u> </u>	CONDUIT EXISTING	
CORDANCE WITH THE		CONDUIT CONCEALED IN WALL OR CEILING CONDUIT CONCEALED UNDER FLOOR OR BELOW GRADE	
ICABLE LOCAL ANDARD THAN		CONDUIT STUBBED OUT AND CAPPED	
CT LOCATIONS SHALL	o	CONDUIT TURNED UP	
DITIONS.	• <u> </u>	CONDUIT TURNED DOWN HATCH MARKS INDICATE NO. OF #12 WIRES IN CODE SIZED	ON DBSIGN, LLC Architecture
HTING FIXTURES SHALL THAT LABEL <i>O</i> F	7	CONDUIT (3) MAX. IN 1/2" C., (5) MAX. IN 3/4" C., (8) MAX. IN 1"C., NO MARKS = 2#12	Planning Interior Design
	A-3	HOME RUN: LETTER INDICATES PANEL, NUMBER(S) INDICATES	Keith Nielen
T ALL MATERIAL AND ED.		CIRCUIT(S). SAWCUT	Keith Nolan C-22451
		GROUND CONNECTION	
OARDS SHALL BE E BREAKER <i>O</i> R		DISTRIBUTION SWITCHBOARD OR PANEL	
		PANEL, BRANCH CIRCUIT TYPE, SURFACE AND FLUSH SIGNAL TERMINAL CABINET, SURFACE & FLUSH	
FORE INSTALLING		LINEAR SURFACE FIXTURE	O
ANY ADDITIONAL	2 g	OUTLET DATA: BAR INDICATES WALL MOUNT, LETTER INDICATES SWITCH CONTROL, NO. INDICATES CIRCUIT.	93102
	0	SURFACE FIXTURE ON FLUSH OUTLET.	
GREEN GROUND WIRE.	\Box	RECESSED FIXTURE WITH JUNCTION BOX FOR THRU WIRING	
BY THE AUTHORITY	$\otimes \otimes$	EXIT LIGHT WITH ARROWS AS SHOWN ON PLANS, WALL AND CEILING MOUNT.	Califor
RANCH CIRCUITS MAY		LOW LEVEL EXIT SIGN, +6" AFF, +4" FROM DOOR JAMB LIGHT FIXTURE DESIGNATION, LETTER INDICATES TYPE,	
N/THWN INSULATION.	100	NO. INDICATES WATTAGE. SEE FIXTURE SCHEDULE.	Barbara
OMPANY AND MAKE	FC 1	MECHANICAL EQUIPMENT DESIGNATION. SEE MECHANICAL DRAWINGS.	Santa B.
Y. INCLUDE ALL BID.	\bigcirc	SPECIAL RECEPTACLE – SEE PLAN	Sa D
MPANY AND MAKE	$\stackrel{(M)}{\odot}$	METER FLUGH FL <i>OO</i> R RECEPTACLE	
. INCLUDE ALL BID.	$\stackrel{\bigcirc}{=}$	RECEPTACLE, DUPLEX, 15A, 125V, NEMA 5-15R +18" U.N.O.	
PANY AND MAKE . INCLUDE ALL	\Rightarrow	DUPLEX RECEPTACLE MTD. ABOVE BACKSPLASH	
BID.		DUPLEX RECEPTACLE W/LOWER HALF SWITCHED	
Y THE CONTRACTOR.	-⊕ ^{GFI}	GROUND FAULT CIRCUIT INTERRUPTING RECEPTACLE DOUBLE DUPLEX RECEPTACLE	
BRANCH CIRCUITS ELLING UNIT KITCHEN,	Ø	CEILING RECEPTACLE	
RLORS, LIBRARIES, CLOSETS, HALLWAYS,	$\stackrel{\mathscr{P}}{\rightarrow}$	RECEPTACLE, DUPLEX, 20A, 125V, NEMA 5-20R +18" U.N.O.	E
LL BE PROTECTED PTER, COMBINATION ENTAL ARC	J	JUNCTION BOX 4" SQUARE, $ -1/2"$ DEEP U.N.O.	S Diagram
IDE PROTECTION UGH(6)].	Ū ⁄2⁄	THERMOSTAT F.B.O. +48" MOTOR, NO. INDICATES HORSEPOWER	Dia Dia
ERE RECEPTACLES	Ð	CLOCK OUTLET +7'-6" U.N.O.	101 101
SISTANT RECECTACLES. BOVE THE FLOOR,		DISCONNECT SWITCH, NON-FUSED	1ENT REET 9310 ⁻ e Line
NCE, (3)A SINGLE PLIANCES THAT ARE D SPACE AND ARE	F	DISCONNECT SWITCH FUSED HORSEPOWER RATED OR SIZED AS NOTED	
(6),(A)(7) OR D FOR REPLACEMENTS	$\boxtimes^{\!$	COMBINATION MAGNETIC STARTER WITH DISCONNECT SWITCH AND FUSES	ARN DA S ⁻ A, C ² Singl
12].	\boxtimes	MAGNETIC MOTOR STARTER W/OVERLOADS IN EACH PHASE	
/ION COMBINATION TERCONNECTED.	D	DIMMER W/INTEGRAL "ON-OFF" SW.	OA AI IGUER ARBAF ymbols
AND CARBON TED WITH SMOKE	e	PUSHBUTTON PHOTOCELL	OA , ARB, ymbc
	SD N	SMOKE DETECTOR	S B F
ALL BE MARKED AS		TELEPHONE/COMPUTER/DATA OUTLET, TWO GANG BOX W/ GANG COVERPLATE & GROMMETED OPENING +18" U.N.O.	U E VIA
ML500 EXTRA DUTY	♦ M	CABLE TV OUTLET +18" U.N.O. MOTION SENSOR	FIGU 528 V SANT Note:
WET LOCATIONS (WP) E GFCI.[CEC 406.9]	\$	EXISTING SWITCH	
SED LIGHT FIXTURES	S	SINGLE POLE SWITCH	General
S TO BE ON SITE AT RGY CODE 150.	S ²	POUBLE POLE SWITCH > QUIET TOGGLE TYPE RATED AT 20A, $ 20/2TTV $ A.C. +42" U.N.O.	ů U
LOSETS, LAUNDRY ROOMS ACANCY SENSOR PER	S ³	THREE WAY SWITCH	
	S ^p S ^m	SWITCH W/PILOT LT MANUAL MOTOR STARTER	
SHALL BE CONTROLLED DE 150(K)2.	FACP	FIRE ALARM CONTROL PANEL	
ALL BE PROVIDED THAT	GFI	GROUND FAULT CIRCUIT INTERRUPTING	
TION WITH PROXIMITY TO ENERGY CODE, SECTION E ELECTRICAL PANEL.	LST MLO	LABOR SAVING TANDEM MAIN LUGS ONLY	
ONDUIT RUN IN THE ATTIC FOR FUTURE SOLAR	w/ C.O.	WITH CONDUIT ONLY	
	U.U. W.P.	WEATHERPR <i>00</i> F	Revision Schedule
EILINGS SHALL HAVE AN GHT.	F.B.O. U.N.O.	FURNISHED BY OTHERS, INSTALL & CONNECT	
BE RECESSED IN A	0.N.O. N.E.C.	UNLESS NOTED OTHERWISE NATIONAL ELECTRICAL CODE ELECTRICAL ENGINEERING	
MARKED AS JA8-2019-E	N.I.C. (F)	NOT IN CONTRACT LIGHTING DESIGN EXISTING CAREGISTIATION NO E13083	
MARKED AS JAO-2019-E NT LAMPS.	(E) (N)	NEW [23616]	
LLED BY DIMMERS OR	(R)	REMOVE 627 OLIVE STREET	
LACED OR EXTENDED IN	(RL) S/M	RELOCATE 627 OLIVE STREET SURFACE MOUNT Santa BarBara Ca 93105 FAX (805) 569-9216 FAX (805) 569-2405	Project Manager
CIRCUIT SHALL BE	U/G	UNDERGROUND	RA
E AFCI LOCATED AT THE	,		obaio
E AFCI LOCATED AT THE LET BRANCH-CIRCUIT TYPE EXISTING BRANCH CIRCUIT.	ĊŴP	COLD WATER PIPE	AS SHOWN Print Date
LET BRANCH-CIRCUIT TYPE EXISTING BRANCH CIRCUIT.	,	COLD WATER PIPE ABOVE FINISHED FLOOR HEATING AND AIR CONDITIONING RATED CIRCLE PROFESSION	AS SHOWN
LET BRANCH-CIRCUIT TYPE	CWP AFF	ABOVE FINISHED FLOOR	AS SHOWN Print Date



JOINT TRENCH DETAIL

A

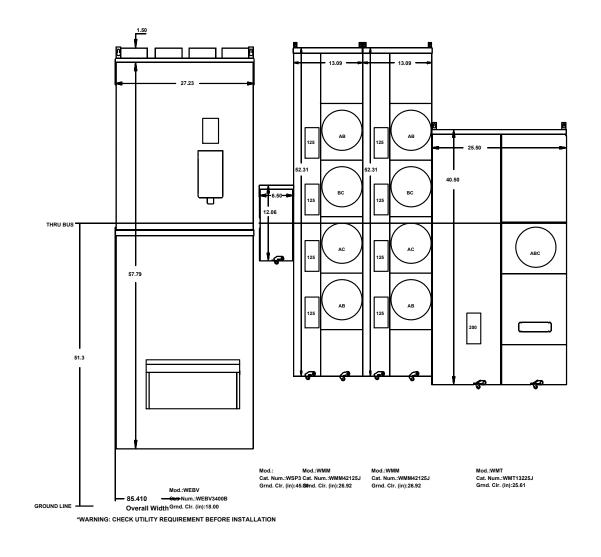


SAWCUT AND PATCH	UNDISTURBED ASPHALT

[
	TYPI	CAL UNIT LED		SCHEDULE		
TYPE	MANUFACTURER AND CATALOG NUMBER TYPE	LED MODULE	- <u>r</u>	DRIVER	OPTIC/LENS	REMARKS
$\begin{array}{ c c }\hline A \\\hline 20 \end{array}$	JUNO SLIM FORM JSF 13 IN 18CLM 30K 90CRI 120 FRPC WH	3000К	20	FRPC	DIFFUSE	13" S/M SLIM LED
B 10	JUNO SLIM FORM JSF 7 IN 10 LM 30K 90CRI 120 FRPC WH	3000K	10	FRPC	DIFFUSE	7" S/M SLIM LED
$\left\langle \begin{array}{c} D\\ 24 \end{array} \right\rangle$	TECH LIGHTING 700 BC FINN 24S LED 930	3000K	24	ELECTRONIC	DIFFUSE	VANITY SCONCE OVER MIRROR
F 25	LITHONIA LIGHTING BLP4 30L ADSM MVOLT SLD LP830	3000K	25		DIFFUSE	SURFACEMOUNT LINEAR
$\begin{pmatrix} X \\ 20 \end{pmatrix}$	LITHONIA WDGE 2 LED P4 30K 80CRI VW MVOLT DDBXD	3000K	20	0-10V	FLAT, CLEAR	WEDGE FULL CUTOFF EXTERIOR SCONCE
		SERVICE: 12 NEMA 3R REMAF IRRIGATION C EV CHAF " EV CHAF " SPAF " " " " " " " " "	ΦΑ CONTROLS 100 RGER 3,600 RE	MAIN BKR.: MLO LOAD R L M P ΦB ΦC C G S L ΦB ΦC C G S L 3,600 I I 2 2 3,600 I I 2 2 3,600 I I 2 2 3,600 I I Z 2 3,600 I I Z 2 3,600 I I Z 2 I I I Z Z I I I Z Z I I I Z Z I I I Z X I I I Z X	I R R I L C G S	LOAD REMARKS ΦA ΦB ΦC ΦA ΦB ΦC EXTERIOR LIGHTS " I I " I I SPARE I I " I I " I I " I I " I I " I I " I I I I I I I I I I I I
			PPLIANCE	MAIN BKR.: MLO LOAD R L M P E T I O CG S L DA ΦB C E Image: Comparison of the system Image: Comparison of the system Image: Comparison of the system Image: Comparison of the system Image: Comparison of the system Image: Comparison of the system Image: Comparison of the system	T C T P R L R I I R O E T I R I R I C G I R I L C G P C C P E I 20 1 220 1 I I	LOC.: SEE PLAN MTG.: FLUSH MTG.: FLUSH MTG.: FLUSH MTG.: FLUSH REMARKS C $\Phi A \Phi B$ RECEPTACLES "

NIT LED	FIXTU	JRE	SC	HEC	U	LE															·····				
MODULE																									
R TEMP	WAT	TS		DF	RIV	'ER					OP ⁻	TIC,	/LE	ENS	5						RE	M	ARKS		
)00К	20		FRPC					DIFFUSE								13" S/M SLIM LED									
)00K	10 FRPC						DIFFUSE								7" S/M SLIM LED										
)00K	24	, ,		ELEC	TR	ON	IC				D	IFF	JSI	E									CONCE OVER RROR		
)00K	25										D	IFFI	JSI	E				SURFACEM				MOUNT LINEAR			
)00K	20	20 0-10V						FLAT, CLEAR							WEDGE FULL CUTOFF EXTERIOR SCONCE										
SERVICE: 120 NEMA 3R	ס/208∨ 3⊄	4W		MAI		R.: N	<u>/LO</u>		PAN		SCH		JLE	BUS	6: 22	25A							LOC.: SEE PLAN MTG.: SURFACE		
REMAR	KS .	ФА	LOA ØB			R L E T C G		0 L	R I P	C I R C		C I R C	R I P	P O L E	R E C	L T G	M I S C		DA	LOAI ΦB		ÞC	REMARKS		
IRRIGATION CO		100						1	20	1		2	20	1						+0			EXTERIOR LIGHT		
EV CHAR	GER		3,60	3,60	00			2 X	40 X	3 5		4	20 20	1							_		"		
EV CHAR	GER	3,600	3,60	0	_			2 X	40 X			8 10	20 20	1									SPARE "		
SPAR "	E							2	40	11		12	20	1			_	1					"		
"								X 2	X 40	13 15		14 16	20 20	1							+		"		
								X	X			18	20	1											
TOTAL WATTS	S=		14,5	00	¢	A=		11		19 700	L		20 ΦB=	-		 7,	200	1	1			ΦC=			
AMPS=		4(AC										MIN	IIMUI	M BK	<r< td=""><td></td><td>A.I.</td><td>C. R/</td><td>ATINC</td><td>G= 10</td><td>0,000</td><td>DAMPS SYM</td></r<>		A.I.	C. R/	ATINC	G= 10	0,000	DAMPS SYM		
TOTAL WATTS AMPS=			AC			ΓYF			3,7 UN		PAN		MIN		ED		LE	A.I.	C. R	ΑΤΙΝΟ		0,000	3,600 DAMPS SYM		
SERVICE: 12 SQUARE					IVIA	IN B	KR.:	NL	<u> </u>					IRC	JS:	12	эA						DC.: SEE PLAN TG.: FLUSH		
REMA					R E C	L T G	M I S	P O L	T R I	C I R		C I R	T R	L	E C		L T G	M I S) ФВ		REMARKS		
SMALL AP	PLIANCE		₩4	ΨĎ			С	<u>Е</u> 1	P 20	<u>с</u> 1			P 2 20					C	ΦΑ	<u> </u>	ΨĎ		RECEPTACLES		
" SMOKE DE	TECTOP	<u>_</u>				-		1	20 20	3 5		4			_								11		
SWUKE DE	ILUIUK	<u> </u>				<u> </u>		1	20	0			120			_									

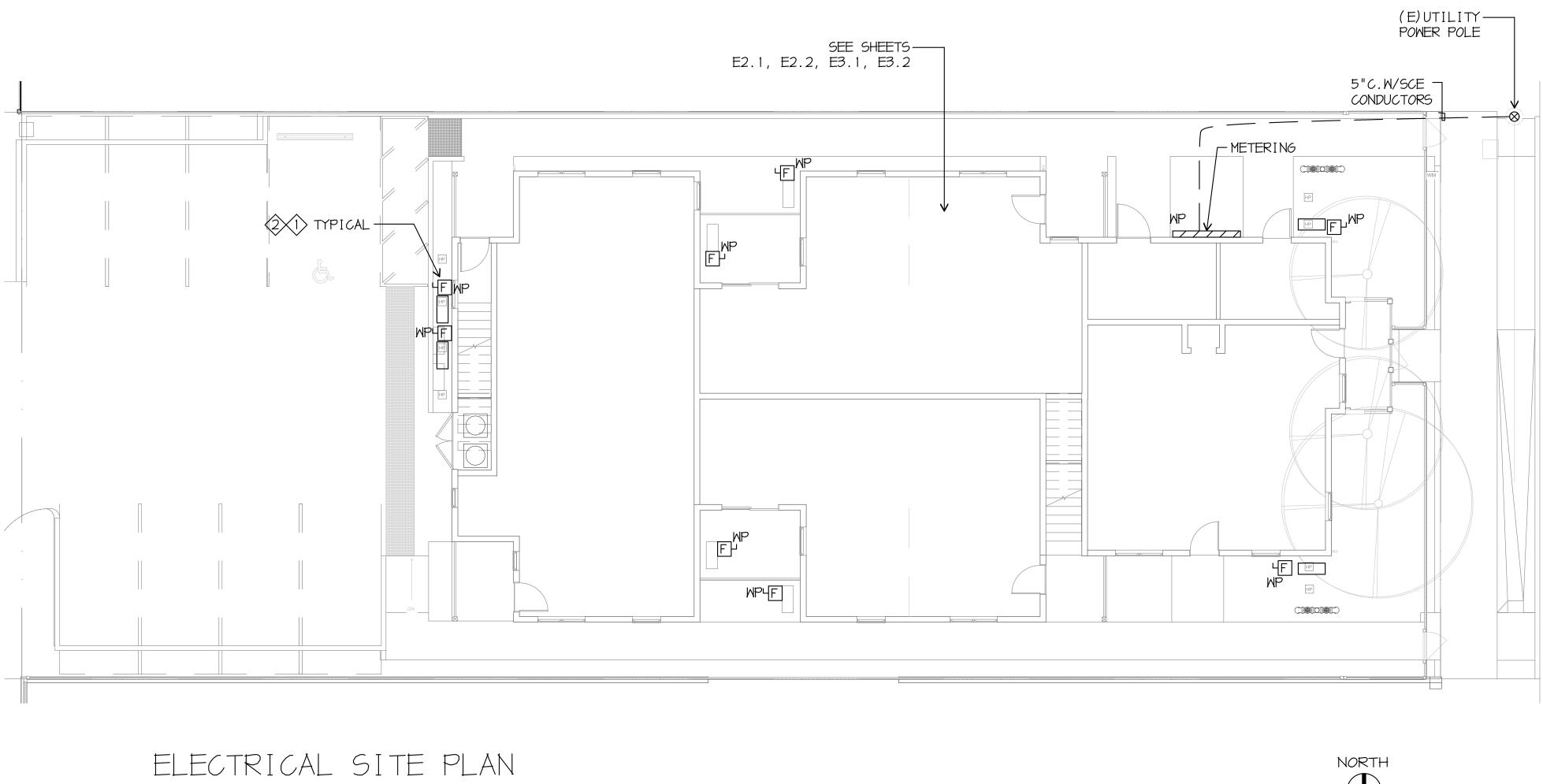
10DULE																			
RTEMP	WATT	S	DR	VEF	2			0	PT	ΊC/	LEN	IS					R	EMA	ARKS
ООК	20		FR	PC					DI	FFL	JSE					13	3" S	5/M 5	SLIM LED
ООК	10		FR	PC					DI	FFL	JSE				7" S/M SLIM LED			LIM LED	
ООК	24		ELECT	RON	NIC				DI	FFL	JSE				١	/AN		/ SCC MIRI	NCE OVER ROR
ООК	25							DI	FFL	JSE				ડા	JRF.	ACI	EMO	UNT LINEAR	
ООК	20		0-2	LOV				FL	.A ⁻	Г, С	LEA	R							LL CUTOFF SCONCE
SERVICE: 12 NEMA 3R REMAR IRRIGATION CO EV CHAR " EV CHAR " SPAR " " " " " " " " " " " " " " " " " " "	KS ONTROLS GER GER 3, E	V LOA ΦΑ ΦΒ 00 3,600 600 3,600 14,50 40 Α	ΦC 0 3,600 0 0 0	R E C	MLO L M T I G S C 	P 0 L E 1 2 X 2 X 2 X 2 X 2 X 1	T R I 20 40 X 40 X 40 X 40 X 40 X 40 X 20 3,70	C I R C I I I I I I I I I I I I I I I I		C I R C 2 4 6 8 10 12 14 16 18 20	B T F R C I L P E 20 - 20 <	US: 7 P R D E C E U I I I I I I I I U M E	225A		фА 		DAD PB	ΦC	LOC.: SEE PLAN MTG.: SURFACE REMARKS EXTERIOR LIGHT " SPARE " " " " " " 3,600 AMPS SYM
	20/208V 1P				BKR.:							BUS:							C.: SEE PLAN
		AD CENI		R L	M	P O L	R	C I R		C I R C	T R I P	0	_	T G	VI I S C	LC ФА	DAD	×B	TG.: FLUSH REMARKS
SQUARE REMA SMALL AP	D QD LO RKS	LOA ΦA	D	E T C G	S C	E 1	20	<u>C</u> 1		2	20	1							RECEPTACLES
REMA	D QD LO RKS PLIANCE TECTORS		D		1 1	Е				2 4 6 8	20 20 20 20 20								RECEPTACLES " REFRIGERATOR HEAT PUMP



400A METERING ELEVATION SCALE: NONE



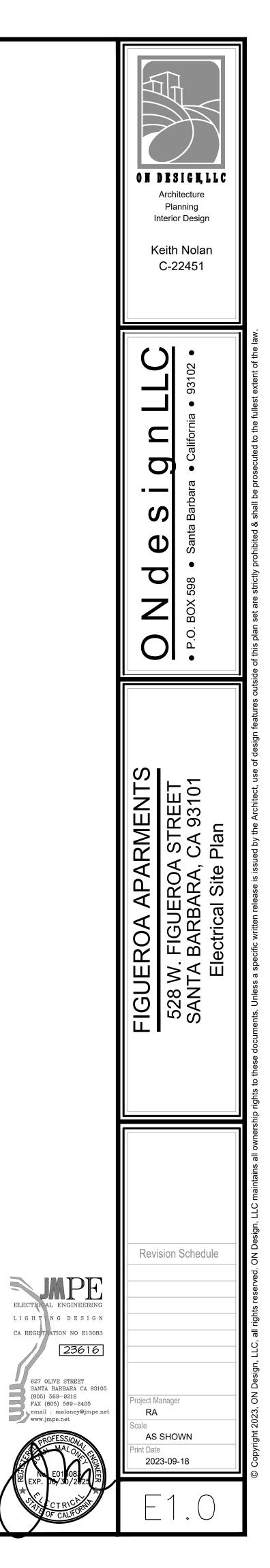
ON DESIGN, LLC Architecture Planning Interior Design Keith Nolan C-22451 **O** 93102 • D O - -----S മ Ð Ő • σ 598 • P.O. BOX 5 an A APARMENTS JEROA STREET BARA, CA 93101 bols, Single Line Diagra FIGUEROA APAI 528 W. FIGUEROA SANTA BARBARA, General Notes, Symbols, Sir Revision Schedule ELECTRICAL ENGINEERING LIGHT NG DESIGN CA REGIST ATION NO E13083 23616 627 OLIVE STREET SANTA BARBARA CA 93105 (805) 569-9216 FAX (805) 569-2405 email : maloney@jmpe.net www.jmpe.net roject Manager RA AS SHOWN int Date 2023-09-18 ΕO \cap



ELECTRICAL SITE PLAN
SCALE:
$$1/8" = 1'-0"$$

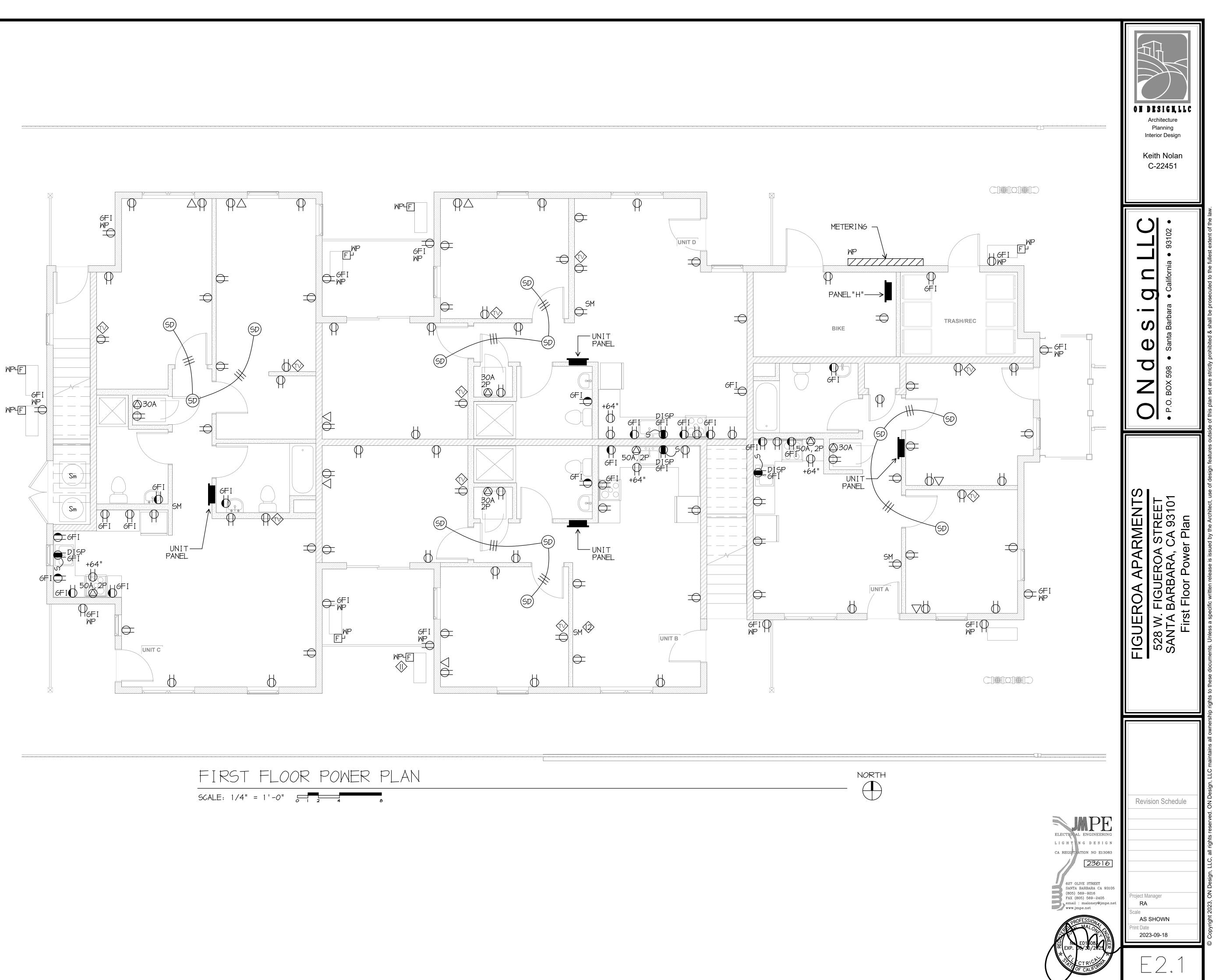
ELECTRICAL NOTES CONNECT AC DISCONNECT TO UNIT PANELS.

2 MP, 30AS, 20AF



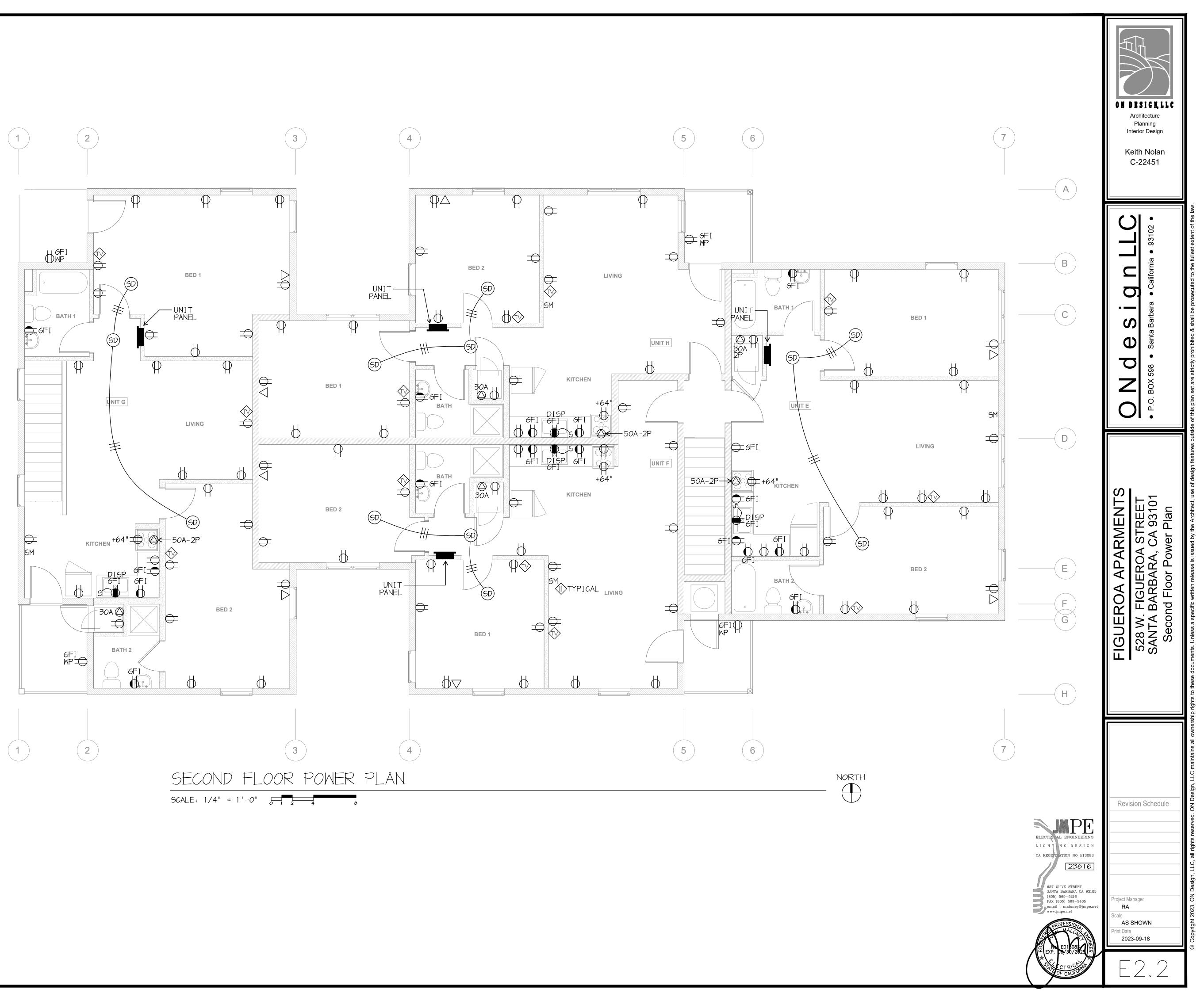
ELECTRICAL NOTES

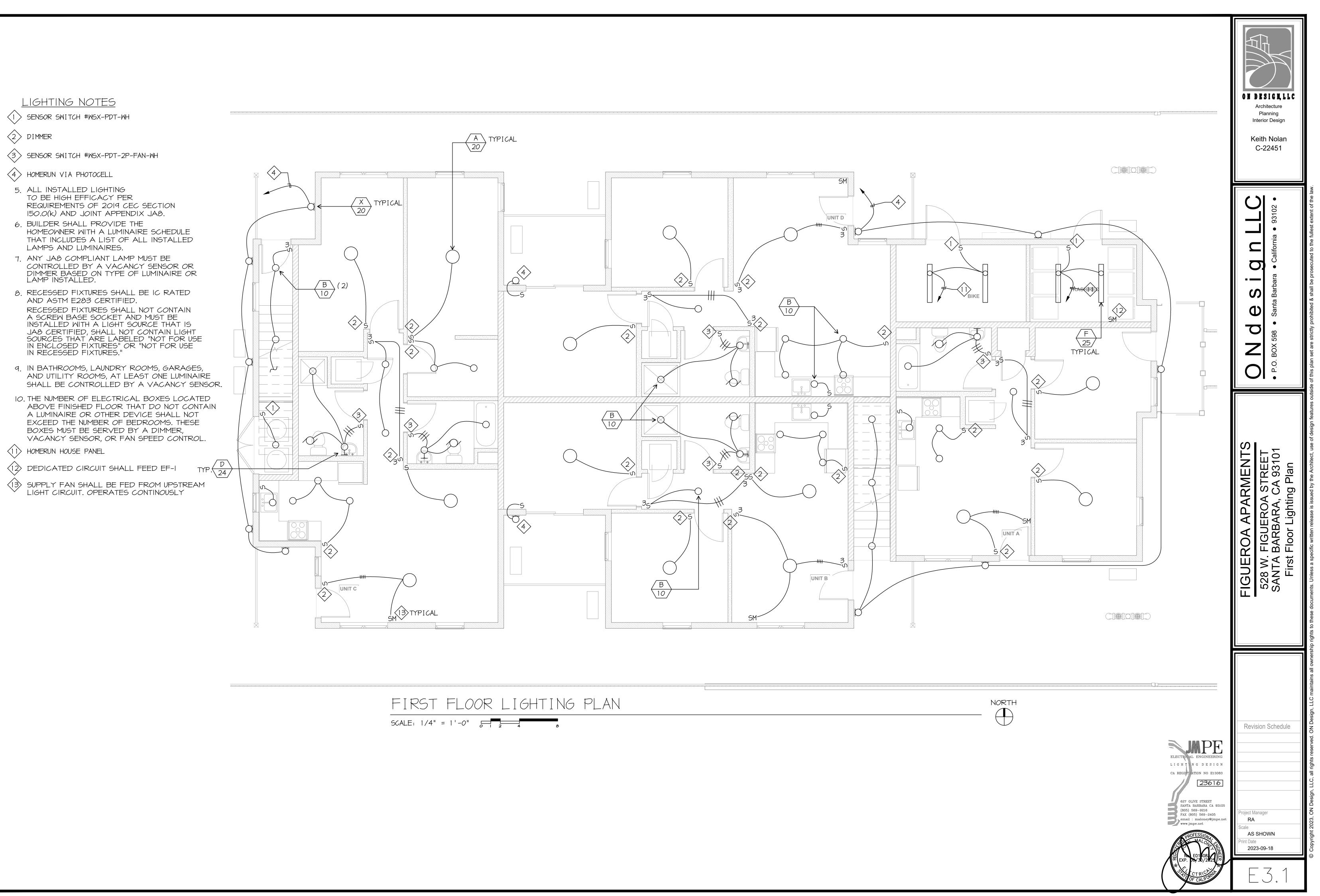
- I. ALL OUTLETS IN DWELLING UNITS SHALL BE PROTECTED BY A LISTED ARC FAULT CIRCUIT INTERRUPTER, COMBINATION TYPE PER CEC 210.12
- 2. TAMPER RESISTANCE RECEPTACLE SHALL BE INSTALLED IN DWELLING UNITS PER CEC 406.II
- 3. SMOKE DETECTORS SHALL BE 120V, INTERCONNECTED, PHOTOELECTRIC/ION UNITS WITH BATTERY BACK UP
- HALLWAY DETECTORS SHALL BE COMBINATION SMOKE AND CARBON MONOXIDE DETECTOR. PART #KIDDE KN-COSM-BA
- VERIFY LOCATION OF FLUSH FLOOR RECEPTACLE PRIOR TO ROUGH IN
- SENSOR SWITCH #WSD-PDT-WH
- ♦ LIGHTS MASTER SWITCH
- 2 POLE VACANCY SENSOR SWITCH SENSOR SWITCH #WSD-2P-PDT-WH FAN
- 9. RESIDENCE SHALL BE PROTECTED BY APPROVED FIRE WARNING SYSTEM PER NFPA 72
- EXHAUST FAN WITH MOTION & HUMIDITY
- WP, 30AS, 20AF DISCONNECT
- DUTDOOR HEAT PUMP POWERS



ELECTRICAL NOTES

- I. ALL OUTLETS IN DWELLING UNITS SHALL BE PROTECTED BY A LISTED ARC FAULT CIRCUIT INTERRUPTER, COMBINATION TYPE PER CEC 210.12
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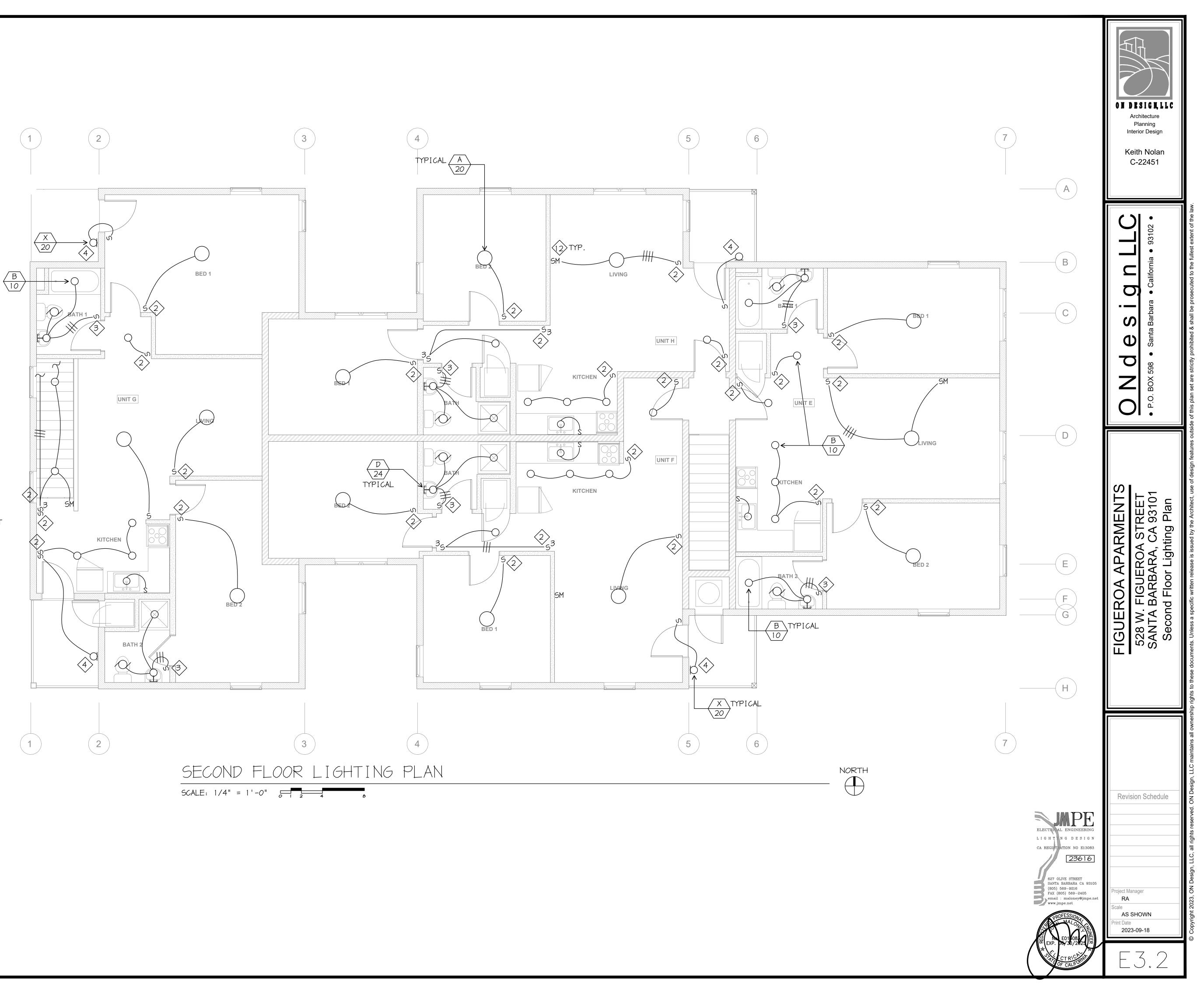


LIGHTING NOTES

(1) SENSOR SWITCH #WSX-PDT-WH

2 DIMMER

- (3) SENSOR SWITCH #WSX-PDT-2P-FAN-WH
- 4 HOMERUN VIA PHOTOCELL
- 5. ALL INSTALLED LIGHTING TO BE HIGH EFFICACY PER REQUIREMENTS OF 2019 CEC SECTION 150.0(k) AND JOINT APPENDIX JA8. 6. BUILDER SHALL PROVIDE THE
- HOMEOWNER WITH A LUMINAIRE SCHEDULE THAT INCLUDES A LIST OF ALL INSTALLED LAMPS AND LUMINAIRES.
- 7. ANY JA8 COMPLIANT LAMP MUST BE CONTROLLED BY A VACANCY SENSOR OR DIMMER BASED ON TYPE OF LUMINAIRE OR LAMP INSTALLED.
- 8. RECESSED FIXTURES SHALL BE IC RATED AND ASTM E283 CERTIFIED. RECESSED FIXTURES SHALL NOT CONTAIN A SCREW BASE SOCKET AND MUST BE INSTALLED WITH A LIGHT SOURCE THAT IS JA8 CERTIFIED, SHALL NOT CONTAIN LIGHT SOURCES THAT ARE LABELED "NOT FOR USE IN ENCLOSED FIXTURES" OR "NOT FOR USE IN RECESSED FIXTURES."
- 9. IN BATHROOMS, LAUNDRY ROOMS, GARAGES, AND UTILITY ROOMS, AT LEAST ONE LUMINAIRE SHALL BE CONTROLLED BY A VACANCY SENSOR.
- IO. THE NUMBER OF ELECTRICAL BOXES LOCATED ABOVE FINISHED FLOOR THAT DO NOT CONTAIN A LUMINAIRE OR OTHER DEVICE SHALL NOT EXCEED THE NUMBER OF BEDROOMS. THESE BOXES MUST BE SERVED BY A DIMMER, VACANCY SENSOR, OR FAN SPEED CONTROL.
- (1) HOMERUN HOUSE PANEL
- SUPPLY FAN SHALL BE FED FROM UPSTREAM LIGHT CIRCUIT. OPERATES CONTINUOUSLY.



CERTIFICATE OF COMPLIANCE - LOWRISE MULTIFAMILY MIXED US		LMCC-PRF-01-E	CERTIFICATE OF COMPLIANCE - LOW		PERFORMANCE CC	OMPLIANCE METHOD			LMCC-PRF-01-E	CERTIFICATE OF COMPLIANCE - LOWRISE MULTIFAMILY MIX	
owrise Multifamily Mixed Use Performance Compliance Method		(Page 1 of 30)	Lowrise Multifamily Mixed Use Perfo	formance Compliance Method				٦	(Page 2 of 30)	Lowrise Multifamily Mixed Use Performance Compliance N	ethod
roject Name:	Figueroa Apartments Date Prepare	ed: 2024-03-25	B. PROJECT SUMMARY							C1. COMPLIANCE SUMMARY	
General Information			Table B shows which building compone permit application.	nents are included in the performa	ance calculation. If	f indicated as not include	ed, the project must .	show compliance pres	riptively if within the		COMPLIES ³
Project Name Figueroa Apartments Run Title Title 24 Analysis			Non	Components Complying via Perfo	formance Thermal Water		he following building com	ponents Complying F ponents are ONLY eligible f	r prescriptive compliance		Time Dependent Valuation (TDV)
Project Location 528 W. Figueroa St.			Envelope (See Table G) Multil		ng (See Table I3)	Not Included	permit application (i.e.	ed on the LMCC form listed compliance will not be show	n on the LMCC-PRF-E).	Standard Design	Efficiency ¹ (kBtu/ft ² - yr) Total ² (kBtu/ 56.3
L City Santa Barbara	5 Standards Version Con	mpliance 2022	Non Mechanical (See Table H)	Commerce	ered Process: rcial Kitchens (see	Performance		conditioned) 140.6 & 2(e)	LMCC-LTI-01E is required	Proposed Design	47.08 -18.97
Zip code 93101	7 Compliance Software (version) End	ergyPro 9.2	Multil		Table J)	Not Included	Outdoor Lighting	g 140.7 & 170.2(e)	LMCC-LTO-01E is required	Compliance Margins	9.22 8.27
Climate Zone 6 Building Type(s) • Multifamily 3 stories	9 Building Orientation (deg) 0 11 Weather File SAI	NTA-BARBARA_STYP20.epw	Domestic Hot Water (See Table I) Multil	Laborato	ered Process: tory Exhaust (see Table J)	Performance		40.8 & 170.2(e)	LMCC-LTS-01E is required	¹ Efficiency measures include improvements like a better build	
Project Scope New complete scope	13 Number of Dwelling Units 8			iFam Performance	ÎĈĒ	Ele	ectrical power syster	ts Complying with M ns, commissioning, so s are mandatory and s	ar ready, elevator and	² Compliance Totals include efficiency, photovoltaics and botte ³ New Construction, Complete Addition Scope: Building compl are not exceeded	ries ies when all efficiency and total compliance margins are greater th
Total Conditioned Floor Area in 6835	15 Total # of hotel/motel rooms 0		Lighting (Indoor Conditioned, see Table K)	Not Included Photovo	oltaics (see Table F)		on the LMCC form list	ed if applicable (i.e. co wn on the LMCC-PRF	mpliance will not be		en efficiency compliance margin is greater than or equal to zero a
Total Unconditioned Floor Area (ft ²)	17 Fuel Type Nat	tural gas	Multil	iFam Performance		Not Included	Electrical Power	Distribution 110.11	LMCC-ELC-01E is required		
Nonresidential Conditioned Floor Area 0	19Total # of Stories (Habitable Above Grade)2					Performance	Commissio	oning 120.8	LMCC-CXR-01E is required		
Residential Conditioned Floor Area 6835				Battery	ry (see Table F)	Not Included	Solar and Ba	attery 110.10	LMCC-SAB-01E is required		
Registration Number: 224-F010036847A-000-000-0000000-0000 CA Building Energy Efficiency Standards 2022 Lowrise Multifamily Compliance	Registration Date/Time: 2024-03-26 11:42:16 Report Version: 2022.0.000 Schema Version: rev 20220601	HERS Provider: CalCERTS inc. Report Generated: 2024-03-25 14:23:53 Compliance ID: EnergyPro-4552-0324-0070	Registration Number: 224-F010036847A CA Building Energy Efficiency Standard 2022 Lowrise Multifamily Compliance	ds	Report V Schema	tion Date/Time: 2024-0 /ersion: 2022.0.000 Version: rev 20220601	03-26 11:42:16	HERS Provider: Cal Report Generated: 2 Compliance ID: Energ	24-03-25 14:23:53 yPro-4552-0324-0070	Registration Number: 224-F010036847A-000-000-0000000-0000 CA Building Energy Efficiency Standards 2022 Lowrise Multifamily Compliance	Registration Date/Time: 2024-03-26 11:42:16 Report Version: 2022.0.000 Schema Version: rev 20220601
ERTIFICATE OF COMPLIANCE - LOWRISE MULTIFAMILY MIXED US		LMCC-PRF-01-E (Page 4 of 30)	CERTIFICATE OF COMPLIANCE - LOW		PERFORMANCE CO	OMPLIANCE METHOD			LMCC-PRF-01-E (Page 5 of 30)	CERTIFICATE OF COMPLIANCE - LOWRISE MULTIFAMILY MIX	
		(1-80-1-01-00)							(
DV ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COMPONEN	NTS (Annual TDV Energy Use, kBtu/ft ² - yr) COMPLIES ²		C3. TDV ENERGY RESULTS FOR NON-REG		Standard D	esign (TDV)	Proposed Design (T	DV) Complia	nce Margin (TDV) ¹	C4. SOURCE ENERGY COMPLIANCE RESULTS FOR PERFORMANCE C	OMPONENTS (Annual SOURCE Energy Use, kBtu/ft ² /yr) COMPLIES ²
Energy Component	Standard Design (TDV) Proposed Design	(TDV) Compliance Margin (TDV) ¹	Receptacle	8,p	55.		55.58			Energy Component	Standard Design (SOURCE) Proposed Design
e Heating	5.27 5.77	-0.5	Process		39	.83	39.78		0.05	Space Heating	0.75 0.81
2 Cooling	1.13 0.77	0.36	Other Ltg		9.1	17	9.17			Space Cooling	0.04 0.03
Fans ejection	6.39 7.02	-0.63	Process Motors TOTAL (TOTAL COMPLIANCE + NON-REGU		93	.88	85.56		3.32 (8.9%)	Indoor Fans Heat Rejection	0.62 0.7
s & Misc.	0.28 0.36	-0.08	¹ Notes: This table is not used for Ener							Pumps & Misc.	0.04 0.05
estic Hot Water	43.23	10.07		1600		RTS, I				Domestic Hot Water	
Lighting		0				r i da i Rovii					
	56.3 47.08	9.22 (16.4%)			ry r		y g r			Flexibility EFFICIENCY COMPLIANCE TOTAL	1ERS PROVIDER 11.66 9.71
voltaics	-67 -66.05	-0.95								Photovoltaics	-2.17 -2.13
ies										Batteries	
L COMPLIANCE es: This number in parenthesis following the Compliance Margi	-10.7 -18.97	8.27 (0%)								TOTAL COMPLIANCE	9.49 7.58 Margin in column 4, represents the Percent Better than Standard.
istration Number: 224-F010036847A-000-000-0000000-0000 Building Energy Efficiency Standards 2 Lowrise Multifamily Compliance RTIFICATE OF COMPLIANCE - LOWRISE MULTIFAMILY MIXED US	Registration Date/Time: 2024-03-26 11:42:16 Report Version: 2022.0.000 Schema Version: rev 20220601 SE PERFORMANCE COMPLIANCE METHOD	HERS Provider: CalCERTS inc. Report Generated: 2024-03-25 14:23:53 Compliance ID: EnergyPro-4552-0324-0070 LMCC-PRF-01-E	Registration Number: 224-F010036847A CA Building Energy Efficiency Standard 2022 Lowrise Multifamily Compliance CERTIFICATE OF COMPLIANCE - LOW	ds	Report V Schema	tion Date/Time: 2024-0 /ersion: 2022.0.000 Version: rev 20220601 DMPLIANCE METHOD		HERS Provider: Cal Report Generated: 2 Compliance ID: Energ		Registration Number: 224-F010036847A-000-000-0000000-0000 CA Building Energy Efficiency Standards 2022 Lowrise Multifamily Compliance CERTIFICATE OF COMPLIANCE - LOWRISE MULTIFAMILY MIX	Registration Date/Time: 2024-03-26 11:42:16 Report Version: 2022.0.000 Schema Version: rev 20220601 ED USE PERFORMANCE COMPLIANCE METHOD
wrise Multifamily Mixed Use Performance Compliance Method		(Page 7 of 30)	Lowrise Multifamily Mixed Use Perfo						(Page 8 of 30)	Lowrise Multifamily Mixed Use Performance Compliance N	
SOURCE ENERGY RESULTS FOR NON-REGULATED COMPONENTS ¹			C7. ENERGY USE SUMMARY		_					C8. ENERGY USE INTENSITY (EUI)	
Non-Regulated Energy Component	Standard Design (SOURCE) Proposed Design (S	OURCE) Compliance Margin (SOURCE) ¹	Energy Component		Proposed Design	Margin (MWh)	Standard Design	Proposed Design	Margin (MBtu)		t ² / yr) Proposed Design (kBtu/ft ² / yr) Margin (kBtu/
ptacle	5.32 5.32		Space Heating	Site (MWh) 1.2	Site (MWh)	-0.1	Site (MBtu)	Site (MBtu)		GROSS EUI ¹ 28.73	26.35 2.38
ess	6.13 6.13		Space Cooling	0.1	0.1	0				NET EUI ¹ 17.4 1 Number Come Filling France line Tetri (met inclusion Rifl) (Tetri	15.27 2.13
r Ltg ss Motors	0.91 0.91		Indoor Fans	1.6	1.7	-0.1					Building Area. Net EUI is Energy Use Total (including PV)/Total Bu
(TOTAL COMPLIANCE + NON-REGULATED COMPONENTS)	21.85 19.94	1.91 (8.7%)	Heat Rejection							D1. EXCEPTIONAL CONDITIONS • The building does not include service water heating. Verify	hat service water heating is not required and is not included in th
s: This table is not used for Energy Code Compliance.			Pumps & Misc. Domestic Hot Water	0.1	0.1	0	79.1	64.2	14.9	D2. MULTIFAMILY REQUIRED SPECIAL FEATURES	
BOVE CODE' QUALIFICATIONS			Indoor Lighting	1	l(CFI	RTES				 Indoor air quality, balanced fan Ducts with high level of insulation 	alCFRTS Inc
	This project is pursuing CalGreen Tie	er 2	Flexibility				de e <u>r</u> e			Non-standard duct location (any location other than attic)	iers provider
			EFFICIENCY TOTAL Photovoltaics	-22.7	-22.2	-0.5	79.1	64.2	14.9		
			Batteries			-0.5					
			ENERGY USE SUBTOTAL	-19.1	-19	-0.1	79.1	64.2	14.9		
			Receptacle	13.4	13.4	0					
			Process Other Ltg	2	5.9 2	0	32.3	32.3			
			Process Motors								
			ENERGY USE TOTAL	2.2	2.3	-0.1	111.4	96.5	14.9		
ation Number: 224-F010036847A-000-000-0000000-0000 ding Energy Efficiency Standards owrise Multifamily Compliance	Registration Date/Time: 2024-03-26 11:42:16 Report Version: 2022.0.000 Schema Version: rev 20220601	HERS Provider: CalCERTS inc. Report Generated: 2024-03-25 14:23:53 Compliance ID: EnergyPro-4552-0324-0070	Registration Number: 224-F010036847A CA Building Energy Efficiency Standard 2022 Lowrise Multifamily Compliance	ds	Report V	tion Date/Time: 2024-0 /ersion: 2022.0.000 Version: rev 20220601	03-26 11:42:16	HERS Provider: Cal Report Generated: 2 Compliance ID: Energ		Registration Number: 224-F010036847A-000-000-0000000-0000 CA Building Energy Efficiency Standards 2022 Lowrise Multifamily Compliance	Registration Date/Time: 2024-03-26 11:42:16 Report Version: 2022.0.000 Schema Version: rev 20220601

FORMANCE COMPLIANCE METH	OD		LMCC-PRF-01-E]
			(Page 3 of 30)	
COMPLIES ³				
Time Dependent	Valuation (TDV)	Source E	nergy Use	
Efficiency ¹ (kBtu/ft ² - yr)	Total ² (kBtu/ft ² -	yr) Total ² (kE	tu/ft² - yr)	
56.3	-10.7	9	49	
47.08	-18.97	7	58	
9.22	8.27	1	.91	
Pass	Pass	P	ass	1
Registration Date/Time: Report Version: 2022.0.000 Schema Version: rev 20220		HERS Provider: CalCERT Report Generated: 2024- Compliance ID: EnergyPro)3-25 14:23:53	
FORMANCE COMPLIANCE METH	OD		LMCC-PRF-01-E	
				1

ORMANCE COMPLIANCE METH	IOD	LMCC-PRF-01-E
		(Page 6 of 30)
(Annual SOURCE Energy Use, kBtu,	/fr ² /vr)	
COMPLIES ²		
Standard Design (SOURCE)	Proposed Design (SOURCE)	Compliance Margin (SOURCE) ¹
0.75	0.81	-0.06
0.04	0.03	0.01
0.62	0.7	-0.08
0	0	0
0.04	0.05	-0.01
	8.12	2.09
SLOVI 2		0
S P.ROV	TDER	
11.66	9.71	1.95 (16.7%)
-2.17	-2.13	-0.04
9.49	7.58	1.91 (20.1%)

Registration Date/Time: 2024-03-26 11:42:16 Report Version: 2022.0.000 Schema Version: rev 20220601

HERS Provider: CalCERTS inc. Report Generated: 2024-03-25 14:23:53 Compliance ID: EnergyPro-4552-0324-0070

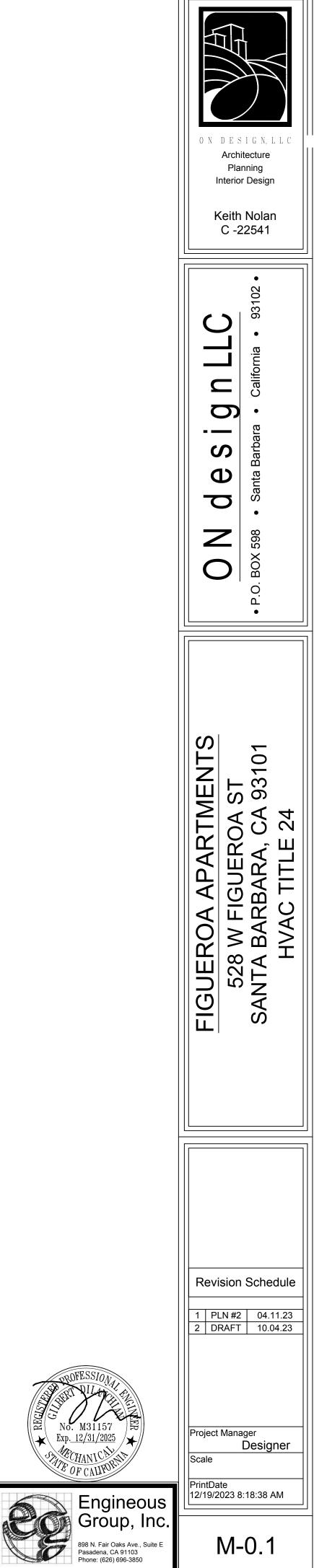
MANCE COMPLIANCE METHO	D	LMCC-PRF-01-E
		(Page 9 of 30)
osed Design (kBtu/ft² / yr)	Margin (kBtu/ft² / yr)	Margin Percentage
26.35	2.38	8.28
15.27	2.13	12.24
	luding PV)/Total Building Area.	

ter heating is not required and is not included in the design.



HERS Provider: CalCERTS inc. Report Generated: 2024-03-25 14:23:53 Compliance ID: EnergyPro-4552-0324-0070 M31157

OFCALL



	ANCE - LOWRISE	MULTIFAMILY	MIXED USE PERFO	ORMANCE CO)MPLIANCE M	THOD		I	LMCC-PRF-01-E	CERTIFICATE OF COMPLIANCE	- LOWRISE MULTIFAI	MILY MIXED USE PERFO	RMANCE CON		OD			LMCC-PRF-01
owrise Multifamily Mi	ed Use Performa	nce Compliand	e Method						(Page 10 of 30)	Lowrise Multifamily Mixed U	e Performance Comp	liance Method						(Page 11 of
L. HERS VERIFICATION SU	IMARY																	
The following is a summ									this computer	F1B. PV BATTERY BUILDING TYPE		4						
analysis. Additional deta	-	e building table	es below. Registere	ed LMCIs and	LMCVs are rec	juired to be completed	I in the HERS Registr	/.		Building	0)ccupancy Type [*] (From	1 Table 140.10-A/B and 170). 2- U/V)		Condition	02 ed Floor Area (ft ²)	Unco	03 Inditioned Floor Area (ft
 Building-level Verificatio Indoor air quality 	entilation										Gro				condition	0		0
 Kitchen range hoo Cooling System Verificat 											High-Rise I	•				0		0
 Minimum Airflow Fan Efficacy Watts 	/CFM										e, Financial Institution Re	ns, Unleased Tenant Spa tail	ace			0		0
 Heating System Verificat Verified heat pum 		pacity									Sch					0		0
 HVAC Distribution System Duct leakage testing 	n Verifications:									Auditorium, Convention Cente	Ware Hotel/Mo <mark>tel, L</mark> ibrary		ng/Clinic, Resta	urant, Theater		0		0
 Ducts located enti Domestic Hot Water Sys 	ely in conditioned		ned by duct leakage	e testing							No					0		0
• None			Cal/	PE	Dhr(*Building Occupancy Types are	defined in Section 100	1.1 of the Energy Code		NHC				
F1. REQUIRED PV SYSTEMS				SE	<u>N</u> l e		10			F3. DWELLING UNIT INFORMATIO	N A		<u> </u>	$\langle \rangle$		<u>(La</u>		
01 02	03	04	H of R	S ₀₆ P	R 07		9 10	11	12	01 Dwelling Unit Name		Dwelling Unit Type	S P I	ROV	Zone	R	Zone G	04 iroup Multiplier
DC System Size (kWdc) Exception	¹ Module Type	Array Type	Power Electronics	CFI	Azimuth (deg)	Tilt Input Array (de		Inverter Eff. (%)	Annual Solar Access (%)	DDU-1-(1/1)		DU-1		S-1-U	JNIT A - 2BDR			1
13	Standard	Fixed	none	false	180	Degrees 2		96	100	DDU-2-(1/1) DDU-3-(1/1)		DU-2 DU-3			INIT B - 2BDR INIT C - 2BDR			1
See Table D1 for any PV	(14-17%) exceptions used.									DDU-3-(1/1) DDU-4-(1/1)		DU-3 DU-4			INIT C - 2BDR			1
										DDU-5-(1/1) DDU-6-(1/1)		DU-5 DU-6			JNIT E - 2BDR JNIT F - 2BDR			1
										DDU-6-(1/1) DDU-7-(1/1)		DU-6 DU-7			INIT F - 2BDR			1
										DDU-8-(1/1)		DU-8			INIT H - 2BDR			1
OWRISE MULTING OF COMPL				DRMANCE CO	MPLIANCE ME	:THOD			LMCC-PRF-01-E (Page 13 of 30)	CERTIFICATE OF COMPLIANCE			DRMANCE CON		OD			LMCC-PR
-4. DWELLING UNIT TYPES																		
01	02		03	0)4	05	06		07	G2B. ROOFING PRODUCT SUMM								
Name	CFA (ft ²)	Num	ber of Bedrooms	Number i	n Building	Space Conditioning Systems Assigned	DHW System Na	ne IAQ \	/ent Fan Name	01 Name	02 Roof Pitch	03 Roof Rise (x	(in 12)	04 Aged Solar Refle	ectance	05 Thermal Emitt	ance	06 SRI
						DU-8 :Heat Pump				Attic S-5-UNIT E - 2BDR	Low slope	0		0.1		0.85		N/A
DU-8	796		2	1	L	System 8:Air Distribution System	MF0-AO Smith E 2501		ult Minimum nced IAQ Fan	Attic S-6-UNIT F - 2BDR Attic S-7-UNIT G - 2BDR	Low slope Low slope	0		0.1		0.85		N/A N/A
						8:HVAC Fan 8:2:3				Attic S-8-UNIT H - 2BDR	Low slope	0		0.1		0.85		N/A
G1. ENVELOPE GENERAL IN	IFORMATION (cond	itioned spaces o								G3. ATTIC								
01 Opaque Surfaces &	Orientation	Total	02 Gross Surface Area	(ft ²)	Total	03 Fenestration Area (ft ²)	Wi	04 ndow to Wall Ra	atio (%)	01 Name		02 Construction			03 Type		Pa	04 diant Barrier
North-Faci			1465			238		16.25		Attic S-5-UNIT E - 2BI	VR _F	Roof-Attic S-5-UNIT E - 2	BDR	V	/entilated			Yes
East-Facir South-Faci	-		1663 1785		RAC	155	B	9.32 14.17		Attic S-6-UNIT F - 2BI		Roof-Attic S-6-UNIT F - 2		1 5 1	entilated	C		Yes
West-Faci	- Marine Marine and Mar		1662					6.38		Attic S-7-UNIT G - 2B Attic S-8-UNIT H - 2B		oof-Attic S-7-UNIT G - 2 oof-Attic S-8-UNIT H - 2		11 1 5 74	/entilated /entilated 📄			Yes Yes
Total Roof	2		6575 0			752		11.44										
lotes North-Facing is oriented East-Facing is oriented t South-Facing is oriented West-Facing is oriented	o within 45 degree to within 45 degre	es of true east, ees of true sour	including 45 00'00 th, including 45 00	" south of ea '00" west of :	ast (SE), but exc south (SW), but	luding 45 00'00" north t excluding 45 00'00" e	of east (NE), ast of south (SE),											
				-	tion Date/Time	2024-03-26 11:42:16	Report Gene	er: CalCERTS rated: 2024-0: D: EnergyPro-		Registration Number: 224-F010 CA Building Energy Efficiency St 2022 Lowrise Multifamily Comp	andards	-0000	Report Ver	n Date/Time: sion: 2022.0.000 rrsion: rev 20220)	Rep		CalCERTS inc. I: 2024-03-25 14:23: hergyPro-4552-0324
egistration Number: 2 A Building Energy Efficie 022 Lowrise Multifamily	ncy Standards	000-0000000-0000		Report V	/ersion: 2022.0. Version: rev 20		Compliance											
A Building Energy Efficie	ncy Standards	000-0000000-0000		Report V														
A Building Energy Efficie	ncy Standards Compliance			Report V Schema	Version: rev 20	0220601			LMCC-PRF-01-E	CERTIFICATE OF COMPLIANCE	- LOWRISE MULTIFAI	MILY MIXED USE PERFO	DRMANCE CON		OD			LMCC-PRF-
A Building Energy Efficie 022 Lowrise Multifamily	ncy Standards Compliance IANCE - LOWRISE	MULTIFAMILY	MIXED USE PERFC	Report V Schema	Version: rev 20	0220601			LMCC-PRF-01-E (Page 16 of 30)	CERTIFICATE OF COMPLIANCE Lowrise Multifamily Mixed U			DRMANCE CON		OD			LMCC-PRF-(
A Building Energy Efficie 022 Lowrise Multifamily CERTIFICATE OF COMPL	ncy Standards Compliance ANCE - LOWRISE Ked Use Performa	MULTIFAMILY	MIXED USE PERFC	Report V Schema	Version: rev 20	0220601							PRMANCE COM		OD			
A Building Energy Efficie 022 Lowrise Multifamily CERTIFICATE OF COMPL	ncy Standards Compliance IANCE - LOWRISE Ked Use Performa	MULTIFAMILY	MIXED USE PERFC	Report V Schema	Version: rev 20	0220601 ETHOD	09			Lowrise Multifamily Mixed Us G7B. FENESTRATION SUMMARY	e Performance Comp MULTIFAMILY AND COM	liance Method //MON AREAS)						(Page 17 of
A Building Energy Efficie 022 Lowrise Multifamily CERTIFICATE OF COMPL Lowrise Multifamily Mi G5. OPAQUE SURFACE ASS 01 0 Surface Name	IANCE - LOWRISE	MULTIFAMILY nce Complianc	MIXED USE PERFC	Report V Schema	Version: rev 20 DMPLIANCE ME O Value	0220601 ETHOD 07 08	09		(Page 16 of 30)	Lowrise Multifamily Mixed Us G7B. FENESTRATION SUMMARY 01 02	e Performance Comp MULTIFAMILY AND CON 03	MON AREAS)	05 06	6 07	08	09 10 Dverall SHGC	11 Overall	(Page 17 of
A Building Energy Efficie 022 Lowrise Multifamily CERTIFICATE OF COMPL Lowrise Multifamily Mi 55. OPAQUE SURFACE ASS 01 0	IANCE - LOWRISE	MULTIFAMILY nce Compliand	MIXED USE PERFC	Report V Schema DRMANCE CC 06 Dontinuous R-	Version: rev 20 DMPLIANCE ME O Value	0220601 ETHOD 07 08 nits Value	09 Description of Ass	embly Layers	(Page 16 of 30)	Lowrise Multifamily Mixed Us G7B. FENESTRATION SUMMARY 01 02 Fenestration Fenestration Type Name Type / Frame	e Performance Comp MULTIFAMILY AND COM 03 ve/ Product Paren e Type Surfa	Miance Method MMON AREAS)		6 07	08 U-factor	09 10 Dverall SHGC SHGC Source	Overall	(Page 17 of
A Building Energy Efficie D22 Lowrise Multifamily CERTIFICATE OF COMPL owrise Multifamily Mi 55. OPAQUE SURFACE ASS 01 0 Surface Name Constr	IANCE - LOWRISE Ked Use Performa EMBLY SUMMARY 2 03 Juction De Area (ft	MULTIFAMILY nce Compliand 04 2) Framing Type Wood	MIXED USE PERFC	Report V Schema DRMANCE CC 06 Dontinuous R-	Version: rev 20 DMPLIANCE ME O Value Un	ETHOD TO 08 Thits Value The Road Road Road Road Road Road Road Road	09	embly Layers bhalt Shingle)	(Page 16 of 30)	Lowrise Multifamily Mixed Us G7B. FENESTRATION SUMMARY 01 02 Fenestration Fenestration Type	e Performance Comp MULTIFAMILY AND COM 03 ee/ Product Paren e Type Surfa stration Window - SE Exte	MON AREAS) 04 nt ce Azimuth Mu	05 06	5 07 (ft ²) Overall U-factor	08 U-factor Source	Overall SHGC	e VT	(Page 17 o



Registration Date/Time: 2024-03-26 11:42:16 Report Version: 2022.0.000 Schema Version: rev 20220601

HERS Provider: CalCERTS inc. Report Generated: 2024-03-25 14:23:53 Compliance ID: EnergyPro-4552-0324-0070 CA Building Energy Efficiency Standards 2022 Lowrise Multifamily Compliance

Lowrise Mul	tifamily Mixed Use Performan	ice Compliance	e Method								(Page	17 of 30)
G7B. FENESTR	ATION SUMMARY (MULTIFAMILY		AREAS)									
01	02	03	04	05	06	07	08	09	10	11	12	13
Fenestration Name	Fenestration Type/ Product Type / Frame Type	Parent Surface	Azimuth	Multiplier	Area (ft ²)	Overall U-factor	U-factor Source	Overall SHGC	SHGC Source	Overall VT	Exterior Shading	Status ¹
Window	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SE Exterior Wall	135	1	15	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 2	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SE Exterior Wall 2	135	1	15	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 3	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW Exterior Wall 2	225		15	0:3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 4	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW Exterior Wall 2	F ₂₂₅ E	R S	P 25	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 5	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW Exterior Wall 4	225	1	25	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 6	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW Exterior Wall 4	225	1	15	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 7	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NW Exterior Wall 2	315	1	15	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N

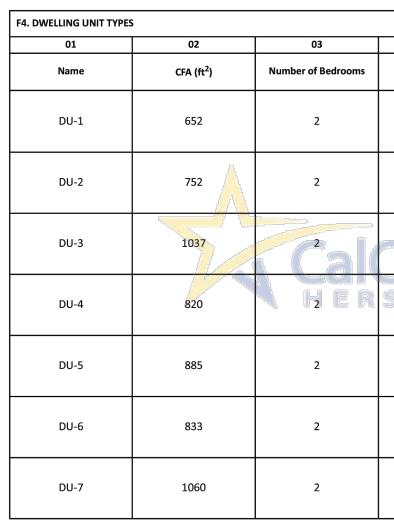
Registration Number: 224-F010036847A-000-000-0000000-0000

Report Version: 2022.0.000 Schema Version: rev 20220601

Registration Date/Time: 2024-03-26 11:42:16 HERS Provider: CalCERTS inc. Report Generated: 2024-03-25 14:23:53

Compliance ID: EnergyPro-4552-0324-0070

CERTIFICATE OF COMPLIANCE - LOWRISE MULTIFAMILY MIXED USE PERFORMA Lowrise Multifamily Mixed Use Performance Compliance Method



Registration Number: 224-F010036847A-000-000-0000000-0000

CA Building Energy Efficiency Standards 2022 Lowrise Multifamily Compliance

Lowrise Multif	amily Mixed Use	Performance	e Compliance	e Method					(Pa	ge 15 of 30
G5. OPAQUE SUF	RFACE ASSEMBLY SU	UMMARY								
01	02	03	04	05	0	6	07	08	09	10
Surface Name	Construction	Area (ft ²)	Framing	Cavity	Continuo	us R-Value	Units	Value	Description of Assembly Layers	Status ¹
	Туре	,,	Туре	R-Value	Interior	Exterior				
R-21 Wall	Exterior Walls	6,575	Wood Framed Wall	21	0	0	U-factor	0.0686	Inside Finish: Gypsum Board Cavity / Frame: R-21 / 2x6 Exterior Finish: 3 Coat Stucco	N
R-21 Wall1	Interior Walls	3,150	Wood Framed Wall	21	0	0	U-factor	0.064	Inside Finish: Gypsum Board Cavity / Frame: R-21 / 2x6 Other Side Finish: Gypsum Board	
R-19 Floor No Crawlspace	Interior Floors	2,741	Wood Framed Floor	19	0		U-factor	0.0449	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 / 2x10 Ceiling Below Finish: Gypsum Board	N
R-30 Roof Attic	Ceilings (below attic)	3,574	Wood Framed Ceiling	G H30E	R S	PR	U-factor	0.0317	Over Ceiling Joists: R-20.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board	N
R-30 Floor No Crawlspace	Interior Floors	833	Wood Framed Floor	30	0	0	U-factor	0.0329	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-30 / 2x10 Ceiling Below Finish: Gypsum Board	N
Roof-Attic S-5-UNIT E - 2BDR	Attic Roofs	885	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N
Roof-Attic S-6-UNIT F - 2BDR	Attic Roofs	833	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N

Lowrise Multifa	amily Mixed Use	Performance	e Compliance	Method					(Pa	ge 15 of 30
G5. OPAQUE SUR	FACE ASSEMBLY SU	JMMARY								
01	02	03	04	05	0	6	07	08	09	10
Surface Name	Construction	Area (ft ²)	Framing	Cavity	Continuo	us R-Value	Units	Value	Description of Assembly Layers	Status ¹
Surface Marrie	Туре	Alea (It.)	Туре	R-Value	Interior	Exterior	Onics	value	Description of Asserting Layers	Status
R-21 Wall	Exterior Walls	6,575	Wood Framed Wall	21	0	0	U-factor	0.0686	Inside Finish: Gypsum Board Cavity / Frame: R-21 / 2x6 Exterior Finish: 3 Coat Stucco	N
R-21 Wall1	Interior Walls	3,150	Wood Framed Wall	21	0	0	U-factor	0.064	Inside Finish: Gypsum Board Cavity / Frame: R-21 / 2x6 Other Side Finish: Gypsum Board	
R-19 Floor No Crawlspace	Interior Floors	2,741	Wood Framed Floor	19	0		U-factor	0.0449	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 / 2x10 Ceiling Below Finish: Gypsum Board	N
R-30 Roof Attic	Ceilings (below attic)	3,574	Wood Framed Ceiling	H ³⁰ E	R S	PR(U-factor	0.0317	Over Ceiling Joists: R-20.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board	N
R-30 Floor No Crawlspace	Interior Floors	833	Wood Framed Floor	30	0	0	U-factor	0.0329	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-30 / 2x10 Ceiling Below Finish: Gypsum Board	N
Roof-Attic S-5-UNIT E - 2BDR	Attic Roofs	885	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N
Roof-Attic S-6-UNIT F - 2BDR	Attic Roofs	833	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N

¹ Status: N - New, A - Altered, E - Existing

Registration Number: 224-F010036847A-000-000-0000000-0000 CA Building Energy Efficiency Standards

2022 Lowrise Multifamily Compliance

CERTIFICATE	OF COMPLIANCE - LOWRISE N	MULTIFAMILY	AIXED USE	PERFORMANC	E COMPLIA	NCE METH	OD				LMCC-	PRF-01-E
Lowrise Mult	tifamily Mixed Use Performan	ice Compliance	e Method								(Page	18 of 30)
G7B. FENESTR	ATION SUMMARY (MULTIFAMILY		AREAS)									
01	02	03	04	05	06	07	08	09	10	11	12	13
Fenestration Name	Fenestration Type/ Product Type / Frame Type	Parent Surface	Azimuth	Multiplier	Area (ft ²)	Overall U-factor	U-factor Source	Overall SHGC	SHGC Source	Overall VT	Exterior Shading	Status ¹
Door	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW Exterior Wall 5	225	1	48	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 8	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW Exterior Wall 6	225	1	15	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	Ν
Window 9	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW Exterior Wall 6	225		25	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	Ν
Window 10	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NW Exterior Wall 3	L ³¹⁵ E	R ³ S	P ⁸ R	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 11	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NW Exterior Wall 4	315	1	8	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	Ν
Window 12	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NE Exterior Wall 2	45	1	25	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	Ν
Window 13	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NE Exterior Wall 2	45	1	15	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	Ν

Registration Number: 224-F010036847A-000-000-0000000-0000

CA Building Energy Efficiency Standards 2022 Lowrise Multifamily Compliance

ANCE COMPLIANCE METHOD	LMCC-PRF-01-E
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04	05	06	07
Number in Building	Space Conditioning Systems Assigned	DHW System Name	IAQ Vent Fan Name
1	DU-1 :Heat Pump System 1:Air Distribution System 1:HVAC Fan 1:2:3	MF0-AO Smith BTH 2501	Default Minimum Balanced IAQ Fan
1	DU-2 :Heat Pump System 2:Air Distribution System 2:HVAC Fan 2:2:3	MF0-AO Smith BTH 2501	Default Minimum Balanced IAQ Fan
FRT	DU-3 :Heat Pump System 3:Air Distribution System 3:HVAC Fan 3:2:3	MF0-AO Smith BTH 2501	Default Minimum Balanced IAQ Fan
5 Piro	DU-4 :Heat Pump System 4:Air Distribution System 4:HVAC Fan 4:2:3	MF0-AO Smith BTH 2501	Default Minimum Balanced IAQ Fan
1	DU-5 :Heat Pump System 5:Air Distribution System 5:HVAC Fan 5:2:3	MF0-AO Smith BTH 2501	Default Minimum Balanced IAQ Fan
1	DU-6 :Heat Pump System 6:Air Distribution System 6:HVAC Fan 6:2:3	MF0-AO Smith BTH 2501	Default Minimum Balanced IAQ Fan
1	DU-7 :Heat Pump System 7:Air Distribution System 7:HVAC Fan 7:2:3	MF0-AO Smith BTH 2501	Default Minimum Balanced IAQ Fan

Registration Date/Time: 2024-03-26 11:42:16 Report Version: 2022.0.000 Schema Version: rev 20220601

HERS Provider: CalCERTS inc. Report Generated: 2024-03-25 14:23:53 Compliance ID: EnergyPro-4552-0324-0070

Registration Date/Time: 2024-03-26 11:42:16 Report Version: 2022.0.000 Schema Version: rev 20220601

HERS Provider: CalCERTS inc. Report Generated: 2024-03-25 14:23:53 Compliance ID: EnergyPro-4552-0324-0070

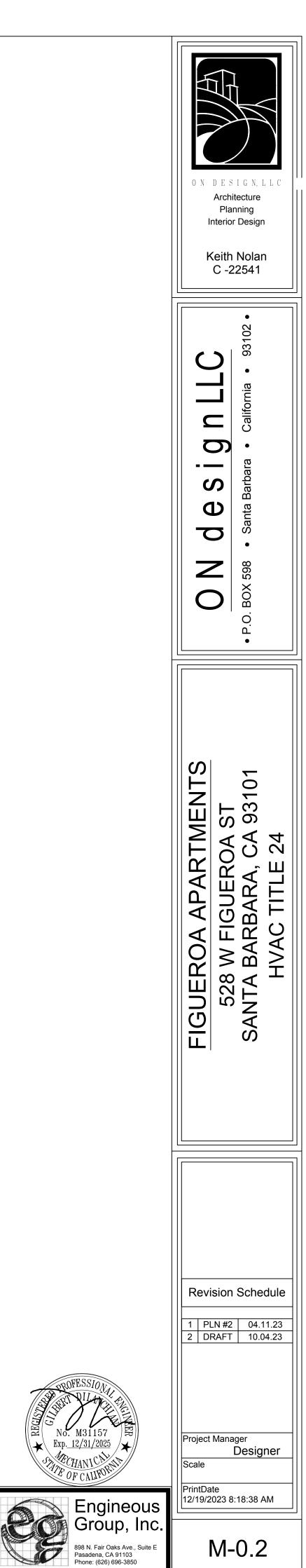
Registration Date/Time: 2024-03-26 11:42:16 Report Version: 2022.0.000 Schema Version: rev 20220601

HERS Provider: CalCERTS inc. Report Generated: 2024-03-25 14:23:53 Compliance ID: EnergyPro-4552-0324-0070 No. M31157

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CERTIFICATE	OF COMPLIANCE - LOWRISE I	MULTIFAMILY	AIXED USE	PERFORMANC	E COMPLIA	NCE METHO	DD				LMCC-	PRF-01-I
Lowrise Mult	tifamily Mixed Use Performar	ice Compliance	e Method								(Page	19 of 30
G7B. FENESTR	ATION SUMMARY (MULTIFAMILY	AND COMMON	AREAS)									
01	02	03	04	05	06	07	08	09	10	11	12	13
Fenestration Name	Fenestration Type/ Product Type / Frame Type	Parent Surface	Azimuth	Multiplier	Area (ft ²)	Overall U-factor	U-factor Source	Overall SHGC	SHGC Source	Overall VT	Exterior Shading	Status
Window 14	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SE Exterior Wall 5	135	1	15	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Door 2	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NE Exterior Wall 3	45	1	48	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 15	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NW Exterior Wall 7	315		15	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 16	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NE Exterior Wall 4	H ⁴⁵ E	R S	P ¹ R	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 17	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NE Exterior Wall 4	45	1	25	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 18	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NE Exterior Wall 5	45	1	15	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 19	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NE Exterior Wall 6	45	1	15	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N

CERTIFICATE	OF COMPLIANCE - LOWRISE I	MULTIFAMILY	IXED USE	PERFORMANC	E COMPLIA	NCE METH	OD				LMCC-	PRF-01-
Lowrise Mul	tifamily Mixed Use Performar	nce Compliance	e Method								(Page	20 of 30
G7B. FENESTR	ATION SUMMARY (MULTIFAMILY	AND COMMON	AREAS)									
01	02	03	04	05	06	07	08	09	10	11	12	13
Fenestration Name	Fenestration Type/ Product Type / Frame Type	Parent Surface	Azimuth	Multiplier	Area (ft ²)	Overall U-factor	U-factor Source	Overall SHGC	SHGC Source	Overall VT	Exterior Shading	Statu
Window 20	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SE Exterior Wall 7	135	1	25	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 21	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SE Exterior Wall 7	135	1	25	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 22	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SE Exterior Wall 7	135		15	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 23	Vertical fenestration Architectural Window Operable (Multifamily only) N/A	SW Exterior Wall 8	L ²²⁵ E	R S	P ¹ R	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 24	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW Exterior Wall 10	225	1	15	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 25	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW Exterior Wall 10	225	1	15	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 26	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NW Exterior Wall 9	315	1	15	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N

CA Building Energy Efficiency Standards 2022 Lowrise Multifamily Compliance

Lowrise Multi	family Mixed U	Ise Performance Comp	liance Meth	od							(Page	e 23 of 30)
H2. DWELLING	UNIT HVAC HEAT	ING AND COOLING SYSTE	MS									
01	02	03	04	05	06	07	08	09	10	11	12	13
				A :			Hea	ting			Cooling	
Dwelling Unit Type	Equipment Name	Equipment Type	Quantity	Air Distribution System Name	Fan System name	Heat Output at 47	Heat Output at 17	Efficiency Unit	Efficiency	Total Cooling Output	Efficiency Unit	Efficiency
DU-1	Heat Pump System 1	Central split HP N/A	1	Air Distribution System 1	HVAC Fan 1	10,000	7,200	HSPF2	10	N/A	EER2 SEER2	12.5 20
DU-2	Heat Pump System 2	Central split HP N/A	1	Air Distribution System 2	HVAC Fan 2	13,500	9,700	HSPF2	10	N/A	EER2 SEER2	12.5 20
DU-3	Heat Pump System 3	Central split HP N/A	1	Air Distribution System 3	HVAC Fan 3	21,600	15,500	HSPF2	9	N/A	EER2 SEER2	12.5 20
DU-4	Heat Pump System 4	Central split HP N/A	1H	Air Distribution System 4	HVAC Fan 4	10,000	7,200	HSPF2	10	N/A	EER2 SEER2	12.5 20
DU-5	Heat Pump System 5	Central split HP N/A	1	Air Distribution System 5	HVAC Fan 5	21,600	15,500	HSPF2	9	N/A	EER2 SEER2	12.5 20
DU-6	Heat Pump System 6	Central split HP N/A	1	Air Distribution System 6	HVAC Fan 6	21,600	15,500	HSPF2	9	N/A	EER2 SEER2	12.5 20
DU-7	Heat Pump System 7	Central split HP N/A	1	Air Distribution System 7	HVAC Fan 7	21,600	15,500	HSPF2	9	N/A	EER2 SEER2	12.5 20
DU-8	Heat Pump System 8	Central split HP N/A	1	Air Distribution System 8	HVAC Fan 8	13,500	9,700	HSPF2	10	N/A	EER2 SEER2	12.5 20

Lowrise Multi	family Mixed U	lse Performance Comp	liance Meth	od							(Page	e 23 of 30)
H2. DWELLING	UNIT HVAC HEAT	ING AND COOLING SYSTE	MS									
01	02	03	04	05	06	07	08	09	10	11	12	13
				Air			Hea	ting			Cooling	
Dwelling Unit Type	Equipment Name	Equipment Type	Quantity	Distribution System Name	Fan System name	Heat Output at 47	Heat Output at 17	Efficiency Unit	Efficiency	Total Cooling Output	Efficiency Unit	Efficienc
DU-1	Heat Pump System 1	Central split HP N/A	1	Air Distribution System 1	HVAC Fan 1	10,000	7,200	HSPF2	10	N/A	EER2 SEER2	12.5 20
DU-2	Heat Pump System 2	Central split HP N/A	1	Air Distribution System 2	HVAC Fan 2	13,500	9,700	HSPF2	10	N/A	EER2 SEER2	12.5 20
DU-3	Heat Pump System 3	Central split HP N/A	1	Air Distribution System 3	HVAC Fan 3	21,600	15,500	HSPF2	9	N/A	EER2 SEER2	12.5 20
DU-4	Heat Pump System 4	Central split HP N/A		Air Distribution System 4	HVAC Fan 4	10,000	7,200	HSPF2	10	N/A	EER2 SEER2	12.5 20
DU-5	Heat Pump System 5	Central split HP N/A	1	Air Distribution System 5	HVAC Fan 5	21,600	15,500	HSPF2	9	N/A	EER2 SEER2	12.5 20
DU-6	Heat Pump System 6	Central split HP N/A	1	Air Distribution System 6	HVAC Fan 6	21,600	15,500	HSPF2	9	N/A	EER2 SEER2	12.5 20
DU-7	Heat Pump System 7	Central split HP N/A	1	Air Distribution System 7	HVAC Fan 7	21,600	15,500	HSPF2	9	N/A	EER2 SEER2	12.5 20
DU-8	Heat Pump System 8	Central split HP N/A	1	Air Distribution System 8	HVAC Fan 8	13,500	9,700	HSPF2	10	N/A	EER2 SEER2	12.5 20

CA Building Energy Efficiency Standards 2022 Lowrise Multifamily Compliance

Lowrise Multifam	ily Mixed Use Perfo	ormance Compliance	Method					(Page 26 of
H4b. MULTIFAMILY H	HVAC DISTRIBUTION	- HERS VERIFICATION						
01	02	03	04	05	06	07	08	09
Name	Duct Leakage Verification	Duct Leakage Target (%)	Verified Duct Location	Verified Duct Design	Buried Ducts	Deeply Buried Ducts	Low-leakage Air Handler	Low Leaka Ducts Entirel Conditioned S
Air Distribution System 1	Yes	total leakage <= 12.0 or leakage to outdoors <= 6.0	Required	Not Required	Not Required	Credit not taken	Not Required	Yes
Air Distribution System 2	Yes	total leakage <= 12.0 or leakage to outdoors <= 6.0	Required	Not Required	Not Required	Credit not taken	Not Required	Yes
Air Distribution System 3	Yes	total leakage <= 12.0 or leakage to outdoors <= 6.0	Required	Not Required	Not Required	Credit not taken	Not Required	Yes
Air Distribution System 4	Yes	total leakage <= 12.0 or leakage to outdoors <= 6.0	Required	Not Required	Not Required	Credit not taken	Not Required	Yes
Air Distribution System 5	Yes	total leakage <= 12.0 or leakage to outdoors <= 6.0	Not Required	Not Required	Not Required	Credit not taken	Not Required	No
Air Distribution System 6	Yes	total leakage <= 12.0 or leakage to outdoors <= 6.0	Not Required	Not Required	Not Required	Credit not taken	Not Required	No
Air Distribution System 7	Yes	total leakage <= 12.0 or leakage to outdoors <= 6.0	Not Required	Not Required	Not Required	Credit not taken	Not Required	No
Air Distribution System 8	Yes	total leakage <= 12.0 or leakage to outdoors <= 6.0	Not Required	Not Required	Not Required	Credit not taken	Not Required	No

Registration Number: 224-F0 CA Building Energy Efficiency 2022 Lowrise Multifamily Compliance

Registration Number: 224-F010036847A-000-000-0000000-0000 CA Building Energy Efficiency Standards 2022 Lowrise Multifamily Compliance

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HERS Provider: CalCERTS inc. Report Generated: 2024-03-25 14:23:53 Compliance ID: EnergyPro-4552-0324-0070

CERTIFICATE	OF COMPLIANCE - LOWRISE I		VIXED USE	PERFORMANC	E COMPLIA	NCE METH	OD				LMCC	-PRF-01-E
Lowrise Mult	ifamily Mixed Use Performar	nce Compliance	e Method								(Page	22 of 30)
G7B. FENESTR	ATION SUMMARY (MULTIFAMILY	AND COMMON	AREAS)									
01	02	03	04	05	06	07	08	09	10	11	12	13
Fenestration Name	Fenestration Type/ Product Type / Frame Type	Parent Surface	Azimuth	Multiplier	Area (ft ²)	Overall U-factor	U-factor Source	Overall SHGC	SHGC Source	Overall VT	Exterior Shading	Status ¹
Window 34	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NE Exterior Wall 9	45	1	25	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 35	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NW Exterior Wall 13	315	1	15	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 36	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NE Exterior Wall 10	45		15	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 37	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NE Exterior Wall 10	H ⁵ E	R ³ S	P ² R	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 38	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SE Exterior Wall 11	135	1	15	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
¹ Status: N - N	ew, A - Altered, E - Existing											

Registration Number: 224-F010036847A-000-000-0000000-0000 CA Building Energy Efficiency Standards 2022 Lowrise Multifamily Compliance

Registration Date/Time: 2024-03-26 11:42:16 Report Version: 2022.0.000 Schema Version: rev 20220601

HERS Provider: CalCERTS inc. Report Generated: 2024-03-25 14:23:53 Compliance ID: EnergyPro-4552-0324-0070

wrise Multifamily Mixed Use	Performance Compliance Metho	d					(Page 25 of 30)
I. MULTIFAMILY HVAC DISTRIBUT	rion						
01	02	03	04	05	06	07	08
Norre	Turne	Duct Ins.	Duct Ins. R-value	Duct Location	Duct Location	Verified Duct De	sign Surface Area
Name	Туре	R-value Supply	Return	Supply	Return	Supply	Return
Air Distribution System 1	Conditioned space-entirely (Non-Verified)	R-8	R-8	Conditioned Zone	Conditioned Zone	N/A	N/A
Air Distribution System 2	Conditioned space-entirely (Non-Verified)	R-8	R-8	Conditioned Zone	Conditioned Zone	N/A	N/A
Air Distribution System 3	Conditioned space-entirely (<mark>Non-</mark> Verified)	R-8	R-8	Conditioned Zone	Conditioned Zone	N/A	N/A
Air Distribution System 4	Conditioned space-entirely (Non-Verified)	R-8	R-8	Conditioned Zone	Conditioned Zone	N/A	N/A
Air Distribution System 5	Unconditioned attic (Non-Verified)	R-8	R-8	Attic	Attic	N/A	N/A
Air Distribution System 6	Unconditioned attic (Non-Verified)	R-8	R-8	Attic	Attic	N/A	N/A
Air Distribution System 7	Unconditioned attic (Non-Verified)	E 💦 🍋 R-8	R-8	Attic	Attic	N/A	N/A
Air Distribution System 8	Unconditioned attic (Non-Verified)	R-8	R-8	Attic	Attic	N/A	N/A

Registration Number: 224-F010036847A-000-000-0000000-0000 CA Building Energy Efficiency Standards 2022 Lowrise Multifamily Compliance

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HERS Provider: CalCERTS inc. Report Generated: 2024-03-25 14:23:53 Compliance ID: EnergyPro-4552-0324-0070 Registration Number: 224-F010036847A-000-000-0000000-0000

Registration Date/Time: 2024-03-26 11:42:16 Report Version: 2022.0.000 Schema Version: rev 20220601

HERS Provider: CalCERTS inc. Report Generated: 2024-03-25 14:23:53 Compliance ID: EnergyPro-4552-0324-0070

Registration Number: 224-F010036847A-000-000-0000000-0000

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HERS Provider: CalCERTS inc. Report Generated: 2024-03-25 14:23:53 Compliance ID: EnergyPro-4552-0324-0070

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Registration Date/Time: 2024-03-26 11:42:16 Report Version: 2022.0.000 Schema Version: rev 20220601

HERS Provider: CalCERTS inc.

Report Generated: 2024-03-25 14:23:53 Compliance ID: EnergyPro-4552-0324-0070

CERTIFICATE	OF COMPLIANCE - LOWRISE I		VIXED USE	PERFORMANC	E COMPLIA	NCE METH	OD				LMCC-	PRF-01-E
Lowrise Mul	tifamily Mixed Use Performar	nce Compliance	e Method								(Page	21 of 30)
G7B. FENESTR	ATION SUMMARY (MULTIFAMILY	AND COMMON	AREAS)									
01	02	03	04	05	06	07	08	09	10	11	12	13
Fenestration Name	Fenestration Type/ Product Type / Frame Type	Parent Surface	Azimuth	Multiplier	Area (ft ²)	Overall U-factor	U-factor Source	Overall SHGC	SHGC Source	Overall VT	Exterior Shading	Status ¹
Window 27	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW Exterior Wall 11	225	1	25	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 28	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SE Exterior Wall 9	135	1	15	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 29	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW Exterior Wall 12	225		15	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 30	Vertical fenestration Architectural Window Operable (Multifamily only) N/A	NW Exterior Wall 11	L ³¹⁵ E	R ¹ S	P ¹⁵ R	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 31	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NW Exterior Wall 11	315	1	15	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 32	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NE Exterior Wall 8	45	1	15	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
Window 33	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SE Exterior Wall 10	135	1	15	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N

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2022 Lowrise Multifamily Compliance

Lowrise Multifamily Mixed Us	e Performance Compliance Method			(Page 24 of 3)
H3a. MULTIFAMILY / COMMON U	SE AREA FAN SYSTEMS SUMMARY			
01	02	03	04	05
Name	Туре	Power	Power Units	Status
HVAC Fan 1	Fixed speed	0.58	W/cfm	N/A
HVAC Fan 2	Fixed speed	0.58	W/cfm	N/A
HVAC Fan 3	Fixed speed	0.58	W/cfm	N/A
HVAC Fan 4	Fixed speed	0.58	W/cfm	N/A
HVAC Fan 5	Fixed speed	0.58	W/cfm	N/A
HVAC Fan 6	Fixed speed	0.58	W/cfm	N/A
HVAC Fan 7	Fixed speed	0.58	W/cfm	N/A
HVAC Fan 8	Fixed speed	0.58	W/cfm	N/A
HVAC Fan 8		0.58 ICERTS R S P R O V	W/cfm	

Registration Number: 224-F010036847A-000-000-0000000-0000 CA Building Energy Efficiency Standards 2022 Lowrise Multifamily Compliance

CERTIFICATE O	F COMPLIANCE - LOV	VRISE MULTIF	AMILY MIXED	USE PERFOR	MANCE CO	OMPLIANCE N	IETHOD				LM	CC-PRF-01-E
Lowrise Multif	amily Mixed Use Per	formance Cor	npliance Meth	nod							(Pa	ge 27 of 30)
110. MULTIFAMI	ILY DWELLING UNIT TYP	PE CENTRAL / II	NDIVIDUAL VEN	ITILATION								
01	02	03	04	05	06	07	08	09	10	11	12	13
			Central	Fan (If applical	ble)				Individual	Fan (if applicab	le)	
Dwelling Unit Type	IAQ Option	IAQ Fan Type Type	Supply Airflow CFM	Supply Fan Efficacy W/CFM	Exhaust CFM	Exhaust Fan Efficacy W/CFM	IAQ Fan Type	Count	Airflow CFM	Fan Efficacy W/CFM	Recovery Efficiency SRE	Recovery Efficiency ASRE
DU-1	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	42.06	N/A	N/A	N/A
DU-2	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	45.06	N/A	N/A	N/A
DU-3	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	53.61	N/A	N/A	N/A
DU-4	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	<mark>N/A</mark>	N/A	N/A	N/A	47.1	N/A	N/A	N/A
DU-5	Default Minimum Balanced IAQ Fan	N/A	N/A		N/A	N/A		N/A	49.05	N/A	N/A	N/A
DU-6	Default Minimum Balanced IAQ Fan	N/A	N/A H	E _{N/A}	N/A			N/AR	47.49	N/A	N/A	N/A
DU-7	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	54.3	N/A	N/A	N/A
DU-8	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	46.38	N/A	N/A	N/A

CERTIFICATE O	F COMPLIANCE - LOV	VRISE MULTIF	AMILY MIXED	USE PERFOR	MANCE CO	OMPLIANCE N	IETHOD				LM	CC-PRF-01-E
Lowrise Multif	amily Mixed Use Per	formance Cor	npliance Metl	nod							(Pa	ge 27 of 30)
H10. MULTIFAMI	ILY DWELLING UNIT TYP	PE CENTRAL / I	NDIVIDUAL VEN	ITILATION								
01	02	03	04	05	06	07	08	09	10	11	12	13
			Central	Fan (If applica	ble)				Individual	Fan (if applicab	le)	
Dwelling Unit Type	IAQ Option	IAQ Fan Type Type	Supply Airflow CFM	Supply Fan Efficacy W/CFM	Exhaust CFM	Exhaust Fan Efficacy W/CFM	IAQ Fan Type	Count	Airflow CFM	Fan Efficacy W/CFM	Recovery Efficiency SRE	Recovery Efficiency ASRE
DU-1	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	42.06	N/A	N/A	N/A
DU-2	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	45.06	N/A	N/A	N/A
DU-3	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	53.61	N/A	N/A	N/A
DU-4	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	47.1	N/A	N/A	N/A
DU-5	Default Minimum Balanced IAQ Fan	N/A	N/A		N/A	N/A		N/A	49.05	N/A	N/A	N/A
DU-6	Default Minimum Balanced IAQ Fan	N/A	N/A H	E _{N/A}	S N/A			N/AR	47.49	N/A	N/A	N/A
DU-7	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	54.3	N/A	N/A	N/A
DU-8	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	46.38	N/A	N/A	N/A

Registration Number: 224-F010036847A-000-000-0000000-0000 CA Building Energy Efficiency Standards 2022 Lowrise Multifamily Compliance

Registration Date/Time: 2024-03-26 11:42:16 Report Version: 2022.0.000 Schema Version: rev 20220601

HERS Provider: CalCERTS inc. Report Generated: 2024-03-25 14:23:53 Compliance ID: EnergyPro-4552-0324-0070

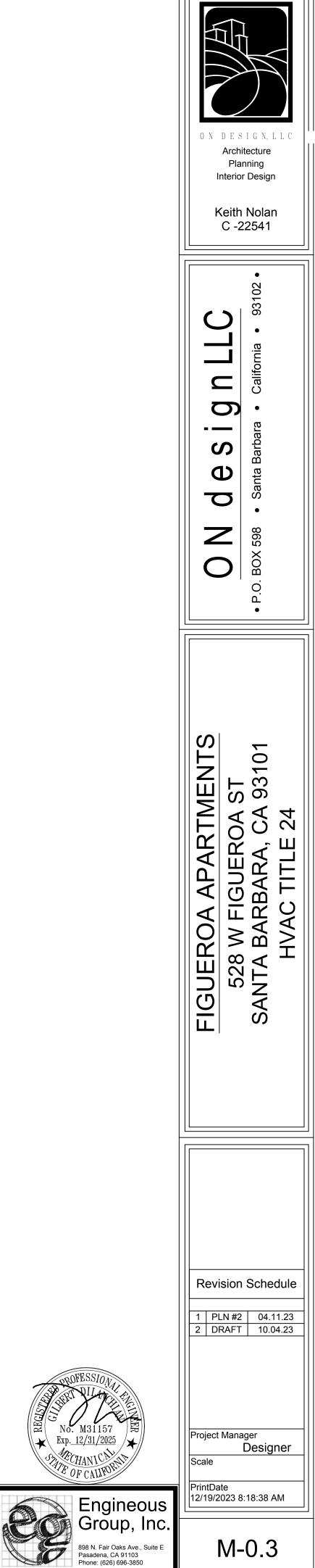
Registration Date/Time: 2024-03-26 11:42:16 Report Version: 2022.0.000 Schema Version: rev 20220601

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CERTIFICATE OF	COMPLIANCE - LC	WRISE MULTIFA	WILY M	IIXED USI	: PERFOR		LOWPLIANC	EWEIHOD					LMCC-PRF-01-E	CERTIFICATE OF COMPLIANCE - LOWRISE MULTIFAMILY MIXED USE PERFORM	
Lowrise Multifa	mily Mixed Use Pe	erformance Comp	oliance	Method									(Page 28 of 30)	Lowrise Multifamily Mixed Use Performance Compliance Method	
I1. WATER HEATER	R EQUIPMENT SUM	MARY												Documentation Author's Declaration Statement	
01	02	03	04	05	06	07	08	09	10	11	12	13	14	1. I certify that this Certificate of Compliance documentation is accurate and co	mplete.
Name	Heater Element	Tank Type	Qty	Tank Vol	Rated	Rated Input	Efficiency	Efficiency Unit	Tank Insulation R-value	Standby Loss	1st Hr. Rating or Flow Rate	Heat Pump	Tank Location or Ambient	Documentation Author Name: Gilbert Dilanchian <u>Gilbert Dilanchian</u> Company: Engineous Group, Inc.	Docu Signa
	Туре	Commercial		(gal)	Input	Unit		Unit	Int/Ext	Fraction	(gal)	Туре	Condition	Engineous Group, Inc. Address: 898 N Fair Oaks Ave Suite E 751 N. Fair Oaks Ave, Suite 201	202 CEA/ M3
AO Smith BTH 25010	Natural Gas	Storage (TE & SBL)	8	100	250	kBtu/Hr	0.95	TE	N/A	0	N/A	N/A	N/A	City/State/Zip: Pasadena, Ca 91103 Pasadena, CA 91103	Phon 626
	•	·			•			•		•				Responsible Person's Declaration statement	
12. MULTI-FAMILY	WATER HEATING SY	STEM DETAIL												I certify the following under penalty of perjury, under the laws of the State of G	alifornia:
01	02		03		04	4		05	06	6	07		08	1. The information provided on this Certificate of Compliance is true and	
System Name	Configura	tion	Туре		Qty in S	System		ing Unit Ition Type	Water Heat	ter Name	Solar Heating	System	ls Compact Distribution	 I am eligible under Division 3 of the Business and Professions Code to a Compliance (responsible designer) The energy features and performance specifications, materials, compo 	
MF0-AO Smith B 2501	3TH Domestic Ho (DHW		nitary					Distribution stem	AO Smith B	тн 25010	N/A		No	Certificate of Compliance conform to the requirements of Title 24, Part 4. The building design features or system design features identified on th compliance documents, worksheets, calculations, plans and specificati	s Certificate o
						5 6	" K C	JVI	DE	R				 5. I understand that a registered copy of this Certificate of Compliance sh the enforcement agency for all applicable inspections, and I will take th 6. I understand that a registered copy of this Certificate of Compliance is occupancy, and I will take the necessary steps to accomplish these required 	all be made a e necessary s equired to be
														Responsible Designer Name: Keith Nolan	Resp
														Company: ON Design, LLC	Date 202
														Address: P.O. Box 489	Licer C2
														City/State/Zip: Santa Barbara / CA / 93102	Title
														Phone:	Scop

Registration Number: 224-F010036847A-000-000-0000000-0000 CA Building Energy Efficiency Standards

2022 Lowrise Multifamily Compliance

Registration Date/Time: 2024-03-26 11:42:16 Report Version: 2022.0.000 Schema Version: rev 20220601

HERS Provider: CalCERTS inc. Report Generated: 2024-03-25 14:23:53 Compliance ID: EnergyPro-4552-0324-0070

Address: P.O. Box 489 City/State/Zip: Santa Barbara / CA / 93102 805-896-8374

CA Building Energy Efficiency Standards 2022 Lowrise Multifamily Compliance

CERTIFICATE OF COMPLIANCE - LOWRISE MULTIFAMILY MIXED USE PERFORMANCE COMPLIANCE METHOD	LMCC-PRF-01-E
owrise Multifamily Mixed Use Performance Compliance Method	(Page 29 of 30)

ocumentation Author's Declaration Statement

1. I certify that this Certificate of Compliance documentation is accurate and complete.					
Documentation Author Name: Gilbert Dilanchian	Documentation Author Signature:				
Gilbert Dilanchian	<i>Gilbert Dilanchian</i>				
Company: Engineous Group, Inc.	Signature Date:				
Engineous Group, Inc.	2024-03-25 15:11:28				
Address: 898 N Fair Oaks Ave Suite E	CEA/HERS Certification Identification (if applicable): M31157				
751 N. Fair Oaks Ave, Suite 201	M31157				
City/State/Zip: Pasadena, Ca 91103	Phone: 626 696 3850				
Pasadena, CA 91103	626-696-3850				
Responsible Person's Declaration statement					

1. The information provided on this Certificate of Compliance is true and correct. 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer) 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations. 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application. 5. I understand that a registered copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections, and I will take the necessary steps to accomplish this requirement. 6. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to accomplish these requirements. Responsible Designer Name: Keith Nolan feelf Responsible Designer Signature: Date Signed: 2024-03-26 11:42:16 License #: C22541

Lowrise Multifamily Mixed Us	e Performance Compliance Method
Responsible Designer Name: Keith Nolan	
Company: ON Design, LLC	
Address: P.O. Box 489	
City/State/Zip: Santa Barbara / CA / 93102	
Phone: 805-896-8374	



Digitally signed by CalCERTS. This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.

Registration Number: 224-F010036847A-000-000-0000000-0000 Registration Date/Time: 2024-03-26 11:42:16 Report Version: 2022.0.000 Schema Version: rev 20220601

Title:

Scope:

HERS Provider: CalCERTS inc. Report Generated: 2024-03-25 14:23:53 Compliance ID: EnergyPro-4552-0324-0070 Digitally signed by CalCERTS. This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.

Registration Number: 224-F010036847A-000-000-0000000-0000 CA Building Energy Efficiency Standards 2022 Lowrise Multifamily Compliance

٩N	ICE COMPLIANCE METHOD	LMCC-PRF-01-E
		(Page 30 of 30)
	Responsible Designer Signature:	
	Date Signed: 2024-03-26 11:42:30	
	License #: C22541	
	Title:	
	Scope:	

HERS PROVIDER



Registration Date/Time: 2024-03-26 11:42:16 Report Version: 2022.0.000 Schema Version: rev 20220601

HERS Provider: CalCERTS inc. Report Generated: 2024-03-25 14:23:53 Compliance ID: EnergyPro-4552-0324-0070

	ONDESIGNELC Architecture Planning Interior Design Keith Nolan C -22541
	ON de sign LLC • P.O. BOX 598 • Santa Barbara • California • 93102 •
	FIGUEROA APARTMENTS 528 W FIGUEROA ST SANTA BARBARA, CA 93101 HVAC TITLE 24
No. M31157 Exp. 12/31/2025	Revision Schedule 1 PLN #2 04.11.23 2 DRAFT 10.04.23 Project Manager Designer Scale PrintDate 12/19/2023 8:18:38 AM
Engineous Group, Inc. 898 N. Fair Oaks Ave., Suite E Pasadena, CA 91103 Phone: (626) 696-3850	M-0.4



BALANCING NOTES	APPLICAE
I. CONTRACTOR SHALL PROVIDE SERVICES OF NEBB OR AABC CERTIFIED AIR AND HYDRONIC BALANCING SERVICES TO ESTABLISH ALL FLOW QUANTITIES SHOWN ON CONSTRUCTION DOCUMENTS. BALANCING CONTRACTOR SHALL PROVIDE COPIES OF CERTIFIED BALANCE REPORTS FOR REVIEW AND APPROVAL BY ARCHITECT.	THE APPLICABLE CO INCLUDE BUT ARE NO 2022 CALIFORNIA N 2022 CALIFORNIA E 2022 CALIFORNIA E
2. PRIOR TO COMMENCEMENT OF WORK, BALANCING CONTRACTOR SHALL REVIEW HVAC SHOP DRAWINGS AND COORDINATE ALL VOLUME DAMPERS, BALANCING VALVES AND SIMILAR DEVICES REQUIRED FOR BALANCING WORK TO ASSURE ALL NEEDED COMPONENTS AND ACCESS ARE INCLUDED DURING CONSTRUCTION.	
3. A BALANCING TEST WILL BE REQUIRED TO VERITY PROPER AMOUNT OF OUTSIDE AIR TO COMPLY WITH THE TITLE 24 CALCULATIONS & TO PERFORM T-24 REQUIRED	AS PART OF A SUCCESSFUL AND ACCEPT
"ACCEPTANCE TESTS" SPECIFIED ON THE T-24 FORMS BEFORE FINAL OF THIS PROJECT. 4. CONTRACTOR SHALL PERFORM & PROVIDE DOCUMENTATION FOR ALL	FOR ALL EQUIPMENT AND SYSTEMS, C I. COMPLETE AND SIGN TITLE 24 ACCEP AND FUNCTIONAL FORMS FOR PROJEC
ACCEPTANCE TESTING REQUIRED BY TITLE-24. 5. FOR THE O.S.A. CFM, SEE MECHANICAL VENTILATION FORM NRCC-MCH-03-E OF	2. ISSUE RECORD SETS OF "AS-BUILD" P
THE TITLE 24 FORMS.	EQUIPMENT LOCATIONS PLUS ALL ACC PROVIDE TO ARCHITECT BEFORE END
CONTROLS NOTES	3. OBTAIN OPERATION AND MAINTENANC ANY SIMILAR CLOSEOUT DOCUMENTS I COMPONENT AND PROVIDE TO BUILDII REVIEW ALL CLOSEOUT DOCUMENT MI
I. CONTROLS SCOPE OF WORK IS DESIGN-BUILD AND HVAC OR GENERAL CONTRACTOR SHALL ENGAGE A QUALIFIED CONTROLS SUBCONTRACTOR TO PROVIDE A COMPLETE AND FUNCTIONAL DESIGN-BUILD CONTROLS SYSTEM.	AWARE OF PREVENTATIVE AND REGU
2. PROVIDE ONE T-24 APPROVED TEMPERATURE CONTROLLER FOR EACH AC SYSTEM UNILESS PLANS CALL TO REUSE EXISTING. FOR EACH T-STAT WITH A SENSOR IF REQUESTED BY OWNER, COORDINATE EXACT LOCATION OF T-STAT	<u>CONDENSATE</u>
WITH OWNER. CONTRACTOR SHALL PROGRAM EACH AC SYSTEM SCHEDULES PER BUILDING OWNER INPUT AND TEST TO ASSURE CORRECT OPERATION.	I. CONDENSATE DRAINS ARE CODE REQU OPERATION OF AC SYSTEMS AND CONI REVIEW PLUMBING PLANS TO ASSURE C SECONDARY CONDENSATE DRAIN PIPES ISSUED SO G.C. TO INCLUDE IN BID.
SHOP DRAWINGS NOTES	2. PRIOR TO INSTALL SECONDARY DRAIN FROM PLUMBING SUB THAT TERMINATIO ARCHITECT AND ARE READILY VISIBLE
I. PRIOR TO START OF ALL WORK, HVAC, PLUMBING, ELECTRICAL & FIRE SPRINKLER CONTRACTORS SHALL:	
 A. PREPARE SHOP DRAWINGS & SUBMIT TO GC FOR APPROVAL. B. SHOP DRAWINGS SHOULD BE COORDINATED BETWEEN THESE CONTRACTORS IN FORM OF OVERLAY MEP LAYOUT TO IDENTIFY CONFLICTS PRIOR TO 	ACCEPTANCE TE
 START OF PROJECT. C. LOCATION OF ALL HVAC EQUIPMENT SHALL BE COORDINATED WITH OTHER TRADES BEFORE INSTALLATION TO AVOID CONFLICTS WITH OTHER SYSTEMS. D. HVAC SHOP DRAWINGS SHALL INCLUDE HANGERS AND SUPPORTS PER SMACNA GUIDELINES OR BE PREPARED BY STATE REGISTERED STRUCTURAL OR CIVIL ENG'R. E. PROVIDE SHOP DRAWINGS FOR SEISMIC RESTRAINT AND VIBRATION 	HVAC & BALANCING CONTRACTOR SHALL REQUIRED ON 2022 NRCA SETS OF FORM PREFUNCTIONAL/FUNCIONAL TEST FORMS ARCHITECT, COMMISSIONING AGENT, AND NONRESIDENTIAL MANUAL AND/OR PROJE DETAILS.
ISOLATION BASES AND DEVICES ENGINEERED BY A STATE LICENSED STRUCTURAL OR CIVIL ENGINEER FOR ALL EQUIPMENT.	CAL GREEN & OTH
2. PROVIDE SHOP DRAWINGS TO ARCHITECT FOR APPROVAL. DO NOT ORDER COMPONENTS OR START ANY WORK PRIOR TO COMPLETING ABOVE TASKS TO IDENTIFY AND RESOLVE CONFLICTS.	FOR PROJECTS LESS THAN 10,000 SQFT, TESTS SHALL BE PERFORMED BY THE GE
 BIDDING NOTES	ALL TESTS, THE RESULTS SHOULD BE REP
I. BIDDING CONTRACTORS SHALL REVIEW ALL SETS OF CONSTRUCTION DOCUMENTS AS A TEAM PRIOR TO BID AND SHALL SUBMIT RFIS RELATED TO ANY UNKNOWN OR LACK OF SPECIFIC INFORMATION ABOUT SCOPE OF WORK SUCH AS NEED FOR ANY MAKE/MODEL NUMBER, WIRING/PIPING DIAGRAMS REQUIRED TO CONSTRUCT INTENDED COMPLETE AND FUNCTIONAL SYSTEMS.	HVAC: I. ACCEPTANCE TESTS SHOWN ON TITLE 2. TEST REQUIRED BY COMMISSIONING A 3. HVAC SYSTEMS AND CONTROLS SHAL STANDARDS:
2. AS PART OF COMPLETE AND FUNCTIONAL SYSTEMS, COORDINATED WORK BY OTHER TRADES WILL BE REQUIRED RELATED TO INFORMATION SHOWN ON MECHANICAL PLANS SUCH AS BUT NOT LIMITED TO, EQUIPMENT SCHEDULES REMARKS, SEQUENCE OF OPERATION NOTES, PROJECT MANUAL, DETAILS, WIRING DIAGRAMS AND NOTES, TO COORDINATE SCOPE SUCH AS BUT NOT LIMITED TO	TABB'S CONSTRUCTION SPECIFICATION (SECTIONS 23 05 93 AND 15990) OR
INTERLOCKING/CONTROLS WITH ELECTRICAL CONTRACTOR, TO COORDINATE DRAINS, GAS SUPPLY AND MAKEUP WATER NEEDS FOR MECHANICAL EQUIPMENT WITH PLUMBING CONTRACTOR.	NEBB'S STANDARDS FOR TESTING, A ENVIRONMENTAL SYSTEMS (7TH OR
3. COORDINATE ACCESS FOR CONCEALED INSTALLATIONS FOR LOCATION AND SIZE OF ACCESS DOORS NECESSARY FOR EACH MEP COMPONENT REQUIRING SUCH ACCESS INCLUDING BUT NOT LIMITED TOO FIRE OR FIRE/SMOKE DAMPERS, FAN COILS, ROOFTOP UNITS, FANS, MOTORIZED DAMPERS, VALVES, ELECTRICAL PANELS AND ALL SIMILAR EQUIPMENT.	AABC 'S NATIONAL STANDARDS FOR (6TH EDITION) OR
4. REFER TO ENTIRE SET OF CONSTRUCTION DOCUMENTS (CD) FOR WORK RELATED TO HVAC, INCLUDING BUT NOT LIMITED TO DRAWING SETS OF ARCHITECTURAL, STRUCTURAL, ELECTRICAL PLUMBING SCOPE OF WORK, PROJECT MANUALS OR SPECIFICATIONS AND ANY OTHER SET OF DOCUMENT AS PART OF CD. DURING BID PHASE NOTIFY OTHER TRADES FOR WORK CALLED ON HVAC SETS SUCH AS	ASHRAE STANDARD III PLUMBING:
WIRING INTERLOCK, EQUIPMENT PLATFORMS/PAD OR SIMILAR.	I. PRESSURE TESTS FOR ALL PIPING PER
5. BIDDING CONTRACTOR SHALL BE EXPERIENCED ON SIMILAR PROJECTS WITH SAME TECHNICAL SOPHISTICATION AND COMPLEXITY. IT IS G.C. RESPONSIBILITY TO SCREEN ALL CONTRACTORS FOR PAST EXPERIENCE TO ASSURE COMPLIANCE WITH THIS INTENT.	DOMESTIC WATER SYSTEM: PER SECT SANITARY WASTE & VENT SYSTEM: PE GAS PIPING SYSTEM: PER SECTION 12
6. BIDDING CONTRACTOR SHALL ENSURE PROVIDED BID INCLUDES A COMPLETE, FUNCTIONAL, CODE COMPLIANT, COORDINATED AND SERVICEABLE INSTALLATION THAT ASSURES THE INSTALLED DUCTWORK AND PIPING SHALL INCLUDE ALL NECESSARY FITTINGS AND COMPONENTS, INCLUDING BUT NOT LIMITED TO REDUCERS TO DUCT/PIPE AND TO EQUIPMENT, TRANSITIONS, BEAM BOXES, VOLUME DAMPERS, AND ANY AND ALL SIMILAR COMPONENTS NEEDED. IF ADDITIONAL INFORMATION IS MISSING OR REQUIRED, SUBMIT REQUESTS FOR INFORMATION TO GENERAL CONTRACTOR PRIOR TO BID TO ELIMINATE ANY MISSING INFORMATION, CONFUSION, OR SIMILAR.	 START, FULL LOAD CONSUMPTION AND WATER HEATERS, AND PUMPS. SEISMIC RESTRAINT INSTALLATION. APPROVAL: A FINAL REPORT FOR TESTING AND A COMPLETED PRIOR TO FINAL APPROV SIGNED BY THE INDIVIDUAL RESPONSI
	2. AN OPERATION & SYSTEMS MANUAL, S REPRESENTATIVE AND TO THE FIELD INSPECTION.

BLE CODES

ODES TO THIS PROJECT OT LIMITED TO: MECHANICAL CODE ENERGY CODE SREEN BUILDING CODE

ROCESS NOTES

TABLE START UP PLUS TESTING PROCESS INTRACTOR SHALL:

PTANCE TEST FORMS, OR PRE-FUNCTIONAL CTS INVOLVING COMMISSIONING AND IF REQUESTED TO AHJ.

LANS SHOWING ACTUAL INSTALLED WORK \$ CESS DOOR AND PANEL LOCATIONS TO OF WORK.

E MANUALS, WARRANTY CERTIFICATES AND FOR ALL PIECES OF EQUIPMENT OR NG OWNER AND CONTRACTOR SHALL ITH BUILDING ENGINEER AND MAKE THEM LAR MAINTENANCE.

E DRAIN NOTES

IREMENT AND ESSENTIAL FOR PROPER DENSING FURNACES, REFER TO BID SET AND ODE APPROVED PRIMARY AND S ARE SHOWN, OTHERWISE RFI SHOULD BE

NS BY PLUMBING SUBCONTRACTOR, VERIFY ON POINTS ARE COORDINATED WITH

EST REQUIREMENTS

PERFORM ALL APPLICABLE T-24 TESTS 15 AND PROJECT'S COMMISSIONING AND SHALL SUBMIT SIGNED COPIES TO IF REQUESTED TO AHJ . REFER TO T-24 ECT'S COMMISSIONING PLAN/SPECS FOR TEST

HER TESTING NOTES

AT THE MINIMUM, THE FOLLOWING NERAL CONTRACTOR UNTIL PASSING PORTED TO INSPECTORS:

24 FORMS. GENT. L COMPLY WITH ONE OF THE FOLLOWING

ONS INSTITUTE MASTERFORMAT

ADJUSTMENT, AND BALANCING OF ADDITION)

OR TOTAL SYSTEMS BALANCE

ER CPC:

TION 609.4 OF CPC. PER SECTION 712.0 OF CPC.

14.3 ODF CPC.

D TEMPERATURE CONTROL TEST FOR THE

ADJUSTING OF ALL NEW SYSTEMS SHALL BE VAL BY THE FIELD. THIS REPORT SHALL BE IBLE FOR PERFORMING THESE SERVICES. SHALL BE PROVIDED TO THE OWNER OR INSPECTOR AT THE TIME OF FINAL

AIR CONDITIONING NOTES

- I. FABRICATE ALL DUCTS PER CHAPTER 6 OF CMC. SUPPLY AIR, RETURN AIR, AND OUTSIDE AIR FOR HEATING, COOLING, OR EVAPORATIVE COOLING SYSTEMS SHALL BE CONSTRUCTED OF METAL AS SET FORTH IN THE ANSI/SMACNA HVAC-DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE OR ANOTHER APPROVED DUCT CONSTRUCTION STANDARD. RECTANGULAR DUCTS IN EXCESS OF TWO (2) INCHES W.G. SHALL COMPLY WITH THE ANSI/SMACNA HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE, OR AN OTHER APPROVED DUCT CONSTRUCTION STANDARD.
- 2. PROVIDE TURNING VANES IN ALL 90° ELBOW SUPPLY, RETURN AND EXHAUST AIR DUCTS. PROVIDE TURNING VANES ON ALL RECTANGULAR ELBOWS IF TWO CONSECUTIVE ELBOWS ARE CLOSER THAT 5 FEET REGARDLESS OF THE ELBOW'S ANGLE.
- 3. ALL GRAVITY VENTILATORS AND LOUVERS SHALL HAVE BACK DRAFT DAMPERS TO ALLOW AIR IN THE INTENDED DIRECTION AND SHUT DOWN AIR FLOW IN THE OPPOSITE DIRECTION, UNLESS A MOTORIZED DAMPER IS SHOWN.
- 4. PLUMBING CONTRACTOR TO PROVIDE CONDENSATE DRAIN PIPE COPPER TYPE "M" WITH 4" DEEP TRAP TO APPROVED RECEPTOR.
- 5. ALL FIRE DAMPERS SHALL BE STATE FIRE MARSHALL APPROVED WITH LISTING NUMBER.
- 6. ALL H.V.A.C. EQUIPMENT AND DUCTS SHALL BE INSTALLED PER "SMACNA" SEISMIC RESTRAINT INSTALLATION METHODS.
- 7. ALL OUTDOOR CONDENSER COILS FOR PACKAGE & SPLIT SYSTEMS SHALL HAVE FACTORY APPLIED COASTAL FIN PROTECTION FILM.
- 8. ALL COMBUSTIBLE MATERIALS SHALL HAVE A FLAME SPREAD < 25, SMOKE SPREAD < 50.
- 9. ALL INSULATED DUCTWORK SHALL BE ATTACHED TO BLANKET WITH #10 SOFT ANNEALED WIRE AT 12" O.C.
- IO. THERMOSTATS ARE TO BE LOCATED BETWEEN 3' AND 4' ABOVE FINISH FLOOR.
- II. CONTRACTOR IS RESPONSIBLE TO VERIFY EQUIPMENT VOLTAGE PRIOR TO ORDER.
- 12. OUTDOOR EQUIPMENT SHALL HAVE PROPER WEATHER PROTECTION AND RATING. CONTRACTOR TO VERIFY AND DETERMINE EQUIPMENT WEATHER PROTECTION REQUIREMENTS PRIOR TO ORDER.
- 13. ALL OUTSIDE AIR & RELIEF DUCTS/OPENING SERVING EACH AIR HANDLER SHALL HAVE GRAVITY OR MOTORIZED DAMPERS FOR AFTER HOURS SHUTDOWN.
- 14. ALL HVAC EQUIPMENT SHALL HAVE PERMANENT PLATE OR METAL LABELS SHOWING THE EQUIPMENT NUMBER AND AREA THEY SERVE.
- 15. PROVIDE ONE T-24 APPROVED TEMPERATURE CONTROLLER FOR EACH AC SYSTEM. FOR EACH T-STAT WITH A SENSOR, COORDINATE EXACT LOCATION OF T-STAT WITH OWNER. CONTRACTOR SHALL PROGRAM EACH AC SYSTEM SCHEDULES PER BUILDING OWNER INPUT AND TEST TO ASSURE CORRECT OPERATION.

COORDINATION SCOPE:

- BIDDING CONTRACTORS SHALL REVIEW ALL SETS OF CONSTRUCTION DOCUMENTS AS A TEAM PRIOR TO BID AND SHALL SUBMIT RFIS RELATED TO ANY UNKNOWN OR LACK OF SPECIFIC INFORMATION ABOUT SCOPE OF WORK REQUIRED TO CONSTRUCT INTENDED COMPLETE AND FUNCTIONAL SYSTEMS SUCH AS NEED FOR ANY MAKE/MODEL NUMBER, WIRING/PIPING DIAGRAMS.
- 2. AS PART OF COMPLETE AND FUNCTIONAL SYSTEMS, COORDINATED WORK BY OTHER TRADES WILL BE REQUIRED RELATED TO INFORMATION SHOWN ON MECHANICAL PLANS SUCH AS, BUT NOT LIMITED TO, EQUIPMENT SCHEDULES REMARKS, SEQUENCE OF OPERATION NOTES, PROJECT MANUAL, DETAILS, WIRING DIAGRAMS AND NOTES TO COORDINATE INTERLOCKING/CONTROLS OF EQUIPMENT WITH ELECTRICAL CONTRACTOR OR TO COORDINATE DRAINS, GAS SUPPLY AND MAKEUP WATER NEEDS FOR MECHANICAL EQUIPMENT WITH PLUMBING CONTRACTOR.
- 3. COORDINATE ACCESS FOR CONCEALED INSTALLATIONS FOR LOCATION AND SIZE OF ACCESS DOORS NECESSARY FOR EACH MEP COMPONENT REQUIRING SUCH ACCESS INCLUDING BUT NOT LIMITED TOO FIRE OR FIRE/SMOKE DAMPERS. FAN COILS, ROOFTOP UNITS, FANS, MOTORIZED DAMPERS, VALVES, ELECTRICAL PANELS AND ALL SIMILAR EQUIPMENT.

FUTURE ACCESS NOTES

CONTRACTOR SHALL PROVIDE THE FOLLOWING:

- MEANS FOR ACCESS ALL SERVICE AREAS OF ALL HVAC EQUIPMENT/DEVICES. THIS INCLUDES BUT NOT LIMITED TO EACH FANCOIL OR AIR HANDLER, WATER SOURCE HEAT PUMPS, FANS, MANUAL OR MOTORIZED DAMPERS, FIRE OR COMBINATION/SMOKE FIRE DAMPERS, SMOKE DETECTORS, SENSORS AND SIMILAR COMPONENTS REQUIRING FUTURE ACCESS AND SERVICE.
- 2. ACCESS MIGHT BE THROUGH T-BAR PANELS, CEILING OR WALL ACCESS PANELS, DUCT ACCESS DOORS.
- 3. WHERE SAFE ACCESS THROUGH LADDERS IS NOT POSSIBLE, CONTRACTOR SHALL PROVIDE SERVICE PLATFORMS IN FRONT OF SERVICE/ACCESS AREAS.
- 4. EACH DUCTED SPLIT SYSTEM FAN COILS CONCEALED ABOVE A CEILING SHALL HAVE A DRAIN PAN TO ALLOW THE INSTALLATION OF THE SECONDARY CONDENSATE DRAIN LINE.
- 5. PROVIDE SHOP DRAWINGS OF THE ACCESS DOORS AND FLOOR PLAN LAYOUT TO ARCHITECT FO RAPPROVAL.

SUBMITTED BIDS SHALL INCLUDE ALL SUCH MEANS OF ACCESS FOR EVERY SINGLE PIECE OF EQUIPMENT OR DEVICE.

FIRE/LIFE SAFETY NOTES

GENERAL CONTRACTOR IS RESPONSIBLE TO PROVIDE A COMPLETE AND APPROVED FIRE/LIFE SAFETY SYSTEM . PROVIDE FIRE DEPARTMENT APPROVED SHOP DRAWINGS TO ARCHITECT FOR APPROVAL AND COORDINATE ALL RELATED WORK WITH ELECTRICAL, MECHANICAL AND ALL INVOLVED TRADES AT NO ADDITIONAL COST, INCLUDING SOURCES OF POWER, WIRING TO SMOKE DETECTORS AND MONITORING DEVICES.

AIRC	ONDITIONING LEGEND		
SYMBOL	DESCRIPTION		
	AIR INLET/OUTLET, NECK SIZE, IN.		
500	AIR QUANTITY CFM		
	SOLID LINE DENOTES NEW DUCTWORK		
	DUCT TRANSITION/ CHANGE IN SIZE		ONDESIGN, LI Architecture
	DASHED LINE DENOTES EXISTING DUCTWORK TO REMAIN.		Planning Interior Design
<u> </u>	CROSS-HATCHED LINE DENOTES EXISTING DUCTWORK TO BE REMOVED.		Keith Nolan
	SUPPLY AIR DUCT.		C -22541
	RETURN AIR DUCT.		•
	EXHAUST AIR DUCT.		93102
www	FLEXIBLE DUCT		
	DOUBLE THICKNESS TURNING VANES		
	CEILING DIFFUSER		California
	RETURN AIR GRILLE, RELIEF GRILLE		
	EXHAUST GRILLE		arbara
	CEILING MOUNTED FIRE DAMPER		DEST
♦FD	WALL MOUNTED FIRE DAMPER		
	MOTORIZED COMBINATION/SMOKE FIRE DAMPER		
	MANUAL VOLUME DAMPER		X 298
	REMOTELY OPERATED MANUAL VOLUME DAMPER		O BOX
	MOTORIZED DAMPER		· ·
	DUCT (FIRST DIMENSION IS SIDE SHOWN).		
ج ا <u>ع x 6 (L)</u>	LINED DUCT (SHEET METAL SIZE SHOWN).		
SD	DUCT SMOKE DETECTOR		
(T)	THERMOSTAT (MOUNT AT +42 IN. ABOVE FLOOR).		
(5)	ROOM SENSOR (MOUNT AT +42 IN. ABOVE FLOOR)		01 01
(0)	CO2 SENSOR (FOR DEMAND CONTROL VENTILATION)		
(H)	HUMIDITY SENSOR		ME A S A 9;
(M)	EQUIPMENT FURNISHED AND INSTALLED BY MECH. CONT'R.		
(E)	EQUIPMENT FURNISHED AND INSTALLED BY ELEC. CONT'R.		ROA APAR W FIGUERC BARBARA, (
ME	EQUIPMENT FURNISHED BY MECH. CONTRACTOR AND INSTALLED BY ELECT. CONTRACTOR.		
60	CARBON MONOXIDE SENSOR		А П Р К С Р К
•	POINT OF CONNECTION FROM EXISTING DUCTWORK TO NEW DUCTWORK		FIGUEROA 528 W FI SANTA BAR
S.A.	SUPPLY AIR		GUEF 528 ANTA
R.A.	RETURN AIR		5 SAN ⁻
E.A.	EXHAUST AIR		
т.А.	TRANSFER AIR		
0.5.A.	OUTSIDE AIR		
U.T.R.	UP THRU ROOF		
D.T.F.	DOWN THRU FLOOR		
C.D.	CEILING DIFFUSER		
R.A.G.	RETURN AIR GRILLE, RELIEF GRILLE		
R.G. E.G.	EXHAUST GRILLE		
D.G.	DOOR GRILLE		Devision Ochod
0.B.D	OPPOSED BLADE DAMPER		Revision Sched
B.D.D.	BACKDRAFT DAMPER		1 PLN #2 04.11 2 DRAFT 10.04
V.A.V.			
C.V.	CONSTANT VOLUME	SSIONAL PI	
U.V. H.W.S. & R.			
		<u>31/2025</u>	Project Manager Design
CH.M.S. & R.	CHILLED WATER SUPPLY AND RETURN	NICALMORNIA	Scale
C.W.S. & R.		Ingineous	PrintDate 12/19/2023 8:18:38 AM
V.I.F.		Group, Inc.	<u></u>
		,	M-1.1

ESIGN, LL ഗ ⊢__ ÖZ ر مې \circ () LE CA W FIGUER BARBARA, CHEDULE, 528 SANTA QUIP. S(Ш \mathbf{O} HVA on Schedule #2 04.11.23 T 10.04.23 Designer 23 8:18:38 AM

SINGLE/MULTI FAMILY CONTINUOS WHOLE-BUILDING VENTILATION RATE IN CFM)(PER ASHRAE 62.2)

RATE= (0.03xFLOOR AREA)+7.5x(NBDRM+I)

RESIDENTIAL VENTILATION REQUIRED:

2 BEDROOM

CFM REQUIRED PER T-24 CALCULATION PER SECTION 4.3.2.5.6: 49

- A: LOW SPEED CFM OF EACH CONTINUOUSLY OPERATING BATHROOM FAN: 50
- B: NUMBER OF BATHROOM FAN:
- CFM PROVIDED = 1 x 50=50

RESIDENTIAL AIR BALANCE TABLE								
EQUIPMENT	QUANTITY	SA	EA	BALANCE				
SF-RI	I	50	-	50				
EF-RI	I	-	50	50				
SA/EA = 100%								

2 BEDROOM

CFM REQUIRED PER T-24 CALCULATION PER SECTION 4.3.2.5.6: 55

- A: LOW SPEED CFM OF EACH CONTINUOUSLY OPERATING BATHROOM FAN: 80
- B: NUMBER OF BATHROOM FAN:

CFM PROVIDED = 1 x 80=80

RESIDENTIAL AIR BALANCE TABLE								
EQUIPMENT	QUANTITY	SA	EA	BALANCE				
SF-R2		80	-	80				
EF-R2		-	80	80				
SA/EA = 100%								

COMPLIANCE NOTES:

- RESIDENTIAL SPACES SHALL COMPLY WITH CA T-24 VENTILATION REQUIREMENTS ADOPTED FROM ASHRAE STANDARD 62.2
- 2. THIS PROJECT COMPLIES WITH CA VENTILATION REQUIREMENT THROUGH BALANCED (OSA + EXHAUST) OPTION.

RESIDENTIAL DUCT INSULATION NOTES

PORTIONS OF SUPPLY-AIR AND RETURN-AIR DUCTS CONVEYING HEATED OR COOLED AIR SHALL BE INSULATED TO A MINIMUM INSTALLED LEVEL OF R-6.

RESIDENTIAL AIR FILTRATION NOTES

- PROVIDE MERV 13 FILTER FOR OSA FAN AND RETURN AIR GRILLES.
- 2. OSA FAN SHALL BE WITH 2" MERV 13 FILTER RACK.
- 3. RETURN AIR GRILLE SHALL BE PRICE INDUSTRIES 530FF SERIES AND HAVE I" MERV 13 FILTER SIZED FOR 150 FPM MAX, OR 2" MERV 13 WHERE SPACE ALLOWS. SEE PLANS FOR PROJECT SPECIFIC REQUIREMENTS.
- 4. 2" MERV 13 FILTERS SHALL BE FILTRATION GROUP AEROSTAR MODEL
- 5. I' MERV 13 FILTERS SHALL BE 3M 1900. (IF CALLED OUT ON PLANS).
- 6. DUE TO T-24 SPECIFIC PRESSURE DROP REQUIREMENTS, NO FILTER SUBSTITUTION IS ALLOWED, UNLESS APPROVED SPECIFICALLY IN ADVANCE.



- PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION)
- 4.504.2.1, ADHESIVES, SEALANTS AND CAULKS.
- COMPLY WITH THE FOLLOWING: OUTSIDE THE BUILDING
 - PERCENT.
 - BATHROOM EXHAUST FANS)
- THEIR EQUIPMENT SELECTED USING THE FOLLOWING METHODS:
 - OR METHODS.

 - THE SYSTEMS FUNCTION ARE ACCEPTABLE.
- PROGRAM (702.1 INSTALLER TRAINING)



- ASHRAE STANDARD 62.2.
- SPECIFIED IN REFERENCE RESIDENTIAL APPENDIX RA3.7.
- (DWELLING UNIT AIR SEALING) REQUIREMENT.
- 5. CLOTHES DRYER EXHAUST MUST BE VENTED TO THE OUTDOORS
- ADJACENT CONDITIONED SPACES, GARAGES, OR UNCONDITIONED SPACES.
- TO PREVENT BACK DRAFTING.
- OR GASKETED.
- OF THE SYSTEM AIR FILTER AT THE DESIGNED AIRFLOW RATE.
- BE LOCATED AWAY FROM KNOWN SOURCES OF OUTDOOR CONTAMINANTS.
- WITH NEPA STANDARD 720.
- FOR AIRFLOW AND SOUND:
- BE RATED AT A MAXIMUM OF I.O SONE (MEASUREMENT OF SOUND).

- MINIMUM AIRFLOW SETTING EXCEEDING 400 CFM.
- BALANCED, AND (FOR SOME SYSTEMS) TESTED FOR LEAKAGE.

CALIFORNIA GREEN CODE NOTES

RESIDENTIAL MANDATORY MEASURES

I. AT THE TIME OF ROUGH INSTALLATION OR DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING AND COOLING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER METHODS ACCEPT-ABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST OR DEBRIS WHICH MAY COLLECT IN THE SYSTEM. (SECTION 4.504.1, COVERING OF DUCT OPENINGS AND

2. ADHESIVES, SEALANTS AND CAULKS SHALL BE PER THE REQUIREMENTS OF SECTION

3. MECHANICAL EXHAUST FANS WHICH EXHAUST DIRECTLY FROM BATHROOMS SHALL

I. FANS SHALL BE ENERGY STAR COMPLIANT AND BE DUCTED TO TERMINATE

2. UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDISTAT WHICH SHALL BE READILY ACCESSIBLE. HUMIDISTAT CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF 50 TO 80

NOTE: FOR THE PURPOSES OF THIS SECTION, A BATHROOM IS A ROOM WHICH CONTAINS A BATHTUB, SHOWER OR TUB/SHOWER COMBINATION (4.506.)

4. HEATING AND AIR CONDITIONING SYSTEMS SHALL BE SIZED, DESIGNED AND HAVE

I.THE HEAT LOSS AND HEAT GAIN IS ESTABLISHED ACCORDING TO ACCA MANUAL J, ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE

2. DUCT SYSTEMS ARE SIZED ACCORDING TO ACCA 29-D MANUAL D, ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS

3. SELECT HEATING AND COOLING EQUIPMENT ACCORDING TO ACCA 36-5 MANUALS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.

EXCEPTION: USE OF ALTERNATE DESIGN TEMPERATURES NECESSARY TO ENSURE

(4.507.2 HEATING AND AIR CONDITIONING SYSTEM DESIGN)

5. HVAC SYSTEM INSTALLERS SHALL BE TRAINED AND CERTIFIED IN THE PROPER INSTALLATION OF HVAC SYSTEMS INCLUDING DUCTS AND EQUIPMENT BY A NATIONALLY OR REGIONALLY RECOGNIZED TRAINING OR CERTIFICATION

VENTILATION REQUIREMENTS FOR MULTI FAMILY BUILDING

RESIDENTIAL SPACES SHALL COMPLY WITH CA T-24 VENTILATION REQUIREMENTS ADOPTED FROM

2. A WHOLE-DWELLING UNIT MECHANICAL VENTILATION SYSTEM MUST BE PROVIDED. TYPICAL SOLUTIONS ARE DESCRIBED IN SECTION 11.4.2.10 DWELLING UNIT VENTILATION STRATEGIES SECTION BELOW. THE AIRFLOW RATE PROVIDED BY THE SYSTEM MUSTMUST BE CONFIRMED THROUGH FIELD VERIFICATION AND DIAGNOSTIC TESTING IN ACCORDANCE WITH THE APPLICABLE PROCEDURES

3. DWELLING UNITS MUST EITHER USE BALANCED VENTILATION OR MEET A COMPARTMENTALIZATION

4. KITCHENS AND BATHROOMS MUST HAVE LOCAL EXHAUST SYSTEMS VENTED TO THE OUTDOORS.

6. VENTILATION AIR MUSTMUST COME FROM OUTDOORS AND MUST NOT BE TRANSFERRED FROM

7. COMBUSTION APPLIANCES MUST BE PROPERLY VENTED, AND EXHAUST SYSTEMS MUST BE DESIGNED

8. WALLS AND OPENINGS BETWEEN THE DWELLING UNIT AND ADJACENT SPACES, SUCH AS ADJACENT UNITS, A COMMON CORRIDOR, TRASH CHUTE, PARKING GARAGE, OR OTHER SPACES MUST BE SEALED

9. MECHANICAL SYSTEMS, INCLUDING VENTILATION SYSTEMS, THAT SUPPLY AIR TO HABITABLE SPACES MUSTMUST BE DESIGNED TO FILTER RECIRCULATED AIR AND OUTDOOR AIR THROUGH A MERY 13 FILTER OR BETTER AND MUSTMUST BE DESIGNED TO ACCOMMODATE THE RATED PRESSURE DROP

IO. DEDICATED OUTDOOR AIR INLETS THAT ARE PART OF THE VENTILATION SYSTEM DESIGN MUSTMUST

II. A CARBON MONOXIDE ALARM MUSTMUST BE INSTALLED IN EACH DWELLING UNIT IN ACCORDANCE

12. AIR-MOVING EQUIPMENT USED TO MEET THE WHOLE-DWELLING UNIT VENTILATION REQUIREMENT AND THE LOCAL EXHAUST REQUIREMENT, INCLUDING KITCHEN LOCAL MECHANICAL EXHAUST, MUSTMUST BE RATED BY HVI OR AHAM, WHICH PROVIDES RATINGS FOR KITCHEN LOCAL MECHANICAL EXHAUST,

· WHOLE-DWELLING UNIT VENTILATION AND CONTINUOUSLY OPERATING LOCAL EXHAUST FANS MUST

• DEMAND-CONTROLLED LOCAL EXHAUST FANS MUST BE RATED AT A MAXIMUM OF 3.0 SONE.

• KITCHEN EXHAUST FANS MUST BE RATED AT A MAXIMUM OF 3.0 SONE AT ONE OR MOR AIRFLOW SETTINGS GREATER THAN OR EQUAL TO 100 CFM. (AS DESCRIBED IN SECTION 11.4.2 O, THE STANDARD REQUIRES KITCHEN RANGE HOODS TO HAVE A HIGHER AIRFLOW THAN 100 CFM, BUT THE RANGE HOODS MUST BE TESTED FOR SOUND AT A MINIMUM OF 100 CFM.)

· REMOTELY LOCATED AIR-MOVING EQUIPMENT (MOUNTED OUTSIDE HABITABLE SPACES, BATHROOMS, TOILETS, AND HALLWAYS) IS EXEMPT FROM THE SOUND REQUIREMENTS PROVIDED THERE IS AT LEAST 4 FT. OF DUCTWORK BETWEEN THE FAN AND THE INTERIOR GRILLE. KITCHEN RANGE HOODS ARE ALSO EXEMPT FROM THE SOUND REQUIREMENTS PROVIDED THEY HAVE A

. FOR CENTRAL VENTILATION SYSTEMS SERVING MULTIPLE DWELLING UNITS, DUCTS MUST BE SEALED,

BIDDING NOTES

- BIDDING CONTRACTORS SHALL REVIEW ALL SETS OF CONSTRUCTION DOCUMENTS AS A TEAM PRIOR TO BID AND SHALL SUBMIT RFIS RELATED TO ANY UNKNOWN OR LACK OF SPECIFIC INFORMATION ABOUT SCOPE OF WORK SUCH AS NEED FOR ANY MAKE/MODEL NUMBER, WIRING/PIPING DIAGRAMS REQUIRED TO CONSTRUCT INTENDED COMPLETE AND FUNCTIONAL SYSTEMS.
- 2. AS PART OF COMPLETE AND FUNCTIONAL SYSTEMS, COORDINATED WORK BY OTHER TRADES WILL BE REQUIRED RELATED TO INFORMATION SHOWN ON MECHANICAL PLANS SUCH AS BUT NOT LIMITED TO, EQUIPMENT SCHEDULES REMARKS, SEQUENCE OF OPERATION NOTES, PROJECT MANUAL, DETAILS, WIRING DIAGRAMS AND NOTES, TO COORDINATE SCOPE SUCH AS BUT NOT LIMITED TO INTERLOCKING/CONTROLS WITH ELECTRICAL CONTRACTOR, TO COORDINATE DRAINS, GAS SUPPLY AND MAKEUP WATER NEEDS FOR MECHANICAL EQUIPMENT WITH PLUMBING CONTRACTOR.
- 3. COORDINATE ACCESS FOR CONCEALED INSTALLATIONS FOR LOCATION AND SIZE OF ACCESS DOORS NECESSARY FOR EACH MEP COMPONENT REQUIRING SUCH ACCESS INCLUDING BUT NOT LIMITED TOO FIRE OR FIRE/SMOKE DAMPERS, FAN COILS, ROOFTOP UNITS, FANS, MOTORIZED DAMPERS, VALVES, ELECTRICAL PANELS AND ALL SIMILAR EQUIPMENT
- 4. REFER TO ENTIRE SET OF CONSTRUCTION DOCUMENTS (CD) FOR WORK RELATED TO HVAC, INCLUDING BUT NOT LIMITED TO DRAWING SETS OF ARCHITECTURAL, STRUCTURAL, ELECTRICAL PLUMBING SCOPE OF WORK, PROJECT MANUALS OR SPECIFICATIONS AND ANY OTHER SET OF DOCUMENT AS PART OF CD. DURING BID PHASE NOTIFY OTHER TRADES FOR WORK CALLED ON HVAC SETS SUCH AS WIRING INTERLOCK, EQUIPMENT PLATFORMS/PAD OR SIMILAR.
- 5. BIDDING CONTRACTOR SHALL BE EXPERIENCED ON SIMILAR PROJECTS WITH SAME TECHNICAL SOPHISTICATION AND COMPLEXITY. IT IS G.C. RESPONSIBILITY TO SCREEN ALL CONTRACTORS FOR PAST EXPERIENCE TO ASSURE COMPLIANCE WITH THIS INTENT.
- 6. BIDDING CONTRACTOR SHALL ENSURE PROVIDED BID INCLUDES A COMPLETE, FUNCTIONAL, CODE COMPLIANT, COORDINATED AND SERVICEABLE INSTALLATION THAT ASSURES THE INSTALLED DUCTWORK AND PIPING SHALL INCLUDE ALL NECESSARY FITTINGS AND COMPONENTS, INCLUDING BUT NOT LIMITED TO REDUCERS TO DUCT/PIPE AND TO EQUIPMENT, TRANSITIONS, BEAM BOXES, VOLUME DAMPERS, AND ANY AND ALL SIMILAR COMPONENTS NEEDED. IF ADDITIONAL INFORMATION IS MISSING OR REQUIRED, SUBMIT REQUESTS FOR INFORMATION TO GENERAL CONTRACTOR PRIOR TO BID TO ELIMINATE ANY MISSING INFORMATION, CONFUSION, OR SIMILAR,

CAL GREEN & OTHER TESTING NOTES

FOR PROJECTS LESS THAN 10,000 SQFT, AT THE MINIMUM, THE FOLLOWING TESTS SHALL BE PERFORMED BY THE GENERAL CONTRACTOR UNTIL PASSING ALL TESTS, THE RESULTS SHOULD BE REPORTED TO INSPECTORS:

TESTING:

HVAC:

- ACCEPTANCE TESTS SHOWN ON TITLE 24 FORMS
- 2. TEST REQUIRED BY COMMISSIONING AGENT. 3. HVAC SYSTEMS AND CONTROLS SHALL COMPLY WITH ONE OF THE FOLLOWING STANDARDS:

TABB'S CONSTRUCTION SPECIFICATIONS INSTITUTE MASTERFORMAT (SECTIONS 23 05 93 AND 15990)

OR

NEBB'S STANDARDS FOR TESTING, ADJUSTMENT, AND BALANCING OF ENVIRONMENTAL SYSTEMS (7TH ADDITION)

OR

AABC 'S NATIONAL STANDARDS FOR TOTAL SYSTEMS BALANCE (6TH EDITION)

OR

ASHRAE STANDARD

PLUMBING:

PRESSURE TESTS FOR ALL PIPING PER CPC:

DOMESTIC WATER SYSTEM: PER SECTION 609.4 OF CPC. SANITARY WASTE & VENT SYSTEM: PER SECTION 712.0 OF CPC. GAS PIPING SYSTEM: PER SECTION 1214.3 ODF CPC.

- 2. START, FULL LOAD CONSUMPTION AND TEMPERATURE CONTROL TEST FOR THE WATER HEATERS, AND PUMPS.
- 3. SEISMIC RESTRAINT INSTALLATION.

APPROVAL:

- I. A FINAL REPORT FOR TESTING AND ADJUSTING OF ALL NEW SYSTEMS SHALL BE COMPLETED PRIOR TO FINAL APPROVAL BY THE FIELD. THIS REPORT SHALL BE SIGNED BY THE INDIVIDUAL RESPONSIBLE FOR PERFORMING THESE SERVICES.
- 2. AN OPERATION & SYSTEMS MANUAL, SHALL BE PROVIDED TO THE OWNER OR REPRESENTATIVE AND TO THE FIELD INSPECTOR AT THE TIME OF FINAL INSPECTION.

COORDINATION SCOPE

- BIDDING CONTRACTORS SHALL REVIEW ALL SETS OF CONSTRUCTION DOCUMENTS AS A TEAM PRIOR TO BID AND SHALL SUBMIT REIS RELATED TO ANY UNKNOWN OR LACK OF SPECIFIC INFORMATION ABOUT SCOPE OF WORK REQUIRED TO CONSTRUCT INTENDED COMPLETE AND FUNCTIONAL SYSTEMS SUCH AS NEED FOR ANY MAKE/MODEL NUMBER, WIRING/PIPING DIAGRAMS,
- 2. AS PART OF COMPLETE AND FUNCTIONAL SYSTEMS, COORDINATED WORK BY OTHER TRADES WILL BE REQUIRED RELATED TO INFORMATION SHOWN ON MECHANICAL PLANS SUCH AS, BUT NOT LIMITED TO, EQUIPMENT SCHEDULES REMARKS, SEQUENCE OF OPERATION NOTES, PROJECT MANUAL, DETAILS, WIRING DIAGRAMS AND NOTES TO COORDINATE INTERLOCKING/CONTROLS OF EQUIPMENT WITH ELECTRICAL CONTRACTOR OR TO COORDINATE DRAINS, GAS SUPPLY AND MAKEUP WATER NEEDS FOR MECHANICAL EQUIPMENT WITH PLUMBING CONTRACTOR.
- COORDINATE ACCESS FOR CONCEALED INSTALLATIONS FOR LOCATION AND SIZE OF ACCESS DOORS NECESSARY FOR EACH MEP COMPONENT REQUIRING SUCH ACCESS INCLUDING BUT NOT LIMITED TOO FIRE OR FIRE/SMOKE DAMPERS, FAN COILS, ROOFTOP UNITS, FANS, MOTORIZED DAMPERS, VALVES, ELECTRICAL PANELS AND ALL SIMILAR EQUIPMENT

BALANCING NOTES

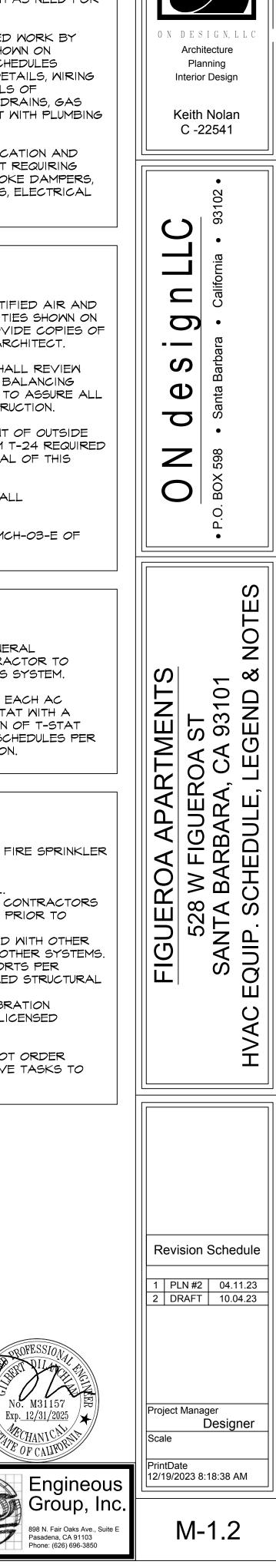
- CONTRACTOR SHALL PROVIDE SERVICES OF NEBB OR AABC CERTIFIED AIR AND HYDRONIC BALANCING SERVICES TO ESTABLISH ALL FLOW QUANTITIES SHOWN ON CONSTRUCTION DOCUMENTS. BALANCING CONTRACTOR SHALL PROVIDE COPIES OF CERTIFIED BALANCE REPORTS FOR REVIEW AND APPROVAL BY ARCHITECT.
- 2. PRIOR TO COMMENCEMENT OF WORK, BALANCING CONTRACTOR SHALL REVIEW HVAC SHOP DRAWINGS AND COORDINATE ALL VOLUME DAMPERS, BALANCING VALVES AND SIMILAR DEVICES REQUIRED FOR BALANCING WORK TO ASSURE ALL NEEDED COMPONENTS AND ACCESS ARE INCLUDED DURING CONSTRUCTION.
- 3. A BALANCING TEST WILL BE REQUIRED TO VERITY PROPER AMOUNT OF OUTSIDE AIR TO COMPLY WITH THE TITLE 24 CALCULATIONS & TO PERFORM T-24 REQUIRED "ACCEPTANCE TESTS" SPECIFIED ON THE T-24 FORMS BEFORE FINAL OF THIS PROJECT.
- 4. CONTRACTOR SHALL PERFORM & PROVIDE DOCUMENTATION FOR ALL ACCEPTANCE TESTING REQUIRED BY TITLE-24.
- 5. FOR THE O.S.A. CFM, SEE MECHANICAL VENTILATION FORM NRCC-MCH-03-E OF THE TITLE 24 FORMS

CONTROLS NOTES

- CONTROLS SCOPE OF WORK IS DESIGN-BUILD AND HVAC OR GENERAL CONTRACTOR SHALL ENGAGE A QUALIFIED CONTROLS SUBCONTRACTOR TO PROVIDE A COMPLETE AND FUNCTIONAL DESIGN-BUILD CONTROLS SYSTEM.
- 2. PROVIDE ONE T-24 APPROVED TEMPERATURE CONTROLLER FOR EACH AC SYSTEM UN;LESS PLANS CALL TO REUSE EXISTING. FOR EACH T-STAT WITH A SENSOR IF REQUESTED BY OWNER, COORDINATE EXACT LOCATION OF T-STAT WITH OWNER. CONTRACTOR SHALL PROGRAM EACH AC SYSTEM SCHEDULES PER BUILDING OWNER INPUT AND TEST TO ASSURE CORRECT OPERATION

SHOP DRAWINGS NOTES

- PRIOR TO START OF ALL WORK, HVAC, PLUMBING, ELECTRICAL & FIRE SPRINKLER CONTRACTORS SHALL:
- PREPARE SHOP DRAWINGS & SUBMIT TO GC FOR APPROVAL. SHOP DRAWINGS SHOULD BE COORDINATED BETWEEN THESE CONTRACTORS IN FORM OF OVERLAY MEP LAYOUT TO IDENTIFY CONFLICTS PRIOR TO START OF PROJECT.
- LOCATION OF ALL HVAC EQUIPMENT SHALL BE COORDINATED WITH OTHER \mathcal{C} TRADES BEFORE INSTALLATION TO AVOID CONFLICTS WITH OTHER SYSTEMS. HVAC SHOP DRAWINGS SHALL INCLUDE HANGERS AND SUPPORTS PER
- SMACNA GUIDELINES OR BE PREPARED BY STATE REGISTERED STRUCTURAL OR CIVIL ENG'R. PROVIDE SHOP DRAWINGS FOR SEISMIC RESTRAINT AND VIBRATION E.
- ISOLATION BASES AND DEVICES ENGINEERED BY A STATE LICENSED STRUCTURAL OR CIVIL ENGINEER FOR ALL EQUIPMENT.
- 2. PROVIDE SHOP DRAWINGS TO ARCHITECT FOR APPROVAL. DO NOT ORDER COMPONENTS OR START ANY WORK PRIOR TO COMPLETING ABOVE TASKS TO IDENTIFY AND RESOLVE CONFLICTS.



					OUT		DR SF
SYMBOL	MAKE	MODEL #	UNIT SIZE (TONS)	COOL. CAP. (MBH) TOTAL SENS.	AMB. °F	SEER2 EER2	HEATI CAPACITY (@ 47°F
	DAIKIN	RXO9BXVJU	0.75	8.9 6.4	95	20 2.5	10.0
	DAIKIN	RXI2BXVJU	1.0	10.9 7.8	95	20 2.5	13.5
	DAIKIN	RXI8BXVJU	1.5	18.0	95	20 2.5	21.6
I I VIBRATION ISOLATIC	I I VIBRATION ISOLATION AND SEISMIC RESTRAINT.						ORY RECOM NOT LIMITED
							D COMPRES

SYMBOL	MAKE	MODEL #	SUPPLY AIR CFM	E.S.P.	RPM	BHP	OUTSIDE AIR CFM
	DAIKIN	FTXO9BXVJU	300	-	-	22 WATTS	-
	DAIKIN	FTXI2BXVJU	400	-	-	22 WATTS	-
FC FC FC FC C E F G	DAIKIN	FTXI8BXVJU	600	-	-	39 WATTS	-

PROVIDE CONDENSATE PUMP

2 MOUNT PER MANUFACTURER'S INSTALLATION RECOMMENDATION

							ELECTRICAL		BHP SONE	APPROXIMATE		
SYMBOL	MAKE	MODEL #	CFM	E.S.P.	RPM	POWER	MOTOR H.P.	BHP		OPERATING WEIGHT(LBS.)	SERVICE	ACCESSORIES
	GREENHECK	5Q-98-VG	200	0.25"	1725	1157	1/4	0.03	6.5	52	-	4
	GREENHECK	SP-AP0511W	50 80	0.3"	828	1157	IO WATTS	_	1.0	10	-	
	GREENHECK	SP-AP0511W	80	0.3"	817	1157	13 WATTS	-	1.0	10	-	
EF R3	GREENHECK	SP-AP0511W	50	0.3"	828	1157	IO WATTS	-	1.0	10	-	2
	AIRKING	FIBOD	50	0.2"	_	1157	IO WATTS	-		18	-	3
SF R2	AIRKING	FIBOD	80	0.2"	_	1157	16 WATTS	-		18	-	3
R2	AIRKING	FIBOD	80	0.2"	-	1157	I6 WATTS	-		18	-	(3)

SHALL ACTIVATE HIGH SPEED OPERATION.

2 OPERATE WITH WALL SWITCH.

(3) OPERATE CONTINUOUSLY WITH 2" MERV 13 FILTER.

(4) BACKDRAFT DAMPER.

PLIT	SYSTEM	HEAT	PUMP	OR	COOLING	ONLY U	NITS

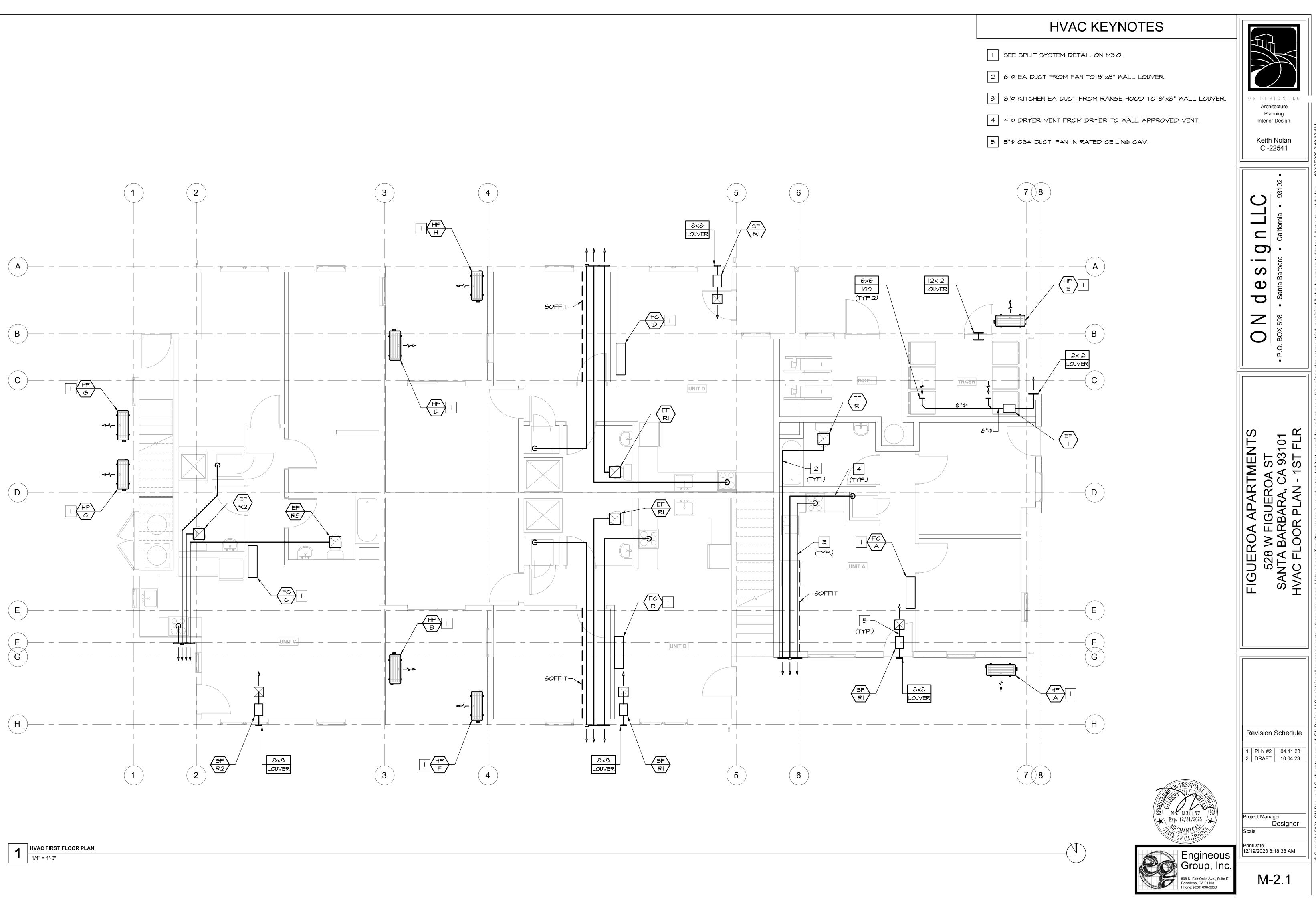
TING	H.S.P.F.2	ELECTRICAL					A.C.		
ITY (MBH) F AMB.)	C.O.P.	POWER	TOTAL F.L.A.	MCA	MOP	OPERATING WEIGHT(LBS.)	UNIT HEIGHT	SERVICE	
0.0	10.0 4.1	208-230V-IØ	-	12.35	15	55	22"	_	123
3.5	10.0 3.8	208-230V-10	-	12.4	15	62	22"	_	123
1.6	9.0 3.6	208-230∨- ¢	-	16.55	20	97	28"	-	123

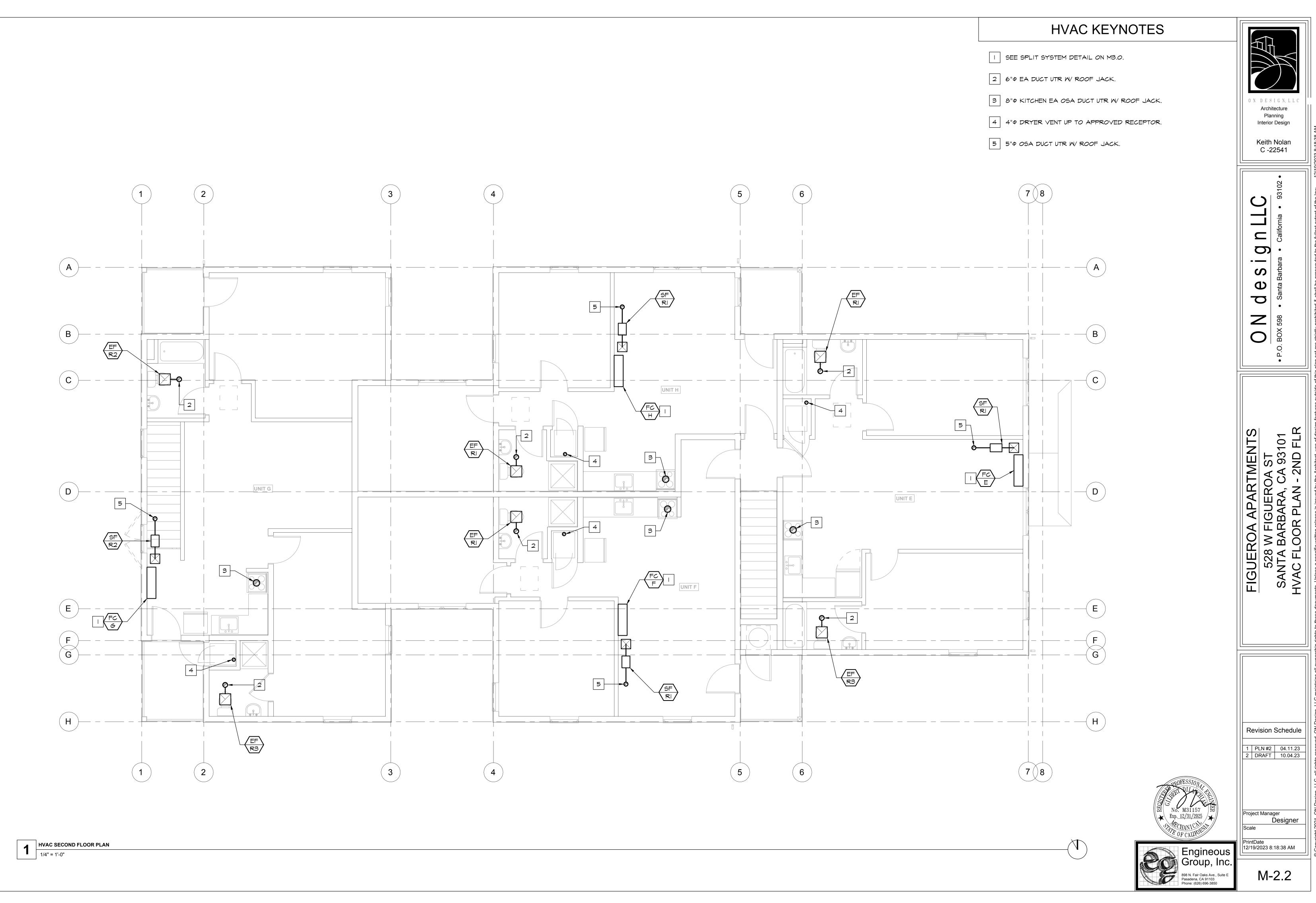
MMENDED ACCESSORIES D TO SIGHT GLASS, FILTER ESSOR CRANKCASE HEATER

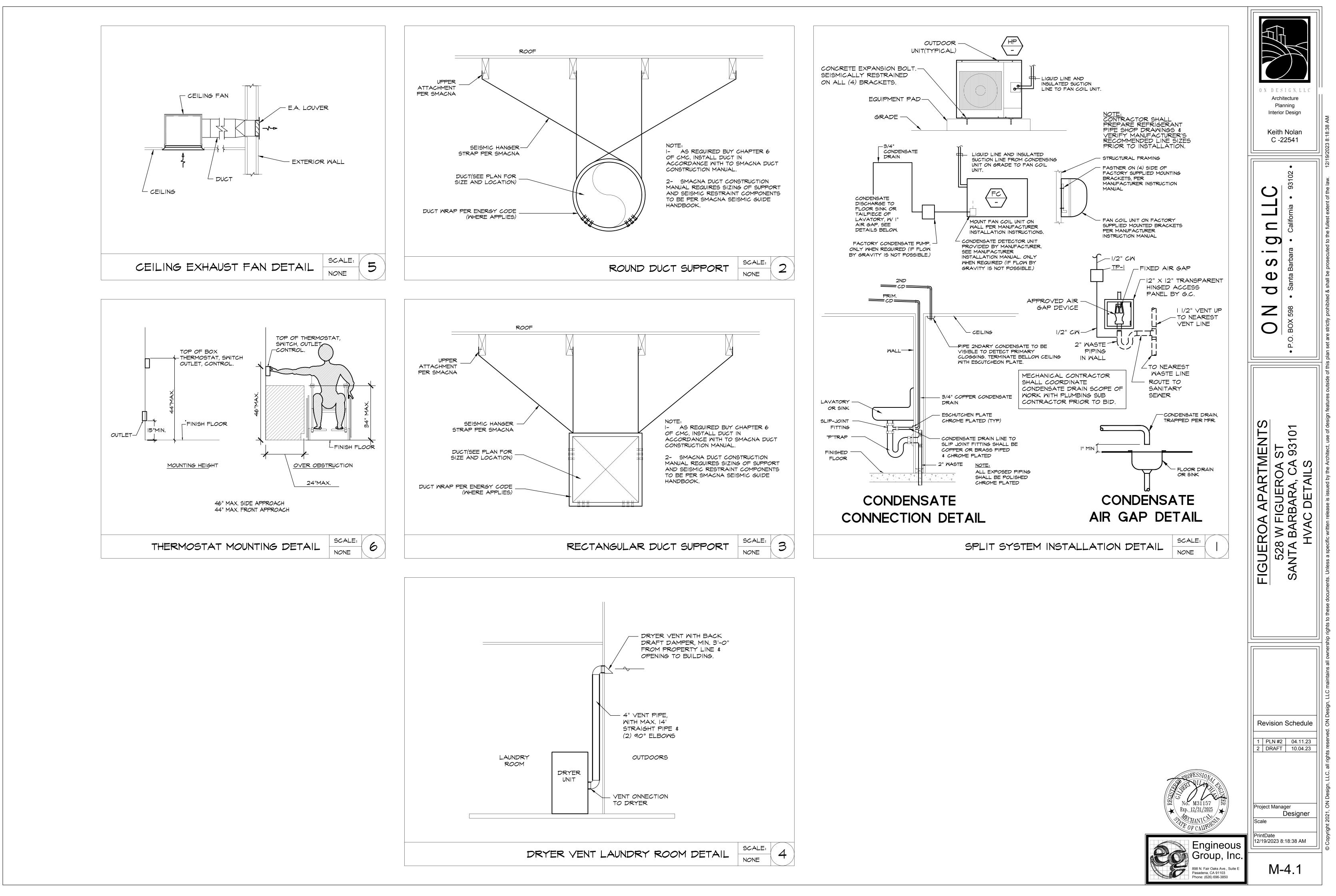
HORIZONTAL FAN-COIL UNITS

		ELECTRI	CAL			APPROXIMATE		
२	MOTOR HP	POWER	TOTAL F.L.A.	MCA	MAX. FUSE SIZE	OPERATING WEIGHT(LBS.)	SERVICE	
	-	POWERED BY OUTDOOR UNIT	-	-	-	21	_	12
	-	POWERED BY OUTDOOR UNIT	-	-	_	22	-	12
	-	POWERED BY OUTDOOR UNIT	-	-	-	31	-	12

ACCESSORIES		• California • 93102	ed by the Architect, use of design features outside of this plan set are strictly prohibited & shall be prosecuted to the fullest extent of the law. 12/19/2023 8:18:38 AM
		FIGUEROA APARTMENTS 528 W FIGUEROA ST SANTA BARBARA, CA 93101 HVAC EQUIP. SCHEDULE, LEGEND & NOTES	ON Design, LLC maintains all ownership rights to these documents. Unless a specific written release is issued by the Architect, use of design features outside of the orden of the advection of
	No. M31157 By Regineration No. M31157 No. M31157 By Regineration No. M31157 By Regineration No. M31157 By Regineration State No. M31157 By Regineration No. M3112025 <	11 11	© Copyright 2021, ON Design, LLC, all rights reserved. ON Design, LLC maintains all owne







				PLUMBING FIXTURE SCHEDULE
ITEM NO.	DESCRIPTION	MANUFACTURER	MODEL	COMMENTS
	<varies></varies>	<varies></varies>	<varies></varies>	<varies></varies>
BT-1	BATHTUB/SHOWER - 1.75 GPM	KOHLER	ARCHER K-1946-RA	ROUGH-IN: 2"W, 2"PTRAP, 2"V, 1/2"HW & CW, MOEN MODEL NO'S. ARLYS SHOWER BALANCING VALVE ,SHOWER HEAD, 1.75 GPM, TEMPERATURE BALANCING MIXING MAGNETIX", 60"INCH HOSE AND SHOWER HEAD & BRONZE NICKEL FINISH
CWM-1	1" WATER METER (CALIFORNIA CERTIFIED)	MASTER METER	NMT	CONN. 1 1/4" OR 2"CW TO WATER METER W/SOV & UNION & PROVIDE MARS COMP METERS IN EACH UNIT
HWM-1	5/8" WATER METER (CALIFORNIA CERTIFIED)	MASTER METER	NMT	CONN. 1" OR 1 1/4"HW TO WATER METER W/SOV & UNION & PROVIDE MARS COMP METERS IN EACH UNIT - ROUTE LOW VOLTAGE WIRING TO EACH HOT WATER MET
KS-1	KITCHEN SINK	BLANCO, PRECIS	SILGRANIT	ROUGH-IN: 2"W, 2"V, & 3/4"HW & CW, 1 1/2"P-TRAP, TYPE 302 18-8 UNDERMOUNT S BASKET STRAINER WITH 1-1/2" TAILPIECE, LA PATTERN CAST BRASS P-TRAP "SPE CONCETTO FAUCET, 1.5 GPM, BRUSHED NICKEL FINISH, CONCEALED SINK FITTING SS-5000, "SUPER HUSH" GARBAGE DISPOSER, 115V, 1 PHASE, 1/2 HP, EXTEND ¾"H RATED BOX #391123
L-1	LAVATORY 1.2 GPM	KOHLER	K-20000	ROUGH-INS: 2"W, 2"V, 1 1/4"P-TRAP, 3/4"HW & CW, VITREOUS CHINA WALL HUNG, 5 404-VE2805ABCP, 8"CENTER, TWO LEVER FAUCET, 5"SPOUT. CHICAGO 1013 ANGI TUBULAR P-TRAP, AND SUPPLY COVERS & ZURN INSULATED GUARD FOR SUPPLI
SH-1	SHOWER 1.75 GPM	KOHLER	K-706015-L-MX	ROUGH-IN: 2"W, 2"PTRAP, 2"V, 1/2"HW & CW, KOHLER, TEMPERATURE BALANCING GPM, TEMPERATURE BALANCING MIXING VALVE, 1.75 GPM FIXED SHOWER HEAD CONNECTION
WB-1	CLOTHESWASHER BOX	OATEY PRODUCTS	696-2313	ROUGH-IN CONN: 2"W, 2"STANDPIPE, 2"V, 1/2"HW & CW, CLOTHESWASHER METAL HAMMER ARRESTORS, WATTS INTELLIFLOW MODEL NO A2C-WB-M-1 & MUSTEE D PROVIDE 2"PTRAP & 2"V & "PPP" PR-555 TRAP PRIMER W/SOV & ROUTE TO NEARE
WC-1	WATER CLOSET 1.28 GPF	KOHLER	K-3810	ROUGH-IN CONN: 4"SS, 2"V & 3/4"CW, 1.28 GPF, SIPHON JET, FLOOR MOUNTED, EL 95CC-SS SEAT, McGUIRE NO. H2165 STOP WITH RIGID SUPPLY AND BOLT CAPS.

	GAS WATER HEATER & PUMPS											
ITEM NO.	ITEM NO. DESCRIPTION MANUFACTUERER MODEL COMMENTS											
		1										
CP-1	CIRCULATING PUMP	B & G	SERIES PR	BRONZE PUMP, 120V, 1 PH, 1/6 HP								
WH-1	DOMESTIC WATER HEATER	A. O. SMITH	BTH-199	OPERATING WEIGHT: 1000 LBS. 3"PVC INTAKE & EXHAUST THRU ROOF								
WH-2	DOMESTIC WATER HEATER	A. O. SMITH	BTH-199	OPERATING WEIGHT: 1000 LBS. 3"PVC INTAKE & EXHAUST THRU ROOF								

WATER PRESSURE MAX:

RESIDUAL PRESSURE

WATER PRESSURE @ PRV =

LOSS THRU 2" WATER METER

4" SI T(DSS DUE TO E REDUCED PR JB-WATER ME DTAL FRICTIO RESSURE AVA	ESSURE BACH TER N LOSS
FI	RICTION LOSS	PER 100 FEE
	PEX	SIZE SC
	PLAST	VATER - PE> IC INSERTS ER CRIMP CO GS
		8 PSI/ 100 STEM SIZED MAXIMUM VE
	SIZE	FLUSH T
	1/2" 3/4"	2 7
	1"	10
	1 1/4"	32
	1 1/2"	58
	2"	1
	2 1/2"	40
	3"	6
	4"	1:

OMMENTS

SHOWER AND BATHTUB NOZZLE, AND PROVIDE MOEN TEMPERATURE NG MIXING VALVE, 1.75 GPM FIXED SHOWER HEAD & MOEN "ATTRACT WITH

- ARS COMPANY RCM-100 DUAL METER DISPLAY FOR EACH SET OF WATER
- ARS COMPANY RCM-100 DUAL METER DISPLAY FOR EACH SET OF WATER ATER METER IN UNIT TO ONE DISPLAY UNIT RMOUNT SINGLE COMPARTMENT SINK, 5" DEEP, SINGLE HOLE PUNCH, LK-99 TRAP "SPEEDWAY"SUPPLIES WITH LOOSE KEY ANGLESTOPS. HANSGROHER INK FITTING WITH 8" SPOUT, AERATOR AND SINGLE LEVER, WASTE KING NO.
- XTEND ¾"HW TO DISHWASHER & ½"CW TO REFRIGERATOR BOX OTAY FIRE LL HUNG, SIZE 20" X 18", CONCEALED ARMS, WHITE. CHICAGO FAUCET 1013 ANGLESTOPS WITH STAINLESS STEEL BRAIDED SUPPLIES, 17 GAUGE
- OR SUPPLIES. ALANCING VALVE #5-T14501-4-BN, K-933-BN, 5-939-G-BN SHOWER HEAD, 1.75 /ER HEAD AND SHOWER HEAD & WADE 1102N H-G5 WITHOUT TRAP PRIMER
- HER METAL CLOTHESWASHER BOX. 2"METAL OUTLET. EXPOSED WATER MUSTEE DRIP PAN MODEL 99 DURAPAN WITH IAPMO LISTED FLOOR DRAIN, & TO NEAREST WATER LINE IN WALL UNTED, ELONGATED BOWL, WATER SAVER. COMPLETE WITH OLSONITE NO.

PRESSURE CALCULATIONS

75 PSI MIN.: 70 PSI		70.00 PSI				
R		5.00 PSI				
		20.00 PSI				
FT. X 0.433		11.00 PSI				
KFLOW PREVENTOR		12.00 PSI				
		2.00 PSI				
		50.00 PSI				
FRICTION LOSS:		20.0 PSI				
T. =20.0 PSI X 100 FT. / 250 F	T.= 8 PSIG PER 10	00 FT.				
HEDULE	PEX SI	ZE SCHEDULE				
X PIPING	HOT WAT	ER - PEX PIPING				
WITH	PLASTIC INSERTS WITH					
OLD EXPANSION	FITTINGS	CRIMP COLD EXPANSION				
FT.	8	3 PSI/ 100 FT.				
ON 5 FPS		EM SIZED ON 5 FPS				
ELOCITY		XIMUM VELOCITY				
ANK UNITS	SIZE	FLUSH TANK FIXTURE UNITS				
	1/2"	2				
	3/4"	7				
6	1"	16				
2	1 1/4"	32				
8	1 1/2"	58				
55	2"	155				
06	2 1/2"	406				
92	3"	692				
583	4"	1583				
	L					

GENERAL NOTES

- COMPLY WITH ALL LOCAL, COUNTY, STATE AND FEDERAL CODES, ORDINANCES, RULES AND REGULATIONS (2022 CPC)
- 2. COMPLY WITH ALL REQUIREMENTS OF THE SERVING AGENCIES. PAY ALL COSTS REQUIRED FOR METER INSTALLATIONS, SEWER CONNECTIONS OR FEES IN RELATIONSHIP TO THIS CONSTRUCTION.
- . COMPLY WITH ALL REFERENCED COMMERCIAL STANDARDS, SPECIFICATIONS, CODES, RULES, ETC.
- . INSTALL DIELECTRIC FITTING BETWEEN FERROUS AND NON-FERROUS MATERIALS.
- 5. PIPE RELIEF DRAIN FOR WATER HEATER TO BE DRAINED TO AN APPROVED RECEPTACLE, SERVICE SINK OR AS SHOWN ON DRAWINGS.
- CONTRACTOR TO VERIFY LOCATION, DEPTH AND SIZE OF POINT OF CONNECTIONS FOR WATER AND SEWER CONNECTIONS TO CIVIL WORK.
- CONTRACTOR SHALL INSTALL SHUT OFF VALVES ON EACH WATER SUPPLY AT EACH PLUMBING FIXTURE.
- GENERAL, MECHANICAL, PLUMBING, AND ELECTRICAL CONTRACTORS SHALL COORDINATE THEIR WORK PRIOR TO INSTALLATION TO PROVIDE FOR PROPER CLEARANCES BETWEEN EQUIPMENT, DUCT WORK, PIPING, JOISTS, CEILINGS, ETC.
- SEE MECHANICAL PLANS FOR EXACT LOCATION OF MECHANICAL EQUIPMENT, COORDINATE ROUGH IN LOCATIONS OF CONDENSATE DRAINS WITH MECHANICAL CONTRACTOR.
- 10. ALL HORIZONTAL WASTE PIPING, AND CONDENSATE DRAINS SHALL HAVE A MINIMUM SLOPE OF 2% (1/4" P.L.F.) UNLESS NOTED OTHERWISE ON PLANS.
- 11. PLUMBING CONTRACTOR TO PROVIDE AND COORDINATE ALL FINAL PLUMBING CONNECTIONS AND HOOK-UPS TO ALL OWNER FURNISHED APPLIANCES.
- 12. ALL BURIED PIPING SHALL BE AT LEAST 2" BELOW BOTTOM OF CONCRETE SLAB.
- 13. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS & MOUNTING HEIGHTS OF ALL PLUMBING FIXTURES.
- 14. ALL CLEANOUTS SHALL BE ACCESSIBLE.
- 15. VALVES SHALL BE LINE SIZE UNLESS OTHERWISE NOTED.
- 16. PROVIDE ACCESS DOORS TO ALL CONCEALED VALVES, TRAP PRIMERS, ETC.
- 17. ALL PIPING IN FINISHED AREAS SHALL BE RUN CONCEALED; EXPOSED PIPING, WHERE NECESSARY, SHALL BE RUN AS HIGH AS POSSIBLE AND TIGHT TO THE WALLS.
- 18. ALL PIPING PENETRATING WALL, CEILING AND FLOOR SHALL BE ISOLATED FROM BUILDING STRUCTURES WITH RESILIENT SEALS.
- 19. THE WATER CLOSET FLUSHOMETER SHALL FLUSH WITH NO MORE THAN 1.28 GALLON FLUSH AND URINALS NO MORE THAN .125 GALLON FLUSH.
- 20.PROVIDE CLEANOUTS AT ALL THE UPPER TERMINAL OF EACH HORIZONTAL LEG EXCEEDING 5' LONG PER SECTION 707.4, CPC 2022
- 21. FLOOR SINKS SHALL BE INSTALLED FLUSH WITH THE FLOOR SURFACE AND BE LOCATED SO AS TO BE READILY ACCESSIBLE FOR CLEANING AND REPAIR.
- 22. ALL WATER CLOSETS FOR HANDICAPPED ACCESSIBLE USE SHALL HAVE THE FLUSHOMETER VALVE HANDLE MOUNTED ON THE WIDE SIDE OF THE WATER CLOSET.
- 23. THE PAINTING CONTRACTOR SHALL PRIME AND PAINT ALL EXPOSED PIPING AND STAND OFFS ON ROOF.
- 24. FOR EXACT PIPE SIZES, SEE RISER DIAGRAMS ON SHEET P5.10
- 25. THE PLUMBING CONTRACTOR SHALL DETERMINE IF A BACKWATER VALVE IS REQUIRED PER CPC 2020 SECTION 710.1 AND SHALL BE PART OF THE BID UNTIL IT IS DETERMINED. IF A BACKWATER VALVE IS REQUIRED IT SHALL BE INSTALLED WITH A SEWER MANHOLE OR A BACKWATER DEVICE THAT HAS EASY ACCESS.
- 26. ALL FITTINGS AND FIXTURES IN CONTACT WITH POTABLE WATER SHALL BE "LOW LEAD" (CALIFORNIA STATE HEALTH AND SAFETY SECTION 116875
- 27. IN PROJECTS WHERE PEX PIPING IS USED, PLUMBING CONTRACTOR SHALL INSTALL PIPING ACCORDING TO STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION. PROPER MEASURES SHALL BE TAKEN TO PROTECT PEX PIPING FROM POSSIBLE DAMAGE FROM SHARP ITEMS SUCH AS NAILS, SCREWS OR SIMILAR DURING CONSTRUCTION AND IN THE FUTURE WHEN THE BUILDING IS OCCUPIED. PLUMBING CONTRACTOR SHALL ALSO EDUCATE OWNER OR END USER OF PEX PIPING SAFE USE. THERE SHALL BE NO PEX PIPING BELOW FLOOR OR GRADE.
- 28. SHOWERS AND SHOWER-TUBS SHALL BE PROVIDED WITH INDIVIDUAL CONTROL VALVES OF THE PRESSURE BALANCE, THERMOSTATIC OR COMBINATION PRESSURE BALANCE/THERMOSTATIC MIXING VALVE TYPE THAT PROVIDE SCALD AND THERMAL SHOCK PROTECTION AS PER CPC 408.3
- 29. ALL PLUMBING FIXTURES SHALL MEET THE FLOW REQUIREMENTS SPECIFIED IN CAL-GREEN CODE
- 30. ALL FIXTURES, EQUIPMENT, PIPING, AND MATERIALS SHALL BE APPROVED FOR THE INTENDED USE.

		PLUMBING LEGEND
SYMBOLS	ABBREV.	DESCRIPTION
	S OR W	SEWER OR WASTE ABOVE FLOOR OR GRADE
	S OR W	SEWER OR WASTE BELOW GRADE
	V	VENT
	CW	COLD WATER
	HW	HOT WATER
	HWR	HOT WATER RETURN
CD	CD	CONDENSATE DRAIN
G	G	GAS
GW	SGW	SANITARY GREASE WASTE
	SOV/SOC	SHUT OFF VALVE (WATER) / SHUT-OFF COCK (GAS)
	CV	CHECK VALVE
	BV	BALANCING VALVE
	U	UNION
	GC	GAS COCK
	UP	PIPING UP
	DN	PIPING DOWN OR DROP
0	FCO	FLOOR CLEANOUT
ι	WCO	WALL CLEANOUT
	CO	CLEANOUT
	COTG	CLEANOUT TO GRADE
Ŷ	DROP	VERTICAL DROP
)	TP	TRAP PRIMER
-	WHA	WATER HAMMER ARRESTER
	A.P.	ACCESS PANEL
	BP	BACKFLOW PREVENTOR
X	WHA	WATER HAMMER ARRESTER
Т	BEH.	BEHIND
	CONN.	CONNECTION
	FIN. FLR.	FINISH FLOOR
	F.U.	FIXTURE UNIT
	IN. EL.	INVERT ELEVATION
	(E)	EXISTING
•	POC	POINT OF CONNECTION
U	ABV.	ABOVE.
	BEL.	BELOW
	FR.	FROM.
	VTR	
	W/	WITH NARD ROX
	Y.B.	YARD BOX
	MECH.	MECHANICAL
	A.H.J.	AUTHORITY HAVING JURISDICTION

	PIPE MATERIAL SCHEDULE										
SERVICE	MATERIAL	COPPER TYPE "M"	COPPER TYPE "L"	COPPER TYPE "K"	PVC SCHED. 40 1	BLACK STEEL	GALVANIZED STEEL	CAST IRON SOIL PIPE & FITTINGS	VITRIFIED CLAY	PEX PIPING, CSA- B137.10,ASTM F876	
WATER	INSIDE		٠							٠	
	OUTSIDE		۲								
SANITARY	INSIDE							•			ABV. FLR.
DRAINAGE	OUTSIDE				•						BEL. FLR.
SAN. VENT	INSIDE							•			
CONDENSATE	INSIDE	٠									
DRAINAGE	OUTSIDE	•									
GAS	INSIDE					٠					
	OUTSIDE						•				
STORM	INSIDE							•			ABV. FLR.
DRAINAGE	OUTSIDE				•						BEL. FLR.

NOTE:

1. ALL WASTE PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE OR RECEIVE PRIOR APPROVAL OF THE ENGINEER.

2. ALL UNDERGROUND WASTE, VENT & STORM DRAIN OR METAL PIPING SHALL BE WRAPPED WITH 8 MIL POLYETHYLENE ENCASEMENT WITH A MIN OF AT LEAST 6 INCHES OF SAND SURROUNDING THE PIPE ALONG THE ENTIRE LENGTH OF PIPE AND FITTINGS TO RESIST HOT CORROSIVE CONDITIONS IN ACCORDANCE WITH ANSI/AWWA C105/A21.5-82 AND LOCAL AUTHORITIES.

(1) ABS & PVC SHALL BE IN ACCORDANCE WITH APPLICABLE STANDARDS REFERENCED IN TABLE 1401.1

FIXTURE NOTES:

INSTALLATION OF ALL PLUMBING FIXTURES SHALL BE PER MANUFACTURER'S STRICT INSTRUCTIONS. IN CASE OF DISCREPANCIES BETWEEN MANUFACTURER'S INSTALLATION INSTRUCTIONS AND FIELD CONDITIONS, CONTACT THE ARCHITECT/ ENGINEER FOR DIRECTIONS.

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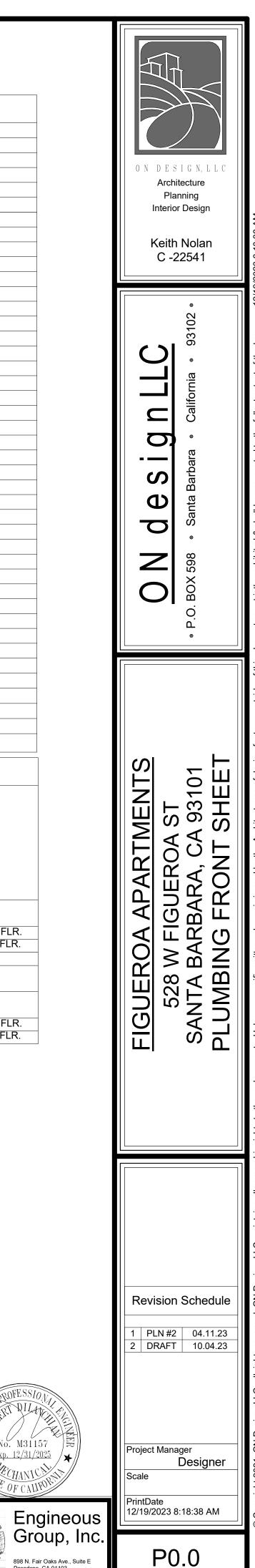
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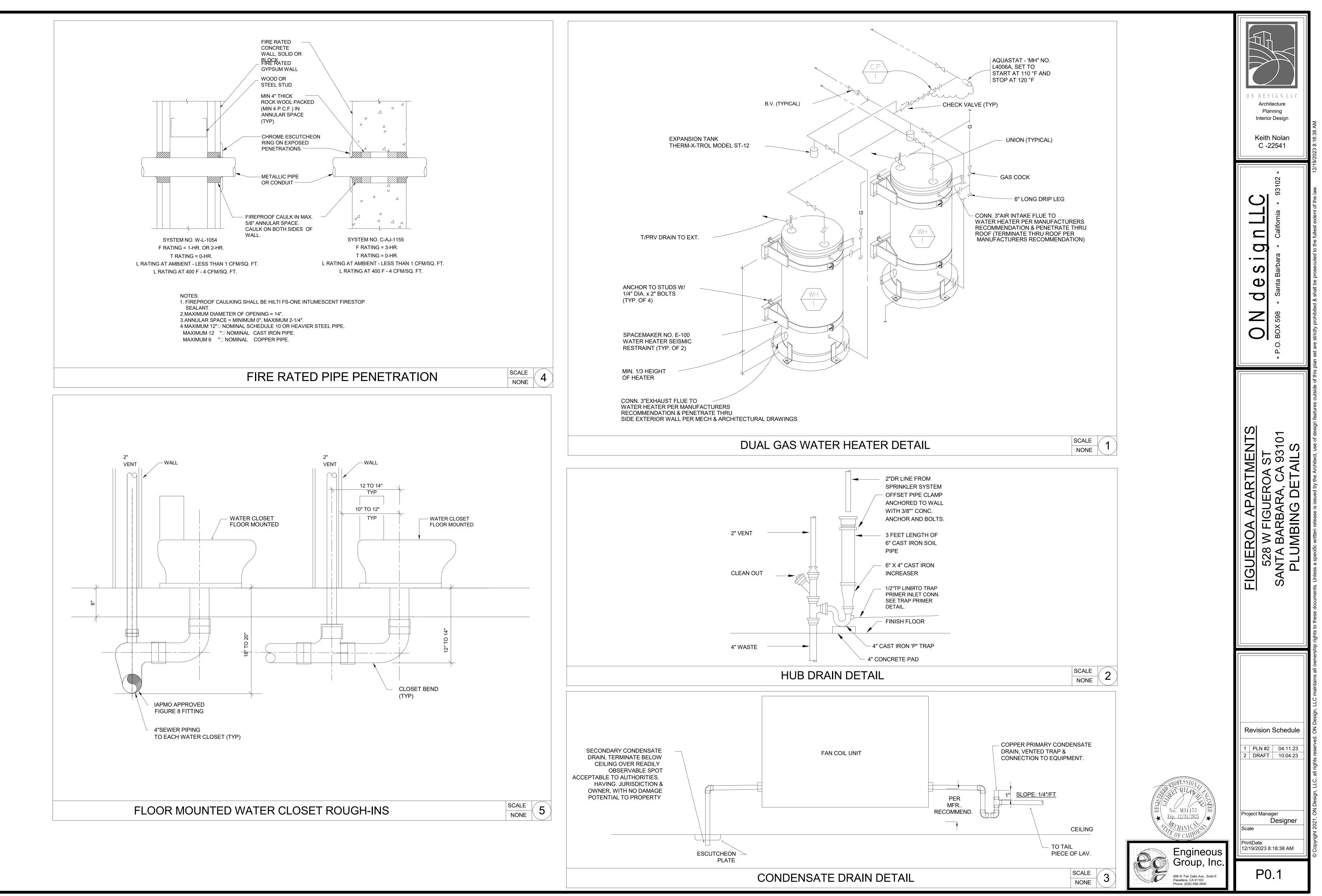
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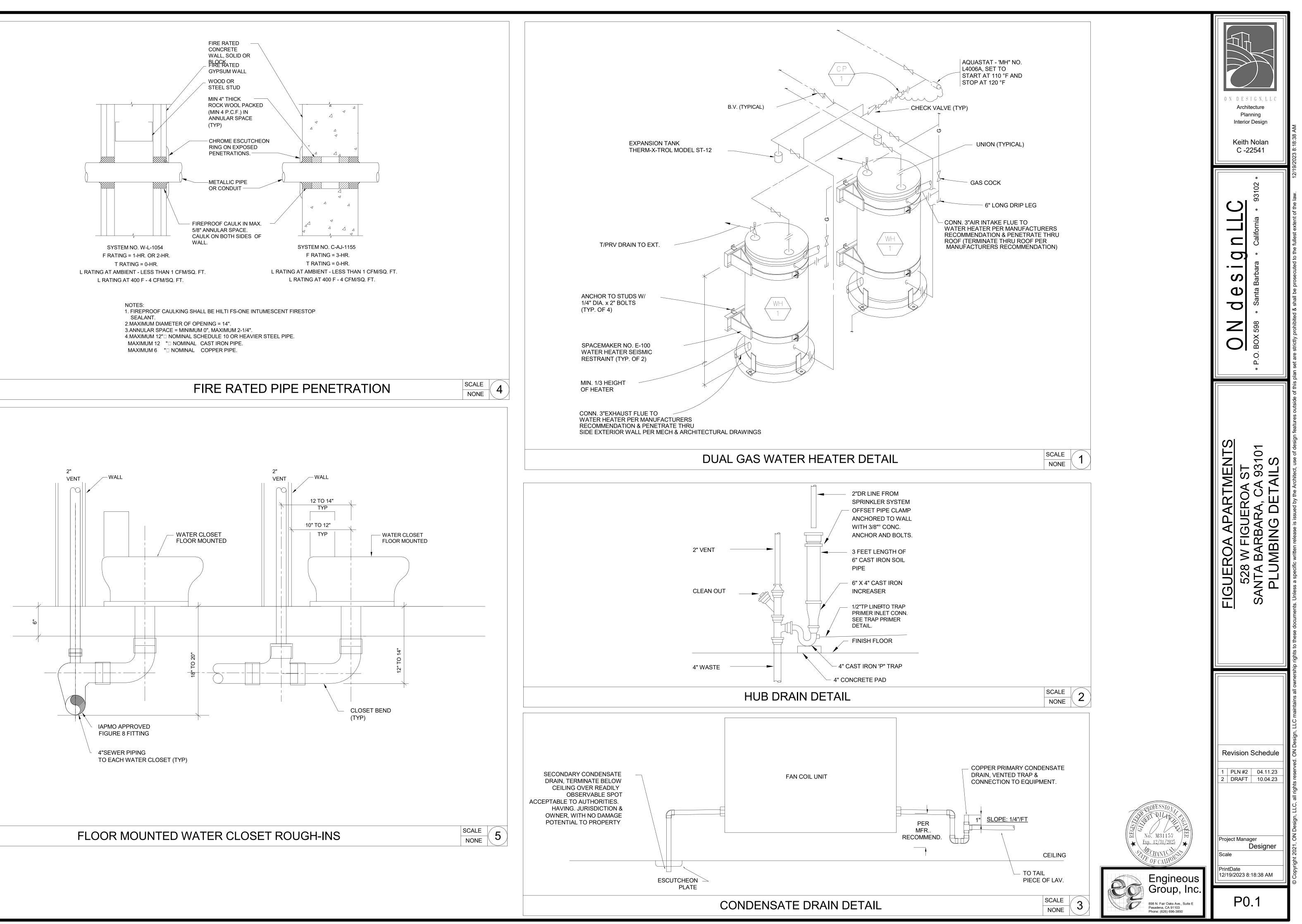
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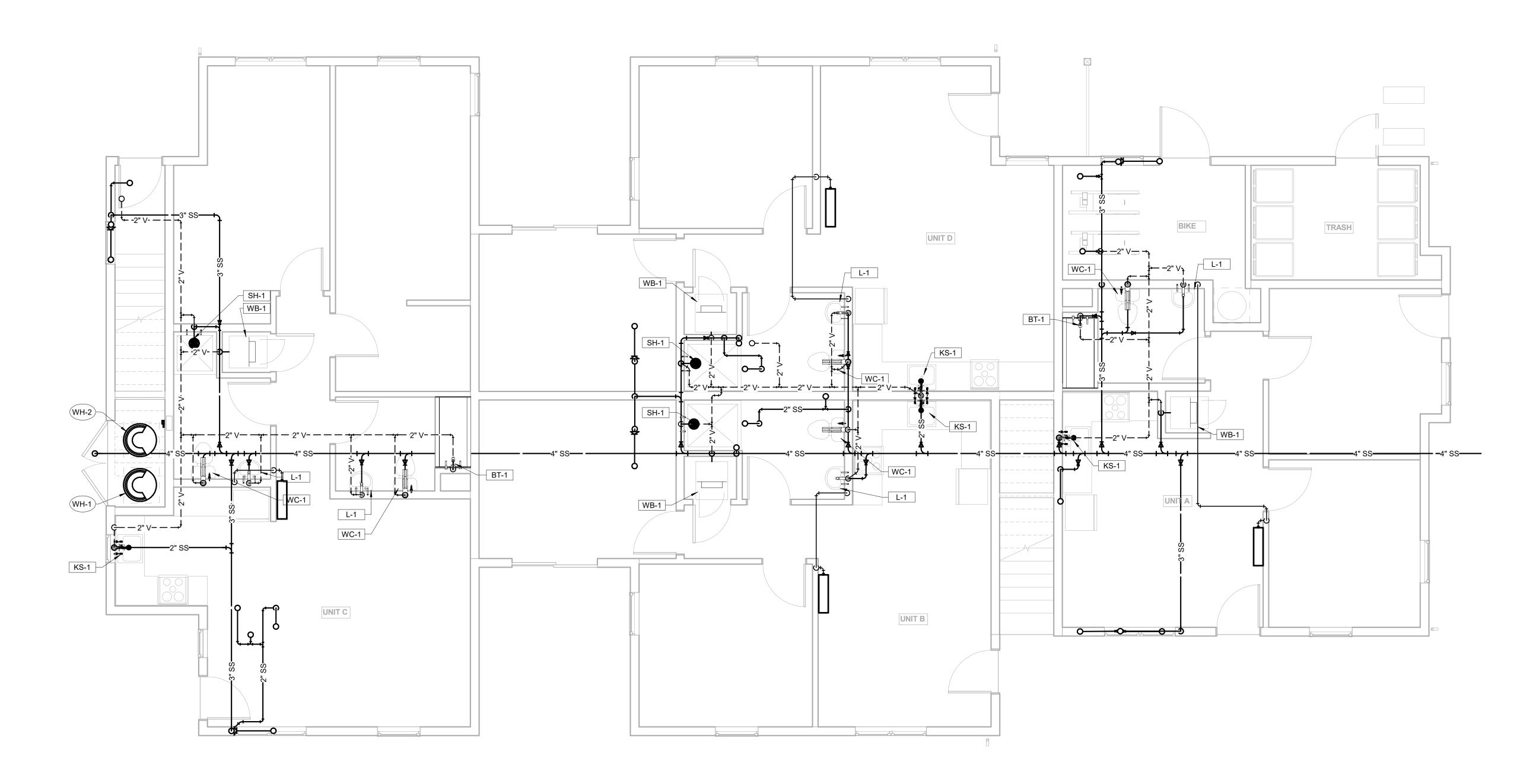
Engineous

898 N. Fair Oaks Ave., Suite E Pasadena, CA 91103 Phone: (626) 696-3850



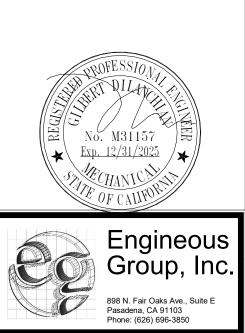


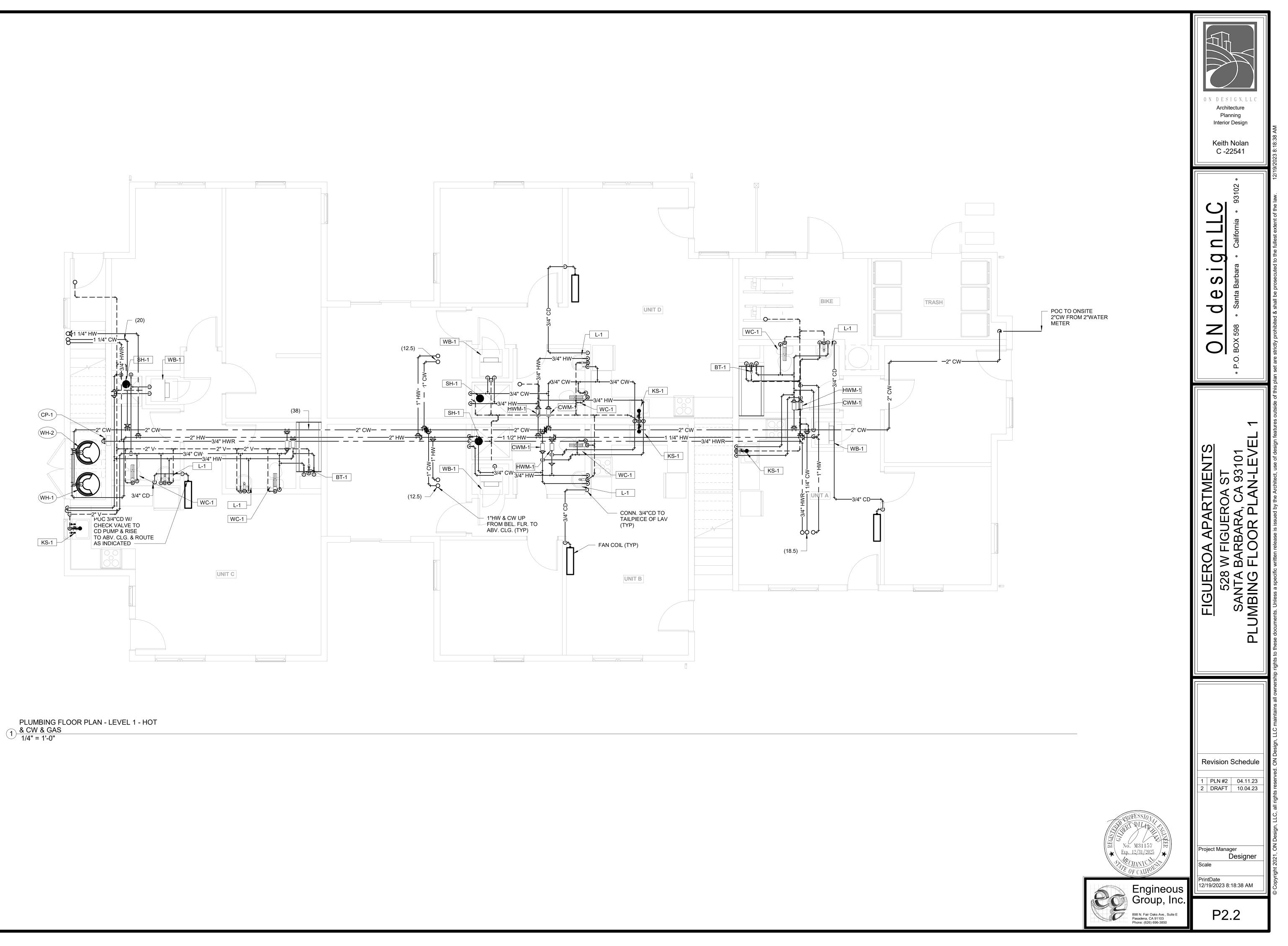


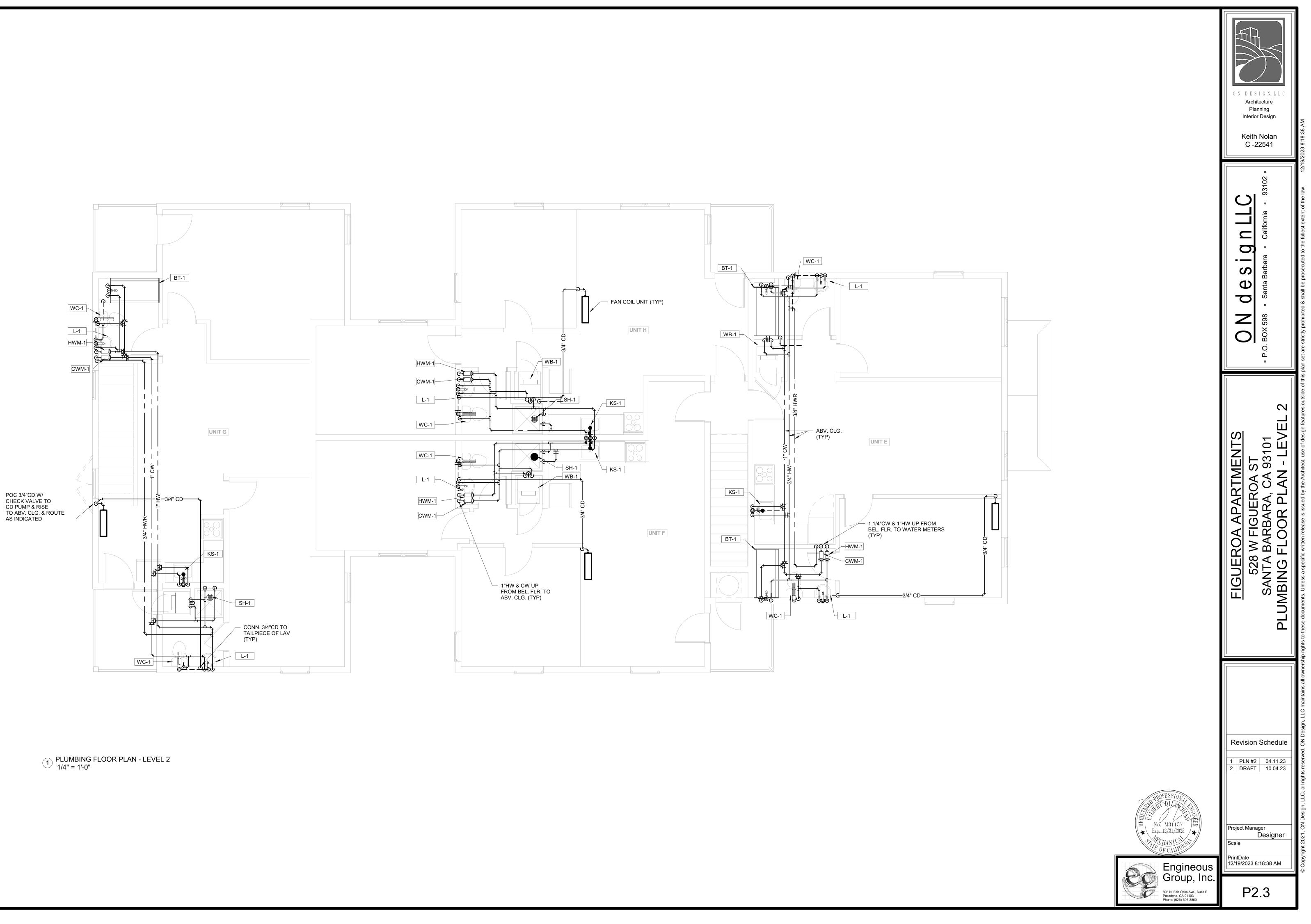


PLUMBING FLOOR PLAN - LEVEL 1 -1 WASTE & VENT 1/4" = 1'-0"

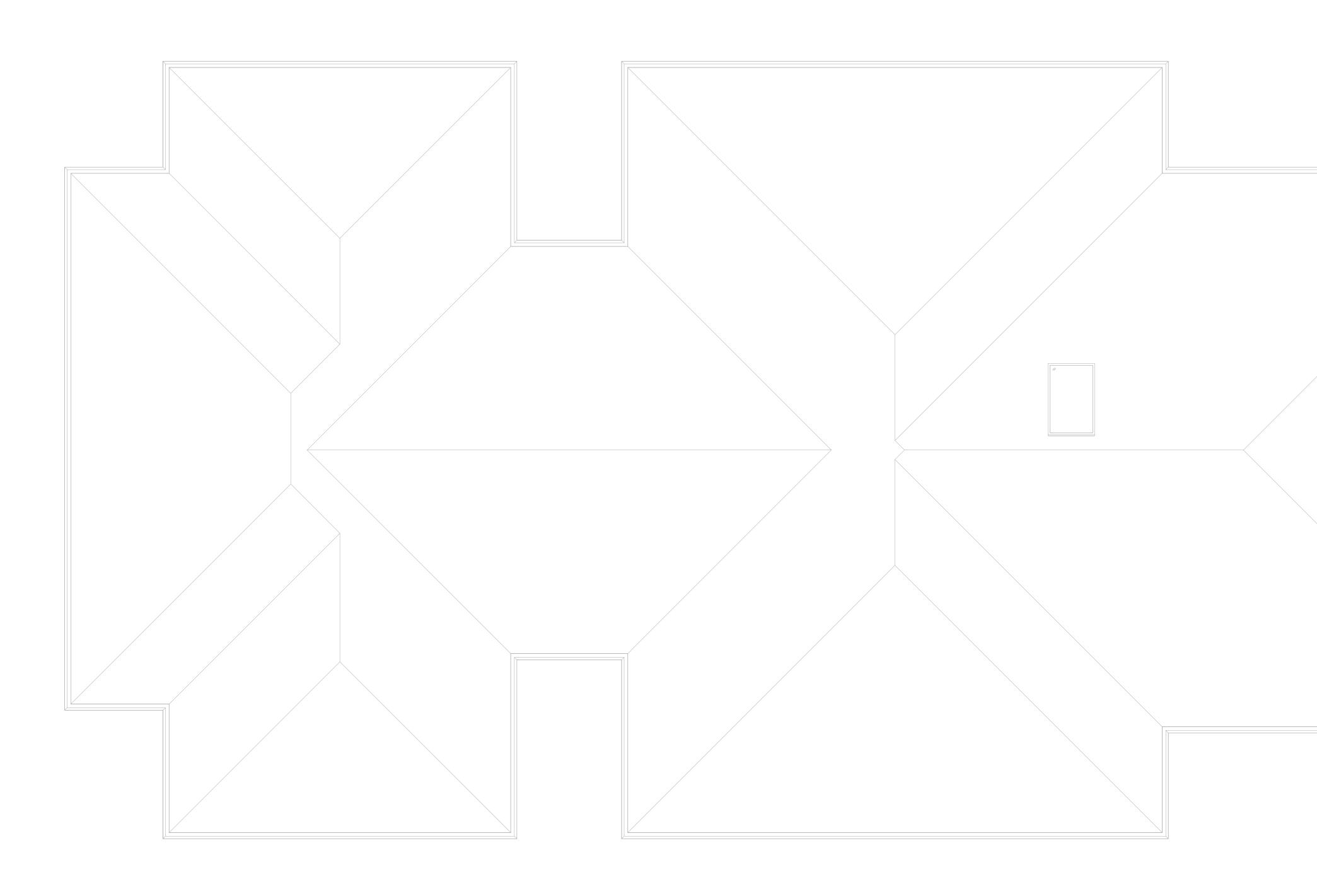


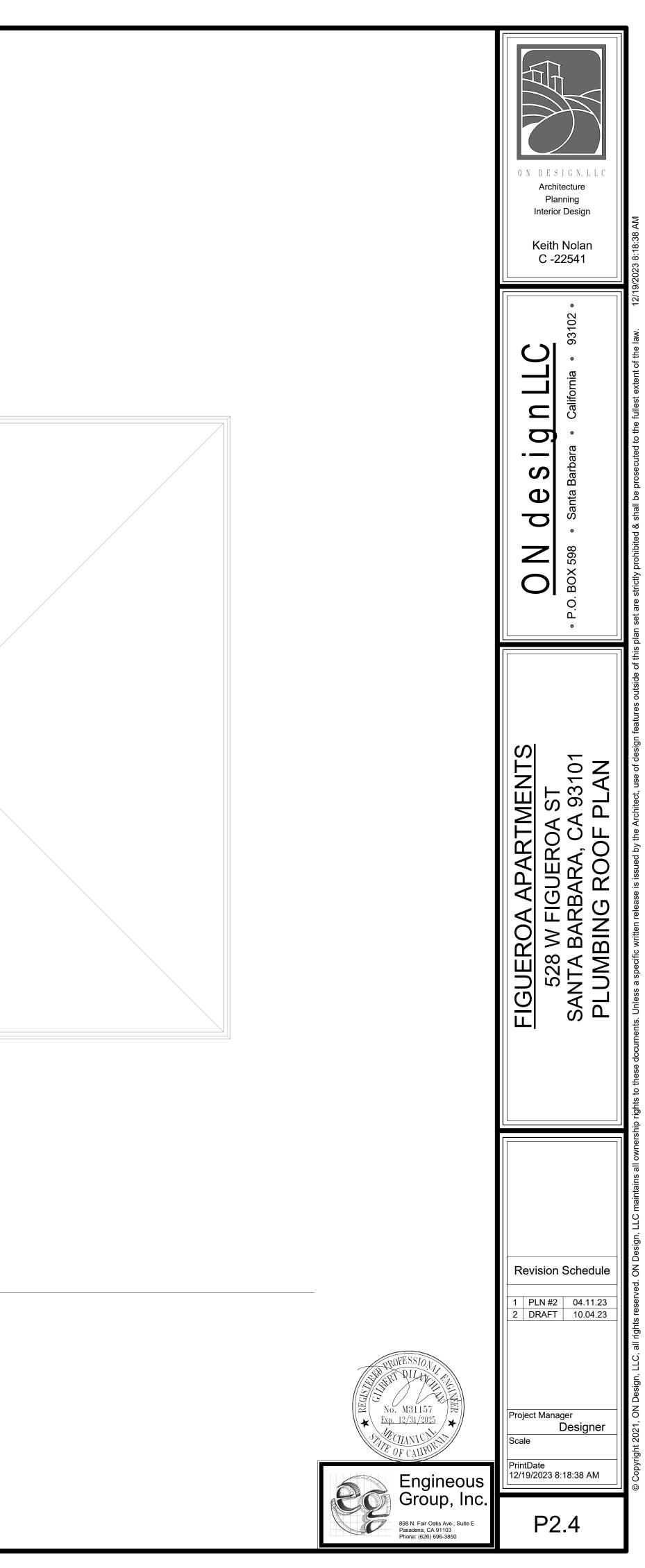


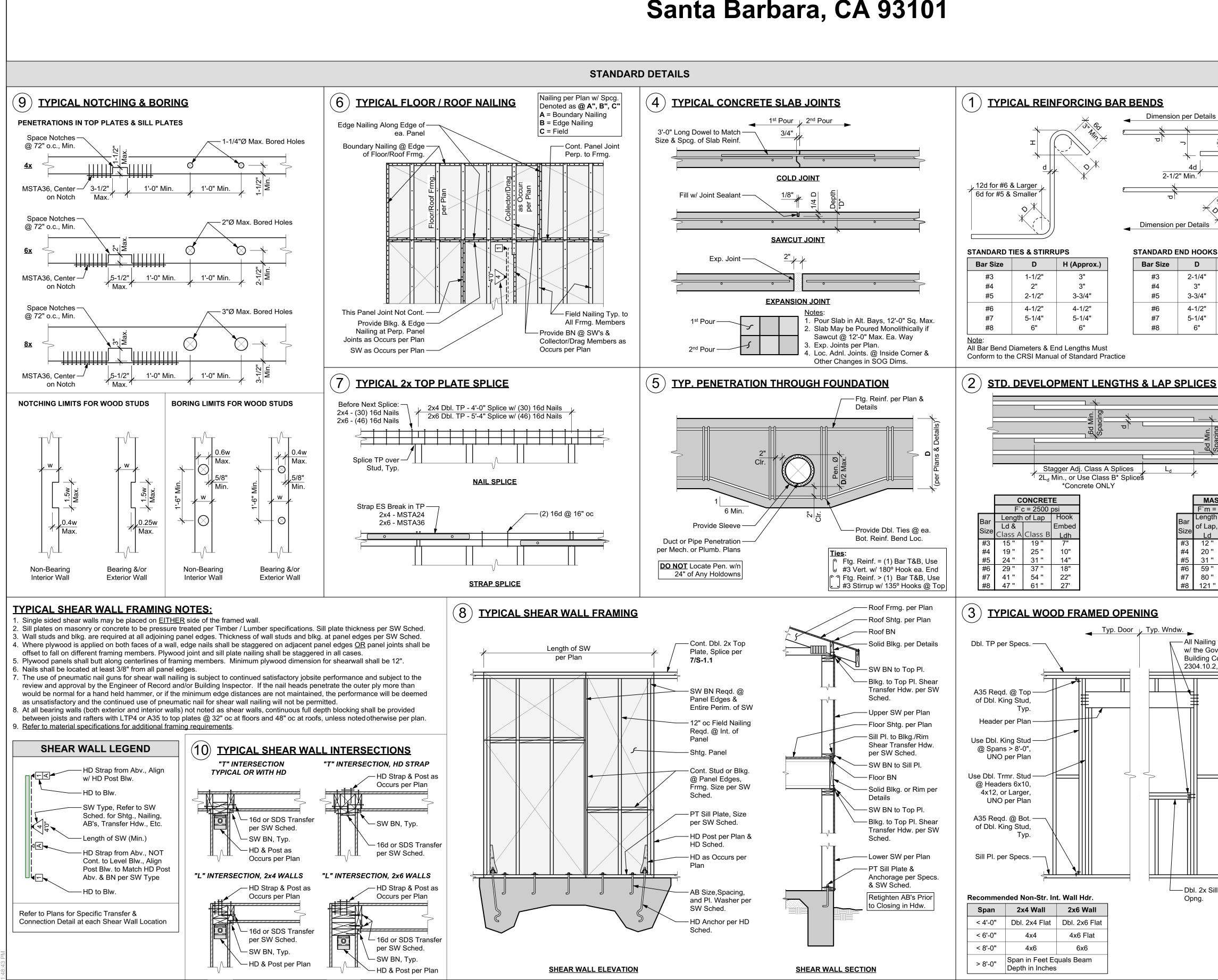




1 PLUMBING ROOF PLAN 1/4" = 1'-0"

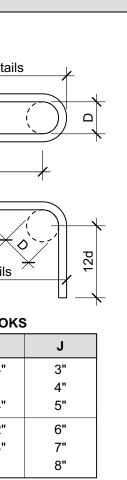


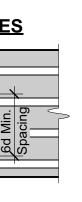




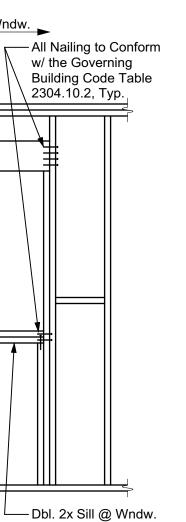
Figueroa Apartments

528 West Figueroa Street, Santa Barbara, CA 93101





MASONRY			
F`m = 1500 psi			
Length	Hook		
of Lap,	Embed		
Ld	Ldh		
12 "	5 "		
20 "	7 "		
31 "	8 "		
59 "	10 "		
80 "	11 "		
121 "	13 "		



AB A&B	Anchor Bolt Above and Below	Mas. Max.	Masonry Maximum	
Abv.	Above	MB	Machine Bolt	
Adn. Adj.	Addition (al) Adjacent,Adjustable	MF Mfr.	Moment Frame Manufacture(r)	
Alt.	Alternate (ive)	Min.	Minimum, Minute	
Appd. Arch.	Approved Architect(ural)	Mod. Mtl.	Modif(y), (ication) Metal	
Avg.	Average	(N) N/A	New	
Bdry. Bldg.	Boundary Building	N/A Nat.	Not Applicable Natural	
Blk(g). Bm.	Block (ing) Beam	NTS o/	Not to Scale Over	
BN	Boundary Nailing	oc	On Center	
B-O BO	Bottom of By Others	OD Opng.	Outside Diameter Opening	
Bot.	Bottom	Opp.	Opposite	
Brg. Btwn.	Bearing Between	Opt. Para.	Optional Parallel	
BW Cant.	Both Ways Cantilever(ed)	PCF Pen.	Lbs per Cubic Ft.	
Cant. CIP	Cast in Place	Perf.	Penetrate, (tion) Perforated	
CJ CJP	Ceiling Joist Complete Joint	Perim. Perp.	Perimeter Perpendicular	
	Penetration	PI	Panel Index	
CL Clg.	Center Line Ceiling	PJP PL	Partial Joint Pen. Plate	
CMU	Conc. Masonry Unit	PLF	Lbs per Linear Ft.	
Col. Com.	Column Common	Ply. Prep.	Plywood Prepare, (ation)	
Comp.	Component Concrete	Press.	Pressure	
Conc. Conn.	Connection	Proj. Prop.	Project Property	
Const. Cont.	Construction Continue (ous)	PSF PSI	Lbs per Square Ft. Lbs per Square In.	
Ctr.	Center	PT	Pressure-Treated	
d Dbl.	Penny Double	PV	Photovoltaic (Solar Panels)	
Defl.	Deflection	R Baa(a)	Radius	
Deg. Demo.	Degree Demolish(tion)	Rec(s). Rect.	Recommendation(s) Rectangular	
Dep.	Depress(ed)	Ref. Reinf	Reference	
DF Dia.	Douglas Fir Diameter	Reinf.	Reinforce(d), (ment),(ing)	
Diaph. Dif.	Diaphragm Different	Req(d). Reqs.	Require(d) Requirements	
Dim.	Dimension	Ret.	Retain(ing)	
Dist. DJ	Distance Deck Joist	RJ RR	Roof Joist Roof Rafter	
DL	Dead Load	RW	Redwood	
Dwg. (E)	Drawing Existing	SAD Sched.	See Arch Dwg's Schedule	
Ea.	Each	Sgl.	Single	
EF EFP	Each Face Equivalent Fluid	Shtg. Sim.	Sheathing Similar	
Elev.	Pressure Elevator, Elevation	SIP SM	Str. Insulated Panel Sheet Metal	
Embed.	Embed(ed), (ment)	SMS	Sheet Metal Screw	
Engr. EOR	Engineer	SOG Spec.	Slab on Grade	
			Specificed).(callons)	
Eq.	Engineer of Record Equal, Equivalent	Sq.	Specifi(ed),(cations) Square	
Eq. ES EW	-			
EŚ EW Exp.	Equal, Equivalent Each Side Each Way Expand, Expansion	Sq. SS Std. Stgr.	Square Structural Steel Standard Stagger(ed)	
ES EW Exp. Ext. Fdn.	Equal, Equivalent Each Side Each Way	Sq. SS Std. Stgr. Stl. Struc.	Square Structural Steel Standard	
ES EW Exp. Ext. Fdn. FF	Equal, Equivalent Each Side Each Way Expand, Expansion Exterior Foundation Finished Floor	Sq. SS Std. Stgr. Stl. Struc. SW	Square Structural Steel Standard Stagger(ed) Steel Structure, (al) Shear Wall	
ES EW Exp. Ext. Fdn. FF FJ Flr(g).	Equal, Equivalent Each Side Each Way Expand, Expansion Exterior Foundation Finished Floor Floor Joist Floor (ing)	Sq. SS Std. Stgr. Stl. Struc. SW Sym. T&B	Square Structural Steel Standard Stagger(ed) Steel Structure, (al) Shear Wall Symmet(ry), (rical) Top and Bottom	
ES EW Exp. Ext. Fdn. FF FJ FIr(g). FOC	Equal, Equivalent Each Side Each Way Expand, Expansion Exterior Foundation Finished Floor Floor Joist Floor (ing) Face of Concrete	Sq. SS Std. Stgr. Stl. Struc. SW Sym. T&B T&G	Square Structural Steel Standard Stagger(ed) Steel Structure, (al) Shear Wall Symmet(ry), (rical) Top and Bottom Tongue and Groove	
ES EW Exp. Ext. Fdn. FF FJ Flr(g). FOC FOM FOS	Equal, Equivalent Each Side Each Way Expand, Expansion Exterior Foundation Finished Floor Floor Joist Floor (ing) Face of Concrete Face of Masonry Face of Studs	Sq. SS Std. Stgr. Stl. Struc. SW Sym. T&B T&B T&G Temp. Thk.	Square Structural Steel Standard Stagger(ed) Steel Structure, (al) Shear Wall Symmet(ry), (rical) Top and Bottom Tongue and Groove Temporary Thick(ness)	
ES EW Exp. Ext. Fdn. FF FJ Flr(g). FOC FOM	Equal, Equivalent Each Side Each Way Expand, Expansion Exterior Foundation Finished Floor Floor Joist Floor (ing) Face of Concrete Face of Masonry	Sq. SS Std. Stgr. Stl. Struc. SW Sym. T&B T&B T&G Temp.	Square Structural Steel Standard Stagger(ed) Steel Structure, (al) Shear Wall Symmet(ry), (rical) Top and Bottom Tongue and Groove Temporary	
ES EW Exp. Ext. Fdn. FF FJ Flr(g). FOC FOM FOS FOW Frmg. Ft.	Equal, Equivalent Each Side Each Way Expand, Expansion Exterior Foundation Finished Floor Floor Joist Floor (ing) Face of Concrete Face of Masonry Face of Studs Face of Wall Framing Foot, Feet	Sq. SS Std. Stgr. Stl. Struc. SW Sym. T&B T&G Temp. Thk. Thru TN TP	Square Structural Steel Standard Stagger(ed) Steel Structure, (al) Shear Wall Symmet(ry), (rical) Top and Bottom Tongue and Groove Temporary Thick(ness) Through Toe-Nail Top Plate	ł
ES EW Exp. Ext. Fdn. FF FJ Flr(g). FOC FOM FOS FOW FOS FOW Frmg. Ft. Ftg. Ga.	Equal, Equivalent Each Side Each Way Expand, Expansion Exterior Foundation Finished Floor Floor Joist Floor (ing) Face of Concrete Face of Masonry Face of Studs Face of Wall Framing Foot, Feet Footing Gage, Gauge	Sq. SS Std. Stgr. Stl. Struc. SW Sym. T&B T&G Temp. Thk. Thru TN TP T-O TOB	Square Structural Steel Standard Stagger(ed) Steel Structure, (al) Shear Wall Symmet(ry), (rical) Top and Bottom Tongue and Groove Temporary Thick(ness) Through Toe-Nail Top Plate Top of Top of Beam	٩
ES EW Exp. Ext. Fdn. FF FJ Flr(g). FOC FOM FOS FOW Frmg. Ft. Ftg.	Equal, Equivalent Each Side Each Way Expand, Expansion Exterior Foundation Finished Floor Floor Joist Floor (ing) Face of Concrete Face of Masonry Face of Studs Face of Wall Framing Foot, Feet Footing	Sq. SS Std. Stgr. Stl. Struc. SW Sym. T&B T&G Temp. Thk. Thru TN TP T-O	Square Structural Steel Standard Stagger(ed) Steel Structure, (al) Shear Wall Symmet(ry), (rical) Top and Bottom Tongue and Groove Temporary Thick(ness) Through Toe-Nail Top Plate Top of	e.
ES EW Exp. Ext. Fdn. FF FJ Flr(g). FOC FOM FOS FOW Frog. Ft. Ftg. Ga. GB GC	Equal, Equivalent Each Side Each Way Expand, Expansion Exterior Foundation Finished Floor Floor Joist Floor (ing) Face of Concrete Face of Masonry Face of Studs Face of Wall Framing Foot, Feet Footing Gage, Gauge Galvanized Grade Beam General Contractor	Sq. SS Std. Stgr. Stl. Struc. SW Sym. T&B T&G Temp. Thk. Thru TN TP T-O TOB TOC TOG TOM	Square Structural Steel Standard Stagger(ed) Steel Structure, (al) Shear Wall Symmet(ry), (rical) Top and Bottom Tongue and Groove Temporary Thick(ness) Through Toe-Nail Top Plate Top of Top of Beam Top of Concrete Top of Grade Top of Masonry	Ŀ
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ABBREVIATIONS

Minimum, Minut ARCHITECT Modif(y), (ication) ON Design Arhcitects, P.O. Box 598 Not Applicable Santa Barbara, CA 93102 Natural (805) 896-7896 Not to Scale SOILS/GEO. ENGINEEF On Center Beacon Geotechnical Outside Diamete 1117 Vine Street Opening Paso Robles, CA 93446 Opposite (805) 239-9457 Optional Parallel Lbs per Cubic F **DESIGN PARAMETERS** Penetrate, (tion) Perforated Perimeter Perpendicular GENERAL PARAMETERS Panel Index **Building Code** Partial Joint Pen. Roof Loads Lbs per Linear F Dead Loads** (DL) Plywood **Includes 3 psf PV Loads Prepare, (ation) Pressure Project Property Lbs per Square F Lbs per Square Ir Pressure-Treated Photovoltaic (Solar Panels) Radius Recommendation Rectangular Reference Reinforce(d) (ment),(ing) Requirements Retain(ing) Roof Joist Roof Rafter

CLIENT:

3.M.1.W., LLC

831 Cliff Drive,

Santa Barbara, CA 93109

Live Loads (LL) Floor Loads - Typ.	20 psf
Dead Loads (DL) Live Loads (LL) Floor Loads - Deck	22 psf 40 psf
Dead Loads (DL) Live Loads (LL)	11 psf 60 psf
SOILS VALUES	(Soils Report)
Bearing Pressure	1750 psf
WIND DESIGN BASIS	<u>8</u>
Ultimate Wind Speed Nominal Wind Speed Risk Category Exposure Importance Factor, I _v Int. Press. Coefficien	d, V _{ASD} 74 mph II B v 1.00
SEISMIC DESIGN BA	<u>ASIS</u>
Seismic Design Cate Site Class	gory E D
Seismic Factors S _S / S ₁ S _{DS} / S _{D1} Risk Category Importance Factor, I _e Resisting System:	2.227 / 0.800 1.782 / 0.907 II 1.00 Wood Shear Walls
Response Mod. Coefficient, R Design Base Shear Analysis Procedure:	6.5 V = 0.228W Eqv. Lateral Force (ASCE 7-16, T. 12.6-1)

The 2022 California Building Code (CBC), based on the 2021 International Building Code (IBC), is the governing code in the State of California.

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S-1.1 S-1.2	Structural Title Sheet Structural Specifications & Special Inspections
S-2.1	Foundation Plan
S-2.2	Floor Framing Plan
S-2.3	Roof Framing Plan
S-3.1	Structural Details
S-3.2	Structural Details

S-3.3 Structural Details

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Proj.	Engr.:	Jeremia	n W.	Phone Ext.:	210
Proj.	Mngr.:	Paul B.			
Date	: 27 Ma	ar. 2023	Sc	ale: 1/4"=1'-0'	•
A&V	Job No.	.: 23102	3		
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S-1.1

ONOT SCALE THESE DRAWINGS. Refer to Architectural plans for all dimensions.

PROJECT INFORMATION

he use of these plans and specifications shall be estricted to the original site for which they were prepared and publication thereof is expressly limited to such use. Reproduction or publication by any method, in whole or in part, is prohibited. Title to these plans and specifications remain with Ashley & Vance Engineering, Inc. without prejudice. Visual contact with these plans and pecifications shall constitute prima facie evidence of the cceptance of these restrictions Engineer of Record: OR CONSTR 2022 CBC 15 psf

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STATEMENT OF SPECIAL INSPECTIONS 1. This Statement of Special Inspection is submitted in fulfillment of the requirements of the Governing Building Code, section 1704 and 1705. 2. Special Inspections and Testings will be preformed in accordance with the approved plans and specifications, this statement and the Governing Building Code, Section 1704, 1705, 1707, and 1708. 3. The schedule of Special Inspections summarizes the Special Inspections and tests required. Special Inspectors will refer to the approved plans and specifications for detailed special inspector requirements. Any additional tests and inspections required by the approved plans and specifications will also be performed. 4. Interim reports will be submitted to the Building Official and the Registered Design Professional in Responsible Charge in accordance with the Governing Building Code Section 1704.2.4. 5. A Final Report of Special Inspections documenting required Special Inspections, testing and correction of any discrepancies noted in the inspections. 6. The Owner recognizes his or her obligation to ensure that the construction complies with the approved permit documents and to implement this program of special inspectial. Inspectial Inspectians, the Owner will retain and directly pay for the Special Inspection fa unain directly pay for the Special Inspection feature sponsibility. Each contractor responsible for the construction of a main wind- or seismic force-resisting system, designated seismic system or a wind- or seismic force-resisting system, designated seismic system or a wind- or seismic force-resisting system, designated seismic system or a wind- or seismic force-resisting system, designated seismic system or a wind- or seismic force-resisting system, designated seismic system or awind- or seismic force-	 with the contract documents or any applicable code requirements shall be corrected by the Contractor at no expense to the Owner or Engineer. All information on existing conditions shown on the structural plans are based on best present knowledge available, but without guarantee of accuracy. The Contractor shall be responsible for the verifications of all dimension and conditions at the site. Any discrepancies between actual site conditions and information shown on the drawings or in the specifications shall be brought to the attention of the EOR prior to the start of construction. Refer to the Architectural plans for the following: (a) Dimensions (b) Size and location of all interior and exterior wall locations. (c) Size and location of all floor, roof and wall openings (d) Size and location of all drains, slopes, depressions, steps, etc. (e) Specification of all finishes & waterproofing (f) All other non-structural elements Refer to the mechanical, electrical and plumbing plans for the following: (a) Size and location of all equipment (b) Pipe runs, sleeves, hangers and trenches (c) All other mechanical, electrical or plumbing related elements Do NOT scale structural plans. Contractor shall use all written dimensions on Architectural plans. Construction materials shall be uniformly spread out if placed on floor or roof so as to not overload the framing. Load shall not exceed the design live load per square foot. It is the Contractor's responsibility to provide adequate shoring and/or bracing as required. Specifications and detailing of all waterproofing and drainage items, while sometimes shown on the structural plans for the server so only, are solely the design responsibility of others. The Engineer will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences or proc
2. Materials Testing 3. Geotechnical Inspection * 4dditional inspections may be required at the discretion of the Building Official.	 programs in connection with the construction delineated by these plans. It should be understood that the Contractor or his/her agent(s) shall supervise and direct all work and shall be solely and completely responsible for all construction means, methods, techniques, sequences, procedures and conditions on the job site, including safety of all persons and property during the entire period of construction. Periodic observations by the Engineer, his staff or representatives are not intended to include verification of dimensions or review the adequacy of the Contractor's safety measures on or near the construction site. 10. Modifications of the plans, notes, details and specifications shall not be permitted without prior approval from the Engineer. 11. All workmanship shall conform to the best practice prevailing in the various trades performing the work. The Contractor's responsibile for coordinating the work of all trades. 12. It is the Contractor's responsibility to ensure that only approved structural plans are used during the course of construction. The use of unapproved documents shall be at the contractor's expense. 13. These plans and specifications represent the structural design only. No information nor warranty is provided for the work of any other Consultant (Architect, Mechanical, Electrical, etc.). This includes, but is not limited to, waterproofing, drainage, ventilation, accessibility, or
SEISMIC REQUIREMENTS (Section 1705.13)	dimensions. FOUNDATIONS
Description of seismic-force-resisting system and designated seismic systems subject to special inspections per Section 1705.13: Light-framed walls sheathed with wood structural panels rated for shear resistance or steel sheets (ASCE 7, Table 12.2-1, Line A.15) The extent of the main seismic-force-resisting system is defined in more detail in the construction documents. WIND REQUIREMENTS (Section 1705.12) Description of main wind-force-resisting system and designated seismic systems subject to special inspections per Section 1705.12: Not Applicable The extent of the main wind-force-resisting system is defined in more detail in the construction documents. SCHEDULE OF SPECIAL INSPECTIONS Column Header Notation Used in Table: C Indicates periodic inspections are required. The notes and/or contract documents should clarify. Box Entry Notation Used in Table: X Is placed in the appropriate column to denote either "C" continuous or "P" periodic inspections. Denotes a one-time activity or one whose frequency is defined in some other manner. Additional details regarding inspections are provided in the project specifications or notes on the drawings.	 Refer to Structural Design Parameters section on sheet S-1.1 for all soil design values used in calculations. Soils values per geotechnical engineering report by Beacon Geotechnical, Inc., Project No. F-102566, dated December 31, 2020. This report and all recommendations contained therein are to be considered a part of these plans. It is the Contractor's responsibility to obtain a copy of the soils report from the Owner. A copy of the soils report shall be on the job site during the course of construction. Unexpected Soil Conditions: Allowable values and subsequent foundation designs are based on soil conditions which are shown by test borings. Actual soil conditions which deviate appreciably from that shown in the test borings shall be reported to the EOR and/or soils engineer immediately. All compaction, fill, backfilling and site preparation shall be performed in accordance with project soils report or the Governing Building Code Chapter 18 & Appendix J. All such work shall be performed per the recommendations of the project soils engineer. Excavate to required depths and dimensions (as indicated in the drawings), cut square and smooth with firm level bottoms. Care shall be taken not to over-excavate foundation at lower elevation and prevent disturbance of soils around high elevation. Foundations shall be poured in neat excavations. Excavate all foundations to required depths into compacted fill or natural soil (as per plans and details) and as verified by the building official and/or soils engineer. All foundations shall be inspected and approved by the appropriate building official and/or a representative of the soils engineer prior to forming and placement of reinforcing or concrete Foundations shall not be poured until all required reinforcing steel, framing hardware, sleeves, inserts, conduits, pipes, etc. and formwork is properly placed and inspected by the appropriate build
Verification & Inspection C P Notes	remove standing water and to maintain optimum working conditions. 13. The Contractor shall be solely responsible for all excavation procedures including lagging,
1705.6 - Soils 1. Verify materials below shallow footings are adequate to achieve the desired bearing capacity X	shoring, and the protection of adjacent property, structures, streets, and utilities in accordance with all federal, state and local safety ordinances. The Contractor shall provide for the design and installation of all cribbing, bracing and shoring required. TRUSSES
2. Verify excavations are extended to proper depth and have reached proper material X 3. Perform classification and testing of compacted fill materials X 4. Verify use of proper materials, densities, and lift thicknesses during placement and compaction of compacted fill X 5. Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly X	 Refer to the structural and architectural plans for additional design loads and conditions. Bottom chords shall be designed to resist a minimum ceiling live load of 10 psf. Truss calculations and details shall be submitted to the Architect/Engineer and the building department for review and approval prior to fabrication. All trusses shall be fabricated in the shop of a licensed fabricator approved by the governing building department. Each truss shall be legibly branded, marked or otherwise have permanently affixed thereto the following information located within 2 feet of the center of the span on the face of the bottom chord: (a) Identity of the company manufacturing the truss (b) the design load, and (c) the spacing of the trusses.
1705 12 2 Sciemie Registence Structurel Wood	 5. Walls: (a) Trusses shall bear on exterior walls only unless specifically noted otherwise.
1705.13.2 - Seismic Resistance - Structural Wood 2. Inspect nailing, bolting, anchoring, and other fastening of elements of the main seismic force-resisting system, including wood shear walls, wood diaphragms, collectors (drag struts), braces, shear panels, and hold-downs X Inspection of shear walls and diaphragms with fasteners spaced greater than 4" oc is not required	 (b) All interior walls shall be non-bearing unless specifically noted otherwise. (c) All approved interior bearing locations shall be specifically noted on the structural plans. 6. Bearing: (a) Securing of bearing walls, unless noted otherwise, trusses shall be secured at all bearing points with Simpson seismic anchors (e.g. H1). (b) Interior non-bearing walls shall be isolated from the trusses with Simpson truss clips (e.g. STC, DTC, HTC4) or approved equal. (c) Trusses to be manufactured with necessary camber to account for dead load deflections and eliminate accidental bearing on interior non-bearing walls. 7. Blocking and bracing shall be installed per manufacturer's recommendations. As a minimum the trusses shall be blocked at the following locations:

-bearing walls. in reinforcing steel are to be made cold. All bend radii shall conform to CRSI Manual of endations. As a minimum, Standard Practice. the trusses shall be blocked at the following locations: 8. Refer to Concrete and Masonry notes for specific minimum splice length and splice (a) All bearing points staggering requirements. Lap welded wire fabric (WWF) reinforcement two (2) modules (b) Along ridge Erect trusses according to the approved shop drawings. Lift members only at designated lift minimum (UNO). All splices are to be staggered.

points. Provide erection bracing to keep the members straight and plumb as required to assure adequate lateral support for individual members and the entire system until the sheathing is applied.

all phases of this 1. All concrete shall have: structural plans shall etails are given, ne Contractor shall be ifications prior to the start of the Engineer prior to 2 ork performed in conflict

- charge of construction precautions and ans. It should be
- nd direct all work and . methods. techniques.
- ety of all persons and ons by the Engineer, his nensions or review the uction site.
- t be permitted without various trades performing

- ents shall be performed at No information nor Mechanical, Electrical,
- ntilation, accessibility, or
- soil design values used hnical, Inc.,
- I recommendations
- t from the Owner. A copy uction. dation designs are based
- itions which deviate the EOR and/or soils ed in accordance with
- pendix J. All such work
- wings), cut square and vate foundation at lower
- tural soil (as per plans
- building official and/or a of reinforcing or concrete. raming hardware,
- rly position all holdown
- are. Refer to typical imum moisture content otings as required to
- ures including lagging, and utilities in
- Contractor shall provide quired.
- oads and conditions. d of 10 psf. gineer and the building
- proved by the governing
- anently affixed thereto an on the face of the
- noted otherwise. ed otherwise.
- hall be secured at all
- with Simpson truss clips
- ount for dead load

CONCRETE

- (a) an ultimate compressive strength (f'c) of 3,000 psi at 28 days (UNO). (b) a maximum slump of 5" at point of placement.
- (c) a W/C ratio of 0.55 or less for all slabs, walls, and columns, and 0.60 or less for all foundations.

(d) a normal dry-weight density (UNO). Special inspection is NOT required as the foundations have been <u>designed</u> with f'c = 2,500 psi in accordance with the Governing Building Code, section 1705.3, exceptions 1, 2.1, and 2.3, unless explicitly specified herein, on the structural plans, or by the Building Department. At a minimum, special inspection is always required on: (a) structural slabs, flat plates

- (b) walls, columns, beams
- (c) piles, caissons
- (d) welding of reinforcement, installation of mechanical bar splice devices, epoxy application When required or specified, special inspection services shall conform to the Governing
- Building Code, Chapter 17 and shall be provided by an ICC certified inspector or Building Department approved engineer. The Building Department reserves the right to waive or require special inspections. Nothing in these plans waives the Building Department's right to 7. require special inspection at any point and on any material.
- 3. Testing of materials used in concrete construction must be performed as noted on structural plans or at the request of the Building Department to determine if materials are quality specified. Tests of materials and of concrete shall be made by an approved agency and at the expense of the contractor; such tests shall be made in accordance with the standards listed in the Governing Building Code, Table 1705.3. When testing of concrete is required, four (4) test cylinders shall be taken from each 150 yards, or fraction thereof, poured in any one day. One (1) cylinder shall be tested at seven (7) days; two (2) at 28 days; one (1) shall 8. Notching: be held in reserve. Where 4x8 cylinders are used, (5) test cylinders shall be taken, with (3) cylinders tested at 28 days. If Contractor elects to have additional tests performed for "early-break" results, additional test cylinders must be taken. At no time shall the Contractor instruct the testing agency to perform tests on a schedule different than above without the prior authorization of the Engineer. Contractor is responsible for complying with applicable
- testing requirements of theBuilding Department. Copies of all test reports shall be provided to Engineer and Building Department for review in a timely manner. The Contractor shall remove and replace any concrete which fails to attain specified 28 day compressive strength if so directed by the Engineer. Any defects in the hardened concrete shall be repaired to the satisfaction of the Engineer and/or Architect or the hardened
- concrete shall be replaced at the Contractor's expense. All concrete work shall conform with the Governing Building Code, Chapter 19.
- All cement shall be Portland Cement Type I or II and shall conform to ASTM C150. 7. All aggregates shall conform to ASTM C33. Maximum aggregate sizes:
- (a) Footings: 1-1/2" (b) All other work: 3/4"
- Where not specifically detailed, the minimum concrete cover on reinforcing steel shall be: (a) Permanently exposed to earth or weather
- Cast against earth: ii. Cast against forms:
- (b) Not exposed to earth or weather
- Slabs, walls, joists: ii. Beams, girders, columns: 1-1/2"
- 9. The minimum lap splice length for all reinforcing steel shall be as noted in the typical details on sheet S-1.1. All lap splices to be staggered.
- 10. All reinforcing steel, anchor bolts, dowels, inserts, and any other hardware to be cast in concrete shall be well secured in position prior to foundation inspection. All hardware to be installed in accordance with respective manufacturer's specifications. Refer to architectural and structural plans for locations of embedded items.
- 11. Locations of all construction joints, other than specified on the structural plans, shall be approved by the Architect and Engineer prior to forming. Construction joints shall be thoroughly air and water cleaned and heavily roughened so as to expose coarse aggregates All surfaces to receive fresh concrete shall be maintained continuously wet at least three (3) hours in advance of concrete placement. Unless specifically detailed or otherwise noted, construction and control joints shall be provided in all concrete slabs-on-grade. Joints shall
- be located such that the area does not exceed 400 sq. feet. 12. The Architect, Engineer and appropriate inspectors shall be notified in a timely manner for a reinforcement inspection prior to the placement of any concrete.
- 13. The Contractor shall obtain approval from the Architect and the Engineer prior to placing sleeves, pipes, ducts, chases, coring and opening on or through structural concrete beams, walls, floors, and roof slabs unless specifically detailed or noted on the plans. All piles or conduits passing through concrete members shall be sleeved with standard steel pipe sections.
- 14. The Contractor is responsible for design, installation, maintenance and removal of all formwork. Forms shall be properly constructed, sufficiently tight to prevent leakage, sufficiently strong, and braced to maintain their shape and alignment until no longer needed for concrete support. Joints in formwork shall be tightly fitted and blocked, and shall produce a finished concrete surface that is true and free from blemishes. Forms for exposed concrete shall be pre-approved by the Architect to ensure conformance with design intent.
- 15. Remove formwork in accordance with the following schedule:
- (a) Forms at slab edge: 1 dav (b) Side forms at footings: 2 days
- (c) All other vertical surfaces: 7 days
- (d) Beams, columns, girders: 15 days
- (e) Elevated slabs: 28 days Engineer reserves the right to modify removal schedule above based on field observations concrete conditions, and/or concrete test results.
- 16. Retaining walls shall not be backfilled until concrete has set a minimum of 14 days. Refer to structural plans for slab and/or framing installation sequencing.
- 17. All concrete (except slabs-on-grade 6" or less) shall be mechanically vibrated as it is placed. Vibrator to be operated by experienced personnel. The vibrator shall be used to consolidate the concrete. The vibrator shall not be used to convey concrete, nor shall it be placed on reinforcing and/or forms.
- 18. Concrete shall be maintained in a moist condition for a min. of five (5) days after placement. 19. Concrete shall not be permitted to free fall more than six (6) feet. For heights greater than six (6) feet, use tremie, pump or other method consistent with applicable standards.
- 20. When specified ultimate compressive strength is greater than 2500 psi, Contractor shall submit mix designs to Architect and Engineer for approval seven (7) days prior to placement. Mix designs shall be prepared by an approved testing laboratory. Sufficient data must be
- provided for all admixtures. 21. Refer to Architectural plans for locations of all dimensions, slab depressions, slopes, drains, curbs, and control joints.

- **REINFORCEMENT** 1. Reinforcing steel shall be deformed, clean, free of rust, grease or any other material likely
- to impair concrete bond. 2. All bars shall conform to ASTM A615, Grade 60 minimum (UNO on structural plans). All weld
- wire fabric (WWF) shall conform to ASTM A185. 3. Reinforcing steel that is to be welded shall conform to ASTM A706. All welding of
- reinforcement shall be subject to special inspection.
- 4. Contractor shall take necessary steps (standard ties, anchorage devices, etc.) to secure all reinforcing steel in their true position and prevent displacement during concrete placement. 5. Fabrication, placement and installation of reinforcing steel shall conform to: (a) Concrete Reinforcing Steel Institute (CRSI) Manual of Standard Practice
- (b) the Governing Building Code. 6. Shop drawings for fabrication of reinforcing steel shall be approved by the Contractor and submitted to the Architect and Engineer for review and approval prior to fabrication. Shop
- drawings are not required for slabs-on-grade or foundations unless specifically noted on the structural plans. 7. Heating of reinforcing steel to aid in bending and shaping of bars is not permitted. All bends

ROUGH CARPENTRY

- 1. Refer to latest edition of the Governing Building Code, Table 2304.10.2. for nailing requirements.
- 2. Refer to individual sections for applicable material specifications.
- 3. Fabricate, size, install, connect, fasten, bore, notch, and cut wood and plyw true, tight, and well-nailed, screwed or bolted as required, all members to ha without being shimmed, unless noted otherwise. Set horizontal members su with the crown up. Install framing plumb, square, true and cut for full bearing
- permitted between bearings. Use full lengths unless otherwise specified. Metal framing angles, anchor, clips, straps, ties, holdowns, etc. shall be mfg
- Strong-Tie Co. No substitutions shall be permitted without prior approval of 5. All walls are to have continuous double 2x top plates spliced as followings u
- noted otherwise on the plans and details.
- 6. Wall Studs: (a) Unless specifically noted on the plan and details, use the following
 - framino Use 2x4 studs at 16" oc for walls less than 9'-0" tall.
 - ii. Walls 9'-0" to 16'-0" tall shall be constructed of 2x6 studs at 16" iii. Request specifically engineered wall details for walls greater that
- Blocking (a) Provide min. one row of nominal 2" thick blocking of same width as and spiked into studs at mid-height of partitions or walls over 8' high
- (b) All foundation cripple walls (or "pony walls") less than 14" in height blockina. (c) Rim blocking/rim board to be 1-1/4" minimum width x full depth at be
- UNO per plans and details. Refer to shearwall section for additional requirements.
- (a) Is not permitted of any structural member without prior approval
- (b) In exterior and bearing walls, notches shall not exceed 25% of the s (c) Non-bearing partition walls, notches shall not exceed 40% of the stu (d) Successive notches in the same member shall be spaced a min of
- 9. Boring: (a) Is not permitted of any structural member without prior approval (b) In exterior and bearing walls, holes shall not exceed 40% of the stud (c) Non-bearing partition walls, may be drilled not greater than 60% of
- (d) Successive holes in the same member shall be spaced a minimum 10. Bearing: (a) Provide a min. of 1-1/2" of bearing for all 2x joists and hdrs 4x10 / 6x
- (b) Provide a min. of 3" of bearing for all beams and hdrs 4x12 / 6x10 & (c) Members bearing on prefabricated hangers are to have full bearing
- manufacturer's specifications. 11. Posts:
- (a) Posts inside walls shall bear on sill plates and shall be continuous b bottom plates, unless specifically noted otherwise. (b) Provide posts under all beams, girders or double joists equal to the
- supported member (c) Posts on upper levels are to be stacked on posts of equal size at levels
- unless a larger post is specified on the plans. (d) Vertically oriented blocking ("squash blocking") shall be used to fully area through floors to foundation. Vertical blocking shall be equal to plus 1/16".
- (e) Headers framing into continuous posts without trimmer studs shall t Simpson HUC hangers unless noted otherwise on the plans. (f) Posts when isolated, shall be seated in Simpson post or column bas

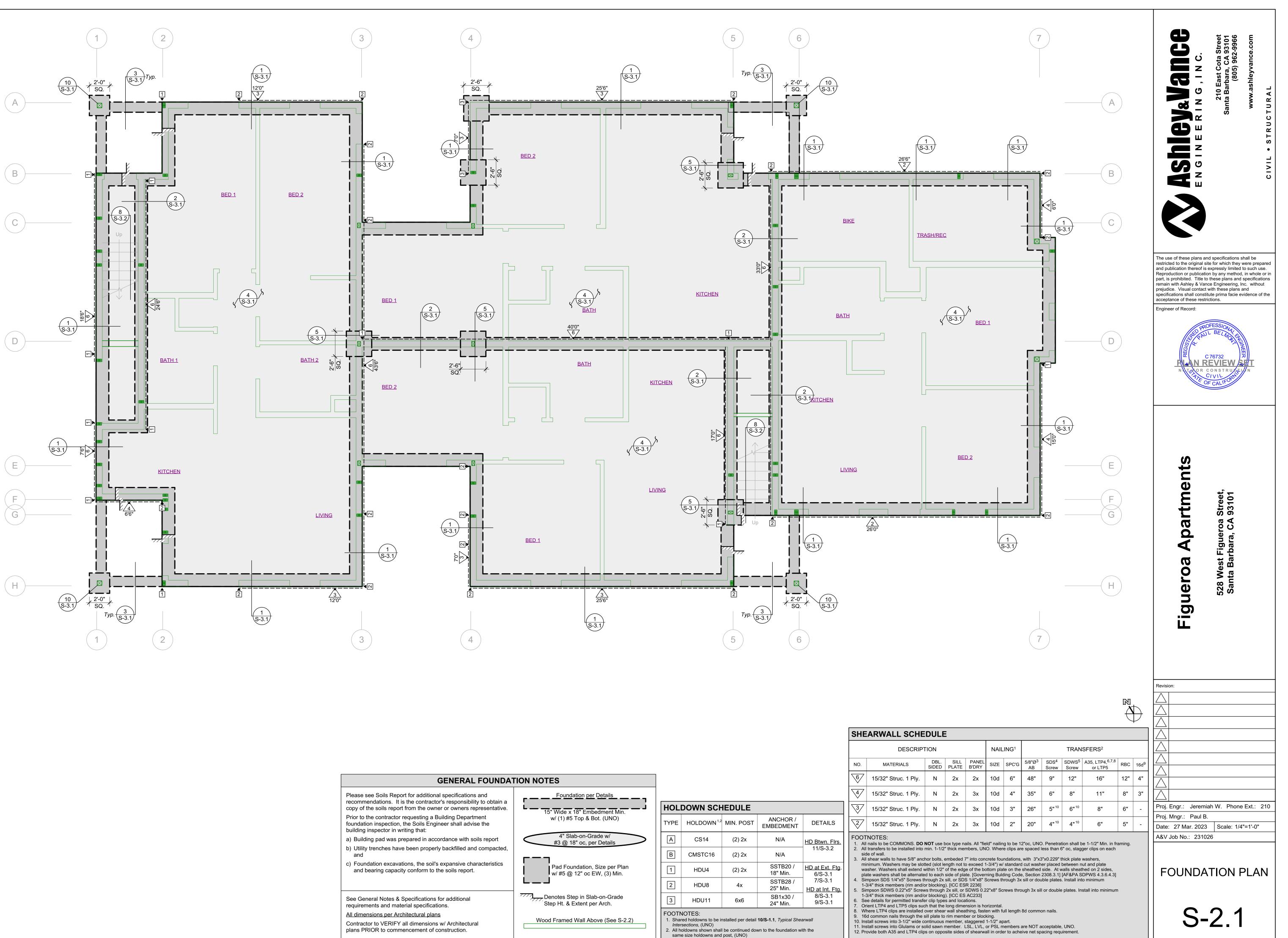
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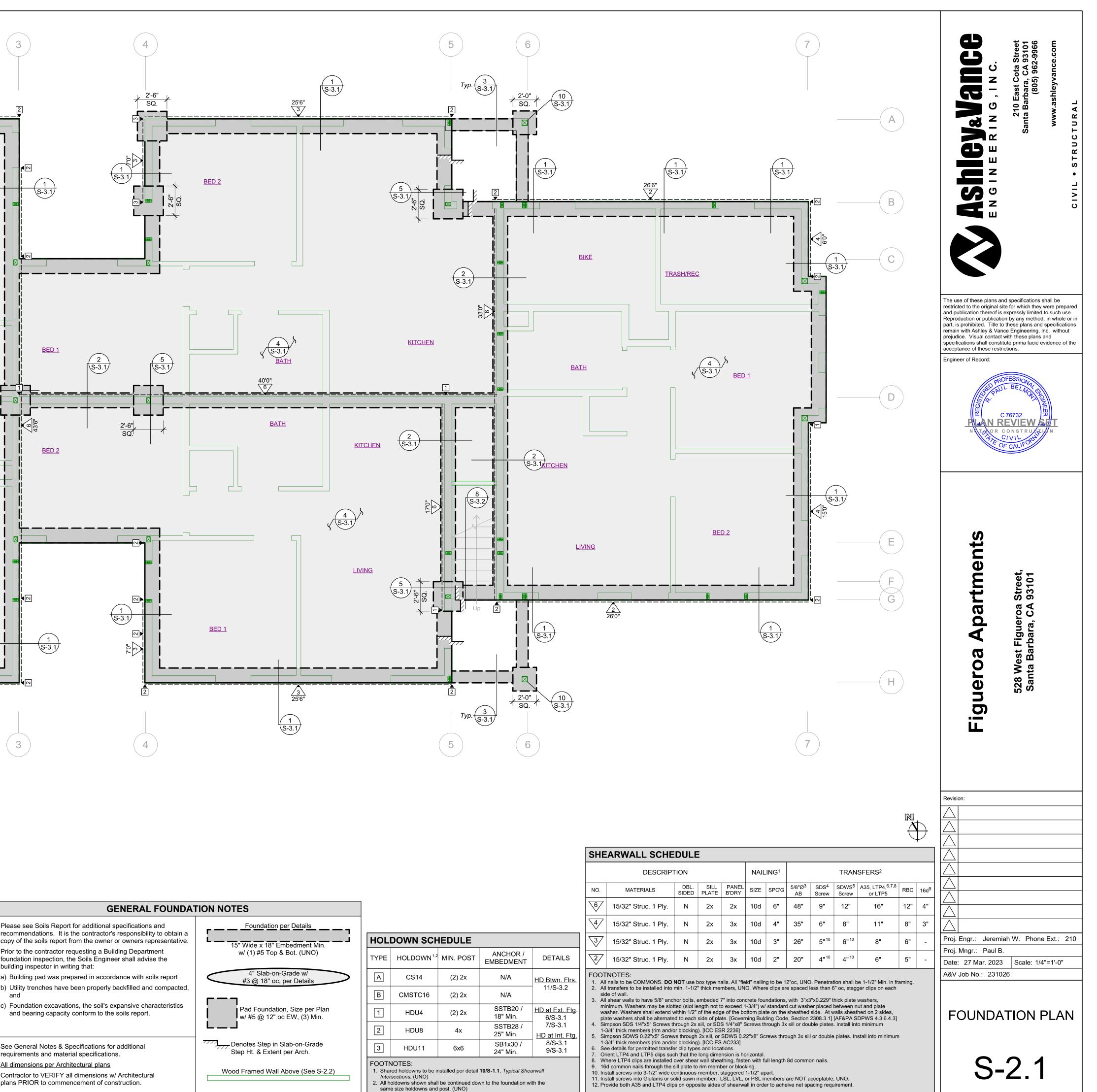
ROUGH CARPENTRY Refer to latest edition of the Governing Building Code, Table 2304.10.2. for all minimum 	ENGINEERED LUMBER 1. Glu-laminated Beams (GLB):	
nailing requirements.2. Refer to individual sections for applicable material specifications.3. Fabricate, size, install, connect, fasten, bore, notch, and cut wood and plywood with joints	(a) shall have the following properties: Use EWS Combination Species / Grade	000 000 000 000 000 000 000 000 000 00
true, tight, and well-nailed, screwed or bolted as required, all members to have solid bearing without being shimmed, unless noted otherwise. Set horizontal members subject to bending with the around up install forming plumb, equate true and put for full bearing. Splices are not	Symbol (psi) (ksi) (psi) (psi) <t< td=""><td>C. C. CA 93 962-9 unce.c</td></t<>	C. C. CA 93 962-9 unce.c
with the crown up. Install framing plumb, square, true and cut for full bearing. Splices are not permitted between bearings. Use full lengths unless otherwise specified.4. Metal framing angles, anchor, clips, straps, ties, holdowns, etc. shall be mfg by Simpson	(b) shall not be notched, cut or drilled without prior approval from the Engineer	
Strong-Tie Co. No substitutions shall be permitted without prior approval of the Engineer.All walls are to have continuous double 2x top plates spliced as followings unless specifically	(c) shall have exterior glue and weather-treatment prior to installation(d) shall be fabricated by an approved manufacturer & in accordance with ANSI A 190.1	ast ast
 noted otherwise on the plans and details. 6. Wall Studs: (a) Unloss apositionly pated on the plan and details, use the following guidelines for well. 	 (e) shall have factory standard camber of 3,500-5,000 ft on beams UNO per Plan 2. Laminated Veneer Lumber (LVL) : (a) shall be 1.2/4" minimum thickness with the following minimum properties: 	210 Z10 WWW.
 (a) Unless specifically noted on the plan and details, use the following guidelines for wall framing: i. Use 2x4 studs at 16" oc for walls less than 9'-0" tall. 	 (a) shall be 1-3/4" minimum thickness with the following minimum properties: i. E = 2000 ksi ii. Fb = 2600 psi 	
 Walls 9'-0" to 16'-0" tall shall be constructed of 2x6 studs at 16" oc Request specifically engineered wall details for walls greater than 16'-0" tall. 	iii. Fv = 285 psi iv. Fc (parallel) = 2500 psi	
 7. Blocking: (a) Provide min. one row of nominal 2" thick blocking of same width as stud, fitted snugly and spiked into studs at mid-height of partitions or walls over 8' high. 	v. Fc (perp.) = 750 psi vi. Ft (parallel) = 1500 psi vii. Specific Gravity = 0.50	
 (b) All foundation cripple walls (or "pony walls") less than 14" in height shall be solid blocking. 	 (b) shall be fabricated by an approved manufacturer (c) shall bear a minimum of 3-1/2" on specified supports. Provide full depth solid 	
(c) Rim blocking/rim board to be 1-1/4" minimum width x full depth at bearing walls, UNO per plans and details. Refer to shearwall section for additional rim/blocking	blocking at all bearing points(d) shall be nailed in accordance with mfg's specifications. Unless otherwise approved,	
requirements. 8. Notching: (a) Is not permitted of any structural member without prior approval	nailing into the top edge shall not be spaced any closer than: i. 16d @ 6" oc, 10d @ 4" oc, and 8d @ 3" oc ii. When nailing must be reduced, stagger rows a minimum of 1/2" apart while	
 (a) is not permitted of any structural memoer without phot approval (b) In exterior and bearing walls, notches shall not exceed 25% of the stud depth. (c) Non-bearing partition walls, notches shall not exceed 40% of the stud depth. 	(e) shall be, when comprised of multiple members, connected with 16d nail, 1/2" bolts or	
(d) Successive notches in the same member shall be spaced a min of 18" apart.9. Boring:	1/4" lag screws in accordance with manufacturer's specifications.(f) shall not be cut, notched or drilled without specific written approval of the EOR.	
 (a) Is not permitted of any structural member without prior approval (b) In exterior and bearing walls, holes shall not exceed 40% of the stud depth. (c) Non-bearing partition walls, may be drilled not greater than 60% of stud depth. 	 3. Laminated Strand Lumber (LSL) : (a) shall be 1-1/4" minimum thickness with the following minimum properties: i. E = 1550 ksi 	
(d) Successive holes in the same member shall be spaced a minimum of 18" apart. 10. Bearing:	ii. $Fb = 2325 \text{ psi}$ iii. $Fv = 310 \text{ psi}$	The use of these plans and specifications shall be
 (a) Provide a min. of 1-1/2" of bearing for all 2x joists and hdrs 4x10 / 6x8 & smaller. (b) Provide a min. of 3" of bearing for all beams and hdrs 4x12 / 6x10 & larger, UNO on plane. 	iv. Fc (parallel) = 2500 psi v. Fc (perp.) = 800 psi vi. Ft (parallel) = 1070 psi	restricted to the original site for which they were prepared and publication thereof is expressly limited to such use. Reproduction or publication by any method, in whole or in
plans. (c) Members bearing on prefabricated hangers are to have full bearing and nailing per manufacturer's specifications.	vi. Ft (parallel) = 1070 psi vii. Specific Gravity = 0.50 (b) shall be fabricated by an approved manufacturer	part, is prohibited. Title to these plans and specifications remain with Ashley & Vance Engineering, Inc. without prejudice. Visual contact with these plans and
11. Posts:(a) Posts inside walls shall bear on sill plates and shall be continuous between top and	 (c) shall bear a minimum of 3-1/2" on specified supports. Provide full depth solid blocking at all bearing points 	specifications shall constitute prima facie evidence of the acceptance of these restrictions.
bottom plates, unless specifically noted otherwise.(b) Provide posts under all beams, girders or double joists equal to the width of the supported member.	 (d) shall be nailed in accordance with mfg's specifications. Unless otherwise approved, nailing into the top edge shall not be spaced any closer than: 	Engineer of Record:
 supported member. (c) Posts on upper levels are to be stacked on posts of equal size at levels below, unless a larger post is specified on the plans. 	 i. 16d @ 6" oc, 10d @ 4" oc, and 8d @ 3" oc ii. When nailing must be reduced, stagger rows a minimum of 1/2" apart while maintaining proper edge distances. 	ROFESSIONAL
(d) Vertically oriented blocking ("squash blocking") shall be used to fully transfer the post area through floors to foundation. Vertical blocking shall be equal to floor thickness	(e) shall be, when comprised of multiple members, connected with 16d nail, 1/2" bolts or 1/4" lag screws in accordance with manufacturer's specifications.	
plus 1/16". (e) Headers framing into continuous posts without trimmer studs shall be supported in Simpson HUC hangers unless noted otherwise on the plans.	 (f) shall not be cut, notched or drilled without specific written approval of the EOR. 4. Parallel Strand Lumber (PSL): (a) shall be 2-1/2" minimum thickness with the following minimum properties: 	C 76732 C 76732 FI→AN REVIEW S#T
 (f) Posts when isolated, shall be seated in Simpson post or column bases, unless noted otherwise on the plans 	i. $E = 2200 \text{ ksi}$ ii. Fb = 2900 psi	NOTOKOR CONSTRUCTION
12. Roof Framing:(a) Provide wood joists, as specified, laid with the crown up and spaced as indicated.	iii. Fv = 290 psi iv. Fc (parallel) = 2900 psi	
 (b) Provide a minimum of 1-1/2" end bearing unless otherwise shown. (c) Provide full depth solid 2x blkg or cross-bridging between the joists at 8' oc max. (d) Provide all cricket framing required to achieve positive drainage per Arch. 	v. Fc (perp.) = 750 psi vi. Ft (parallel) = 2025 psi vii. Specific Gravity = 0.50	
(e) Install plywood panels with the face grain across the framing and close joints and nail at each support. Fully nail with common nails per the plans.	(b) shall be fabricated by an approved manufacturer(c) shall bear a minimum of 3-1/2" on specified supports. Provide full depth solid	
(f) Plywood panels shall not be less than 4' x 8' except at boundaries and changes in framing direction, where the minimum panel dimension shall be no less than 24", walkee all advect a fundarizing panels are supported by and factored to framing.	blocking at all bearing points (d) shall be nailed in accordance with manufacturer's specifications. Unless otherwise	
unless all edges of undersized panels are supported by and fastened to framing members or blocking. (g) Provide Simpson "PSCL" clips at all plywood joints perpendicular to framing. Provide	approved, nailing shall not be spaced any closer than: i. Narrow face: 16d @ 6" oc, 10d @ 4" oc, and 8d @ 3" oc ii. Wide Face: 16d @ 8" oc, and 10d & 8d @ 6" oc	S S
clips midway between framing members at the unsupported edges of plywood when members are spaced at 24" oc or greater. If clips are not used, provide solid blocking	When nailing must be reduced, stagger rows a minimum of 1/2" apart while maintaining proper edge distances	l li
for joints perpendicular to framing. 13. Floor Framing: (a) Provide wood joists, as specified, laid with the crown up and spaced as indicated.	 (e) shall not be cut, notched or drilled without specific written approval of the EOR. 5. Plywood I Joists: (a) type and manufacturer shall be clearly noted on the plans. Substitutions shall not be 	er er
 (b) Provide a minimum of 1-1/2" end bearing unless otherwise shown. (c) Provide full depth solid 2x blkg or cross-bridging between the joists at 8' oc max. For 	(a) type and manufacturer onall be obtain be obtain her be obtained on the plane. Obtained on the plane. Dependent of the engineer.(b) shall be installed in accordance with applicable code approvals and mfg's spec's.	treet, 3101
floors framed with I joists, refer to the mfg's spec's for blkg requirements.(d) Provide full depth solid 2x blocking between the joists under all walls and partitions	 (c) shall bear a minimum of 1-3/4" at all end supports, and 3-1/2" at intermediate supports. Provide full depth solid blocking at all bearing points. 	്ഗത
where the wall or partition is perpendicular to the floor framing (including floors framed with I joists) (e) Install plywood sheathing with the face grain across supports, end supports	 (d) shall be installed with intermediate blocking or bridging as specified by the Mfr. Only omit intermediate blocking when specifically allowed by the Mfr. (e) shall not be cut, notched or drilled without specific written approval of the EOR. 	
staggered, and the edges of sheets centered over supports. If T&G plywood is used, blocking need not be provided at all plywood edges (UNO per plan). If T&G plywood	FASTENERS	Ap Figuer rbara,
is not used, blocking shall be provided at all plywood edges. Glue plywood to joists and fully nail with common nails per the plans.	 Nails: (a) shall be with "common" nails unless noted otherwise. (b) shall not be driven closer than 1/2 their length nor closer than 1/4 of their length to 	COA West F Ita Bar
(f) Plywood panels shall not be less than 4' x 8' except at boundaries and changes in framing direction, where the minimum panel dimension shall be no less than 24", unless all edges of undersized panels are supported by and fastened to framing	 (b) shall not be driven closer than 72 their length to closer than 74 of their length to the edge or end of a member, except for sheathing. (c) shall be installed in pre-drilled lead holes if necessary to avoid splitting. 	
members or blocking. 14. Shear Walls:	 (d) shall be hot-dipped zinc-coated galvanized steel, stainless steel, silicon bronze, or copper when in contact with preservative-treated wood. 	UCI 528 Sar
 (a) Refer to plans for all shearwall locations, length type and nailing. (b) Refer to Shearwall Schedule on title sheet for additional information. (c) Shear wall lengths specified on plans are minimum required. 	 When used in exterior applications, nails shall have coating types and weights in accordance with the treated wood or bolt manufacturer's Recs. A Min. of ASTM A653, type G185 zinc-coated galvanized steel (or equiv.) shall be used. 	0
(d) Shear walls to be nailed with common nails. All nails to have minimum 3/8" edge distance to panel or framing member.	When used in an interior, dry environment in SBX/DOT or zinc borate preservative-treated wood, plain carbon nails shall be permitted.	i i i i i i i i i i i i i i i i i i i
(e) Where 3x framing is required per the shear wall schedule, stagger edge nailing.(f) Oriented Strand Board (OSB) may be used in lieu of plywood.	 (e) All nailing shall conform to the Governing Building Code, Table 2304.10.2. 2. Lag screws: (a) shall be installed into pro drilled load balas. Lubricant (or each) shall be used to 	
(g) Typical Rim Board/Blocking at Shearwalls shall be 1-3/4" Min. LSL (refer to Engineered Lumber Section for Material Specifications). <u>Refer to Shearwall</u> <u>Schedule per Plan for Min. Rim/Blkg Width Requirements per Transfer Fasteners</u> .	 (a) shall be installed into pre-drilled lead holes. Lubricant (or soap) shall be used to facilitate installation and prevent damage to the screws. (b) shall be hot-dipped zinc-coated galvanized steel or stainless steel when in contact 	
TIMBER / LUMBER	with preservative-treated wood. i. When used in exterior applications, bolts shall have coating types and weights in	
 All structural lumber shall be Douglas Fir-Larch, S4S and shall conform to the Governing Building Code, section 2303.1.1. The minimum lumber grade of each member shall be as follows (unless specifically 	accordance with the treated wood or bolt manufacturer's rec's. A minimum of ASTM A653, type G185 zinc-coated galvanized steel (or equal) shall be used. ii. When used in dry interior environments in SBX/DOT or zinc borate preservative-	Revision:
noted otherwise on plans and details) : (a) 2x studs, blocking, plates:Stud	treated wood, plain carbon screws, nuts, and washers shall be permitted. 3. Bolts:	
 (b) 2x joists #2 or better (c) 4x4, 4x6, or 6x6 beams or posts #2 or better (d) 4x8, 6x8, or larger beams or posts #1 or better 	 (a) shall conform to ASTM A307, UNO specifically on plans and details. (b) shall be installed in pre-drilled holes a max of 1/16" larger than the specified bolt dia. (c) when installed against wood surfaces, shall have standard washers under the heads 	\square
It is recommended (but not required) that all exposed members be Select Structural or better and free of heart center due to visual characteristics.	 (c) when installed against wood surfaces, shall have standard washers under the heads and nuts. (d) shall be hot-dipped zinc-coated galvanized steel or stainless steel when in contact 	
3. All lumber in contact with concrete or masonry shall be pressure treated Douglas Fir. Whenever it is necessary to cut, notch, bore or splice pressure treated material, all newly cut	with preservative-treated wood. i. When used in exterior applications, bolts shall have coating types and weights in	\bigtriangleup
 surfaces shall be thoroughly painted with the same preservative. 4. Maximum moisture content for all structural members shall not exceed 19%. 5. All plywood sheathing shall be CDX grade (or better) Douglas Fir with exterior glue. All 	accordance with the treated wood or bolt manufacturer's rec's. A minimum of ASTM A653, type G185 zinc-coated galvanized steel (or equal) shall be used. ii. When used in dry interior environments in SBX/DOT or zinc borate preservative-	
sheathing shall conform to the Governing Building Code and grade-marked by the American Plywood Association (APA). Panel index to be 40/20 for floors and 24/0 for	treated wood, plain carbon screws, nuts, and washers shall be permitted. 4. Anchor Bolts:	
roofs unless specifically noted otherwise on the plans and details.	 (a) shall be installed at all exterior walls and all interior shear and/or bearing walls. (b) shall be 5/8" diameter with 3x3x0.229" steel plate washers at shearwalls. (c) shall be 5/8" diameter with 2x2x3/16" steel plate washers at non-shearwalls. 	\bigtriangleup
	 (d) shall have 7" minimum embedment. (Contractor to coordinate length of bolts with sill plate thicknesses). 	Proj. Engr.: Jeremiah W. Phone Ext.: 210 Proj. Mngr.: Paul B.
	 (e) shall conform to ASTM F1554, Grade 36. (f) shall be hot-dipped zinc-coated galvanized steel or stainless steel when in contact with preservative-treated wood 	Date: 27 Mar. 2023 Scale: 1/4"=1'-0"
	 with preservative-treated wood. When used in exterior applications, bolts shall have coating types and weights in accordance with the treated wood or bolt manufacturer's rec's. A minimum of 	
	ASTM A653, type G185 zinc-coated galvanized steel (or equal) shall be used. ii. When used in dry interior environments in SBX/DOT or zinc borate preservative-	STRUCTURAL
	treated wood, plain carbon screws, nuts, and washers shall be permitted. (g) shall not be spaced greater than 72" oc Refer to shearwall schedule for specific anchor bolt spacing requirements.	SPECIFICATIONS &
	(h) shall be placed a maximum of 12" from wall corners, wall ends, and sill plate splices (but not less than 7 dia.), and a min. of two bolts per piece of sill plate is required.	INSPECTIONS
	 (i) shall be secured in place prior to foundation inspection. 5. Powder Actuated Shot Pins: (a) shall be installed at all interior non-bearing, non-shearwalls. 	0

3-1.2

OT SCALE THESE DRAWINGS. Refer to Architectural plans for all dimensions.

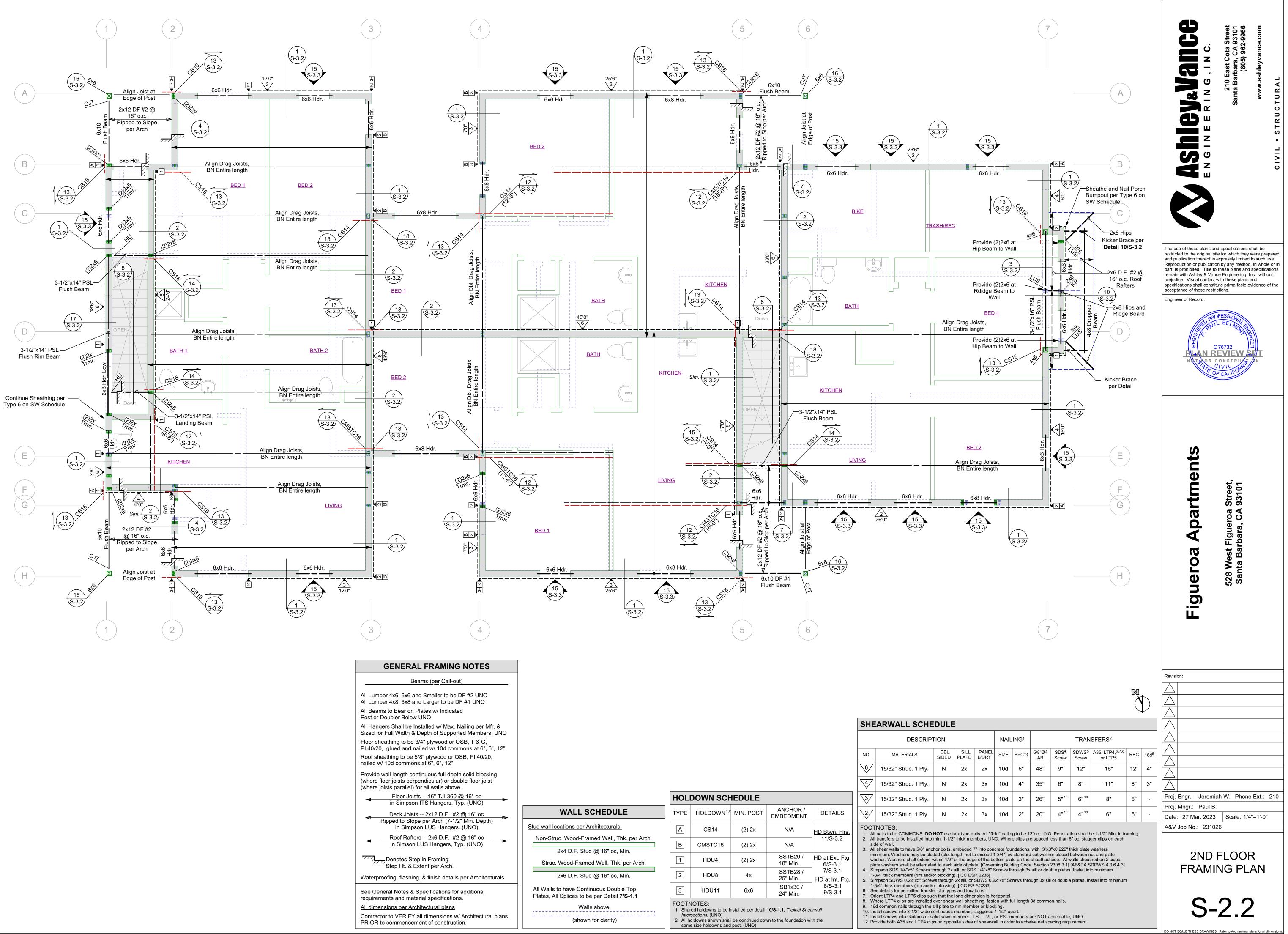
- (b) shall be 0.145x3" with 1.5" diameter steel washers. (c) shall not be spaced greater than 32" o.c.



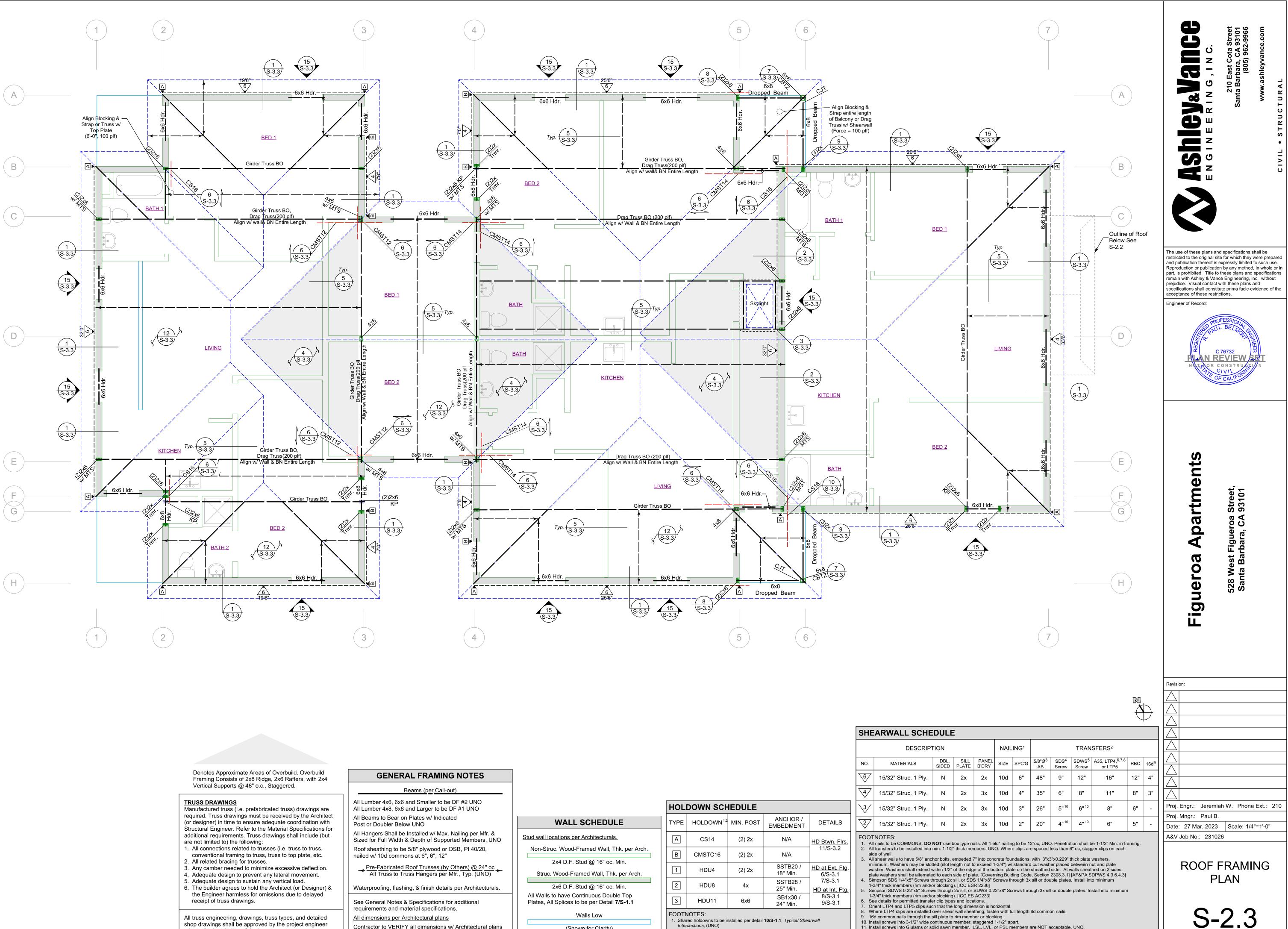


TYPE	HOLDOWN ^{1,2}	MIN. POST	ANCHOR / EMBEDMENT	DETAILS
А	CS14	(2) 2x	N/A	HD Btwn. Flrs.
В	CMSTC16	(2) 2x	N/A	11/S-3.2
1	HDU4	(2) 2x	SSTB20 / 18" Min.	HD at Ext. Ftg. 6/S-3.1
2	HDU8	4x	SSTB28 / 25" Min.	7/S-3.1 <u>HD at Int. Ftg.</u>
3	HDU11	6x6	SB1x30 / 24" Min.	8/S-3.1 9/S-3.1
FOOT	IOTES.			

DO NOT SCALE THESE DRAWINGS. Refer to Architectural plans for all dimensions.



TYPE	HOLDOWN ^{1,2}	LDOWN ^{1,2} MIN. POST AN EMB		DETAILS	
Α	CS14	(2) 2x	N/A	HD Btwn. Flrs.	
В	CMSTC16	(2) 2x	N/A	11/S-3.2	
1	HDU4	(2) 2x	SSTB20 / 18" Min.	HD at Ext. Ftg. 6/S-3.1	
2	HDU8	4x	SSTB28 / 25" Min.	7/S-3.1 <u>HD at Int. Ftg.</u>	
3	HDU11	6x6	SB1x30 / 24" Min.	8/S-3.1 9/S-3.1	
FOOT					



All truss engineering, drawings, truss types, and detailed shop drawings shall be approved by the project engineer prior to the installation of the trusses.

GENERAL FRAMING NOTES

requirements and material specifications. All dimensions per Architectural plans Contractor to VERIFY all dimensions w/ Architectural plans

PRIOR to commencement of construction.

TYPE	E HOLDOWN ^{1,2} MIN. PO		ANCHOR / EMBEDMENT	DETAILS	
Α	CS14	(2) 2x	N/A	HD Btwn. Flrs.	
В	3 CMSTC16 (2)		N/A	11/S-3.2	
1	HDU4	(2) 2x	SSTB20 / 18" Min.	HD at Ext. Ftg. 6/S-3.1	
2	HDU8	4x	SSTB28 / 25" Min.	7/S-3.1 HD at Int. Ftg	
3	HDU11	6x6	SB1x30 / 24" Min.	8/S-3.1 9/S-3.1	
FOOT	NOTES:				

(Shown for Clarity)

Walls Low

Intersections, (UNO) 2. All holdowns shown shall be continued down to the foundation with the

. Shared holdowns to be installed per detail **10/S-1.1**, *Typical Shearwall*

same size holdowns and post, (UNO)

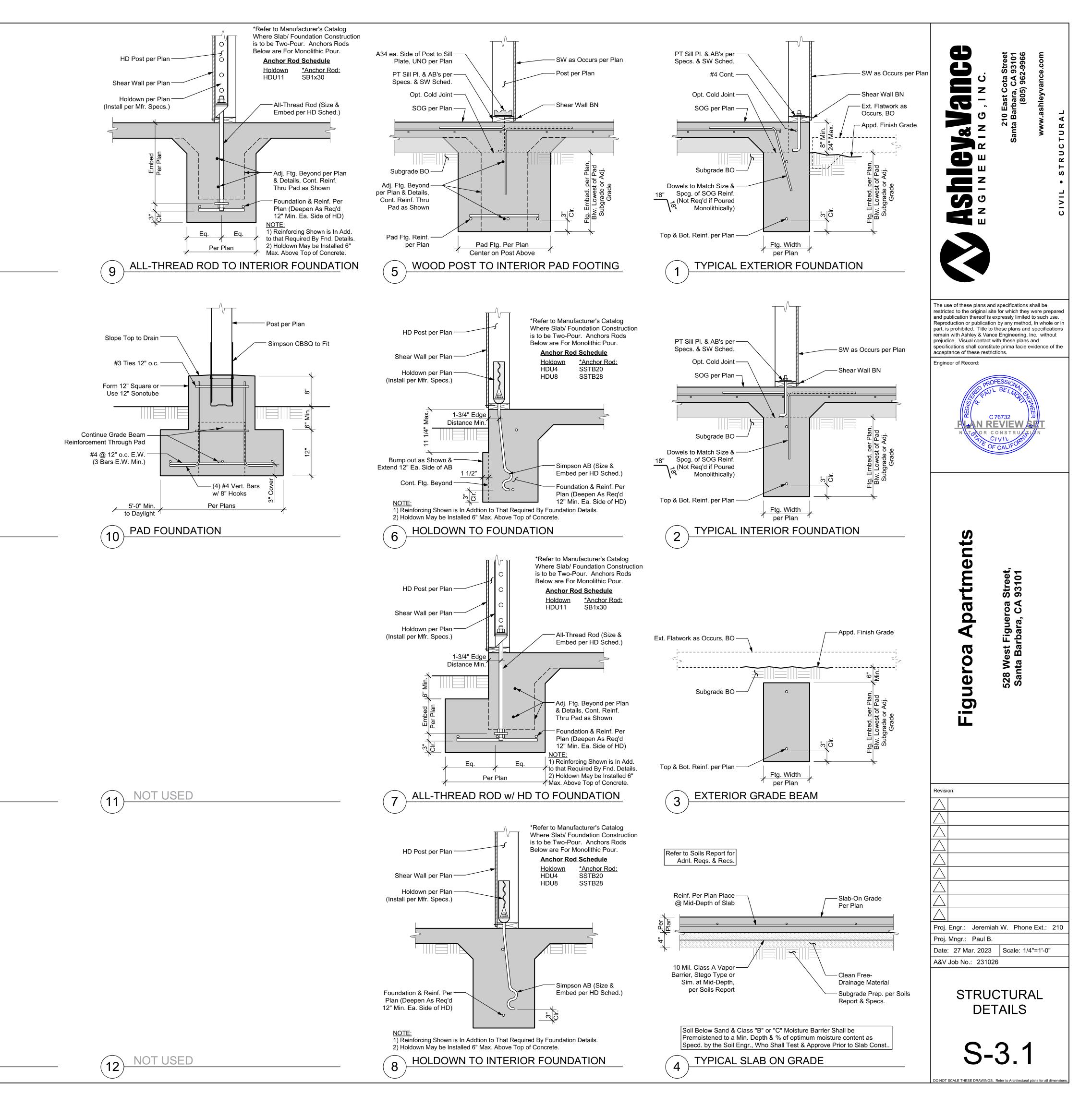
- 8. Where LTP4 clips are installed over shear wall sheathing, fasten with full length 8d common nails.
- 9. 16d common nails through the sill plate to rim member or blocking. 10. Install screws into 3-1/2" wide continuous member, staggered 1-1/2" apart.
- 11. Install screws into Glulams or solid sawn member. LSL, LVL, or PSL members are NOT acceptable, UNO. 12. Provide both A35 and LTP4 clips on opposite sides of shearwall in order to acheive net spacing requirement.

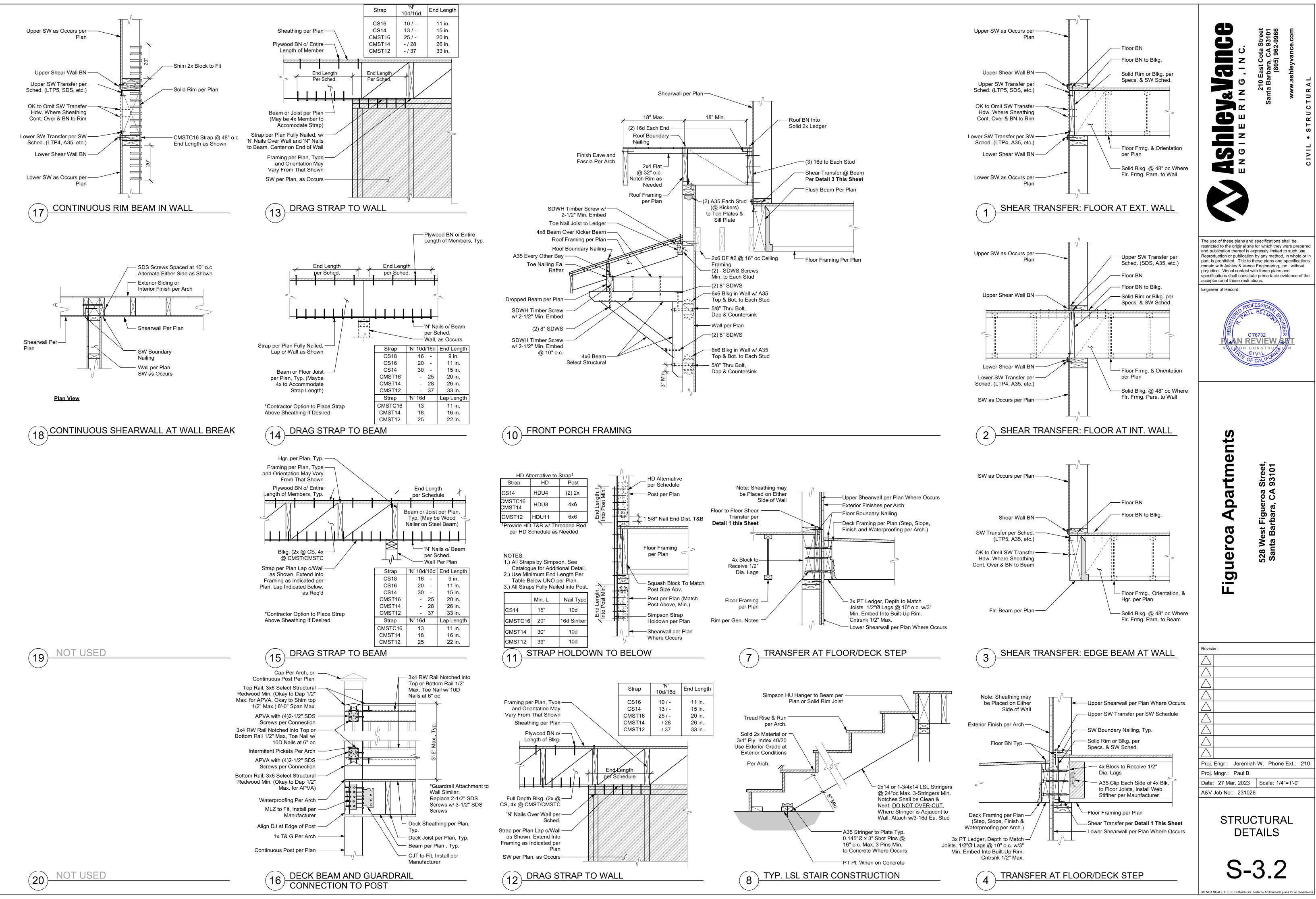
DO NOT SCALE THESE DRAWINGS. Refer to Architectural plans for all dimensions.

NOT USED NOT USED (17)〔13〕 NOT USED NOT USED (18) (14) NOT USED NOT USED (15) (19) NOT USED NOT USED

(16)

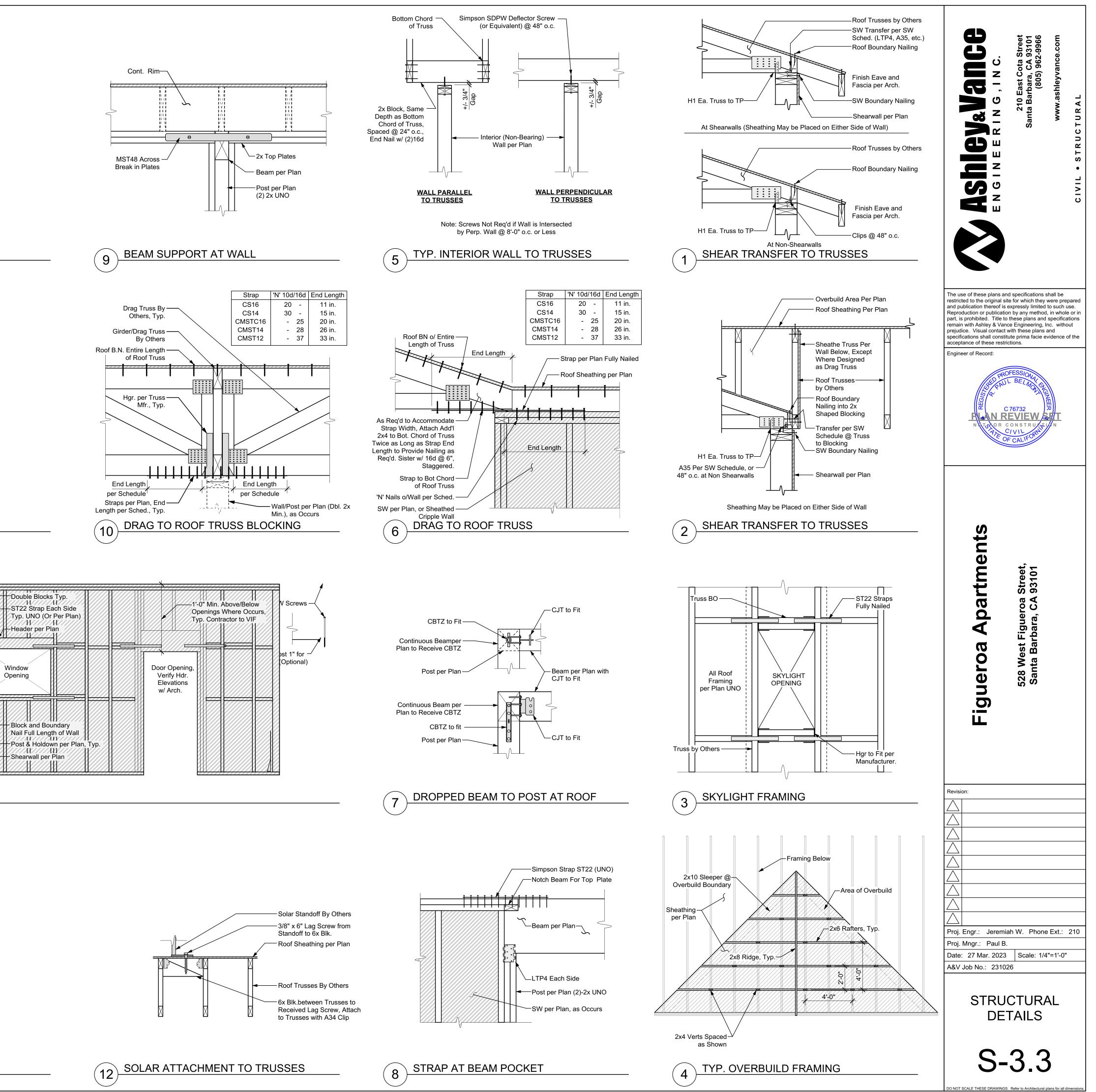
(20)





NOT USED NOT USED (17)(13) NOT USED NOT USED (18)(14)NOT USED **OPENINGS IN SHEARWALL** (19) (15) NOT USED (16)

NOT USED (20)



PLANTING NOTES:

- Shrub layout as shown on plan indicates "shrub masses." Quantities are as shown on legend, on-center spacing as shown on legend. Contractor to verify quantities based on spacing and add additional plant material (at no additional cost to the owner) required to maintain design intent due to existing site conditions not anticipated during design. Layout/spacing shall be as shown on plan or legend. Landscape architect to approve final layout in field prior to installation.
- Contractors shall notify the landscape architect of site conditions which prevent installation per plans and specifications.
- Contractor shall be liable for removing and re-installing irrigation equipment, and replanting areas which are not installed per plan and specifications.
- Refer to planting specifications for inspection/certification schedule.
- Irrigation system shall be installed and operational prior to installation of plant materials
- Trees and shrubs shall be planted after concrete placement, but not before irrigation coverage test no. 1 has been approved. (see specifications).
- Place trees between irrigation heads wherever possible.
- Shredded mulch installation: Install shredded mulch in all shrub and groundcover areas per specifications unless otherwise indicated on plans. Contractor is responsible for all repairs and/or replacement of any damaged
- landscape areas beyond the limit of work, including repairing any irrigation lines/sprinkler heads, that is a direct result of the landscape construction and/or his sub-contractor. Replacement items shall be exact duplication of original work or plants, unless otherwise approved by the landscape architect.
- 10. Clean-up shall take place on a daily basis unless otherwise approved by the owner's representative.
- 11. It is the contractor's responsibility to maintain all grades and flow lines as shown on the grading plan. Where sod is to be installed on a swale, the finish grade must be adjusted so the sod does not restrict the flow.
- 12. Landscape contractor shall take additional soil samples from the site at a rate specified in AB 1881. The samples shall be taken at a depth of 12" after rough grading and submitted to an approved soil and plant laboratory for agricultural suitability testing. The cost of testing shall be included in the contractor's bid.
- 13. The recommendations of the soil report shall supersede the soil preparation and backfill mix specifications (see specifications). The contractor shall submit a copy of all soils reports to the landscape architect prior to modification of these specifications.

CONSTRUCTION NOTES:

- 1. Contractor shall be responsible for consulting with site superintendent, appropriate agencies and plans, in order to determine the location of all underground utilities, pipes, and structures. Contractor shall take sole responsibility for any cost incurred due to damage of said utilities.
- All property lines and lot lines shall be verified prior to commencing work.
- See civil engineer's drawings for all finish/grade elevations not 3 shown in this plan set.
- Contractor is responsible for identifying the accurate location of property lines, right-of-way lines, and shall notify the landscape architect of any discrepancies.
- Contractor shall not willfully proceed with construction as designed when it is obvious the obstructions, area discrepancies and/or grade differences exist that may not have been known during design. Such conditions shall be immediately brought to the attention of the owner's authorized representative. The contractor shall assume full responsibility for all necessary revisions due to failure to give such conditions.
- Contractor shall be responsible for any coordination with subcontractors as required to accomplish all construction operations. All piping, conduit, sleeves, and etc., shall be set in place prior to installation of construction items.
- Refer to City of Santa Barbara standard plans and specifications where applicable.
- Contractor is responsible for replacement of any existing materials that are damaged during construction.
- All dimensions are from outside face of paving, walls, curbs and etc., unless otherwise noted on plans. All baselines are from face of building unless otherwise noted.
- 10. All construction items formed with steel in place and/or compacted subgrade shall be observed and approved prior to installation by the owners representative.
- 11. These plans are for the purpose of construction of referenced site construction features.
- 12. Refer to the civil engineer's drawings for the vertical controls of all construction features and for the horizontal controls and features not described herein.
- 13. Refer to the civil engineer's drawings for the geotechnical report for all details and structural specifications regarding; concrete thickness, presoaking depth, reinforcement, edge conditions, joint requirements, joint spacing and base/sub-base specification information.
- 14. Expansion joints shall be placed in all cases where concrete paving abuts structures.
- 15. All callouts and dimensions are once typical per sheet.
- 16. Contractor shall stake the locations of all walls and hardscape for approval by the owner's representative prior to commencing work.
- 17. Dimensions taken from road edge are to back of curb unless otherwise noted.
- 18. Concrete surfaces shall be formed with long, smooth gradient to reduce dips, abrupt changes and sharp transitions.
- 19. All curvilinear walks, curbs, header boards, and walls shall have a continuous smooth curve where applicable. All forms must be inspected and approved prior to beginning that phase of work.
- 20. Contractor shall submit 3' x 3' (or as noted in the specifications), samples, with joints in place of all paving, paving alternatives, finishes and colors. All samples shall be approved by owner's representative, prior to construction.
- 21. This plan set is based on civil improvement plans prior to residential buildings being designed and plotted. As such improvements such as driveway approaches may be subject to change. If such features locations are adjusted, the contractor shall adjust the landscape and irrigation consistent with the design intent.

MULCH NOTE:

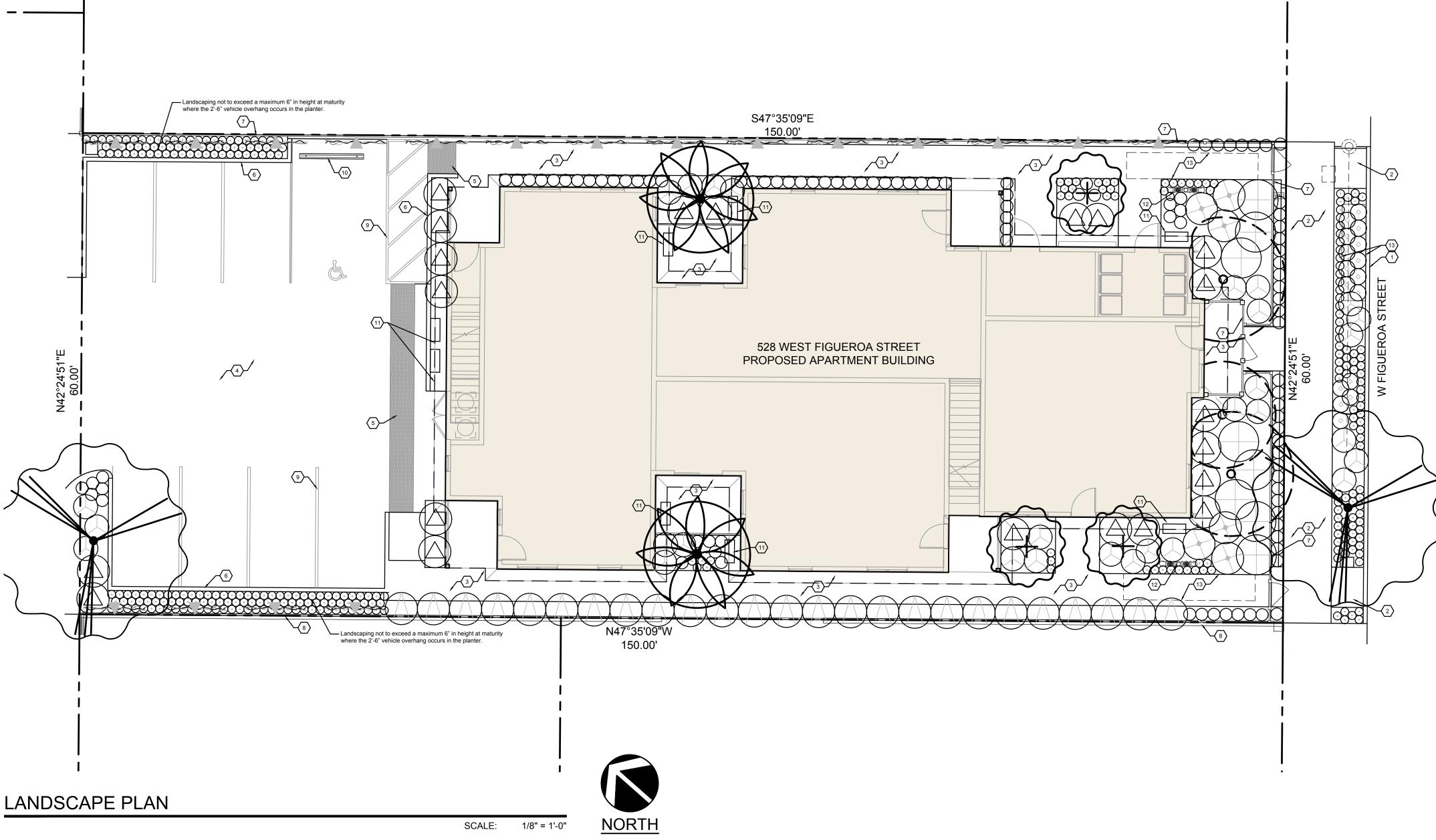
Contractor shall install a 3" layer of mulch available in all shrub and groundcover areas unless otherwise noted.

SOIL AMENDMENT NOTE:

Regardless of the recommendations as a result of the required soils testing, the soil amendment "Tri-C Humate" available from TRI-C Enterprises and distributors or approved equal shall be top dressed and incorporated into the soil at a rate of 10 LBS./1,000SF

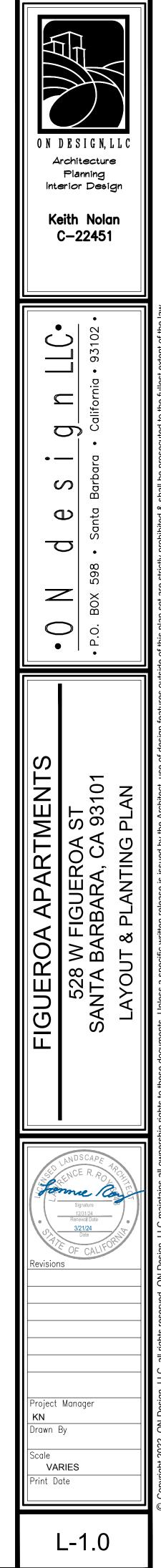
SOILS REPORT AND **RECOMMENDATIONS:**

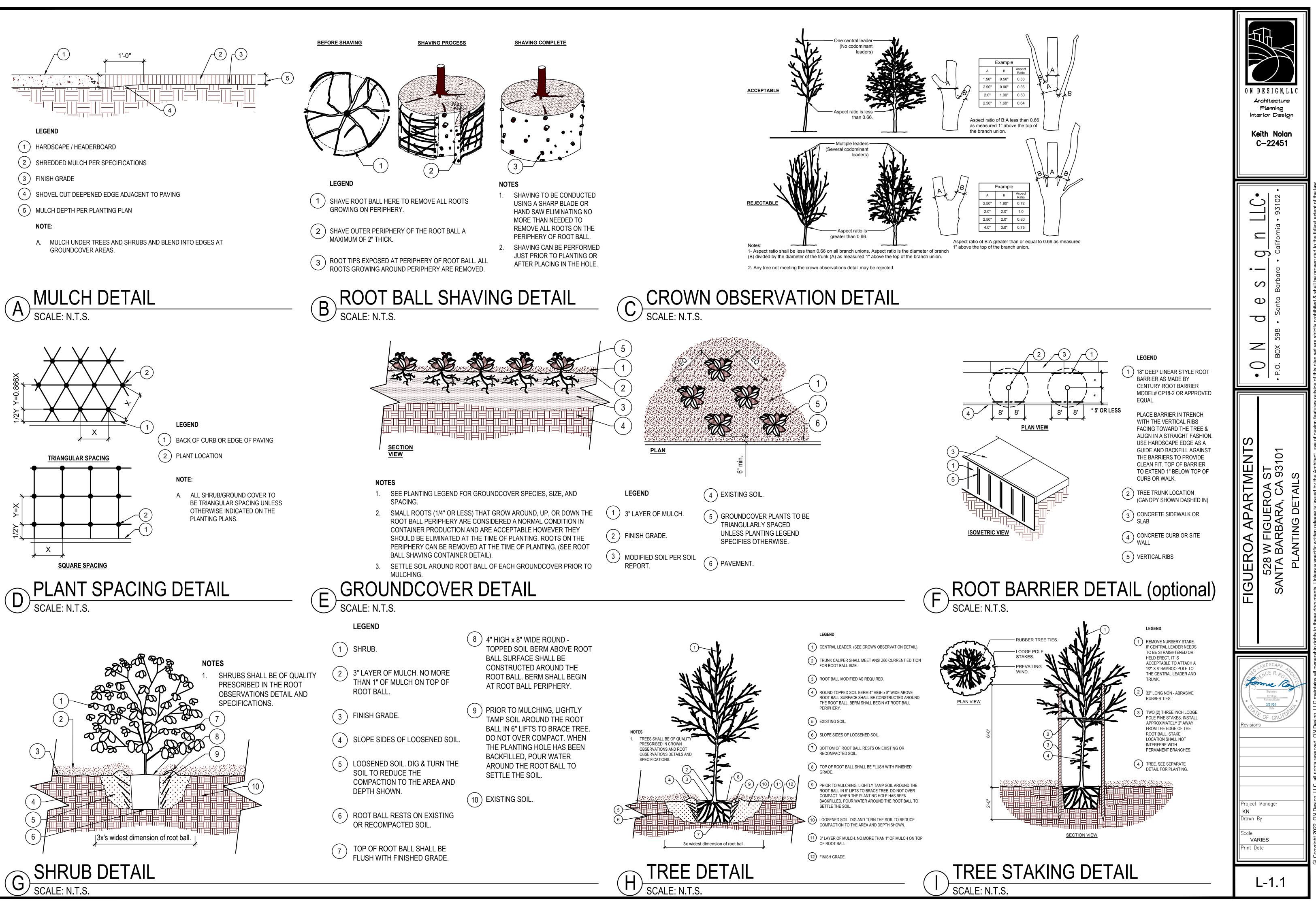
Contractor shall sample the site after mass grading and submit minimum number of samples per code to qualified soil lab. The report and recommendations shall be submittal to the City and Landscape Architect for review.



	PLANT	ING LEGEND:						
	SYMBOL CALLOUT E TREES	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	COMMENTS	WATER USE	QUANTITY
~~~		Existing Tree - Protect in place						
$\langle \mathbf{n} \rangle$	3	- Pyrus kawakamii	Evergreen Pear	24" Box	As Shown	Standard	М	2
		Syagrus romanzoffiana	Queen Palm	10' BTH	As Shown	Standard	М	2
	$\overline{\textcircled{\bullet}}$	Hymenosporum flavum	Sweetshade	24" Box	As Shown	Standard	М	3
	SHRUBS							
	$\bigcirc$	Westringia fruticosa	Low Coast Rosemary	5 Gal.	48" O.C.	-	L	21
		Salvia leucantha	Mexican Bush Sage	5 Gal.	48" O.C.	-	L	6
	$\bigcirc$	Agave attenuata	Fox Tail Agave	5 Gal.	36" O.C.	-	L	29
	0	Agapanthus africanus 'Peter Pan'	Dwarf Agapanthus	1 Gal.	18" O.C.	-	L	101
	GROUNDC	OVER						
	$\bigcirc$	Salvia 'Bee's Bliss'	Bee's Bliss Sage	1 Gal.	60" O.C.	-	L	8
	Ο	Dymondia margaretae	Silver Carpet	Flats	12" O.C.	-	L	14
	$\bigcirc$	Festuca mairei	Atlas Fescue	1 Gal.	24" O.C.	-	L	16
	VINE							
7		Trachelospermum jasminoides	Star Jasmine	1 Gal.	As Shown	-	L	19

CONSTRUCTION LEGEND				
ITEM	DESCRIPTION	DETAIL		
(1)	Curb and gutter	Per Civil Eng.		
2	Sidewalk	Per Civil Eng.		
3	4" Natural gray concrete sidewalk w/ medium broom finish.	Per Civil Eng.		
$\langle 4 \rangle$	Permeable concrete	Per Civil Eng.		
5	Truncated Dome	Per Civil Eng.		
6	Vertical Curb	Per Civil Eng.		
$\overline{7}$	Wood Fence	Per Architect		
8	Combo wall/fence	Per Architect		
(9)	Parking lot striping	Per Architect		
(10)	Wheel stop	Per Architect		
(11)	Heat pump	Per Architect		
(12)	Backflow preventer	Per Civil Eng.		
(13)	BMP	Per Civil Eng.		





## **IRRIGATION NOTES:**

- This system is diagrammatic. all pipe, valves, etc. shown within paved areas are for design clarification only and shall be installed in planting areas wherever possible.
- Do not willfully install the sprinkler system as indicated on the drawings when it is obvious in 7. the field that unknown obstructions or grade differences exist and should be brought to the attention of the owner's representative. In the event that this notification is not performed, the contractor must assume full responsibility for revisions necessary.
- System design is based on minimum operating pressure shown at each point of connection with maximum GPM demand specified. Irrigation contractor shall verify all pressures on site prior to construction to owner's construction representative.
- It is the responsibility of the irrigation contractor to familiarize their self with all grade differences, location of walls, retaining walls, curbs, etc. They shall coordinate all his work with the general contractor and other sub-contractors for location of pipe sleeves through walls, under roads, paving and structures.
- Mainline feeder between point of connection meter, and backflowpreventer to be of material required by current water district.

#### CONTROLLER NOTE:

Automatic irrigation controller shall be wall mounted on building. Final location to be approved by owner. Make and model as specified on irrigation legend. Installation location approximate. 120 volt power provided by owner.

#### MAINLINE & LATERAL LINE NOTE:

Mainline & lateral lines shown for clarity only. Place pipe in adjacent planter. Do not install any piping under wall footings (exception when crossing & sleeved) fence posts or lighting footings. Maintain a minimum of 12" clearance from above items.

#### DRIPLINE INSTALLATION NOTES:

- Dripline emitters and spacing between lines as per Irrigation Legend.
- Locate flush valve at lowest and furthest points of system. Install in planter area. See flush valve detail for installation. Locate air relief valve near system high point, if needed.
- Connect dripline to supply tubing with PLD-Loc fittings.

#### SOLAR SYNC SENSOR NOTE:

Contractor to install a wireless solar sync sensor on building in an open area to collect solar and rain water.

#### MWELO 492.7(a)(1)(M) NOTE:

all irrigation emission devices must meet the requirements set in the american national standards institute (ansi) standard, american society of agricultural and biological engineers'/international code council's (asabe/icc) 802-2014 "landscape irrigation sprinkler and emitter standard, all sprinkler heads installed in the landscape must document a distribution uniformity low quarter of 0.65 or higher using the protocol defined in asabe/icc 802-2014.

#### MWELO 492.7(a)(1)(I) NOTE:

The irrigation system has been designed utilizing drip systems. most plant material will be irrigated with point source emitters at the base of plants not to cause runoff. Groundcover areas may be irrigated with micro-sprays targeted specifically at the plants, and their radius can be modified not to cause runoff or overspray. The drip and micro-spray systems both have a low gpm outflow to allow water to percolate and not cause runoff. The site is flat, and low head drainage will not be an issue.

#### MWELO 492.7(A)(1)(U) NOTE:

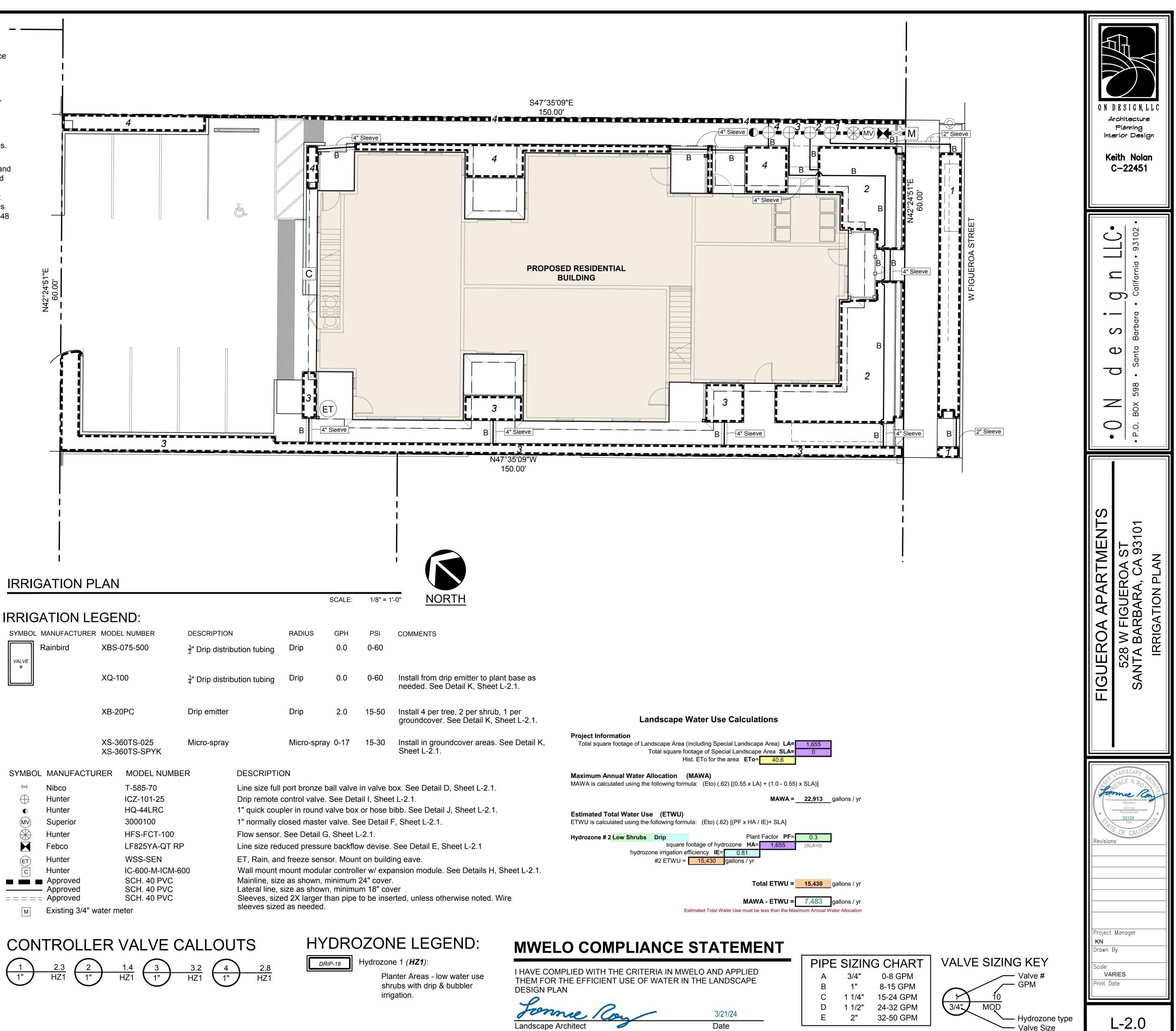
Micro-spray irrigation shall not be permitted within 24" of adjacent pavement. Adjust spray radius to prevent overspray and runoff.

#### THIS IS A POTABLE IRRIGATION SYSTEM

#### **SLEEVING NOTE:**

Sleeve all hardscape crossing prior to hardscape placement.

- Final location of the automatic controller enclosure and the backflow prevention device shall be approved by the city's and owner's representative, and/or landscape architect, where applicable.
- In addition to the sleeves shown on the plan, the irrigation contractor shall be responsible for the installation of additional sleeves of sufficient size under all paved areas prior to paving upon approval of the owner's representative, if required to operate systems.
- 8. Irrigation contractor shall flush all lines and adjust all heads for maximum performance and to prevent overspray onto walks, streets, and buildings as much as possible. This shall include selecting the best nozzle radius to fit unusual site conditions for approval purposes at no extra charge. Call landscape architect 48 hours in advance for any coverage tests.
- Quality control observation sequences are found in the specifications.
- 10. Clean-up on a daily basis per owner's representative's approval.



#### **IRRIGATION PLAN**

## **IRRIGATION LEGEND:**

		_
SYMBC	L MANUFACTURER	MODEL NUMBER
	Rainbird	XBS-075-500
VALVE #		
		XQ-100

$\boxtimes$	Nibco	T-585-7	
$\bigoplus$	Hunter	ICZ-101	
$\bullet$	Hunter	HQ-44L	
MV	Superior	3000100	
$\bigotimes$	Hunter	HFS-FC	
	Febco	LF825Y	
(ET)	Hunter	WSS-SE	
C	Hunter	IC-600-N	
	Approved	SCH. 40	
	Approved	SCH. 40	
====	Approved	SCH. 40	
Μ	Existing 3/4" water meter		

