

**ALL PLANS SHALL COMPLY WITH:**

- 2022 California Administrative Code, Part 1,
- 2022 California Building Code, Part 2,
- 2022 California Residential Code, Part 2.5,
- 2022 California Electrical Code, Part 3,
- 2022 California Mechanical Code, Part 4,
- 2022 California Plumbing Code, Part 5,
- 2022 California Energy Code, Part 6,
- 2022 California Historical Building Code, Part 7
- 2022 California Fire Code, Part 9,
- 2022 California Existing Building Code, Part 10,
- 2022 California Green Building Standards Code, Part 11,
- 2022 California Referenced Standard Code, Part 12,

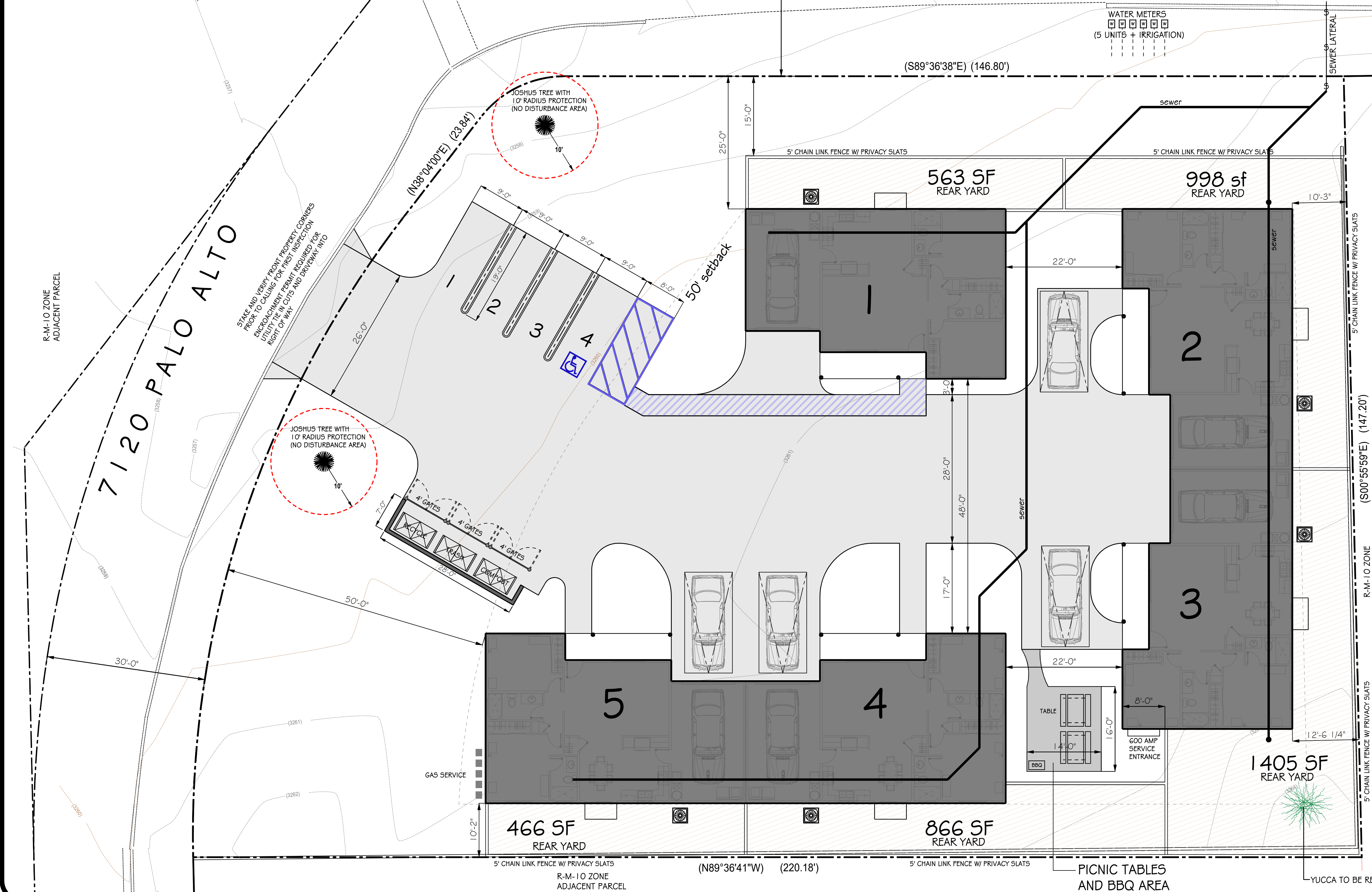
C-6 ZONE  
ADJACENT PARCEL

ALTA VISTA DR.

Vicinity Map



Revisions	By
ADD ADA STALL AND PATH	BTD



Owner:  
VATSON HOLDINGS LLC  
7120 PALO ALTO AVE  
YUCCA VALLEY, CA 92284-3820

APN: 0595-282-12-0000

County: SAN BERNARDINO  
Community: Town of Yucca Valley

Lot Area: 29,185 Sq. Ft.

OCCUPANCY: R-3/ U  
SPRINKLERS: YES  
CONSTRUCTION TYPE: VB  
NO. OF STORIES: 1

SQUARE FOOTAGE TABULATIONS:

UNIT 1 = 1020 SF LIVING AREA  
322 SF GARAGE  
100 SF COVERED PATIO

UNIT 2 = 1020 SF LIVING AREA  
322 SF GARAGE  
100 SF COVERED PATIO

UNIT 3 = 1020 SF LIVING AREA  
322 SF GARAGE  
100 SF COVERED PATIO

UNIT 4 = 1020 SF LIVING AREA  
322 SF GARAGE  
100 SF COVERED PATIO

UNIT 5 = 1020 SF LIVING AREA  
322 SF GARAGE  
100 SF COVERED PATIO

TOTAL ENCLOSED AREA = 6710 SF

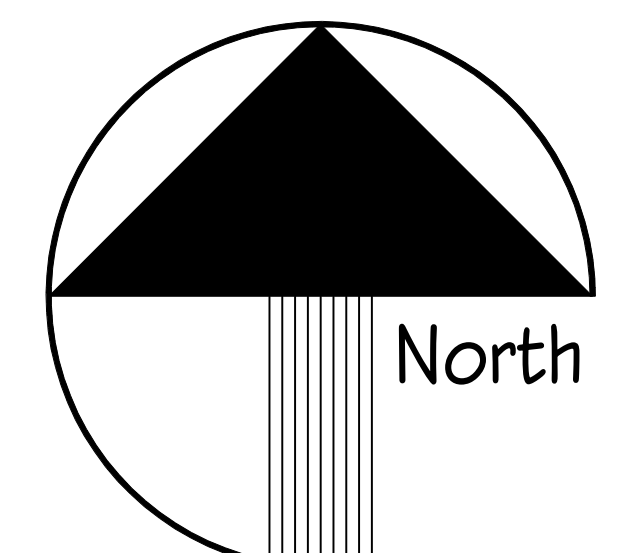
LOT AREA = 29,185 SF (.67 AC)

BUILDINGS = 23% LOT COVERAGE  
PARKING / PAVING = 25% (7426 SF)  
LANDSCAPE/ OPEN = 52% (15,039 SF)

PARKING ANALYSIS:

REQUIRED:  
2 spaces for each unit containing 2 or more bedrooms.  
At least 1 of the spaces required for each unit shall be within a garage or carport

PROVIDED:  
(5) 2 BEDROOM UNITS REQUIRE 10 SPACES  
5 SPACES WITHIN GARAGES OR CARPORTS  
8 OPEN SPACES, TOTAL 13 SPACES PROVIDED



5 UNIT RENTAL COMPLEX FOR:  
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APN: 0595-282-12-0000

**DESIGN CONCEPTS**  
DRAFTING AND DESIGN SERVICE  
5744 S 29 Palms Hwy., Suite 304  
Yucca Valley, CA 92284  
Phone (760) 365-8742 - Fax (760) 365-8742  
Email: design.online@venzon.net

DRAWN BRIAN T. DEBOLT
CHECKED
DATE 6/08/2021
SCALE 1" = 10'
JOB NUMBER Valley Pipeline
SHEET # 1

Site Plan



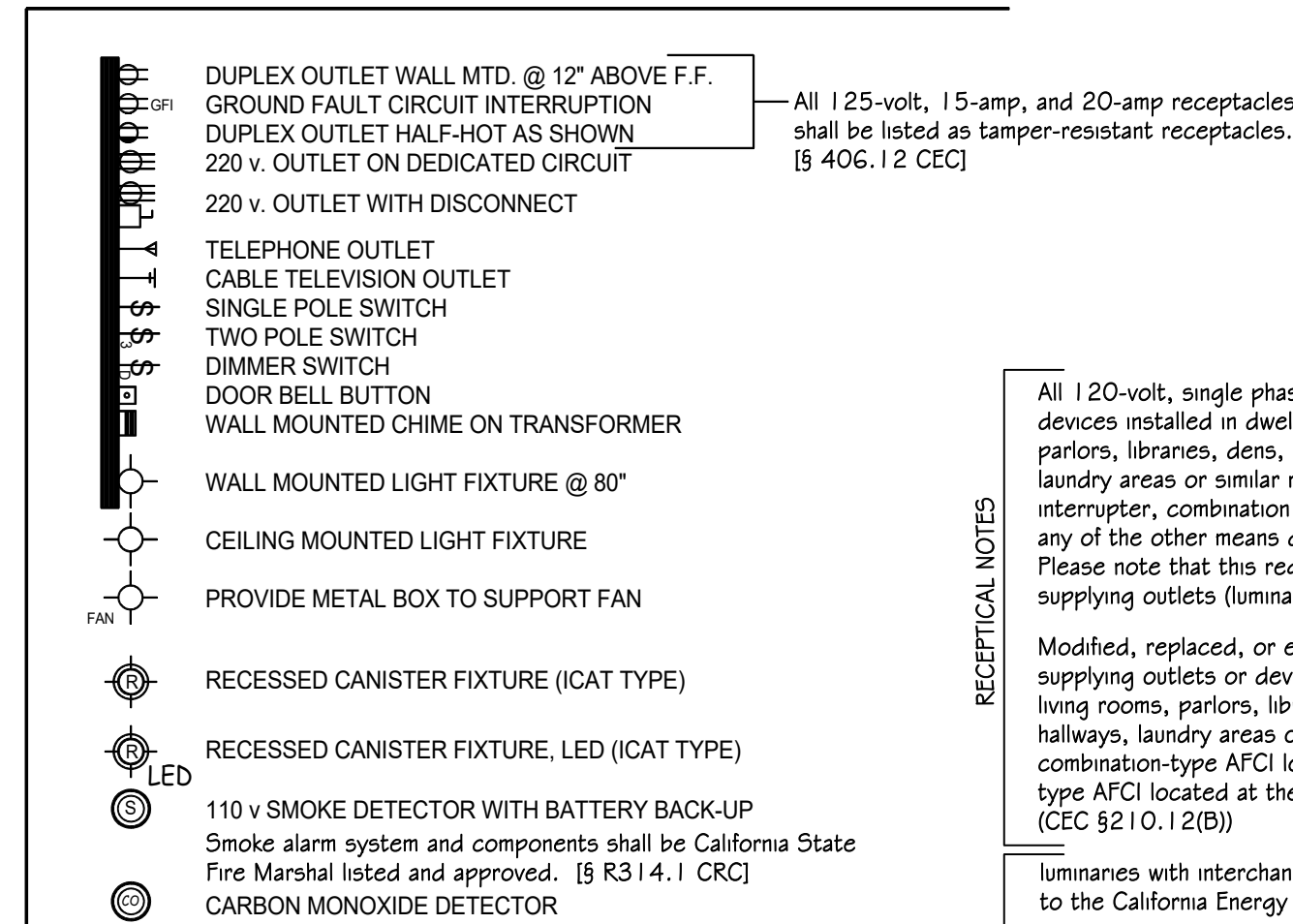
## RESIDENTIAL ENERGY REQUIREMENTS:

- ALL NEW GLAZING WILL BE INSTALLED WITH CERTIFYING LABEL ATTACHED, SHOWING U-VALUE.
- PIPING FOR RECIRCULATING WATER HEATING SYSTEM IS REQUIRED TO INSULATE FOR THE ENTIRE LENGTH REGARDLESS OF LOCATION PER SECTION 150 (j)(2).
- LIGHTING IN KITCHENS SHALL HAVE LAMPS PROVIDING A MIN. OF 40 WATT (NO COMPACT FLUORESCENT). A FIXTURE WHICH IS THE ONLY LIGHTING IN THE KITCHEN WILL BE CONSIDERED GENERAL LIGHTING. GENERAL LIGHTING SHALL BE CONTROLLED BY THE MOST ACCESSABLE SWITCH.
- FLUORESCENT FIXTURES SHALL NOT CONTAIN MEDIUM BASE INCANDESCENT LAMP SOCKET AND SHALL BE ON SEPERATE SWITCHES FROM ANY INCANDESCENT LIGHTING.
- ALL LIGHTING FIXTURES RECESSED INTO INSULATED CEILINGS SHALL BE APPROVED FOR ZERO CLEARANCE INSULATION COVER AND AIR TIGHT (TYPE IC-AT)
- ALL SHADING DEVICES MUST BE INSTALLED PRIOR TO FINAL INSPECTION.

## GENERAL NOTES:

- UPON COMPLETION OF THE INSULATION, A CARD CERTIFYING THAT THE INSULATION HAS BEEN INSTALLED IN CONFORMANCE WITH THE REQUIREMENTS OF THIS REGULATIONS SHALL BE COMPLETED BY THE INSULATION APPLICATOR AND BY THE BUILDER. POST THIS CERTIFICATE IN A CONSPICUOUS PLACE INSIDE THE DWELLING.
- FIXTURES HAVING SLIP JOINT CONNECTIONS SHALL BE PROVIDED WITH AN ACCESS PANEL PER UPC SECTION 904(b)
- WHERE ANY 2" VENT RUNS HORIZ. IN WALL, THE MINIMUM STUD SIZE FOR THAT WALL IS TO BE 2x6 FOR THAT PLUMBING WALL.
- PROVIDE A 1-3/4" THICK SOLID CORE DOOR WITH A SELF CLOSER AT SEPERATION WALL BETWEEN GARAGE AND RESIDENCE.
- DRYER DUCT SHALL BE SMOOTH METAL AND SHALL HAVE A BACK DRAFT DAMPER PER UMC.
- WATER HEATER SHALL BE PROVIDED WITH A TEMPERATURE AND PRESSURE RELIEF VALVE AND DRAIN LINE TO EXTEND TO THE OUTSIDE.
- PROVIDE A NON-REMOVABLE BACKFLOW PREVENTION DEVICE ON ALL EXTERIOR HOSE-BIBS
- 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. [§408.3 CPC]

## ELECTRICAL SYMBOLS:



## ELECTRICAL NOTES:

- ALUMINUM CONDUCTORS ARE PERMITTED ONLY IF SIZE 1/0 OR LARGER, AND ONLY TO FEED MAIN OR SUB-PANELS. ALL OTHER CURRENT CARRYING CONDUCTORS SHALL BE COPPER.
  - PROVIDE AT LEAST TWO 20-AMPERE SMALL APPLIANCE BRANCH CIRCUITS TO SERVE KITCHEN, BREAKFAST ROOM, AND DINING ROOM. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS.
  - PROVIDE AT LEAST ONE 20-AMPERE TO SERVE LAUNDRY APPLIANCES SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS.
  - PROVIDE AT LEAST ONE 20-AMPERE BRANCH CIRCUIT TO SERVE BATHROOM RECEPTACLES. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS.
  - PROVIDE ARC-FAULT CIRCUIT INTERRUPTERS FOR ALL OUTLETS (NOT JUST RECEPTACLES) LOCATED IN ROOMS DESCRIBED IN NEC 210.12(B); FAMILY, LIVING, BEDROOMS, DINING, HALLS, ETC.
  - PROVIDE 50 CFM, 1 SONE EXHAUST FANS  
EXHAUST FANS IN BATHROOMS SHALL BE ENERGY STAR RATED AND CONTROLLED BY A HUMIDISTAT CAPABLE OF AN ADJUSTMENT BETWEEN 50% AND 80% HUMIDITY  
BATHROOM FANS USED INTERMITTENTLY MUST BE 3 SONES OR LESS
  - RECESSED FLUORESCENT CAN LIGHT, ICAT RATED  
120V NPL electronic ballast - Energy Star and California T24 requirements  
(1) quad or triple, 15-Watt compact fluorescent lamp.
- ALL RECEPTACLE OUTLET LOCATIONS WILL COMPLY WITH CEC ARTICLE 210.52(A)  
 -PROVIDE TAMPER RESISTANT RECEPTACLES FOR ALL LOCATIONS DESCRIBED IN 210.52 (ALL LOCATIONS)

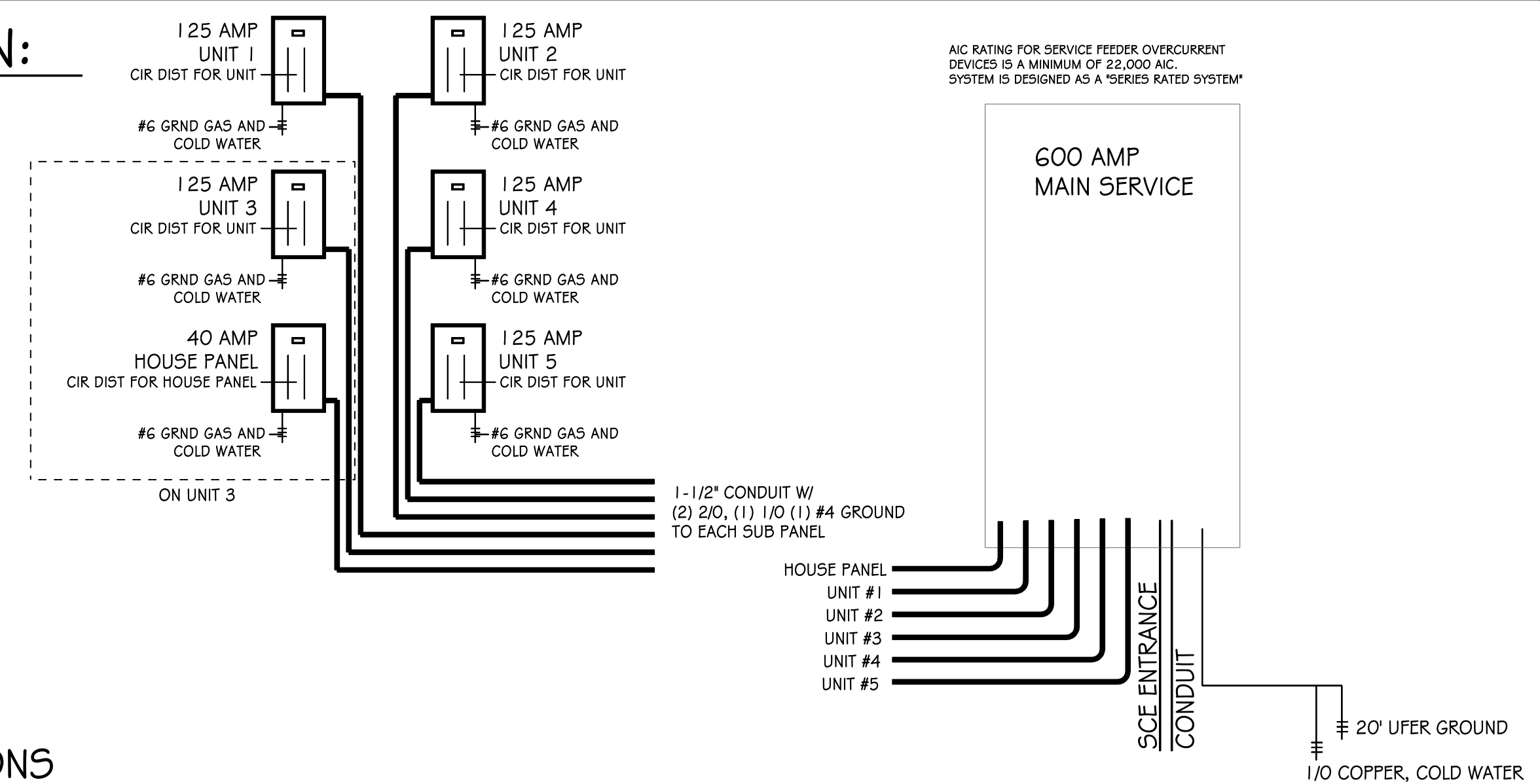
## FOR WATER HEATERS IN NEW CONSTRUCTION:

- 120V receptacles provided within 3ft
- A category III or IV vent, or a straight (without bends) Type B vent
- Condensate drain that is no more than 2 inches higher than the base of the water heater
- Gas supply line with a minimum 200,000 Btu/hr. dedicated capacity for the water heater

All hot water piping sized 3/4" or larger is required to be insulated as follows:  
 1" pipe size or less: 1" thick insulation; larger pipe sizes require 1-1/2" thick insulation.  
 Note: In addition, the 1/2" size hot water pipe to the kitchen sink is required to be insulated. E5 150.0(j)  
 Below grade hot water piping is required to be installed in a waterproof and noncrushable sleeve or casing that allows for replacement of both the piping and insulation. E5 150.0(j)

## ELECTRICAL LOAD CALCULATION:

1020 sf @ 3 WATTS (GENERAL LIGHTING)	3,060 watts
(4) APPLIANCE CIRCUITS @ 1500 WATTS	6,000 watts
(1) FAU's	1,600 watts
(1) WASHERS	1,000 watts
	<b>11,660 watts</b>
1st 10,000 watts @ 100% REMAINDER @ 40%	10,000 watts
	<b>664 watts</b>
	<b>10,664 watts</b>
AVC LOADS @ 100%	
3 tons x 1250 WATTS = 3,750 WATTS	3,750 watts
	<b>14,414 WATTS</b>
14,414 WATTS / 240 VOLTS = 60 AMPS, 125 AMPS PROPOSED	



## ELECTRICAL SINGLE LINE AND CALCULATIONS

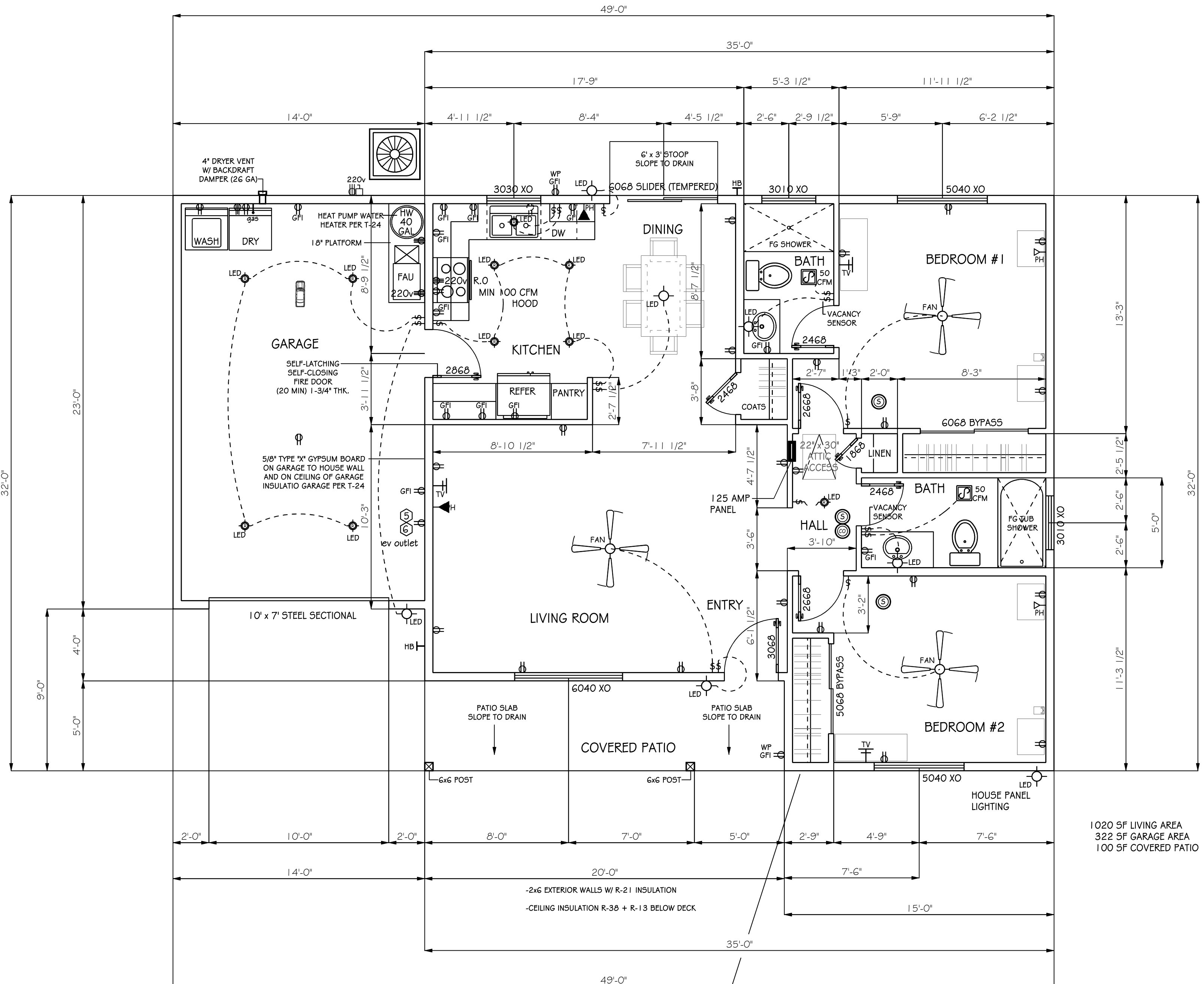
## SMOKE AND CO ALARM REQUIREMENTS

- Required smoke alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection. [§R314.4 CRC]
- The smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed. [§R314.4 CRC]
- Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery backup. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection. [§R315.5 CRC]
- Where more than one carbon monoxide alarm is required, the alarm shall be interconnected so that activation of one alarm activates all of the alarms in the individual unit. [§R315.7 CRC]

## RECEPTICAL NOTES

- All 120-volt, single phase, 15- and 20-ampere branch circuits supplying outlets or devices installed in dwelling unit kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, laundry areas or similar rooms or areas shall be protected by an listed arc-fault circuit interrupter, combination type, installed to provide protection of the branch circuit or by any of the other means described in 210.12(A)(2) through (6). (CEC §210.12(A))  
 Please note that this requirement requires protection of the entire branch circuit supplying outlets (luminaires, fans, smoke alarms, etc.) and the devices within dwelling unit.
- Modified, replaced, or extended 120-volt, single phase, 15- and 20-ampere branch circuits supplying outlets or devices installed in dwelling unit kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, laundry areas or similar rooms or areas shall be protected by either a listed combination-type AFCI located at the origin of the branch circuit or a listed outlet branch-circuit type AFCI located at the first receptacle outlet of the existing branch circuit. (CEC §210.12(B))
- Luminaires with interchangeable or screw based sockets may qualify as "high efficacy" if registered to the California Energy Commission and equipped with a properly labeled "JAB" compliant bulb.
- Recessed luminaires shall not be of a type with screw based sockets. Additionally, all luminaires that are recessed into insulated ceilings are required to be IC-AT rated (insulation contact and airtight with air leakage less than 2.0 CF, at 75 pascals when tested in accordance with ASTM 283) and be sealed with a gasket or caulk between the luminaire housing and ceiling, and shall have all air leak paths between conditioned and unconditioned spaces sealed with a gasket or caulk.
- In addition to qualifying as high efficacy, outdoor lighting must be equipped with a manual ON and OFF switch that does not override to automatic ON; controlled by a motion sensor not having an override or bypass switch that disables the motion sensor, or controlled by a motion sensor having a temporary override which bypasses the motion sensing function and automatically reactivates the motion sensor within 6 hours; and controlled by either a photo cell, an astronomical time clock or an Energy management system. (California Energy Code §150.0(k) 9)
- All installed recessed lighting and screw-based lighting complying with Joint Appendix B must be controlled by either a dimmer or vacancy sensor. Indicate on plan the method of switching in compliance with these requirements. (CEC §150.0(k)2K)

- Showers compartments, regardless of shape, shall have a minimum finished interior of 1024 square inches (32' by 32')
- 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. [§ R307.2 CRC]
- Egress doors shall be operable from inside the dwelling without the use of a key or special knowledge or effort. [§ R311.2 CRC]
- Provide a permanently accessible 12-inch square bathtub trap access or note on plan that a non-slip-joint trap will be used. [§402.11 CFC]
- Pad supporting compressor/condenser shall be a minimum of 3" above the grade. [§1106.2 CMC]
- A one-inch diameter electrical conduit shall be provided for installation of future solar PV energy systems on single family dwellings. The one-inch diameter electrical conduit shall extend from the exterior wall location adjacent to the main electrical service panel and terminate into the attic space. At each location, the conduit shall terminate at a two-gang, electric junction box. Three open spaces shall be provided at the bottom of the buss to accommodate future solar PV systems.
- The EVSE must consist of minimum 1" conduit extending from the main panel to a junction box where the EVSE receptacle will be provided. The main service panel must be sized to accommodate 200/240 Volt, 40 amp dedicated branch circuit. CEC 4.106.4.



## UNIT 1

Floor & Electrical Plan

Revisions	By
CORRECTED PER B45	BTD

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DRAWN  
 BRIAN T. DEBOLIT  
 CHECKED  
 DATE  
 9/18/2020  
 SCALE  
 1/4"=1'  
 JOB NUMBER  
 VALLEY PIPELINE  
 SHEET #

2

OF 3 SHEETS



# ELECTRICAL SYMBOLS:

- DUPLEX OUTLET WALL MTD. @ 12" ABOVE F.F.
- GROUND FAULT CIRCUIT INTERRUPTION
- DUPLEX OUTLET HALF-HOT AS SHOWN
- 220 v. OUTLET ON DEDICATED CIRCUIT
- 220 v. OUTLET WITH DISCONNECT
- TELEPHONE OUTLET
- CABLE TELEVISION OUTLET
- SINGLE POLE SWITCH
- TWO POLE SWITCH
- DIMMER SWITCH
- DOOR BELL BUTTON
- WALL MOUNTED CHIME ON TRANSFORMER
- WALL MOUNTED LIGHT FIXTURE @ 80"
- CEILING MOUNTED LIGHT FIXTURE
- PROVIDE METAL BOX TO SUPPORT FAN
- RECESSED CANISTER FIXTURE (ICAT TYPE)
- RECESSED CANISTER FIXTURE, LED (ICAT TYPE)
- 110 v SMOKE DETECTOR WITH BATTERY BACK-UP
- Smoke alarm system and components shall be California State Fire Marshal listed and approved. [§ R314.1 CRC]
- CARBON MONOXIDE DETECTOR
- Fluorescent 4' FLUORESCENT FIXTURE

## ELECTRICAL NOTES:

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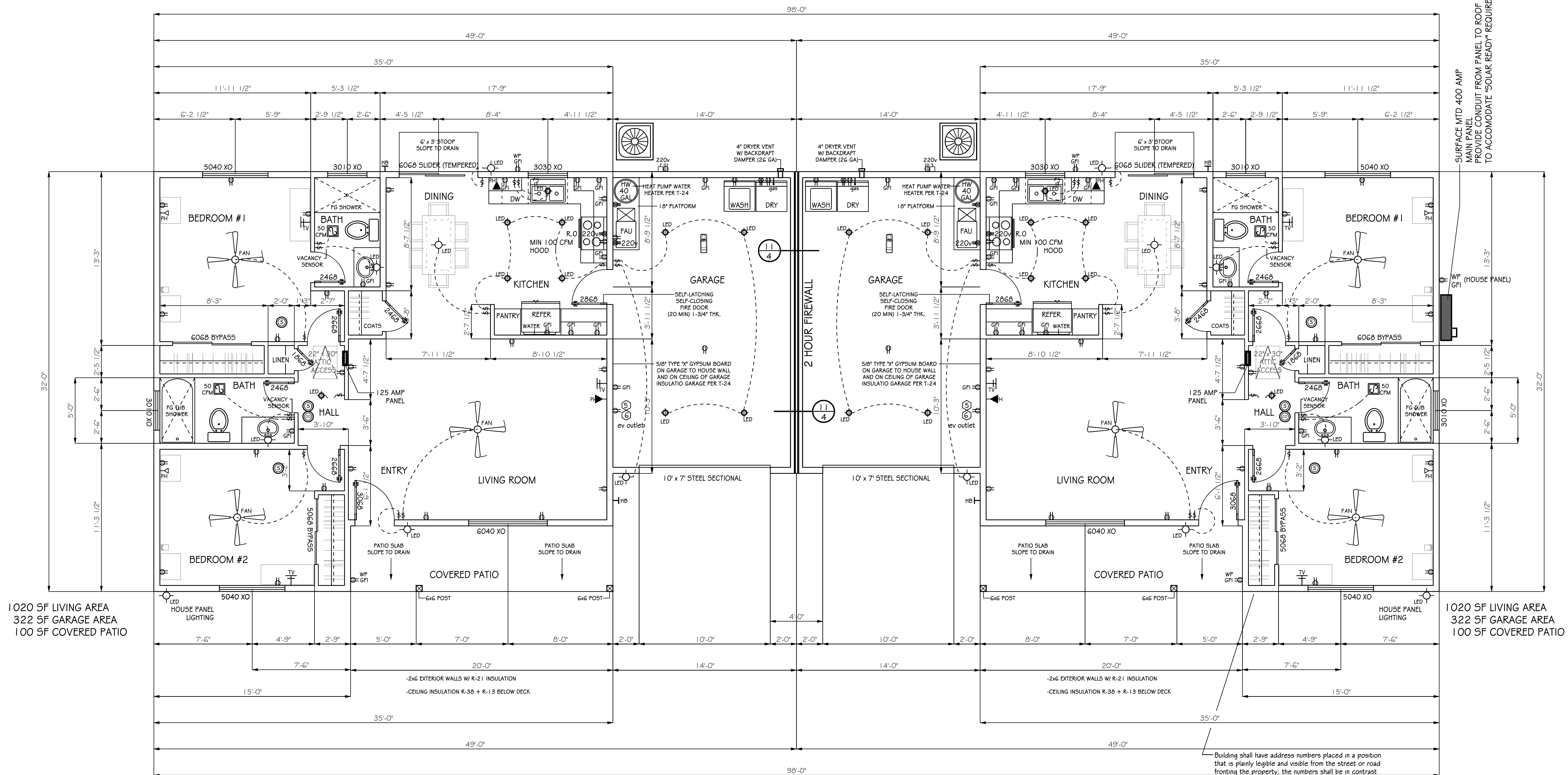
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 100 SF COVERED PATIO

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UNIT 2 & 4

UNIT 3 & 5

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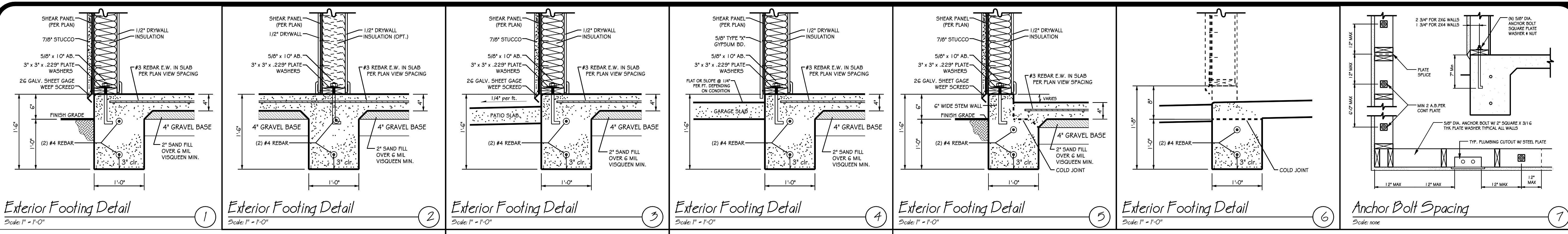


DRAWN	BRIAN T. DEBOLT
CHECKED	
DATE	9/18/2020
SCALE	1/4"=1'
JOB NUMBER	VALLEY PIPELINE
SHEET #	

3

OF 3 SHEETS





Exterior Footing Detail  
Scale: 1" = 1'-0"

Exterior Footing Detail  
Scale: 1" = 1'-0"

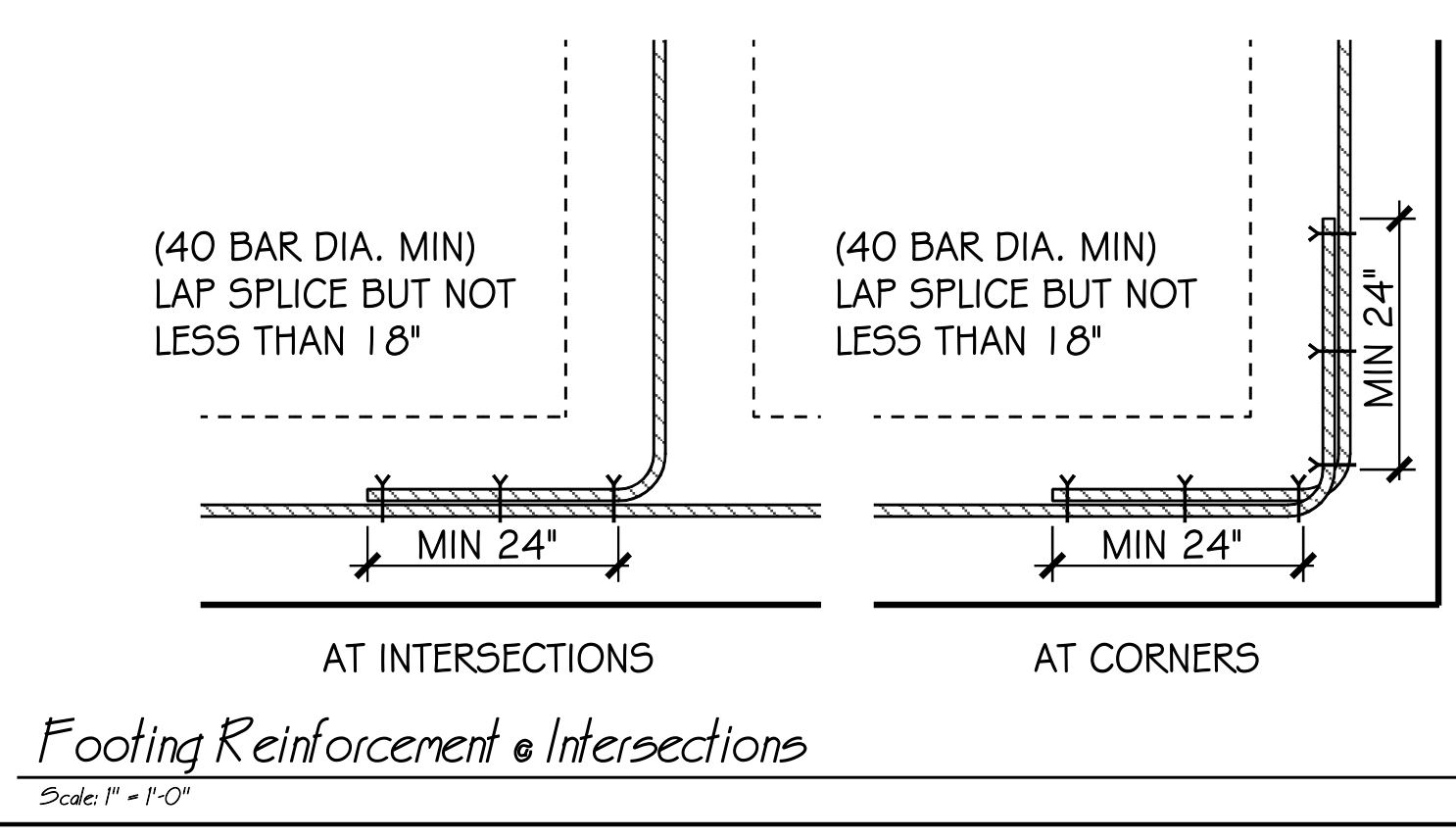
Exterior Footing Detail  
Scale: 1" = 1'-0"

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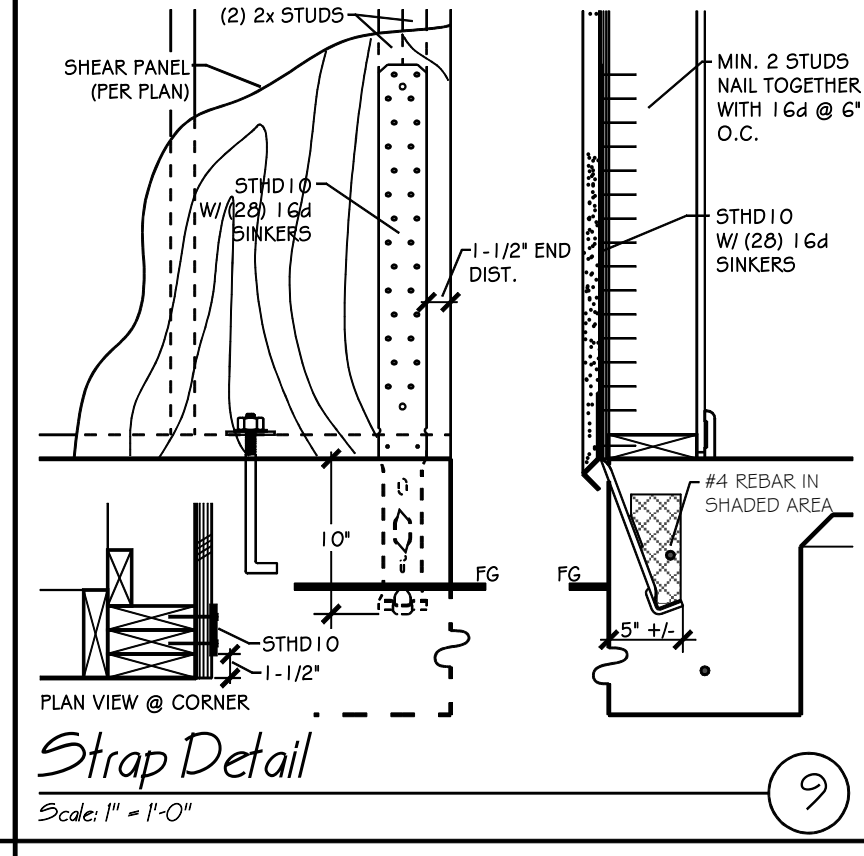
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Scale: 1" = 1'-0"

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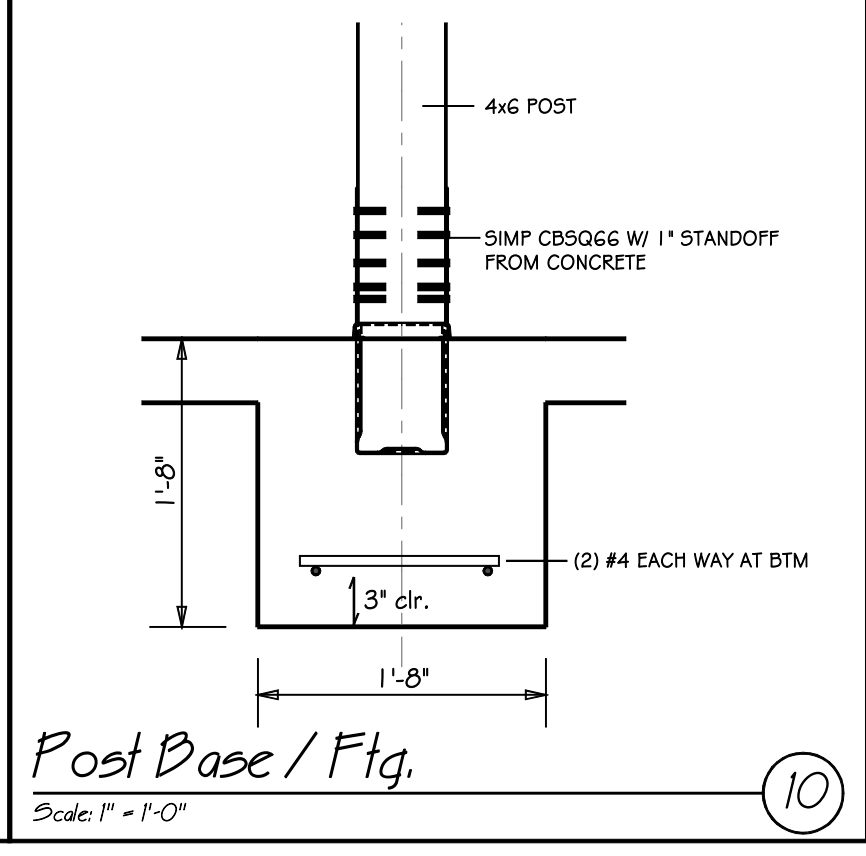
Anchor Bolt Spacing  
Scale: none



Footing Reinforcement @ Intersections  
Scale: 1" = 1'-0"



Strap Detail  
Scale: 1" = 1'-0"



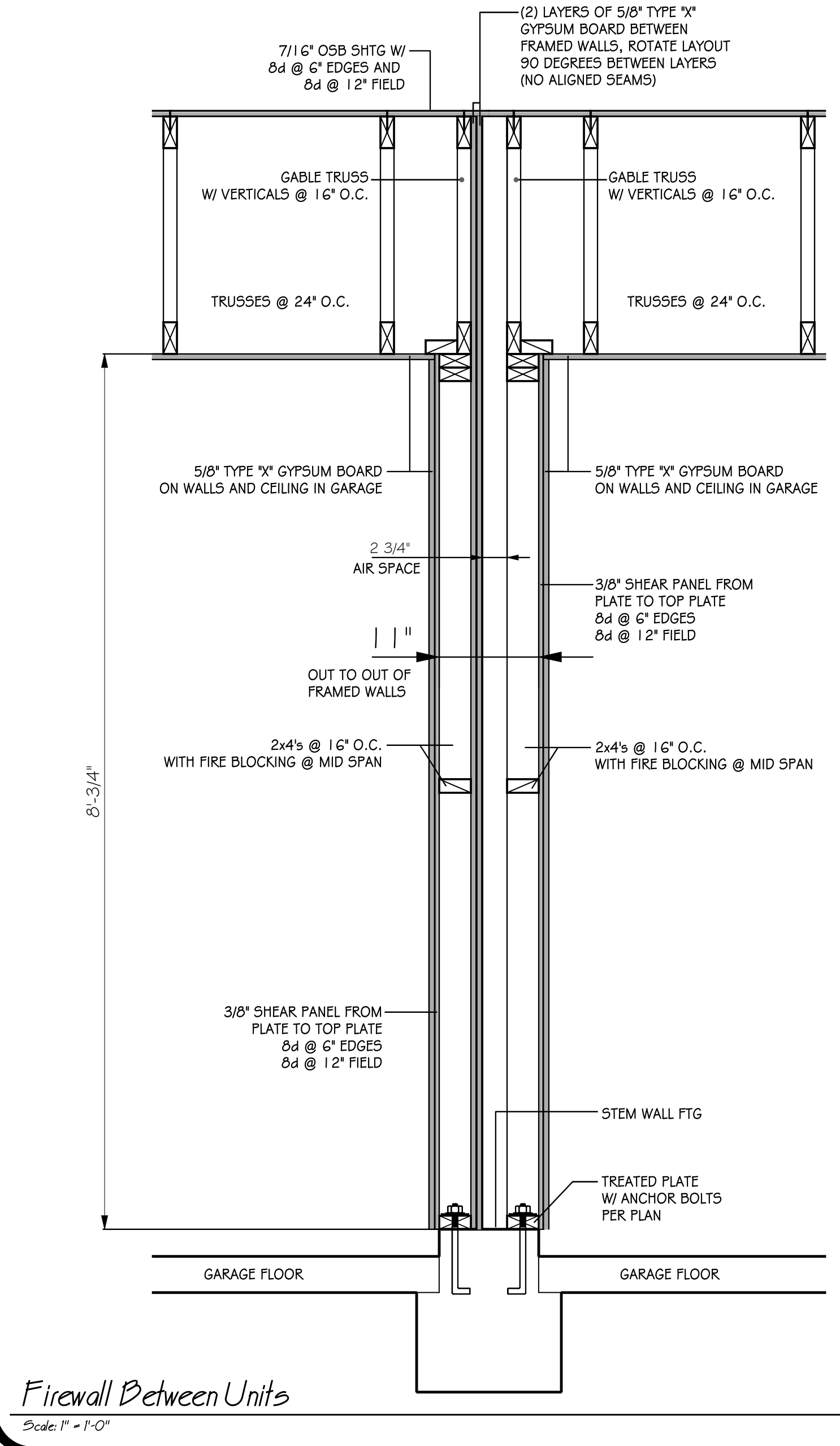
Post Base / Ftg.  
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**SHEAR WALL SCHEDULE:**  
PER TABLE 2306.3(4)

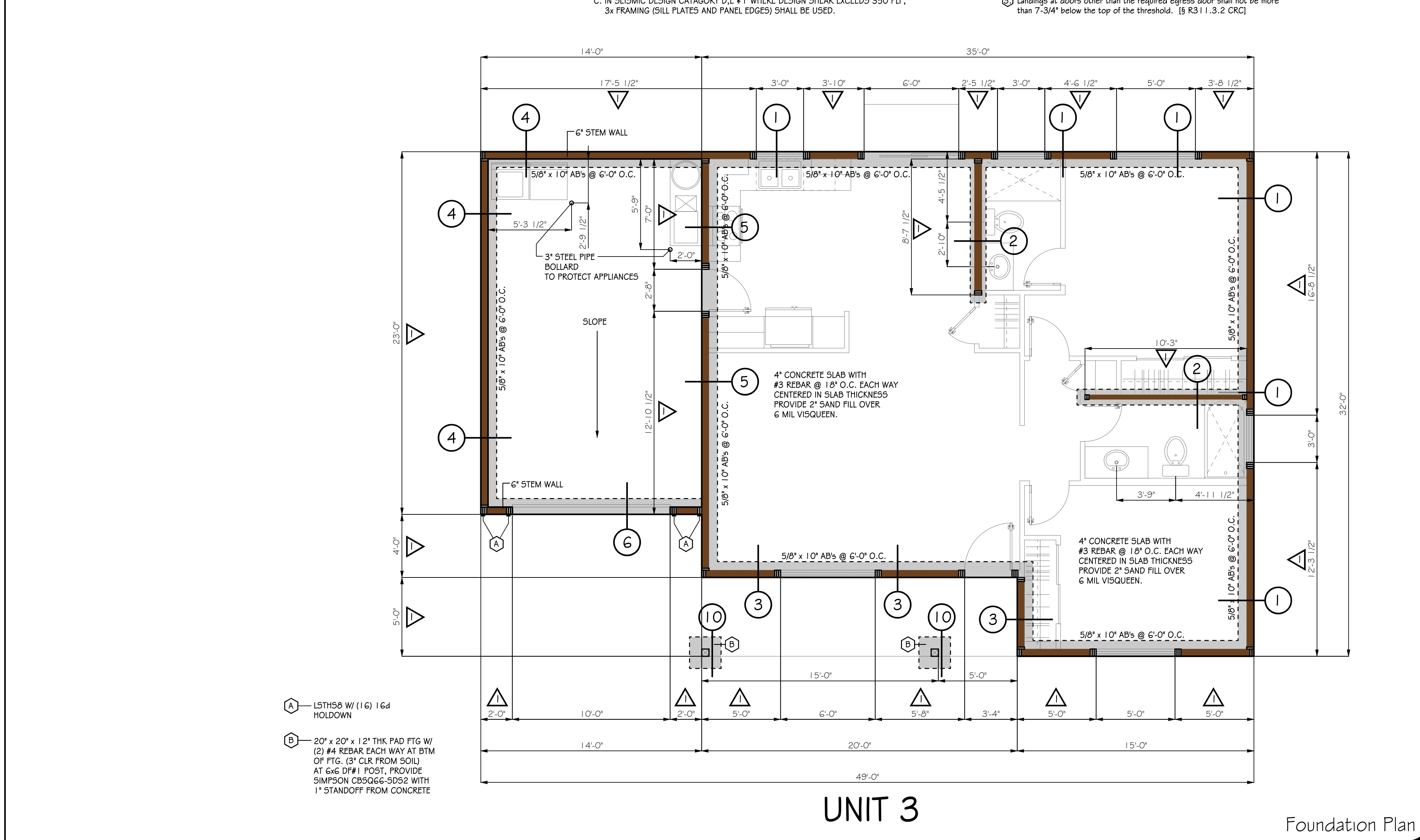
- 1. 15/32" CDX PLYWOOD WITH 8d @ 6" EDGES AND 8d @ 12" FIELD. ALLOW 260 PLF AB'S SPACED PER PLAN
- 2. 15/32" CDX PLYWOOD WITH 8d @ 4" EDGES AND 8d @ 12" FIELD. ALLOW 360 PLF AB'S SPACED PER PLAN
- 3. 15/32" CDX PLYWOOD WITH 8d @ 3" EDGES AND 8d @ 12" FIELD. ALLOW 490 PLF AB'S SPACED PER PLAN

NOTES:  
A. PANELS MAY BE APPLIED IN ANY DIRECTION DIRECTLY OVER STUDS SPACED AT 16" O.C.  
B. 8d NAILS SHALL PENETRATE A MIN OF 1-3/8" INTO FRAMING  
C. IN SEISMIC DESIGN CATEGORY D, E & F WHERE DESIGN SHEAR EXCEEDS 350 PLF, 3x FRAMING (SILL PLATES AND PANEL EDGES) SHALL BE USED.

- GENERAL CONCRETE NOTES:
1. ALL WOOD IN DIRECT CONTACT WITH CONCRETE SHALL BE TREATED WITH AN APPROVED PRESERVATIVE.
  2. ANCHOR BOLTS TO BE MIN 5/8" x 10" (A307) WITH MIN. 7" EMBEDMENT INTO CONCRETE, PROVIDE 3" x 3" x 0.229" PLATE WASHERS AT ALL ANCHOR BOLTS.
  3. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 2500 PSI @ 28 DAYS.
  4. CONCRETE SHALL BE KEPT WET DURING CURING PROCESS TO REDUCE CRACKING DURING CURING PROCESS.
  5. CONTRACTOR SHALL MAKE SURE WELDED WIRE MESH IS RESTING ON CHAIRS TO OBTAIN CENTER OF SLAB PLACEMENT DURING CONCRETE POUR.
  6. WHERE 3x SILL PLATE IS USED, CONTRACTOR TO VERIFY BOLTS ARE PLACED HIGH ENOUGH FOR WASHER AND NUT + 1/4" THREAD AT TOP. (APPROX 4" FROM SURFACE OF CONCRETE)
  7. PROVIDE 26 GAUGE GALVANIZED WEEP SCREED AT ALL FOUNDATION PLATE LINE.
  8. ALL HOLDDOWNS MUST BE IN PLACE PRIOR TO FOUNDATION INSPECTION.
- ① Provide landings at exterior doors equal to the width of the door and a length in the direction of travel equal to 36 inches. Slope of exterior landings shall not exceed 1/4" per foot (2% slope). [§ R311.3.3 CRC]
- ② Landings at the required egress door shall not be more than 1-1/2" lower than the top of the threshold. Landings with doors that do not swing over the landing may have a difference in elevation of 7-3/4" maximum below the top of the threshold. [§ R311.3.1 CRC]
- ③ Landings at doors other than the required egress door shall not be more than 7-3/4" below the top of the threshold. [§ R311.3.2 CRC]



Firewall Between Units  
Scale: 1" = 1'-0"



**UNIT 3**

Foundation Plan

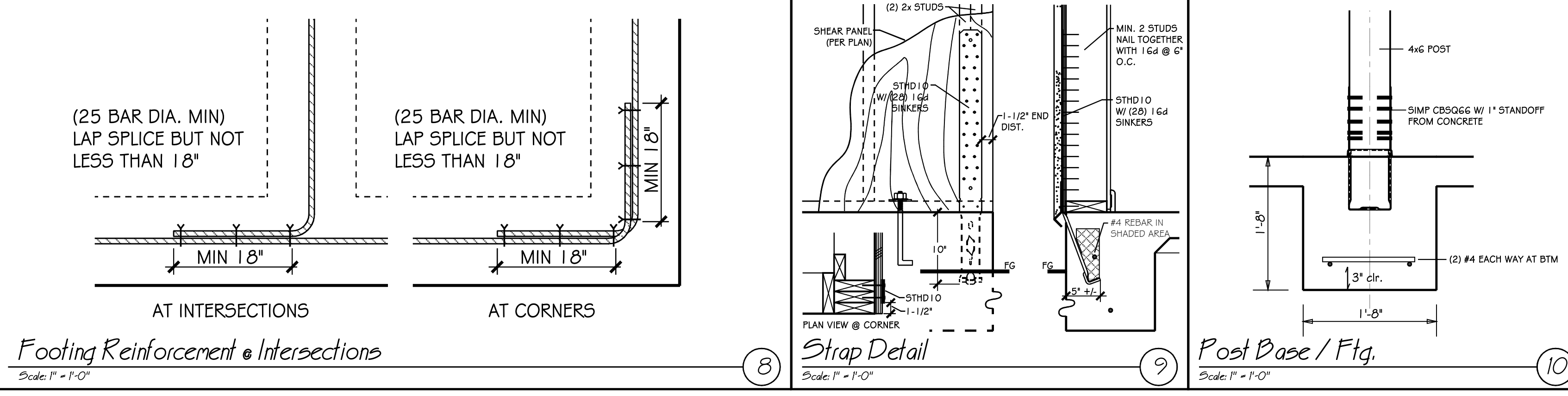
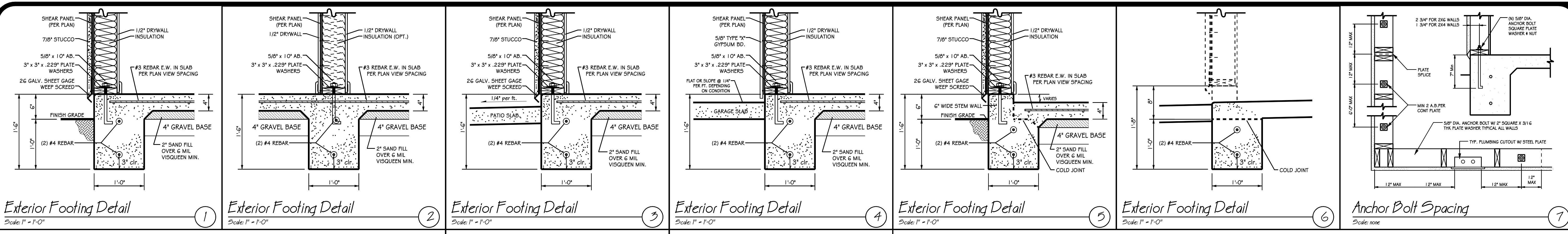
Revisions	By
CORRECTED PER BAS	BTD

5 UNIT RENTAL COMPLEX FOR:  
Owner:  
VATSON HOLDINGS LLC  
7120 PALO ALTO AVE  
YUCCA VALLEY, CA 92284-3820  
APN: 0595-282-12-0000

**DESIGN CONCEPTS**  
DRAFTING AND DESIGN SERVICE  
57445 29 Palms Hwy., Suite 304  
Yucca Valley, CA 92284  
Phone (760) 365-8742 - Fax (760) 365-8742  
Email: design.online@venzon.net

DRAWN	BRIAN T. DEBOLT
CHECKED	
DATE	9/18/2020
SCALE	1/4" = 1'
JOB NUMBER	VALLEY PIPELINE
SHEET #	4





### SHEAR WALL SCHEDULE:

PER TABLE 2306.3(4)

- 1 15/32" CDX PLYWOOD WITH  $\delta d$  @ 6" EDGES AND  $\delta d$  @ 12" FIELD. ALLOW 260 PLF AB'S SPACED PER PLAN
- 2 15/32" CDX PLYWOOD WITH  $\delta d$  @ 4" EDGES AND  $\delta d$  @ 12" FIELD. ALLOW 360 PLF AB'S SPACED PER PLAN
- 3 15/32" CDX PLYWOOD WITH  $\delta d$  @ 3" EDGES AND  $\delta d$  @ 12" FIELD. ALLOW 490 PLF AB'S SPACED PER PLAN

NOTES:  
 A. PANELS MAY BE APPLIED IN ANY DIRECTION DIRECTLY OVER STUDS SPACED AT 16" O.C.  
 B.  $\delta d$  NAILS SHALL PENETRATE A MIN OF 1-3/8" INTO FRAMING  
 C. IN SEISMIC DESIGN CATEGORY D, E & F WHERE DESIGN SHEAR EXCEEDS 350 PLF, 3x FRAMING (SILL PLATES AND PANEL EDGES) SHALL BE USED.

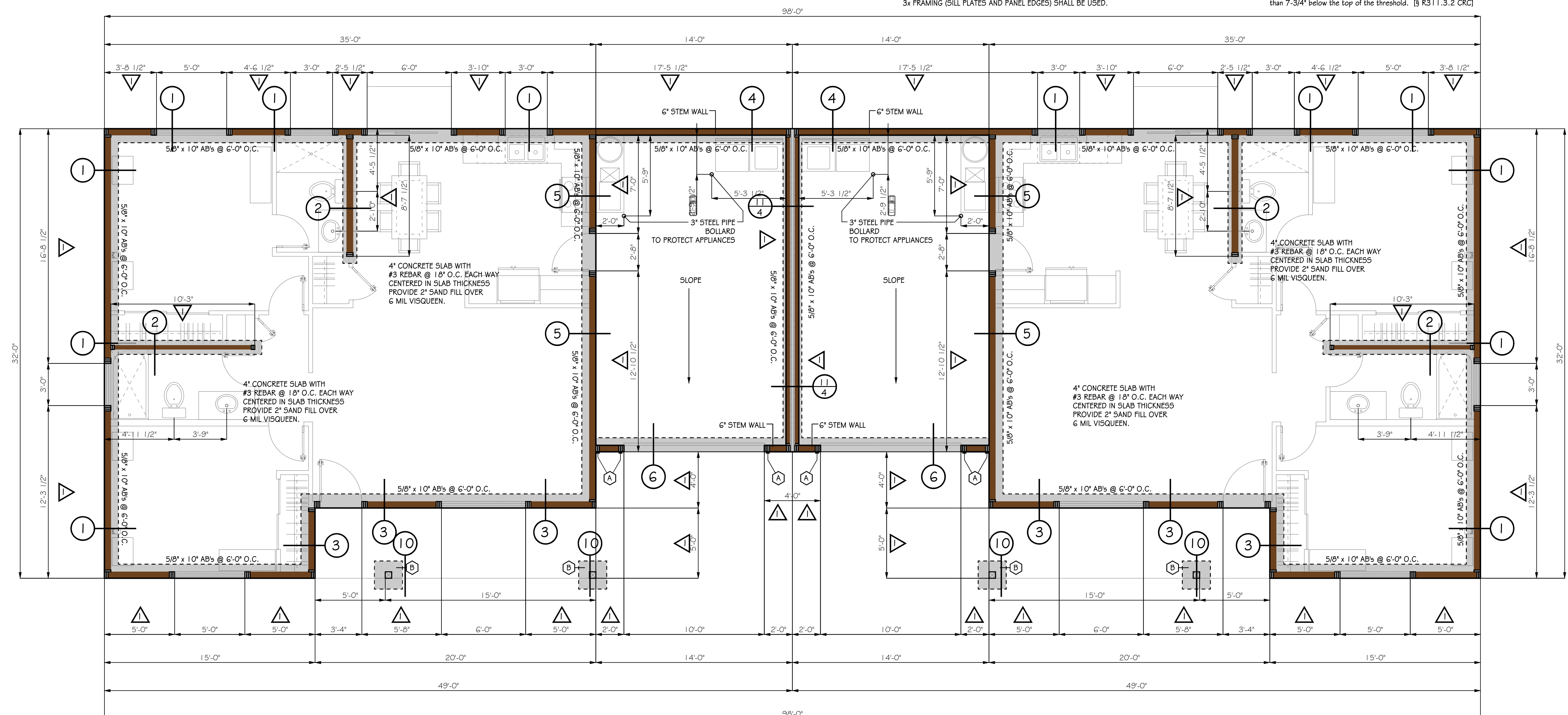
**GENERAL CONCRETE NOTES:**

- ALL WOOD IN DIRECT CONTACT WITH CONCRETE SHALL BE TREATED WITH AN APPROVED PRESERVATIVE.
- ANCHOR BOLTS TO BE MIN 5/8" x 10" (A307) WITH MIN. 7" EMBEDMENT INTO CONCRETE, PROVIDE 3" x 3" x 0.229" PLATE WASHERS AT ALL ANCHOR BOLTS.
- CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 2500 PSI @ 28 DAYS.
- CONCRETE SHALL BE KEPT WET DURING CURING PROCESS TO REDUCE CRACKING DURING CURING PROCESS.
- CONTRACTOR SHALL MAKE SURE WELDED WIRE MESH IS RESTING ON CHAIRS TO OBTAIN CENTER OF SLAB PLACEMENT DURING CONCRETE POUR.
- WHERE 3x SILL PLATE IS USED, CONTRACTOR TO VERIFY BOLTS ARE PLACED HIGH ENOUGH FOR WASHER AND NUT + 1/4" THREAD AT TOP. (APPROX 4" FROM SURFACE OF CONCRETE)
- PROVIDE 26 GAUGE GALVANIZED WEEP SCREED AT ALL FOUNDATION PLATE LINE.
- ALL HOLD-DOWNS MUST BE IN PLACE PRIOR TO FOUNDATION INSPECTION.

① Provide landings at exterior doors equal to the width of the door and a length in the direction of travel equal to 36 inches. Slope of exterior landings shall not exceed 1/4" per foot (2% slope). [§ R311.3 CRC]

② Landings at the required egress door shall not be more than 1-1/2" lower than the top of the threshold. Landings with doors that do not swing over the landing may have a difference in elevation of 7-3/4" maximum below the top of the threshold. [§ R311.3.1 CRC]

③ Landings at doors other than the required egress door shall not be more than 7-3/4" below the top of the threshold. [§ R311.3.2 CRC]



Revisions	By
CORRECTED PER B45	BTD

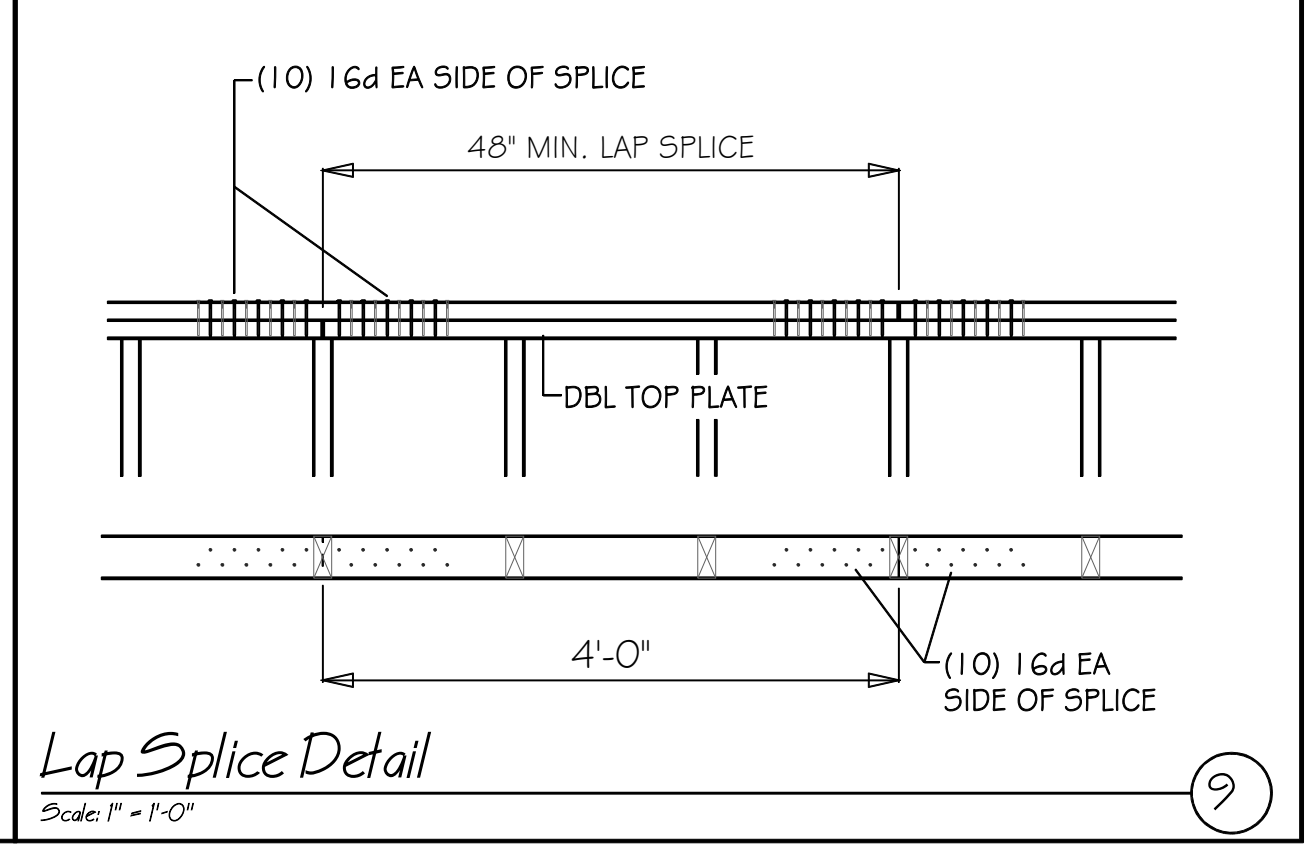
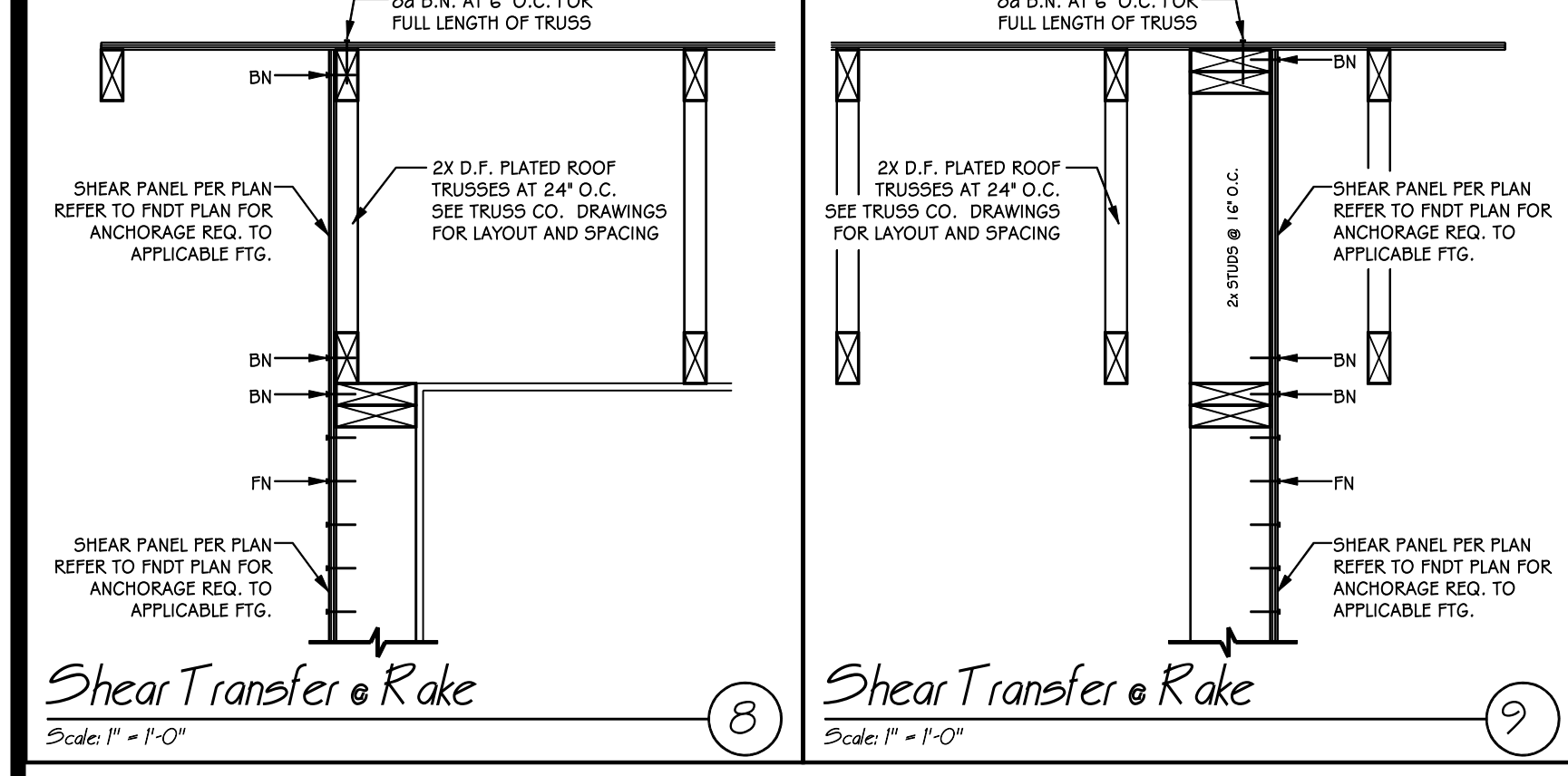
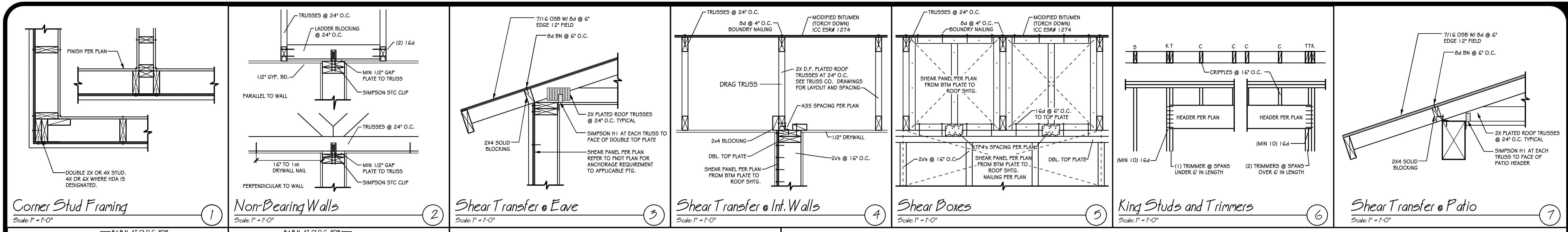
5 UNIT RENTAL COMPLEX FOR:  
 Owner: VATION HOLDINGS LLC  
 7120 PALO ALTO AVE  
 YUCCA VALLEY, CA 92284-3820  
 APN: 0595-282-12-0000

**DESIGN CONCEPTS**  
 DRAFTING AND DESIGN SERVICE  
 57445 29 Palms Hwy., Suite 304  
 Yucca Valley, CA 92284  
 Phone (760) 365-8742 - Fax (760) 365-8742  
 Email: design.online@venzon.net

DRAWN	BRIAN T. DEBOLT
CHECKED	
DATE	9/18/2020
SCALE	1/4" = 1'
JOB NUMBER	VALLEY PIPELINE
SHEET #	

Foundation Plan





**Notes For Wood Trusses:**

- Plans, details, and calculations shall be reviewed by the job architect/engineer prior to submittal to the City for approval. [§2303.4.1.4 CBC]
- Truss fabricator shall submit, name, and phone number of the agency inspecting the shop operations [§1704.2.5 CBC]
- Calculations and details are to be prepared and signed by a registered architect/engineer [§2303.4.1.4.1 CBC]
- Truss manufacturer shall provide a truss placement diagram that identifies the proposed location for each individually designated truss and references the corresponding truss design drawings (to be included in the submittal package and with the shipment of trusses). [§2303.4.2 CBC]

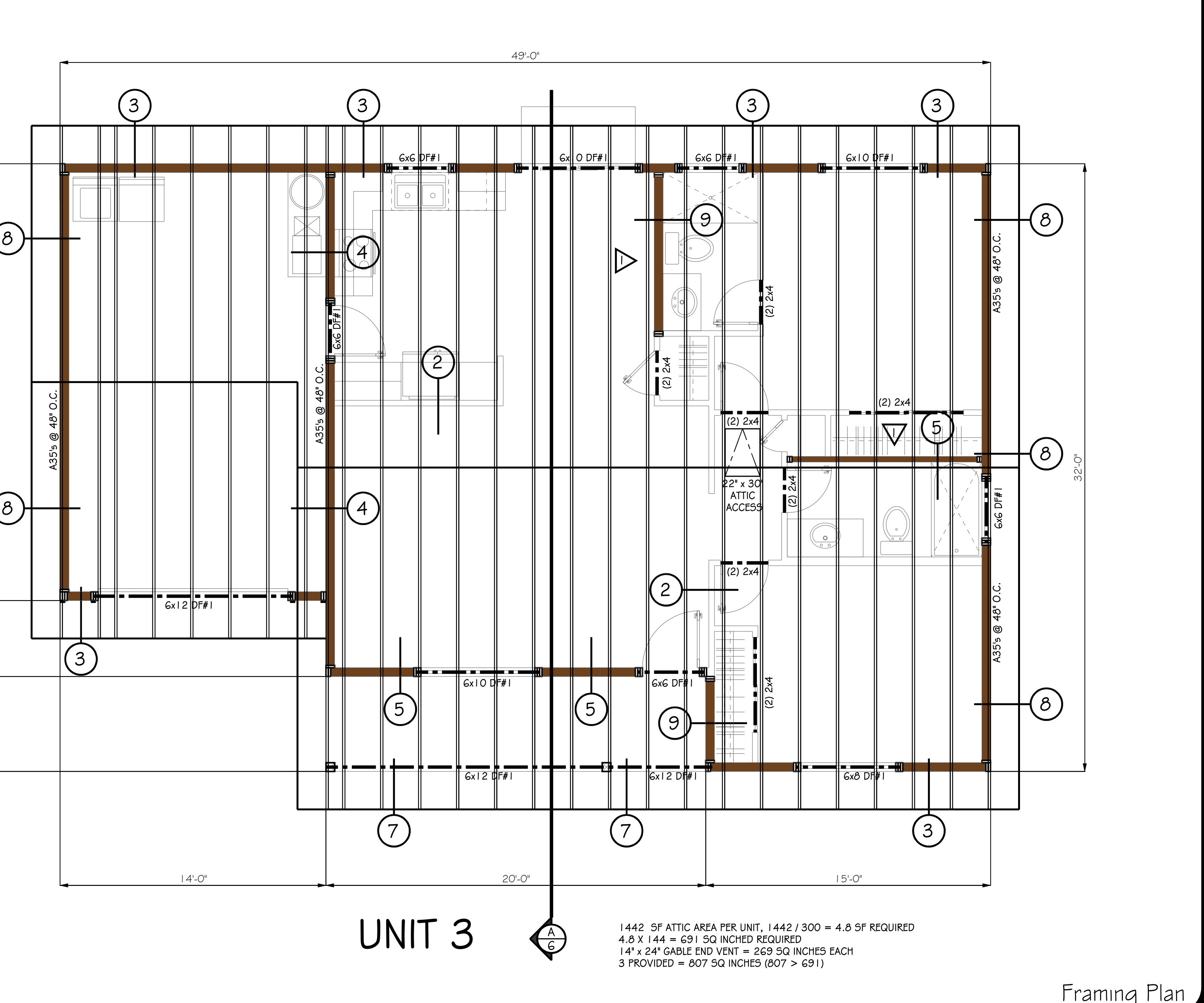
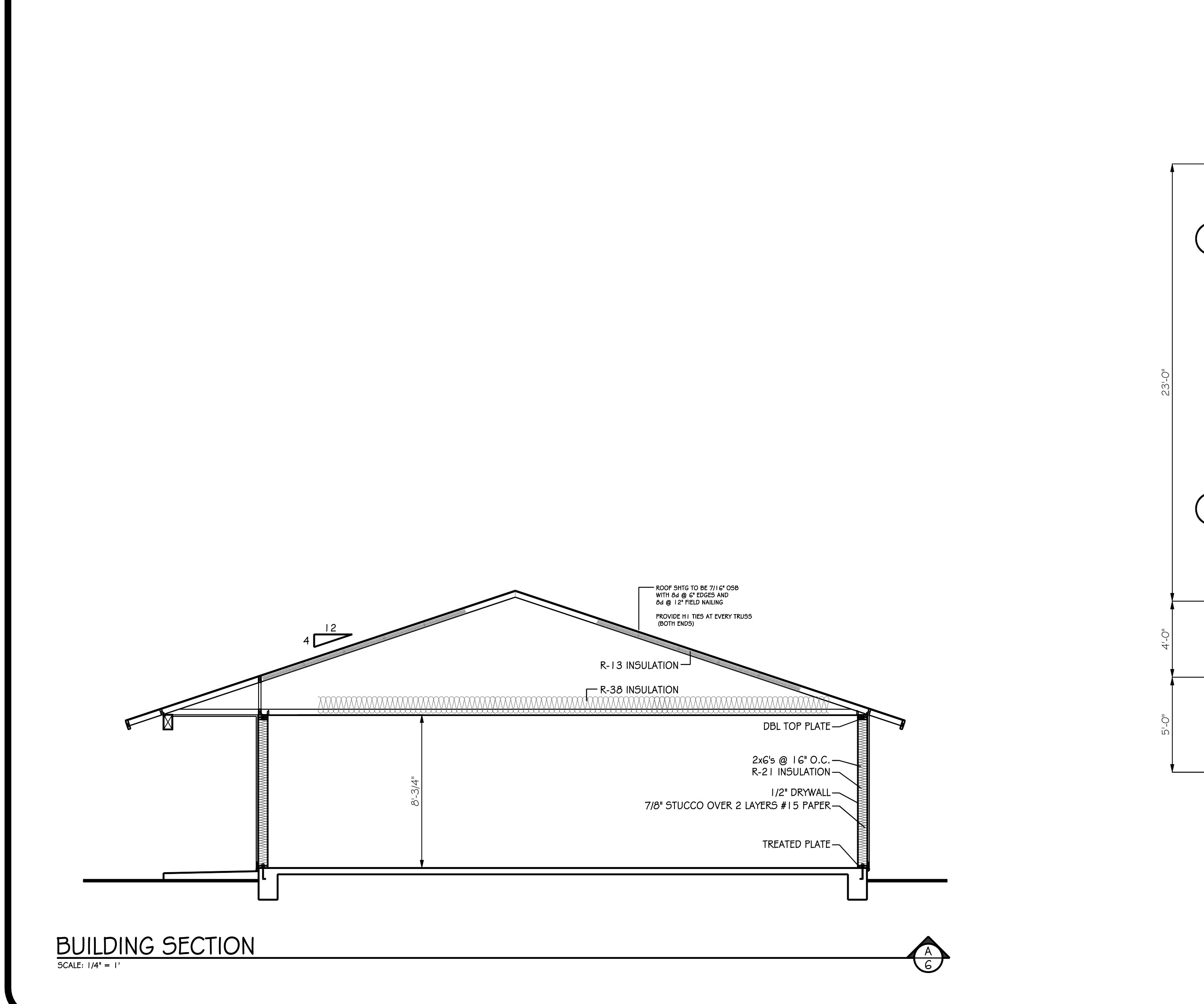
**Structural Notes:**

- Truss members and components shall not be cut, notched, drilled, or otherwise altered in any way without written concurrence and approval of a registered design professional. [§2303.4.5 CBC]
- Alterations resulting in the addition of loads to any member (e.g. HVAC equipment, water heater) shall not be permitted without verification that the truss is capable of supporting such additional loading. [§2303.4.5 CBC]

(7/16-inch SHEATHING SPAN, 24/16 Exposure 1)  
 ROOF SHTG TO BE 7/16" OSB  
 WITH 8d @ 6" EDGES AND  
 8d @ 12" FIELD NAILING

PROVIDE H1 TIES AT EVERY TRUSS  
 (BOTH ENDS)

-ROOFING MATERIAL TO BE INSTALLED IN ACCORDANCE WITH  
 MANUFACTURERS INSTALLATION INSTRUCTIONS:  
 -TILE ROOF (CLASS 'A') OVER 30# FELT EAGLE ROOFING ER5-1900



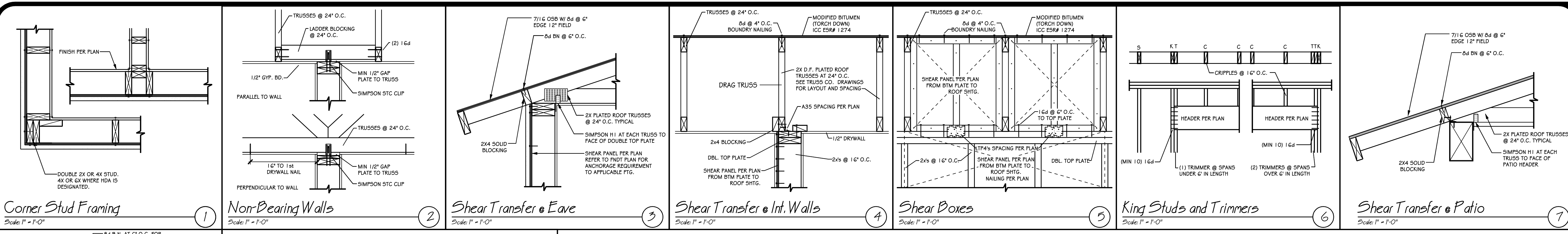
Revisions	By
CORRECTED PER BAS	BTD

**5 UNIT RENTAL COMPLEX FOR:**  
 Owner:  
 VATSON HOLDINGS LLC  
 7120 PALO ALTO AVE  
 YUCCA VALLEY, CA 92284-3820  
 APN: 0595-282-12-0000

**DESIGN CONCEPTS**  
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 Yucca Valley, CA 92284  
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 Email: design.online@venzon.net

DRAWN	BRIAN T. DEBOLIT
CHECKED	
DATE	9/18/2020
SCALE	1/4" = 1"
JOB NUMBER	VALLEY PIPELINE
SHEET #	6





Revisions	By
CORRECTED PER B45	BTD

**Notes For Wood Trusses:**

- Plans, details, and calculations shall be reviewed by the job architect/engineer prior to submittal to the City for approval. [§2303.4.1.4 CBC]
- Truss fabricator shall submit, name, and phone number of the agency inspecting the shop operations [§1704.2.5 CBC]
- Calculations and details are to be prepared and signed by a registered architect/engineer [§2303.4.1.4.1 CBC]
- Truss manufacturer shall provide a truss placement diagram that identifies the proposed location for each individually designated truss and references the corresponding truss design drawings (to be included in the submittal package and with the shipment of trusses). [§2303.4.2 CBC]

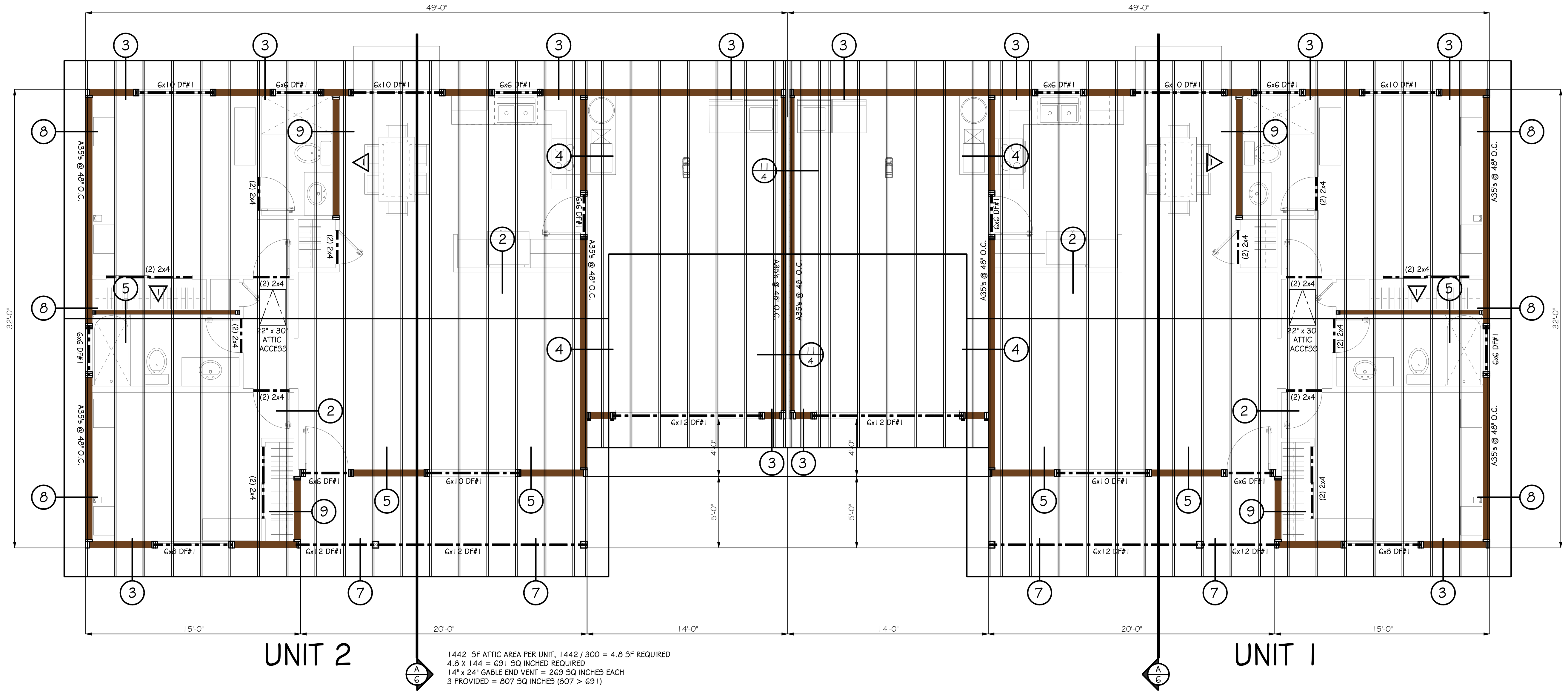
**Structural Notes:**

- Truss members and components shall not be cut, notched, drilled, or otherwise altered in any way without written concurrence and approval of a registered design professional. [§2303.4.5 CBC]
- Alterations resulting in the addition of loads to any member (e.g. HVAC equipment, water heater) shall not be permitted without verification that the truss is capable of supporting such additional loading. [§2303.4.5 CBC]

(7/16-inch SHEATHING SPAN, 24/16 Exposure 1)  
 ROOF SHTG TO BE 7/16" O5B  
 WITH 8d @ 6" EDGES AND  
 8d @ 12" FIELD NAILING

PROVIDE H I TIES AT EVERY TRUSS  
 (BOTH ENDS)

-ROOFING MATERIAL TO BE INSTALLED IN ACCORDANCE WITH  
 MANUFACTURERS INSTALLATION INSTRUCTIONS:  
 -TILE ROOF (CLASS 'A') OVER 30# FELT EAGLE ROOFING ER5-1900



1442 SF ATTIC AREA PER UNIT, 1442 / 300 = 4.8 SF REQUIRED  
 4.8 X 144 = 691 SQ INCHED REQUIRED  
 14' x 24' GABLE END VENT = 269 SQ INCHES EACH  
 3 PROVIDED = 807 SQ INCHES (807 > 691)

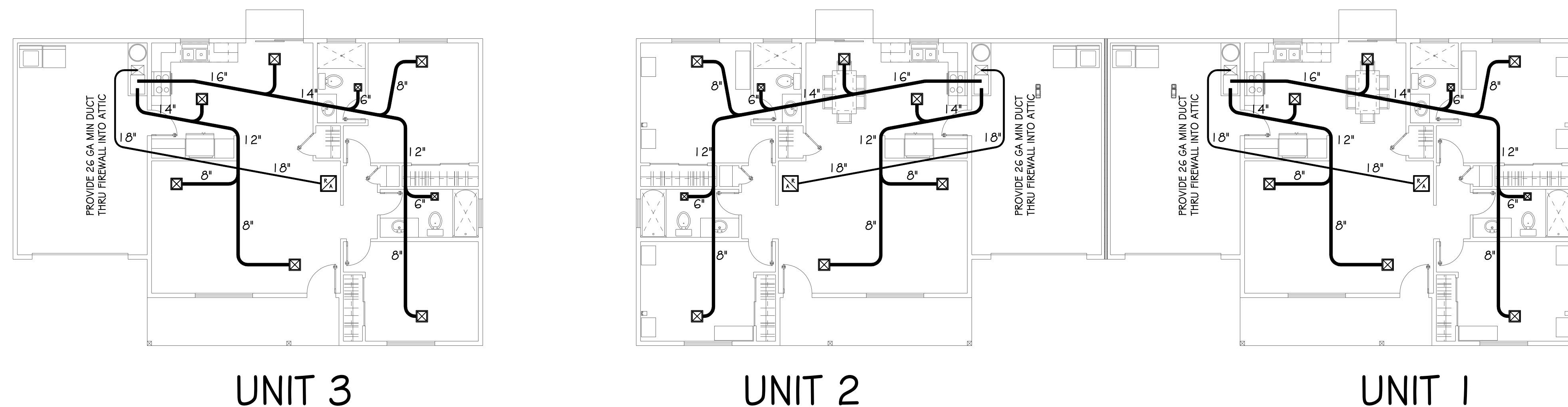
**5 UNIT RENTAL COMPLEX FOR:**  
 Owner:  
 VATSON HOLDINGS LLC  
 7120 PALO ALTO AVE  
 YUCCA VALLEY, CA 92284-3820  
 APN: 0595-282-12-0000

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DRAWN	BRIAN T. DEBOLT
CHECKED	
DATE	9/18/2020
SCALE	1/4" = 1'
JOB NUMBER	VALLEY PIPELINE
SHEET #	7



Revisions	By
CORRECTED PER B4S	BTD

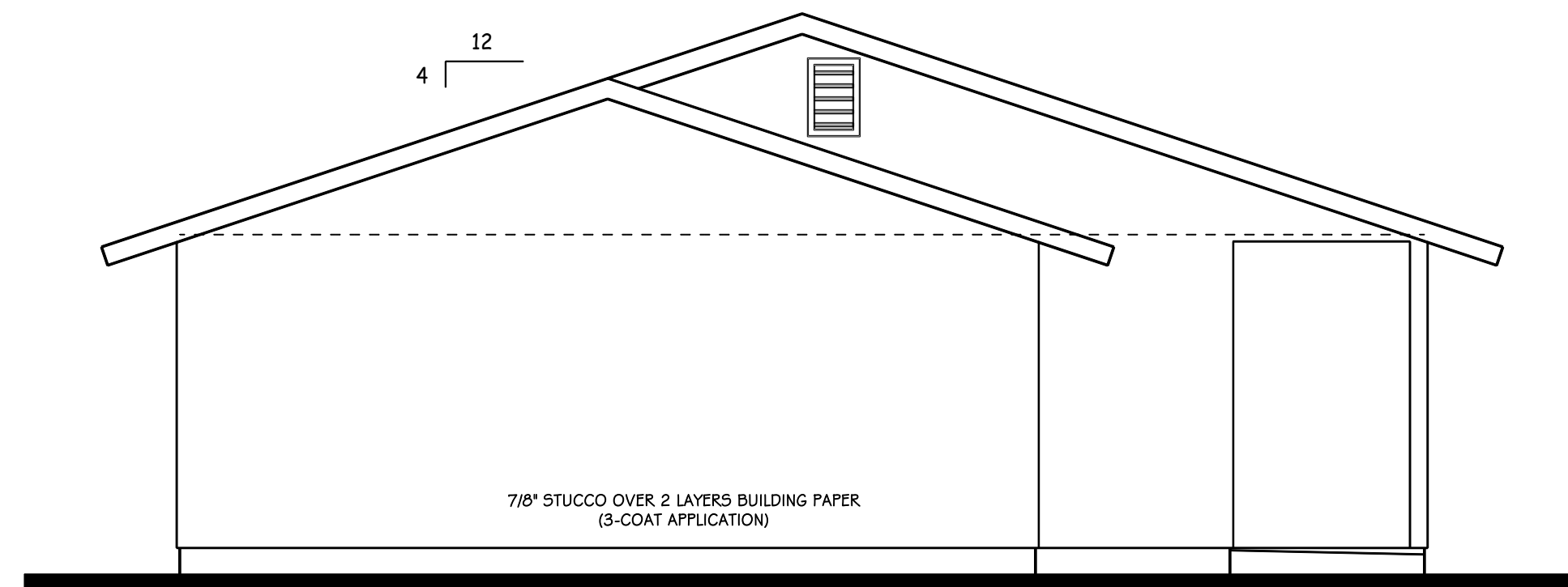


HVAC Plan

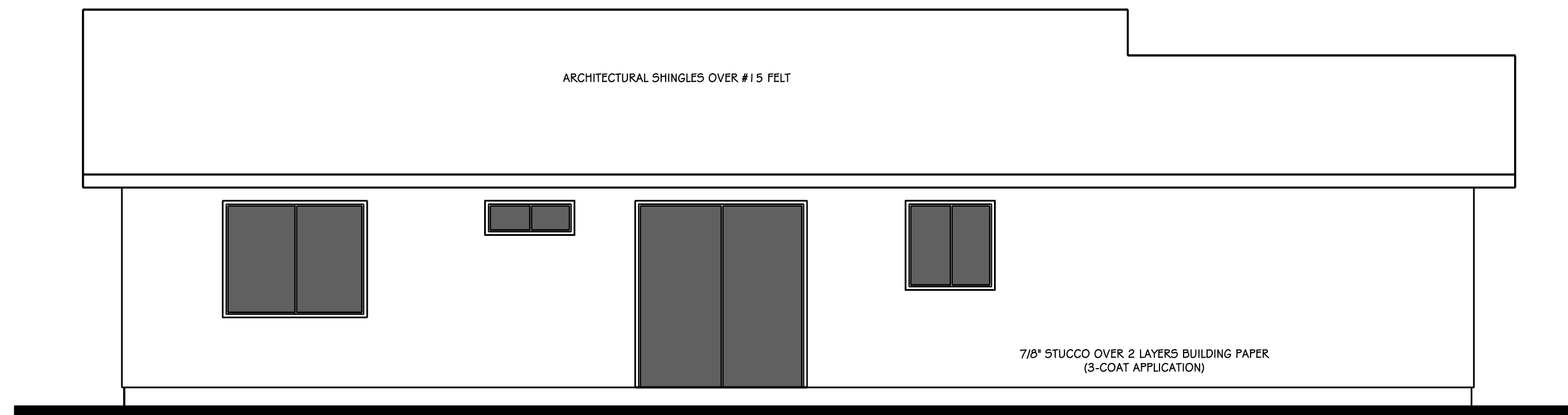
**R806.1** Ventilation required. Enclosed attics and enclosed after spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain or snow. Ventilation openings shall have a least dimension of 1/16 inch (1.6 mm) minimum and 1/4 inch (6.4 mm) maximum. Ventilation openings having a least dimension larger than 1/4 inch (6.4 mm) shall be provided with corrosion-resistant wire cloth screening, hardware cloth, or similar material with openings having a least dimension of 1/16 inch (1.6 mm) minimum and 1/4 inch (6.4 mm) maximum. Openings in roof framing members shall conform to the requirements of Section R802.7.

**R806.2** Minimum area. The total net free ventilating area shall not be less than 1/150 of the area of the space ventilated except that reduction of the total area to 1/300 is permitted provided that at least 50 percent and not more than 80 percent of the required ventilating area is provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet (914 mm) above the eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents. As an alternative, the net free cross-ventilation area may be reduced to 1/300 when a Class I or II vapor barrier is installed on the warm-in-winter side of the ceiling.

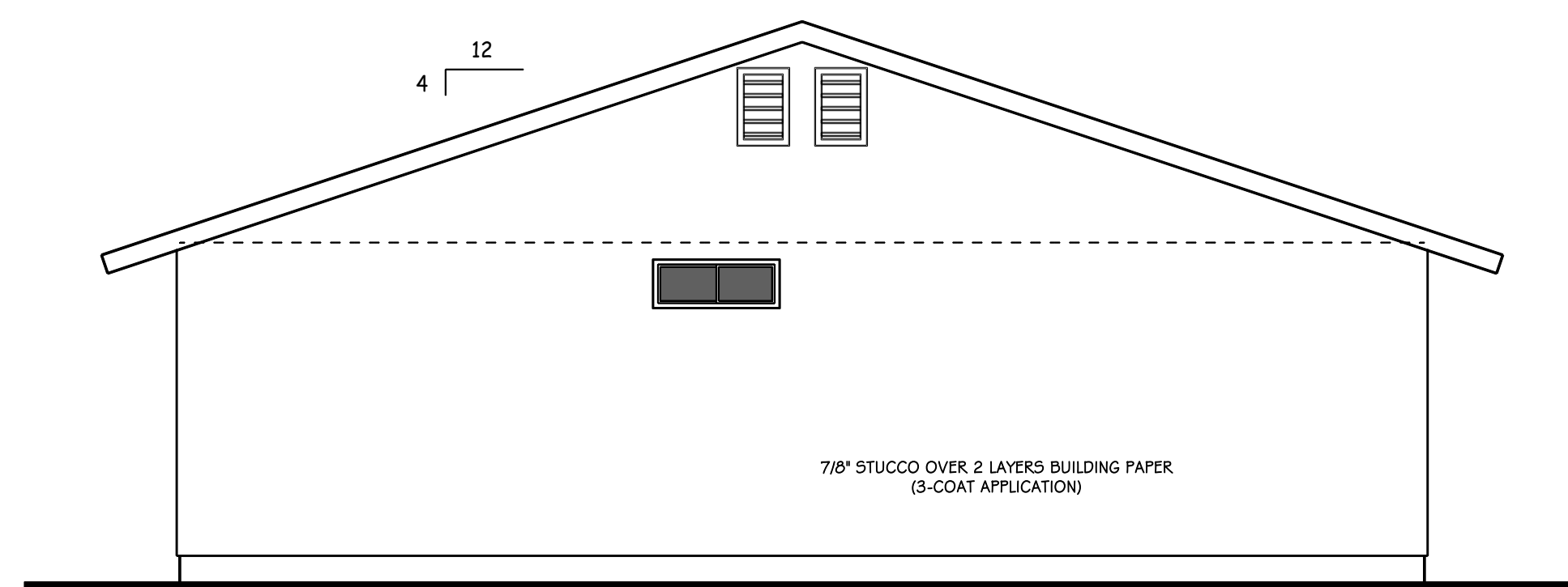
1442 SF ATTIC AREA PER UNIT. 1442 / 300 = 4.8 SF REQUIRED  
 4.8 X 144 = 691 SQ INCHES REQUIRED  
 14" x 24" GABLE END VENT = 269 SQ INCHES EACH  
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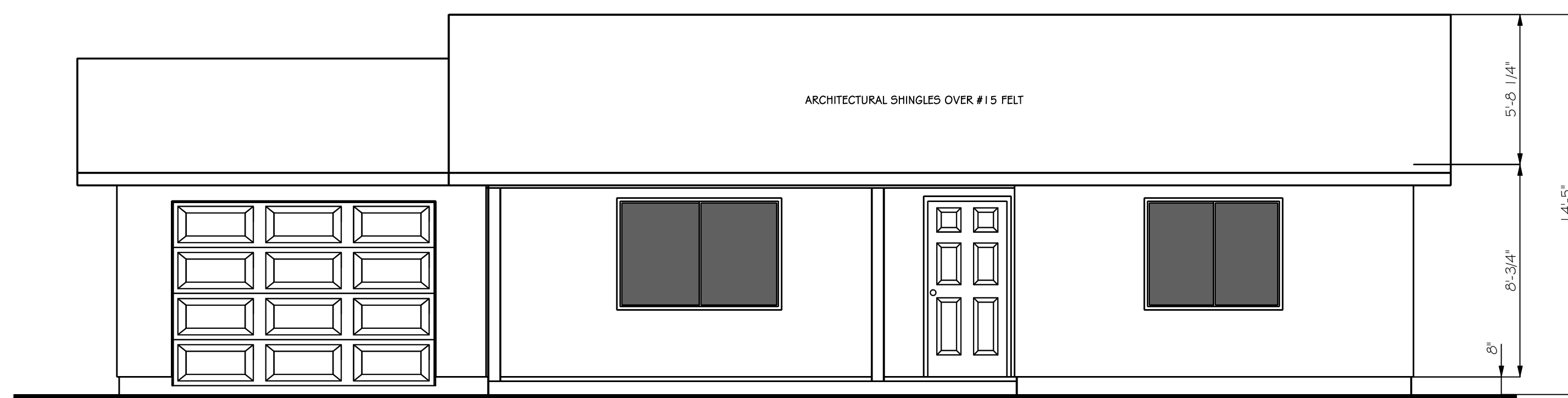
Left Elevation



Rear Elevation



Right Elevation



Front Elevation

**UNIT 3**  
Elevations Plan

5 UNIT RENTAL COMPLEX FOR:  
 Owner:  
 VATSON HOLDINGS LLC  
 7120 PALO ALTO AVE  
 YUCCA VALLEY, CA 92284-3820  
 APN: 0595-282-12-0000

**DESIGN CONCEPTS**  
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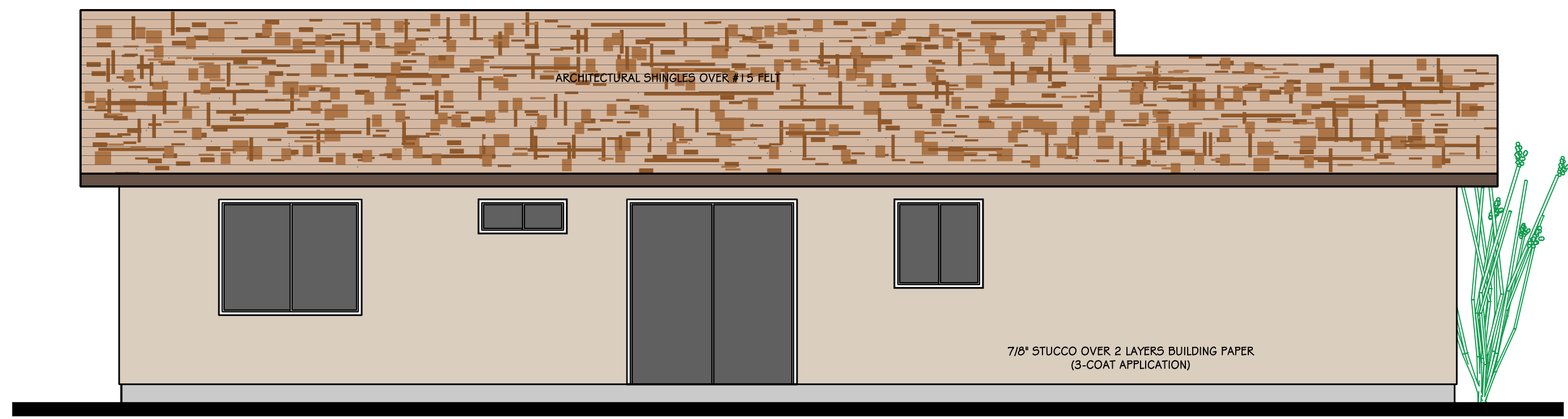
DRAWN	BRIAN T. DEBOLT
CHECKED	
DATE	9/18/2020
SCALE	1/4"=1'
JOB NUMBER	VALLEY PIPELINE
SHEET #	8





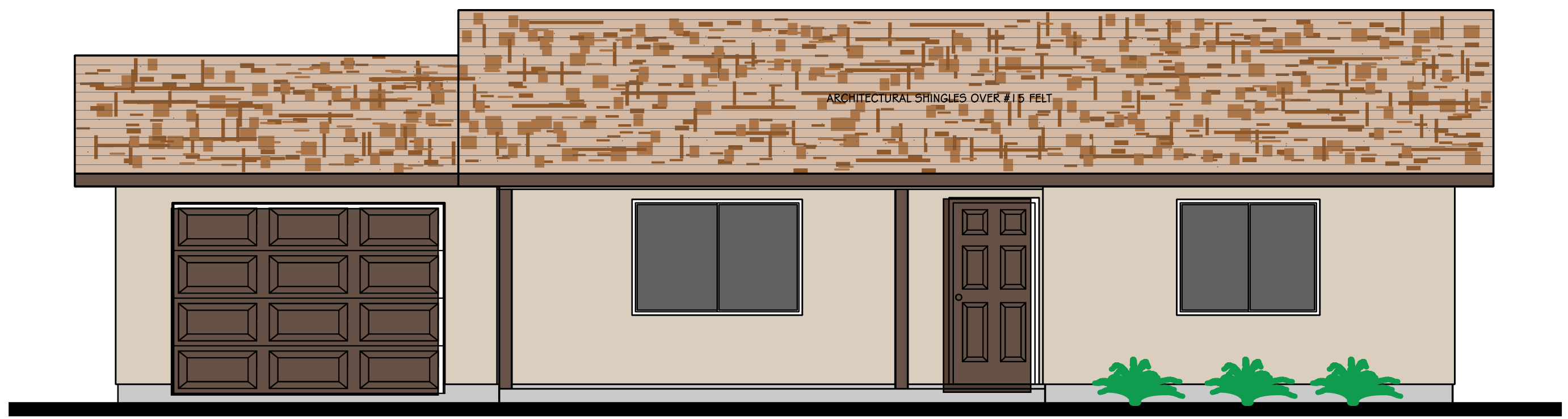


Revisions	By



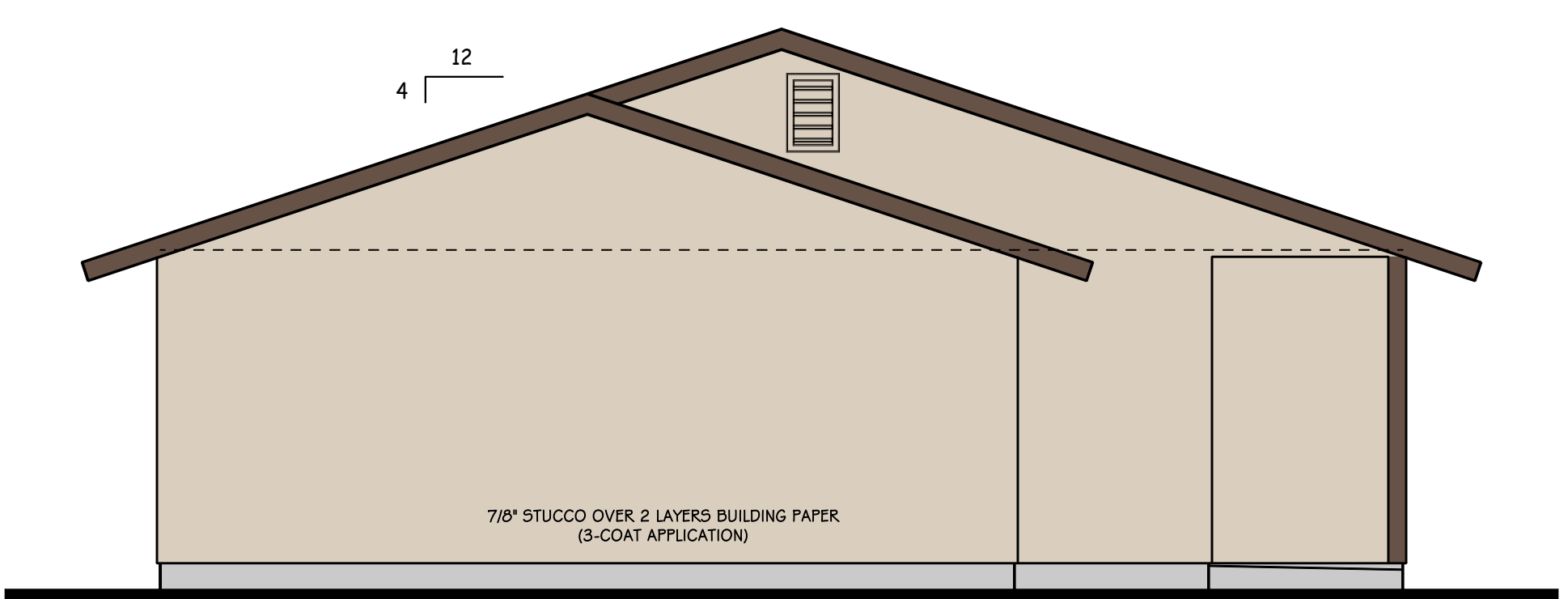
Rear Elevation

UNIT 1



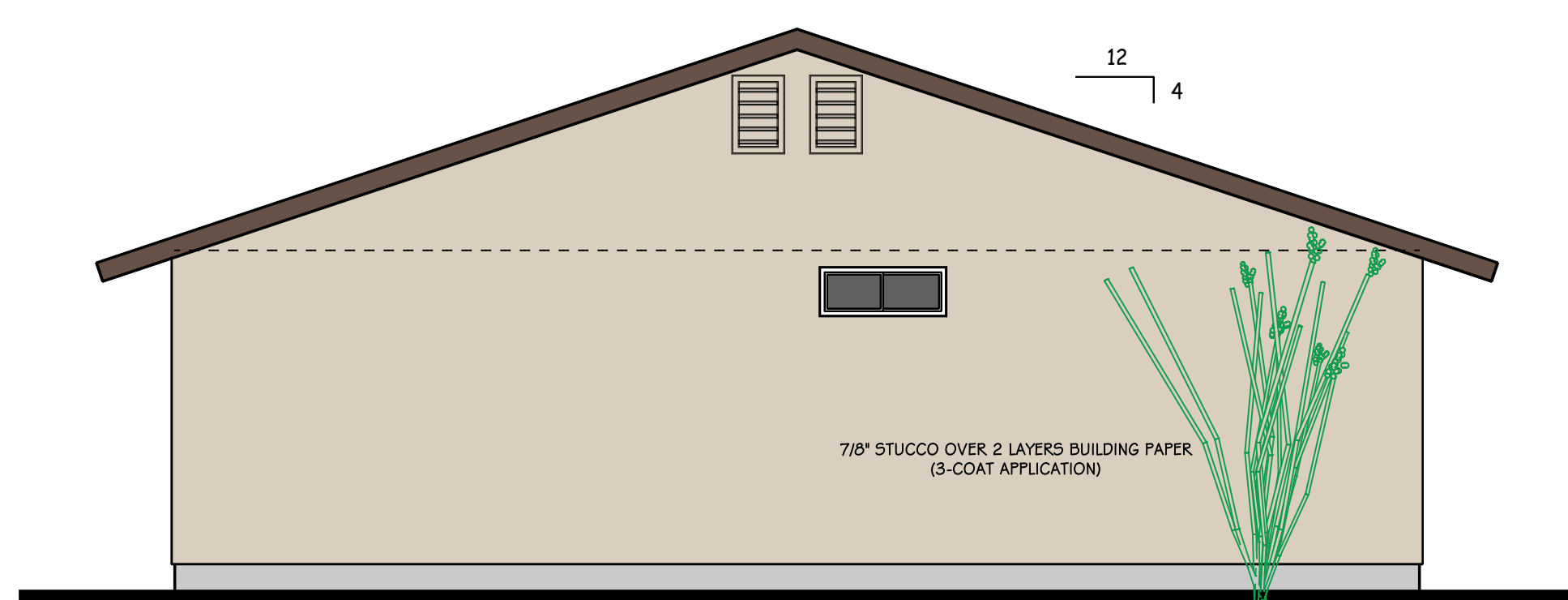
Front Elevation

UNIT 1



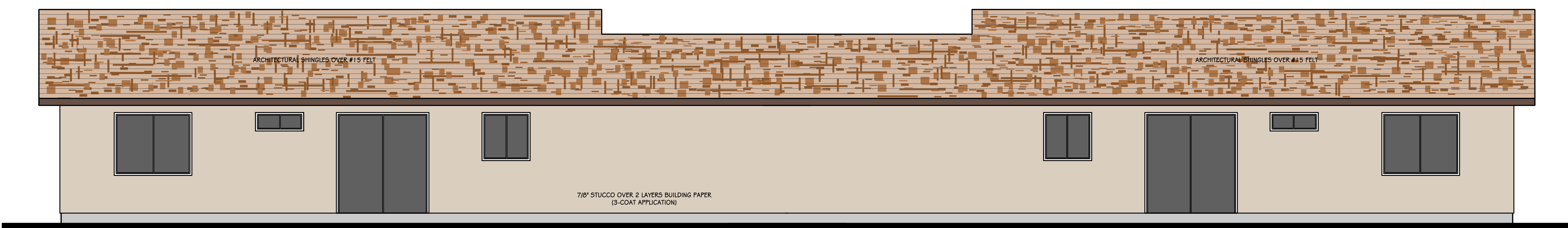
Left Elevation

UNIT 1



Left / Right Elevation (Right is Mirrored)

UNIT 1, 3&5



Rear Elevation

UNIT 3&5



UNIT 2&4

Front Elevation

98'-0"

UNIT 3&5

Elevations Plan

5 UNIT RENTAL COMPLEX FOR:  
 Owner:  
 VATSON HOLDINGS LLC  
 7120 PALO ALTO AVE  
 YUCCA VALLEY, CA 92284-3820  
 APN: 0595-282-12-0000

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DRAWN BY  
 BRIAN T. DIEBOLT  
 CHECKED BY  
 DATE  
 9/18/2020  
 SCALE  
 1/4"=1'  
 JOB NUMBER  
 Valley Pipeline  
 SHEET #

9a

OF 1 SHEET



GENERAL AND STRUCTURAL NOTES

- ALL CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE (CBC) OR AS NOTED HEREIN.
- THE ARCHITECT/ENGINEER (ARCH/ENGR) IS NOT RESPONSIBLE FOR THE LOCATION OF PROPERTY LINES AND/OR EASEMENTS, SOILS CONDITIONS, MECHANICAL AND ELECTRICAL WORK, AND THE PRESENCE OF UTILITIES NOT REPORTED TO HIM IN WRITING BY THE OWNER.
- THE ENGINEER IS NOT RESPONSIBLE FOR FIELD REVIEW OF CONSTRUCTION UNLESS RETAINED FOR THAT PURPOSE.
- DRAWINGS SHALL NOT BE SCALED. WRITTEN DIMENSIONS SHALL GOVERN. THE CONTRACTOR SHALL VERIFY DIMENSIONS PRIOR TO CONSTRUCTION AND ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCH/ENGR SO CLARIFICATIONS CAN BE MADE. EXISTING CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AND SHALL BE SUBMITTED TO THE ARCH/ENGR FOR REVIEW PRIOR TO CONSTRUCTION.
- DETAILS OF CONSTRUCTION NOT SHOWN OR NOTED SHALL BE CONSIDERED OF THE SAME CHARACTER SHOWN FOR SIMILAR CONSTRUCTION. SPECIFICATIONS, WHEN PROVIDED, ARE A PART OF THESE DRAWINGS. SEE SPECIFICATIONS FOR MATERIALS AND WORKMANSHIP REQUIREMENTS.
- THE CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT, MATERIAL AND SERVICES NECESSARY FOR THE EXECUTION OF ALL CONSTRUCTION WORK AS SHOWN ON THE DRAWINGS AND AS NOTED IN THE SPECIFICATIONS.
- THE CONTRACTOR SHALL COMPARE THE DRAWINGS AND NOTIFY THE ARCH/ENGR OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK.
- TEMPORARY BRACING AND SHORING NECESSARY TO SUPPORT ANY PORTION OF THE STRUCTURE DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR.

FOUNDATIONS

- ASSUMED ALLOWED BEARING PRESSURE IS 1500 PSF AT NEW FOUNDATIONS AND IS NOT CONSIDERED AT EXISTING FOUNDATIONS. INSPECT TO VERIFY PLACEMENT OF FILLS & FOUNDATION EXCAVATIONS PRIOR TO PLACEMENT OF CONCRETE FIGS.
- ALL FOOTING EXCAVATIONS SHALL BE DUG AS NEAT AND AS CLOSE TO FOOTING DIMENSIONS AS PRACTICABLE. OVEREXCAVATIONS IN DEPTH SHALL BE FILLED WITH CONCRETE. OVEREXCAVATION IN WIDTH MAY BE FILLED WITH CONCRETE OR COMPACTED FILL UNLESS OTHERWISE NOTED.

FOUNDATIONS

- ALL FOUNDATIONS SHALL BEAR ON FIRM UNDISTURBED NATIVE SOILS OR ENGINEERED FILLS AT OR EXCEEDING DEPTHS SHOWN ON THE DRAWINGS. ALL SOILS WORK AND SITE GRADING SHALL BE DONE IN ACCORDANCE WITH CHAPTERS 33 AND 138 OF THE CBC, AND WITH THE SPECIFICATIONS AND REQUIREMENTS OF THE SOILS REPORT IF NOTED BELOW.

CONCRETE

- CONCRETE SHALL BE 5 SACK, 3/4" AGGREGATE MIX WITH 4" SLUMP. COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE AS FOLLOWS:  
2500 PSI FOR SLABS AND FOUNDATIONS  
2500 PSI FOR WALLS AND COLUMNS
- CONCRETE MIX DESIGN AND TESTING SHALL MEET THE REQUIREMENTS OF SECTION 1905 OF THE CBC AND THE SPECIFICATIONS IF ISSUED.
- SLABS, BEAMS WALLS AND OTHER CONCRETE EXPOSED TO THE WEATHER SHALL BE KEPT WET CONTINUOUSLY FOR 48 HOURS AFTER PLACEMENT. BEAMS, WALLS ETC. SHALL BE KEPT DAMP FOR 7 DAYS AFTER PLACEMENT. SLAB SHALL HAVE CURE APPLIED IMMEDIATELY AFTER FINISHING IF OTHER FINISHES ARE NOT AFFECTED.
- ALL CONCRETE SHALL BE REINFORCED, UNLESS OTHERWISE NOTED (U.O.N.). REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60. #4 BARS AND SMALLER MAY BE ASTM GRADE 40.
- WELDED WIRE FABRIC SHALL CONFORM WITH ASTM A 65 AND SHALL BE LAPPED 12" MINIMUM.
- REINFORCING STEEL SHALL BE PLACED IN AS LONG OF LENGTHS AS PRACTICABLE. SEE STANDARD DETAILS FOR SPLICE AND LAPS.

STEEL

- ALL STRUCTURAL STEEL FABRICATION AND ERECTION SHALL CONFORM TO THE SPECIFICATIONS AS STATED IN THE MANUAL OF STEEL CONSTRUCTION\* BY A.I.S.C. (LATEST EDITION). STRUCTURAL STEEL SHALL MEET THE FOLLOWING MINIMUMS:  
SHAPES / PLATES ASTM A-36 / TUBES ASTM A-500 / PIPE ASTM A-53 GRADE B  
ALL STEEL MEMBER SHALL BE GIVEN ONE COAT OF RUST INHIBITIVE PRIMER PRIOR TO ERECTION, U.O.N.
- BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-307. BOLT HOLES SHALL BE 1/16" LARGER IN DIAMETER THAN THE BOLT, UNLESS OTHERWISE NOTED (U.O.N.)
- WELDING ELECTRODES SHALL MEET AWS REQUIREMENTS. WELD METAL SHALL MATCH OR EXCEED TENSILE STRENGTH OF PARENT METAL. ELECTRODES SHALL BE E70XX FOR SHIELDED METAL ARC, F7XX – DXX FOR SUBMERGED ARC, AND E70-X FOR GA5 METAL ARC, U.O.N.
- ALL STRUCTURAL WELDS SHALL BE CERTIFIED BY A TESTING AGENCY ACCEPTABLE TO THE ARCH/ENGR. CERTIFICATIONS SHALL BE SUBMITTED TO THE ARCH/ENGR AND THE BUILDING OFFICIAL.
- GROUT UNDER COLUMN BASE PLATES TO BE MASTER BUILDERS MASTERFLOW #928.
- DRILLED CONCRETE ANCHORS ARE RAMSEY CORPORATION WHERE NOTED AND SELF DRILLING ANCHORS ARE PHILLIPS RED HEAD. CONCRETE INSERTS, COIL LOOP INSERTS AND FERREUL LOOP INSERTS AS NOTED ON DRAWINGS ARE BY BURKE COMPANY. APPROVED EQUALS MAY BE SUBSTITUTED.

WOOD CONSTRUCTION (CARPENTRY)

- SAWN FRAMING LUMBER TO BE DOUGLAS FIR WITH GRADES AS FOLLOWS:  
BEAMS AND POST (4 x AND LARGER), #1  
JOIST, PLATES AND 2 x 6 STUDS, #2 OR BETTER  
2 x 4 STUDS, CONSTRUCTION GRADE OR BETTER  
OTHER GRADE REQUIREMENTS ARE AS NOTED ON THE DRAWINGS.
- NAILS TO BE COMMON WIRE WHERE NAILING IS SPECIFIED ON THE DRAWINGS. OTHERWISE BOX NAILS MAY BE USED PER NAILING SCHEDULE. NAILS USED IN EXTERIOR APPLICATIONS TO BE GALVANIZED.
- REPLACE SPLIT MEMBERS, FREDRILL HOLES WHERE NAILING CAUSES WOOD TO SPLIT.
- METAL FRAMING CLIPS, HANGERS, ETC. INDICATED ON THE DRAWINGS ARE SIMPSON STRONG TIE. NAILING SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS WITH A NAIL PROVIDED FOR EACH PUNCHED HOLE. WHERE NAILS ARE TO BE FURNISHED BY THE MANUFACTURER, THEY SHALL BE USED IN PLACE OF COMMON NAILS.
- BOLTS SHALL BE UNFINISHED MACHINE BOLTS OF SIZES SHOWN ON DRAWINGS CONFORMING TO ASTM A307. LENGTH OF BOLTS SHALL NOT PROJECT LESS THAN 1/16" OR MORE THAN 1/2" PAST THE END OF NUT. BOLT HOLES IN WOOD SHALL BE 1/32" DIAMETER LARGER THAN THE BOLT DIAMETER. HOLES IN STEEL SHALL BE 1/16" DIAMETER LARGER THAN THE BOLT DIAMETER. PROVIDE WASHERS UNDER BOLT HEAD AND NUT WHERE THEY WOULD BEAR ON WOOD. NUTS SHALL BE TIGHTENED WHEN PLACED AND RETIGHTENED BEFORE CLOSING IN WALLS OR OTHER CONSTRUCTION.
- WOOD AGAINST CONCRETE OR CONCRETE BLOCK SHALL BE PRESSURE TREATED DOUGLAS FIR. WOOD POST EMBEDDED IN CONCRETE OR EARTH SHALL BE PRESSURE TREATED TO THE AWFP L2-2 STANDARD.
- STRUCTURAL MEMBERS SHALL NOT BE NOTCHED, CUT OR OTHERWISE ALTERED FOR DUCTS, PIPES, ETC. WITHOUT THE ARCH/ENGR PRIOR APPROVAL.

PLYWOOD SHEATHING

- STRUCTURAL PLYWOOD SHALL BE AS NOTED ON THE DRAWINGS, BE CONSTRUCTED WITH EXTERIOR GLUE, AND BE GRADE STAMPED BY A.F.A.. CONTINUOUSLY SUPPORTED EDGES OF PLYWOOD SHALL ABUT ALONG CENTERLINE OF FRAMING MEMBERS. GUN NAILING AND NAILS TO BE APPROVED BY THE ENGINEER PRIOR TO USE. PLYWOOD NAILS SHALL BE COMMON WIRE WITH FULL ROUND HEADS AND SHALL HAVE A MINIMUM NET PENETRATION INTO FRAMING OF 1 1/2" FOR 8d AND 1 5/8" FOR 10d.

FASTENING SCHEDULE

ELEMENT LOCATION:	FASTENER	LOCATION
1. Blocking between ceiling joists, rafters or studs to top plate or other framing below. Blocking between rafters or studs not at the wall top plate, rafter or stud	1" x 8d common (27"x 0.131") 3" x 12d 3" x 14d gage staples, 7/16" crown	Tossal each end
2. Ceiling joists to top plate	3" x 12d 3" x 14d gage staples, 7/16" crown	Tossal each joint
3. Ceiling joist not attached to partition (to throat)	3" x 12d 3" x 14d gage staples, 7/16" crown	Face nail
4. Ceiling joist attached to partition (raft joint)	3" x 12d 3" x 14d gage staples, 7/16" crown	Face nail
5. Collar to joist rafter	3" x 12d common 4" x 10d 4" x 10d 4" x 10d 4" x 10d 4" x 10d 4" x 10d	Face nail
6. Rafter or roof truss to top plate (table and section 2308.3.5)	3" x 12d 3" x 14d gage staples, 7/16" crown	Tossal
7. Roof rafter to ridge valley or top ridge or roof rafter to 2" ridge beam	3" x 12d 3" x 14d gage staples, 7/16" crown	Tossal
8. Stud to Stud (not at brace wall panels)	16d common 17d 17d 17d 17d 17d	24" o.c. face nail
9. Stud to stud and sheathing studs at intersecting wall corners (braced wall panels)	16d common 17d 17d 17d 17d 17d	16" o.c. face nail
10. Built-up header	16d common 17d 17d 17d 17d 17d	16" o.c. face nail 16" o.c. face nail 12" o.c. face nail
11. Continuous header to stud	4 x 4 common 4 x 4 common 4 x 4 common 4 x 4 common	Tossal
12. Top plate to top plate	16d common 17d 17d 17d 17d 17d	16" o.c. face nail 12" o.c. face nail
13. Top plate to top plate, at end joints	16d common 17d 17d 17d 17d 17d	Each side of end joint, face nail 12" o.c. face nail 12" o.c. face nail
14. Bottom plate to joist, rim joist, band joint or floor joist (not at braced wall panels)	16d common 17d 17d 17d 17d 17d	16" o.c. face nail 12" o.c. face nail
15. Bottom plate to joist, rim joist, band joint or floor joist (at braced wall panels)	16d common 17d 17d 17d 17d 17d	16" o.c. face nail
16. Stud to top of bottom plate	4 x 4 common 4 x 4 common 4 x 4 common 4 x 4 common 4 x 4 common 4 x 4 common	End nail
17. Top or bottom plate to stud	16d common 17d 17d 17d 17d 17d	End nail
18. Top plates, laps or corners or intersections	16d common 17d 17d 17d 17d 17d	Face nail
19. 1" brace to each stud and plate	2 x 4 common 2 x 4 common 2 x 4 common 2 x 4 common 2 x 4 common	Face nail
20. 1"x6" sheathing to each bearing	2 x 4 common 2 x 4 common 2 x 4 common 2 x 4 common	Face nail
21. 1"x6" w/under sheathing to each bearing	2 x 4 common 2 x 4 common 2 x 4 common 2 x 4 common	Face nail
22. Joist to sill, top plate, or girder	3 x 4 common 3 x 4 common 3 x 4 common 3 x 4 common 3 x 4 common	Tossal
23. Rim joist, band joint, or blocking to top plate, sill or other framing below	16d common 17d 17d 17d 17d 17d	6" o.c., tossal
24. 1"x6" under joist or less to each joist	2 x 4 common 2 x 4 common 2 x 4 common 2 x 4 common 2 x 4 common	Face nail
25. 2"x6" under joist or girder	2 x 4 common 2 x 4 common 2 x 4 common 2 x 4 common 2 x 4 common	Face nail
26. 2" plank 2" lumber layers	2 x 4 common 2 x 4 common 2 x 4 common 2 x 4 common 2 x 4 common	Each bearing, face nail 16" o.c. face nail at top and bottom staggered on opposite ends
27. Ledger strip supporting joist or rafter	16d common 17d 17d 17d 17d 17d	Each joint or rafter, face nail
28. Joist to band joist or rim joist, rafter or truss	16d common 17d 17d 17d 17d 17d	End nail
29. Bridging or blocking to joist, rafter or truss	2 x 4 common 2 x 4 common 2 x 4 common 2 x 4 common 2 x 4 common	Each end, tossal

For 24" 1 inch = 25.4 mm.  
a. Hole spaced 4 inches at intermediate supports where spans are 45" or more. For nailing of wood structural panels and partitioning sheathing and other walls, refer to Section 2305. Nails for wood sheathing are provided by the contractor, but not on ceiling.  
b. Spacing shall be 4 inches on center on the edges and 12 inches on center at intermediate supports for nonstructural application. End supports at 16 inches (80 inches if through span in the line direction) of the panel, unless otherwise noted.  
c. Where a rafter is attached to an adjacent parallel ceiling joist in accordance with the schedule and the ceiling joist is fastened to the top plate in accordance with the schedule, the number of bolts in the rafter shall be permitted to be reduced by one.  
\* See Table 2304.1(C) for more information.

2022 Single-Family Residential Mandatory Requirements Summary

- Building Envelope:**
- 110.6(a): Air Leakage.** Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283, or AAMA/WDMA/CSA 1011 S.2/440-2011.
  - 110.6(b): Labeling.** Fenestration products and exterior doors must have a label meeting the requirements of § 110.11(a).
  - 110.6(c): Field fabricated exterior doors and fenestration products** must use U-Factors and solar heat gain coefficients (SHGC) values from Tables 110.6.A, 110.6.B, or 24.5.3 for exterior doors. They must be caulked and/or weatherstripped.
  - 110.7: Air Leakage.** All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, weatherstripped, or otherwise sealed.
  - 110.8(a): Insulation Certification by Manufacturers.** Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
  - 110.8(b): Insulation Requirements for Heated Slab Floors.** Heated slab floors must be insulated per the requirements of § 110.8(g).
  - 110.8(c): Roofing Products Solar Reflectance and Thermal Emittance.** The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(d) and be labeled per § 110.8(d) when the installation of a cool roof is specified on the CPD.
  - 110.8(d): Radiant Barrier.** When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
- Roof Deck, Ceiling and Rafter Roof Insulation.** Roof decks in newly constructed attics in climate zones 4 and 5 shall have area-weighted average U-factor not exceeding 0.14. Ceiling and rafter roofs minimum R-22 insulation in wood-frame ceiling or area-weighted average U-factor must not exceed 0.043. Rafter roof assemblies minimum R-19 or area-weighted average U-factor of 0.054 or less. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration, as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling.
- Loose-fill Insulation.** Loose-fill insulation must meet the manufacturer's required density for the labeled R-value.
- Wall Insulation.** Minimum R-13 insulation in 2x4 wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Oppaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Table 150-A-4.
- 110.9(d): Raised-Floor Insulation.** Minimum R-13 insulation in raised wood framed floor or 0.037 maximum U-factor.
- 110.9(e): Slab Edge Insulation.** Slab edge insulation must meet all of the following: have a water absorption rate for the insulation material alone without facings, no greater than 0.3 percent, have a water vapor permeance no greater than 2.0 perm inch, be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
- 110.9(f): Vapor Retarder.** In climate zones 1 through 16, the warm floor of unventilated crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 110.9(f)(2).
- 110.9(g): Vapor Retarder.** In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with an airtight insulation.
- 110.9(h): Fenestration Products.** Fenestration products used in unconditioned space or outdoors must have a maximum U-factor of 0.45, or area-weighted average U-factor of all fenestration must not exceed 0.45.
- Fireplaces, Decorative Gas Appliances, and Gas Log**
- 110.10(a): Pilot Light.** Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
  - 110.10(b): Closable Doors.** Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
  - 110.10(c): Combustion Appliances.** Masonry or factory-built fireplaces must have a combustion air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and self-closing control device.
  - 110.10(d): Fuel Damper.** Masonry or factory-built fireplaces must have a fuel damper with a readily accessible control device.
- Space Conditioning, Heating, and Plumbing System:**
- 110.10(e): Certification.** Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission.
  - 110.10(f): HVAC Efficiency.** Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-N.
  - 110.20(a): Controls for Heat Pumps with Supplementary Electric Resistance Heating.** Heat pumps with supplementary electric resistance heaters must have a minimum seasonal energy efficiency ratio (SEER) of 14.0, and the heating load can be met by the heat pump alone; and in which the on-on-temperature for compression heating is higher than the on-on-temperature for supplementary heating, and the off-off-temperature for compression heating is higher than the off-off-temperature for supplementary heating.
  - 110.20(b): Thermostat.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat.
  - 110.20(c): Insulation.** Unvented service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank insulation, and other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.
  - 110.30(a): Isolation Valves.** Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.

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- Space Conditioning System Airflow Rate and Fan Efficiency.** Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the plenum. Airflow must be 150 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficiency of 0.45 watts per CFM for gas furnaces at handsets and 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow of 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficiency of 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3.
- Ventilation and Indoor Air Quality:**
- 110.00(1): Requirements for Ventilation and Indoor Air Quality.** All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings and the amendments specified in § 150.10(1).
  - 150.00(1)(B): Central Fan Integrated (CFI) Ventilation System.** Continuous operation of CFI air handlers is not allowed to provide the whole-dwelling unit ventilation airflow required by § 150.00(1)(C). A motorized damper must be installed on the ventilation ducts that prevents airflow through the space conditioner (system) in closed uncontrolled per § 150.00(1)(B)(ii). CFI ventilation systems must have controls that track outdoor air ventilation rate, and either open or close the motorized damper(s) for compliance with § 150.00(1)(C).
  - 150.00(1)(C): Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and townhouses.** Single-family detached dwelling units, and attached dwelling unit not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 150.00(1)(C).
  - 150.00(1)(G): Local Mechanical Exhaust.** Kitchens and bathrooms must have local mechanical exhaust; nonresidential kitchens must have demand-controlled exhaust system meeting requirements of § 150.00(1)(G); enclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting § 150.00(1)(G). Airflow must be measured by the installer per § 150.00(1)(G), and rated for sound per § 150.00(1)(H).
  - 150.00(1)(H): Airflow Measurement and Sound Ratings of Whole-Dwelling Unit ventilation Systems.** The airflow required per § 150.00(1)(C) must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminal(s) per Reference Residential Appendix RA3.7. Whole-dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 § 2.2 at no less than the minimum airflow rate required by § 150.00(1)(G).
  - 150.00(2): Field Verification and Diagnostic Testing.** Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HVAC and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hood airflow must be verified per Reference Residential Appendix RA3.7.4.3 to confirm it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per § 150.00(1)(G).
- Pool and Spa Systems and Equipment:**
- 110.4(a): Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following: compliance with the Appliance Efficiency Regulations and listing in MAEDS; an on/off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent waterproof plate or card with operating instructions; and must not use electric resistance heating.
  - 110.4(b)(1): Covers.** Outdoor pools or spas that have a heat pump or heater must have a cover.
  - 110.4(b)(2): Directional Inlets and Time Switches for Pools.** Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be off or programmed to run only during off-peak electricity demand periods.
  - 110.5: Pilot Light.** Natural gas pool and spa heaters must have a continuously burning pilot light.
  - 150.00(1): Pool Systems and Equipment Installation.** Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.

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- 110.5: Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas, fan-type cabinet furnaces, household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour), and pool and spa heaters.
  - 150.00(1): Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment, Volume, Applications Volume, and Fundamentals Volume, the SMACNA Residential Comfort System Installation Standards Manual, or the ACCA Manual J using design conditions specified in § 150.00(2).
  - 150.00(3A): Clearance.** Air conditioners and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any duct.
  - 150.00(3B): Liquid Line Drier.** Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
  - 150.00(4): Water Piping, Solar Water-Heating System Piping, and Space Conditioning System Line Insulation.** All domestic hot water piping must be insulated as specified in § 609.11 of the California Plumbing Code.
  - 150.00(2): Insulation Protection.** Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment, UV light, maintenance and wind as required by § 120.3(b). Insulation exposed to weather must be water resistant and protected from the weather by light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crucible casing or sleeve.
  - 150.00(1): Gas or Propane Water Heating Systems.** Systems using gas or propane water heaters to serve individual dwelling units must designate a space at least 2' x 2' x 5' suitable for the future installation of a heat pump water heater, and meet electrical and plumbing requirements, based on the distance between this designated space and the water heater location, and a condensate drain no more than 2' higher than the base of the water heater.
  - 150.00(3): Solar Water-Heating Systems.** Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the executive director.
- Ducts and Fans:**
- 110.8(b)(3): Ducts.** Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC), or a CMC certified damper in all openings to the outside, except air conditioning, inlet and outlet air openings, inlet and outlet air ducts.
  - 110.8(b)(4): CMC Compliance.** All air-distribution system ducts and plenums must meet CMC § 601.0-605.0 and ANSISMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to R-4 or higher: ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.4.3.8) do not require insulation. Connections of metal ducts and inner core of flexible duct must be mechanically sealed. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable UL requirements, or aerosol sealant that meets UL 723. The compound of mastic or other sealant used in such applications must be used to seal openings greater than 1/2". If mastic or tape is used, Building cavities, air handler support platforms, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must be used to comply with § 110.8(b). Building cavities and support platforms may contain ducts, ducts installed in these spaces must be compressed.
  - 150.00(1): Factory-Fabricated Duct Systems.** Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures, joints and seams of duct systems and their components must not be sealed with cloth backer adhesive plugging requirements, based on the distance between this designated space and the water heater location, and a condensate drain no more than 2' higher than the base of the water heater.
  - 150.00(2): Field-Fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
  - 150.00(3): Backdraft Damper.** Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
  - 150.00(4): Gravity Ventilation Dampers.** Gravity ventilation systems serving conditioned space must have either automatic or readily accessible, closable dampers in all openings to the outside, except air conditioning, inlet and outlet air openings, inlet and outlet air ducts.
  - 150.00(5): Protection of Insulation.** Insulation must be protected from damage due to sunlight, moisture, equipment, maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover). Covering insulation as above or painted with a water resistant and solar radiation-resistant coating.
  - 150.00(6): Porous Inner Core Flex Duct.** Porous inner cores of flex ducts must have a non-porous layer or air barrier between the inner core and outer fabric layer.
  - 150.00(11): Duct System Sealing and Leakage Test.** When space conditioning systems use forced air duct systems to supply conditioned air in an occupiable space, the ducts must be sealed and air duct systems to be leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1.
  - 150.00(12): Air Filtration.** Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must be a inch deep or can be one inch if sized per regulation 150-A. Clean-filter pressure drop and labeling must meet the requirements in 150.00(12). Filters must be accessible for regular service. Filter media fillers must use gaskets, sealing, or other means to close gaps around the inserted filters to and prevents air from bypassing the filter.

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- 150.00(1)(G): Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8.
- 150.00(1)(H): Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliant with the JAB elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
- 150.00(1): Light Sources in Drawers, Cabinets, and Linen Closets.** Light sources internal to drawers, cabinets or linen closets are not required to comply with Table 150-A-6 or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
- 150.00(2A): Interior Switches and Controls.** All forward phase out dimmers used with LED light sources must comply with NEMA SSL 7A.
- 150.00(2B): Accessible Controls.** Controls must have readily accessible wall-mounted controls that allow the lighting to be manually turned on or off from the occupant's location.
- 150.00(2C): Occupant Sensor.** Luminaires must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer sensor is installed to comply with § 150.00(1).
- 150.00(2D): Mandatory Requirements.** Lighting controls must comply with the applicable requirements of § 110.9.
- 150.00(2E): Energy Management Control System.** An energy management control system (EMCS) may be used to comply with dimming, occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified in § 150.00(2C).
- 150.00(2F): Automatic Shutoff Controls.** In bathrooms, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic off-functionality. Lighting inside drawers and cabinets with opaque finish or doors must have controls that turn the light off when the drawer or door is closed.
- 150.00(2G): Dimmers.** Lighting in habitable spaces (e.g., living rooms, kitchens, and bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A.
- 150.00(2K): Independent controls.** Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting.
- 150.00(3A): Residential Outdoor Lighting.** For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or on other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch controller or an astronomical time clock. An energy management control system that provides the specified control functionality and meets all applicable requirements may be used to meet these requirements.
- 150.00(3B): Internally illuminated address signs.** Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power.
- 150.00(4): Residential Garages for Eight or More Vehicles.** Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for commercial garages in § 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.

Solar Readiness:

- 110.10(1): Single-Family Residences.** Single-family residences located in subdivisions with 10 or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 150.10(1)(b).
- Minimum Solar Zone Area.** The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 in any requirement adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no obstruction less than 5 feet and no less than 80 square feet each for buildings with roof areas less than 10,000 square feet or less than 160 square feet for buildings with roof areas greater than 10,000 square feet. For single-family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet.
- 110.10(1)(b): Azimuth.** All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.
- 110.10(1)(3A): Shading.** The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof-mounted equipment.
- 110.10(1)(3B): Shading.** Any obstruction located on the roof or any other part of the building that projects above the solar zone must be located at least twice the horizontal distance from the vertical projection of the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.
- 110.10(3D): Structural Design Loads on Vertical Construction Documents.** For areas of the roof designated as a solar zone, the structural design loads for roof dead and roof live load must be clearly indicated on the construction documents.
- 110.10(1)(B): Interconnection Pathways.** The construction documents must indicate a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service, and for single-family residences and central water-heating systems, a pathway reserved for routing of conduit to the water-heating systems.
- 110.10(1): Documentation.** A copy of the construction documents or a comparable document indicating the information from § 110.10(1)(b) must be provided to the occupant.
- 110.10(1)(1): Main Electrical Service Panel.** The main electrical service panel must have a minimum busbar rating of 200 amps.
- 110.10(1)(2): Main Electrical Service Panel.** The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."

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2022 Single-Family Residential







# UNITS 1, 3 & 5

**CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD**  
 Project Name: Watson Holdings Unit 1-3-5 gr  
 Calculation Date/Time: 2023-11-02T14:16:48-07:00  
 Input File Name: Watson-7120 Palo Alto #1-3-5.rbd22  
 CF1R-PRF-01E (Page 13 of 14)

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 Leakage Ducts Entirely in Conditioned Space
Distribution System 1-hers-dist	Yes	5.0	Not Required	Not Required	Not Required	Credit not taken	Not Required	No

HVAC FAN SYSTEMS			
01	02	03	04
Name	Type	Fan Power (Watts/CFM)	
HVAC Fan System 1	HVAC Fan	0.45	HVAC Fan System 1-hers-fan

HVAC FAN SYSTEMS - HERS VERIFICATION			
01	02	03	04
Name	Verified Fan Watt Draw	Required Fan Efficiency (Watts/CFM)	
HVAC Fan System 1-hers-fan	Required	0.45	

INDOOR AIR QUALITY (IAQ) FANS								
01	02	03	04	05	06	07	08	09
Dwelling Unit	Airflow (CFM)	Fan Efficiency (W/CFM)	IAQ Fan Type	Includes Head Energy Recovery?	IAQ Recovery Effectiveness - SRE/ASRE	Includes Fault Indicator Display?	HERS Verification	Status
Slam IAQventRpt	52	0.35	Exhaust	No	n/a / n/a	No	Yes	

Registration Number: 423-P010199790A-000-000-000000-0000  
 Registration Date/Time: 11/02/2023 14:29  
 HERS Provider: CHEERS  
 Report Version: 2022.0.000  
 Schema Version: rev 20220903

**CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD**  
 Project Name: Watson Holdings Unit 1-3-5 gr  
 Calculation Date/Time: 2023-11-02T14:16:48-07:00  
 Input File Name: Watson-7120 Palo Alto #1-3-5.rbd22  
 CF1R-PRF-01E (Page 14 of 14)

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**  
 I, I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Brian Diebolt  
 Signature Date: 11/02/2023  
 Company: Design Concepts (Yucca Valley)  
 Address: 57445 29 Palms Hwy Suite 304  
 City/State/Zip: Yucca Valley, CA 92284  
 Phone: (760) 365-8742

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**  
 I certify the following under penalty of perjury, under the laws of the State of California:  
 1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.  
 2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.  
 3. 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.

Responsible Designer Name: Brian Diebolt  
 Signature Date: 11/02/2023  
 Company: Design Concepts (Yucca Valley)  
 Address: 57445 29 Palms Hwy Suite 304  
 City/State/Zip: Yucca Valley, CA 92284  
 Phone: (760) 365-8742

Registration Number: 423-P010199790A-000-000-000000-0000  
 Registration Date/Time: 11/02/2023 14:29  
 HERS Provider: CHEERS  
 Report Version: 2022.0.000  
 Schema Version: rev 20220903

# UNITS 1, 3 & 5

# UNITS 2 & 4

**CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD**  
 Project Name: Watson Holdings-7120 Palo Alto #2&4 GR  
 Calculation Date/Time: 2023-11-02T14:10:08-07:00  
 Input File Name: Watson 7120 Palo Alto #2&4 gr.rbd22  
 CF1R-PRF-01E (Page 1 of 14)

GENERAL INFORMATION			
01	Project Name	05	Standards Version
02	Watson Holdings-7120 Palo Alto #2&4 GR	06	2022
03	Run Title	07	Software Version
04	2120 Palo Alto Unit 2&4	08	CBECC Rev 2022.3.0
05	City	09	Front Orientation (deg/ Cardinal)
06	Yucca Valley, CA	10	All orientations
07	Zip code	11	Number of Dwelling Units
08	92284	12	1
09	Climate Zone	13	Number of Bedrooms
10	14	14	2
11	Building Type	15	Number of Stories
12	Single family	16	1
13	Project Scope	17	Renovation Average Of Factors
14	Newly Constructed	18	0.20
15	Addition Cond. Floor Area (SF)	19	Glaspan Percentage (%)
16	0	20	15.63%
17	Existing Cond. Floor Area (SF)	21	ASU Conditioned Floor Area
18	1030	22	0
19	Total Cond. Floor Area (SF)	23	No Dwelling Unit
20	1030	24	No
21	ASU Bedroom Count		
22	0		
23	Fuel Type		
24	Natural gas		

**COMPLIANCE RESULTS**

01	Building Complies with Computer Performance
02	This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.
03	This building incorporates one or more Special Features shown below

Registration Number: 423-P010199790A-000-000-000000-0000  
 Registration Date/Time: 11/02/2023 14:31  
 HERS Provider: CHEERS  
 Report Version: 2022.0.000  
 Schema Version: rev 20220903

**CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD**  
 Project Name: Watson Holdings-7120 Palo Alto #2&4 GR  
 Calculation Date/Time: 2023-11-02T14:10:08-07:00  
 Input File Name: Watson 7120 Palo Alto #2&4 gr.rbd22  
 CF1R-PRF-01E (Page 2 of 14)

ENERGY DESIGN RATINGS	Energy Design Ratings			Compliance Margins		
	Source Energy (EDR1)	Efficiency <sup>2</sup> EDR (EDR2efficiency)	Total <sup>3</sup> EDR (EDR2total)	Source Energy (EDR1)	Efficiency <sup>2</sup> EDR (EDR2efficiency)	Total <sup>3</sup> EDR (EDR2total)
Standard Design	41.6	43.8	32.3			
Proposed Design						
North Facing	33.8	39.6	28.3	7.8	4.2	4
East Facing	34.8	43.4	30.5	6.8	0.4	1.8
South Facing	34.3	40.5	26.8	7.3	3.3	3.5
West Facing	35.2	43.4	30.5	6.4	0.4	1.8
RESULT <sup>1</sup> : PASS						

<sup>1</sup>Efficiency EDR includes improvements like a better building envelope and more efficient equipment  
<sup>2</sup>Total EDR includes efficiency and demand response measures such as photovoltaic (PV) system and batteries  
<sup>3</sup>Building complies when source energy, efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded

- Standard Design PV Capacity: 2.13 kWdc

Registration Number: 423-P010199790A-000-000-000000-0000  
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 HERS Provider: CHEERS  
 Report Version: 2022.0.000  
 Schema Version: rev 20220903

# UNITS 2 & 4

Revisions	By

5 UNIT RENTAL COMPLEX FOR:  
 Owner:  
 WATSON HOLDINGS LLC  
 7120 PALO ALTO AVE  
 YUCCA VALLEY, CA 92284-3820  
 APN: 0595-282-12-0000

DESIGN CONCEPTS  
 DRAFTING AND DESIGN SERVICE  
 57445 29 Palms Hwy., Suite 304  
 Yucca Valley, CA 92284  
 Phone (760) 365-8742 - Fax (760) 365-8742  
 Email: design.online@vonzon.net

DRAWN  
 BRIAN T. DIEBOLT  
 CHECKED

DATE  
 9/18/2020

SCALE  
 1/4"=1'

JOB NUMBER  
 VALLEY PIPELINE

SHEET #  
 12

OF 3 SHEETS



# UNITS 2 & 4

Revisions By

**CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD**  
 Calculation Date/Time: 2023-11-02T14:10:08-07:00  
 Project Name: Watson Holdings-7120 Palo Alto #264 GR  
 Calculation Description: Input File Name: Watson 7120 Palo Alto #264 gr/rb22

**CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD**  
 Calculation Date/Time: 2023-11-02T14:10:08-07:00  
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Energy Use	Standard Design Source Energy (EDR1) (Btu/h <sup>2</sup> -yr)	Standard Design TDV Energy (EDR2) (kWh/m <sup>2</sup> -yr)	Proposed Design Source Energy (EDR1) (Btu/h <sup>2</sup> -yr)	Proposed Design TDV Energy (EDR2) (kWh/m <sup>2</sup> -yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)
Space Heating	6.7	25.48	3.57	25.48	3.13	4.66
Space Cooling	1.49	31.88	1.38	30.61	0.11	1.27
IAD Ventilation	0.4	4.34	0.4	4.34	0	0
Water Heating	2.36	23.85	2.17	23.16	0.19	2.69
Self Utilization/Transitability Credit			0	0	0	0
<b>North Facing Efficiency Compliance Total</b>	<b>10.95</b>	<b>90.01</b>	<b>7.52</b>	<b>83.39</b>	<b>3.43</b>	<b>6.62</b>
Space Heating	6.7	30.14	3.7	26.67	3	3.47
Space Cooling	1.49	31.88	1.68	37.42	-0.19	-5.54
IAD Ventilation	0.4	4.34	0.4	4.14	0	0
Water Heating	2.36	23.85	2.17	20.9	0.19	2.95
Self Utilization/Transitability Credit			0	0	0	0
<b>East Facing Efficiency Compliance Total</b>	<b>10.95</b>	<b>90.01</b>	<b>7.95</b>	<b>83.13</b>	<b>3</b>	<b>6.88</b>

Energy Use	Standard Design Source Energy (EDR1) (Btu/h <sup>2</sup> -yr)	Standard Design TDV Energy (EDR2) (kWh/m <sup>2</sup> -yr)	Proposed Design Source Energy (EDR1) (Btu/h <sup>2</sup> -yr)	Proposed Design TDV Energy (EDR2) (kWh/m <sup>2</sup> -yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)
Space Heating	6.7	30.14	3.8	27.67	2.9	2.47
Space Cooling	1.49	31.88	1.38	30.39	0.11	1.49
IAD Ventilation	0.4	4.34	0.4	4.34	0	0
Water Heating	2.36	23.85	2.16	20.95	0.2	2.9
Self Utilization/Transitability Credit			0	0	0	0
<b>South Facing Efficiency Compliance Total</b>	<b>10.95</b>	<b>90.01</b>	<b>7.74</b>	<b>83.15</b>	<b>3.21</b>	<b>6.86</b>
Space Heating	6.7	30.14	3.93	28.28	2.77	1.86
Space Cooling	1.49	31.88	1.63	35.8	-0.14	-3.92
IAD Ventilation	0.4	4.34	0.4	4.34	0	0
Water Heating	2.36	23.85	2.17	20.96	0.19	2.89
Self Utilization/Transitability Credit			0	0	0	0
<b>West Facing Efficiency Compliance Total</b>	<b>10.95</b>	<b>90.01</b>	<b>8.13</b>	<b>89.18</b>	<b>2.82</b>	<b>6.83</b>

Energy Use Intensity	Standard Design (kBtu/m <sup>2</sup> -yr)	Proposed Design (kBtu/m <sup>2</sup> -yr)	Compliance Margin (kBtu/m <sup>2</sup> -yr)	Margin Percentage
<b>North Facing</b>				
Gross EU <sup>1</sup>	27.35	22.03	5.32	19.45
Net EU <sup>2</sup>	14.23	7.94	6.29	44.2
<b>East Facing</b>				
Gross EU <sup>1</sup>	27.35	22.78	4.57	16.71
Net EU <sup>2</sup>	14.23	8.68	5.55	39
<b>South Facing</b>				
Gross EU <sup>1</sup>	27.35	22.26	5.09	18.61
Net EU <sup>2</sup>	14.23	8.17	6.06	42.59
<b>West Facing</b>				
Gross EU <sup>1</sup>	27.35	22.92	4.43	16.2
Net EU <sup>2</sup>	14.23	8.82	5.41	38.02

PI SYSTEMS	01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kVA)	Exception	Module Type	Array Type	Power Electronics	CH	Airpath (deg)	Tilt Input	Array Angle (deg)	Tilt (in 12)	Inverter Eff (%)	Annual Solar Access (%)	
2.2	NA	Standard (14-17%)	Fixed	none	true	150-270	n/a	n/a	>=12	96	100	

**REQUIRED SPECIAL FEATURES**  
 The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis:  
 • PV System 2.2 MW  
 • Insulation below roof deck  
 • Window overhangs and/or fins  
 • NorthWest Energy Efficiency Alliance (NEEA) rated heat pump water heater, specific brand/model, or equivalent, must be installed

**HERS FEATURE SUMMARY**  
 The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional details is provided in the building tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry  
 • Quality insulation installation (QII)  
 • Indoor air quality ventilation  
 • Kitchen range hood  
 • Minimum airflow  
 • Verified SEER/SEER2  
 • Verified Refrigerant Charge  
 • Fan Efficiency (EER/CFM)  
 • Verified heat pump rated heating capacity  
 • Dual Inletage Washers  
 • Pipe Insulation, All Lines

Building - Features Information	01	02	03	04	05	06	07
	Project Name	Conditioned Floor Area (ft <sup>2</sup> )	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
Watson Holdings 7120 Palo Alto #264 GR	1020	1	2	1	0	0	1

Registration Number: 423-P010199782A-000-000-000000-0000  
 Report Date/Time: 11/02/2023 14:31  
 HERS Provider: CHEERS  
 Report Version: 2022.0.000  
 Schema Version: rev 20220901

Registration Number: 423-P010199782A-000-000-000000-0000  
 Report Date/Time: 11/02/2023 14:31  
 HERS Provider: CHEERS  
 Report Version: 2022.0.000  
 Schema Version: rev 20220901

Registration Number: 423-P010199782A-000-000-000000-0000  
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 Schema Version: rev 20220901

**CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD**  
 Calculation Date/Time: 2023-11-02T14:10:08-07:00  
 Project Name: Watson Holdings-7120 Palo Alto #264 GR  
 Calculation Description: Input File Name: Watson 7120 Palo Alto #264 gr/rb22

**CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD**  
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 Project Name: Watson Holdings-7120 Palo Alto #264 GR  
 Calculation Description: Input File Name: Watson 7120 Palo Alto #264 gr/rb22

Zone Information	01	02	03	04	05	06	07
	Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft <sup>2</sup> )	Avg. Ceiling Height	Water Heating System 1	Status
Zone 1	Conditioned	HVAC System 1	1020	8	DHW System 1	New	

Opaque Surfaces	01	02	03	04	05	06	07	08
	Name	Zone	Construction	Altimth	Orientation	Gross Area (ft <sup>2</sup> )	Window and Door Area (ft <sup>2</sup> )	Tilt (deg)
z1 front	Zone 1	exterior walls	0	Front	389.66	64	90	
z1 back	Zone 1	exterior walls	180	Back	389.66	71.6	90	
z1 right	Zone 1	exterior walls	270	Right	80	0	90	
z1 left	Zone 1	exterior walls	90	Left	296	0	90	
garage right	Zone 1	garage	n/a	n/a	256	0	n/a	
Interior Wall 1	Zone 1	interior walls	n/a	n/a	176	0	n/a	
Ceiling (below attic) garage	Garage	garage ceiling	n/a	n/a	302	n/a	n/a	
Ceiling (below attic) 1	Zone 1	ceiling	n/a	n/a	3300	n/a	n/a	
garage front	Garage	garage exterior walls	0	Front	112	70	90	
garage back	Garage	garage exterior walls	180	Back	112	0	90	

ATIC	01	02	03	04	05	06	07	08
	Name	Construction	Type	Roof Rise (in 12)	Roof Reflectance	Roof Emittance	Radiant Barrier	Cool Roof
ATIC	Asphalt Shingle Roof	Ventilated	4	0.1	0.85	No	No	

Penetration / Glazing	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	Name	Zone	Surface	Orientation	Altimth	Width (ft)	Height (ft)	Mult.	Area (ft <sup>2</sup> )	U-Factor	SHGC	SHGC Source	Exterior Shading	
living	Window	z1 front	Front	0	6	4	1	24	0.29	NFRC	0.23	NFRC	Bag Screen	
bed 2	Window	z1 front	Front	0	6	4	1	20	0.29	NFRC	0.23	NFRC	Bag Screen	
master	Window	z1 back	Back	180	3	1	1	3	0.29	NFRC	0.23	NFRC	Bag Screen	
dining	Window	z1 back	Back	180	6	6.6	1	39.6	0.28	NFRC	0.23	NFRC	Bag Screen	
master bath	Window	z1 back	Back	180	3	1	1	3	0.29	NFRC	0.23	NFRC	Bag Screen	
bed 1	Window	z1 back	Back	180	3	1	1	3	0.29	NFRC	0.23	NFRC	Bag Screen	
living	Window	z1 back	Back	180	3	1	1	3	0.29	NFRC	0.23	NFRC	Bag Screen	
bath	Window	z1 left	Left	90	3	1	1	3	0.29	NFRC	0.23	NFRC	Bag Screen	

Opaque Doors	01	02	03	04
	Name	Side of Building	Area (ft <sup>2</sup> )	U-Factor
front door	z1 front	20	0.35	
garage door	garage front	70	0.35	

Overhangs and Fins	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Condition	U-factor	Assembly Layers						
exterior walls	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-21	None / None	0.065	Inside Finish: Gypsum Board Cavity / Frame: R-21 / 2x6 Sheathing / Insulation: Wood Siding/Heating/Cooling Exterior Finish: 3 Coat Stucco							

Overhangs and Fins	01	02	03	04	05	06	07	08	09	10	11	12	13	14
	Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Condition	U-factor	Assembly Layers						
exterior walls	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-21	None / None	0.065	Inside Finish: Gypsum Board Cavity / Frame: R-21 / 2x6 Sheathing / Insulation: Wood Siding/Heating/Cooling Exterior Finish: 3 Coat Stucco							

Opaque Surface Constructions	01	02	03	04	05	06	07	08
	Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Condition	U-factor	Assembly Layers
exterior walls	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-21	None / None	0.076	Inside Finish: Gypsum Board Cavity / Frame: R-21 / 2x6 Sheathing / Insulation: Wood Siding/Heating/Cooling Exterior Finish: 3 Coat Stucco	
interior walls	Interior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-21	None / None	0.064	Inside Finish: Gypsum Board Cavity / Frame: R-21 / 2x6 Other Side Finish: Gypsum Board	
garage int	Interior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-21	None / None	0.075	Inside Finish: Gypsum Board Cavity / Frame: R-21 / 2x4 Other Side Finish: Gypsum Board	
Asphalt Shingle Roof	Attic Roofs	Wood Framed Ceiling	2x4 Top Chord of Roof Truss @ 24 in. O. C.	R-13	None / None	0.078	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/Heating/Cooling Cavity / Frame: R-13 / 2x4 Top Chrd Around Roof Joists: R-0 Insul.	
ceiling	Ceilings (below attic)	Wood Framed Ceiling	2x4 Bottom Chord of Truss @ 24 in. O. C.	R-18	None / None	0.025	Cher Ceiling Joists: R-20.9 Insul. Cavity / Frame: R-6.1 / 2x4 Btm Chrd Inside Finish: Gypsum Board	
garage ceiling	Ceilings (below attic)	Wood Framed Ceiling	2x4 Bottom Chord of Truss @ 24 in. O. C.	R-18	None / None	0.025	Cher Ceiling Joists: R-20.9 Insul. Cavity / Frame: R-6.1 / 2x4 Btm Chrd Inside Finish: Gypsum Board	

Building Envelope - HERS Verification	01	02	03	04	05
	Quality Insulation Installation (QII)	High R-value Spray Foam Insulation	Building Envelope Air Leakage	CFM50	CFM50
Required	Not Required	N/A	N/A	N/A	n/a

Registration Number: 423-P010199782A-000-000-000000-0000  
 Report Date/Time: 11/02/2023 14:31  
 HERS Provider: CHEERS  
 Report Version: 2022.0.000  
 Schema Version: rev 20220901

Registration Number: 423-P010199782A-000-000-000000-0000  
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**CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD**  
 Calculation Date/Time: 2023-11-02T14:10:08-07:00  
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Water Heating Systems	01	02	03	04	05	06	07	08	09
	Name	System Type	Distribution Type	Water Heater Name	Number of Units	Heat Pump System	Compact Distribution	HERS Verification	Water Heater Name (1)
DHW System 1	Domestic Hot Water (DHW)	HERS Verified Pipe Insulation credit	Water Heater 1	1	n/a	None	DHW System 1-her-dhw	Water Heater 1	

Water Heaters - NEA Heat Pump	01	02	03	04	05	06	07	08
	Name	# of Units	Tank Vol. (gal)	NEA Heat Pump Brand	NEA			



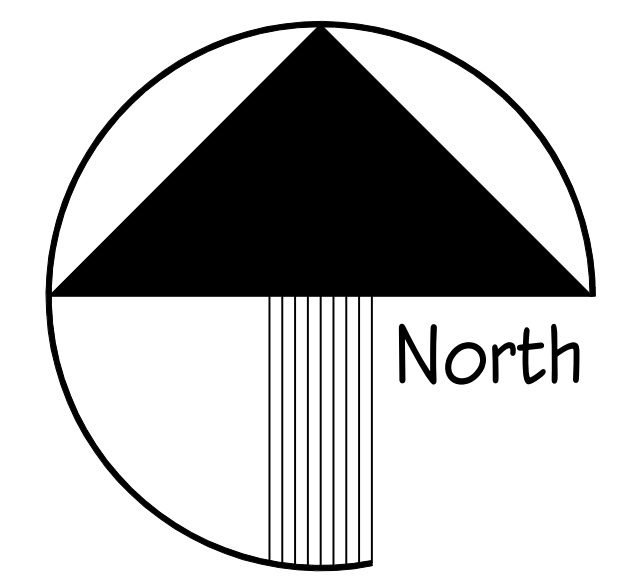
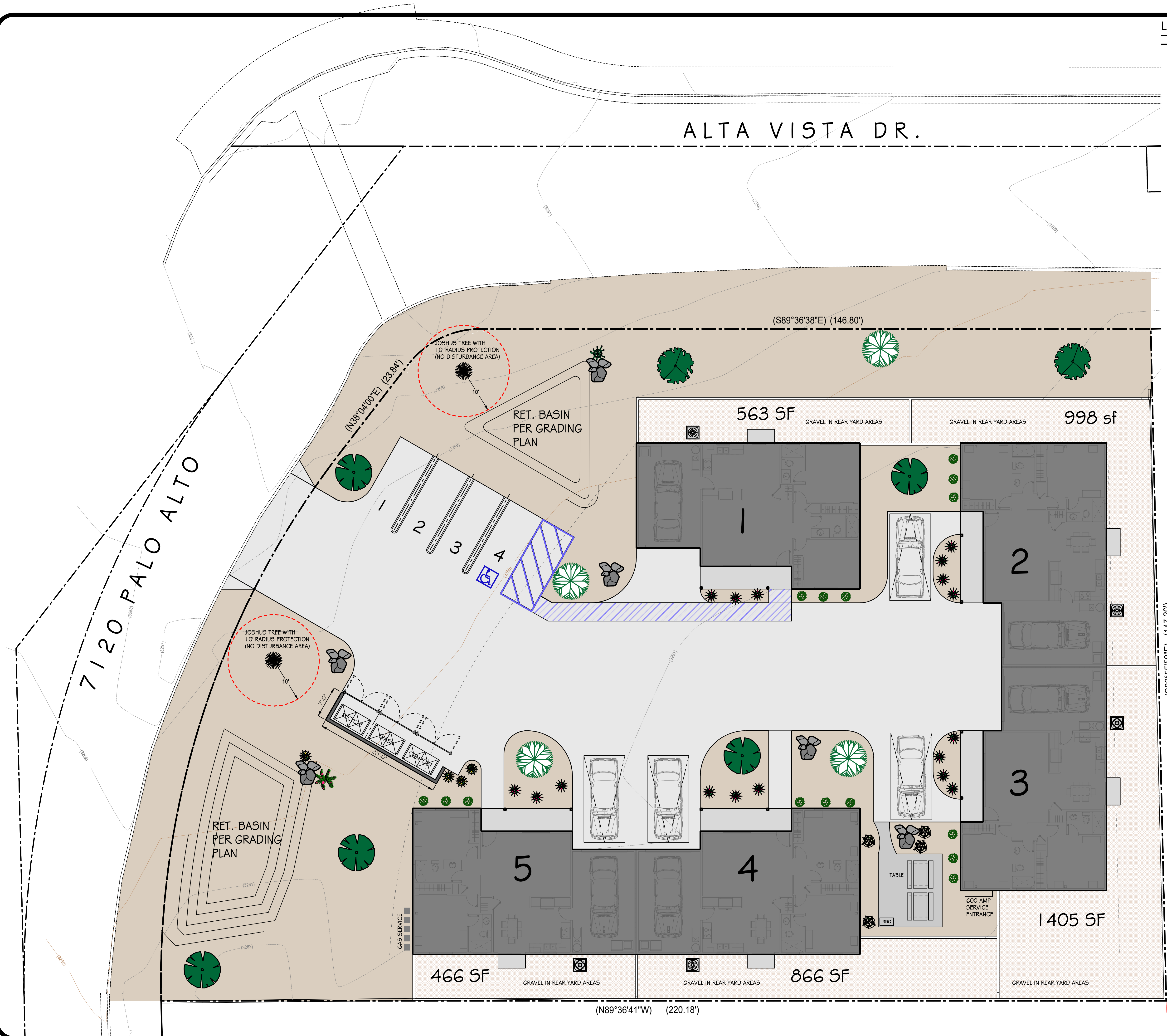
SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
	SCHINUS MOLLE	CALIFORNIA PEPPER TREE	24 BOX
	WASHINGTON ROBUSTA	MEXICAN FAN PALM	24 BOX
	PROSOPIS GLANDULOSA (VAR. GLANDULOSA)	TEXAS HONEY MESQUITE	24 BOX
	CERIDIUM FLORIDUM	BLUE PALO VERDE	24 BOX
	FOUQUIERIA APLENDENS	OCOTILLO	6'-8' TALL
	AGAVE DESMETTIANA	AGAVE	1 GALLON
	HESPERALOE PARVIFLORA	RED YUCCA	1 GALLON
	HESPERALOE PARVIFLORA	YELLOW YUCCA	1 GALLON
	BUXUS SEMPERVIRENS	BOXWOOD	3 GALLON
	LANTANA SP. NEW GOLD	NEW GOLD LANTANA	3 GALLON
	LANTANA MONTEVIDENSIS	PURPLE TRAILING LANTANA	3 GALLON
	AGAVE AMERICANA	CENTURY AGAVE	3 GALLON
	NERIUM	OLEANDER HEDGE	5 GALLON
	CAESALPINIA PULCHERRIMA	RED BIRD OF PARADISE	5 GALLON
	BOULDER CLUSTER	SCALE ON PLAN	VARIES
	NATIVE GROUND COVER		

Revisions	By

5 UNIT RENTAL COMPLEX FOR:  
 Owner:  
 VATSON HOLDINGS LLC  
 7120 PALO ALTO AVE  
 YUCCA VALLEY, CA 92284-3820  
 APN: 0595-282-12-0000

**DESIGN CONCEPTS**  
 DRAFTING AND DESIGN SERVICE  
 57445 29 Palms Hwy., Suite 304  
 Yucca Valley, CA 92284  
 Phone (760) 365-8742 - Fax (760) 365-8742  
 Email: design.online@venzon.net

DRAWN BY  
 BRIAN T. DEBOLT  
 CHECKED BY  
 DATE  
 6/08/2021  
 SCALE  
 1" = 10'  
 JOB NUMBER  
 Valley Pipeline  
 SHEET #  
**14**  
 OF \_\_\_\_ SHEETS



Landscape Plan







# 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

## RESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2023)

Y NA RESPON PARTY  
 \* YES  
 \* NOT APPLICABLE  
 \* RESPONSIBLE PARTY (BY ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

Y	NA	RESPON PARTY																			
			<b>CHAPTER 3</b> <b>GREEN BUILDING</b> <b>SECTION 301 GENERAL</b> <b>301.1 SCOPE.</b> 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 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. <b>301.1.1 Additions and alterations.</b> [HCD] The mandatory provisions of Chapter 4 shall be applied to additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. The requirements shall apply only to and/or within the specific area of the addition or alteration. The mandatory provision of Section 4.106.4.2 may apply to additions or alterations of existing parking facilities or the addition of new parking facilities serving existing multifamily buildings. See Section 4.106.4.3 for application. <b>Note:</b> Repairs including, but not limited to, resurfacing, restriping and repairing or maintaining existing lighting fixtures are not considered alterations for the purpose of this section. <b>Note:</b> On and after January 1, 2014, residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates. <b>301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS.</b> [HCD] The provisions of individual sections of CALGreen may apply to either low-rise residential buildings, high-rise residential buildings, or both. Individual sections will be designated by banners to indicate where the section applies specifically to low-rise only (LR) or high-rise only (HR). When the section applies to both low-rise and high-rise buildings, no banner will be used. <b>SECTION 302 MIXED OCCUPANCY BUILDINGS</b> <b>302.1 MIXED OCCUPANCY BUILDINGS.</b> In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy. Exceptions: 1. [HCD] Accessory structures and accessory occupancies serving residential buildings shall comply with Chapter 4 and Appendix A4, as applicable. 2. [HCD] For purposes of CALGreen, live/work units, complying with Section 419 of the California Building Code, shall not be considered mixed occupancies. Live/Work units shall comply with Chapter 4 and Appendix A4, as applicable. <b>DIVISION 4.1 PLANNING AND DESIGN</b> <b>ABBREVIATION DEFINITIONS:</b> HCD Department of Housing and Community Development BSC California Building Standards Commission DSA-DSS Division of the State Architect, Structural Safety CSHPD Office of Statewide Health Planning and Development LR Low Rise HR High Rise AA Additions and Alterations N New <b>CHAPTER 4</b> <b>RESIDENTIAL MANDATORY MEASURES</b> <b>SECTION 4.102 DEFINITIONS</b> <b>4.102.1 DEFINITIONS</b> The following terms are defined in Chapter 2 (and are included here for reference) <b>FRENCH DRAIN.</b> A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar porous material used to collect or channel drainage or runoff water. <b>WATTLES.</b> Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials such as hay, straw or similar material shaped in the form of tubes and placed on a downward slope. Wattles are also used for perimeter and inlet controls. <b>4.106 SITE DEVELOPMENT</b> <b>4.106.1 GENERAL.</b> Preservation and use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, management of storm water drainage and erosion controls shall comply with this section. <b>4.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION.</b> Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction. In order to manage storm water drainage during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site. 1. Retention basins of sufficient size shall be utilized to retain storm water on the site. 2. Where storm water is conveyed to a public drainage system, collection point, gutter or similar disposal method, water shall be filtered by use of a barrier system, wattle or other method approved by the enforcing agency. 3. Compliance with a locally enacted storm water management ordinance. <b>Note:</b> Refer to the State Water Resources Control Board for projects which disturb one acre or more of soil, or are part of a larger common plan of development which in total disturbs one acre or more of soil. (Website: <a href="https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html">https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html</a> ) <b>4.106.3 GRADING AND PAVING.</b> Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from the following locations. Examples of methods to manage surface water include, but are not limited to, the following: 1. Swales 2. Water collection and disposal systems 3. French drains 4. Water retention gardens 5. Other water measures which keep surface water away from buildings and aid in groundwater recharge. <b>Exception:</b> Additions and alterations not altering the drainage path. <b>4.106.4 Electric vehicle (EV) charging for new construction.</b> New construction shall comply with Sections 4.106.4.1 or 4.106.4.2 to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625. <b>Exceptions:</b> 1. On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions: 1.1 Where there is no local utility power supply or the local utility is unable to supply adequate power. 1.2 Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 4.106.4, may adversely impact the construction cost of the project. 2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities. <b>4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages.</b> For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Raceways are required to be continuous if enclosed, inaccessible or concealed areas and spaces. The service panel and/or subpanel shall provide capacity to install a 40-ampere 208/240-volt minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device. <b>Exception:</b> A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the location of an EV charger at the time of original construction in accordance with the California Electrical Code. <b>4.106.4.1.1 Identification.</b> The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "EV CAPABLE." The raceway termination location shall be permanently and visibly marked as "EV CAPABLE."																		
		X	<b>4.106.4.2 New multifamily dwellings, hotels and motels and new residential parking facilities.</b> When parking is provided, parking spaces for new multifamily dwellings, hotels and motels shall meet the requirements of Sections 4.106.4.2.1 and 4.106.4.2.2. Calculations for spaces shall be rounded up to the nearest whole number. A parking space served by electric vehicle supply equipment or designed as a future EV charging space shall count as at least one standard automobile parking space only for the purpose of complying with any applicable minimum parking space requirements established by a local jurisdiction. See Vehicle Code Section 22511.2 for further details. <b>4.106.4.2.1 Multifamily development projects with less than 20 dwelling units; and hotels and motels with less than 20 sleeping units or guest rooms.</b> The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section. <b>1.EV Capable.</b> Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at a minimum of 40 amperes. <b>The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.</b> <b>Exceptions:</b> 1. When EV chargers (Level 2 EVSE) are installed in a number equal to or greater than the required number of EV capable spaces. 2. When EV chargers (Level 2 EVSE) are installed in a number less than the required number of EV capable spaces, the number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed. <b>Notes:</b> a. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging. b. There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use. <b>2.EV Ready.</b> Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit. <b>Exception:</b> Areas of parking facilities served by parking lifts. <b>4.106.4.2.2 Multifamily development projects with 20 or more dwelling units, hotels and motels with 20 or more sleeping units or guest rooms.</b> The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section. <b>1.EV Capable.</b> Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at a minimum of 40 amperes. <b>The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.</b> <b>Exception:</b> When EV chargers (Level 2 EVSE) are installed in a number greater than five (5) percent of parking spaces required by Section 4.106.4.2.2, Item 3, the number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed over the five (5) percent required. <b>Notes:</b> a. Construction documents shall show locations of future EV spaces. b. There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use. <b>2.EV Ready.</b> Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit. <b>Exception:</b> Areas of parking facilities served by parking lifts. <b>3.EV Chargers.</b> Five (5) percent of the total number of parking spaces shall be equipped with Level 2 EVSE. Where common use parking is provided, at least one EV charger shall be located in the common use parking area and shall be available for use by all residents or guests. When low power Level 2 EV charging receptacles or Level 2 EVSE are installed beyond the minimum required, an automatic load management system (ALMS) may be used to reduce the maximum required electrical capacity to each space served by the ALMS. The electrical system and any on-site distribution transformers shall have sufficient capacity to deliver at least 3.3 kW simultaneously to each EV charging station (EVCS) served by the ALMS. The branch circuit shall have a minimum capacity of 40 amperes, and installed EVCS shall have a capacity of not less than 30 amperes. ALMS shall not be used to reduce the minimum required electrical capacity to the required EV capable spaces. <b>4.106.4.2.2.1 Electric vehicle charging stations (EVCS).</b> Electric vehicle charging stations required by Section 4.106.4.2.2, Item 3, shall comply with Sections 4.106.4.2.2.1. <b>Exception:</b> Electric vehicle charging stations serving public accommodations, public housing, hotels and motels shall not be required to comply with this section. See California Building Code, Chapter 11B, for applicable requirements. <b>4.106.4.2.2.1.1 Location.</b> EVCS shall comply with at least one of the following options: 1. The charging space shall be located adjacent to an accessible parking space meeting the requirements of the California Building Code, Chapter 11A, to allow use of the EV charger from the accessible parking space. 2. The charging space shall be located on an accessible route, as defined in the California Building Code, Chapter 2, to the building. <b>Exception:</b> Electric vehicle charging stations designed and constructed in compliance with the California Building Code, Chapter 11B, are not required to comply with Section 4.106.4.2.2.1.1 and Section 4.106.4.2.2.1.2, Item 3. <b>4.106.4.2.2.1.2 Electric vehicle charging stations (EVCS) dimensions.</b> The charging spaces shall be designed to comply with the following: 1. The minimum length of each EV space shall be 18 feet (5486 mm). 2. The minimum width of each EV space shall be 9 feet (2743 mm). 3. One in every 25 charging spaces, but not less than one, shall also have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet (3658 mm). a. Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction. <b>4.106.4.2.2.1.3 Accessible EV spaces.</b> In addition to the requirements in Sections 4.106.4.2.2.1.1 and 4.106.4.2.2.1.2, all EVSE, when installed, shall comply with the accessibility provisions for EV chargers in the California Building Code, Chapter 11B. EV ready spaces and EVCS in multifamily developments shall comply with California Building Code, Chapter 11A, Section 1102A. <b>4.106.4.2.3 EV space requirements.</b> 1. Single EV space required. Install a listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of the EV charger. Construction documents shall identify the raceway termination point, receptacle or charger location, as applicable. The service panel and/or subpanel shall have a 40-ampere minimum dedicated branch circuit, including branch circuit overcurrent protective device installed, or space(s) reserved to permit installation of a branch circuit overcurrent protective device. <b>Exception:</b> A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the location or the proposed location of the EV space, at the time of original construction in accordance with the California Electrical Code. 2. Multiple EV spaces required. Construction documents shall indicate the raceway termination point and the location of installed or future EV spaces, receptacles or EV chargers. Construction documents shall also provide information on ampacity of installed or future receptacles or EVSE, raceway methods, wiring schematics and electrical load calculations. Plan design shall be based upon a 40-ampere minimum branch circuit. Required raceways and related components that are planned to be installed underground, enclosed, inaccessible or in small areas and spaces shall be installed at the time of original construction.																		
		X	<b>4.106.4.2.4 Identification.</b> The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code. <b>4.106.4.2.5 Electric Vehicle Ready Space Signage.</b> Electric vehicle ready spaces shall be identified by signage or pavement markings, in compliance with Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its successor(s). <b>4.106.4.3 Electric vehicle charging for additions and alterations of parking facilities serving existing multifamily buildings.</b> When new parking facilities are added, or electrical systems or lighting of existing parking facilities are added or altered and the work requires a building permit, ten (10) percent of the total number of parking spaces added or altered shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. <b>Notes:</b> 1. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging. 2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use. <b>DIVISION 4.2 ENERGY EFFICIENCY</b> <b>4.201 GENERAL</b> <b>4.201.1 SCOPE.</b> For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory standards. <b>DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION</b> <b>4.303 INDOOR WATER USE</b> <b>4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS.</b> Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the sections 4.303.1.1, 4.303.1.2, 4.303.1.3, and 4.303.1.4. <b>Note:</b> All noncompliant plumbing fixtures in any residential real property shall be replaced with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy, or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates. <b>4.303.1.1 Water Closets.</b> The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-type Toilets. <b>Note:</b> The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush. <b>4.303.1.2 Urinals.</b> The effective flush volume of wall mounted urinals shall not exceed 0.125 gallons per flush. The effective flush volume of all other urinals shall not exceed 0.5 gallons per flush. <b>4.303.1.3 Showerheads.</b> <b>4.303.1.3.1 Single Showerhead.</b> Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads. <b>4.303.1.3.2 Multiple showerheads serving one shower.</b> When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to only allow one shower outlet to be in operation at a time. <b>Note:</b> A hand-held shower shall be considered a showerhead. <b>4.303.1.4 Faucets.</b> <b>4.303.1.4.1 Residential Lavatory Faucets.</b> The maximum flow rate of residential lavatory faucets shall not exceed 1.2 gallons per minute at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 gallons per minute at 20 psi. <b>4.303.1.4.2 Lavatory Faucets in Common and Public Use Areas.</b> The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings shall not exceed 0.5 gallons per minute at 60 psi. <b>4.303.1.4.3 Metering Faucets.</b> Metering faucets when installed in residential buildings shall not deliver more than 0.2 gallons per cycle. <b>4.303.1.4.4 Kitchen Faucets.</b> The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi. <b>Note:</b> Where complying faucets are unavailable, aerators or other means may be used to achieve reduction. <b>4.303.1.4.5 Pre-rinse spray valves.</b> When installed, shall meet the requirements in the California Code of Regulations, Title 20 (Appliance Efficiency Regulations), Sections 1605.3 (h)(4)(A) Table 4-2, Section 1605.3 (h)(4)(A), and Section 1607 (d)(7) and shall be equipped with an integral automatic shutoff. <b>FOR REFERENCE ONLY:</b> The following table and code section have been reprinted from the California Code of Regulations, Title 20 (Appliance Efficiency Regulations), Section 1605.1 (h)(4) and Section 1605.3 (h)(4)(A). <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">TABLE H-2 STANDARDS FOR COMMERCIAL PRE-RINSE SPRAY VALVES MANUFACTURED ON OR AFTER JANUARY 28, 2019</th> </tr> <tr> <th>PRODUCT CLASS (spray force in ounces force (ozf))</th> <th>MAXIMUM FLOW RATE (gpm)</th> </tr> </thead> <tbody> <tr> <td>Product Class 1 (&lt;= 5.0 ozf)</td> <td>1.00</td> </tr> <tr> <td>Product Class 2 (&gt; 5.0 ozf and &lt;= 8.0 ozf)</td> <td>1.20</td> </tr> <tr> <td>Product Class 3 (&gt; 8.0 ozf)</td> <td>1.28</td> </tr> </tbody> </table> Title 20 Section 1605.3 (h)(4)(A) Commercial pre-rinse spray valves manufactured on or after January 1, 2006, shall have a minimum spray force of not less than 4.0 ounces-force (ozf) (113 grams-force (gf))	TABLE H-2 STANDARDS FOR COMMERCIAL PRE-RINSE SPRAY VALVES MANUFACTURED ON OR AFTER JANUARY 28, 2019		PRODUCT CLASS (spray force in ounces force (ozf))	MAXIMUM FLOW RATE (gpm)	Product Class 1 (<= 5.0 ozf)	1.00	Product Class 2 (> 5.0 ozf and <= 8.0 ozf)	1.20	Product Class 3 (> 8.0 ozf)	1.28								
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		X	<b>4.303.2 Submitters for multifamily buildings and dwelling units in mixed-used residential/commercial buildings.</b> Submitters shall be installed to measure water usage of individual rental dwelling units in accordance with the California Plumbing Code. <b>4.303.3 Standards for plumbing fixtures and fittings.</b> Plumbing fixtures and fittings shall be installed in accordance with the California Plumbing Code, and shall meet the applicable standards referenced in Table 1701.1 of the California Plumbing Code. <b>NOTE:</b> THIS TABLE COMPILS THE DATA IN SECTION 4.303.1, AND IS INCLUDED AS A CONVENIENCE FOR THE USER. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">TABLE - MAXIMUM FIXTURE WATER USE</th> </tr> <tr> <th>FIXTURE TYPE</th> <th>FLOW RATE</th> </tr> </thead> <tbody> <tr> <td>SHOWER HEADS (RESIDENTIAL)</td> <td>1.8 GMP @ 80 PSI</td> </tr> <tr> <td>LAVATORY FAUCETS (RESIDENTIAL)</td> <td>MAX. 1.2 GPM @ 60 PSI MIN. 0.8 GPM @ 20 PSI</td> </tr> <tr> <td>LAVATORY FAUCETS IN COMMON &amp; PUBLIC USE AREAS</td> <td>0.5 GPM @ 60 PSI</td> </tr> <tr> <td>KITCHEN FAUCETS</td> <td>1.8 GPM @ 60 PSI</td> </tr> <tr> <td>METERING FAUCETS</td> <td>0.2 GAL/CYCLE</td> </tr> <tr> <td>WATER CLOSET</td> <td>1.28 GAL/FLUSH</td> </tr> <tr> <td>URINALS</td> <td>0.125 GAL/FLUSH</td> </tr> </tbody> </table>	TABLE - MAXIMUM FIXTURE WATER USE		FIXTURE TYPE	FLOW RATE	SHOWER HEADS (RESIDENTIAL)	1.8 GMP @ 80 PSI	LAVATORY FAUCETS (RESIDENTIAL)	MAX. 1.2 GPM @ 60 PSI MIN. 0.8 GPM @ 20 PSI	LAVATORY FAUCETS IN COMMON & PUBLIC USE AREAS	0.5 GPM @ 60 PSI	KITCHEN FAUCETS	1.8 GPM @ 60 PSI	METERING FAUCETS	0.2 GAL/CYCLE	WATER CLOSET	1.28 GAL/FLUSH	URINALS	0.125 GAL/FLUSH
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		X	<b>4.304 OUTDOOR WATER USE</b> <b>4.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS.</b> Residential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MVELDO), whichever is more stringent. <b>NOTES:</b> 1. The Model Water Efficient Landscape Ordinance (MVELDO) is located in the California Code Regulations, Title 23, Chapter 2.7, Division 2. MVELDO and supporting documents, including water budget calculator, are available at: <a href="https://www.water.ca.gov/">https://www.water.ca.gov/</a> <b>DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY</b> <b>4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE</b> <b>4.406.1 RODENT PROOFING.</b> Annular spaces around pipes, electric cables, conduits or other openings in sole-bottom plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency. <b>4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING</b> <b>4.408.1 CONSTRUCTION WASTE MANAGEMENT.</b> Recycle and/or salvage for reuse a minimum of 65 percent of the non-hazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste management ordinance. <b>Exceptions:</b> 1. Excavated soil and land-clearing debris. 2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite. 3. The enforcing agency may make exceptions to the requirements of this section when isolated jobsites are located in areas beyond the haul boundaries of the diversion facility. <b>4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN.</b> Submit a construction waste management plan in conformance with Items 1 through 5. The construction waste management plan shall be updated as necessary and shall be available during construction for examination by the enforcing agency. 1. Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale. 2. Specify construction and demolition waste materials will be sorted on-site (source separated) or bulk mixed (single stream). 3. Identify diversion facilities where the construction and demolition waste material collected will be taken. 4. Identify construction methods employed to reduce the amount of construction and demolition waste generated. 5. Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both. <b>4.408.3 WASTE MANAGEMENT COMPANY.</b> Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with Section 4.408.1. <b>Note:</b> The owner or contractor may make the determination if the construction and demolition waste materials will be diverted by a waste management company. <b>4.408.4 WASTE STREAM REDUCTION ALTERNATIVE [LR].</b> Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 3.4 lbs./sq. ft. of the building area, shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1. <b>4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE.</b> Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 2 pounds per square foot of the building area, shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1. <b>4.408.5 DOCUMENTATION.</b> Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, Items 1 through 5, Section 4.408.3 or Section 4.408.4. <b>Notes:</b> 1. Sample forms found in "A Guide to the California Green Building Standards Code (Residential)" located at <a href="http://www.hcd.ca.gov/CALGreen.html">www.hcd.ca.gov/CALGreen.html</a> may be used to assist in documenting compliance with this section. 2. Mixed construction and demolition debris (C & D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle). <b>4.410 BUILDING MAINTENANCE AND OPERATION</b> <b>4.410.1 OPERATIONS AND MAINTENANCE MANUAL.</b> At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the enforcing agency which includes all of the following shall be placed in the building: 1. Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure. 2. Operation and maintenance instructions for the following: a. Equipment and appliances, including water-saving devices and systems, HVAC systems, photovoltaic systems, electric vehicle chargers, water-heating systems and other major appliances and equipment. b. Roof and yard drainage, including gutters and downspouts. c. Space conditioning systems, including condensers and air filters. d. Landscape irrigation systems. e. Water reuse systems. 3. Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations. 4. Public transportation and/or carpool options available in the area. 5. Educational material on the positive impacts of an interior relative humidity between 30-60 percent and what methods an occupant may use to maintain the relative humidity level in that range. 6. Information about water-conserving landscape and irrigation design and controllers which conserve water. 7. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation. 8. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc. 9. Information about state solar energy and incentive programs available. 10. A copy of all special inspections verifications required by the enforcing agency or its code. 11. Information from the Department of Forestry and Fire Protection on maintenance of defensible space around residential structures. 12. Information and/or drawings identifying the location of grab bar reinforcements. <b>4.410.2 RECYCLING BY OCCUPANTS.</b> Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serves all buildings on the site and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste and metals, or meet a locally enacted local recycling ordinance, if more restrictive. <b>Exception:</b> Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section 42949 (a)(2)(A) et seq. are not required to comply with the organic waste portion of this section. <b>DIVISION 4.5 ENVIRONMENTAL QUALITY</b> <b>SECTION 4.501 GENERAL</b> <b>4.501.1 Scope</b> The provisions of this chapter shall outline means of reducing the quality of air contaminants that are odorous, irritating and/or harmful to the comfort and well being of a building's installers, occupants and neighbors. <b>SECTION 4.502 DEFINITIONS</b> <b>5.102.1 DEFINITIONS</b> The following terms are defined in Chapter 2 (and are included here for reference) <b>AGRIFIBER PRODUCTS.</b> Agrifiber products include wheatboard, strawboard, panel substrates and door cores, not including furniture, fixtures and equipment (FFAE) constructed base building elements. <b>COMPOSITE WOOD PRODUCTS.</b> Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, prefabricated wood I-joists or finger-jointed lumber, all as specified in California Code of regulations (CCR), title 17, Section 93120.1. <b>DIRECT-VENT APPLIANCE.</b> A fuel-burning appliance with a sealed combustion system that draws all air for combustion from the outside atmosphere and discharges all flue gases to the outside atmosphere.																		

DISCLAIMER: THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.

Revisions	By

5 UNIT RENTAL COMPLEX FOR:  
 Owner:  
 VISION HOLDINGS LLC  
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DRAWN	
CHECKED	
DATE	
SCALE	
JOB NUMBER	VALLEY PIPELINE
SHEET #	

# CG-1



