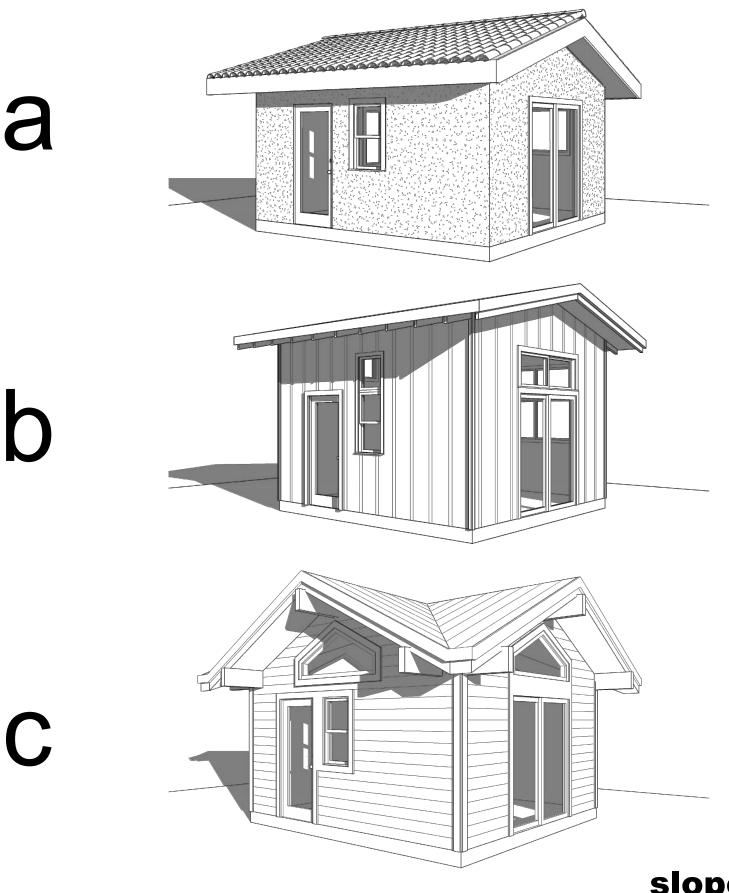
# encinitas pradu studio

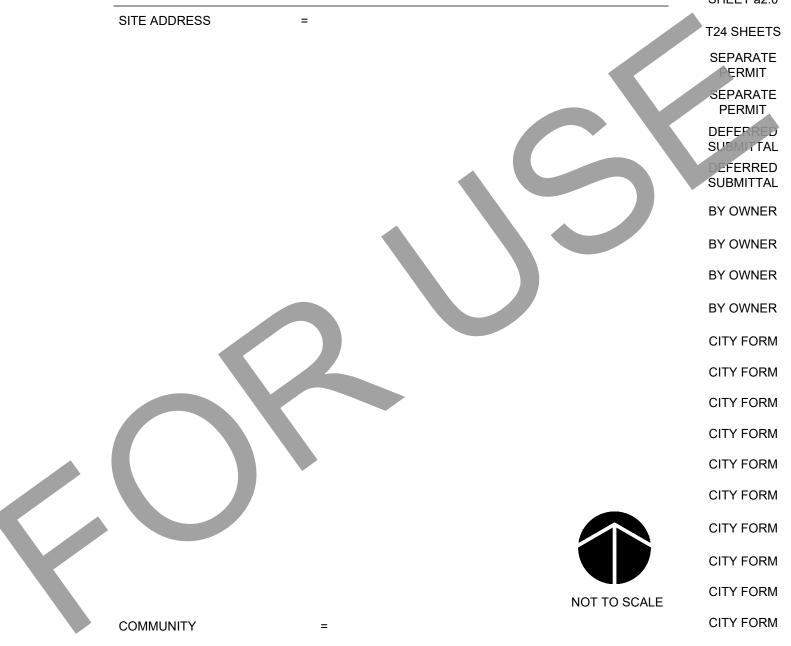
CONTACT SDG&E REGARDING ELECTRIC SERVICE TO THIS DETACHED ADU. ANY EXISTING SERVICE UPGRADE OR NEW SERVICE FOR THE ADU WILL REQUIRE A SEPARATE PERMIT FROM THE CITY OF ENCINITAS.



## construction codes:

2022	CALIFORNIA	BUILDING CODE	TITLE 24	PART 2, V. 1&2	
2022	CALIFORNIA	RESIDENTIAL CODE	TITLE 24	PART 2.5	
2022	CALIFORNIA	ELECTRICAL CODE	TITLE 24	PART 3	
2022	CALIFORNIA	MECHANICAL CODE	TITLE 24	PART 4	
2022	CALIFORNIA	PLUMBING CODE	TITLE 24	PART 5	
2022	CALIFORNIA	ENERGY CODE	TITLE 24	PART 6	
2022	CALIFORNIA	FIRE CODE	TITLE 24	PART 9	
2022	CALIFORNIA	GREEN BUILDING CODE	TITLE 24	PART 11	
PROJECT SHALL COMPLY WITH THE 2022 CALIFORNIA BUILDING CODE WHICH ADOPTS:					
2021 IRC, 2021 UMC, 2021 UPC & 2020 NEC.					

## vicinity map:



## slope analysis:

1. IF THE SITE IS IN THE SPECIAL STUDY OVERLAY WITH NATURAL STEEP SLOPES (25% IN GRADIENT OR STEEPER) ARE PRESENT ON SITE, PROVIDE A SLOPE ANALYSIS AS PER EMC 30.34.030.A&B AND SHOW ANY REQUIRED FUEL MODIFICATION BUFFERS OVERLAID ON THE SITE PLAN.

# required for plan check submittal and permits

ITEM	√ COMPLETED OR ACKNOWLED
SHEET a0.0	PROJECT DATA SHEET INFORMATION FIL
SHEET a0.1	
SHEET a0.3	CAL GREEN CHECKLIST FILLED OUT
SHEET a0.4	SITE PLAN DRAFTED & NOTED PER SIT
SHEET a0.5	
SHEET a2.0	CALCULATION REVISED IF MODIFIED
T24 SHEETS	
SEPARATE PERMIT	COASTAL PERMIT (IF APPLICABLE)
SEPARATE PERMIT	CONTACT SDG&E PROJECT PLANNING CITY PERMIT FOR ELECTRICAL UPGRA
DEFERRED SUB TAL	PHOTOVOLTAIC PERMIT OR EXISTING PUDEFERRED SUBMITTAL TABLE ON THIS S
DEFERRED SUBMITTAL	FIRE SPRINKLER PERMIT (IF APPLICABLE CHECKLIST ON SHEET a0.1
BY OWNER	SOIL REPORT FOR ADU OVER 500 SF W REVIEW APPROVAL LETTER
BY OWNER	PROPERTY GRANT DEED WITH LEGAL
BY OWNER	RESIDENTIAL BUILDING RECORD FROM
BY OWNER	AGENCY LETTER IF OWNER IS USING AGE PERMIT PROCESSING
CITY FORM	BUILDING PERMIT CALCULATIONS - BU
CITY FORM	
CITY FORM	STORMWATER INTAKE FORM & STAND
CITY FORM	
CITY FORM	BUILDING ACKNOWLEDGMENT OWNER-B
CITY FORM	HOUSING DEVELOPMENT TRACKING FOR
CITY FORM	ADU COVENANT PROVIDED BY PROJECT OWNER CHECK PROVIDED FOR COUNTY
CITY FORM	WATER DISTRICT SIGN OFF
CITY FORM	SEWER DISTRICT OR COUNTY HEALTH
CITY FORM	SCHOOL DISTRICT(S) SIGN OFF IF ADU

## energy requirement notes:

1. CONNECTION TO A PHOTOVOLTAIC SOLAR SYSTEM IS REQUIRED FOR THIS PROJECT. SOLAR SYSTEM IS A DEFERRED SUBMITTAL

- 2. REQUIRED SPECIAL FEATURES:
  - WHOLE HOUSE FAN
  - EXPOSED SLAB FLOOR IN CONDITIONED ZONE
  - VARIABLE CAPACITY HEAT PUMP COMPLIANCE OPTION (VERIFICATION DETAILS FROM VCHP STAFF REPORT, APPENDIX B, AND RA3)
  - NORTHWEST ENERGY EFFICIENCY ALLIANCE (NEEA) RATED HEAT PUMP WATER HEATER; SPECIFIC BRAND/MODEL, OR EQUAL, MUST BE INSTALLED
- 3. HERS FEATURE SUMMARY

### BUILDING LEVEL VERIFICATIONS:

- INDOOR AIR QUALITY VENTILATION
- KITCHEN RANGE HOOD
- WHOLE HOUSE FAN AIRFLOW AND FAN EFFICACY
- COOLING SYSTEM VERIFICATIONS:
- VERIFIED SEER/SEER2
- VERIFIED REFRIGERANT CHARGE AIRFLOW IN HABITABLE ROOMS(SC3.1.4.1.7)
- HEATING SYSTEM VERIFICATIONS:
- VERIFIED HSPF (C ELEV ONLY)
- VERIFIED HEAT PUMP RATED HEATING CAPACITY
- WALL MOUNTED THERMOSTAT IN ZONES GREATER THAN 150
- SF(SC3.4.5) DUCTLESS INDOOR UNITS LOCATED ENTIRELY IN CONDITIONED SPACE
- (SC3.1.4.1.8)
- HVAC DISTRIBUTION SYSTEM VERIFICATIONS:
- NONE

DOMESTIC HOT WATER SYSTEM VERIFICATIONS: NONE

## deferred submittals:

- 1. A PHOTOVOLTAIC SYSTEM MEETING THE MINIMUM QUALIFICATION REQUIREMENTS AS SPECIFIED IN JOINT APPENDIX JA11, WITH ANNUAL ELECTRICAL OUTPUT EQUAL TO OR GREATER THAN THE DWELLING'S ANNUA ELECTRICAL USAGE AS DETERMINED BY EQUATION 150.1-C 13 REQUIRED. ES SECTION 150.1(C)14.
- 2. SUBMITTED DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE, WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND THAT THEY HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

## solar ystem notes:

- 1. A PHOTOVOLTAIC (PV) SOLAR SYSTEM IS REQUIRED AND A SEPARATE PERMIT WILL BE REQUIRED. THE PV SYSTEM MUST BE INSTALLED, OPERATIONAL AND HAVE FINAL APPROVAL PFIOR TO FINAL BUILDING INSPECTION AND APPROVA FOR THE A
- ADDITIONAL INFORMATION ABOUT THE PV SOLAR SYSTEM IS PROVIDED AT THE UTILITY PLAN ON SHEET a2.0 AND AT THE T-24 ENERGY REQUIREMENT SHEETS

SPACES

SPACES

SPACES

SPACES

SPACES

SPACES

TOTAL REQUIRED SPACES

TOTAL PROVIDED SPACES

## parking:

REQUIRED VEHICLE SPACES FOR EXISTING RESIDENCE	=	
REQUIRED VEHICLE SPACES FOR ADU	=	
REQUIRED SPACES ON SITE	=	
PROVIDED ENCLOSED SPACES PROVIDED FOR EXISTING RESIDENCE	=	
PROVIDED UNENCLOSED SPACES PROVIDED FOR EXISTING RESIDENCE	=	
PROVIDED ENCLOSED SPACES PROVIDED FOR ADU	=	
PROVIDED UNENCLOSED SPACES	_	

PROVIDED FOR ADU

VEHICLE SPACES PROVIDED ON SITE

## conditions of use:

THE PERMITTEE AND OWNER OF THE PROPERTY THAT IS THE SUBJECT OF THESE PLANS AGREES TO AND DOES BY UTILIZING THESE PLANS AND BY SUBMITTING THEM TO THE CITY OF ENCINITAS FOR PERMITTING DOES HEREBY RELEASE, HOLD HARMLESS AND AGREE TO INDEMNIFY AND DEFEND THE CITY OF ENCINITAS AND THE ARCHITECT, INCLUDING WITHOUT LIMITATION, ALL EMPLOYEES, OFFICERS, COUNCILMEMBERS, COMMISSIONERS, AND AGENTS AND/OR CONSULTANTS OF THE FOREGOING WHO PREPARED THESE CONSTRUCTION DOCUMENTS, AND EACH OF THEM, FROM ANY AND ALL CLAIMS, LIABILITIES, SUITS AND DEMANDS ON ACCOUNT OF ANY INJURY DAMAGE OR LOSS, TO PERSONS OR PROPERTY, INCLUDING INJURY OR DEATH, OR ECONOMIC LOSSES, ARISING OUT OF THE USE OF THESE CONSTRUCTION DOCUMENTS. THE OWNER AND THE PERMITTEE, AND EACH OF THEM ACKNOWLEDGE AGREEING TO THIS COVENANT, IS A CONDITION PRECEDENT TO BEING ABLE TO UTILIZE THESE PLANS, AND, THAT WITHOUT THIS HOLD HARMLESS AND RELEASE, WOULD NOT BE ABLE BE ABLE TO UTILIZE THESE PLANS. FURTHER, OWNER AND PERMITTEE ACKNOWLEDGES THAT THE OWNER/PERMITTEE HAS BEEN ADVISED TO SEEK THE SERVICES C ANY AND ALL CONSULTANTS, THEY CHOOSE, TO REVIEW THESE PLANS PRIOF TO USING THEM, TO SEEK ADVICE ON THE SUITABLY OF THESE PLANS FOR THEIR USE FOR THE INTENDED USE BY THE OWNER/PERMITTEE. THE INDEMNITY DOES NOT INCLUDE ANY LIABILITY ARISING OUT OF THE SOLE NEGLIGENCE OR WILLFUL MISCONDUCT OF THE PARTIES BEING INDEMNIFIED 2. BY USING THESE PERMIT READY CONSTRUCTION DOCUMENTS, THE USER AGREES TO RELEASE THE CITY OF ENCINITAS AND THE ARCHITECT WHO PREPARED THESE CONSTRUCTION DOCUMENTS FROM ANY AND ALL CLAIMS LIABILITIES, SUITS AND DEMANDS ON ACCOUNT OF ANY INJURY, DAMAGE OR LOSS TO PERSONS OR PROPERTY, INCLUDING INJURY OR DEATH, OR ECONOMIC LOSSES, ARISING OUT OF THE USE OF THESE CONSTRUCTION DOCUMENTS.

## scope of work:

PROJECT DESCRIPTION	=	ONE STORY DETACHED STUDIO ACCESSORY DWELLING UNIT (A
PLAN CHECK NUMBER	=	BLDR

## area calculations:

LOT AREAS			
GROSS LOT AREA	=		SF
NET LOT AREA	=		SF
(DEDUCTIONS PER CHAP 30.04)	=	(	SF)
BUILDING AREAS			
PROPOSED			
PROPOSED ADU	=	224	SF
EXISTING			
EXISTING RESIDENCE BASEMENT	=		SF
EXISTING RESIDENCE FIRST FLOOR	=		SF
EXISTING RESIDENCE SECOND FLOOR	=	•	SF
TOTAL EXISTING RESIDENCE	=		SF
EXISTING GARAGE ATTACHED	=		SF
EXISTING GARAGE DETACHED	=		SF
EXISTING ACCESSORY STRUCTURE	=		Sr
FAR (FLOOR AREA RATIO)			
BULK FLOOR AREA (AS APPLIED TO FAR)			
FIRST FLOOR LIVING AREA	=		SF
SECOND FLOOP LIVING AREA	=		SF
GARAGE AREA EXCEEDING 400 SF	₽		SF
ADU LIVING AREA	=		SF
ADU DEDUCTION	=	(	SF - NTE 80
ACCESSORY STRUCTURE TOTAL SF	=		SF
	=		SF - IF QUA
TOTAL BULK FLOOR AREA	=		SF
ALLOWED FAR			
FAR ALLO NED	=		
FAR ALLOWED x GROSS LOT AREA	=		SF
PROPOSED FAR (TOTAL BULK FLOOR AREA / GROSS LOT AREA)	=		SF
FAR PROPOSED	=		
LOT COVERAGE (LC)			
ALLOWED LOT COVERAGE (BY ZONE)	=		%
TOTAL STRUCTURE FOOTPRINT AREA	=	SF(	EXISTING +
CANTILEVERED FLOOR AREA ABOVE	=	,	SF
ADU DEDUCTION	=	(	SF - NTE 80
LC SF / NET LOT AREA	=	` . x 100 :	
PROPOSED LOT COVERAGE	=		%

## agencies:

- MUNICIPAL JURISDICTION ELEMENTARY SCHOOL DISTRICT HIGH SCHOOL DISTRICT SEWER DISTRICT WATER DISTRICT FIRE DEPARTMENT
- = CITY OF ENCINITAS = CARDIFF OR ENCINITAS = SDUHSD = CARDIFF, ENCINITAS OR LEUCADIA = SAN DIEGUITO OR OLIVENHAIN = ENCINITAS

## sheet index:

SHEET #	SHEET TITLE
a0.0	PROJECT DATA
a0.1	CHECKLIST + SCHEDULE
a0.1F	VERY HIGH FIRE HAZARD SEVERITY ZONI
a0.2	GENERAL SPECIFICATIONS
a0.3	CAL GREEN CHECKLIST
a0.4	SITE PLAN + NOTES
a0.5	AVERAGE LOT SLOPE DIAGRAM
a1.0	FLOOR PLANS
a2.0	UTILITY PLAN
a3.0	ROOF PLANS
a4.0	A ELEVATIONS + SECTIONS
a4.1	<b>B ELEVATIONS + SECTIONS</b>
a4.2	C ELEVATIONS + SECTIONS
s0.0	STRUCTURAL NOTES
s1.0	FOUNDATION PLANS
s2.0	ROOF FRAMING PLANS
s2.1	REVERSE ROOF FRAMING PLANS
d0.0	DETAILS
d0.1	DETAILS
d0.2	DETAILS
d0.3	DETAILS
d0.4	DETAILS
T-01 to T-04	STUDIO A ENERGY REQUIREMENTS
T-01 to T-04	STUDIO B ENERGY REQUIREMENTS
T-01 to T-04	STUDIO C ENERGY REQUIREMENTS
T-05	HVAC SYSTEM SUMMARIES

EDGED

LLED OUT

TE PLAN INFORMATION DIAGRAM ED & NOTED WITH TABLE

ADU ELECTRICAL PANEL LOAD

IER & LOCATION IF NEEDED

FOR WORK ORDER, GET ADE (IF APPLICABLE) V SYSTEM REPORT, SEE SHEET

E), SEE FIRE SPRINKLER

WITH FOUNDATION DESIGN

DESCRIPTION

M COUNTY ASSESSOR GENT FOR PLAN CHECK &

JILDING SQUARE FOOTAGE

IAGEMENT PLAN

DARD SWQMP

CHECKLIST

BUILDER

T PLANNER NOTARIZED AND Y RECORDER

H SEPTIC SIGN OFF

J IS 500 SF OR GREATER

	project data:		T	PREF <b>F</b>	PARER SIGNATURE	: 1
DIO T (ADU)	SITE ADDRESS (EXISTING RESIDENCE)	=				
YEAR	SITE ADDRESS (PROPOSED ADU)	=				
	PROPERTY OWNER (LEGAL)	=				
	PROPERTY OWNER PHONE	=		I		
	PROPERTY OWNER EMAIL	=		jimar	-	4
	PROPERTY OWNER ADDRESS	=		FC FC	OR CITY STAMPS	1
	APN	=				
	LEGAL DESCRIPTION	=				
	GENERAL PLAN DESIGNATION	=	RESIDENTIAL			
	ZONE	=	R			
	ZONE OVERLAYS	=				
	OCCUPANCY	=	R-3			
	CONSTRUCTION TYPE	=	V-B			
	ORIGINAL CONSTRUCTION YEAR	=				
	EXISTING USE	=	SINGLE ORMULTI FAMILY			
	PROPOSED USE	=	ACCESSORY DWELLING UNIT (ADU)			
	FIRE SPRINKLERS	=	SEE SELECTION ON SHEET a0.1			
	AVERAGE LOT SLOPE	=	% (FROM TABLE ON SHEET a0.5)			
	SLOPE ANALYSIS	=	SEE NOTE ON THIS SHEET			

# setback, height & story

SETBACKS				
	FRONT	INTERIOR SIDE	EXTERIOR SIDE	REAR
REQUIRED - STANDARD	FT	FT	FT	FT
EXISTING RESIDENCE	FT	FT	FT	FT
EXISTING ACCESSORY STRUCTURE	FT	FT	FT	FT
REQUIRED - ADU	FT	FT	FT	FT
PROPOSED - ADU	FT	FT	FT	FT
HEIGHT				
EXISTING RESIDENCE	=	FT		
EXISTING ACCESSORY STRUCTURE	=	FT		
PROPOSED ADU	=	FT		
STORY				
EXISTING RESIDENCE	=			
EXISTING ACCESSORY STRUCTURE	=			
PROPOSED ADU	=	1		
				_
	REQUIRED - STANDARD EXISTING RESIDENCE EXISTING ACCESSORY STRUCTURE REQUIRED - ADU PROPOSED - ADU HEIGHT EXISTING RESIDENCE EXISTING ACCESSORY STRUCTURE PROPOSED ADU STORY EXISTING RESIDENCE EXISTING RESIDENCE	FRONTREQUIRED - STANDARDFTEXISTING RESIDENCEFTEXISTING ACCESSORY STRUCTUREFTREQUIRED - ADUFTPROPOSED - ADUFTHEIGHTIEXISTING RESIDENCE=EXISTING ACCESSORY STRUCTURE=PROPOSED ADU=STORY=EXISTING RESIDENCE=EXISTING RESIDENCE=EXISTING RESIDENCE=EXISTING RESIDENCE=EXISTING RESIDENCE=EXISTING RESIDENCE=EXISTING RESIDENCE=EXISTING RESIDENCE=EXISTING RESIDENCE=EXISTING ACCESSORY STRUCTURE=	FRONTINTERIOR SIDEREQUIRED - STANDARDFTFTEXISTING RESIDENCEFTFTEXISTING ACCESSORY STRUCTUREFTFTREQUIRED - ADUFTFTPROPOSED - ADUFTFTEXISTING RESIDENCE=FTEXISTING RESIDENCE=FTPROPOSED ADUFTFTEXISTING RESIDENCE=FTFTSTRUCTURE=FTEXISTING RESIDENCE=FTEXISTING RESIDENCE=F	FRONTINTERIOR SIDEEXTERIOR SIDEREQUIRED - STANDARDFTFTFTEXISTING RESIDENCEFTFTFTEXISTING ACCESSORYFTFTFTREQUIRED - ADUFTFTFTPROPOSED - ADUFTFTFTEXISTING RESIDENCEIFTFTEXISTING ACCESSORYIFTFTPROPOSED ADUFTFTFTEXISTING ACCESSORYIFTIPROPOSED ADUIFTIFING RESIDENCEIIIFING RESIDENCEIIIEXISTING RESIDENCEIII

## grading:

CUT	=	YD <sup>3</sup>
FILL	=	YD <sup>3</sup>
IMPORT	=	YD <sup>3</sup>
EXPORT	=	YD <sup>3</sup>
OVEREXCAVATION & RECOMPACTION	=	YD <sup>3</sup>
MAXIMUM CUT HEIGHT	=	FT
MAXIMUM FILL HEIGHT	=	FT

## landscape area:

EXISTING LANDSCAPE SITE AREA	=	SF, %	
PROPOSED LANDSCAPE SITE AREA	=	SF, %	
NON LANDSCAPE SITE AREA	=	SF, %	
TOTAL SITE AREA	=	SF, 100%	

## impervious surfaces:

EXISTING IMPERVIOUS SITE AREA	=	SF, %
PROPOSED IMPERVIOUS SITE AREA	=	SF, %
NON IMPERVIOUS SITE AREA	=	SF, %
TOTAL SITE AREA	=	SF, 100%
CHANGE (+/-) IMPERVIOUS SITE AREA	=	SF, %

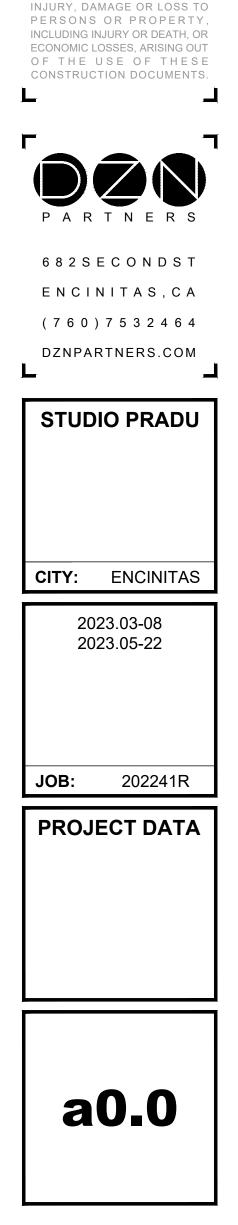
## project team:







FIRM	DZN PARTNERS
ADDRESS	682 2ND ST
CITY, STATE, ZIP	ENCINITAS, CA 92024
PHONE	(760) 753-2464
EMAIL	B.SMITH@DZNPARTNERS.COM
CONTACT	BART SMITH, AIA LEED AP
FIRM	BEAR TECHNOLOGYS CONSULTANTING, INC
ADDRESS	3431 DON ARTURO DR
CITY, STATE, ZIP	CARLSBAD, CA 92010
PHONE	(760) 635-2327
EMAIL	WAYNE@BEARTECHCONSUL TING.COM
CONTACT	WAYNE SEWARD
FIRM	PCSD ENGINEERING
ADDRESS	3529 COASTVIEW COURT
CITY, STATE, ZIP	CARLSBAD, CA 92010
PHONE	(760) 207-1885
EMAIL	PAUL.PCSD@GMAIL.COM
CONTACT	PAUL CHRISTENSON



BY USING THESE PERMIT READY CONSTRUCTION DOCUMENTS

THE USER AGREES TO RELEASE

THE CITY OF ENCINITAS AND THE

ARCHITECT WHO PREPARED

THESE CONSTRUCTION

DOCUMENTS FROM ANY AND ALL

CLAIMS, LIABILITIES, SUITS AND

DEMANDS ON ACCOUNT OF AN'

Г	abbr	
& @	AND AT	EP EQ
٥	DEGREES	EQU
Ø %	DIAMETER	EW EXP
d	PENNY (NAIL SIZE)	EXS
#	POUND OR NUMBER	EXT
(E) (N)	EXISTING	FA FAB
(NR)	NEW REPLACEMENT	FAU
AA	ATTIC ACCESS	FD
AB AC	ANCHOR BOLT ASPHALT CONCRETE	FDN FE
A-C	ALTERNATING CURRENT	FF
A/C		FG
ACOUS	ACOUSTICAL ACOUSTICAL CEILING TILE	FIN FJ
AD	AREA DRAIN	FL
ADA AFO	AMERICAN DISABILITY ACT	FLR FLS
AGGR	AGGREGATE	FN
AGO	ARCH GYPSUM BOARD OPENING	FO
AHS AL	ALUMINUM HORIZONTAL SLIDING	FP FR
ALM	ALARM	FRM
ALT	ALTERNATE	FT
AMP APN	AMPERE ASSESSORS PARCEL NUMBER	FTG FXD
ARCH	ARCHITECT	FYS
AS	ALUMINUM SLIDING	GA
ASPH AVE	ASPHALT AVENUE	GAL GAL
AVS	ALUMINUM VERTICAL SLIDING	GB
AWG	AWNING	GFI
B BBQ	BOTTOM BARBEQUE	GI GL
BD	BOARD	GLB
BFD	BIFOLDING DOOR	GO
BI BJ	BUILT IN BALCONY JOIST	GR GWI
BLDG	BUILDING	GYF
BLK	BLOCK	н нв
BLKG BM	BLOCKING BEAM	нь
BN	BOUNDARY NAIL	H/C
BOT BPD	BOTTOM BYPASS DOOR	HD HDF
BRG	BEARING	HDV
BRK	BRICK	HF
BSMT BTU	BASEMENT BRITISH THERMAL UNIT	ні нм
BW	BOTH WAYS	HOF
CAB CB	CABINET CATCH BASIN	HP HPF
CEM	CEMENT	HR
CER	CERAMIC	HT
CI CIP	CAST IRON CAST IN PLACE	HTR HW
CJ	CEILING JOIST / CONTROL JOINT	INS
CL CLG	CENTERLINE CEILING	IN INT
CLKG	CAULKING	JST
CLO	CLOSET	JT
CLR CMN	CLEAR COMMON	KIT L
CMU	CONCRETE MASONRY UNIT	LAN
со	CLEANOUT	LAT
COL CONC	COLUMN CONCRETE	LAV LDG
CONT	CONTINUOUS	LG
CONTR CP	CONTRACTOR CEMENT PLASTER	LR LS
CPT	CARPET	LSW
CSMT		LT
CTR CW	CENTER COLD WATER VALVE	LGT MAX
CY	CUBIC YARD	MB
DBL	DOUBLE	MBF
DEMO DF	DEMOLITION DOUGLAS FIR	MC MDL
DG	DUAL GLAZED	MEC
DH DIA	DOUBLE HUNG DIAMETER	MEN MFF
DIA	DIMENSION	MIN
DJ	DECK JOIST	MIS
DN DP	DOWN DEEP	MS MTL
DP DR	DOOR	MW
DS	DOWNSPOUT	N
DTP DV	DOUBLE TOP PLATE DRYER VENT	N/A NAT
DW	DISHWASHER	NAF
DZN	DESIGN	NIC
E EA	EAST	NO
EGR	EXISTING GRADE	NTS
EJ ELEC	EXPANSION JOINT	O/ OC
ELEC	ELEVATOR OF ELEVATION	00
EM	ELECTR'CALMETER	OH
EMER EN	EMERCENCY EDGE NAIL	OPC OZ
ENCL	ENCLOSURE	Ρ
L		

b b r	' e	viat	Ī	ons
	EP	ELECTRICAL PANEL	PCC	PRECAST CONCRETE
S	EQ EQUIP	EQUAL EQUIPMENT	PKT PL	POCKET PLATE
ER	EW	EACH WAY	P/L	PROPERTY LINE
	EXP	EXPANSION	PLS	PLASTER
NAIL SIZE) OR NUMBER	EXST EXT	EXISTING	PLY PNL	PLYWOOD PANEL
G	FA	FIRE ALARM	PR	PAIR
	FAB	FABRICATE	PRE	
PLACEMENT CCESS	FAU FD	FORCED AIR UNIT	PT PTR	PRESSURE TREATED PARTNER
RBOLT	FDN	FOUNDATION	PV	PRESSURE VALVE
T CONCRETE ATING CURRENT	FE FF	FIRE EXSTINGUISHER	PVC R	POLYVINYL CHLORIDE RISER, RIDGE OR RADIUS
IDITIONING	FG	FINISH GRADE	RA	RETURN AIR
<b>FICAL</b>	FIN	FINISH	RB	REINFORCING BAR
FICAL CEILING TILE	FJ FL	FLOOR JOIST FLOURESCENT	RBR RCP	RUBBER REFLECTED CEILING PLA
AN DISABILITY ACT	FLR	FLOOR	RD	ROOF DRAIN
FRAMED OPENING	FLSH	FLASHING	REF	REFRIGERATOR
GATE YPSUM BOARD OPENING	FN FO	FIELD NAILING FRAMED OPENING	REG REINF	REGISTER
UM HORIZONTAL SLIDING	FP	FIREPLACE	REQD	REQUIRED
UM	FR	FIRE RATED	REV	REVISION
ATE	FRMG FT	FRAMING FOOT/FEET	RI RM	RIGID INSULATION
E	FTG	FOOTING	RO	ROUGH OPENING
ORS PARCEL NUMBER	FXD		RR	ROOF RAFTER
ECT UM SLIDING	FYSB GA	FRONT YARD SETBACK GAUGE	R/S RYSB	RESAWN REAR YARD SETBACK
т	GAL	GALLON	S	SOUTH
	GALV		SA	
UM VERTICAL SLIDING	GB GFI	GYPSUM BOARD GROUND FORCE INTERRUPT	SBO SC	SELECTION BY OWNER SOLID CORE
1	GI	GALVANIZED IRON	SDG	SIDING
UE	GL	GLASS	SEC	
NG DOOR	GLB GO	GLU-LAM BEAM GYPSUM BOARD OPENING	SF SFD	SQUARE FEET SINGLE FAMILY DWELLIN
I	GR	GRADE	SH	SINGLE HUNG OR SHELF
	GWB GYP	GYPSUM WALL BOARD GYPSUM	SHR SHT	SHEAR
G	н	HIP	SHTG	SHEATHING
١G	HB	HOSE BIBB	SIM	SIMILAR
ARY NAIL	HC H/C	HOLLOW CORE	SP S & P	SHEAR PANEL SHELF AND POLE
1	HD	HEAD	SPEC	SPECIFICATIONS
DOOR	HDR	HEADER	SQ	SQUARE
3	HDWR HF	HARDWARE HARDY FRAME	SS SSW	STAINLESS STEEL STEEL STRONG WALL
INT	н	HIGH	SSYSB	STREET SIDEYARD SETB
THERMAL UNIT	HM	HOLLOW METAL	ST	STAIR
ΆΥS Γ	HOR HP	HORIZONTAL HEAT PUMP	STL STP	STEEL
BASIN	HPR	HOPPER	STR	STRUCTURAL
r	HR	HOUR	STRG	STORAGE
C ON	HT HTR	HEIGHT HEATER	SUSP SWU	SUSPENDED SOFT WATER UNIT
PLACE	HW	HOT WATER	SYSB	SIDE YARD SETBACK
JOIST / CONTROL JOINT	INSUL	INSULATION	т	TREAD OR TOP
RLINE	IN INT	INCH	ТВ Т & В	THROUGH BOLT
٩G	JST	JOIST	TC	TRASH COMPACTOR
	JT	JOINT	TELE	TELEPHONE
N	KIT L	KITCHEN LINEN	TEMP TG	TEMPORARY TEMPERED GLASS
ETE MASONRY UNIT	LAM	LAMINATE	T & G	TONGUE AND GROOVE
DUT	LAT	LATERAL	ТНК	THICK
N ETE	LAV LDG	LAVATORY	TME TP	TO MATCH EXISTING
UOUS	LG	LONG	TV	TELEVISION
ACTOR	LR	LARGE	TYP	TYPICAL
Γ PLASTER -	LS LSW	LAZY SUSAN LAG SCREW	TWH U/	TANKLESS WATER HEAT
ENT	LT	LAUNDRY TUB	U/C	UNDER COUNTER
R	LGT	LIGHT	UNO	UNLESS NOTED OTHERW
ATER VALVE	MAX MB	MAXIMUM MACHINE BOLT	UON V	UNLESS OTHERWISE NO
	MBPD	MIRROR BYPASS DOOR	VAC	VACUUM
TION	MC	MEDICINE CABINET	VER	VERTICAL
AS FIR	MDL	MODEL MECHANICAL	VHS VIF	VINYL HORIZONTAL SLID
LAZED E HUNG	MECH MEMB	MEMBRANE	VIF	VOLUME
ER	MFR	MANUFACTURER	VTR	VENT TO ROOF
ION	MIN		vvs w	VINYL VERTICAL SLIDER
DIST	MISC MS	MISCELLANEOUS MACHINE SCREW	W	WEST WITH
	MTL	METAL	W/O	WITHOUT
	MW	MICROWAVE OVEN	WC	WATER CLOSET
POUT TOP PLATE	N N/A		WD WDW	WOOD WINDOW
VENT	NAT	NATURAL	WDWR	WARMING DRAWER
SHER	NAP		WH	
	NIC NO	NOT IN CONTRACT	WHS WI	WOOD HORIZONTAL SLIE WROUGHT IRON
	NOM	NOMINAL	WIC	WALK IN CLOSET
G GRADE	NTS	NOT TO SCALE	WMH	
ION JOINT	0/ OC	OVER ON CENTER	WP WS	WATERPROOF WOOD SCREW
	OAE	OR APPROVED EQUAL	ws WSW	WOOD STRONG WALL
ICAL METER	ОН	OVERHANG	WVS	WOOD VERTICAL SLIDER
ENCY	OPG OZ	OPENING OUNCE	WWM YD	WELDED WIRE MESH
SURE	DZ P	POLE	ם י	

C		n	S
	PRECA	ST CON	CRETE
	POCKE	T	
		RTY LIN	E
	PLAST	ER	
	PLYWC	DOD	
	PANEL PAIR		
	PREFA	BRICATE	Ð
	PRESS	URE TRE	EATED
	PARTN	ER URE VAL	VE
		INYL CHI	
	RISER,	RIDGE C	OR RADIUS
	RETUR	N AIR	DAD
	RUBBE		DAIX
	REFLE	CTED CE	EILING PLAN
	ROOF	DRAIN GERATOF	-
	REGIS		,
	REINFO	ORCE	
	REQUII REVISI		
		NSULATI	ION
	ROOM		
			NG
	RESAV	RAFTER /N	
	REAR	YARD SE	TBACK
	SOUTH	-	
		TION BY	OWNER
	SOLID	CORE	
	SIDING		
		RE FEET	
	SINGLE	E FAMILY	DWELLING
	SINGLE		OR SHELF
	SHEET	-	
	SHEAT	HING	
	SIMILA	R PANEL	
			LE
	SPECIF	ICATION	IS
	SQUAF	RE .ESS STE	EL
	STEEL	STRONG	G WALL
3	STREE STAIR	T SIDEY	ARD SETBACK
	STEEL		
	STRAP		
	STRUC		
	SUSPE	NDED	
		VATER U ARD SET	
		OR TOP	
		JGH BOL	
		ND BOTT	
	TELEP	HONE	
		RARY	224
	THICK		
	TOP PL	TCH EXIS _ATE	
	TELEV	ISION	
	TYPICA TANKL		TER HEATER
	UNDEF	R	
			ER D OTHERWISE
	UNLES	S OTHER	RWISE NOTED
		Y OR VAL	LVE
	VACUL		
	VINYL	HORIZO	TAL SLIDER
			د
4			
		VERTICA	L SLIDER
	WEST WITH		
	WITHO	υт	
	WATER	RCLOSE	Y
	WINDC		
र		ING DRA	
		R HEATEI	R NTAL SLIDER
		GHT IRO	
		MOUNTE	D HEATER
	WOOD	SCREW	
		STRONG	G WALL AL SLIDER
	YARD		

doo	r sc	hedu	ıle -	elev	ation	а				T			d
DOOR #	WIDTH	HEIGHT	THICK	TYPE	OPERATION	CORE OR GLAZING	MATERIAL	FRAME	SCREEN	U FACTOR	SHGC	QUANTITY	NOTES
1	3'-0"	6-8"	1-3/4"	FRENCH	SWING	DG, TG	WOOD	WOOD	OPTIONAL	0.58	0.65	1	ENTRY
2	6'-0"	6-8"	1-3/4"	FRENCH	SLIDING	DG, TG	VINYL	VINYL	YES	0.58	0.65	1	
3	2'-0"	6-8"	1-1/2"	INTERIOR	SWING	SOLID	WOOD	WOOD	NO	N/A	N/A	1	PRIVACY
4	2'-0"	6-8"	1-1/2"	INTERIOR	SWING	SOLID	WOOD	WOOD	NO	N/A	N/A	1	

## window schedule - elevation a

	1	1	1	1		1			1	
WINDOW #	WIDTH	HEIGHT	TYPE	MATERIAL	GLAZING	SCREEN	U FACTOR	SHGC	QUANTITY	NOTES
1	2'-0"	3-6"	VERTICAL SLIDER	VINYL	DG, TG	YES	0.58	0.65	1	
2	2'-0"	4'-0"	VERTICAL SLIDER	VINYL	DG	YES	0.58	0.65	1	OPAQUE
3	6'-0"	3'-0"	HORIZONTAL SLIDER	VINYL	DG	YES	0.58	0.65	1	

doo	r sc	hedu	ule -	elev	vation	b							d
DOOR #	WIDTH	HEIGHT	THICK	TYPE	OPERATION	CORE OR GLAZING	MATERIAL	FRAME	SCREEN	U FACTOR	SHGC	QUANTITY	NOTES
1	3'-0"	6-8"	1-3/4"	FRENCH	SWING	DG, TG	WOOD	WOOD	OPTIONAL	0.58	0.65	1	ENTRY
2	6'-0"	6-8"	1-3/4"	FRENCH	SLIDING	DG, TG	VINYL	VINYL	YES	0.58	0.65	1	
3	2'-0"	6-8"	1-1/2"	INTERIOR	SWING	SOLID	WOOD	WOOD	NO	N/A	N/A	1	PRIVACY
4	2'-0"	6-8"	1-1/2"	INTERIOR	SWING	SOLID	WOOD	WOOD	NO	N/A	N/A	1	

## window schedule - elevation b

window schedule - elevation b											
WIDTH	HEIGHT	TYPE	MATERIAL	GLAZING	SCREEN	U FACTOR	SHGC	QUANTITY	NOTES		
2'-0"	3-6"	VERTICAL SLIDER	VINYL	DG, TG	YES	0.58	0.65	1			
2'-0"	4'-0"	VERTICAL SLIDER	VINYL	DG	YES	0.58	0.65	1	OPAQUE		
6'-0"	3'-0"	HORIZONTAL SLIDER	VINYL	DG	YES	0.58	0.65	1			
6'-0"	2'-0"	FIXED	VINYL	DG	NO	0.58	0.67	2	TRANSOM OVER DOOR 2 & WINDOW 3		
2'-0"	2'-0"	FIXED	VINYL	DG	NO	0.58	0.67	1	TRANSOM OVER WDW 1		
2'-0"	2'-0"	AWNING	VINYL	DG	YES	0.58	0.65	1	STORAGE LOFT		
	WIDTH 2'-0" 2'-0" 6'-0" 2'-0"	WIDTH     HEIGHT       2'-0"     3-6"       2'-0"     4'-0"       6'-0"     3'-0"       6'-0"     2'-0"       2'-0"     2'-0"	WIDTH         HEIGHT         TYPE           2'-0"         3-6"         VERTICAL SLIDER           2'-0"         4'-0"         VERTICAL SLIDER           6'-0"         3'-0"         HORIZONTAL SLIDER           6'-0"         2'-0"         FIXED           2'-0"         2'-0"         FIXED	WIDTHHEIGHTTYPEMATERIAL2'-0"3-6"VERTICAL SLIDERVINYL2'-0"4'-0"VERTICAL SLIDERVINYL6'-0"3'-0"HORIZONTAL SLIDERVINYL6'-0"2'-0"FIXEDVINYL2'-0"2'-0"FIXEDVINYL	WIDTHHEIGHTTYPEMATERIALGLAZING2'-0"3-6"VERTICAL SLIDERVINYLDG, TG2'-0"4'-0"VERTICAL SLIDERVINYLDG6'-0"3'-0"HORIZONTAL SLIDERVINYLDG6'-0"2'-0"FIXEDVINYLDG2'-0"2'-0"FIXEDVINYLDG	WIDTHHEIGHTTYPEMATERIALGLAZINGSCREEN2'-0"3-6"VERTICAL SLIDERVINYLDG, TGYES2'-0"4'-0"VERTICAL SLIDERVINYLDGYES6'-0"3'-0"HORIZONTAL SLIDERVINYLDGYES6'-0"2'-0"FIXEDVINYLDGNO2'-0"2'-0"FIXEDVINYLDGNO	WIDTHHEIGHTTYPEMATERIALGLAZINGSCREENU FACTOR2'-0"3-6"VERTICAL SLIDERVINYLDG, TGYES0.582'-0"4'-0"VERTICAL SLIDERVINYLDGYES0.586'-0"3'-0"HORIZONTAL SLIDERVINYLDGYES0.586'-0"2'-0"FIXEDVINYLDGNO0.582'-0"2'-0"FIXEDVINYLDGNO0.58	WIDTHHEIGHTTYPEMATERIALGLAZINGSCREENU FACTORSHGC2'-0"3-6"VERTICAL SLIDERVINYLDG, TGYES0.580.652'-0"4'-0"VERTICAL SLIDERVINYLDGYES0.580.656'-0"3'-0"HORIZONTAL SLIDERVINYLDGYES0.580.656'-0"2'-0"FIXEDVINYLDGNO0.580.672'-0"2'-0"FIXEDVINYLDGNO0.580.67	WIDTHHEIGHTTYPEMATERIALGLAZINGSCREENU FACTORSHGCQUANTITY2'-0"3-6"VERTICAL SLIDERVINYLDG, TGYES0.580.6512'-0"4'-0"VERTICAL SLIDERVINYLDGYES0.580.6516'-0"3'-0"HORIZONTAL SLIDERVINYLDGYES0.580.6516'-0"2'-0"FIXEDVINYLDGNO0.580.6722'-0"2'-0"FIXEDVINYLDGNO0.580.671		

## door schedule - elevation c

				0-0-		<b>—</b>							
DOOR #	WIDTH	HEIGHT	THICK	TYPE	OPERATION	CORE OR GLAZING	MATERIAL	FRAME	SCREEN	U FACTOR	SHGC	QUANTITY	NOTES
1	3'-0"	6-8"	1-3/4"	FRENCH	SWING	DG, TG	WOOD	WOOD	OPTIONAL	0.58	0.65	1	ENTRY
2	6'-0"	6-8"	1-3/4"	FRENCH	SLIDING	DG, TG	VINYL	VINYL	YES	<b>Q</b> .58	0.65	1	
3	2'-0"	6-8"	1-1/2"	INTERIOR	SWING	SOLID	WOOD	WOOD	NO	N/A	N/A	1	PRIVACY
4	2'-0"	6-8"	1-1/2"	INTERIOR	SWING	SOLID	WOOD	WOOD	NO	N/A	N/A	1	

# window schedule - elevation c

WINDOW #	WIDTH	HEIGHT	TYPE	MATERIAL	GLAZING	SCREEN	U FACTOR	SHGC	QUANTITY	NOTES
1	2'-0"	3-6"	VERTICAL SLIDER	VINYL	DG, TG	YES	0.58	0.65	1	
2	2'-0"	4'-0"	VERTICAL SLIDER	VINYL	DG	YES	0.58	0.65	1	OPAQUE
3	3'-0"	5'-0"	VERTICAL SLIDER	VINYL	DG	YES	0.58	0.65	1	
4	6'-0"	2'-6"	FIXED	VINYL	DG	NO.	0.58	0.67	4	HIGH PENTAGON TRANSOM EACH SIDE

# appliance schedule - s'udio 0

appliance sc	pliance schedule - s'udio 0									
APPLIANCE	OPERATION	MANUFACTURER	MODEL	QUANTITY	NOTES					
SPLIT SYSTEM HEAT RUMP	ELECTRICITY	PANASONIC	CU-XE, CS-XE -15WKUA	1	OR EQUAL					
HEAT PUMP TANK WATER HEATER	ELECTRICITY	RHEEM	PROPH40 T2 RH375-SO	1	OR EQUAL					
REFRIGERATOR	ELECTRIC.	BY OWNER	BY OWNER	1	30" WIDE, COUNTER DEPTH					
RANGE	ELECTRICITY	BY OWNER	BY OWNER	1	30" WIDE					
MICROWAVE HOOL	EECTRICITY	BY OWNER	BY OWNER	1	30" WIDE					
GARBAGE DISPOSAL	ELECTRICITY	BY OWNER	BY OWNER	1	AIR SWITCH					
	· ·		•							

# xture schedule - studio 0

FIXTURE	LOCATION	MANUFACTURER	MODEL	QUANTITY	NOTES
SINK	KITCHEN	BY OWNER	BY OWNER	1	
SINK FAUCET	KITCHEN	BY OWNER	BY OWNER	1	
LAVATORY	BATH	BY OWNER	BY OWNER	1	
LAVATORY FAUCET	BATH	BY OWNER	BY OWNER	1	
TOILET	BATH	BY OWNER	BY OWNER	1	
BATHTUB	BATH	BY OWNER	BY OWNER	1	30"x60" CAST IRON, OR EQUAL
BATH FILLER + SHOWER HEAD	BATH	BY OWNER	BY OWNER	1	

# material schedule - studio 0

material schedule - studio 0											
LOCATION	FLOOR	BASE	CASE	COUNTER	CABINET	WALL	CEILING	NOTES			
GREAT ROOM	1	4	4	3	2	1	5	OR EQUAL			
BATH	2	2	4	4	1	2	2	OR EQUAL			
	1-CONCRETE	1-NONE	1-NONE	1-CONCRETE	1-PAINTED	1-FLAT PAINT	1-FLAT PAINT				
	2-TILE	2-TILE	2-TILE	2-TILE	WOOD	O/ GB	O/ GB				
	3-VINYL	3-VINYL	3-VINYL	3-STONE	2-STAINED	2-SEMIGLOSS	2-SEMIGLOSS				
	4-CARPET	4-P. WOOD	4-P. WOOD	4-GLASS	WOOD	PAINT O/ GB	PAINT O/ GB				
	5-WOOD	5-S. WOOD	5-S. WOOD	5-WOOD	3-METAL	5-WOOD	5-T&G WOOD				

# fire sprinklers:

√ EXISTING OR PROPOSED RESIDENCE NO NO

YES

# fire sprinklers:

REQUIRED AT PROPOSED ADU

NO NO YES

(**w**)

**d** 

(**W**)

## fire sprinkler notes:

- 1. IF FIRE SPRINKLERS ARE REQUIRED AT THE ADU THAN THESE APPLY.
- AUTOMATIC FIRE SPRINKLER SYSTEM AN AUTOMATIC FIRE SPRI SYSTEM SHALL BE INSTALLED AS PER N.F.P.A. 13D, THE MOST CUI EDITION SHALL BE USED AND THE ENCINITAS FIRE DEPARTMENT POLICIES/ORDINANCES. DETAILED SPRINKLER PLANS SHALL BE S THE FIRE PREVENTION BUREAU AND APPROVED PRIOR TO INST PLANS AND INSTALLATION MUST BE BY A C16 LICENSED SPRIN CONTRACTOR.
- SECTION 903.2 GROUP R AN AUTOMATIC SPRINKLER SYSTEM INST 3. ACCORDANCE WITH SECTION 903.3 SHALL BE PROVIDED THROUGH BUILDINGS WITH A GROUP R FIRE AREA. THIS INCLUDES SINGLE P DWELLINGS, MULTI-FAMILY DWELLINGS AND ALL RESIDENTIAL CA
- FACILITIES REGARDLESS OF OCCUPANT LOAD. SECTION 903.2.01 ADDITIONS AN AUTOMATIC SPRINKLER SYSTE INSTALLED IN ACCORDANCE WITH 903.3 MAY BE REQUIRED TO INSTALLED THROUGHOUT STRUCTURES WHEN THE ADDI JON IS THAN 50% OF THE EXISTING BUILDING OR WHEN THE ALTERED WILL EXCEPT IRE FLOW OF 1,5 GALLONS PER MINUTE AS O PER SECT 507.3. THE FIRE CODE FICIAL AY REQUIRE AN SPRING RYSTEM BE INSTALLED IN SUIDINGS WHERE NO WA EXIST O PROVIDE THE REQUIRED FIRE FLOW OR WHERE A SP HAZARD EXISTS SUCH AS: POOR ACCESS ROADS, GRADE, BLUF CANYON RIMS HAZARDOUS BRUSH AND RESPONSE TIMES GRE MINUTES BY A FIRE DEPARTMENT.
- SECTION 90, 2.01 REMODELS OR RECONSTRUCTION AN AUTOM SPRINCLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTIO BE REQUIRED IN THE SCOPE OF WORK INCLUDES SIGNIFICANT MODIF CATION TO THE INTERIOR AND/OR ROOF OF THE BUILDI COST OF THE INSTALLATION DOES NOT EXCEED 15 PERCENT VALUATION OF THE REMODEL.
- CCATION AND SIZE OF WATER SERVICE UNDERGROUND SHAL INSTALLED AS SHOWN ON APPROVED FIRE SPRINKLER PLANS. INCH WATER SHALL BE INSTALLED.
- 7. A FIRE UNDERGROUND FLUSH CERTIFICATION SHALL BE REQU FINAL INSPECTION.
- 8. A HYDRO INSPECTION OF THE FIRE SPRINKLER SYSTEM IS REQUI TO FRAME INSPECTION. ONLY THE NEW PIPING SHALL BE TESTED

## waste water:

- SELECTION
- SEWER
- SEPTIC ( REQUIRES SAN DIEGO COUNTY HEALTH APPROVAL)

DISTANCE TO CONNECTION = \_\_\_\_\_FEET

## onsite parking:

√ REQUIRED

- NONE
- ONE PARKING SPACE

# very high fire severity zo

 $\sqrt{}$  SELECTION

NO NO

YES

f

- 1. IF THE PROPERTY THAT WILL CONTAIN THE ADU IS IN THE VERY HAZARD SEVERITY ZONE SEE NOTES BELOW & ON SHEET a0.1F 2. THE ADU SHALL COMPLY WITH CHAPTER 7A OF THE CURRENT
- BUILDING CODE. STRUCTURES IN THE VERY HIGH FIRE HAZARD SEVERITY ZONE PROVIDE & MAINTAIN A FUEL MODIFICATION ZONE. FUEL MODIF ZONES: THE APPLICANT SHALL PROVIDE & MAINTAIN FIRE/FUE THE SATISFACTION OF THE ENCINITAS FIRE DEPARTMENT. FIR BREAKS SIZE (MINIMUM 100 FEET FROM STRUCTURE) & COMPO SHALL BE DETERMINED BY THE FIRE DEPARTMENT & SHOWN C

## schedule notes:

- 1. ALL GLAZING IN DOORS SHALL BE TEMPERED. 2. SEE ELEVATIONS FOR 'TG' AT WINDOWS THAT REQUIRE TEMPI GLAZING.
- 3. IF THE PROPERTY THAT WILL CONTAIN THE ADU IS IN THE VER HAZARD SEVERITY ZONE SEE NOTES AND SCHEDULES ON SHE CONCERNING DOOR & WINDOW CONSTRUCTION AND TEMPERE 4. SEE ELEVATIONS FOR WINDOW OPERATION DIRECTION & LOCA
- MUNTINS. 5. SEE FLOOR PLANS FOR DOOR SWING DIRECTION.
- 6. ALL GLAZED OPENINGS SHALL MEET THE REQUIREMENTS OF SHEETS PROVIDED IN THE PLANS.
- 7. VINYL WINDOWS AND EXTERIOR VINYL DOOR FRAMES & SASH WI COMPRISED OF VINYL MATERIAL WITH WELDED CORNERS & META REINFORCEMENT IN THE INTERLOCK AREA.

	$\neg$	PREPARER SIGNATURE
e sprinklers:	studio 0 plan selection:	
EXISTING OR PROPOSED RESIDENCE		
NO	STANDARD PLAN, ELEVATION A STANDARD PLAN, ELEVATION B	
	STANDARD PLAN, ELEVATION B	
e sprinklers:	REVERSE PLAN, ELEVATION A	L _
REQUIRED AT PROPOSED ADU	REVERSE PLAN, ELEVATION B	
NO	REVERSE PLAN, ELEVATION C	•
YES		
e sprinkler notes:	foundation type:	
IF FIRE SPRINKLERS ARE REQUIRED AT THE ADU THAN THESE NOTES APPLY.	√ SELECTION	
AUTOMATIC FIRE SPRINKLER SYSTEM - AN AUTOMATIC FIRE SPRINKLER SYSTEM SHALL BE INSTALLED AS PER N.F.P.A. 13D, THE MOST CURRENT EDITION SHALL BE USED AND THE ENCINITAS FIRE DEPARTMENT	STANDARD SOLL SLAB ON GRADE	
POLICIES/ORDINANCES. DETAILED SPRINKLER PLANS SHALL BE SUBNITED TO THE FIRE PREVENTION BUREAU AND APPROVED PRIOR TO INSTALLATION. PLANS AND INSTALLATION MUST BE BY A C16 LICENSED SPRINK ER	EXPANSIVE SOIL, SLAB ON GRADE	
CONTRACTOR. SECTION 903.2 GROUP R AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN	STANDARD SOIL, RAISED FLOOR FOUNDATION (ENERGY CALCS AVAILABLE ON REQUEST)	
ACCORDANCE WITH SECTION 903.3 SHALL BE PROVIDED THROUGHOUT ALL BUILDINGS WITH A GROUP R FIRE AREA. THIS INCLUDES SINCLE FAMILY	EXPANSIVE SOIL, RAISED FLOOR FOUNDATION (ENERGY CALCS AVAILABLE ON REQUEST)	
DWELLINGS, MULTI-FAMILY DWELLINGS AND ALL RESIDENTIAL CARE FACILITIES REGARDLESS OF OCCUPANT LOAD.	exterior wall material:	
SECTION 903.2.01 ADDITIONS AN AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH 903.3 MAY BE REQUIRED TO BE INSTALLED THROUGHOUT STRUCTURES WHEN THE ADDITION IS MORE	#1 #2 MATERIAL	
THAN 50% OF THE EXISTING BUILDING OR WHEN THE ALTERED BUILDING WILL EXCEED A FIRE FLOW OF 1,500 GALLONS PER MINUTE AS CALCULATED	CEMENT PLASTER SIDING - SAND FINISH OR TME	
PER SECTION 507.3. THE FIRE CODE OFFICIAL MAY REQUIRE AN AUTOMATIC SPRING LR SYSTEM BE INSTALLED IN BUILDINGS WHERE NO WATER MAIN EXISTS TO PROVIDE THE REQUIRED FIRE FLOW OR WHERE A SPECIAL		
HAZAR DEXISTS OF AS: POOR ACCESS ROADS, GRADE, BLUFFS AND CANYON RIME LAZARDOUS BRUSH AND RESPONSE TIMES GREATER THAN	FIBER CEMENT - BOARD & BATT SIDING	
SMINUTES BY A FIRE DEPARTMENT. SECTON 90.2.01 REMODELS OR RECONSTRUCTION AN AUTOMATIC	FIBER CEMENT - LAP SIDING	
SPRIVER STEM INSTALLED IN ACCORDANCE WITH SECTION 903.3 MAY BE REQUIRED IN THE SCOPE OF WORK INCLUDES SIGNIFICANT		
MODIF CATION TO THE INTERIOR AND/OR ROOF OF THE BUILDING, AND THE COST OF THE INSTALLATION DOES NOT EXCEED 15 PERCENT OF THE VALUATION OF THE REMODEL.		с -
LCCATION AND SIZE OF WATER SERVICE UNDERGROUND SHALL BE INSTALLED AS SHOWN ON APPROVED FIRE SPRINKLER PLANS. A MINIMUM 1	window material:	BY USING THESE PERMIT READY CONSTRUCTION DOCUMENTS,
INCH WATER SHALL BE INSTALLED. A FIRE UNDERGROUND FLUSH CERTIFICATION SHALL BE REQUIRED AT		THE USER AGREES TO RELEASE THE CITY OF ENCINITAS AND THE ARCHITECT WHO PREPARED
FINAL INSPECTION. A HYDRO INSPECTION OF THE FIRE SPRINKLER SYSTEM IS REQUIRED PRIOR	VINYL	THESE CONSTRUCTION DOCUMENTS FROM ANY AND ALL CLAIMS, LIABILITIES, SUITS AND
TO FRAME INSPECTION. ONLY THE NEW PIPING SHALL BE TESTED.	FIBERGLASS	DEMANDS ON ACCOUNT OF ANY INJURY, DAMAGE OR LOSS TO
aste water:	WOOD	PERSONS OR PROPERTY, INCLUDING INJURY OR DEATH, OR ECONOMIC LOSSES, ARISING OUT
SELECTION	ALUMINUM CLAD WOOD	OF THE USE OF THESE CONSTRUCTION DOCUMENTS.
SEWER	eave/rake & parapet: -	
SEVER SEPTIC ( REQUIRES SAN DIEGO COUNTY HEALTH APPROVAL)	#1 #2 MATERIAL	
NCE TO CONNECTION = FEET	SINGLE FASCIA - IGNITION RESISTANT	
	EXPOSED RAFTER - IGNITION RESISTANT	PARTNERS
site parking:	STEPPED DOUBLE FASCIA - IGNITION RESISTANT	6 8 2 S E C O N D S T
REQUIRED	HEAVY TIMBER RAFTER TAIL - IGNITION RESISTANT	E N C I N I T A S , C A
NONE	PARAPET WITH WALL MATERIAL CAP - IGNITION RESISTANT	(760)7532464 DZNPARTNERS.COM
ONE PARKING SPACE	PARAPET WITH METAL CAP - IGNITION RESISTANT	
ONE FARRING SFACE	CORBEL PARAPET WITH METAL CAP - IGNITION RESISTANT	STUDIO PRADU
ery high fire severity zone:	roof material:	
SELECTION		
NO	FIBERGLAS ASPHALT SHINGLES - GAF INC - ICC ESR 1475 OR ICC ESR 3267 - OAE	<b>CITY:</b> ENCINITAS
YES		CITY: ENCINITAS
HAZARD SEVERITY ZONE SEE NOTES BELOW & ON SHEET a0.1F THE ADU SHALL COMPLY WITH CHAPTER 7A OF THE CURRENT CALIFORNIA	STANDING SEAM METAL ROOF - AEP SPAN INC - IAPMO-UES ER 0309 - OAE	
BUILDING CODE. STRUCTURES IN THE VERY HIGH FIRE HAZARD SEVERITY ZONE SHALL		
PROVIDE & MAINTAIN A FUEL MODIFICATION ZONE. FUEL MODIFICATION ZONES: THE APPLICANT SHALL PROVIDE & MAINTAIN FIRE/FUEL BREAKS TO	CLAY ROOF TILES - REDLAND CLAY TILE INC - IAPMO ER 445 - OAE	
THE SATISFACTION OF THE ENCINITAS FIRE DEPARTMENT. FIRE/FUEL BREAKS SIZE (MINIMUM 100 FEET FROM STRUCTURE) & COMPOSITION SHALL BE DETERMINED BY THE FIRE DEPARTMENT & SHOWN ON THE	stormwater bioretention:	
IMPROVEMENT/GRADING PLANS, FINAL MAP & BUILDING PLANS.	SQ. FT. TOTAL NEW &/OR REMOVED & REPLACED IMPERVIOUS SURFACES	<b>JOB:</b> 202241R
	IS NOT GREATER THAN 500 SQ. FT. SIZING CALCULATION NOT REQUIRED	CHECKLIST +
hedule notes:	IS GREATER THAN 500 SQ. FT. SIZING CALCULATION REQUIRED	SCHEDULE
ALL GLAZING IN DOORS SHALL BE TEMPERED. SEE ELEVATIONS FOR 'TG' AT WINDOWS THAT REQUIRE TEMPERED	SIZING CALCULATION:SQ. FT. x 4% =SQ. FT. (MIN BMP AREA REQUIRED)	
GLAZING. IF THE PROPERTY THAT WILL CONTAIN THE ADU IS IN THE VERY HIGH FIRE	BMP DRAINAGE TYPE	
HAZARD SEVERITY ZONE SEE NOTES AND SCHEDULES ON SHEET a0.1F CONCERNING DOOR & WINDOW CONSTRUCTION AND TEMPERED GLAZING.	A - BIORETENTION BASIN - SURFACE FLOW WITH SPILLWAY	
SEE ELEVATIONS FOR WINDOW OPERATION DIRECTION & LOCATION OF MUNTINS.	B - VEGETATED SWALE	
SEE FLOOR PLANS FOR DOOR SWING DIRECTION. ALL GLAZED OPENINGS SHALL MEET THE REQUIREMENTS OF THE CBC T24	C - SITE DESIGN + LID (LOW IMPACT DEVELOPMENT)	
SHEETS PROVIDED IN THE PLANS. VINYL WINDOWS AND EXTERIOR VINYL DOOR FRAMES & SASH WILL BE	NOT REQUIRED	
COMPRISED OF VINYL MATERIAL WITH WELDED CORNERS & METAL REINFORCEMENT IN THE INTERLOCK AREA.		a0.1

# very high fire hazard severity zone 14. 707A.9 UNDERFLOOR PROTECTION THE UNDERFLOOR AREA OF very high fire hazard OPEN ROOF EAVES ELEVATED OR OVERHANGING BUILDINGS SHALL BE ENCLOSED TO

# severity zone notes:

CBC CHAPTER 7A - MATERIALS & CONSTRUCTION METHODS FOR EXTERIOR WILDFIRE EXPPOSURE IF THE PROPERTY THAT WILL CONTAIN THE ADU IS IN THE VERY HIGH FIRE HAZARD SEVERITY ZONE THESE NOTES & NOTES ON SHEET a0.1 APPLY. 701A.3 APPLICATION THE JURISDICTION HAS DETERMINED THAT THIS PROJECT IS IN A WILDLAND-URBAN INTERFACE AREA. PLEASE SHOW COMPLIANCE WITH THE FOLLOWING ITEMS FOR NEW BUILDINGS, PER THE 2022 CBC. EXCEPTIONS

- 1 GROUP U OCCUPANCY ACCESSORY BUILDINGS OF ANY SIZE LOCATED AT LEAST 50 FEET (15 240 MM) FROM AN APPLICABLE BUILDING ON THE
- 2. GROUP U OCCUPANCY AGRICULTURAL BUILDINGS, AS DEFINED IN SECTION 202 OF THIS CODE OF ANY SIZE LOCATED AT LEAST 50 FEET (15 240 MM) FROM AN APPLICABLE BUILDING.
- 3 GROUP C OCCUPANCY SPECIAL BUILDINGS CONFORMING TO THE LIMITATIONS SPECIFIED IN SECTION 450 4.1
- 4. NEW ACCESSORY BUILDINGS AND MISCELLANEOUS STRUCTURES SPECIFIED IN SECTION 710A SHALL COMPLY ONLY WITH THE REQUIREMENTS OF THAT SECTION.
- 5. ADDITIONS TO AND REMODELS OF BUILDINGS ORIGINALLY CONSTRUCTED PRIOR TO JULY 1, 2008

#### REQUIREMENTS ROOFING

- 1. 705A.2 ROOF COVERINGS WHERE THE ROOFING PROFILE HAS AN AIRSPACE UNDER THE ROOF COVERING INSTALLED OVER A COMBUSTIBLE DECK A 72 LB (32 7 KG) CAP SHEET COMPLYING WITH ASTM D3909 STANDARD SPECIFICATION FOR "ASPHALT ROLLED ROOFING (GLASS FELT) SURFACED WITH MINERAL GRANULES," SHALI BE INSTALLED OVER THE ROOF DECK BIRD STOPS SHALL BE USED AT THE EAVES WHEN THE PROFILE FITS, TO PREVENT DEBRIS AT THE EAVE. HIP & RIDGE CAPS SHALL BE MUDDED IN TO PREVENT INTRUSION OF FIRE OR EMBERS
- EXCEPTION: CAP SHEET IS NOT REQUIRED WHEN NO LESS THAN 1" OF MINERAL WOOL BOARD OR OTHER NONCOMBUSTIBLE MATERIAL IS LOCATED BETWEEN THE ROOFING MATERIAL & WOOD FRAMING OR DECK.
- ALTERNATELY, A CLASS A FIRE RATED ROOF UNDERLAYMENT, TESTED IN ACCORDANCE WITH ASTM F108\_SHALL BE PERMITTED TO BE USED. IF THE SHEATHING CONSISTS OF EXTERIOR FIRE-RETARDANT-TREATED WOOD, THE UNDERLAYMENT SHALL NOT BE REQUIRED TO COMPLY WITH A CLASS A CLASSIFICATION. BIRD STOPS SHALL BE USED AT THE EAVES WHEN THE PROFILE FITS. TO PREVENT DEBRIS AT THE EAVE. HIP AND RIDGE CAPS SHALL BE MUDDED IN TO PREVENT INTRUSION OF FIRE OR EMBERS.
- 705A.3 ROOF VALLEYS WHERE VALLEY FLASHING IS INSTALLED, THE FLASHING SHALL BE NOT LESS THAN 0.019-INCH (0.48 MM) NO. 26 GAGE GALVANIZED SHEET CORROSION-RESISTANT METAL INSTALLED OVER NOT LESS THAN ONE LAYER OF MINIMUM 72 POUND (32.4 KG) MINERAL-SURFACED NONPERFORATED CAP SHEET COMPLYING WITH ASTM D3909, AT LEAST 36-INCH-WIDE (914 MM) RUNNING THE FULL LENGTH OF THE VALLEY
- 3. 705A.4 ROOF GUTTERS. ROOF GUTTERS SHALL BE PROVIDED WITH THE MEANS TO PREVENT THE ACCUMULATION OF LEAVES & DEBRIS IN THE GUTTER
- VENTS 4. 706A.1 GENERAL WHERE PROVIDED, VENTILATION OPENINGS FOR ENCLOSED ATTICS GABLE ENDS RIDGE ENDS UNDER EAVES AND CORNICES ENCLOSED FAVE SOFEIT SPACES ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS, UNDER ELOOR VENTILATION FOUNDATIONS AND CRAWL SPACES OR ANY OTHER OPENING INTENDED TO PERMIT VENTILATION, EITHER IN A HORIZONTAL OR VERTICAL PLANE, SHALL BE IN ACCORDANCE WITH SECTION 1202 ANI SECTIONS 706A.1 THROUGH 706A.2 TO RESIST BUILDING IGNITION FROM THE INTRUSION OF BURNING EMBERS AND FLAME THROUGH THE
- VENTILATION OPENINGS 5. 706A.2 REQUIREMENTS VENTILATION OPENINGS SHALL BE FULLY COVERED WITH WILDFIRE FLAME AND EMBER RESISTANT VENTS APPROVED AND LISTED BY THE CALIFORNIA STATE FIRE MARSHAL, OR WUI VENTS TESTED TO ASTM E2886 AND LISTED, BY COMPLYING WITH ALL OF THE FOLLOWING REQUIREMENTS. 1 THERE SHALL BE NO FLAMING IGNITION OF THE COTTON MATERIAL
- DURING THE EMBER INTRUSION TEST 2. THERE SHALL BE NO FLAMING IGNITION DURING THE INTEGRITY TEST PORTION OF THE FLAME INTRUSION TEST 3. THE MAXIMUM TEMPERATURE OF THE UNEXPOSED SIDE OF THE VENT SHALL NOT EXCEED 662°F (350°C)
- 6. 706A.2.1 OFF RIDGE AND RIDGE VENTS VENTS THAT ARE INSTALLED ON A SLOPED ROOF, SUCH AS DORMER VENTS, SHALL COMPLY WITH ALL OF THE FOLLOWING 1. VENTS SHALL BE COVERED WITH A MESH WHERE THE DIMENSIONS OF THE MESH THEREIN SHALL BE A MINIMUM OF 1/16-INCH (1.6 MM) AND
- SHALL NOT EXCEED 1/8-INCH (3.2 MM) IN DIAMETER. 2. THE MESH MATERIAL SHALL BE NONCOMBUSTIBLE.
- 3. THE MESH MATERIAL SHALL BE CORROSION RESISTANT EXTERIOR COVERINGS 707A.3 EXTERIOR WALL COVERINGS THE EXTERIOR WALL COVERING SHALL COMPLY WITH ONE OR MORE OF THE FOLLOWING REQUIREMENTS, EXCEPT AS PERMITTED FOR EXTERIOR WALL
- ASSEMBLIES COMPLYING WITH SECTION 707A.4: 1. NONCOMBUSTIBLE MATERIAL. 2. IGNITION-RESISTANT MATERIAL. THE IGNITION-RESISTANT MATERIAL SHALL BE LABELED FOR EXTERIOR USE AND SHALL MEET THE **REQUIREMENTS OF SECTION 704A.2**
- 3. FIRE-RETARDANT-TREATED WOOD. THE FIRE-RETARDANT-TREATED WOOD SHALL BE LABELED FOR EXTERIOR USE AND SHALL MEET THE REQUIREMENTS OF SECTION 2303.2 8. 707A.3.1 EXTENT OF EXTERIOR WALL COVERING EXTERIOR WALL
- COVERINGS SHALL EXTEND FROM THE TOP OF THE FOUNDATION TO THE ROOF, AND TERMINATE AT 2 INCH (50.8 MM) NOMINAL SOLID WOOD BLOCKING BETWEEN RAFTERS AT ALL ROOF OVERHANGS, OR IN THE CASE OF ENCLOSED EAVES. TERMINATE AT THE ENCLOSURE. EXTERIOR WALL ASSEMBLIES
- 707A.4 EXTERIOR WALL ASSEMBLIES EXTERIOR WALL ASSEMBLIES OF BUILDINGS OR STRUCTURES SHALL BE CONSTRUCTED USING ONE OR MORE OF THE FOLLOWING METHODS, UNLESS THEY ARE COVERED BY AN EXTERIOR WALL COVERING COMPLYING WITH SECTION 707A.3: 1. ASSEMBLY OF SAWN LUMBER OR GLUE-LAMINATED WOOD WITH THE SMALLEST MINIMUM NOMINAL DIMENSION OF 4 INCHES (102 MM). OR GLUE-LAMINATED PLANKS SPLINED, TONGUE-AND-GROOVE, OR CLOSE TOGETHER AND WELL SPIKED.
- 2. LOG WALL CONSTRUCTION ASSEMBLY. 3. ASSEMBLY THAT HAS BEEN TESTED IN ACCORDANCE WITH THE TEST PROCEDURES FOR A 10-MINUTE DIRECT FLAME CONTACT EXPOSURE TEST SET FORTH IN ASTM E2707 WITH THE CONDITION ACCEPTANCE SHOWN IN SECTION 707A.4.1
- 4. ASSEMBLY THAT MEETS THE PERFORMANCE CRITERIA IN ACCORDANCE WITH THE TEST PROCEDURES FOR A 10-MINUTE DIRECT FLAME CONTACT EXPOSURE LOT SET FORTH IN SFM STANDA 5. ASSEMBLY SUITABLE FOR EXTERIOR FIRE EXPOSURE WITH A 1-HOUR FIRE-RESISTANCE RATING, RATED FROM THE EXTERIOR SIDE, AS TESTED IN ACCORDANCE WITH ASTM 2119 OR UL 263.
- 6. ASSEMBLY SUITABLE OR EY ONE LAYER OF 5/8-INCH (1) TYPE X GY, LEATHING APPLIED BEILD THE EXPORT WALL SOVERING OR CLADDING ON THE FRIOR SIDE OF THE FRAM
- ASSEMBLY SUITABLE FOR EXTERIOR FIRE EXPOSURE CONTAINING NY OF THE GYPSUN PANEL AND SHEATHING PRODUCTS LISTED IN THE YPSUM ASSOCIATION FIRE RESISTANCE DESIGN MANUAL AS OMPLYING WITH A 1-HOUR FIRE-RESISTANCE RATING. AS TESTED IN CORDANCE WITH AST /I E119 OR UL 263.

- 10. 707A.5 OPEN ROOF EAVES THE EXPOSED ROOF DECK ON THE UNDERSIDE OF UNENCLOSED ROOF EAVES SHALL CONSIST OF ONE OR MORE OF THE FOLLOWING 1 NONCOMBUSTIBLE MATERIAL
- 2. IGNITION-RESISTANT MATERIAL. THE IGNITION-RESISTANT MATERIAL SHALL BE LABELED FOR EXTERIOR USE AND SHALL MEET THE **REQUIREMENTS OF SECTION 704A 2** 3. FIRE-RETARDANT-TREATED WOOD. THE FIRE-RETARDANT-TREATED
- WOOD SHALL BE LABELED FOR EXTERIOR USE AND SHALL MEET THE **REQUIREMENTS OF SECTION 2303 2** 4. MATERIALS APPROVED FOR NOT LESS THAN 1-HOUR FIRE-RESISTANCE-RATED CONSTRUCTION ON THE EXTERIOR SIDE, AS
- TESTED IN ACCORDANCE WITH ASTM E119 OR UL 263. 5. ONE LAYER OF 5/8-INCH (15.9 MM) TYPE X GYPSUM SHEATHING APPLIED BEHIND AN EXTERIOR COVERING ON THE UNDERSIDE OF THE
- ROOF DECK 6. THE EXTERIOR PORTION OF A 1-HOUR FIRE-RESISTANCE-RATED EXTERIOR ASSEMBLY, AS TESTED IN ACCORDANCE WITH ASTM E119 OR UL 263, APPLIED TO THE UNDERSIDE OF THE ROOF DECK DESIGNED FOR EXTERIOR FIRE EXPOSURE, INCLUDING ASSEMBLIES USING THE GYPSUM PANEL AND SHEATHING PRODUCTS LISTED IN THE GYPSUM ASSOCIATION FIRE RESISTANCE DESIGN MANUAL
- EXCEPTION TO SECTION 707A.5: THE FOLLOWING MATERIALS DO NOT REQUIRE PROTECTION: FASCIA & OTHER ARCHITECTURAL TRIM BOARDS.
- ENCLOSED ROOF EAVES AND ROOF EAVE SOFFITS 707A.6 ENCLOSED ROOF EAVES AND ROOF EAVE SOFFITS
- THE EXPOSED UNDERSIDE OF ENCLOSED ROOF EAVES HAVING EITHER A BOXED-IN ROOF FAVE SOFEIT WITH A HORIZONTAL LINDERSIDE OR SLOPING RAFTER TAILS WITH AN EXTERIOR COVERING APPLIED TO THE UNDERSIDE OF THE RAFTER TAILS, SHALL BE PROTECTED BY ONE OR MORE OF THE FOLLOWING:
- 1. NONCOMBUSTIBLE MATERIAL. 2. IGNITION-RESISTANT MATERIAL. THE IGNITION-RESISTANT MATERIAL SHALL BE LABELED FOR EXTERIOR USE AND SHALL MEET THE REQUIREMENTS OF SECTION 704A 2 3 FIRE-RETARDANT-TREATED WOOD THE FIRE-RETARDANT-TREATED

15

THE FOLLOWING:

MANUAL.

6. SKYLIGHTS.

STANDARD 12-

1/8-INCH (3 2MM)

NFPA 252

7. VENTS.

- WOOD SHALL BE LABELED FOR EXTERIOR USE AND SHALL MEET THE REQUIREMENTS OF SECTION 2303.2 4. MATERIALS APPROVED FOR NOT LESS THAN 1-HOUR FIRE-RESISTANCE-RATED CONSTRUCTION ON THE EXTERIOR SIDE, AS
- TESTED IN ACCORDANCE WITH ASTM F119 OR UL 263 5. ONE LAYER OF 5/8-INCH (15.9 MM) TYPE X GYPSUM SHEATHING APPLIED BEHIND THE EXTERIOR COVERING OR CLADDING ON THE UNDERSIDE OF THE RAFTER TAILS OR SOFFIT.
- 6. THE EXTERIOR PORTION OF A 1-HOUR FIRE-RESISTIVE EXTERIOR ASSEMBLY APPLIED TO THE UNDERSIDE OF THE RAFTER TAILS OR SOFFIT INCLUDING ASSEMBLIES USING THE GYPSUM PANEL AND SHEATHING PRODUCTS LISTED IN THE GYPSUM ASSOCIATION FIRE RESISTANCE DESIGN MANUA
- 7. BOXED-IN ROOF EAVE SOFFIT ASSEMBLIES WITH A HORIZONTAL UNDERSIDE THAT MEET THE PERFORMANCE CRITERIA IN SECTION 707A.11 WHEN TESTED IN ACCORDANCE WITH THE TEST PROCEDURES SET FORTH IN ASTM E2957.
- 8. BOXED-IN ROOF EAVE SOFFIT ASSEMBLIES WITH A HORIZONTAL UNDERSIDE THAT MEET THE PERFORMANCE CRITERIA IN ACCORDANCE WITH THE TEST PROCEDURES SET FORTH IN SFM STANDARD 12-7A-3. EXCEPTION TO SECTION 707A.6: THE FOLLOWING MATERIALS DO NOT REQUIRE PROTECTION: FASCIA & OTHER ARCHITECTURAL TRIM
- BOARDS PORCH CEILINGS
  - 707A.7 EXTERIOR PORCH CEILINGS THE EXPOSED UNDERSIDE OF EXTERIOR PORCH CEILINGS SHALL BE PROTECTED BY ONE OR MORE OF THE FOLLOWING 1. NONCOMBUSTIBLE MATERIAL
  - 2. IGNITION-RESISTANT MATERIAL. THE IGNITION-RESISTANT MATERIAL SHALL BE LABELED FOR EXTERIOR USE AND SHALL MEET THE REQUIREMENTS OF SECTION 704A 2
  - 3. FIRE-RETARDANT-TREATED WOOD. THE FIRE-RETARDANT-TREATED WOOD SHALL BE LABELED FOR EXTERIOR USE AND SHALL MEET THE REQUIREMENTS OF SECTION 2303.2 4. MATERIALS APPROVED FOR NOT LESS THAN 1-HOUR
- FIRE-RESISTANCE-RATED CONSTRUCTION ON THE EXTERIOR SIDE, AS TESTED IN ACCORDANCE WITH ASTM F119 OR UL 263 5. ONE LAYER OF 5/8-INCH (15.9 MM) TYPE X GYPSUM SHEATHING APPLIED BEHIND THE EXTERIOR COVERING OR CLADDING ON THE
- UNDERSIDE OF THE RAFTER TAILS OR SOFFIT. 6. THE EXTERIOR PORTION OF A 1-HOUR FIRE-RESISTANCE-RATED EXTERIOR ASSEMBLY, AS TESTED IN ACCORDANCE WITH ASTM E119. APPLIED TO THE LINDERSIDE OF THE CEILING ASSEMBLY, INCLUDING ASSEMBLIES USING THE GYPSUM PANEL AND SHEATHING PRODUCTS LISTED IN THE GYPSUM ASSOCIATION FIRE RESISTANCE DESIGN
- 7. PORCH CEILING ASSEMBLIES WITH A HORIZONTAL UNDERSIDE THAT MEET THE PERFORMANCE CRITERIA IN SECTION 707A.11 WHEN TESTED IN ACCORDANCE WITH THE TEST PROCEDURES SET FORTH IN ASTM
- 8. PORCH CEILING ASSEMBLIES WITH A HORIZONTAL UNDERSIDE THAT MEET THE PERFORMANCE CRITERIA IN ACCORDANCE WITH THE TEST PROCEDURES SET FORTH IN SFM STANDARD 12-7A-3. EXCEPTION TO SECTION 707A.7: ARCHITECTURAL TRIM BOARDS DO NOT REQUIRE PROTECTION.
- FLOOR PROJECTIONS 707A.8 FLOOR PROJECTIONS THE EXPOSED UNDERSIDE OF A CANTILEVERED FLOOR PROJECTION WHERE A FLOOR ASSEMBLY EXTENDS OVER AN EXTERIOR WALL SHALL BE PROTECTED BY ONE OR MORE OF THE FOLLOWING:
- 1. NONCOMBUSTIBLE MATERIAL. 2. IGNITION-RESISTANT MATERIAL. THE IGNITION-RESISTANT MATER SHALL BE LABELED FOR EXTERIOR USE AND SHALL MEET THE REQUIREMENTS OF SECTION 704A.2.
- 3. FIRE-RETARDANT-TREATED WOOD. THE FIRE-RETARDANT-TREATED WOOD SHALL BE LABELED FOR EXTERIOR USE AND SHALL MEET THE REQUIREMENTS OF SECTION 2303.2. 4. MATERIALS APPROVED FOR NOT LESS THAN 1-HOUR
- FIRE-RESISTANCE RATED CONSTRUCTION ON THE EXTERIOR SIDE, AS TESTED IN ACCORDANCE WITH ASTM E119 OR UL 263. 5. ONE LAYE 5/8-INCH (15.9 1) TYPE X GYPSUM SHEATHING APPLIED BEAL THE EXTEP COVERING ON THE UNDERSIDE OF THE CEILING.
- THE EXTERIOR PORITION OF A 1-HOUR FIRE-RESISTANCE-RATED Y, AS TESTED IN ACCORDANCE WITH ASTM E119, APPLIED TO THE UNDERSIDE OF THE CEILING ASSEMBLY, INCLUDING ASSEMBLIES USING THE SYPSUM PANEL AND SHEATHING PRODUCTS LISTED IN THE SYPSUM AS OCTATION FIRE RESISTANCE DESIGN
- HE UNDERSIDE OF A FLOOR PROJECTION ASSEMBLY THAT MEETS HE PERFORMANCE CRITERIA IN SECTION 707A.10 WHEN TESTED IN ACCORDANCE V THE TEST PROCEDURES SET FORTH IN ASTM F2957 3. THE UNDERSIDE OF A FLOOR PROJECTION ASSEMBLY THAT MEETS ANCE CRITERIA IN ACCORDANCE WITH THE TEST URES SET FORTH IN SFM STANDARD 12-7A-3.
- EXCEPTION TO SECTION 707A.8: ARCHITECTURAL TRIM BOARDS DO NOT REQUIRE PROTECTION. **ER FLOOR & UNDERSIDE PROTECTION**

GRADE IN ACCORDANCE WITH THE REQUIREMENTS OF THIS CHAPTER OR THE UNDERSIDE OF THE EXPOSED UNDERFLOOR SHALL BE PROTECTED BY ONE OR MORE OF THE FOLLOWING: 1 NONCOMBUSTIBLE MATERIAL

2. IGNITION-RESISTANT MATERIAL. THE IGNITION-RESISTANT MATERIAL SHALL BE LABELED FOR EXTERIOR USE AND SHALL MEET THE **REQUIREMENTS OF SECTION 704A 2** 3. FIRE-RETARDANT-TREATED WOOD. THE FIRE-RETARDANT-TREATED WOOD SHALL BE LABELED FOR EXTERIOR USE AND SHALL MEET THE

**REQUIREMENTS OF SECTION 2303.2** 4. MATERIALS APPROVED FOR NOT LESS THAN 1-HOUR FIRE-RESISTANCE-RATED CONSTRUCTION ON THE EXTERIOR SIDE, AS TESTED IN ACCORDANCE WITH ASTM F119 OR UL 263 5. ONE LAYER OF 5/8-INCH (15.9 MM) TYPE X GYPSUM SHEATHING APPLIED BEHIND AN EXTERIOR COVERING ON THE UNDERSIDE OF THE

FLOOR PROJECTION. 6. THE EXTERIOR PORTION OF A 1-HOUR FIRE-RESISTANCE-RATED EXTERIOR ASSEMBLY, AS TESTED IN ACCORDANCE WITH ASTM E119 OR LIL 263 APPLIED TO THE LINDERSIDE OF THE FLOOR INCLUDING ASSEMBLIES USING THE GYPSUM PANEL AND SHEATHING PRODUCTS LISTED IN THE GYPSUM ASSOCIATION FIRE RESISTANCE DESIGN

7. THE UNDERSIDE OF A FLOOR ASSEMBLY THAT MEETS THE PERFORMANCE CRITERIA IN SECTION 707A.11 WHEN TESTED IN ACCORDANCE WITH THE TEST PROCEDURES SET FORTH IN ASTM E2957 8. THE UNDERSIDE OF A FLOOR ASSEMBLY THAT MEETS THE PERFORMANCE CRITERIA IN ACCORDANCE WITH THE TEST PROCEDURES SET FORTH IN SEM STANDARD 12-7A-3

EXCEPTION TO SECTION 707A.9: STRUCTURAL COLUMNS AND BEAMS DO NOT REQUIRE PROTECTION WHEN CONSTRUCTED WITH SAWN LUMBER OR GLUE-LAMINATED WOOD WITH THE SMALLEST MINIMUM NOMINAL DIMENSION OF 4 INCHES (102 MM) SAWN OR GUIE-LAMINATED PLANKS SHALL BE SPLINED, TONGUE-AND-GROOVE, OR SET CLOSE TOGETHER AND WELL SPIKED. 707A.10 UNDERSIDE OF APPENDAGES WHEN REQUIRED BY THE

ENFORCING AGENCY, THE UNDERSIDE OF OVERHANGING APPENDAGES SHALL BE ENCLOSED TO GRADE IN ACCORDANCE WITH THE REQUIREMENTS OF THIS CHAPTER, OR THE UNDERSIDE OF THE EXPOSED UNDER-FLOOR SHALL BE PROTECTED BY ONE OR MORE OF 1. NONCOMBUSTIBLE MATERIAL

2. IGNITION-RESISTANT MATERIAL. THE IGNITION-RESISTANT MATERIAL SHALL BE LABELED FOR EXTERIOR USE AND SHALL MEET THE **REQUIREMENTS OF SECTION 704A.2.** 3. FIRE-RETARDANT-TREATED WOOD. THE FIRE-RETARDANT-TREATED WOOD SHALL BE LABELED FOR EXTERIOR USE AND SHALL MEET THE REQUIREMENTS OF SECTION 2303.2

4. MATERIALS APPROVED FOR NOT LESS THAN 1-HOUR FIRE-RESISTANCE-RATED CONSTRUCTION ON THE EXTERIOR SIDE AS TESTED IN ACCORDANCE WITH ASTM E119 OR UL 263. 5. ONE LAYER OF 5/8-INCH (15.9 MM) TYPE X GYPSUM SHEATHING APPLIED BEHIND THE EXTERIOR COVERING ON THE UNDERSIDE OF THE APPENDAGE PROJECTION. 6. THE EXTERIOR PORTION OF A 1-HOUR FIRE-RESISTANCE-RATED EXTERIOR ASSEMBLY, AS TESTED IN ACCORDANCE WITH ASTM E119 OR

UL 263, APPLIED TO THE UNDERSIDE OF THE APPENDAGE, INCLUDING ASSEMBLIES USING THE GYPSUM PANEL AND SHEATHING PRODUCTS LISTED IN THE GYPSUM ASSOCIATION FIRE RESISTANCE DESIGN 7. THE UNDERSIDE OF AN APPENDAGE ASSEMBLY THAT MEETS THE

PERFORMANCE CRITERIA IN SECTION 707A.11 WHEN TESTED IN ACCORDANCE WITH THE TEST PROCEDURES SET FORTH IN ASTM F2957 8 THF UNDERSIDE OF AN APPENDAGE ASSEMBLY THAT MEETS THE PERFORMANCE CRITERIA IN ACCORDANCE WITH THE TEST PROCEDURES SET FORTH IN SFM STANDARD 12-7A-3.

EXCEPTION TO SECTION 707A.10: STRUCTURAL COLUMNS AND BEAMS DO NOT REQUIRE PROTECTION WHEN CONSTRUCTED WITH SAWN LUMBER OR GLUE LAMINATED WOOD WITH THE SMALLEST MINIMUM NOMINAL DIMENSION OF 4 INCHES (102 MM), SAWN OR GLUE-LAMINATED PLANKS SHALL BE SPLINED, TONGUE-AND-GROOVE, OR SET CLOSE TOGETHER AND WELL SPIKED.

**EXTERIOR GLAZING & OPENINGS** 708A.2 EXTERIOR GLAZING THE FOLLOWING EXTERIOR GLAZING MATERIALS AND/OR ASSEMBLIES SHALL COMPLY WITH THIS SECTION: 1 EXTERIOR WINDOWS 2. EXTERIOR GLAZED DOORS

3. GLAZED OPENINGS WITHIN EXTERIOR DOO 4. GLAZED OPENINGS WITHIN EXTER OR GARAGE DOC 5. EXTERIOR STRUCTURAL GLASS VENEER.

708A.2.1 EXTERIOR INDOWS, SKYLIGITS AND EXTERIOR GLAZ DOOR ASSEMBLY RECUREMENTS FOR AN WINDOW SOUGHTS & EXTERIOR GLOED DO ASSEMELS SHALL OMPLY WINDOW OF THE FOLLOWING REQUIREMENT

1. BE CONSTRUCTED OF MULTIPANE GLAZING WITH A MINIMUM OF ONE D PANE MEETING THE REQUIREMENTS OF SECTION 2406 ZING. OR 2. BE CONSTRUCTED OF GLASS BLOCK UNITS, OR

3. HAVE A FIRE RESISTANCE RATING OF NOT LESS THAN 20 MINUTES WHEN TESTED ACCORDING TO NEPA 257, OR 4. BE TESTED TO MEET THE PERFORMANCE REQUIREMENTS OF SFM

708A.2.2 OPERABLE SKYLIGHTS. OPERABLE SKYLIGHTS SHALL BE PROTECTED BY A NON-COMBUSTIBLE MESH SCREEN WHERE THE DIMENSIONS OF THE OPENINGS IN THE SCREEN SHALL NOT EXCEED

708A.2.3 STRUCTURAL GLASS VENEER THE WALL ASSEMBLY BEHIND STRUCTURAL GLASS VENEER SHALL COMPLY WITH SECTION 707A.3. 708A.3 EXTERIOR DOORS EXTERIOR DOORS SHALL COMPLY WITH ONE F THE FOLLOWING:

1. THE EXTERIOR SURFACE OR CLADDING SHALL BE OF NONCOMBUSTIBLE MATERIAL 2. THE EXTERIOR SURFACE OR CLADDING SHALL BE OF IGNITION

RESISTANT MATERIAL 3. THE EXTERIOR DOOR SHALL BE CONSTRUCTED OF SOLID CORE WOOD THAT COMPLIES WITH THE FOLLOWING REQUIREMENTS: 3.1 STILES AND RAILS SHALL NOT BE LESS THAN 13/8 INCHES THICK. 3.2 PANELS SHALL NOT BE LESS THAN 11/4 INCHES THICK EXCEPT FOR THE EXTERIOR PERIMETER OF THE PANEL THAT SHALL BE PERMITTED. TO TAPER TO A TONGUE NOT LESS THAN 3/8 INCH THICK.

4. THE EXTERIOR DOOR ASSEMBLY SHALL HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN 20 MINUTES WHEN TESTED ACCORDING TO 5. THE EXTERIOR SURFACE OR CLADDING SHALL BE TESTED TO MEET THE PERFORMANCE REQUIREMENTS OF SECTION 707A.3.1 WHEN

**TESTED IN ACCORDANCE WITH ASTM E2707** 6. THE EXTERIOR SURFACE OR CLADDING SHALL BE TESTED TO MEET THE PERFORMANCE REQUIREMENTS OF SFM STANDARD 12-7A-1. 708A.3.1 EXTERIOR DOOR GLAZING. GLAZING IN EXTERIOR DOORS SHALL COMPLY WITH SECTION 708A.2.1. 708A.4 GARAGE DOOR PERIMETER GAP EXTERIOR GARAGE DOORS

SHALL RESIST THE INTRUSION OF EMBERS FROM ENTERING BY PREVENTING GAPS BETWEEN DOORS AND DOOR OPENINGS AT THE BOTTOM, SIDES & TOPS OF DOORS, FROM EXCEEDING 1/8 INCH (3.2 MM) GAPS BETWEEN DOORS & DOOR OPENINGS SHALL BE CONTROLLED BY ONE OF THE FOLLOWING METHODS: 1. WEATHER-STRIPPING PRODUCTS MADE OF MATERIALS THAT: (A)

HAVE BEEN TESTED FOR TENSILE STRENGTH IN ACCORDANCE WITH ASTM D638 (STANDARD TEST METHOD FOR TENSILE PROPERTIES OF PLASTICS) AFTER EXPOSURE TO ASTM G155 (STANDARD PRACTICE FOR OPERATING XENON ARC LIGHT APPARATUS FOR EXPOSURE OF NON-METALLIC MATERIALS) FOR A PERIOD OF 2,000 HOURS, WHERE THE

MAXIMUM ALLOWABLE DIFFERENCE IN TENSILE STRENGTH VALUES BETWEEN EXPOSED AND NON-EXPOSED SAMPLES DOES NOT EXCEED 10%; AND (B) EXHIBIT A V-2 OR BETTER FLAMMABILITY RATING WHEN TESTED TO UL 94 STANDARD FOR TESTS FOR FLAMMABILITY OF PLASTIC MATERIALS FOR PARTS IN DEVICES AND APPLIANCES 2. DOOR OVERLAPS ONTO JAMBS AND HEADERS.

3. GARAGE DOOR JAMBS & HEADERS COVERED WITH METAL FLASHING.

23. 709A.1.1 FLASHING. A MINIMUM OF A 6-INCH (150 MM) METAL FLASHING, APPLIED VERTICALLY ON THE EXTERIOR OF THE WALL, SHALL BE INSTALLED AT ALL DECK-TO-WALL INTERSECTIONS.

- 709A.3 DECKING SURFACES THE WALKING SURFACE MATERIAL OF DECKS, PORCHES, BALCONIES & STAIRS SHALL BE CONSTRUCTED WITH ONE OF THE FOLLOWING MATERIALS:
- 1. MATERIAL THAT COMPLIES WITH THE PERFORMANCE REQUIREMENTS OF SECTION 709A.4 WHEN TESTED IN ACCORDANCE WITH BOTH ASTM E2632 AND ASTM E2726.
- 2. IGNITION-RESISTANT MATERIAL THAT COMPLIES WITH THE PERFORMANCE REQUIREMENTS OF SECTION 704A.3.
- 3. MATERIAL THAT COMPLIES WITH THE PERFORMANCE REQUIREMENTS OF BOTH SFM STANDARD 12-7A-4 AND SECTION 704A.3. 4. EXTERIOR FIRE-RETARDANT-TREATED WOOD. 5. NONCOMBUSTIBLE MATERIAL
- 6. ANY MATERIAL THAT COMPLIES WITH THE PERFORMANCE REQUIREMENTS OF SFM STANDARD 12-7A-4A WHEN ATTACHED

EXTERIOR WALL COVERING IS ALSO COMPOSED OF NONCOMBUSTIBLE OR IGNITION-RESISTANT MATERIAL. EXCEPTION: WALL MATERIAL SHALL BE PERMITTED TO BE OF ANY MATERIAL THAT OTHERWISE COMPLIES WITH THIS CHAPTER WHEN THE DECKING SURFACE MATERIAL COMPLIES WITH THE PERFORMANCE REQUIREMENTS ASTM E84 WITH A CLASS B FLAME SPREAD INDEX. 7. ANY MATERIAL THAT COMPLIES WITH THE PERFORMANCE

REQUIREMENTS OF SECTION 709A.5 WHEN TESTED IN ACCORDANCE WITH ASTM E2632 AND WHEN ATTACHED EXTERIOR WALL COVERING IS ALSO COMPOSED OF ONLY NONCOMBUSTIBLE OR IGNITION-RESISTANT MATERIALS EXCEPTION: WALL MATERIAL SHALL BE PERMITTED TO BE OF ANY

MATERIAL THAT OTHERWISE COMPLIES WITH THIS CHAPTER WHEN THE DECKING SURFACE MATERIAL COMPLIES WITH THE PERFORMANCE REQUIREMENTS ASTM E84 WITH A CLASS B FLAME SPREAD INDEX.



TS	doo	r sc	hedı	ıle -	elev	vation	a							d
_	DOOR #	WIDTH	HEIGHT	THICK	TYPE	OPERATION	C E OR C ZING	MATERIAL	FRAME	SCREEN	U FACTOR	SHGC	QUANTITY	NOTES
-	1	3'-0"	6-8"	1-3/4"	FRENCH	SWING	DG, TG	WOOD	WOOD	OPTIONAL	0.58	0.65	1	ENTRY
IE	2	6'-0"	6-8"	1-3/4"	FRENCH	SLIDING	DG, TG	VINYL	VINYL	YES	0.58	0.65	1	
	3	2'-0"	6-8"	1-1/2"	INTERIOR	SWING	SOLID	WOOD	WOOD	NO	N/A	N/A	1	PRIVACY
	4	2'-0"	6-8"	1-1/2"	INTERIOR	SWING	SOLID	WOOD	WOOD	NO	N/A	N/A	1	

# window schedule \_\_elevation a

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WINDOW #	WIDTH	HEIGHT	TYPE	MATERIAL	GLAZING	SCREEN	U FACTOR	SHGC	QUANTITY	NOTES
1	<b>2'-</b> 0"	3-6"	VERTICAL SLIDER	VINYL	DG, TG	YES	0.58	0.65	1	
2	2'-0"	4'-0"	VERTICAL S DER	VINYL	DG, TG	YES	0.58	0.65	1	OPAQUE
3	<b>6</b> "-0"	3'-0"	HORIZONTAL SLIDER	VINYL	DG, TG	YES	0.58	0.65	1	

# oor schedule - elevation b

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DOOR #	WIDTH	HEIGHT	THICK	TYPE	OPERATION	CORE OR GLAZING	MATERIAL	FRAME	SCREEN	U FACTOR	SHGC	QUANTITY	NOTES
1	3'-0"	6-8"	1-3/4"	FRENCH	SWING	DG, TG	WOOD	WOOD	OPTIONAL	0.58	0.65	1	ENTRY
2	6'-0"	6-8"	1-3/4"	FRENCH	SLIDING	DG, TG	VINYL	VINYL	YES	0.58	0.65	1	
3	2'-0"	6-8"	1-1/2"	INTERIOR	SWING	SOLID	WOOD	WOOD	NO	N/A	N/A	1	PRIVACY
4	2'-0"	6-8"	1-1/2"	INTERIOR	SWING	SOLID	WOOD	WOOD	NO	N/A	N/A	1	

# window schedule - elevation b

WINDOW #	WIDTH	HEIGHT	TYPE	MATERIAL	GLAZING	SCREEN	U FACTOR	SHGC	QUANTITY	NOTES
1	2'-0"	3-6"	VERTICAL SLIDER	VINYL	DG, TG	YES	0.58	0.65	1	
2	2'-0"	4'-0"	VERTICAL SLIDER	VINYL	DG, TG	YES	0.58	0.65	1	OPAQUE
3	6'-0"	3'-0"	HORIZONTAL SLIDER	VINYL	DG, TG	YES	0.58	0.65	1	
4	6'-0"	2'-0"	FIXED	VINYL	DG, TG	NO	0.58	0.67	2	TRANSOM OVER DOOR 2 & WINDOW 3
5	2'-0"	2'-0"	FIXED	VINYL	DG, TG	NO	0.58	0.67	1	TRANSOM OVER WDW 1
6	2'-0"	2'-0"	AWNING	VINYL	DG, TG	YES	0.58	0.65	1	STORAGE LOFT

# door schedule - elevation c

400						U							
DOOR #	WIDTH	HEIGHT	THICK	TYPE	OPERATION	CORE OR GLAZING	MATERIAL	FRAME	SCREEN	U FACTOR	SHGC	QUANTITY	NOTES
1	3'-0"	6-8"	1-3/4"	FRENCH	SWING	DG, TG	WOOD	WOOD	OPTIONAL	0.58	0.65	1	ENTRY
2	6'-0"	6-8"	1-3/4"	FRENCH	SLIDING	DG, TG	VINYL	VINYL	YES	0.58	0.65	1	
3	2'-0"	6-8"	1-1/2"	INTERIOR	SWING	SOLID	WOOD	WOOD	NO	N/A	N/A	1	PRIVACY
4	2'-0"	6-8"	1-1/2"	INTERIOR	SWING	SOLID	WOOD	WOOD	NO	N/A	N/A	1	

# window schedule - elevati

WINDOW #	WIDTH	HEIGHT	TYPE	MATERIAL	GLAZING	SCREEN	U FACTOR	SHGC	QUANTITY	NOTES
1	2'-0"	3-6"	VERTICAL SLIDER	VINYL	DG, TG	YES	0.58	0.65	1	
2	2'-0"	4'-0"	VERTICAL SLIDER	VINYL	DG, TG	YES	0.58	0.65	1	OPAQUE
3	3'-0"	5'-0"	VERTICAL SLIDER	VINYL	DG, TG	YES	0.58	0.65	1	
4	6'-0"	2'-6"	FIXED	VINYL	DG, TG	NO	0.58	0.67	4	HIGH PENTAGON TRANSOM EACH SIDE

# schedule notes:

- 1. ALL GLAZING IN EXTERIOR DOORS SHALL BE TEMPERED IN THE VHFS
- 2. ALL GLAZING IN WINDOWS SHALL BE TEMPERED IN THE VHFSZ. 3. THE PROPERTY THAT WILL CONTAIN THE ADU IS IN THE VERY HIGH F
- HAZARD SEVERITY ZONE, SEE NOTES ON SHEET a0.1F CONCERNING & WINDOW CONSTRUCTION AND TEMPERED GLAZING.
- 4. SEE ELEVATIONS FOR WINDOW OPERATION DIRECTION & LOCATION MUNTINS
- 5. SEE FLOOR PLANS FOR DOOR SWING DIRECTION.
- 6. ALL GLAZED OPENINGS SHALL MEET THE REQUIREMENTS OF THE CBC T24 SHEETS PROVIDED IN THE PLANS. 7. VINYL WINDOWS AND EXTERIOR VINYL DOOR FRAMES & SASH WILL BE COMPRISED OF VINYL MATERIAL WITH WELDED CORNERS & METAL REINFORCEMENT IN THE INTERLOCK AREA.

# PREPARER SIGNATURE

# FOR CITY STAMPS

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IRE DOOR
OF

## very high fire hazard severity zone notes:

1. THE ADU SHALL COMPLY WITH CHAPTER 7A OF THE CURRENT CALIFORNIA BUILDING CODE BECAUSE IT IS IN THE VHFHSZ.

2. STRUCTURES IN THE VERY HIGH FIRE HAZARD SEVERITY ZONE SHALL PROVIDE & MAINTAIN A FUEL MODIFICATION ZONE. FUEL MODIFICATION ZONES: THE APPLICANT SHALL PROVIDE & MAINTAIN FIRE/FUEL BREAKS TO THE SATISFACTION OF THE ENCINITAS FIRE DEPARTMENT. FIRE/FUEL BREAKS SIZE (MINIMUM 100 FEET FROM STRUCTURE) & COMPOSITION SHALL BE DETERMINED BY THE FIRE DEPARTMENT & SHOWN ON THE IMPROVEMENT/GRADING PLANS, FINAL MAP & BUILDING PLANS.

	JOB: 202241R VERY HIGH FIRE HAZARD SEVERITY ZONE
	CITT. LINCINITAS
	STUDIO PRADU
J	6 8 2 S E C O N D S T E N C I N I T A S , C A ( 7 6 0 ) 7 5 3 2 4 6 4 DZNPARTNERS.COM
I	
J	BY USING THESE PERMIT READY CONSTRUCTION DOCUMENTS, THE USER AGREES TO RELEASE THE CITY OF ENCINITAS AND THE ARCHITECT WHO PREPARED THESE CONSTRUCTION DOCUMENTS FROM ANY AND ALL CLAIMS, LIABILITIES, SUITS AND DEMANDS ON ACCOUNT OF ANY INJURY, DAMAGE OR LOSS TO PERSONS OR PROPERTY, INCLUDING INJURY OR DEATH, OR ECONOMIC LOSSES, ARISING OUT OF THE USE OF THESE CONSTRUCTION DOCUMENTS.

#### 

g	enera	l spe	cificat	ions	:	3.24 3.25 CON		NG REINFORCEMENT TO BE CO BE CONTINUOUS AROUND CC	
-	NOTE GENERAL REQUIREME	ENTS	_	_	_	3.26	WALL PER THE FOLLO	OUNDATION PLATES OR SILLS DWING WITH 'ZMAX', GALVANIZ A. MINIMUM 5/8"Ø 'L' STEEL AN	ED OR STAINLESS STEEL
TANE .0	OARDS CODES GOVERNING CO	ONSTRUCTION:					E	<ol> <li>MINIMUM 3/8 Ø E STEEL AN</li> <li>BOLTS EMBEDDED AT LEAS</li> <li>BOLTS SPACED MAXIMUM 4</li> </ol>	T 7" INTO CONCRETE OR M
	2022 CALIFORNIA 2022 CALIFORNIA	BUILDING CODE RESIDENTIAL CODE	(CBC) (CRC)	TITLE 24 TITLE 24	PART 2, VOLUME 1 & 2 PART 2.5			<ul> <li>MINIMUM 2 BOLTS PER PLA DIAMETERS FROM EACH EN</li> <li>MINIMUM 3" BY 3" BY 0.299"</li> </ul>	ID OF EACH SILL PLATE/PIE
	2022 CALIFORNIA 2022 CALIFORNIA	ELECTRICAL CODE	(CEC) (CMC)	TITLE 24 TITLE 24	PART 3 PART 4	3.27	ALL NON-BEARING IN SIMPSON CO PDPAWI	TERIOR SILLS OR PLATES, UN L-250 PINS AT 36" O.C. WITH 1"	LESS OTHERWISE NOTED,
	2022 CALIFORNIA 2022 CALIFORNIA	PLUMBING CODE ENERGY CODE	(CPC) (CEC)	TITLE 24 TITLE 24	PART 5 PART 6	3.28		ESR-2183) OTINGS TO EXISTING FOOTING © CORED HOLES WITH SIMPSOI	
	2022 CALIFORNIA 2022 CALIFORNIA	FIRE CODE GREEN BUILDING STD		TITLE 24 TITLE 24	PART 9 PART 11	3.29	PER MANUFACTURER	TO EXISTING FOOTINGS SHALI R'S SPECIFICATIONS AND OBTA	AIN SPECIAL INSPECTION (
			ENCY STDS (CBEES) ANCE WITH THE 2022 EDITION 11 IRC, 2021 UMC, 2021 UPC, 2			3.30 CODE 3.31	WITH 6" MINIMUM EM	ETE SLABS TO EXISTING CONC BEDMENT IN 5/8"Ø CORED HOI DED ROD ANCHOR BOLTS INTC	ES WITH SIMPSON SET EF
	JURISDICTION HAVING	AUTHORITY OVER THE				RAIS	CORED HOLES WITH	SIMPSON SET EPOXY ADHESI <sup>N</sup> . FOUNDATION	/E GROUT. (ICC-ES, ESR-17
	FINISHED PROJECT. THE APPROVED CONS	HEY DO NOT INDICATE 1	LCULATIONS AND OTHER PR THE METHOD OF CONSTRUC S, INCLUDING ALL APPROVE	CTION.		3.32	PROTECTION OF WOO	E OR PRESERVATIVE-TREATED OD AGAINST DECAY. (CRC R31	7.1):
	COMMENCING WORK.	ANY ERRORS, OMISSIO	E CHECKED AND VERIFIED IN DNS OR DISCREPANCIES SHA	ALL BE BROUGHT T	O THE ATTENTION OF THE	₹E		<ul> <li>A. ALL WOOD IN CONTACT WIT OR EMBEDDED IN CONCRET</li> <li>B. WOOD JOISTS WITHIN 18" IN</li> </ul>	TE EXPOSED TO WEATHER
	ALL WRITTEN DIMENSI	IONS SHALL TAKE PREC	TOR AND/OR PROJECT MANA CEDENCE OVER SCALED ME/ TAKE PRECEDENCE OVER G	ASUREMENTS.			C	SPACES SHALL BE OF NATU WOOD FRAMING MEMBERS AND ARE LESS THAN 8" FRO	THAT REST ON CONCRETE
	CONFLICT. WHERE CONSTRUCTION	ON DETAILS ARE NOT SH	HOWN OR NOTED FOR ANY F	PART OF THE WORI	K, SUCH DETAILS SHALL BE	THE	ſ	TREATED WOOD D. WOOD FRAMING, SHEATHIN THAN 6" FROM THE EXPOSE	
	ENGINEER, GENERAL	CONTRACTOR AND/OR F	E DRAWINGS. WHERE SUFFI PROJECT MANAGER SHALL I IHE CONTRACTOR'S CONVEI	BE CONSULTED FO	OR CLARIFICATION.	HITECT,	F	SLABS, PATIO SLABS, AND S E. SILLS AND SLEEPERS ON C SEPARATED FROM SUCH SI	SIMILAR HORIZONTAL SURI ONCRETE OR MASONRY SI
	APPROVAL OF SUCH C	HANGES OR SUBSTITU	D FROM THE APPROVED COI ITIONS IS OBTAINED FROM T CHANGES ALONG WITH ANY	THE ARCHITECT ANI	D/OR ENGINEER. IF CHANGE		F	<ul> <li>ENDS OF WOOD GIRDERS E 1/2" ON TOPS, SIDES, AND E</li> </ul>	NTERING MASONRY OR CO
ET	SUBCONTRACTOR INV	ED ITEMS SHALL BE THE OLVED WITH THE CHAN	E LEGAL AND FINANCIAL RES NGE.	PONSIBILITY OF TH	IE CONTRACTOR AND/OR		G	G. WOOD STRUCTURAL MEMB WEATHER, SUCH AS CONCE ROOFS BY AN IMPERVIOUS	RETE OR MASONRY SLABS
D	STRUCTURE DURING C	CONSTRUCTION. SUCH I	HE CONTRACTOR TO PROVI MEASURES SHALL INCLUDE MATERIALS, ETC. THE CONT	, BUT ARE NOT LIM	IITED TO, BRACING & SHORI	NG FOR	ŀ	H. WOOD FURRING STRIPS OF EXTERIOR CONCRETE OR M BETWEEN WALL AND FURRI	ASONRY WALLS BELOW G
	TECHNIQUES, SEQUEN	NCES, PROCEDURES, SU OF THE WORK. BRACING	UPERVISION & INSTALLATIO G & SHORING IS TO BE INST ING &/OR SHORING SHALL S	N OF ALL TEMPORA ALLED PER THE CU	ARY BRACING & SHORING TO JRRENT OSHA & ANY OTHER	D 3.33		S SHALL HAVE VENTILATION OF F VENTILATION OPENINGS OF	PENINGS THROUGH FOUND
	COMPLETED. THE STRUCTURE IS DE	ESIGNED AS A STABLE U	UNIT AFTER ALL COMPONEN	ITS ARE IN PLACE.	THE CONTRACTOR SHALL B	E 3.34	UNDERFLOOR AREA	ING OPENING SHALL BE WITHI S SHALL BE PROVIDED WITH A	
	THE STRUCTURE OR A THE CONTRACTOR SH	NY PORTION THEREOF ALL DESIGN, CONSTRU	DURING CONSTRUCTION.	DEVICES, INCLUDI	NG BRACING & SHORING, &	SHALL BE STAN	MASONRY NDARDS	Y UNITS SHALL COMPLY WITH	
3	STANDARDS. CONSTRUCTION MATE	RIALS SHALL BE SPREA	) ALL LOCAL, STATE & FEDEF AD OUT IF PLACED ON FRAM			4.1 4.2 CEED	GROUT SHALL CONFO 2-1/4 TO 3 PARTS SAM	ORM ARTICLE 2.2 OF TMS 602 8 ND, & 1 TO 2 PARTS GRAVEL.	& SHALL CONSIST OF 1 PAP
	EACH CONTRACTOR S CAUSED BY THEIR WO		ING MEMBERS. EP THE PROJECT AREA FREE	E FROM ACCUMUL4	ATION OF WASTE MATERIAL	S 4.3	TMS 602 & SHALL COM	103.3) NSTRUCTION OF MASONRY, F NSIST OF 1 PART PORTLAND C	
			NTIRE DURATION OF THE PR E WITH THE LABOR CODE OF			4.4 O CARRY	(CBC 2103.2)	SHALL BE TYPE 1. (ASTM 150) /	
		LIABILITY INSURANCE I	N AMOUNTS SATISFACTORY			CTED 4.5	MORTAR FOR USE WI WITH ANSI A118.4 FOI	TH ADHERED MASONRY VENE R LATEX-MODIFIED PORTLAND	CEMENT MORTAR. (CBC 2
10	LITION AND PREPARATI		ID DISPOSE OF IT LEGALLY II	N A TIMELY FASHIC	DN.	4.6 4.7	QUICKLIME AND HYDI	HALL CONFORM TO ASTM C91 RATED LIME SHALL CONFORM	TO ASTM C977-18
	DO NOT REMOVE ANY	VEGETATION EXCEPT A	AS NOTED ON THE DRAWING	GS OR WITH PRIOR	OWNER OR ARCHITECT APP	4.9	A108.1B AND BE OF T GLASS UNIT MASONR	MORTARS FOR INSTALLING CE HE COMPOSITIONS INDICATED BY CONSTRUCTION SHALL BE I	) IN CBC TABLE 2103.2.3. (C NSTALLED PER MANUFAC
	CONDUIT, PLUMBING C THROUGHOUT CONST	DR OTHER UTILITIES WH RUCTION.	Y PRECAUTIONS TO LOCATE HERE NEW WORK IS BEING F	PERFORMED, PRIOF	R TO BEGINNING WORK AND	EALED REIN	13 OF TMS 402 & CBC IFORCEMENT	§2110.(CBC 2110.1) MORTAR F	OR USE WITH GLASS UNIT
	STANDARD CONSTRUCT FORM SIDES OF TREND	CTION PROCEDURES. CHES FOR FOOTINGS A	S REQUIRED TO PROVIDE F				ASTM A996 BARS PRO SHALL BE 60,000 PSI (	ENT SHALL COMPLY WITH THE DDUCED FROM RAIL STEEL SH (GRADE 60 KSI) (276 MPa) REIN JRES SHALL BE DEFORMED & (	ALL BE TYPE R. THE MINIM
	ALL LOOSE MATERIAL SHOULD LOOSE FILL, E EXCAVATION OF THE F	AND STANDING WATER EXPANSIVE SOIL, GROU FOOTINGS, THE ARCHIT	R FROM THE TRENCHES. JND WATER OR OTHER HAZA TECT SHALL BE NOTIFIED AN	ARDOUS CONDITION	NS BE ENCOUNTERED DURI	NG THE 4.11	REINFORCING BAR LA	APPED SPLICES IN MASONRY S ETHER WITH 16 GAUGE WIRE.	SHALL BE 40 BAR DIAMETE
	SOLUTION TO THE ISS TRENCHES OR EXCAV	UE IS REACHED. ATIONS MORE THAN 5 F	FEET IN DEPTH INTO WHICH CALIFORNIA DIVISION OF IND	A PERSON IS REQU	UIRED TO DESCEND SHALL F	HAVE ALL 4.12	POSSIBLE (CBC 2107. REINFORCEMENT SH		ADEQUATELY SUPPORTE
DI	PERMIT ISSUANCE OR NG AND DRAINAGE	BEFORE ANY WORK CC	OMMENCES WITHIN THE TRE	ENCH.			REINFORCING STEEL	ÎNSTITUTE). WEEN REINFORCEMENT SHAL	
	GRADING PERMIT REQ	UIRED IF VOLUME OF E	ED TO A MINIMUM OF 90% RE EARTH MOVED EXCEEDS THE EED 8 FEET IN HEIGHT/DEPT	E MAXIMUM CUBIC		UNICIPAL 4.14 4.15		RC R403.1.5.2). S AND COLUMNS SHALL BE DC S AT THE BOTTOM OF EVERY (	
	FINISH GRADES SHALL ALL REQUIRED BACKF	. BE SLOPED SO THAT S ILL SHALL BE COMPACT	SURFACE WATER DRAINS AV TED TO AT LEAST 90% OF TH	WAY FROM THE BUI	ILDING. (CRC R401.3 & CBC 1 ITY OBTAINABLE BY ASTM D	1804.4). 1557-12E1 CONI	GREATER THAN 5 FEE	ET.	
	RECOMMENDATIONS II BACKFILL FOR ALL RET	F A SOILS REPORT IS A TAINING WALLS SHALL E	COMPACTION. BACKFILL SHA PART OF THE CONSTRUCTION BE PERVIOUS MATERIAL. BA	ON DOCUMENTS. (0 ACKFILLING SHALL N	CBC 1804.3) NOT BEGIN UNTIL THE MASC		OF 1- 1/2 BOLT Ø AT T PERPENDICULAR FRO	SHALL BE BENT BAR ANCHOR I THE FREE END. THE EFFECTIVI OM THE SURFACE OF THE MAS	E EMBEDMENT DEPTH FOR SONRY TO THE BEARING SI
	CONCRETE RETAINING SOILS REPORT RECOM	S STRUCTURES HAVE A IMENDATIONS IF A SOIL	TTAINED THE SPECIFIED DE LS REPORT IS A PART OF TH	SIGN STRENGTH. E	BACKFILL SHALL CONFORM	TO THE 7)	EMBEDMENT SHALL E	BE NO LESS THAN 5 BOLT Ø BU JT BETWEEN THE BOLT AND M	JT NOT LESS THAN 2", UON
	BACKFILLING, UON. SH HAVE DEVELOPED SPE	IORING TO REMAIN IN P	PLACE UNTIL PERMANENT ST N THE CASE OF CONCRETE S	TRUCTURAL SUPPC	ORTING MEMBERS ARE IN PL	ACE AND STAN	NDARDS STRUCTURAL STEEL	SHALL BE DETAILED, FABRICA	
	ALL RETAINING WALLS A GRAVEL & PIPE BACI	S MUST BE PROVIDED W K DRAIN AND OUTLET S	VITH AN ADEQUATE DRAINAC SYSTEM, WITH A MINIMUM OF	F 2 OUTLETS PER W	VALL, TO PREVENT BUILDUP	5.2	DESIGN, FABRICATIO STRUCTURAL STEEL.	N & ERECTION OF STRUCTURA STEEL USED AS STRUCTURA ASTM A36. PIPE COLUMNS SH	AL STEEL FOR BUILDINGS ( _ SHAPES SUCH AS WIDE-F
	HYDROSTATIC PRESSU BACKDRAIN SYSTEMS ENCAPSULATED IN NO	URES. PIPES SHOULD C MUST BE A MINIMUM OI N-WOVEN FILTER FABR	CONSIST OF SCHEDULE 40 P F 3 CUBIC FEET PER LINEAL RIC(MIRAFI 140N, OAE). PERF	PERFORATED PVC F . FOOT OF 3/8" TO 1 FORATIONS IN THE F	PIPE. GRAVEL USED IN THE 1/2" CLEAN CRUSHED ROCH PIPE MUST BE FACE DOWN.	K 5.3	ASTM A500, GRADE B STRUCTURAL STEEL		
	SURFACE OF THE BAC WITH NATIVE SOIL. PR	KFILL MUST BE SEALED	D BY PAVEMENT OR THE TOP AGE MUST BE MAINTAINED. CK DRAIN SYSTEM, PANEL D	P 18" COMPACTED 1	TO 90% RELATIVE COMPACT	ION	W-WIDE FLANGE SHAPES PLATES, ANGLES &	ASTM A992	F <sub>Y</sub> =50-65 KSI
	MAY BE USED. PANEL I RETAINING & STEM WA	DRAINS MUST BE INSTA ALLS SHALL BE WATERP	ALLED PER MANUFACTURER PROOFED WHERE THEY WOU IABLE. DAMPPROOFING MAT	'S GUIDELINES. ULD IMPACT LIVING	GAREAS OR WHERE WALL S	TAINING	CHANNELS HOLLOW TUBE SHAPES	ASTM A36 ASTM A500, GRADE B	F <sub>Y</sub> =36 KSI F <sub>Y</sub> =46 KSI
<b>۲</b>	SPACE BELOW GRADE THE FOOTING TO FINIS	SHALL BE INSTALLED ( SHED GRADE. (CRC SEC	ON THE EXTERIOR SURFACE CTION R406 & CBC SECTION	E OF THE WALL, & S			ROUND PIPE SHAPES	ASTM A53, GRADE B	F <sub>Y</sub> =35 KSI
	,	& CBC SECTION 1803 & OILS REPORT SHALL US	1806). SE A SOIL LOAD BEARING VA	LUE OF 1,500 PSF.	(CRC TABLE R401.4.1 & CBC		ASD ( ALLOWABLE ST	EEL SHALL BE IDENTIFIED AS I RESS DESIGN) METHOD PROV EEL SHALL BE FABRICATED IN	ISIONS IN THE 2022 CBC §
6	PROJECTS REQUIRING	GOR PROVIDED WITH SO RT AN INTEGRAL PART C	OILS REPORT SHALL: OF THE CONSTRUCTION DOG	CUMENTS TO BE C	OMPLIED WITH BY THE	5.5 5.7	DEPARTMENT. STRUCTURAL STEEL	EEL SHALL BE FABRICATED IN SHOP DRAWINGS SHALL BE SI	JBMITTED TO THE ARCHIT
		N PLAN REVIEWED BY S				ORT	THE STRUCTURES CO OF SHOP & FIELD CO	RICATION. SHOP DRAWINGS S OMPONENT PARTS. SHOP DRA NNECTIONS, TYPE, SIZE & EXT	WINGS SHALL INCLUDE
	HAVE THE BUILDING PA	AD PREPARED IN ACCO	HE MAXIMUM SOIL BEARING ORDANCE WITH THE REPORT ONE UNDER THE DIRECT OB:	г.		FINIS	ADJACENT WORK. SHING	EL OTHER THAN GALVANIZED	
	REQUIRE THE SOILS E ALL OF THE RECOMME	NGINEER TO VERIFY IN ENDATIONS AND CONCL	I WRITING TO THE ARCHITEC LUSIONS CONTAINED IN THE	CT THAT CONSTRUC REPORT.	CTION AT THE SITE COMPLIE	0.0	STRUCTURAL STEEL	EL OTHER THAN GALVANIZED SHALL HAVE 2 SHOP COATS C PLACES ON THE SHOP PAINT	F RED OXIDE PRIMER. AFT
		ATERIAL 12 INCHES OR	D TO & APPROVED BY THE G MORE IN DEPTH. (CBC 1803.		NCTION PRIOR TO PLACEME	CONI	ALL STRUCTURAL ST	TEEL EXPOSED TO WEATHER	HALL BE HOLD PED GAL
١C	ARDS FOUNDATION DESIGN	IS BASED ON A SOILS B	BEARING VALUE OF 1,500 PSF				ALL NAILS SHALL BE	7 QUALITY WITH WASHERS, UC COMMON WIRE NAILS, UNLESS	
	FOOTING TO BE PLACE ADJACENT COMPETEN IF NOT SPECIFIED. THE	ED AS SHOWN IN THE A	APPROVED CONSTRUCTION DE OF 12" IF NOT SPECIFIED. ING SHALL NOT BE LESS THA	DOCUMENTS, WITH WIDTH OF THE FOO	H A MINIMUM DEPTH BELOW OTING SHALL BE NOT LESS	THE 5.13 THAN 12" 5.14	STEEL COLUMNS WIT	SCREW: MILAR FASTENE	DDED ON DRY PACK OR N
	TABLE 1809.7) FORMWORK SHALL RE	SULT IN A FINAL STRUC	CTURE THAT CONFORMS TO DOCUMENTS (CRC R404.1.3.3	SHAPES, SIZES & [	DIMENSIONS OF FOUNDATIC	5.15 DNS AS	STEEL ERECTOR TO I DURING CONSTRUCT DING	PROVIDE ERECTION BRACING ION.	
	FORMWORK SUPPORT FORMWORK SUPPORT	ING VERTICAL SURFAC	CES SHALL REMAIN IN PLACE ERS SHALL REMAIN IN PLACE	FOR A MINIMUM O	DF 2 DAYS. DF 15 DAYS.	5.16	ALL WELDS SHALL OF AMERICAN WELD I'G	SOCIETO THE CURE T ED SOCIETO TO THE CURE T ED SOCIETO TO THE CURE TO THE CONTRACT OF THE CONTRACT. THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT. THE CONTRACT OF THE CONTRACT OF THE CONTRACT. THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT. THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT. THE CONTRACT OF THE CONTRACT. THE CONTRACT OF THE CONTRACT OF THE CONTRACT. THE CONTRACT OF THE CONTRACT. THE CONTRACT OF THE CONTRACT OF THE CONTRACT. THE CONTRACT. TH	ALL BE MADE ONLY BY WEI
	NOTED IN THE APPROV	VED CONSTRUCTION DO	PLACED IN CONCRETE SLABS OCUMENTS (CPC SECTION 3 CI 318, ASTM C150, C595 & C1	312).		5.17	SOCIETY. FIELD & SHOP WELDI		
	SHALL CONSIST OF 1 F OF WATER PER SACK	PART CEMENT, 3 PARTS OF CEMENT. (CRC R402	S SAND, 4 PARTS 1-INCH MAX 2.2 & CBC SECTION 1903)	KIMUM SIZE ROCK, A	AND NOT MORE THAN 7-1/2	GALLONS 5.18		ELD WE DING SHALL BE CONT LED FOR IN THE PLANS ARE TH	
	CONTINUOUS AND SPE MAXIMUM SLUMP SHAI	READ FOOTINGS, UON ( LL NOT BE GREATER TH		BLE 1808.8.1 & ACI 3	318).	5.19 5.20 5.21	WELDING ELECTROD	ES SHALLOMPLY TO AWSA5 TAL (AWS D1.1, TABLE 4.1.1).	
	ITEM	STRENGTH (PSI)	TE STRENGTHS SHALL BE (CI	@DAYS	SPECIALINSPECTION	6		CARPENTRY	
F	SLAB ON GRADE FOOTINGS GRADE BEAMS	2500 2500 3000		28 28 28	NO NO	6.1	ALL TIMBER DESIGN & SPECIFICATION FOR	& CONSTRUCTION SHALL BE IN WOOD CONSTRUCTION (LATE: IBERS SHALL BE CLEARLY GR	ST ADOPTED SPECIFICATIO
	GRADE BEAMS CAISSONS STRUCTURAL DECK	3000 3000 3000		28 28 28	YES YES	6.2 6.3	UMBER & TIMBER SH	IBERS SHALL BE CLEARLY GRA HALL BE CUT SQUARE AND TO EVEL, STRAIGHT AND TRUE.	
	COLUMNS CONCRETE SLABS ON	3000 GRADE SHALL NOT BE	LESS THAN 4" THICK & HAVE	28 E #3 REINFORCING	YES BARS EACH WAY @ 18" OC 1	6.4 VIN, UON. 6.5	MOISTURE CONTENT STANDARD WOOD GF	OF SAWN LUMBER AT THE TIN RADES SHALL BE IN ACCORDA	NCE WITH THE FOLLOWING
	A BASE OF 2" CLEAN G	RADED SAND OVER A 1 N GRADED SAND, GRAV	15 MIL POLYETHYLENE APO VEL OR CRUSHED STONE 3H	OR BARRIER OVER	A 4" THICK BASE COURSE			SILL PLATES ON CONCRETE	<u>SPECIES</u> DOUGLAS FIR-LA
	CONCRETE FOUNDATIN	ONS SHALL MEET OR E	EXCEED THE MINIMUM REQUIRED TO OBTAIN M	NIMUM CONCRETE	EMBEDMENT FOR ALL HOLI			N 8' TALL . THAN 8' TALL, 4x4 STUDS, PLA INCEALED FRAMING, BLOCKIN	
	BOLTS. ALL HOLD DOW IN THE EVENT FOUNDA SHALL BE FILLED WITH	VN BOLTS SHALL HAVE A ATION EXCAVATIONS AF H THE SAME CONCRETE	A M "IMUM OF 3" OF CONCR RECARRIED TO A DEPTH GR E AS THAT USED FOR THE FO	REA E HAN REQ OOTIL HE ADDIT	AT BASE OTING. DITIONAL DEF TIONAL CONCRETE SHALL B	Ϋ́H E	FIRESTOPPING 2x & 3x MEMBERS, LA	RGER THAN 4" NOMINAL WIDT	H DOUGLAS FIR-LA
2	PLACED AT THE BOTTO THE ORIGINAL FOOTIN	OM OF THE FOOTING EX IG DEPTH. NO UNCONTF	XCAVATION WITH THE REINF ROLLED FILL WILL BE PERMI	FORCING REMAININ ITTED. (CRC R403.1.				STS, RAFTERS, STRIPPING, MIS G, BLOCKING & FIRESTOPPING N 4x4	
3	FOUNDATIONS OR FOU (CRC R404.1.6 & CBC S	JNDATION WALLS SUPP 2304.12.1.2).	NTINUOUS FOUNDATIONS. (C PORTING WOOD SHALL EXTE	END AT LEAST 6" AB			BEAMS, HEADERS, ST LESS THAT 4x10	FRINGERS & LEDGERS EQUAL	TO OR DOUGLAS FIR-LA
4	ALL FOUNDATION PLAT	CRETE OL SONRY FO	ERS ON A CONCRETE SLAB OUNDATIONS, SHALL BE THE				THAN 4x10	TRINGERS & LEDGERS GREATI	DOUGLAS FIR-LA
5			JST BE ANCHORED IN PLACE	EPRIOR TO CONCR	ETE PLACEMENT AND FOUN		AND BEAMS 5" & THIC STUD-GRADE DOUGL	S, BEAMS, AND POSTS 2" TO 4" CKER SHALL BE NO. 1 GRADE I AS FIR-LARCH OR BETTER WH JLL BE NO. 2 GRADE DOUGLAS	OUGLAS FIR-LARCH OR BI
١F			THE REINFORCING BARS			SHALL 6.7	INECTIONS	LL BE NO. 2 GRADE DOUGLAS	
	& ACI 318). CONTINUOUS CONCRE	E FOOTINGS AND STE	EM WALLS SHALL BE PROVID	DED WITH A MINIMU	, , , , , , , , , , , , , , , , , , ,	CBC 1907 6.8	DRILLED HOLES FOR METAL FRAMING CON	NAILS, WHERE NECESSARY TO INECTORS SHALL BE PROVIDE	O PREVENT SPLITTING, SH D BY SIMPSON CO., OAE.
	ONE AT THE TOP AND STEEL REINFORCEMENT	ONE AT THE BOTTOM O	OF THE FOOTING. (CRC R403) H THE REQUIREMENTS OF A	.1.3.3) ARTICLE 2.4 OF TMS	602 & ASTM A615, A706 OR .	A996.	MANUFACTURER'S S SHALL BE CBC/CRC C	PECIFICATIONS & ASTM D7147 CODE APPROVED (CBC §2304.1 NUTS BEARING ON WOOD SHA	WITH THE APPROPRIATE 0.4).
0	SHALL BE 0000 PSI (C CONCRETE S RUCTUR	GRADE 60 KSI) (276 MPa) RES SHALL BE DEFORM	EL SHALL BE TYPE R. THE M a) REINFORCING STEEL USED IED & COMPLY WITH ASTM AN	D IN CONSTRUCTIO 615. (CBC 2103.4)	ON OF REINFORCED MASONF	RY OR 6.11 6.12	ALL BOLTS HOLES IN	WOOD SHALL BE DRILLED 1/10 SILL PLATES SHALL HAVE NUTS	6"Ø LARGER THAN THE NO
F			CRETE SHALL BE 40 BAR DIAN		NIMUM, UON. SPLICES SHALI ARS SHALL BE STAGGERED	LBE	BOLT Ø	PLATE SIZE	
	POSSIBLE CRC R403.1		WINE. OF EIGEG OF ADJACEN				5/8"	.229" x 3" x 3"	
)	POSSIBLE (CRC R403.1 CONNECTORS ANI LAVE CORROSION RES	I.3.5.4) D METAL HARDWARE IN SISTANT COATINGS OR	N CONTACT WITH PRESSURE PROTECTION SUCH AS 'ZMA (A 153M & ASTM A 767/A 767N	E TREATED WOOD, " AX', HOT DIPPED GA	TIMBERS OR CONCRETE SH ALVANIZED, OR BE STAINLES	IALL	5/8" 3/4" 7/8" 1"	.229" x 3" x 3" .229" x 3" x 3" .3125" x 3" x 3" .375" x 3.5" x 3.5"	

I RESISTANT COATINGS OR PROTECTION SUCH AS 'ZMAX', HOT DIPPED GALVANIZED, OR BE STAINLESS STEEL, HDG: ASTM A 123/A 123M, ASTM A 153/A 153M & ASTM A 767/A 767M(CBC CHAPTER 19 & ACI 318). 3.21 REINFORCEMENT SHALL BE ACCURATELY PLACED, ADEQUATELY SUPPORTED & SECURED AGAINST DISPLACEMENT PRIOR TO CONCRETE PLACEMENT (CBC 1907.1, CRC R403.1.3.5.2 & THE LATEST ADOPTED STANDARDS OF THE WESTERN CONCRETE REINFORCING STEEL INSTITUTE). 3.22 CLEAR SPACING BETWEEN REINFORCEMENT SHALL NOT BE LESS THAN 1 BAR DIAMETER, 1", OR 1-1/3 TIMES THE MAXIMUM AGGREGATE SIZE (CRC R403.1.5.2). STEEL REINFORCEMENT IN CONCRETE SHALL HAVE THE FOLLOWING MINIMUM COVERAGE (CRC R403.1.3.5.3): 3.22.1 CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH : 3" 3 22 2 CONCRETE SURFACES EXPOSED TO FARTH & WEATHER #5 OR LESS 1-1/2"

3.22.3 CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH: 3/4 3.23 PROVIDE #3 REINFORCING BAR STIRRUPS AT 5' OC FROM TOP TO BOTTOM REINFORCEMENT IN ALL CONTINUOUS FOOTINGS. OAE. ALL TIES AND STIRRUPS SHALL CONFORM TO ASTM A-615, GRADE 40 KSI STEEL

#### 3.24 CONTINUOUS FOOTING REINFORCEMENT TO BE CONTINUOUS ACROSS ALL SPREAD OR SPOT FOOTINGS EINFORCING SHALL BE CONTINUOUS AROUND CORNERS AND THROUGH INTERSECTIONS ICHOR BOLTS AT FOUNDATION PLATES OR SILLS SHALL BE BOLTED OR ANCHORED TO THE FOUNDATION OR FOUNDATION ALL PER THE FOLLOWING WITH 'ZMAX', GALVANIZED OR STAINLESS STEEL FINISH (CRC R403.1.6.1 & CRC R602.11.1): A. MINIMUM 5/8"Ø 'L' STEEL ANCHOR BOLTS A307 B. BOLTS EMBEDDED AT LEAST 7" INTO CONCRETE OR MASONRY C. BOLTS SPACED MAXIMUM 4' ON CENTER OR PER SHEAR SCHEDULE D. MINIMUM 2 BOLTS PER PLATE/SILL PIECE WITH 1 BOLT LOCATED MAXIMUM 12" & MINIMUM 7 BOLT DIAMETERS FROM EACH END OF EACH SILL PLATE/PIECE E. MINIMUM 3" BY 3" BY 0.299" STEEL PLATE WASHER BETWEEN SILL & NUT ON EACH BOLT L NON-BEARING INTERIOR SILLS OR PLATES, UNLESS OTHERWISE NOTED, SHALL BE ATTACHED TO THE FOUNDATION WITH IPSON CO PDPAWL-250 PINS AT 36" O.C. WITH 1" Ø WASHERS. PROVIDE ONE PIN WITHIN 6" OF EACH END OF EACH SILL ATE, OAE, (ICC-ES ESR-2183) WEL ANY NEW FOOTINGS TO EXISTING FOOTINGS WITH 2 - #4 x 2' REINFORCING BARS @ TOP & BOTTOM WITH 6" MINIMUM IBEDMENT IN 5/8"Ø CORED HOLES WITH SIMPSON SET EPOXY GROUT. (ICC-ES, ESR-1772 I HOLD DOWNS INTO FXISTING FOOTINGS SHALL BE INSTALLED WITH SIMPSON SET EPOXY ADHESIVE GROUT. INSTALLATION R MANUFACTURER'S SPECIFICATIONS AND OBTAIN SPECIAL INSPECTION (ICC-ES, ESR-1772) WEL NEW CONCRETE SLABS TO EXISTING CONCRETE FOOTINGS OR SLABS WITH 1 - #4 x 2' REINFORCING BARS @ 24" OC [H 6" MINIMUM EMBEDMENT IN 5/8"Ø CORED HOLES WITH SIMPSON SET EPOXY ADHESIVE GROUT. (ICC-ES, ESR-1772 WEL NEW THREADED ROD ANCHOR BOLTS INTO EXISTING CONCRETE FOOTINGS WITH 6" MINIMUM EMBEDMENT IN 5/8"Ø RED HOLES WITH SIMPSON SET EPOXY ADHESIVE GROUT. (ICC-ES, ESR-1772 LOOR - STEM WALL FOUNDATION TURALLY DURABLE OR PRESERVATIVE-TREATED WOOD SHALL BE PROVIDED IN THE FOLLOWING LOCATIONS FOR OTECTION OF WOOD AGAINST DECAY. (CRC R317.1): A. ALL WOOD IN CONTACT WITH GROUND, EMBEDDED IN CONCRETE IN DIRECT CONTACT WITH GROUND. OR EMBEDDED IN CONCRETE EXPOSED TO WEATHER B. WOOD JOISTS WITHIN 18" INCHES AND WOOD GIRDERS WITHIN 12" OF THE EXPOSED GROUND IN CRAWL SPACES SHALL BE OF NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD C. WOOD FRAMING MEMBERS THAT REST ON CONCRETE OR MASONRY EXTERIOR FOUNDATION WALLS ND ARE LESS THAN 8" FROM EXPOSED EARTH SHALL BE OF NATURALLY DURABLE OR PRESERVATIVE TREATED WOOD D. WOOD FRAMING, SHEATHING, & SIDING ON THE EXTERIOR OF THE BUILDING & HAVING CLEARANCE LESS THAN 6" FROM THE EXPOSED GROUND OR LESS THAN 2" VERTICALLY FROM CONCRETE STEPS, PORCH SLABS, PATIO SLABS, AND SIMILAR HORIZONTAL SURFACE EXPOSED TO WEATHER E. SILLS AND SLEEPERS ON CONCRETE OR MASONRY SLAB IN DIRECT CONTACT WITH GROUND UNLESS EPARATED FROM SUCH SLAB BY IMPERVIOUS MOISTURE BARRIER F. ENDS OF WOOD GIRDERS ENTERING MASONRY OR CONCRETE WALLS WITH CLEARANCES LESS THAN 1/2" ON TOPS, SIDES, AND ENDS G. WOOD STRUCTURAL MEMBERS SUPPORTING MOISTURE-PERMEABLE FLOORS OR ROOFS EXPOSED TO ATHER, SUCH AS CONCRETE OR MASONRY SLABS, UNLESS SEPARATED FROM SUCH FLOORS OR ROOFS BY AN IMPERVIOUS MOISTURE BARRIER H. WOOD FURRING STRIPS OR OTHER WOOD FRAMING MEMBERS ATTACHED DIRECTLY TO INTERIOR OF XTERIOR CONCRETE OR MASONRY WALLS BELOW GRADE EXCEPT WHERE VAPOR RETARDER APPLIED BETWEEN WALL AND FURRING STRIPS OR FRAMING MEMBERS IDERFLOOR AREAS SHALL HAVE VENTILATION OPENINGS THROUGH FOUNDATION WALLS OR EXTERIOR WALLS. WITH MUM NET AREA OF VENTILATION OPENINGS OF 1 SQUARE FOOT FOR EACH 150 SQUARE FEET OF UNDERFLOOR AREA. NE SUCH VENTILATING OPENING SHALL BE WITHIN 3 FEET OF EACH CORNER OF THE BUILDING. (CRC R408.2) NDERFLOOR AREAS SHALL BE PROVIDED WITH A MINIMUM 18-INCH BY 24-INCH ACCESS OPENING. (CRC R408.4 NCRETE MASONRY UNITS SHALL COMPLY WITH ARTICLE 2.3 OF TMS 602 FOR LOAD-BEARING UNITS. (CBC 2103.1) OAE ROUT SHALL CONFORM ARTICLE 2.2 OF TMS 602 & SHALL CONSIST OF 1 PART PORTLAND CEMENT, 1/10 PART HYDRATED LIME 4 TO 3 PARTS SAND, & 1 TO 2 PARTS GRAVEL. GROUT SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI AT DAYS. OAE (CBC 2103.3) DRTAR USED IN CONSTRUCTION OF MASONRY, FOUNDATION & RETAINING WALLS SHALL CONFORM TO ARTICLE 2.1 & 2.6A OF S 602 & SHALL CONSIST OF 1 PART PORTLAND CEMENT, 2-1/4 TO 3 PARTS SAND, & 1/4 TO 1/2 PART HYDRATED LIME. OAE BC 2103.2) ORTLAND CEMENT SHALL BE TYPE 1. (ASTM 150) AGGREGATES SHALL HAVE A MAXIMUM SIZE OF 1/2" FOR FOOTINGS AND 1" OR ALL OTHER LOCATIONS. (ASTM C33) ORTAR FOR USE WITH ADHERED MASONRY VENEER SHALL CONFORM TO ANSI C270 FOR TYPE N OR S, OR SHALL COMPLY TH ANSI A118.4 FOR LATEX-MODIFIED PORTLAND CEMENT MORTAR. (CBC 2103.2.4, 1404.10) ASONRY CEMENT SHALL CONFORM TO ASTM C91-18 JICKLIME AND HYDRATED LIME SHALL CONFORM TO ASTM C977-18 RTLAND CEMENT MORTARS FOR INSTALLING CERAMIC WALL AND FLOOR TILE SHALL COMPLY WITH ANSI A108.1A AND ANSI 08.1B AND BE OF THE COMPOSITIONS INDICATED IN CBC TABLE 2103.2.3. (CBC 2103.2.3) ASS UNIT MASONRY CONSTRUCTION SHALL BE INSTALLED PER MANUFACTURERS INSTRUCTIONS & COMPLY WITH CHAPTER OF TMS 402 & CBC §2110.(CBC 2110.1) MORTAR FOR USE WITH GLASS UNITS SHALL BE USED. (ASTM C270, TYPE S OR N) EEL REINFORCEMENT SHALL COMPLY WITH THE REQUIREMENTS OF ARTICLE 2.4 OF TMS 602 & ASTM A615, A706 OR A996 TM A996 BARS PRODUCED FROM RAIL STEEL SHALL BE TYPE R. THE MINIMUM YIELD STRENGTH OF REINFORCING STEEL LL BE 60,000 PSI (GRADE 60 KSI) (276 MPa) REINFORCING STEEL USED IN CONSTRUCTION OF REINFORCED MASONRY OR DNCRETE STRUCTURES SHALL BE DEFORMED & COMPLY WITH ASTM A615. (CBC 2103.4) INFORCING BAR LAPPED SPLICES IN MASONRY SHALL BE 40 BAR DIAMETERS OR 20" MINIMUM, UON. SPLICES SHALL BE ELY TIED TOGETHER WITH 16 GAUGE WIRE. SPLICES OF ADJACENT REINFORCING BARS SHALL BE STAGGERED WHERE SSIBLE (CBC 2107.2.1) INFORCEMENT SHALL BE ACCURATELY PLACED, ADEQUATELY SUPPORTED, & SECURED AGAINST DISPLACEMENT PRIOR TO OUT PLACEMENT (CBC 1907.1, CRC R403.1.3.5.2 & THE LATEST ADOPTED STANDARDS OF THE WESTERN CONCRETE INFORCING STEEL INSTITUTE). EAR SPACING BETWEEN REINFORCEMENT SHALL NOT BE LESS THAN 1 BAR DIAMETER, 1", OR 1-1/3 TIMES THE MAXIMUM GREGATE SIZE (CRC R403.1.5.2) L MASONRY WALLS AND COLUMNS SHALL BE DOWELED TO THEIR SUPPORTS WITH BARS OF THE SAME SIZE AND SPACING. OVIDE CLEANOUTS AT THE BOTTOM OF EVERY CELL CONTAINING VERTICAL REINFORCEMENT IN ALL WALLS OF HEIGHT TIONS LEDGER BOLTS SHALL BE BENT BAR ANCHOR BOLTS WITH A 90° BEND WITH AN INSIDE Ø OF 3 BOLT Ø PLUS AN EXTENSION 1- 1/2 BOLT Ø AT THE FREE END. THE EFFECTIVE EMBEDMENT DEPTH FOR LEDGER BOLTS SHALL BE MEASURED RPENDICULAR FROM THE SURFACE OF THE MASONRY TO THE BEARING SURFACE OF THE BENT END. THE MINIMUM BEDMENT SHALL BE NO LESS THAN 5 BOLT Ø BUT NOT LESS THAN 2", UON. ALL BOLTS SHALL BE GROUTED IN PLACE WITH LEAST 1" OF GROUT BETWEEN THE BOLT AND MASONRY RUCTURAL STEEL SHALL BE DETAILED, FABRICATED & ERECTED IN ACCORDANCE WITH THE AISC SPECIFICATION FOR THE SIGN, FABRICATION & ERECTION OF STRUCTURAL STEEL FOR BUILDINGS (AISC CURRENT EDITION AND SUPPLEMENTS). RUCTURAL STEEL, STEEL USED AS STRUCTURAL SHAPES SUCH AS WIDE-FLANGE SECTIONS, CHANNELS, PLATES, & ANGLES ALL COMPLY WITH ASTM A36. PIPE COLUMNS SHALL COMPLY WITH ASTM A53. STRUCTURAL TUBES SHALL COMPLY WITH TM A500, GRADE B. RUCTURAL STEEL SHALL CONFORM TO CHAPTER 22 OF THE 2022 CBC AND AISC 360. WIDE FLANGE ASTM A992 LATES, ANGLES & ASTM A36 F<sub>Y</sub>=36 KSI ANNELS DLLOW TUBE ASTM A500, GRADE B F<sub>v</sub>=46 KSI IAPES JUND PIPE SHAPES ASTM A53, GRADE B F<sub>v</sub>=35 KSI L STRUCTURAL STEEL SHALL BE IDENTIFIED AS NOTED IN THE 2022 CBC. DESIGN OF STEEL MEDIBERS SHA D ( ALLOWABLE STRESS DESIGN) METHOD PROVISIONS IN THE 2022 CBC §2205.1 & §2205.2 & L STRUCTURAL STEEL SHALL BE FABRICATED IN A STEEL SHOP APPROVED BY THE MUNICIPAL UP RUCTURAL STEEL SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL E RIOR TO STEEL FABRICATION. SHOP DRAWINGS SHALL INCLUDE ALL INFORM TION NECESSARY FOR HE STRUCTURES COMPONENT PARTS. SHOP DRAWINGS SHALL INCLUDE 12E & WEIGHT OF SHOP & GEILD COMPONENT FOR THE STRUCT OF ALL INCLUDE 12E & WEIGHT OF 12E & COMPONENT OF ALL INCLUDE 12E & COMPONENT OF TYPF & SHOP & FIELD CONNECTIONS, TYPE, SIZE & EXTENT OF ALL WELDS WELD EQUENCE & MET JACENT WORK. IOP PAINT FOR STEEL OTHER THAN GALVANIZED SHALL MEET FEDERAL SPECIFIC, MONAT-P-645C F84 (ZINC CURO) TRUCTURAL STEEL SHALL HAVE 2 SHOP COATS OF PED ON DE PRIMER. AFTER ERECTION ALL FIELD CONNECTIONS, BOLTS, /ELDS, & ABRADED PLACES ON THE SHOP PAINT SHALL BE TO UCHED UP WITH THE SAME TO PE OF PAINT AS THE SHOP COAT LI STRUCTURAL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED, UON ORS AND CONNECTIONS DLTS SHALL BE A307 QUALITY WITH WASHERS, UON; HIGH STRENG, HA325/A490 BOLTS MUST DE SPECIAL INSPECTED, UON. L NAILS SHALL BE COMMON WIRE NAILS, UNLESS OTHERWISE NOTEL CHINE BOLTS, LAG SCREWS & S'MILAR FASTENERS SHALL CONFORM TO ASTM A307 & ASTM A563, UON. EEL COLUMNS WITH BASE PLATES SHALL BE BEDDED ON DRY PACK OR NON-SHRINK GROUT OF 1" MINIMUM THICKNESS. TEEL ERECTOR TO PROVIDE ERECTION BRACING REQUIRED TO MAINTAIN A PLUMB & PROPERLY BRACED STRUCTURE THE CURRENT EDITION OF THE CODE FOR WELDING IN BUILDING CONSTRUCTION OF THE AND SHALL BE MADE ONLY BY WELDERS AND WELDING OPERATORS QUALIFIED B AS PRESCRIBED IN THE STRUCTURA CODE FOR WELDING IN BUILDING CONSTRUCTION OF THE AMERICAN WELDING SHALL BE PERFORMED BY A DULY CERTIFIED WELDER USING LOW HYDROGEN E70-T6 ELECTRODE SHOP WELDING VRAL FIELD WE DING SHALL BE CONTINUOUSLY INSPECTED BY AN APPROVED REGISTERED SPECIAL INSPECTOR ELD LENGTHS CALLED FOR IN THE PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. ELDING ELECTRODES SHALL COMPLY TO AWSA5.1 OR A5.5, E70XX, UON . ELDING FILLER METAL (AWS D1.1, TABLE 4.1.1). OOD , TIMBER AND CARPENTRY TIMBER DESIGN & CONSTRUCTION SHALL BE IN ACCORDANCE WITH CBC CHAPTER 23 & THE NATIONAL DESIGN ECIFICATION FOR WOOD CONSTRUCTION (LATEST ADOPTED SPECIFICATION) WITH AMENDMENTS PER CBC SECTION 2306. L LUMBER AND TIMBERS SHALL BE CLEARLY GRADE MARKED BY WWPA OR WCLIB PER DOC PS 20 (CBC §2303.1.1). MBER & TIMBER SHALL BE CUT SQUARE AND TO ACCURATE LENGTH AND NEATLY ASSEMBLED. ALL FRAMING SHALL BE STALLED PLUMB. LEVEL. STRAIGHT AND TRUE. DISTURE CONTENT OF SAWN LUMBER AT THE TIME OF INSTALLATION SH ANDARD WOOD GRADES SHALL BE IN ACCORDANCE WITH THE FOLLOW MBER OR TIMBER SPECIES ESSURE TREATED SILL PLATES ON CONCRETE DOUGLAS FIF 4 STUDS LESS THAN 8' TALL DOUGLAS FIR-I 4 STUDS GREATER THAN 8' TALL, 4x4 STUDS, PLATES. DOUGLAS FIR-RIPPING, MISC. CONCEALED FRAMING, BLOCKING &

- UDS, PLATES, JOISTS, RAFTERS, STRIPPING, MIS NCEALED FRAMING, BLOCKING & FIRESTOPPING STS LARGER THAN 4x4 DOUGLAS FIR-AMS, HEADERS, STRINGERS & LEDGERS EQUAL TO OR DOUGLAS FIR-I ESS THAT 4x10 AMS, HEADERS, STRINGERS & LEDGERS GREATER DOUGLAS FIR-LARCH L JOISTS, RAFTERS, BEAMS, AND POSTS 2" TO 4" THICK SHALL BE NO. 2 GRADE DOUGLAS FIR-LARCH OR BETTER, ALL POSTS D BEAMS 5" & THICKER SHALL BE NO. 1 GRADE DOUGLAS FIR-LARCH OR BETTER. STUDS NOT MORE THAN 8' LONG SHALL BE UD-GRADE DOUGLAS FIR-LARCH OR BETTER WHEN SUPPORTING NOT MORE THAN 1 FLOOR, ROOF, AND CEILING. STUDS NGER THAN 8' SHALL BE NO. 2 GRADE DOUGLAS FIR-LARCH OR BETTER AILING SHALL MEET JURISDICTIONAL STANDARDS, CBC TABLE 2304.10.2, CRC TABLE R602.3(1), R502.9, R602.3 & R802.2, UON. RILLED HOLES FOR NAILS. WHERE NECESSARY TO PREVENT SPLITTING, SHALL BE OF A Ø SMALLER THAN THAT OF THE NAIL TAL FRAMING CONNECTORS SHALL BE PROVIDED BY SIMPSON CO., OAE. ALL CONNECTORS SHALL BE INSTALLED PER NUFACTURER'S SPECIFICATIONS & ASTM D7147 WITH THE APPROPRIATE NUMBER OF BOLTS OR NAILS. ALL CONNECTORS ALL BE CBC/CRC CODE APPROVED (CBC §2304.10.4).
- L BOLTS HEADS & NUTS BEARING ON WOOD SHALL SIT ON .229" x 3" X 3" METAL PLATE WASHERS, MINIMUM L BOLTS HOLES IN WOOD SHALL BE DRILLED 1/16"Ø LARGER THAN THE NOMINAL BOLT Ø. ICHOR BOLTS TO SILL PLATES SHALL HAVE NUTS WITH SQ. PLATE WASHERS IN ACCORDANCE WITH THIS SCHEDULE: OLT Ø PLATE SIZE .229" x 3" x 3' .229" x 3" x 3" .3125" x 3" x 3"
- .375" x 3.5" x 3.5" 6.12 SCHEDULE ALSO APPLIES TO LAG SCREWS DRIVEN INTO SOLE PLATES FOR RAISED FLOOR & UPPER STORY CONDITION 6.13 BOLTS IN WOOD SHALL NOT BE LESS THAN 7Ø FROM THE END OR 4Ø FROM THE EDGE. 6.14 FASTENERS FOR PRESERVATIVE-TREATED AND FIRE-RETARDANT-TREATED WOOD , INCLUDING NUTS AND WASHERS, SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE, OR COPPER. (CRC R317.3.1) EPTION 1: 1/2-INCH DIAMETER OR GREATER STEEL BOLTS EXCEPTION 2: FASTENERS OTHER THAN NAILS AND TIMBEF RIVETS MAY BE OF MECHANICALLY DEPOSITED ZINC-COATED STEEL WITH COATING WEIGHTS IN ACCORDANCE WITH ASTM B 95, CLASS 55 MINIMUM EXCEPTION 3: PLAIN CARBON STEEL FASTENERS ACCEPTABLE IN SBX/DOT & ZINC BORATE PRESERVATIVE-TREATED WOOD IN AN INTERIOR, DRY ENVIRONMENT.

ALL NOT EXCEED 1	9%. (CBC §2303.1.9.2).
ING SCHEDULE:	
	GRADE
-LARCH	#2
-LARCH	#2
-LARCH	#2
-LARCH	#2 JOISTS & PLANKS OR BETTER
-LARCH	#1, POSTS & TIMBERS
-LARCH	#2
	#2
	#1

- SIMPSON CO.
- BP 5/8-3 BP 3/4-3 BP 7/8-2 BP 1
- 6.15 FASTENERS FOR FIRE-RETARDANT-TREATED WOOD USED IN EXTERIOR APPLICATIONS OR WET OR DAMP LOCATIONS SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE, OR COPPER. (CRC R317.3.3)

6.16 LAG SCREWS SHALL BE INSTALLED IN PREDRILLED HOLES. THE CLEARANCE HOLE FOR THE SHANK PORTION SHALL HAVE THE SAME Ø & DEPTH AS THE SHANK. THE LEAD HOLE FOR THE THREADED PORTION SHALL HAVE A Ø EQUAL TO 40%-70% OF THE SHANK Ø (FOR ALL DOUGLAS FIR-LARCH MEMBERS). LAG SCREWS ARE TO BE INSTALLED WITH THE TURN OF A WRENCH DRIVING, AS WITH A HAMMER, IS NOT PERMITTED. FIRE BLOCKING AND DRAFT STOPPING

LEYS SHALL BE DESIGNED AS BEAMS (CBC SECTION 2308.7).

ENGINEER-DESIGNED GIRDER. (CBC 2808.7.3 & CRC R802.3.1)

LESS THAN 3" OF BEARING ON MASONRY OR CONCRETE. (CBC 2308.4.2.2 & CEC 2802.6

LATERALLY BY SOLID BLOCKING, DIAGONAL BRIDGING (WOOD OR METAL), OR A CON ACROSS THE RAFTERS OR CEILING JOISTS AT MAXIMUM

SOLID ROOF SHEATHING. (CBC 2303.4.1.2 & CRC R802.10.3)

WIDE AS MEASURED PERPENDICULAR TO THE SLOPE. CRICKET OR SADDLE COVERING SHALL BE SHEET METAL OR THE SAME

MS (E=1900 KSI), RESPECTIVELY, AS DESCRIBED IN ICC ESR-1153 & ICC ESR-138

(CBC 2308.7.3.1 & CRC R802.3.2

MAXIMUM 8' LENGTH. (CRC R802.5.1)

TRUSS FLOOR AND ROOF FRAMING

6.95

6.10

R PARTITIONS MORE THAN THE

6.91 THE TRUSS SUPPLIER SHALL PROVID

OF TRUSSE

MINATED WOOD TIMBERS

COMBINATION SYMBOL 20F-V12, UON.

BASED ON A RADIUS OF 2,000 FEET.

ROOFING, THERMAL AND MOISTURE PROTECTION

MATERIAL AS THE ROOF COVERING. (CRC R903.2.2)

&1508, CRC R906, 2022 CEC & 2022 CAL GREEN)

SELF-CLOSING ABILITY, UON. (CBC 406.3.2.1)

CBC §1404 (CBC 1404.1) AND CRC §R703 (CRC R703.1)

WEATHER-RESISTANT EXTERIOR WALL ENVELOPE. (CRC R703.2)

ARE SPACED 24" OC (CRC R702.3.1.1 & CRC TABLE R702.3.5).

& AT CEILINGS (CBC SECTION 406.3.2.1; CRC TABLE R302.6).

SMOOTH, HARD, NON- ABSORBENT SURFACE MATERIAL (CBC SECTION 1209.2.3).

PLANS FOR BASEBOARD AND CASING DIFFERENT FROM THIS SPECIFICATION

CONDITIONS OF THE LISTING AND APPLICABLE BUILDING CODES.

ATTACHED FOR APPROVAL BEFORE INSTALLATION. (CEC 110.1)

COOLING EQUIPMENT SPECIFICATIONS AND REQUIREMENTS.

ON THE DRAWINGS OR AS SELECTED BY THE PROJECT OWNER.

13 SPECIAL CONSTRUCTION & ENERGY REQUIREMENTS

EXTERIOR OF THE BUILDING. (CRC R703.7.2.1)

WOOD SHEATHING, OAE (CBC SECTION 2510.6).

CRC §R702 (CRC R702.1)

9.11

10 SPECIALTIES

(CRC R1004.3 & R1005.2)

INTERIOR ACCESSORIES

11 EQUIPMENT

FURNISHINGS

FIREPLACES

DOORS, WINDOWS AND SKYLIGHTS

SHALL NOT EXCEED 14%.

FABRICATION LICENSE.

DECK & BALCONY FRAMING

INSULATION

OMPLY WITH T.P.I. SPECIFICATIONS

- A. IN CONCEALED SPACES OF STUD WALLS & PARTITIONS, INCLUDING FURRED SPACES, & PARALLEL ROWS OF STUDS OR STAGGERED STUDS, AS FOLLOWS: 1. VERTICALLY AT THE CEILING AND FLOOR LEVELS 2. HORIZONTALLY AT INTERVALS NOT EXCEEDING 10'-0" B. AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL & HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP
- EILINGS, & COVE CEILINGS C. IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP & BOTTOM OF THE RUN D. AT OPENINGS AROUND VENTS, PIPES, DUCTS, CABLES AND WIRES AT CEILING AND FLOOR LEVEL, WITH AN APPROVED
- MATERIAL TO RESIST THE FREE PASSAGE OF FLAME AND PRODUCTS OF COMBUSTION E. AT CHIMNEYS AND FIREPLACES PER ITEM 6.20
- F.CORNICES OF A TWO-FAMILY DWELLING AT THE LINE OF DWELLING-UNIT SEPARATION 6.18 EXCEPT AS OTHERWISE SPECIFIED IN ITEMS 6.19 & 6.20, FIREBLOCKING SHALL CONSIST OF THE FOLLOWING MATERIALS WITH THE INTEGRITY MAINTAINED (CRC R302.11.1):
- A. TWO-INCH NOMINAL LUMBER B. TWO THICKNESSES OF ONE-INCH NOMINAL LUMBER WITH BROKEN LAP JOINTS

6.17 FIREBLOCKING SHALL BE PROVIDED IN THE FOLLOWING LOCATIONS (CRC R302.11 & CRC R1003.19):

- C. ONE THICKNESS OF 23/32-INCH WOOD STRUCTURAL PANEL WITH JOINTS BACKED BY 23/32-INCH WOOD STRUCTURAL PANEL D. ONE THICKNESS OF 3/4-INCH PARTICLEBOARD WITH JOINTS BACKED BY 3/4-INCH PARTICLEBOARD E. 1/2-INCH GYPSUM BOARD
- F. 1/4-INCH CEMENT-BASED MILLBOARD G. BATTS OR BLANKETS OF MINERAL OR GLASS FIBER OF OTHER APPROVED MATERIALS INSTALLED IN SUCH A MANNER AS TO
- BE SECURELY RETAINED IN PLACE. BATTS OR BLANKETS OF MINERAL OR GLASS FIBER OR OTHER APPROVED NON-RIGID MATERIALS SHALL BE PERMITTED FOR COMPLIANCE WITH THE 10-FOOT HORIZONTAL FIREBLOCKING IN WALLS CONSTRUCTED SING PARALLEL ROWS OF STUDS OR STAGGERED STUDS. UNFACED FIBERGLASS BATT INSULATION USED AS FIREBLOCKING HALL FILL THE ENTIRE CROSS-SECTION OF THE WALL CAVITY TO A MINIMUM HEIGHT OF 16" MEASURED VERTICALLY. WHEN PIPING, CONDUIT, OR SIMILAR OBSTRUCTIONS ARE ENCOUNTERED, THE INSULATION SHALL BE PACKED TIGHTLY AROUND THE DBSTRUCTION, LOOSE-FILL INSULATION MATERIAL SHALL NOT BE USED AS A FIREBLOCK UNLESS SPECIFICALLY TESTED IN THI ORM & MANNER INTENDED FOR USE TO DEMONSTRATE ITS ABILITY TO REMAIN IN PLACE & TO RETARD THE SPREAD OF FIRE. 6.19 FIREBLOCKING AT OPENINGS AROUND VENTS, PIPES, DUCTS, CABLES, & WIRES AT CEILING AND FLOOR LEVEL. SUCH DPENINGS SHALL BE FIREBLOCKED WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAME AND PRODUCTS
- F COMBUSTION. (CRC R302.11) 6.20 ALL SPACES BETWEEN CHIMNEYS AND FLOORS AND CEILINGS THROUGH WHICH CHIMNEYS PASS SHALL BE FIREBLOCKED WITH NONCOMBUSTIBLE MATERIAL SECURELY FASTENED IN PLACE. THE FIREBLOCKING OF SPACES BETWEEN CHIMNEYS AND WOOD JOISTS, BEAMS, OR HEADERS SHALL BE SELF-SUPPORTING OR BE PLACED ON STRIPS OF METAL OR METAL LATH LAID ACROSS THE SPACES BETWEEN COMBUSTIBLE MATERIAL AND THE CHIMNEY. (CRC R1003.19) 6.21 IN COMBUSTIBLE CONSTRUCTION WHERE THERE IS USABLE SPACE BOTH ABOVE & BELOW THE CONCEALED SPACE OF A
- FLOOR/CEILING ASSEMBLY, DRAFTSTOPS SHALL BE INSTALLED SO THAT THE AREA OF THE CONCEALED SPACE DOES NOT EXCEED 1000 SQUARE FEET. DRAFTSTOPPING SHALL DIVIDE THE CONCEALED SPACE INTO APPROXIMATELY EQUAL AREAS VHERE THE ASSEMBLY IS ENCLOSED BY A FLOOR MEMBRANE ABOVE AND A CEILING MEMBRANE BELOW, DRAFTSTOPPING SHALL BE PROVIDED IN FLOOR/CEILING ASSEMBLIES UNDER THE FOLLOWING CIRCUMSTANCES (CRC R302.12): A. CEILING IS SUSPENDED UNDER THE FLOOR FRAMING B. FLOOR FRAMING IS CONSTRUCTED OF TRUSS-TYPE OPEN-WEB OR PERFORATED MEMBERS.
- 6.22 DRAFTSTOPPING SHALL NOT BE LESS THAN 1/2-INCH GYPSUM BOARD 3/8-INCH WOOD STRUCTURAL PANELS OR OTHER APPROVED MATERIALS ADEQUATELY SUPPORTED. DRAFTSTOPPING SHALL BE INSTALLED PARALLEL TO THE FLOOR FRAM MEMBERS UNLESS OTHERWISE APPROVED BY THE BUILDING OFFICIAL. THE INTEGRITY OF DRAFTSTOPS SHALL BE MAINTAINED (CRC R302.12.1)
- SHEATHING 6.23 SHEATHING SPECIFICATIONS 6.24, 6.25 & 6.26 MAY BE SUPERCEDED BY ALTERNATE SPECIFICATIONS ON THE FRAMING PLANS. 6.24 FLOOR SHEATHING SHALL BE 23/32" CDX APA RATED STURD-I-FLOOR, T&G UNDERLAYMENT, EXPOSURE 1, MINIMUM SPAN RATING 20", UNBLOCKED, NAIL WITH HOT DIP GALVANIZED 10d COMMON NAILS, HAND NAILED 6" O.C. AT EDGE AND 10" O.C. IN
- FIELD. GLUE ALONG FLOOR JOISTS AND PLYWOOD T&G GROOVES SHALL BE PL 400 AS MANUFACTURED BY B.F. GOODRICH DAE. PLYWOOD TO BE GLUED AS IT IS NAILED BEFORE GLUE HAS DRIED OR HARDENED (CBC 2304.8.1 & CRC R503). 6.25 WALL SHEATHING AT SHEAR PANELS SHALL BE APA RATED STRUCTURAL 1, EXPOSURE 1, GROUP 1, UON. SHEATHING
- THICKNESS & NAILING SHALL BE ACCORDING TO THE SHEAR PANEL SCHEDULE. (CBC 2304.6.1 & CRC R604) 6.26 ROOF SHEATHING SHALL BE 15/32" CDX APA RATED SHEATHING. EXPOSURE 1. MINIMUM SPAN INDEX 24/0. NAII FD WITH 8d COMMON NAILS AT 6" O.C. AT EDGE & 12" O.C. IN FIELD & AT INTERMEDIATE MEMBERS (CBC 2304.8.2 & CRC R803).
- 6.27 USE 1x8 SPRUCE, CEDAR OR REDWOOD TONGUE AND GROOVE AT ALL EXPOSED EAVE AREAS, UON, 6.28 DIAPHRAGM SHEATHING NAILS OR OTHER APPROVED SHEATHING CONNECTORS SHALL BE DRIVEN SO THAT THEIR HEAD OR
- CROWN IS FLUSH WITH THE SHEATHING SURFACE. 6.29 ALL WOOD STRUCTURAL PANEL SHEATHING SHALL BE GRADE MARKED BY APA, TECO OR PLT & SHALL CONFORM TO PS 1-95, PS 2-92 OR PRP-108 6.30 PLYWOOD FLOOR & ROOF SHEATHING SHALL BE LAID WITH THE LONG DIMENSION AND FACE GRAIN PERPENDICULAR 7
- AFTERS, JOISTS OR TRUSSES, AND THE SHEETS SHALL BE STAGGERED AS SHOWN IN CBC TABLES IN §2306.2 (CA $\leq$ EACH SHEET SHALL CONTAIN A MINIMUM OF 8 SQ FT & EXTEND TO 3 SUPPORTS. PROVIDE 1/8" SPACING BETWEE PANEL ENDS ES AS REQUIRED FOR EXPANSION. ALL WOOD STRUCTURAL PANEL SHEATHING DIAPHRAGMS SHALL BE THE CONTRACTOR FOR COMPLIANCE WITH NAILING AND PANEL REQUIREMENTS BEFORE THE FINISH MATER 6.31 ROOF PLYWOOD SHALL BE CONTINUOUS UNDER CALIFORNIA FILL FRAMING SO ROOF DIAPHRAGM EXTENDS VALL PLATE.

POM SUPPORTING GIRDERS, WALLS

- FLOOR FRAMING 6.32 FLOOR FRAMING SHALL BE IN ACCORDANCE WITH CBC §2304.4 & 2308.4 & CRC §R502
- 6.33 FLOOR FRAMING SPAN LIMITATIONS SHALL BE IN ACCORDANCE WITH; CBC TABLES 2308 4.1.1(1) & (2), 2308.4.2.1 ABLES R502.3.1(1) & (2) AND MUNICIPAL JURISDICTION TABLES.
- 6.34 THE ENDS OF EACH FLOOR JOIST, BEAM, OR GIRDER SHALL HAVE MINIMUM 1-1/2 INCHES OF BEARING ON WOOD OR ME IAL ANI MINIMUM 3 INCHES OF BEARING ON MASONRY OR CONCRETE EXCEPT WHERE SUPPORT ED ON A 1-INCH-BY-4-INCH RIL STRIP AND NAILED TO THE ADJOINING STUD OR BY THE USE OF APPROVED JOIST HALC: RS. (CBC 2308.4.2.2 & CRC R502.6)
- 6.35 PROVIDE 2x DOUBLE JOISTS UNDER ALL PARALLEL BEARING & NON-BEARING PARTITIONS, NAIL ALL DOUBLE 2x JOISTS WITH 16d NAILS AT 12" OC, STAGGERED, TOP & BOTTOM. BOLT ALL TRIPLED JOISTS WITH 1223 BOLTS AT 18" OC, STAGGERED, TOP & BOTTOM(CBC SECTION 2308.9).
- 6.36 JOISTS UNDER PARALLEL BEARING PARTITIONS SHALL PEOPLADEQUATE SIZE TO SUFPORT THE LOAD. DOUBLE JOISTS, SIZED TO ADEQUATELY SUPPORT THE LOAD, THAT ARE SEPARATED TO PERMIT THE INSTALLATION OF PIPING OR VENTS SHALL BE FULL-DEPTH SOLID-BLOCKED WITH MINIMUM 2" NOTING LUMBER SPACED AT MAXIMUM COC. BEARING PARTITIONS
- PERPENDICULAR TO JOISTS SHALL NOT BE OFFSE JOIST DEPTH UNLESS SUCH JOISTS ARE OF SUPPLY END SIZE TO CARRY THE ADDITIONAL CAD. (CBC 2308.4.5 & CRC R502.4)
- 6.37 WHERE JOISTS ARE PERPENDICULAR TO SHEAR WALL BOVE OR BELOW, A 4x RIM JOIST, SALE JOIST, OR BLOCKING SHALL BE PROVIDED ALONG THE ENTIRE LENG, 1 OF THE SHE WALL. WHERE JOISTS ARE PARALLL, 10 A SHEAR WALL ABOVE OR BELOW, A RIM JOIST, END JOIST OR OTHER PARALLEL FINANCIA SHALL BE PROVIDED DIRECTLY ABOVE AND/OR BELOW THE SHEAR WALL. WHERE A PARALLEL RAMING MEMBER CAN BE LOCATED DIRECTLY ABOVE &/OR BELOW THE SHEAR WALL.
- ULL-DEPTH BLOCKING AT 16" OC SPACING SHALL BE PROVIDED BETWEEN THE PARALLEL FRAMING MEMBERS TO EACH SIDE OF THE SHEAR WALL. (CBC 2308.4.3 & CPC R602.10.8) FLOOR JOISTS SHALL BE SUPPORTED LATERALLY AT ENDS AND LACH INTERMEDIATE SUPPORT BY MINIMUM 2" FULL-DEPTH BLOCKING, BY ATTACHMENT TO FULL-DEPTH HEADER, BAND JOIST, OR RIM JOIST, TO AN ADJOINING STUD, OR SHALL BE
- ROVIDED V. TH LATERAL SUPPORT TO PREVENT ROTATION. (CBC SECTION 2308.4.2.3 & CRC R502.7) OTHERWIS
- 6.39 NOTCHES ON THE ENDS OF JOISTS SHALL NOT EXCEED 1/4 THE JOIST DEPTH. NOTCHES IN THE TOP OR BOTTOM OF JOISTS SHALL NOT EXCEED 1/6 THE DEPTH AND SHALL NOT BE LOCATED IN THE MIDDLE THIRD OF THE SPAN. HOLES BORED IN JOISTS SHALL NOT BE WITHIN 2" OF THE TOP OR BOTTOM OF THE JOIST AND THE DIAMETER OF ANY SUCH HOLE SHALL NOT EXCEED ONE-THE D THE DEPTH OF THE JOIST CBC 2308 2.2. & CRC R502.8).
- STS EXCEEDING NOMINA 2012" SHALL DE SUPPORTED LATERALLY BY SOLID BLOCKING, DIAGONAL BRIDGING 6.40 F METAL), OR A CONTINUC 12 - INCH-BY-3-INCH STRIP NALED ACROSS THE BOTTOM OF JOISTS PERPENDICULAR TO ATMAXIMUM 8-FOOT INTER 12. (CBC 2308.4.6 & CRC R502.7.1)
- 6.41 FLOOR JOISTE FRAMING OPPOSITE SIZES OVER A BEARING SUPPORT SHALL LAP MINIMUM 3 INCHES & SHALL BE NAILED TOGETHER WITH MINIMUM 3 -10 FOR ENAILS. A WOOD OR METAL SPLICE WITH STRENGTH EQUAL TO OR GREATER THAN THAT PROVIDED BY THE DRIVE DESIDE OF COMPARISON OF COMPAR
- 6.42 FLOOR JOISTS FRAMING INTO THE SIDE OF A WOOD GIRDER SHALL BE SUPPORTED BY APPROVED FRAMING ANCHORS OR ON LEDGER STRIPS MINIMUM NOMINAL 2"X2". (CBC 2308.4.2.3 & CRC R502.6.2)
- OPENINGS IN FLOOR FRAMING SHALL BE FRAMED WITH A HEADER & TRIMMER JOISTS. WHEN THE HEADER JOIST SPAN DOES. NOT EXCEED 4', THE HEADER JOIST MAY BE A SINGLE MEMBER THE SAME SIZE AS THE FLOOR JOIST. SINGLE TRIMMER JOISTS
- MAY BE USED TO CARRY A SINGLE HEADER JOIST LOCATED WITHIN 3' OF THE TRIMMER JOIST BEARING. WHEN THE HEADER DIST SPAN EXCEEDS 4, THE TRIMMER JOISTS & HEADER JOIST SHALL BE DOUBLED AND OF SUFFICIENT CROSS SECTION TO
- IPPORT THE FLOOR JOISTS FRAMING INTO THE HEADER. APPROVED HANGERS SHALL BE USED FOR THE HEADER- JOIST R-JOIST CONNECTIONS WHEN THE HEADER JOIST SPAN EXCEEDS 6'. TAIL JOISTS OVER 12' LONG SHALL BE PPORTED AT THE HEADER BY FRAMING ANCHORS OR ON LEDGER STRIPS MINIMUM 2"x2". (CBC 2308.4.4.1 & CRC R502.10)
  - GIRDERS FOR SINGLE-STORY CONSTRUCTION OR GIRDERS SUPPORTING LOADS FROM A SINGLE FLOOR SHALL NOT BE LESS HAN 4"X6" FOR SPANS 6' OR LESS, PROVIDED THAT GIRDERS ARE SPACED NOT MORE THAN 8' OC. OTHER GIRDERS SHALL BE DESIGNED TO SUPPORT THE LOADS SPECIFIED IN THE CBC. GIRDER END JOINTS SHALL OCCUR OVER SUPPORTS. WHEN A SIRDER IS SPLICED OVER A SUPPORT, AN ADEQUATE TIE SHALL BE PROVIDED. THE ENDS OF BEAMS OR GIRDERS SUPPORTED
  - ON MASONRY OR CONCRETE SHALL NOT HAVE LESS THAN 3" OF BEARING. (CBC 2308.7) WALL FRAMING 6.45 WALL FRAMING SHALL BE IN ACCORDANCE WITH CBC §2308.5 & §2308.6 & CRC CHAPTER 6.
  - 6.46 THE SIZE, HEIGHT, AND SPACING OF STUDS SHALL BE IN ACCORDANCE WITH CRC TABLE R602.3(5), (CRC R602.3.1) 6.47 TYPICAL STUD SIZE IS 2x4 WITH A TYPICAL SPACING OF 16" OC. THE MAXIMUM HEIGHT FOR 2x4 & 2x6 STUD BEARING WALLS SHALL BE 10'-0", NON-BEARING STUD WALL MAXIMUM HEIGHT IS 14' FOR 2x4 STUDS & 20' FOR 2x6 STUDS. WALLS WHOSE TT DOES NOT MEET THESE CRITERIA SHALL BE ENGINEERED FOR THEIR SPECIFIC CONDITION. (CBC 2308.5.1 & TABLE
  - 2308.5.1 AND CRC R602.3 & TABLE R602.3(5) 6.48 WHERE JOISTS, TRUSSES, OR RAFTERS ARE SPACED MORE THAN 16" O. C. & BEARING STUDS BELOW ARE SPACED 24" O. C SUCH MEMBERS SHALL BEAR WITHIN 5" OF THE STUDS BENEATH. (CBC 2308.5.3.2 & CRC R602.3.3) 6.49 STUDS SHALL BE PLACED WITH THEIR WIDE DIMENSION PERPENDICULAR TO THE WALL, STUDS SHALL HAVE FULL BEARING ON
  - PLATE OR SILL NOT LESS THAN 2" IN THICKNESS HAVING A WIDTH NOT LESS THAN THAT OF THE STUD WALLS (CBC 2308.5.3.1 & CRC R602.3.4) 6.50 WOOD STUD WALLS SHALL BE CAPPED WITH A DOUBLE TOP PLATE INSTALLED TO PROVIDE OVERLAPPING AT CORNERS & AT NTERSECTIONS WITH OTHER PARTITIONS. END JOINTS IN DOUBLE TOP PLATES SHALL BE OFFSET AT LEAST 48". JOINTS IN
  - PLATES NEED NOT OCCUR OVER STUDS. PLATES SHALL BE MINIMUM NOMINAL 2" THICK & HAVE WIDTH AT LEAST EQUAL TO WIDTH OF STUDS. (CBC 2308.5.3.2 & CRC R602.3.2) 6.51 TOP PLATE SPLICES SHALL BE LAPPED A MINIMUM OF 4-0" & FACE NAILED WITH MINIMUM 20-16d AT EACH SIDE OF THE SPLICE VITH NO MORE THAN 12" BETWEEN NAILS (CBC SECTION 2308.9.1 & CRC R602.10.8.1). NEW TO EXISTING DTP USE ST6236 STRA
  - 6.52 PROVIDE 1/2" MINIMUM CLEARANCE BETWEEN TOP PLATE OF INTERIOR NON-BEARING PARTITIONS & THE BASE OF CEILING JOISTS, RAFTERS & TRUSS BOTTOM CHORDS. (CBC 2308.5.4 & CRC 602.5) 6.53 WHEN PIPING OR DUCTWORK IS PLACED IN OR PARTLY IN AN EXTERIOR WALL OR INTERIOR LOAD-BEARING WALL
  - NECESSITATING CUTTING, DRILLING, OR NOTCHING OF THE TOP PLATE BY MORE THAN 50% OF ITS WIDTH, A GALVANIZED METAL TIE NOT LESS THAN 0.054" THICK & 1-1/2" WIDE SHALL BE FASTENED ACROSS AND TO THE PLATE AT EACH SIDE OF THE PENING WITH NOT LESS THAN 8-10d NAILS HAVING A MINIMUM LENGTH OF 1-1/2" AT EACH SIDE OR EQUIVALENT. THE METAL TIE MUST EXTEND MINIMUM 6 INCHES PAST THE OPENING. (CBC 2308.5.3.2 & CRC R602.6.1) ANY STUD IN AN EXTERIOR WALL OR BEARING PARTITION MAY BE CUT OR NOTCHED TO A DEPTH NOT EXCEEDING 25% OF ITS
  - WIDTH. STUDS IN NONBEARING PARTITIONS MAY BE NOTCHED TO A DEPTH NOT TO EXCEED 40% OF A SINGLE STUD WIDTH. NY STUD MAY BE BORED OR DRILLED, PROVIDED THE DIAMETER OF THE RESULTING HOLE IS NO MORE THAN 60% OF THE STUD WIDTH. THE EDGE OF THE HOLE IS NO MORE THAN 5/8 INCH TO THE EDGE OF THE STUD. AND THE HOLE IS NOT LOCATED N THE SAME SECTION AS A CUT OR NOTCH. STUDS LOCATED IN EXTERIOR WALL OR BEARING PARTITIONS DRILLED OVER 40% & UP TO 60% SHALL ALSO BE DOUBLED WITH NO MORE THAN TWO SUCCESSIVE STUDS BORED. (CBC 2308.5.9&10 & CRC R602.6) 6.55 HEADERS. DOUBLE JOISTS. OR TRUSSES OF ADEQUATE SIZE TO TRANSFER LOADS TO VERTICAL MEMBERS SHALL BE VIDED OVER WINDOW AND DOOR OPENINGS IN LOAD-BEARING WALLS AND PARTITIONS. (CBC 2304.3.2)

NON-BEARING WALLS

HEADER SIZE

OPENING WIDTH

4' OR LESS

4' TO 7'

7' TO 10'

- 6.56 EACH END OF HEADERS SHALL HAVE A BEARING LENGTH OF NOT LESS 1-1/2" FOR THE FULL WIDTH OF THE HEADER (CBC 2308.5.5 & CRC R602.7
- 6.57 STANDARD HEADERS SIZES, UON: BEARING WALLS
- OPENING WIDTH HEADER SIZE 3' OR LESS 4x6
- 3' TO 6'
- 6' TO 8' 4x10 6.58 ALL BEAMS SHALL BE SUPPORTED BY POSTS OR GIRDERS. FOR 4x8 & SMALLER BEAMS A MINIMUM 2-2x4 DF #2 POST SHALL BE
- SED, UON. FOR 4x10 & LARGER BEAMS A MINIMUM 4x4 DF #1 POST SHALL BE USED, UON. EACH POST SHALL PROVIDE FULL BEARING WIDTH FOR THE BEAM IT SUPPORTS, UON. 6.59 ALL POSTS SHALL BE CONTINUED BETWEEN FLOORS WITH SOLID FULL WIDTH BLOCKING AND A POST OF FOLIAL OR GREATER
- IZE BELOW, UNTIL A BEAM OR FOUNDATION IS ENCOUNTERED. ALL POSTS INSIDE WALLS MAY BEAR ON THE SOLE OR SILL PLATE, UON. ISOLATED POSTS SHALL BE SEATED IN A POST OR COLUMN BASE, UON. 6.60 ALL STUD WALLS 8' AND OVER IN HEIGHT SHALL HAVE 2x SOLID, STAGGERED BRIDGING AT MID-HEIGHT (CBC 2308.5.7).

R602.10, CRC R602.10.2, CRC R602.10.4, AND/OR CRC R602.10.5.

6.61 FOUNDATION CRIPPLE WALLS SHALL BE FRAMED OF STUDS NOT LESS IN SIZE THAN THE STUDDING ABOVE. CRIPPLE WALLS MORE THAN 4' IN HEIGHT SHALL HAVE STUDS SIZED AS REQUIRED FOR AN ADDITIONAL STORY, CRIPPLE WALLS WITH STUD HEIGHT LESS THAN 14" SHALL BE SHEATHED ON AT LEAST ONE SIDE WITH A WOOD STRUCTURAL PANEL FASTENED TO BOTH

6.69 CRIPPLE WALLS SHALL BE BRACED PER CRC R602.10.11

PROVISIONS OF CRC R602.10.1.3

REQUIRED AT THE 3x LUMBER,

UST PRIOR TO WALL FRAMING COVE

R602.10.2.2.

THE TOP AND BOTTOM PLATES IN ACCORDANCE WITH TABLE R602.3(1), OR THE CRIPPLE WALLS SHALL BE CONSTRUCTED OF SOLID BLOCKING. CRIPPLE WALLS SHALL BE SUPPORTED ON CONTINUOUS FOUNDATIONS. (CRC R602.9) SHEAR PANELS 6.62 BUILDINGS WALLS SHALL BE BRACED IN ACCORDANCE WITH THE METHODS ALLOWED PER CBC & CRC. (CBC 2308.6 & CRC

6 65 SHEAR WALLS SHALL BE LOCATED NOT MORE THAN 25 FEET ON CENTER. (CRC R602, 10.2.2)

6.68 SHEAR WALLS SHALL MEET MINIMUM LENGTH REQUIREMENTS OF CRC R602.10.6.5.1.

6.63 BRACED WALL LINE SPACING. SPACING BETWEEN BRACED WALL LINES SHALL NOT EXCEED 20 FEET OR ALTERNATE

R602.10.1.3(1) FOR WIND LOADS AND CRC TABLE R602.10.1.3(2) FOR SEISMIC LOADS. (CRC R602.10.1.1)

6.64 THE CUMULATIVE LENGTH OF SHEAR WALLS WITHIN EACH BRACED WALL LINE SHALL MEET THE PROVISIONS OF CRC TABLE

MORE THAN 8' FROM ANY OTHER OFFSET WALL CONSIDERED PART OF THE SAME BRACED WALL LINE. (CRC R602.10.1.2)

6.67 SHEAR WALLS SHALL BE LOCATED AT THE ENDS OF EACH BRACED WALL LINE OR MEET THE ALTERNATE PROVISIONS OF CRC

6.70 ALL SHEAR WALLS, ROOF DIAPHRAGMS, AND FLOOR DIAPHRAGMS SHALL BE NAILED, WITH COMMON OR GALVANIZED NAILS, TO

6.71 ALL VERTICAL JOINTS IN SHEAR WALL SHEATHING SHALL OCCUR OVER, AND BE FASTENED TO, COMMON STUDS, HORIZONTAL

6.72 ALL SHEAR WALLS WITH AN ALLOWABLE SHEAR CAPACITY GREATER THAN 350 PLF REQUIRE 3X LUMBER AT THE SILL PLATE

6.73 4x4 POST MINIMUM AT HOLD DOWNS AT THE ENDS OF SHEAR WALLS AND HOLD DOWN CONNECTORS SHALL BE TIGHTENED

6.74 PROVIDE SIMPSON CO ST6236 STRAP HORIZONTAL @ ALL SHEAR WALL DRAG LINES BREAKS & DIAPHRAGM EDGE NAILING, OAE.

6.75 AT FLOOR FRAMING SHEAR WALL PANEL WILL RUN UP TO DTP WITH EDGE NAIL & METAL ANCHOR PER SHEAR WALL SCHEDULE

JOINTS IN SHEAR WALLS SHALL OCCUR OVER, AND BE FASTENED TO, MINIMUM 1-1/2-INCH-THICK BLOCKING. (CRC R602.10.10)

AND ADJACENT PANEL EDGES. A MINIMUM OF 1/2" EDGE DISTANCE FROM THE PANEL EDGE TO THE CENTER OF THE NAIL IS

6.66 SHEAR WALLS MAY BE OFFSET OUT-OF-PLAN NOT MORE THAN 4' FROM THE DESIGNATED BRACED WALL LINE AND NOT

SUPPORTING CONSTRUCTION PER THE SHEAR PANEL SCHEDULE AND CRC TABLE R602.3(1). (CRC R604.3)

6.76	RAFTERS OR ROOF TRUSSES SHALL BE CONNECTED TO DTP OF SHEAR WALLS WITH BLOCKING BETWEEN THE RAFTERS OR TRUSSES & SHEAR PANEL WILL RUN UP TO DTP WITH EDGE NAIL & METAL ANCHOR PER SHEAR WALL SCHEDULE. (CRC R602.10.8)
CON	VENTIONAL ROOF FRAMING
6.77	ROOF AND CEILING FRAMING SHALL BE IN ACCORDANCE WITH CBC §2308.7 & CRC CHAPTER 8.
6.78	SPAN LIMITATIONS FOR CEILING JOISTS SHALL BE IN ACCORDANCE WITH CBC TABLE 2308.7.1(1), 2308.7.1(2), CRC TABLES R802.5.2(1)&(2) AND MUNICIPAL JURISDICTION TABLES.

STANDARDS

STANDARDS

6.79 SPAN LIMITATIONS FOR CEILING JOISTS SHALL BE IN ACCORDANCE WITH CBC TABLE 2308.7.2(1), 2308.7.2(2), 2308.7.2(3), 2308.7.2(4), 2308.7.2(5), 2308.7.2(6), CRC TABLES R802.4.1(1)-(8) AND MUNICIPAL JURISDICTION TABLES. 6.80 WHEN THE ROOF SLOPE IS LESS THAN 3/12, MEMBERS SUPPORTING RAFTERS & CEILING JOISTS SUCH AS RIDGES, HIPS AND

DRILLING, CUTTING, AND NOTCHING OF ROOF/FLOOR FRAMING. NOTCHES IN SOLID LUMBER JOISTS, RAFTERS, BLOCKING, & BEAMS SHALL NOT EXCEED 1/6 THE MEMBER DEPTH SHALL BE NOT LONGER THAN 1/3 THE MEMBER DEPTH AND SHALL NOT BE

ATED IN THE MIDDLE 1/3 THIRD OF THE SPAN. NOTCHES AT MEMBER ENDS SHALL NOT EXCEED 1/4 THE MEMBER DEPTH. THE TENSION SIDE OF MEMBERS 4" OR GREATER IN NOMINAL THICKNESS SHALL NOT BE NOTCHED EXCEPT AT MEMBER ENDS HE Ø OF HOLES BORED OR CUT INTO MEMBERS SHALL NOT EXCEED1/3 THE MEMBER DEPTH. HOLES SHALL NOT BE CLOSE THAN 2" TO THE TOP OR BOTTOM OF THE MEMBER OR TO ANY OTHER HOLE LOCATED IN THE MEMBER. WHERE THE MEMBER IS ALSO NOTCHED, THE HOLE SHALL NOT BE CLOSER THAN 2" TO THE NOTCH. (CBC 2308.7.4 & CRC R502.8.1 6.82 CEILING JOISTS AND RAFTERS SHALL BE NAILED TO EACH OTHER PER CRC TABLE R802.5.1(9), AND THE RAFTER SHALL BE NAILED TO THE WALL TOP PLATE PER CRC TABLE R602.3(1). CEILING JOISTS SHALL BE CONTINUOUS OR SECURELY JOINED PER CRC TABLE R802.5.1(9) WHERE THEY MEET OVER INTERIOR PARTITIONS AND ARE NAILED TO ADJACENT RAFTERS TO PROVIDE A CONTINUOUS TIE ACROSS THE BUILDING WHEN SUCH JOISTS ARE PARALLEL TO RAFTERS. WHERE CEILING JOISTS ARE NOT CONNECTED TO THE RAFTERS AT THE WALL TOP PLATE, JOISTS CONNECTED HIGHER IN THE ATTIC SHALL BE

INSTALLED AS RAFTER TIES, OR RAFTER TIES SHALL BE INSTALLED TO PROVIDE A CONTINUOUS TIE. WHERE CEILING JOISTS ARE NOT PARALLEL TO RAFTERS, RAFTER TIES SHALL BE INSTALLED. RAFTER TIES SHALL BE MINIMUM 2"x4" NOMINAL, INSTALLED PER CRC TABLE R802.5.1(9), OR CONNECTIONS OF EQUIVALENT CAPACITIES SHALL BE PROVIDED. WHERE CEILINGS JOISTS OR RAFTER TIES ARE NOT PROVIDED, THE RIDGE FORMED BY THESE RAFTERS SHALL BE SUPPORTED BY A WALL OR 6.83 ENDS OF CEILING JOISTS SHALL BE LAPPED MINIMUM 3" OR BUTTED OVER BEARING PARTITIONS OR BEAMS AND TOENAILED TO HE BEARING ELEMENT. WHERE CEILING JOISTS PROVIDE RESISTANCE TO RAFTER THRUST, LAPPED JOISTS SHALL BE NAILED FOGETHER PER CRC TABLE R602.3(1) AND BUTTED JOISTS SHALL BE TIED TOGETHER IN A MANNER TO RESIST SUCH THRUST

RIDGES, HIPS, AND VALLEYS. RAFTERS SHALL BE FRAMED TO A RIDGE BOARD OR TO EACH OTHER WITH A GUSSET PLATE AS A FIE, RIDGE BOARDS SHALL BE MINIMUM 1" NOMINAL THICKNESS AND NOT LESS IN DEPTH THAN THE CUT END OF TH AT ALL VALLEY AND HIPS, THERE SHALL BE A VALLEY OR HIP RAFTER NOT LESS THAN 2" NOMINAL THICKNESS & NO DEPTH THAN THE CUT END OF THE RAFTER. HIP AND VALLEY RAFTERS SHALL BE SUPPORTED AT THE RIDGE BY A BRA EARING PARTITION OR BE DESIGNED TO CARRY AND DISTRIBUTE THE SPECIFIC LOAD AT THAT POINT. (CRC R802.3) 6.85 COLLAR TIES OR RIDGE STRAPS TO RESIST WIND UPLIFT SHALL BE CONNECTED IN THE UPPER THIRD OF THE ATTIC SPACE OLLAR TIES SHALL BE A MINIMUM 1"x4" NOMINAL AND SPACED AT MAXIMUM 4' OC. (CRC R802.3.1

6.86 PURLINS INSTALLED TO REDUCE THE SPAN OF RAFTERS SHALL BE SIZED NOT LESS THAN THE REQUIRED SIZE OF THE RAFTERS THEY SUPPORT. PURLINS SHALL BE CONTINUOUS AND SHALL BE SUPPORTED BY 2 X4 NOMINAL BRACES INSTALLED O BEARING WALLS AT A MINIMUM 45° SLOPE FROM HORIZONTAL. THE BRACES SHALL BE STALED MAXIMUM 4' OC WITH A 6.87 THE ENDS OF FACH RAFTER OR CEILING JOIST SHALL HAVE NOT LESS THAN 1-1/2" BEARING ON WOOD OR METAL AND NOT

6.88 ROOF FRAMING MEMBERS AND CEILING JOISTS WITH A NOMINAL DEPTH-TO-THE VIESS RATE EXCEEDING 5:1 SHALL BE PROVIDED WITH LATERAL SUPPORT AT POINTS OF BEARING TO PREVENT ROTATION (CRC F 6.89 RAFTERS AND CEILING JOISTS WITH A NOMINAL DEPTH-TO-THICKNESS RATIO EXCEEDING 6:1 SHALL DE SUPPORTED

6.90 OPENINGS IN ROOF AND CEILING FRAMING SHALL BE FRAMING AND THE ADD TRIMINE JOISTS. WHEN THE HEADER JOIST SPAN DOES NOT EXCEED 4', THE HEADER JOIST Y BE A SINCE MEMICAL STRUCTURE STATES AND TRIMINE JOISTS. WHEN THE HEADER JOIST OR RAFTER. SINCLE TRIMMER JOISTS MAY BE USED JOIST OF CARRY A SINCE HEADER. JOIST SHALL BE DOUBLED AND OF SUFFICIENT CROSS SECTION TO PORT THE CEILING JOIST SHALL BE DOUBLED AND OF SUFFICIENT CROSS SECTION TO PORT THE CEILING JOIST SOR RAFTERS FRAMING ANCHORS OR ON LEDGER STRUFS MAIL JOISTS OVEP TO RESULT TO TRIMMER JOISTS AND RESTRICT OF THE HEADER. APPROVED HANGERS SHALL BE USED FOR THE DERIVISION OF SUFFICIENT CROSS SECTION TO PORT THE CEILING JOIST SOR RAFTERS FRAMING ANCHORS OR ON LEDGER STRUFS MINIMUM 2'x2''. (CRC 6 10)

DE ALC'LATIONS AND SHOP DRAWING OF ALL ROOF TRUSSES. ROOF TRUSSES SHALL S, ERIOR TO TRUSS FABRICATION THE CALCULATIONS AND SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND MUNICIPAL JURISDICTION FOR APPROVAL (CBC 2303.4.1 & CRC R802.10.1). 6.92 EACH TRUSS SHALL BE LEGIBLY BRANDED MARKED OR OTHER US 2 HAVE PERMANENTLY AFFIXED THERETO THE FOLLOWING INFORMATION LOCATED WITHIN 2' OF THE CENTER OF THE SPAN ON THE FACE OF THE BOTTOM CHORD; THE IDENTITY OF THE COMPANY MANUFACTURING THE TRUSS, THE DESIGN LOCAD OF THE TRUSS & THE REQUIRED SPACING OF THE TRUSSES. (CBC

HEN LATERAL BRACING OF WEB MEMBERS IN TRUSSES IS REQUIRED THE LATERAL BRACE SHALL END ON AN EXTERIOR

MUM 2" NOMINAL BLOCK REQUIRED BETWEEN TRUSSES AT RIDGE LINES & AT POINTS OF BEARING AT EXTERIOR WALLS INCH CLEARANCE REQUIRED BETWEEN TOP PLATES OF INTERIOR NON-BEARING PARTITIONS AND BOTTOM

USSES SHALL BE CONNECTED TO SHEAR WALL TOP PLATES WITH BLOCKING BETWEEN THE TRUSSES. (CRC R602.10.8) SPAN DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO ORDERING AND PURCHASING OF TRUSSES.

EFABRIC, TED WOOD I-JOISTS & I-RAFTERS SHALL BE IN ACCORDANCE WITH CBC 2303.1.2, ASTM D5055 & ICC ESR-1153, OAE. 6.99 LPSL & LVLENGINEERED FRAMING LUMBER SHOWN ON THE PLANS TO BE 2.2E PARALLAM (E=2200 KSI) & 1.9E MICROLAM SLUED-LAMINATED WOOD TIMBERS SHALL BE IN ACCORDANCE WITH CBC 2303.1.3, NSI/AITC A 190.1 AND ASTM D3737.

GLUED-LAMINATED TIMBERS SHALL BE INDUSTRIAL APPEARANCE GRADE, USING EXTERIOR GLUE, COMBINATION SYMBOL 24F-V4 FOR SIMPLE SPANS & 24F-V8 FOR CONTINUOUS SPAN OR CANTILEVERED MEMBERS, UON, GLUED-LAMINATED TIMBERS SHALL BE STAMPED WITH A QUALITY MARK INDICATING CONFORMANCE WITH AITC SPECIFICATIONS. MOISTURE CONTENT 2 WHERE GLUED-LAMINATED TIMBERS ARE EXPOSED TO WEATHER, FABRICATION AND ADHESIVES SHALL BE SUITABLE FOR WET SE COMPLYING WITH CBC 2303.1.3.1. GLUED-LAMINATED TIMBERS SHALL BE ALASKAN CEDAR ARCHITECTURAL GRADE,

6.103 ALL GLUED-LAMINATED WOOD TIMBER SPAN DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION. 6.104 GLUED-LAMINATED TIMBERS SHALL BE FABRICATED IN A PLANT WITH AN APPROVED QUALITY CONTROL SYSTEM & AN AITC 6.105 AN AITC CERTIFICATE OF CONFORMANCE FOR GLUED-LAMINATED TIMBERS IS REQUIRED TO BE SUBMITTED TO THE ARCHITECT AND/OR STRUCTURAL ENGINEER AND THE MUNICIPAL JURISDICTION PRIOR TO INSTALLATION. 6.106 GLUED-LAMINATED TIMBERS SHALL HAVE A STANDARD CAMBER, UON, RESIDENTIAL APPLICATIONS SHALL USE A STANDARD BER BASED ON A RADIUS OF 3,500 FEET. COMMERCIAL & INDUSTRIAL APPLICATIONS SHALL USE A STANDARD CAMBEI

6.107 EXTERIOR LANDINGS, DECKS, BALCONIES, & STAIRS ELEMENTS SHALL BE POSITIVELY ANCHORED TO THE PRIMARY STRUCTURE TO RESIST BOTH VERTICAL AND LATERAL FORCES OR SHALL BE DESIGNED TO BE SELF-SUPPORTING ATTACHMENT SHALL NOT BE ACCOMPLISHED BY USE OF TOENAILS OR NAILS SUBJECT TO WITHDRAWAL. (CRC R311.3)

ALL ROOF COVERING SHALL BE INSTALLED PER APPLICABLE REQUIREMENTS OF CBC 1507, ROOF COVERINGS SHALL BE MINIMUM CLASS A RATED IN ACCORDANCE WITH ASTM E 108 OR UL 790, WHICH SHALL INCLUDE COVERINGS OF SLATE, CLAY OR CONCRETE ROOF TILE, EXPOSED CONCRETE ROOF DECK, FERROUS OR COPPER SHINGLES OR SHEETS ROOFING MATERIAL & ITS APPLICATION SHALL BE PER MANUFACTURER'S SPECIFICATIONS, MATERIAL ICC ESR REPORT, &

FLASHING SHALL BE INSTALLED AT WALL & ROOF INTERSECTIONS, AT GUTTERS, WHEREVER THERE IS A CHANGE IN ROOF SLOPE OR DIRECTION, & AROUND ROOF OPENINGS. WHERE FLASHING IS OF METAL, THE METAL SHALL BE CORROSION-SISTANT WITH A THICKNESS OF NOT LESS THAN 0.019" (26 GALVANIZED SHEET). (CRC R903.2.1) A CRICKET OR SADDLE SHALL BE INSTALLED ON THE RIDGE SIDE OF ANY CHIMNEY OR PENETRATION MORE THAN 30 INCHES

7.5 BATT, RIGID & OTHER INSULATION TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS & APPLICABLE CODES (CBC 720

DOOR & WINDOW SIZES AND OPERATION SHALL BE AS SHOWN IN THE PLANS AND SCHEDULES. 8.2 ALL DOORS & WINDOWS SHALL BE PROVIDED WITH HARDWARE FOR PROPER OPERATION. 8.3 ALL MANUFACTURED DOORS & WINDOWS MUST MEET ANSI AIR INFILTRATION STANDARDS. 8.4 PROVIDE WEATHERSTRIPPING AROUND ALL EXTERIOR DOORS & WINDOWS AS REQUIRED FOR A WEATHER RESISTIVE BARRIER. 8.5 NEW GLAZING SHALL BE INSTALLED WITH A U-VALUE & SHGC CERTIFICATE ATTACHED SHOWING COMPLIANCE WITH ENERGY

8.6 THE DOOR BETWEEN GARAGE & DWELLING SHALL BE A TIGHT FITTING SOLID WOOD DOOR 1- 3/8" IN THICKNESS WITH PROVIDE SAFETY TEMPERED GLAZING IN ALL DOORS & AS REQUIRED FOR HAZARDOUS LOCATIONS IN CBC §2406. 8.8 EXTERIOR OPENINGS EXPOSED TO WEATHER SHALL BE FLASHED IN A MANNER AS TO MAKE THEM WATERPROOF (CBC 1405.3). 8.9 PROVIDE SKYLIGHTS IN THE SIZES INDICATED ON THE PLANS. INSTALL SKYLIGHTS PER MANUFACTURER'S SPECIFICATIONS & APPLICABLE CODES. SKYLIGHTS SHALL HAVE AN APPROVED TESTING AGENCY REPORT. (CBC \$2405).

EXTERIOR WALL COVERINGS SHALL BE DESIGNED & CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF A MINIMUM 0.019" (# 26 GALVANIZED SHEET GAUGE), CORROSION-RESISTANT WEEP SCREED OR PLASTIC WEEP SCREED WITH A MINIMUM VERTICAL ATTACHMENT FLANGE OF 3-1/2" SHALL BE PROVIDED AT OR BELOW THE FOUNDATION PLATE LINE ON EXTERIOR STUD WALLS IN ACCORDANCE WITH ASTM C 92. THE WEEP SCREED SHALL BE PLACED A MINIMUM 4 INCHES

BOVE THE EARTH OR 2 INCHES ABOVE PAVED AREAS & SHALL BE OF A TYPE ALLOWING TRAPPED WATER TO DRAIN TO THE FLASHING SHALL BE INSTALLED IN SUCH A MANNER SO AS TO PREVENT MOISTURE FROM ENTERING THE WALL OR TO REDIRECT THAT MOISTURE TO THE EXTERIOR. FLASHING SHALL BE INSTALLED AT THE PERIMETERS OF EXTERIOR DOOR AND WINDOW ASSEMBLIES, PENETRATIONS AND TERMINATIONS OF EXTERIOR WALL ASSEMBLIES, EXTERIOR WALL INTERSECTIONS

WITH ROOFS, CHIMNEYS, PORCHES, DECKS, BALCONIES AND SIMILAR PROJECTIONS AND AT BUILT-IN GUTTERS AND SIMILAR LOCATIONS WHERE MOISTURE COULD ENTER THE WALL, FLASHING WITH PROJECTING FLANGES SHALL BE INSTALLED ON BOTH SIDES AND THE ENDS OF COPINGS, UNDER SILLS AND CONTINUOUSLY ABOVE PROJECTING TRIM. WHERE SELF-ADHERED MEMBRANES ARE USED AS FLASHINGS OF FENESTRATION IN WALL ASSEMBLIES, THOSE SELF-ADHERED FLASHINGS SHALI COMPLY WITH AAMA 711. WHERE FLUID APPLIED MEMBRANES ARE USED AS FLASHING FOR EXTERIOR WALL OPENINGS, THOSE FLUID APPLIED MEMBRANE FLASHINGS SHALL COMPLY WITH AAMA 714. (CBC 1404.4 & CRC R703.4)

A MINIMUM OF ONE LAYER OF NO. 15 ASPHALT FELT SHALL BE ATTACHED TO STUDS OR SHEATHING OF ALL EXTERIOR WALLS. SUCH FELT OR MATERIAL SHALL BE APPLIED HORIZONTALLY, WITH THE UPPER LAYER LAPPED OVER THE LOWER LAYER MINIMUM 2 INCHES. WHERE JOINTS OCCUR, FELT SHALL BE LAPPED MINIMUM 6". THE FELT SHALL BE CONTINUOUS TO HE TOP OF WALLS AND TERMINATED AT PENETRATIONS AND BUILDING APPENDAGES IN A MANNER TO MAINTAIN A

WHEN CEMENT PLASTER IS INSTALLED OVER SOLID WOOD SHEATHING INSTALL 2 LAYERS GRADE D BUILDING PAPER OVER 9.6 INTERIOR WALL COVERINGS SHALL BE DESIGNED & CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF

9.7 USE 1/2" GYPSUM BOARD AT ALL INTERIOR WALLS & CEILINGS. USE 5/8" GYPSUM BOARD WHERE STUDS, JOISTS OR RAFTERS 9.8 USE 5/8" TYPE X GYPSUM BOARD AT ALL GARAGE SURFACES COMMON TO THE RESIDENCE, FROM FLOOR TO ROOF SHEATHING 9.8 GYPSUM BOARD ATTACHMENT SHALL BE 6d COOLER OR WALLBOARD NAIL; 1-5/8" LONG; 0.086" RING SHANK; 15/64" HEAD @ 7'

OC OR #6 TYPE S OR W 1-1/4" LONG GYPSUM BOARD SCREWS @ 7" OC @ ALL STUDS, JOISTS, RAFTERS & PLATES. OF APPROVED EQUAL AS SHOWN IN CRC TABLE R702.3.5 (CBC TABLE 2508.6 & 2508.6.4; CRC TABLE R702.3.5 & CRC TABLE R702.3.6) 9.9 ALL SURFACES SHALL BE PAINTED WITH A CLASS III FLAME SPREAD MATERIAL, WITH 1 PRIMER COAT AND 2 FINISH COATS, EXCEPT FLAME SPREAD PROVISIONS ARE NOT APPLICABLE IN KITCHEN AND BATHROOMS (CBC 803.1). SHOWER & TUB/SHOWER COMBINATIONS WALLS MUST BE FINISHED TO A HEIGHT OF 72" ABOVE THE DRAIN INLET WITH A

JSE AN APPROVED BASE MATERIAL AT BATHTUB & SHOWER WALLS AND USE ASPHALTIC MEMBRANE MATERIAL AT SHOWER FLOORS & UP WALLS TO PROVIDE A WATERPROOF UNDERLAYMENT (CBC SECTION 1209.2). 9.12 PAINTED OR STAINED WOOD BASE BOARD SHALL BE PROVIDED AT THE BASE OF ALL INTERIOR WALLS EXCEPT WHERE MOISTURE RESISTANCE IS REQUIRED. PAINTED OR STAINED WOOD CASING SHOULD BE PROVIDED AT ALL INTERIOR OPENINGS AND AT THE INTERIOR SIDE OF EXTERIOR OPENINGS. THIS MAY BE SUPERCEDED IF SPECIFIC DETAILS ARE PROVIDED ON THE

10.1 CONSTRUCTION OF MASONRY FIREPLACES AND/OR CHIMNEYS, CONSISTING OF CONCRETE OR MASONRY, SHALL BE IN ACCORDANCE WITH CBC §2111 & CBC §2113 (CBC 2111.1 & 21113.1) AND CRC §R1001 & CRC §1003 (CRC R1001.1 & CRC R1003.1) 10.2 FACTORY-BUILT ELECTRIC FIREPLACES SHALL BE LISTED & LABELED AND SHALL BE INSTALLED IN ACCORDANCE WITH THE

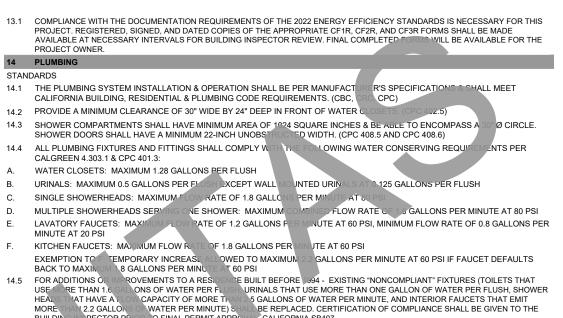
10.3 CHIMNEY CLEARANCE OF MINIMUM 2-FOOT REQUIRED ABOVE BUILDING WITHIN 10-FOOT HORIZONTALLY OF CHIMNEY THE CHIMNEY SHALL EXTEND MINIMUM 3 FEET ABOVE HIGHEST POINT WHERE CHIMNEY PASSES THROUGH ROOF. (CRC R1003.9) 10.4 DECORATIVE SHROUDS SHALL NOT BE INSTALLED AT THE TERMINATION OF CHIMNEYS, WITH CODE APPROVED SPARK ARRESTORS, FOR FACTORY-BUILT FIREPLACES EXCEPT WHERE THE SHROUDS ARE LISTED AND LABELED FOR USE WITH THE SPECIFIC FACTORY-BUILT FIREPLACE SYSTEM AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS

10.7 EACH BATHROOM SHALL HAVE A MINIMUM OF 1 TOWEL BAR, ROBE HOOK AND BATH TISSUE HOLDER.

10.8 EACH CLOSET SHALL HAVE A SHELF AND POLE AS SHOWN IN THE PLANS, DOUBLE SHELF AND POLE AT WALK IN CLOSETS, TYP, ALL ELECTRIC APPLIANCES SHALL COMPLY WITH THE CURRENT CEC TITLE 20, DIVISION 2, CHAPTER 4, ARTICLE 4, SECTIONS 1601-1609, APPLIANCE EFFICIENCY STANDARDS. APPLIANCES MUST HAVE THE CALIFORNIA ENERGY COMMISSION SEAL

SEE T24 DOCUMENTATION SHEETS AND CALCULATIONS FOR MORE INFORMATION ON WATER HEATING, SPACE HEATING, AND ISTALL KITCHEN, BATH & OTHER CABINETS AS SHOWN ON THE DRAWINGS. CABINET TYPE, FINISH & DESIGN TO BE AS SHOWN

12.2 INSTALL KITCHEN, BATH & OTHER CABINET COUNTERTOPS & SPLASHES AS SHOWN ON THE DRAWINGS. COUNTERTOP & SPLASH TYPE, FINISH & DESIGN TO BE AS SHOWN ON THE DRAWINGS OR AS SELECTED BY THE PROJECT OWNER



14.6 ALL HOT VIATER PIPING SIZED 4" OR LARGER IS REQUIRED TO BE INSULATED AS FOLLOWS: 1" PIPE SIZE OR LESS: 1" THICK INSULATION LAPGER PIPE SIZES REQUIRE 11/2" THICK INSULATION. NOTE: IN ADDITION, THE 1/2" SIZE HOT WATER PIPE TO THE S REQUIRED TO BE INSULATED. (CPC 609.11 & CEC 120.3) JBS AND WHIRLPOOL BATHS SHALL BE PROVIDED WITH A TRAP DOOR OR ACCESS WITHIN 20 FEET OF THE PUMP. (CPC

A MINIMUM OF TWO 3/4 B 24 GAUGE STRAPS ARE REQUIRED AROUND TANK WATER HEATERS, WITH 1/4" BY 3" LAG BOLTS CHED DIRECTLY 10 FRAMING. STRAPS SHALL BE AT POINTS WITHIN UPPER 1/3 & LOWER 1/3 THIRD OF THE WATEF ATER VERTICAL DIMENSION. LOWER CONNECTION SHALL OCCUR A MINIMUM OF 4" ABOVE CONTROLS. (CPC 507.2) VIDE IMPACT PROTECTION OF APPLIANCES IN GARAGES, WATER HEATERS & HEATING/COOLING EQUIPMENT SUBJECT TO JLAR IMPACT SHALL BE PROTECTED BY BOLLARDS OR AN EQUIVALENT MEASURE. (CPC 507.13.1 & CMC 305.11) PROVIDE RAISED PLATFORM FOR APPLIANCES IN GARAGES. WATER HEATERS AND HEATING/COOLING EQUIPMENT CAPABLE OF IGNITING FLAMMABLE VAPORS SHALL BE PLACED ON A MINIMUM 18" HIGH PLATFORM UNLESS LISTING REPORT NUMBER PROVIDED SHOWING IGNITION RESISTANT APPLIANCE. (CBC 406.2.9.1, CPC 507.13 & CMC 305.1) IN SHOWERS, TUB-SHOWER COMBINATIONS, BATHTUBS & WHIRLPOOL BATHTUBS, CONTROL VALVES MUST BE PRESSURE BALANCED OR THERMOSTATIC MIXING VALVES (CPC SECTION 408.3). 14. 12 ALL HOSE BIBBS & LANDSCAPE IRRIGATION SYSTEMS SHALL HAVE APPROVED BACKFLOW PREVENTION DEVICES. (CPC 603.3) 15 MECHANICAL AND VENTILATION

O FINAL PERMIT APPRO L. CALIFORNIA SB407.

15.1 ALL BATHROOMS LAUNDRY ROOMS & SIMILAR ROOMS SHALL BE PROVIDED WITH NATURAL VENTILATION OR A MECHANICA VENTILATION SYSTEM CAPABLE OF PROVIDING 5 AIR CHANGES PER HOUR. ALL SUCH ENERGY STAR COMPLIANT FAN SYSTEMS EXHAUSTING AIR FROM THE BUILDING ENVELOPE TO THE OUTSIDE SHALL BE PROVIDED WITH BACKDRAFT DAMPERS INSTALLED TO PREVENT AIR LEAKAGE (CBC 1202.5.2.1 & CMC 402.5 CALGREEN 4.506) 15.2 CLOTHES DRYER SHALL BE VENTED OUTSIDE THE BUILDING ENVELOPE. USE 4"Ø SHEET METAL PIPE MINIMUM WITH A

- MAXIMUM PIPE LENGTH OF 14'- 0" WITH TWO 90 DEGREE ELBOWS (CMC SECTION 504.4) 15.3 THE DISCHARGE POINT FOR EXHAUST AIR WILL BE AT LEAST 3 FEET FROM ANY OPENING WHICH ALLOWS AIR ENTRY INTO OCCUPIED PORTIONS OF THE BUILDING, (CMC 502.2.2)
- 15.4 ATTIC VENTING AREA SHALL BE NOT LESS 1/150 OF THE AREA OF THE SPACE VENTILATED, EXCEPT THAT THE AREA MAY BE 1/300 PROVIDED AT LEAST 50% OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTS LOCATED IN THE UPPER PORTION OF THE SPACE TO BE VENTILATED AT LEAST 3' ABOVE EAVE & CORNICE VENTS WITH THE BALANCE OF THE REQUIRED VENTING PROVIDED BY EAVE & CORNICE VENTS (CBC SECTION 1202.2.1). 15.5 VENT OPENINGS SHALL BE COVERED WITH CORROSION-RESISTANCE METAL MESH WITH OPENINGS 1/8" IN DIMENSION MAXIMUM. (CBC SECTION 1202.2.2)
- PASSAGEWAY TO THE MECHANICAL EQUIPMENT IN ATTIC OR UNDER FLOOR SHALL BE UNOBSTRUCTED & HAVE CONTINUOUS SOLID FLOORING NOT LESS THAN 24" WIDE, NOT MORE THAN 20' IN LENGTH THROUGH THE SPACE TO A 30" SQUARE WORK PLATFORM WITH A LIGHT FIXTURE AND OUTLET. (CMC 304.4) MECHANICAL VENTILATION AND INDOOR AIR QUALITY (ASHRAE 62.2-2010)
- 15.7 VENTILATION AIR SHALL BE PROVIDED DIRECTLY FROM THE OUTDOORS AND NOT AS TRANSFER AIR FROM ADJACENT DWELLING UNITS OR OTHER SPACES, SUCH AS GARAGES, UNCONDITIONED CRAWLSPACES, OR UNCONDITIONED ATTICS.
- (CBEES 150.0(O)) 15.8 VENTILATION SYSTEM CONTROLS SHALL BE LABELED AND THE HOME OWNER SHALL BE PROVIDED WITH INSTRUCTIONS ON HOW TO OPERATE THE SYSTEM. (CBEES 150.0(O)) 15.9 COMBUSTION APPLIANCES SHALL BE PROPERLY VENTED AND AIR SYSTEMS SHALL BE DESIGNED TO PREVENT BACK DRAFTING.
- (CBEES 150.0(O)) 15. 10 THE WALL AND OPENINGS BETWEEN OCCUPIABLE SPACES & THE GARAGE SHALL BE SEALED. HVAC SYSTEMS THAT INCLUDE AIR HANDLERS OR RETURN DUCTS LOCATED IN GARAGES SHALL HAVE TOTAL AIR LEAKAGE OF NO MORE THAN 6% OF TOTAL FAN FLOW WHEN MEASURED AT 0.1 IN. W.C. USING CALIFORNIA TITLE 24 OR EQUIVALENTS. (CBEES 150.0(O)) 15.11 MECHANICAL SYSTEMS SUPPLYING AIR TO OCCUPIABLE SPACE THROUGH DUCTWORK SHALL BE PROVIDED WITH A FILTER HAVING A MINIMUM EFFICIENCY OF MERV 6 OR BETTER. (CBEES 150.0(O))
- 15. 12 AIR MOVING EQUIPMENT USED TO MEET EITHER THE WHOLE-BUILDING VENTILATION REQUIREMENT OR THE LOCAL VENTILATION EXHAUST REQUIREMENT SHALL BE RATED IN TERMS OF AIRFLOW AND SOUND. (CBEES 150.0(O)) A. ALL CONTINUOUSLY OPERATING FANS SHALL BE RATED AT A MAXIMUM OF 1.0 SONE. B. INTERMITTENTLY OPERATED WHOLE-BUILDING VENTILATION FANS SHALL BE RATED AT A MAXIMUM OF 1.0 SONE C. INTERMITTENTLY OPERATED LOCAL EXHAUST FANS SHALL BE RATED AT MAXIMUM OF 3.0 SONE, UNLESS THEIR MAXIMUM RATED AIRFLOW EXCEEDS 400 CFM. D. REMOTELY LOCATED AIR-MOVING EQUIPMENT (MOUNTED OUTSIDE OF HABITABLE SPACES) NEED NOT MEET SOUND REQUIREMENTS IF AT LEAST 4' OF DUCTWORK BETWEEN FAN AND INTAKE GRILL 16 ELECTRICAL
- 16.1 ALL ELECTRICAL INSTALLATION SHALL MEET 2022 CALIFORNIA ELECTRICAL CODE REQUIREMENTS. (CEC) PROVIDE UFER GROUND AT ELECTRIC SERVICE LOCATION IN FOUNDATION. GROUND SHALL BE A 20' LONG #4 REINFORCING BAR, OAE. (CEC 210.50(3) ONE SHOULD BE PROVIDED AT EACH SEPARATE STRUCTURE ON THE PROPE
- POWER 16.3 RECEPTACLE OUTLET LOCATION PER CEC ARTICLE 210 BRANCH CIRCUITS, SECTION 210.52, (CEC 210.52) 16.4 ELECTRICAL CIRCUITS IN BEDROOMS, LIVING ROOMS, DINING ROOMS, DENS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS MUST
- BE PROTECTED BY ARC FAULT CIRCUIT INTERRUPTERS (AFCI). (CEC 210.12) 16.5 GROUND FAULT CIRCUIT INTERRUPTER (GFCI) OUTLETS ARE REQUIRED IN BATHROOMS, AT KITCHEN COUNTERTOPS, AT LAUNDRY AND WET BAR SINKS, IN GARAGES, IN CRAWLSPACES, IN UNFINISHED BASEMENTS, & OUTDOORS. (CEC 210.8)
- 16.6 BATH RECEPTACLE OUTLETS SHALL BE SUPPLIED BY A MINIMUM OF ONE 20 AMP CIRCUIT. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS. THIS CIRCUIT MAY SERVE MULTIPLE BATHS (CEC 210-52) 16.7X TAMPER RESISTANT RECEPTACLES ARE REQUIRED FOR ALL LOCATIONS DESCRIBED IN 210.52 (LE. ALL RECEPTACLES IN A DWELLING). (CEC 406.12)
- 16.8 WEATHER RESISTANT TYPE FOR RECEPTACLES INSTALLED IN DAMP, WET OR EXTERIOR LOCATIONS. (CEC 210-52(E)) 16.9 OUTLETS WILL BE WITHIN 6' OF ANY OPENING & NOT TO EXCEED A SPACING OF 12' A PART. ANY ISOLATED WALL 2' OR WIDE TO HAVE AN OUTLET. (CEC 210.52) **LIGHTIN**
- 16. 10 INSTALLED LUMINAIRES SHALL MEET THE EFFICACY & FIXTURE REQUIREMENTS OF CBEES 150.0(K). 16. 11 ALL LUMINAIRES INSTALLED IN LOW-RISE RESIDENTIAL CONSTRUCTION MUST BE HIGH EFFICACY. PERMANENTLY INSTALLED LUMINAIRES INCLUDE CEILING LUMINAIRES, CHANDELIERS, VANITY LAMPS, WALL SCONCES, UNDER CABINET LUMINAIRES, AND OTHER TYPE OF LUMINAIRE THAT IS ATTACHED TO THE HOUSE. PERMANENTLY INSTALLED LUMINAIRES INCLUDE HARD WIRED OR PLUG-IN LUMINAIRES. (CEC 6.2)
- 16 12 ALL PERMANENTLY INSTALLED LUMINAIRES WITH INTERCHANGEABLE LAMPS MUST CONTAIN LAMPS THAT COMPLY WITH THE REQUIREMENTS OF, AND BE MARKED AS, JA8-2019 HIGH EFFICACY LUMINAIRES. (CEC 6.2.1 & 6.2.2) 16.13 LIGHT SOURCES MUST BE MARKED JA8-2016-F OR JA8-2019-F JE THEY ARE INSTALLED IN ENCLOSED OR RECESSED LUMINAIRES AN ENCLOSED LUMINAIRE IS DEFINED AS HAVING VENTILATION OPENINGS < 3 SQUARE INCHES PER LAMP. (CEC 6.2.3)
- 16. 14 AT LEAST ONE LUMINAIRE IN EACH BATHROOM, GARAGE, LAUNDRY ROOM, AND UTILITY ROOM MUST BE CONTROLLED BY A ACANCY SENSOR. PRESET SCENE CONTROLLERS AND EMCS CAN TAKE THE PLACE OF SENSORS AND DIMMERS AS LONG AS THE FUNCTIONALITY MEETS THE ENERGY CODE REQUIREMENTS. (CEC 6.3.1 F) 16. 15 RECESSED LIGHTS SHOWN IN SLOPED CEILINGS SHALL BE A MODEL DESIGNED TO PROVIDE A PERPENDICULAR LIGHT SOURCE IN A SLOPED CEILING
- 16. 16 ALL EXTERIOR PROJECT LIGHTING SHALL COMPLY WITH THE LIGHTING ORDINANCE OF THE GOVERNING MUNICIPALITY. 16. 17 ALL EXTERIOR LIGHTING SHALL BE HIGH EFFICACY, OAE (CEC 6.5.1) 16. 18 ALL EXTERIOR LIGHTING MUST BE CONTROLLED BY A MANUAL ON AND OFF SWITCH AND ONE OF THE FOLLOWING AUTOMATIC CONTROL TYPES A PHOTO CONTROL AND MOTION SENSOR: OR
- IOTO CONTROL AND AUTOMATIC TIME SWITCH CONTROL; OR C. ASTRONOMICAL TIME CLOCK CONTROL THAT AUTOMATICALLY TURNS THE OUTDOOR LIGHT OFF DURING DAYLIGHT HOURS: D. EMCS THAT PROVIDES THE FUNCTIONALITY OF AN ASTRONOMICAL TIME CLOCK, DOES NOT HAVE AN OVERRIDE OR BYPASS TCH THAT ALLOWS THE LUMINAIRE TO BE ALWAYS ON, & IS PROGRAMMED TO AUTOMATICALLY TURN THE OUTDOOR LIGH OFF DURING DAYLIGHT HOURS. (CEC 6.5.2)
- 16. 19 A COMPLETE LIST OF INSTALLED LIGHTING SYSTEMS, INCLUDING THE LIGHTING SCHEDULE, ALL INFORMATION NECESSARY TO OPERATE AND MAINTAIN THE LIGHTING SYSTEM, AND REFERENCES TO SUPPORT FUTURE UPGRADES TO THE LIGHTING SYSTEM MUST BE PROVIDED TO THE HOMEOWNER PRIOR TO A FINAL INSPECTION (CEC.6.9.1) 16. 20 FORM CF2R-LTG-01-E MUST BE COMPLETED & A COPY BE PROVIDED TO THE INSPECTOR AT THE FINAL INSPECTION. (CEC 6.8.1)
- 16.21 SMOKE DETECTORS ARE REQUIRED IN EACH EXISTING SLEEPING ROOM, OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF SLEEPING ROOMS, & ON EACH STORY OF A DWELLING INCLUDING BASEMENTS. BATTERY-OPERATED DETECTORS ARE ACCEPTABLE IN EXISTING AREAS WITH NO CONSTRUCTION TAKING PLACE & IN ALTERATIONS NOT RESULTING IN REMOVAL OF INTERIOR WALL OR CEILING FINISHES & WITHOUT ACCESS VIA AN ATTIC, CRAWL SPACE, OR BASEMENT. (CRC 16.22 SMOKE DETECTORS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING & SHALL BE FOULIPPED WITH A
- BATTERY BACKUP. SMOKE DETECTORS MAYBE SOLELY BATTERY POWERED WHEN INSTALLED IN EXISTING BUILDINGS. (CRC 16. 23 CARBON MONOXIDE DETECTORS ARE REQUIRED OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF SLEEPING ROOMS & ON EACH STORY OF A DWELLING INCLUDING BASEMENTS. BATTERY-OPERATED DETECTORS ARE ICTION TAKING PLACE & IN ALTERATIONS NOT RESULTING IN REMOVAL OF ACCEPTABLE IN EXISTING AREAS WITH N
- INTERIOR WALL OR CEILING FINISHES 16. 24 CARBON MONOXIDE ALARMS SHALL COMMERCIAL SOURCE AND, WHERE SHALL BE PERMANENT AND WITHOU PROTECTION. (CRC R315.6)
- 16. 25 WHERE MORE THAN ONE SMOKE, C REQUIRED. THE ALARM SHALL BE INTERCONN ALARMS IN THE RESIDENCE. (CRC R314.4 & R31 16. 26 COMBUSTIBLE INSULATION CLEARAN RECESSED LUMINAIRES, FAN MOTO

PREPARER SIGNATURE

FOR CITY STAMPS

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GENERAL SPECIFICATIONS						

S & WITHOUT ACCESS VIA AN ATTIC, CRAWL SPACE, OR BASEMENT. (CRC R315.
RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING IS SERVED FROI PRIMARY POWER IS INTERRUPTED, SHALL RECEIVE POWER FROM A BATTERY. T A DISCONNECTING SWITCH OTHER THAN THOSE REQUIRED FOR OVER-CURR
ARBON MONOXIDE OR COMBINATION SMOKE/CARBON MONOXIDE DETECTOR IS CTED IN A MANNER THAT ACTIVATION OF ONE ALARM SHALL ACTIVATE ALL THE 5.5)
NCE. COMBUSTIBLE INSULATION SHALL BE SEPARATED MINIMUM 3 INCHES FRO RS, AND OTHER HEAT-PRODUCING DEVICES. (CRC R302.14)

# **2022 CALIFORNIA GREEN BUILDING STANDARDS CODE RESIDENTIAL MANDATORY MEASURES, SHEET 1** (January 2023)

	RESIDENTIAL			
Y N/A RESPON. PARTY	CHAPTER 3	Y N/A RESPON. PARTY		The maximum flow rate of residential lavatory
	GREEN BUILDING SECTION 301 GENERAL		not exceed 1.2 gallons per minute at 60 psi. not be less than 0.8 gallons per minute at 20 p	The minimum flow rate of residential lavatory fa
	<b>301.1 SCOPE.</b> Buildings shall be designed to include the green building measures specified as mandatory in		4.303.1.4.2 Lavatory Faucets in Common a	and Public Use Areas NOT USED
	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.		4.303.1.4.3 Metering Faucets NOT USED 4.303.1.4.4 Kitchen Faucets. The maximum	
	<b>301.1.1 Additions and alterations. [HCD]</b> 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		per minute at 60 psi. Kitchen faucets may ten to exceed 2.2 gallons per minute at 60 psi, an minute at 60 psi.	nporarily increase the flow above the maximun
	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		Note: Where complying faucets are unavailable reduction. 4.303.1.4.5 Pre-rinse spray valves NOT U	
	4.106.4.3 for application. <b>Note:</b> Repairs including, but not limited to, resurfacing, restriping and repairing or maintaining existing		4.303.2 Submeters for multifamily buildings and dwellin buildings NOT USED	
	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		<b>4.303.3 Standards for plumbing fixtures and fittings.</b> P accordance with the <i>California Plumbing Code</i> , and shall m	lumbing fixtures and fittings shall be installed i
	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.		1701.1 of the <i>California Plumbing Code</i> , NOTE: THIS TABLE COMPILES THE DATA IN SECTION 4 CONVENIENCE FOR THE USER.	
	301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS. [HCD] - NOT USED		TABLE - MAXIMUM FIXTURE WATER	USE
	SECTION 302 MIXED OCCUPANCY BUILDINGS		FIXTURE TYPE	FLOW RATE
	302.1 MIXED OCCUPANCY BUILDINGS NOT USED		SHOWER HEADS (RESIDENTIAL)	1.8 GMP @ 80 PSI
	DIVISION 4.1 PLANNING AND DESIGN		LAVATORY FAUCETS (RESIDENTIAL)	MAX. 1.2 GPM @ 60 PSI MIN. 0.8 GPM PSI
	ABBREVIATION DEFINITIONS: HCD Department of Housing and Community Development BSC California Building Standards Commission		LAVATORY FAUCETS IN COMMON & PUBLIC USE AREAS	0.5 GPM @ 60 PSI
	DSA-SS Division of the State Architect, Structural Safety OSHPD Office of Statewide Health Planning and Development			1.8 GPM @ 60 PSI
	LR Low Rise HR High Rise		METERING FAUCETS WATER CLOSET	0.2 GAL/CYCLE 1.28 GAL/FLUSH
	AA Additions and Alterations N New		URINALS	0.125 GAL/FLUSH
	CHAPTER 4 RESIDENTIAL MANDATORY MEASURES SECTION 4.102 DEFINITIONS 4.102.1 DEFINITIONS The following terms are defined in Chapter 2 (and an included here for mformate)		<b>4.304 OUTDOOR WATER USE</b> <b>4.304.1 OUTDOOR POTABLE WATER USE IN LANDSC</b> a local water efficient landscape ordinance or the current C Efficient Landscape Ordinance (MWELO), whichever is mo NOTES:	alifornia Department of Water Resources' Mod
	The following terms are defined in Chapter 2 (and are included here for reference) FRENCH DRAIN. A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar		1. The Model Water Efficient Landscape Ordinance	
	pervious 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 downflow slope. Wattles are also		Title 23, Chapter 2.7, Division 2. MWELO and su available at: https://www.water.ca.gov/	pporting documents, including water budget ca
	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		DIVISION 4.4 MATERIAL CONS	ERVATION AND RESOUR
+	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.		4.406 ENHANCED DURABILITY AND REI 4.406.1 RODENT PROOFING. Annular spaces around pip	pes, electric cables, conduits or other openings
	<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.		<ul> <li>sole/bottom plates at exterior walls shall be protected openings with cement mortar, concrete masonry or a agency.</li> <li>4.408 CONSTRUCTION WASTE REDUCT</li> </ul>	TION, DISPOSAL AND RECYCL.
	<ol> <li>Retention basins of sufficient size shall be utilized to retain storm water on the site.</li> <li>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.</li> </ol>		4.408.1 CONSTRUCTION WASTE MANAGEMENT. Rec percent of the non-hazardous construction and demo 4.408.2, 4.408.3 or 4.408.4, or meet a more stringer management ordinance. Exceptions:	olition waste in accordance with either Section
	<ol> <li>Compliance with a lawfully enacted storm water management ordinance.</li> <li>Note: Refer to the State Water Resources Control Board for projects which disturb one acre or more of soil, or</li> </ol>		1. Excavated soil and land-clearing debris.	
	are part of a larger common plan of development which in total disturbs one acre or more of soil. (Website: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html)		<ol> <li>Alternate waste reduction methods developed by recycle facilities capable of compliance with this close to the jobsite.</li> </ol>	
	<ul> <li>4.106.3 GRADING AND PAVING. Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:</li> </ul>		<ol><li>The enforcing agency may make exceptions to the</li></ol>	he requirements of this section when isolated bundaries of the diversion facility.
	<ol> <li>Swales</li> <li>Water collection and disposal systems</li> <li>French drains</li> </ol>		in conformance with Items 1 through 5. The constru- necessary and shall be available during construction 1. Identify the construction and demonstruction waste ma	for examination by the enforcing agency.
	<ol> <li>French drains</li> <li>Water retention gardens</li> <li>Other water measures which keep surface water away from buildings and aid in groundwater recharge.</li> </ol>		<ul> <li>reuse on the project or salvage for the reuse or</li> <li>Spector f construction and demolition waste mat bulk mixed (single stream).</li> <li>Identify diversion facilities where the construction</li> </ul>	sale. erials will be sorted on-site (source separated)
	<b>Exception:</b> Additions and alterations not altering the drainage path.		4. Identify construction methods employed to reduc	
	4.106.4 Electric vehicle (EV) charging for new construction NOT USED 4.106.4.2 New multifamily dwellings, hotels and motels and new residential parking facilities NOT USED 4.106.4.3 Electric vehicle charging for additions and alterations of parking facilities serving existing		generated. 5 Specify that the amount of construction and dem by weight or volume, but not by both.	olition waste materials diverted shall be calcul
	multifamily buildings NOT USED DIVISION 4.2 ENERGY EFFICIENCY		<b>108.3 V TE MANAGEMENT COMPANY.</b> Utilize a we enforcing agency, which can provide verifiable documents demolition waste material diverted from the landfill compared from the landf	mentation that the percentage of construction a omplies with Section 4.408.1.
	<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		<b>Note:</b> The owner or contractor may make the determ materials will be diverted by a waste management co	
	Commission will continue to adopt mandatory standards. DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION		4.408.4 WASTE STREAM REDUCTION ALTERNATIVE weight of construction and demolition waste dispose lbs./sq.ft. of the building area shall meet the minimur Section 4.408.1	d of in landfills, which do not exceed 3.4
	<ul> <li>4.303 INDOOR WATER USE</li> <li>4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures (water close s 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 4.303.4.4.</li> </ul>		<b>4.408.4.1 WASTE STREAM REDUCTION ALTERN</b> weight of construction and demolition waste dispose per square foot of the building area, shall meet the n requirement in Section 4.408.1	d of in landfills, which do not exceed 2 pounds
	Note: All noncompliant plumbing fixtures in any residential real property shall be replaced with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuence 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 securior the definition of a noncompliant plumbing fixture, types of residential buildings affected and one important enactment dates.		<ul> <li>4.408.5 DOCUMENTATION. Documentation shall be provous compliance with Section 4.408.2, items 1 through 5, Notes:</li> </ul>	
	<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			CALGreen.html may be used to assist in (C & D) processors can be located at the Calife
	<ul> <li>More The effective fush volume of duar fush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.</li> <li>4.3.3.1.2 Urinals NOT USED</li> </ul>		Department of Resources Recycling and F 4.410 BUILDING MAINTENANCE AND OF 4.410.1 OPERATION AND MAINTENANCE MANUAL. At disc, web-based reference or other media acceptabl following shall be placed in the building:	<b>PERATION</b> t the time of final inspection, a manual, compared
	<ul> <li>4.3.3.1.3 Showerheads.</li> <li>4.303.1.3.1 Since Showerhead. 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</li> </ul>		<ol> <li>Directions to the owner or occupant that the man life cycle of the structure.</li> </ol>	
	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/or 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.		appliances and equipment. b. Roof and yard drainage, including gutters c. Space conditioning systems, including cor	and downspouts.
<b>k</b>	Note: A hand-held shower shall be considered a showerhead.		<ul> <li>d. Landscape irrigation systems.</li> <li>e. Water reuse systems.</li> <li>3. Information from local utility, water and waste reaction resource consumption, including recycle program</li> </ul>	
	I			

Public transportation and/or carpool options available in the area. Educational material on the positive impacts of an interior relative humidity between 30-60 percent ratory Faucets. The maximum flow rate of residential lavatory faucets shall and what methods an occupant may use to maintain the relative humidity level in that range. inute at 60 psi. The minimum flow rate of residential lavatory faucets shall 6. Information about water-conserving landscape and irrigation design and controllers which conserve per minute at 20 psi. 7. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 ts in Common and Public Use Areas. - NOT USED 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. s. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons 10. A copy of all special inspections verifications required by the enforcing agency or this code. a faucets may temporarily increase the flow above the maximum rate, but not 11. Information from the Department of Forestry and Fire Protection on maintenance of defensible nute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per space around residential structures. Information and/or drawings identifying the location of grab bar reinforcements. ets are unavailable, aerators or other means may be used to achieve 4.410.2 RECYCLING BY OCCUPANTS. 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, valves. - NOT USED corrugated cardboard, glass, plastics, organic waster, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive lings and dwelling units in mixed-used residential/commercial **Exception:** Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section 42649.82 (a)(2)(A) et seq. are note required to comply with the organic waste portion of and fittings. Plumbing fixtures and fittings shall be installed in this section. Code, and shall meet the applicable standards referenced in Table DIVISION 4.5 ENVIRONMENTAL QUALITY SECTION 4.501 GENERAL A IN SECTION 4.303.1, AND IS INCLUDED AS A 4.501.1 Scope 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. IRE WATER USE SECTION 4.502 DEFINITIONS FLOW RATE 5.102.1 DEFINITIONS The following terms are defined in Chapter 2 (and are included here for reference) 1.8 GMP @ 80 PSI AGRIFIBER PRODUCTS. Agrifiber products include wheatboard, strawboard, panel substrates and door MAX. 1.2 GPM @ 60 PSI MIN. 0.8 GPM @ 20 cores, not including furniture, fixtures and equipment (FF&E) not considered base building elements. PSI COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and 0.5 GPM @ 60 PSI medium density fiberboard. "Composite wood products" to a not include tordboard, structural provood, structural panels, structural composite lumber, oriented strand board, gluga laminated timber, prefabricated wood I-joists or finger-jointed lumber, all as specified in California Code of regulations (CCR), title 17, Section 1.8 GPM @ 60 PSI 93120.1. 0.2 GAL/CYCLE DIRECT-VENT APPLIANCE. A fuel-burning appliance with a sealed combustion system that draws all air for 1.28 GAL/FLUSH combustion from the outside atmosphere and discharges at flue gates to the outside atmosphere. MAXIMUM INCREMENTAL REACT IV TY (MIR). The maximum change in weight of ozone formed by adding a 0.125 GAL/FLUSH compound to the "Base Reactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundredths of a gram (g O<sup>3</sup>/g ROC). Note: MIR values for individual compound, and hydrocart solvents are specified in CCR, Title 17, Sections 94700 **JSE IN LANDSCAPE AREAS**. Residential developments shall comply with and 94701. e or the current California Department of Water Resources' Model Water MOISTURE CONTENT. The weight of the water in wood expressed in percentage of the weight of the oven-dry wood. whichever is more stringent. **ROPUGT INFIGURED MIR (PWMIR).** The sum of all weighted-MIR for all ingredients in a product subject to this article. The RUMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of scape Ordinance (MWELO) is located in the California Code Regulations, product (excluding container and packaging). Note: PWMIR is calculated according to equations found in CCR, Title 17, Section 94521 (a). MWELO and supporting documents, including water budget calculator, are **REACTIVE ORGANIC COMPOUND (ROC).** Any compound that has the potential, once emitted, to contribute to zone formation in the troposphere AL CONSERVATION AND RESOURCE A volatile organic compound (VOC) broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a). TY AND REDUCED MAINTENANCE 4.503 FIREPLACES 4.503.1 GENERAL. Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, ellet stoves and fireplaces shall also comply with applicable local ordinances 4.504 POLLUTANT CONTROL 4.504.1 COVERING OF DUCT OPENINGS & PROTECTION OF MECHANICAL EQUIPMENT DURING **CONSTRUCTION.** At the time of rough installation, during storage on the construction site and until final t a more stringent local construction and demolition waste startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of water, dust or debris which may enter the system. 4.504.2 FINISH MATERIAL POLLUTANT CONTROL. Finish materials shall comply with this section. 4.504.2.1 Adhesives, Sealants and Caulks. Adhesives, sealant and caulks used on the project shall meet the requirements of the following standards unless more stringent local or regional air pollution or air quality management district rules apply: e exceptions to the requirements of this section when isolated 1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where AGEMENT PLAN Submit a construction waste management plan applicable or SCAQMD Rule 1168 VOC limits, as shown in Table 4.504.1 or 4.504.2, as applicable. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and tricloroethylene), except for aerosol products, as specified in Subsection 2 below.

> 2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of California Code of Regulations, Title 17, commencing with section 94507.

**4.504.2.2 Paints and Coatings.** Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Suggested Control Measure, as shown in Table 4.504.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 4.504.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in subsections 4.21, 4.36, and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 4.504.3 shall apply.

4.504.2.3 Aerosol Paints and Coatings. Aerosol paints and coatings shall meet the Product-weighted MIR Limits for ROC in Section 94522(a)(2) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(e)(1) and (f)(1) of California Code of Regulations, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8. Rule 49.

**4.504.2.4 Verification.** Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:

Manufacturer's product specification. Field verification of on-site product containers.

4.504.3 CARPET SYSTEMS. All carpet installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)

See California Department of Public Health's website for certification programs and testing labs.

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.

4.504.3.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)

See California Department of Public Health's website for certification programs and testing labs.

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.

4.504.3.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 4.504.1.

4.504.4 RESILIENT FLOORING SYSTEMS. Where resilient flooring is installed, at least 80% of floor area receiving resilient flooring shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)

5. The construction waste management plan shall be updated as ng construction for examination by the enforcing agency.

mployed to reduce the amount of construction and demolition waste truction and demolition waste materials diverted shall be calculated

ANY. Utilize a waste management company, approved by the e verifiable documentation that the percentage of construction and from the landfill complies with Section 4.408.1.

ALTERNATIVE [LR]. Projects that generate a total combined on waste disposed of in landfills, which do not exceed 3.4 meet the minimum 65% construction waste reduction requirement in

**JCTION ALTERNATIVE.** Projects that generate a total combined on waste disposed of in landfills, which do not exceed 2 pounds

tion shall be provided to the enforcing agency which demonstrates

www.hcd.ca.gov/CALGreen.html may be used to assist in with this section. emolition debris (C & D) processors can be located at the California Recycling and Recovery (CalRecycle).

**CE MANUAL.** At the time of final inspection, a manual, compact media acceptable to the enforcing agency which includes all of the ding:

hhtps://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx.

See California Department of Public Health's website for certification programs and testing labs.

	r	OWNER, CONTRACTOR, INSPECT C.)
N/A	RESPON. PARTY	DIVISION 4.5 ENVIRONMENTA' QUAL TY (continued)
		<b>4.504.5 COMPOSITE WOOD PRODUCTS.</b> Hardwood plywood, particle board and medium density fiberboard composite wood products used on the interior of the buildings and meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.),
		by or before the dates specified in those sections, as shown in Table 4.504.5
		<b>4.504.5.1 Documentation.</b> Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:
		<ol> <li>Product certifications and specifications.</li> <li>Chain of custody certifications.</li> </ol>
		3 Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.).
		<ul> <li>4. Serior group produce marked a meeting the PS-1 or PS-2 standards of the Engineered</li> <li>Voot Association of tralian AS/NZS 2269, European 636 3S standards, and Canadian CSA 0121 CSA 0151, CSA 0151, CSA 0325 standards.</li> <li>Other withods acceptable to the enforcing agency.</li> </ul>
	7	<b>4.505 INTER OR MC STURE CONTROL</b> <b>4.505.1 General.</b> Buildings shall meet or exceed the provisions of the <i>California Building Standards Code</i> .
		<b>4.505.2 CONCRETE SLAB FOUNDATIONS.</b> Concrete slab foundations required to have a vapor retarder by California Building Code, Chapter 19, or concrete slab-on-ground floors required to have a vapor retarder by the California Feeddential Code, Chapter 5, shall also comply with this section.
		<b>4.505.2.1 Capillary break.</b> A capillary break shall be installed in compliance with at least one of the following:
		<ol> <li>A 4-inch (101.6 mm) thick base of 1/2 inch (12.7mm) or larger clean aggregate shall be provided with a vapor barrier in direct contact with concrete and a concrete mix design, which will address bleeding, shrinkage, and curling, shall be used. For additional information, see American Concrete Institute, ACI 302.2R-06.</li> <li>Other equivalent methods approved by the enforcing agency.</li> </ol>
		3. A slab design specified by a licensed design professional.
		<b>4.505.3 MOISTURE CONTENT OF BUILDING MATERIALS.</b> Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19 percent moisture content. Moisture content shall be verified in compliance with the following:
		<ol> <li>Moisture content shall be determined with either a probe-type or contact-type moisture meter. Equivalent moisture verification methods may be approved by the enforcing agency and shall satisfy requirements found in Section 101.8 of this code.</li> </ol>
		<ol><li>Moisture readings shall be taken at a point 2 feet (610 mm) to 4 feet (1219 mm) from the grade stamped end of each piece verified.</li></ol>
		<ol><li>At least three random moisture readings shall be performed on wall and floor framing with documentation acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing.</li></ol>
		Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Wet-applied insulation products shall follow the manufacturers' drying recommendations prior to enclosure.
		<b>4.506 INDOOR AIR QUALITY AND EXHAUST</b> <b>4.506.1 Bathroom exhaust fans</b> . Each bathroom shall be mechanically ventilated and shall comply with the following:
		<ol> <li>Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building.</li> <li>Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidity control.</li> </ol>
		a. Humidity controls shall be capable of adjustment between a relative humidity range less than or equal to 50% to a maximum of 80%. A humidity control may utilize manual or automatic means of
		<ul> <li>adjustment.</li> <li>b. A humidity control may be a separate component to the exhaust fan and is not required to be integral (i.e., built-in)</li> </ul>
		Notes:
		<ol> <li>For the purposes of this section, a bathroom is a room which contains a bathtub, shower or tub/shower combination.</li> </ol>
		2. Lighting integral to bathroom exhaust fans shall comply with the California Energy Code.
		<b>4.507 ENVIRONMENTAL COMFORT</b> <b>4.507.2 HEATING AND AIR-CONDITIONING SYSTEM DESIGN.</b> Heating and air conditioning systems shall be sized, designed and have their equipment selected using the following methods:
		<ol> <li>The heat loss and heat gain is established according to ANSI/ACCA 2 Manual J - 2011 (Residential Load Calculation), ASHRAE handbooks or other equivalent design software or methods.</li> <li>Duct systems are sized according to ANSI/ACCA 1 Manual D - 2014 (Residential Duct Systems), ASHRAE handbooks or other equivalent design software or methods.</li> <li>Select heating and cooling equipment according to ANSI/ACCA 3 Manual S - 2014 (Residential Select heating and cooling equipment according to ANSI/ACCA 3 Manual S - 2014 (Residential</li> </ol>
		Equipment Selection), or other equivalent design software or methods. Exception: Use of alternate design temperatures necessary to ensure the system functions are acceptable.
		CHAPTER 7
		INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS
		702 QUALIFICATIONS
		<b>702.1 INSTALLER TRAINING.</b> HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include but are not limited to the following:
		<ol> <li>State certified apprenticeship programs.</li> <li>Public utility training programs.</li> <li>Training programs approach by trade, labor or statewide operative consulting or verification empirations.</li> </ol>

- 3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations. 4. Programs sponsored by manufacturing organizations.
- 5. Other programs acceptable to the enforcing agency.

702.2 SPECIAL INSPECTION [HCD]. When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector:

- 1. Certification by a national or regional green building program or standard publisher. 2. Certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors.
- Successful completion of a third party apprentice training program in the appropriate trade. 4. Other programs acceptable to the enforcing agency.
- 1. Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code. 2. HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate homes in California according to the Home Energy Rating System (HERS).

[BSC] When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from a recognized state, national or international association, as determined by the local agency. The area of certification shall be closely related to the primary job function, as determined by the local agency.

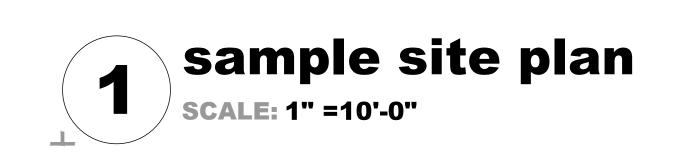
Note: Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.

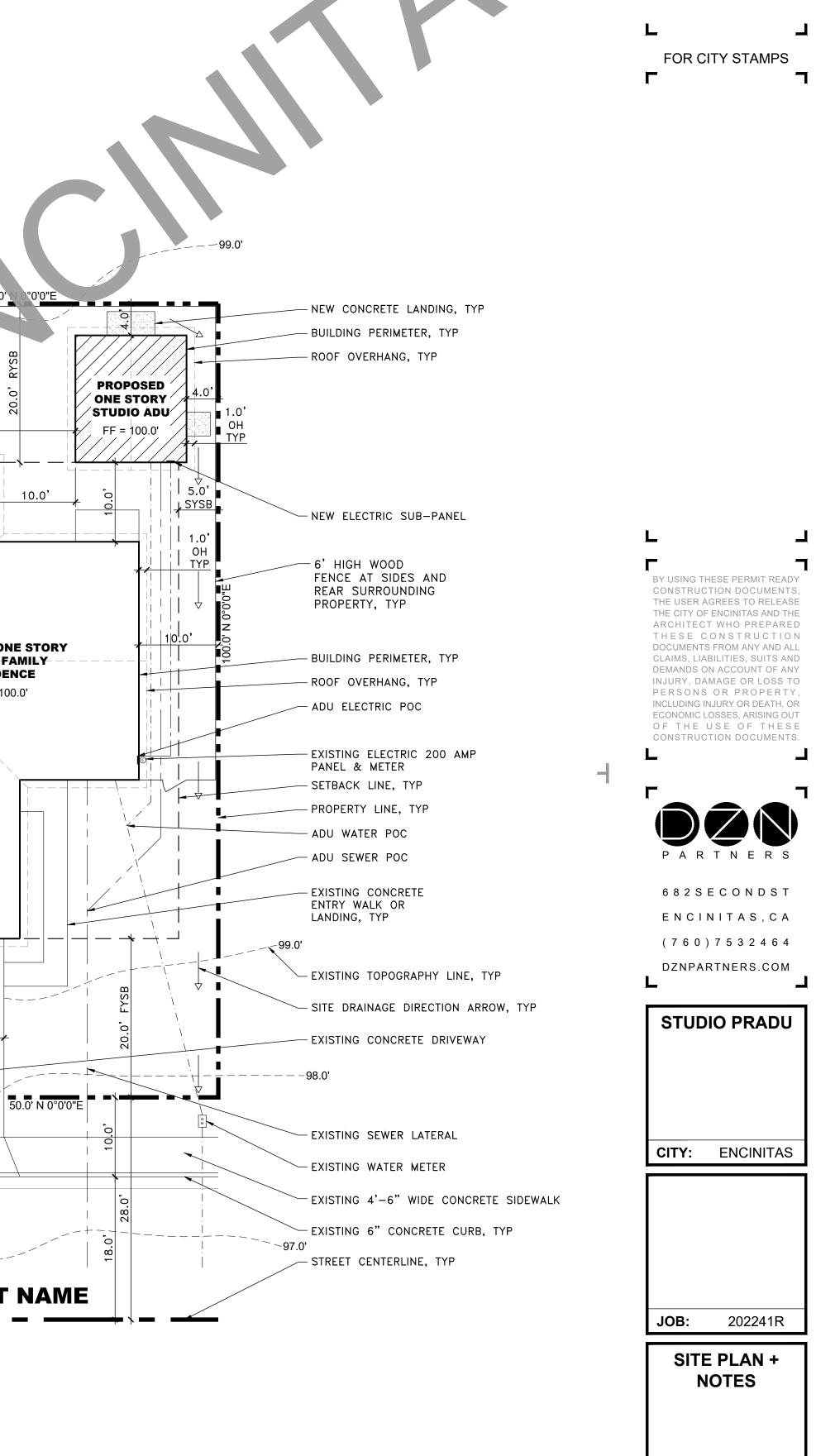
## **703 VERIFICATIONS**

**703.1 DOCUMENTATION.** Documentation used to show compliance with this code shall include but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which demonstrate substantial conformance. When specific documentation or special inspection is necessary to verify compliance, that method of compliance will be specified in the appropriate section or identified applicable checklist.



	-				
	THE APPLICANT SHALL IMPLEMENT SITE DESIGN STORMWATER BEST				
URF REINFORCEMENT MAT F APPLICABLE	MANAGEMENT PRACTICES (BMP) AND LOW IMPACT DEVELOPMENT				
	(LID) CONCEPTS SUCH AS IMPERVIOUS AREA DISPERSION,				
MIN. ENGINEERED SOIL	DRAINAGE TO NATURAL VEGETATION, REDUCTION IN				
SEE NOTE BELOW	IMPERVIOUS SURFACES, BREAKING UP HARDSCAPE AREA, ETC.				
	APPLICANT IS REQUIRED TO INCORPORATE THESE CONCEPTS WITH NEW CONSTRUCTION IN LIEU				
M" SOIL MIX WITH NO ND, 20-30% COMPOST OR	OF SELECTIONS A OR B.				
	C - SITE DESIGN				
OVED BY THE DIRECTOR	+				
CITY OF ENCINITAS	LID CONCEPTS				
otes:	site plan informat	tion:			
	CHECKLIST TO BE INCLUDED ON SIT	TE PLAN		<b>—</b> • • <b>– –</b>	5
N ACTIVITIES	ALL EXTERIOR SITE BOUNDARIES CORRECTLY SC.	ALED &			
AIN WASHOUT WASTES ON SITE. IT RRY, MORTAR, STUCCO, PLASTER					
R CONVEYANCE SYSTEM OR ANY ALL POST A SIGN DESIGNATING	SCALE OF PLAN, GRAPHIC & WRITTEN				20.0
CCESS SHALL BE PROVIDED FOR PREVENT TRACKING DIRT OFF	LEGEND OF SYMBOLS, LINES, ABBREVIATIONS, PLAN	ETC. USED ON	00	9.0'	32.0'
FREVENT TRACKING DIRT OFF FERIAL SUCH AS GRAVEL AND/OR 3.	SITE CONTOURS, GRADE ELEVATIONS & OTHER TO FEATURES	OPOGRAPHIC	95		
RS AND STORMDRAIN SHALL BE HICLES PARKING, VEHICLE	LOCATE & DIMENSION ALL DRIVEWAYS, ACCESS R CUTS	ROADS, & CURB			<b>k</b>
T MAINTENANCE. ALL MAJOR	ULTIMATE RIGHT OF WAY DIMENSION TO CENTERI				
ED FOR ALL EROSIVE SURFACES. LL BE PROTECTED AGAINST	SHOW FIRE ACCESS ROADS / DRIVEWAY & MAXIMU PULL LENGTH OF 150 FT				
SISTANT SURFACES SUCH AS GROUND COVER VEGETATION,	LOCATION & DIMENSIONS OF ALL EASEMENTS (RO WATER, SEWER, GAS & OPEN SPACE ETC.)	DAD, ELECTRIC,			
ITIES ARE ALLOWED DURING WET	SHOW & DIMENSION REQUIRED & PROPOSED BUIL				
ONTRACTOR SHALL PROTECT PERMANENT AND TEMPORARY	STRUCTURES WITH NUMBER OF STORIES				$\bigvee$
Y WHEN ABSOLUTELY NECESSARY. TED IN PHASES TO AVOID					EXISTING
FURAL GROUND COVER. DO NOT SSARILY; THEY HELP DECREASE	DISTANCE OF ALL EXISTING & PROPOSED STRUCT EACH OTHER & FROM PROPERTY LINES	URES FROM			RES FF :
SOON AS POSSIBLE, ONCE S ARE COMPLETE.	LOCATION & HEIGHT OF ALL FENCES & RETAINING	GWALLS		O <u>SYSB</u>	
SHALL BE MINIMIZED. E AINED IN A SECURE PLACE TO	LOCATION & SIZE OF OFF STREET PARKING	Ν		100	
ONTRACTOR SHALL STORE THESE DRY OUT OF THE RAIN. NDARY CONTAINMENT FOR ALL	LOCATION OF EXISTING & PROPOSED UTILITIES TO				
F STORMWATER FROM	LOCATION OF EXISTING & NEW UTILITIES (SEWER CLEANOUTS, WATER LINES WITH SHUT OFF, GAS L				
LES MAY INCLUDE SOIL, PARING GREGATE BASE, ETC. STOCKPILES CENTRATED STORMWATER FLOV		DUITS)			
ES SHALL BE COVERED OR N MEASURES AND PROVIDED WITH ROUND THE PERIMETER AT AL					
	EXISTING MAIN DWELLING UNIT EXCEPT AS SPECI GOVERNMENT CODE SECTION 65852.2				
D TO BE FAMILIAR WI HE CITY ION CONTROL REQUIR NTS. 3L EVERYONE W ON	LOCATION OF EXISTING AND NEW METER LOCATION OF EXISTING AND NEW METER LOCATION (ELECTRICAL, GAS & WATER.)	ONS			
THE PIME CONTACTOR ST TORM TER REQUIREMENTS AND	SITE PLAN SIGNED BY PREPARER.				
E FOR PROPERLY DISPOSING OF	IF REQUIRED, INCORPORATE THE APPROVED GRA PLAN/IMPROVEMENT PLAN WITH THE BUILDING PL				
TION MATERIA S DUMPING OF HE GROUND, WILL E WATER CAN SYSTEM IS STRICLY PROHIBITED	IF REQUIRED, PROVIDE A FUEL MODIFICATION ZON ADMINISTRATION CODE SECTION 302, SEE SHEET MORE INFORMATION				0.0
BE DISCHARGED INTO LACED AROUND DUMPSTERS DUMPSTERS SHALL BE	LOCATION OF APPLICABLE PERMANENT SOURCE ( DESIGN BMPs PER STORM WATER INTAKE FORM 8			99.0'~1	<u>~</u> 16.0'
DUMPSTER LIDS SHALL REMAIN	PROJECT SWQMP (CITY FORM)				-
US ROOFING OR COVERED WITH TACT WITH ANY TRASH MATERIAL. CLUDING SOLVENTS,				<b>└</b> ┥╸-│ <b>-</b>	<b></b> • • <b></b>
DS, BROKEN ASPHALT AND GETATION CAN BE RECYCLED. BE TAKEN TO AN APPROPRIATE				98.0'	
DOUS WASTE. FOR INFORMATION IAL, CALL THE <b>HAZARDOUS</b> 714-1195. FOR INFORMATION ON					
RS CALL <b>EDCO</b> AT (760) 436-4151. POSED SURFACES. PLACE TRASH				/	
AROUND THE SITE. WORKING ORDER AND CHECKED OR SHALL PROVIDE SECONDARY					
LE TOILETS AWAY FROM URFACES. E KEPT AWAY FROM THE STREET,					
CTOR MUST ROUTINELY CHECK HAVE TRAVELED AWAY FROM				97.0'	
<b>e:</b>					STREE
NED SITE PLAN DRAWN TO SCALE	_				

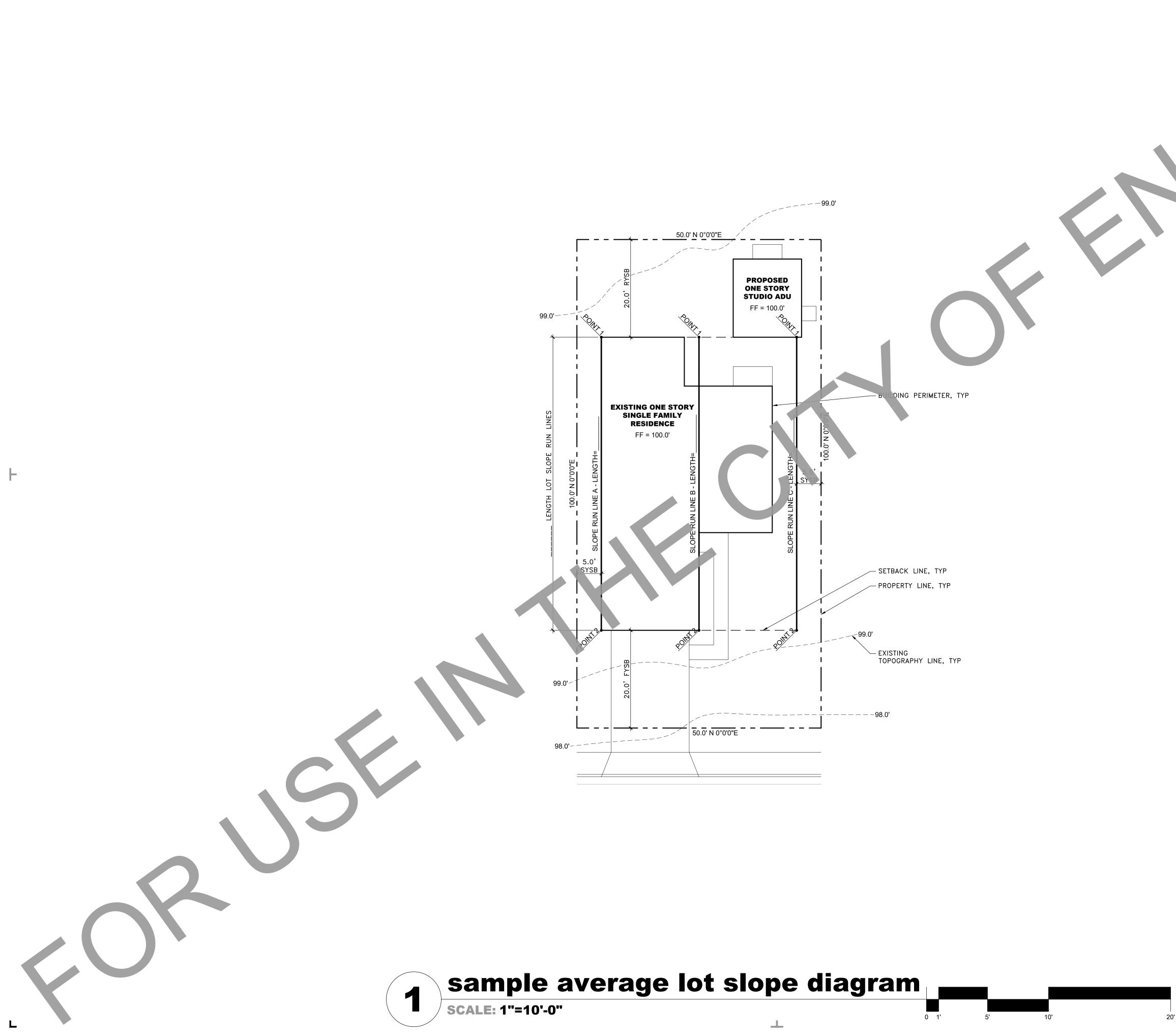


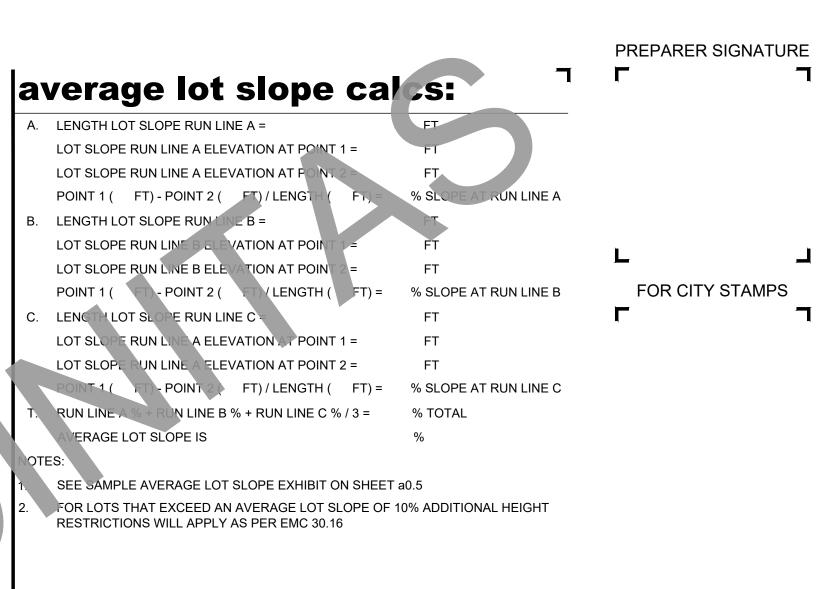






PREPARER SIGNATURE





JOB:

BY USING THESE PERMIT READY CONSTRUCTION DOCUMENTS, THE USER AGREES TO RELEASE THE CITY OF ENCINITAS AND THE ARCHITECT WHO PREPARED THESE CONSTRUCTION

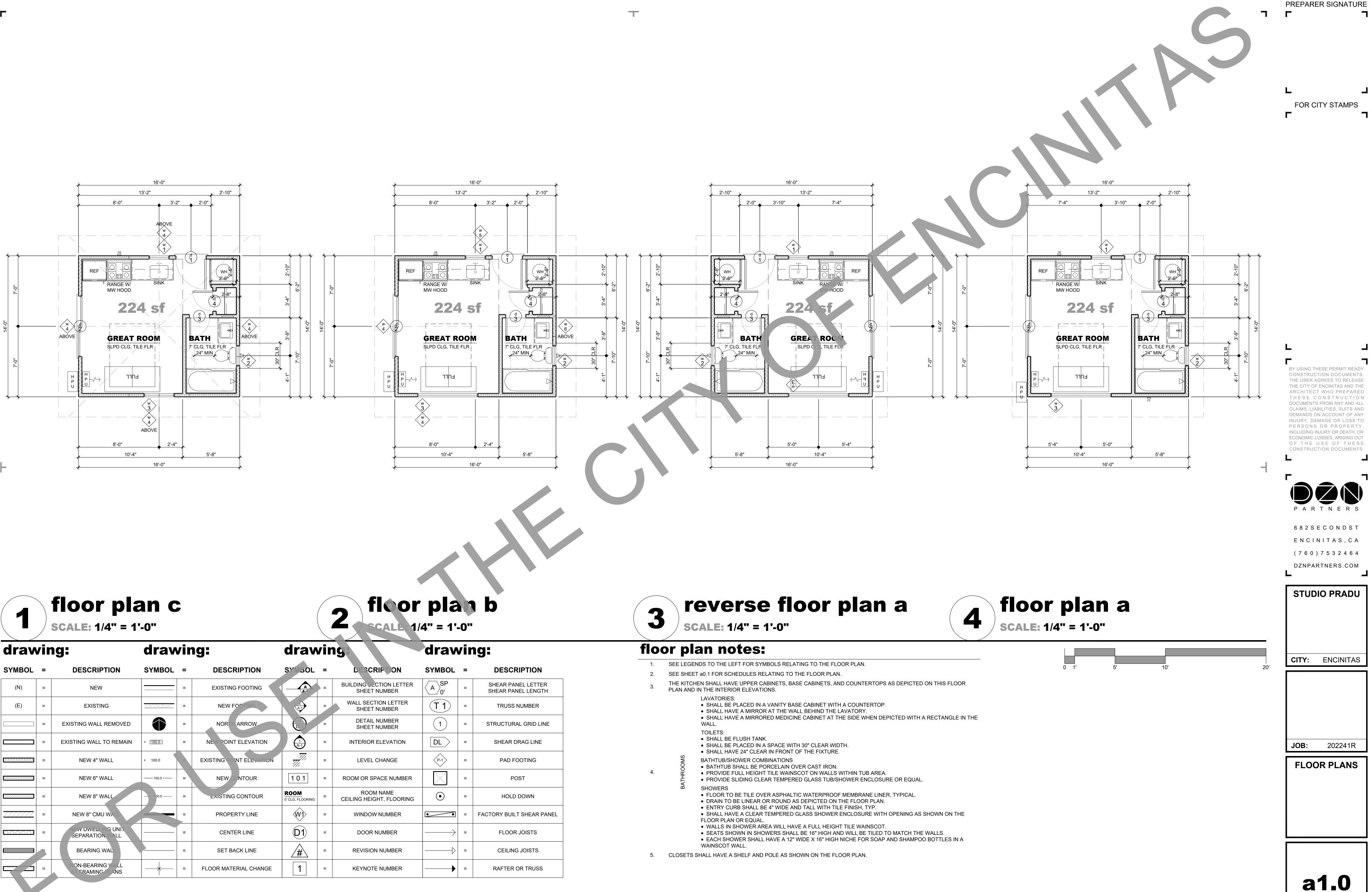
DOCUMENTS FROM ANY AND ALL CLAIMS, LIABILITIES, SUITS AND

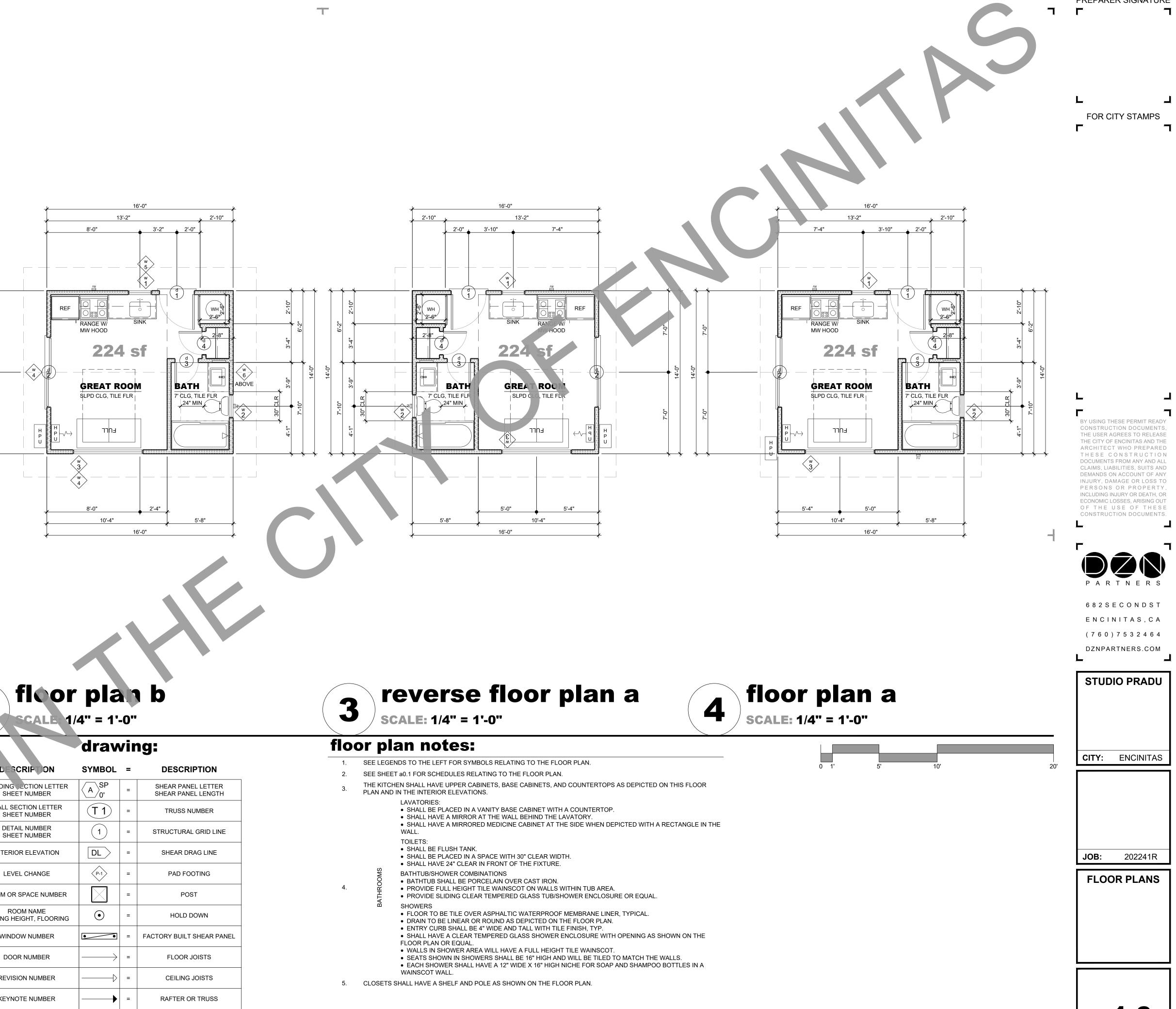
DEMANDS ON ACCOUNT OF ANY

INJURY, DAMAGE OR LOSS TO

PERSONS OR PROPERTY,







	/									
drav	drawing:		g: drawing:		drav	draw				
SYMBOL	=	DESCRIPTION	SYMBOL	=	DESCRIPTION	SYMBOL	=	DESCRIPTION	SYMBOL	
(N)	=	NEW		=	EXISTING FOOTING		=	BUILDING SECTION LETTER SHEET NUMBER	A SP 0'	
(E)	=	EXISTING		=	NEW FOOTING	A.1	=	WALL SECTION LETTER SHEET NUMBER	(T1)	
	=	EXISTING WALL REMOVED		=	NORTH ARROW	$\bigcirc$	=	DETAIL NUMBER SHEET NUMBER	1	
	=	EXISTING WALL TO REMAIN	+ [100.0]	=	NEW POINT ELEVATION		=	INTERIOR ELEVATION	DL	
****	=	NEW 4" WALL	+ 100.0		EXISTING POINT ELEVATION	7777	=	LEVEL CHANGE	P-1	
	=	NEW 6" WALL	100.0	=	NEW CONTOUR	101	=	ROOM OR SPACE NUMBER		
	=	NEW 8" WALL		=	EXISTING CONTOUR	ROOM 0' CLG, FLOORING	=	ROOM NAME CEILING HEIGHT, FLOORING	$\odot$	
7/////	=	NEW 8" CMU WALL		=	PROPERTY LINE	W1	=	WINDOW NUMBER	•	
620202020	=	SEPARATION ALL		=	CENTER LINE	(D1)	=	DOOR NUMBER	$  \longrightarrow$	
	-	BEARING WALL		=	SET BACK LINE	#	=	REVISION NUMBER		
	=	ON-BEARING V ALL		=	FLOOR MATERIAL CHANGE	1	=	KEYNOTE NUMBER		

# photovoltaic requirements:

2022 CALIFORNIA ENERGY CODE SECTION 150.1(c)14:

ALL LOW-RISE RESIDENTIAL BUILDINGS SHALL HAVE A PHOTOVOLTAIC (PV) SYSTEM MEETING THE MINIMUM QUALIFICATION REQUIREMENTS AS SPECIFIED IN JOINT APPENDIX JA11, WITH ANNUAL ELECTRICAL OUTPUT EQUAL TO OR GREATER THAN THE DWELLING'S ANNUAL ELECTRICAL USAGE AS DETERMINED BY EQUATION 150.1-C:

EQUATI	ION 150.1-C	
ANNUAL PHOTOVOLT	AIC ELECTRICAL OUTPUT	
kW <sub>PV</sub> = (CFA x A)	/1000 + (NDwell x B)	
WHERE:		
kW <sub>PV</sub> =	kWDC SIZE OF THE PV SYSTEM	
CFA =	CONDITIONED FLOOR AREA	
NDwell =	NUMBER OF DWELLING UNITS	
A =	ADJUSTMENT FACTOR FROM TABLE 150.1-C	
B =	DWELLING ADJUSTMENT FACTOR FROM TABLE 150.1-C	
EXCEPTION 1 TO SECTION 150.1(C)14:	NO PV SYSTEM IS REQUIRED IF THE EFFECTIVE ANNUAL SOLAR ACCESS IS RESTRICTED TO LESS THAN 80 CONTIGUOUS SQUARE FEET BY SHADING FROM EXISTING PERMANENT NATURAL OR MANMADE BARRIERS EXTERNAL TO THE DWELLING, INCLUDING BUT NOT LIMITED TO TREES, HILLS, AND ADJACENT STRUCTURES. THE EFFECTIVE ANNUAL SOLAR ACCESS SHALL BE 70 PERCENT OR GREATER OF THE OUTPUT OF AN UNSHADED PV ARRAY ON AN ANNUAL BASIS.	
EXCEPTION 2 TO SECTION 150.1(C)14:	IN CLIMATE ZONE 15, THE PV SYSTEM SIZE SHALL BE THE SMALLER OF A SIZE THAT CAN BE ACCOMMODATED BY THE EFFECTIVE ANNUAL SOLAR ACCESS OR A PV SYSTEM SIZE REQUIRED BY THE EQUATION 150.1-C, BUT NO LESS THAN 1.5 WATT DC PER SQUARE FOOT OF CONDITIONED FLOOR AREA.	DI C( E) SI
EXCEPTION 3 TO SECTION 150.1(C)14:	IN ALL CLIMATE ZONES, FOR DWELLING UNITS WITH TWO HABITABLE STORIES, THE PV SYSTEM SIZE SHALL BE THE SMALLER OF A SIZE THAT CAN BE ACCOMMODATED BY THE EFFECTIVE ANNUAL SOLAR ACCESS OR A PV SYSTEM SIZE REQUIRED BY THE EQUATION 150.1-C, BUT NO LESS THAN 1.0 WATT DC PER SQUARE FOOT OF CONDITIONED FLOOR AREA	3
EXCEPTION 4 TO SECTION 150.1(C)14:	IN ALL CLIMATE ZONES, FOR LOW-RISE RESIDENTIAL DWELLINGS WITH THREE HABITABLE STORIES AND SINGLE-FAMILY DWELLINGS WITH THREE OR MORE HABITABLE STORIES, THE PV SYSTEM SIZE SHALL BE THE SMALLER OF A SIZE THAT CAN BE ACCOMMODATED BY THE EFFECTIVE ANNUAL SOLAR ACCESS OR A PV SYSTEM SIZE REQUIRED BY THE EQUATION 150.1-C, BUT NO LESS THAN 0.8 WATT DC PER SQUARE FOOT OF CONDITIONED FLOOR AREA.	32 0 0
EXCEPTION 5 TO SECTION 150.1(C)14:	FOR A DWELLING UNIT PLAN THAT IS APPROVED BY THE PLANNING DEPARTMENT PRIOR TO JANUARY 1, 2020 WITH AVAILABLE SOLAR READY ZONE BETWEEN 80 AND 200 SQUARE FEET, THE PV SYSTEM SIZE IS LIMITED TO THE LESSER OF THE SIZE THAT CAN BE ACCOMMODATED BY THE EFFECTIVE ANNUAL SOLAR ACCESS OR A SIZE THAT IS REQUIRED BY THE EQUATION 150.1-C.	0
EXCEPTION 6 TO SECTION 150.1(C)14:	PV SYSTEM SIZES FROM EQUATION 150.1-C MAY BE REDUCED BY 25 PERCENT IF INSTALLED IN CONJUNCTION WITH A BATTERY STORAGE SYSTEM. THE BATTERY STORAGE SYSTEM SHALL MEET THE OLIAL FLOATION REQUIREMENTS SPECIFIED	

## residential ventilation requirements: utility plan notes:

KITCHENS REQUIRE EXHAUST FANS WITH A MINIMUM 100 CFM DUCTED TO THE EXTERIOR. DETAIL COMPLIANCE BY INCLUDING A COMPLYING EXHAUST FAN OR A DUCTED RANGE HOOD TO THE EXTERIOR. 3 SONES MAXIMUM.

- EACH BATHROOM CONTAINING A BATHTUB, SHOWER OR TUB/SHOWER COMBINATION SHALL BE MECHANICALLY VENTILATED FOR PURPOSES OF HUMIDITY CONTROL IN ACCORDANCE WITH THE CALIFORNIA MECHANICAL CODE, CHAPTER 4; AND THE CALIFORNIA GREEN BUILDING STANDARDS CODE, CHAPTER 4, DIVISION 4.5.
- BATHROOMS REQUIRE EXHAUST FANS (MINIMUM 50 CFM SWITCHED OR 20 CM CONTINUOUS) TO BE DUCTED TO THE EXTERIOR. A BATHROOM IS DEFINED "AS A ROOM WITH A BATHTUB, SHOWER, OR SPA OR SOME SIMILAR SOURCE OF MOISTURE".
- RESIDENTIAL BATHROOM EXHAUST FANS SHALL BE ENERGY STAR RATED 4. AND SHALL BE CONTROL BY A HUMIDISTAT CAPABLE OF AN ADJUSTMENT BETWEEN 50 AND 80% HUMIDITY. CALGREEN 4.506.1. EXCEPTION: CONTROL BY A HUMIDISTAT *IS NOT* REQUIRED IF THE BATHROOM EXHAUST FAN IS ALSO THE DWELLING WHOLE HOUSE VENTILATION. A) ALL FANS INSTALLED TO MEET ALL OF THE PRECEDING VENTILATION REQUIREMENTS MUST BE SPECIFIED AT A NOISE RATING OF A MAXIMUM 1 "SONE" (CONTINUOUS USE) OR 3 "SONE" (INTERMITTENT).
- EXHAUST DUCT SIZE, LENGTH AND OUTLET LOCATION FOR FANS AND 5. HOODS TO BE NOTED ON THE PLANS.

## electric:

SELECTION

ନ୍ତ୍ର

NEW METER WITH AMP PANEL SUBPANEL AMP TO EXISTING

DISTANCE TO CONNECTION =\_\_\_\_ FEET

CONTACT SDG&E REGARDING ELECTRIC SERVICE TO THIS DETACHED ADU. ANY EXISTING SERVICE UPGRADE OR NEW SERVICE FOR THE ADU WILL REQUIRE A SEPARATE PERMIT FROM THE CITY OF ENCINITAS.

AMP MAIN PANEL

OPTIONAL METHOD NEC 220-	30
As an alternative method, the STANDARD ME found in ARTICLE 220 of the National Electric Code	
1. GENERAL LIGHTING LOADS Dwelling <u>224</u> sq. ft. x 3 VA = Small appliance loads -220-16 (a) 1500 VA x <u>2</u> circuits = Laundry load -220-16(b) 1500 VA x <u>0</u> circuits = General Light	<sup>700</sup> VA <u>3000</u> VA <u>N/A</u> VA thing Total <u>3700</u> VA <sup>−</sup> 0 0
2. COOKING EQUIPMENT LOADS - Nameplate Value Range 5000 VA = 22 Cooktop VA = 00 Oven(s) VA = 00 Cooking Equipm	- 5000 VA 
3. ELECTRIC DRYER 220-18 (Nameplate, 5000 VA minimum) DryerN/AVA = D	ryer Total <u>N/A</u> VA =
FIXED APPLIANCE LOADS 230-30(b3)     Dishwasher =     Disposal =     Compactor =     Water Heater =     Hydromassage Bathtub =     Microwave Oyen =     Built-in Vacuum =     Fixed Applia	N/A VA 1000 VA 4500 VA 1500 VA VA 1500 VA VA VA VA VA VA VA VA VA VA
. OPTIONAL SUBTOTAL (Add all of the above totals)	15700 VA
APPLYING DEMAND FACTORS - TABLE 220-30         Optional Subtotal (from line 5)         First 10,000 VA x 100% =         Remaining 5700         VA x 40% =	10,000 VA
HEATING OR AC LOAD - TABLE 220-30 Larger of the Heating or AC Load =	6000 VA
OPTIONAL LOADS TOTAL (Add totals from lines 6 and 7) =	18280VA
MINIMUM SERVICE SIZE = Optional Loads Total =	76_Ampere 2
(Please put total on front of card under Computed Load)	
6 1899 C	les M

GRID CEILING LIGHT

electrical: Jumbing: electrical: electrical: SYMBOL = DESCRIPTION SYMBOL = DESCRIPTION MBOL SYMBOL = DESCRIPTION LIGHT EMITTING DIODE ʹͺϪϴϔϝʹ D LIGHT/HEAT LAMP/FAN COM LED DIMMER SWITCH \$<sub>D</sub> (E)( )CEILING SURFACE MOUNT FIXTURE ELECTRICAL METER KEY OPERATED SWITCH Ψĸ M ELECTRICAL PANEL WEATHERPROOF SWITCH WALL MOUNTED FIXTURE \$<sub>WP</sub> (HP WH)  $(\bullet)$ DUPLEX OUTLET VACANCY SENSOR SWITCH GING FIXTURE \$<sub>vs</sub> WH D HALF HOT DUPLEX OUTLET DOOR OPERATED SW WALL SCONCE  $\smile$  $\oplus$ (wc) QUADRAPLEX OUTLET (F) VENT FAN RECESSED CEILING FIXTURE RECESSED CEILING WALL WASH  $\mathbf{F}$ GFI  $(\square)$ INDOOR AIR QUALITY FAN SO GROUND FORCE OUTLET (IAQ) FIXTURE M RECESSED MOISTURE RESISTANT ⇒wp WATERPROOF GFI OUTLET WHOLE HOUSE I HB<sub>Ⅲ</sub> CEILING FIXTURE  $\square$ IN-FLOOR OUTLET —⊲cw HEAT LAMP FLOOD FIXTURE GARBAGE DISPOSAL OU JUNCTION BOX -0---0-| TRACK LIGHT FIXTURE RP  $\Rightarrow$  $\bigtriangledown$ DEDICATED GROUND OUTLET LIGHT FLOURESCENT TUBE FIXTURE DĞ  $\bigcirc$ LED UNDERCABINET FIXTURE MOTION DETECTOR 220V 015 FT WP GFI VATERPROOF 220V C  $\sim$ CEILING FAN WITH LIGHT ( P PHOTOELECTRIC SENSOR  $\sim \sim \sim$ ₹ 220  $(\mathbf{H})\mathbf{F}$ HEAT LAMP/FAN COMBO 1 WAY SWITCH STEP LIGHT 

LED LIGHT/FAN COMBO

(L)(F)

3 WAY SWITCH

QUALIFICATION REQUIREMENTS SPECIFIED

IN JOINT APPENDIX JA12 AND HAVE A MINIMUM CAPACITY OF 7.5 KWH.

- 1 SEE LEGENDS BELOW FOR SYMBOLS RELATING TO THE UTILITY PLAN.
- SEE SHEET a0.1 FOR SCHEDULES RELATING TO THE UTILITY PLAN. 2.
- RECEPTACLE OUTLET LOCATION PER NEC ARTICLE 210.52. 3. GFCI PROTECTED OUTLETS FOR LOCATIONS DESCRIBED IN NEC 210.8(A): LAUNDRY AREAS, KITCHEN DISHWASHERS, KITCHENS, GARAGES, BATH ROOMS, OUTDOORS, WITHIN 6' OF A SINK, ETC. RECEPTACLE OUTLET
- LOCATION PER NEC ARTICLE 210.52. BATH RECEPTACLE OUTLETS SHALL BE SUPPLIED BY A MINIMUM OF ONE 20 AMP CIRCUIT. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS. THIS
- CIRCUIT MAY SERVE MULTIPLE BATHS (NEC ART. 210-52(D)). TAMPER RESISTANT RECEPTACLES ARE REQUIRED FOR ALL LOCATIONS 6. DESCRIBED IN 210.52 (IE ALL RECEPTACLES IN A DWELLING).
- WEATHER RESISTANT TYPE FOR RECEPTACLES INSTALLED IN DAMP OR WET LOCATIONS.
- ARC-FAULT PROTECTION FOR ALL OUTLETS (NOT JUST RECEPTACLES) LOCATED IN ROOMS DESCRIBED IN NEC 210.12(A): KITCHENS, LAUNDRY AREAS, FAMILY, LIVING BEDROOMS, DINING, HALLS, ETC.
- OUTLETS MUST BE WITHIN 6FT OF ANY OPENING AND NOT TO EXCEED 12FT 9. APART. ANY ISOLATED WALL 2FT OR WIDER TO HAVE OUTLET(S).
- 10. ALL EXTERIOR LIGHTING SHALL BE HIGH EFFICACY, OAE 11. RECESSED LIGHTS SHOWN IN SLOPED CEILINGS SHALL BE A MODEL DESIGNED TO PROVIDE A PERPENDICULAR LIGHT SOURCE IN A SLOPED CEILING.
- PROVIDE UFER GROUND AT ELECTRIC SERVICE LOCATION IN FOUNDATION. 12 GROUND SHALL BE A 20' LONG #4 REINFORCING BAR, OAE.
- PROVIDE SMOKE DETECTORS IN EACH SLEEPING ROOM AND AT A POINT 13. CENTRALLY LOCATED IN AN AREA GIVING ACCESS TO EACH SEPARATE SLEEPING AREA. SMOKE DETECTORS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING AND SHALL BE EQUIPPED WITH A BATTERY BACKUP. SMOKE DETECTORS MAYBE SOLELY BATTERY POWERED WHEN INSTALLED IN EXISTING BUILDINGS. (CRC §R314.6)
- WHERE MORE THAN ONE COMBINATION SMOKE/CARBON MONOXIDE DETECTOR IS REQUIRED, THE ALARM SHALL BE INTERCONNECTED IN A MANNER THAT ACTIVATION OF ONE ALARM SHALL ACTIVATE ALL THE ALARMS IN THE RESIDENCE.
- 15. CONTROL VALVES IN BATHTUBS, WHIRLPOOL BATHTUBS, SHOWERS AND TUB-SHOWER COMBINATIONS MUST BE PRESSURE BALANCED OR THERMOSTATIC MIXING VALVES. CPC SECTION 414.5 AND 418.0.
- 16. ALL HOT WATER PIPING SIZED <sup>3</sup>/<sub>4</sub>" OR LARGER IS REQUIRED TO BE INSULATED AS FOLLOWS: 1" PIPE SIZE OR LESS: 1" THICK INSULATION; LARGER PIPE SIZES REQUIRE 11/2" THICK INSULATION. NOTE: IN ADDITION, THE 1/2" SIZE HOT WATER PIPE TO THE KITCHEN SINK IS REQUIRED TO BE INSULATED. ES 150.0(J)2
- SEE T24 DOCUMENTATION SHEET FOR MORE INFORMATION ON WATER 17 HEATING, SPACE HEATING, AND COOLING EQUIPMENT SPECIFICATIONS.
- 18. SHOW THE LOCATIONS OR PROVIDE NOTES OF ALL CARBON MONOXIDE ALARMS TO MEET THE REQUIREMENTS OF CALIFORNIA RESIDENTIAL CODE SECTION R315. • INSTALLED IN DWELLING UNITS AND IN SLEEPING UNITS WITHIN WHICH
- FUEL-BURNING APPLIANCES ARE INSTALLED AND IN DWELLING UNITS THAT HAVE ATTACHED GARAGES. WHERE MORE THAN ONE CARBON MONOXIDE ALARM IS REQUIRED TO INSTALLED THE ALARM SHALL BE INTERCONNECTED IN A MANNER THAT
- ACTIVATION OF ONE ALARM SHALL ACTIVATE ALL THE ALARMS IN THE INDIVIDUAL UNIT. \*WHERE AREAS OF NO CONSTRUCTION IS TAKING PLACE CARBO
- MONOXIDE DETECTORS CAN BE SOLELY BATTER
- CARBON MONOXIDE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM 19. THE BUILDING WIRING IS SERVED FROM A COMMERCIAL SOURCE AND WHERE PRIMARY POWER IS INTERRUPTED, SHALL RECEIVE POWER FROM A BATTERY. WIRING SHALL BE PERMANENT AND WITHOUT A DISCONNECTING SWITCH OTHER THAN THOSE REQUIRED FOR OVER-CURRENT PROTECTION. SHOW THE LOCATIONS OF PROVIDE NOTES OF ALL SMOKE ALARMS 20.
- MEETING THE REQUIREMENTS OF CRC SECTION R314. • ON THE CEILING OR WALL OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF BED ROOMS.
- IN EACH ROOM USED FOR SLEEPING PURPOSES. • IN EACH STORY WITHIN A DWELLING UNIT, INCLUDING BASEMENTS.
- IN DWELLING UNITS WITH SPLIT LEVELS AND WITHOUT AN INTERVENING DOOR BETWEEN THE ADJACENT LEVELS. A SMOKE ALARM INSTALLED ON THE UPPER LEVEL SHALL SUFFICE FOR THE ADJACENT LOWER LEVEL PROVIDED THAT THE LOWER LEVEL IS LESS THAN ONE FULL STORY BELOW THE UPPER LEV

DESCRIPTION

FIRE SPRINKLER

ROUND SHOWER DRAIN

LINEAR SHOWER DRAIN

CLEAN OUT

FLOOR DRAIN

FLOOR SINK

DECK OR ROOF DRAIN

OVERFLOW SCUPPER

DECK OR ROOF DRAIN +

OVERFLOW SCUPPER

DOWNSPOUT

URINAL

BIDET

TOILET - FLOOR MOUNT

HERE AREAS OF NO CONSTRUCTION IS TAKING PLACE SMOKE CTORS CAN BE SOLELY BATTERY POWERED ONLY.

## plumbing:

DESCRIPTION	SYMBOL	=	
WATER METER	×	=	
FIRE WATER METER	×	=	
TANK WATER HEATER		=	
ELECTRIC HEAT PUMP WATER HEATER	CO	=	
TANKLESS WATER HEATER	⊖ FD	=	
WATER CONDITIONER	⊖ FS	=	
WATER SERVICE SHUTOFF	$\otimes$	=	
HOSE BIB	□ OS	=	
COLD WATER VALVE	$\bigcirc \circ$	=	
RECESSED PLUMBING	DS	=	
SHOWERHEAD		=	
OVERHEAD SHOWERHEAD	( <u>)</u>	=	
ADJUSTABLE SHOWERHEAD		=	

## plumbing:

# SYMBOL = Ĵ 0 | 00 \_\_\_\_

#### DESCRIPTION SYMBOL =

## mechanical:

#### DESCRIPTION SPLIT SYSTEM HEAT PUMP EXTERIOR UNIT $[H] \rightarrow \rightarrow$ SPLIT SYSTEM HEAT PUMP INTERIOR UNIT —(T) THERMOSTAT SUPPLY AIR WALL REGISTER SUPPLY AIR CEILING REGISTER SUPPLY AIR FLOOR REGISTER RETURN AIR WALL REGISTER $\square$ RETURN AIR CEILING REGISTER RETURN AIR FLOOR REGISTER

# mechanical:

SYMBOL	=	DE
	=	RIGI
	=	RIGII
	=	FLEXIE
FE	=	FIF
VM	=	\ \
(V)	=	N
DV	=	
FV	=	
RV	=	RA



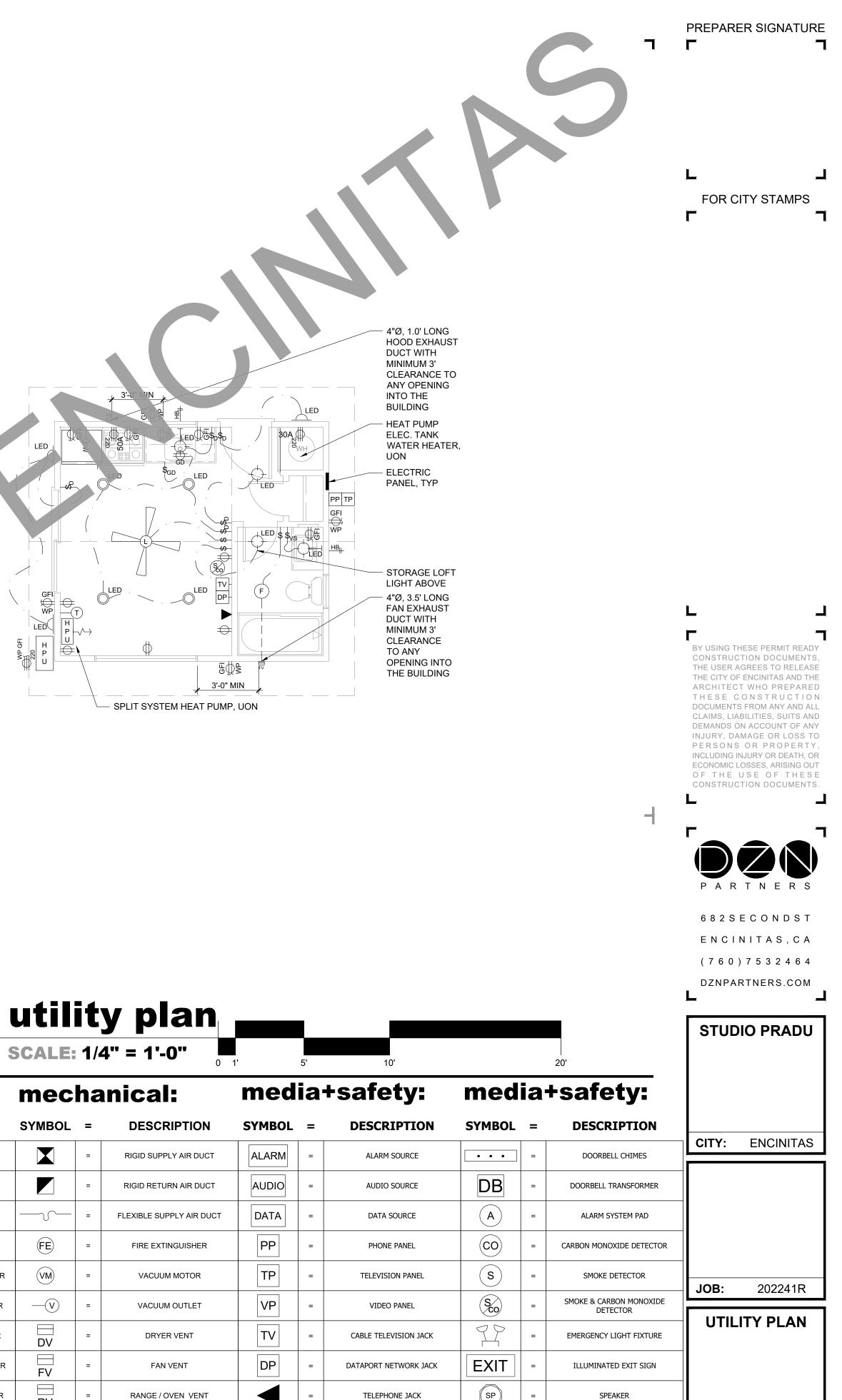




TOILET - WALL MOUNT

FAUCET

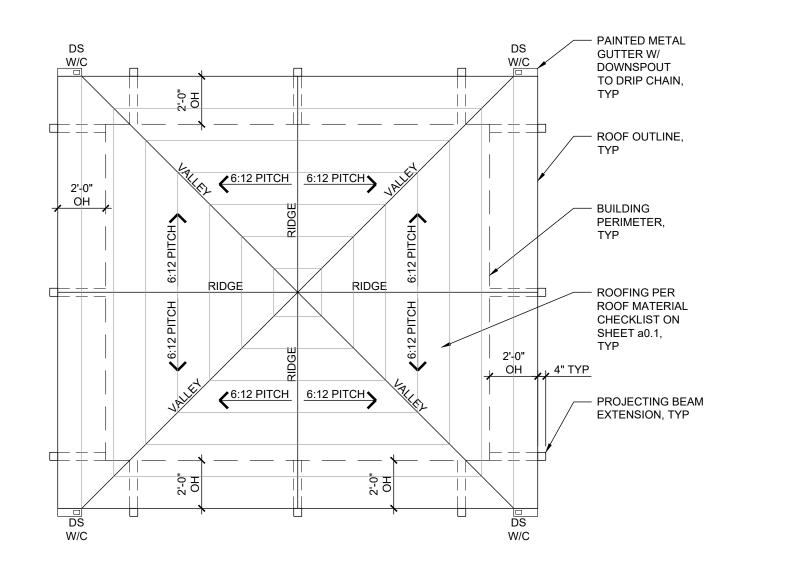
APRON SINK



DOORBELL OR GARAGE DOOR

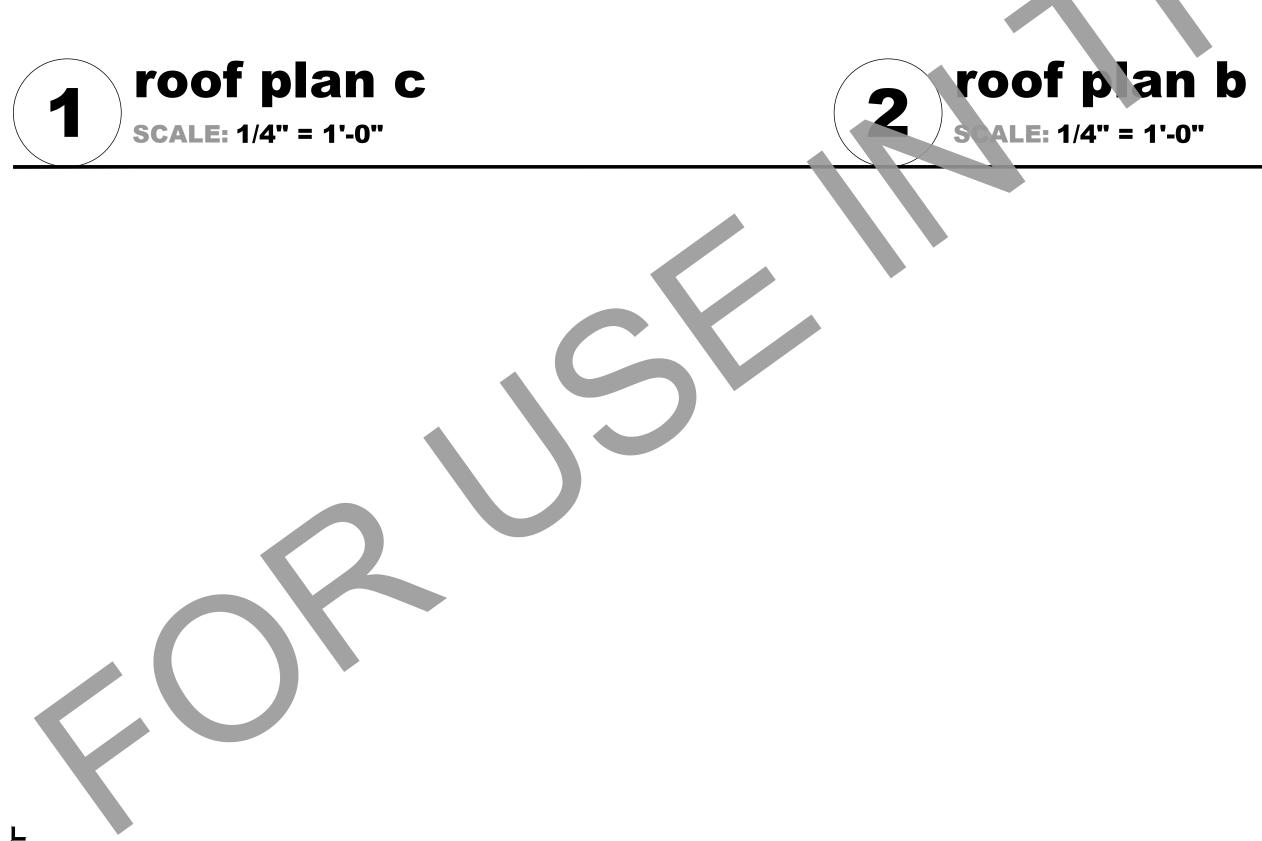
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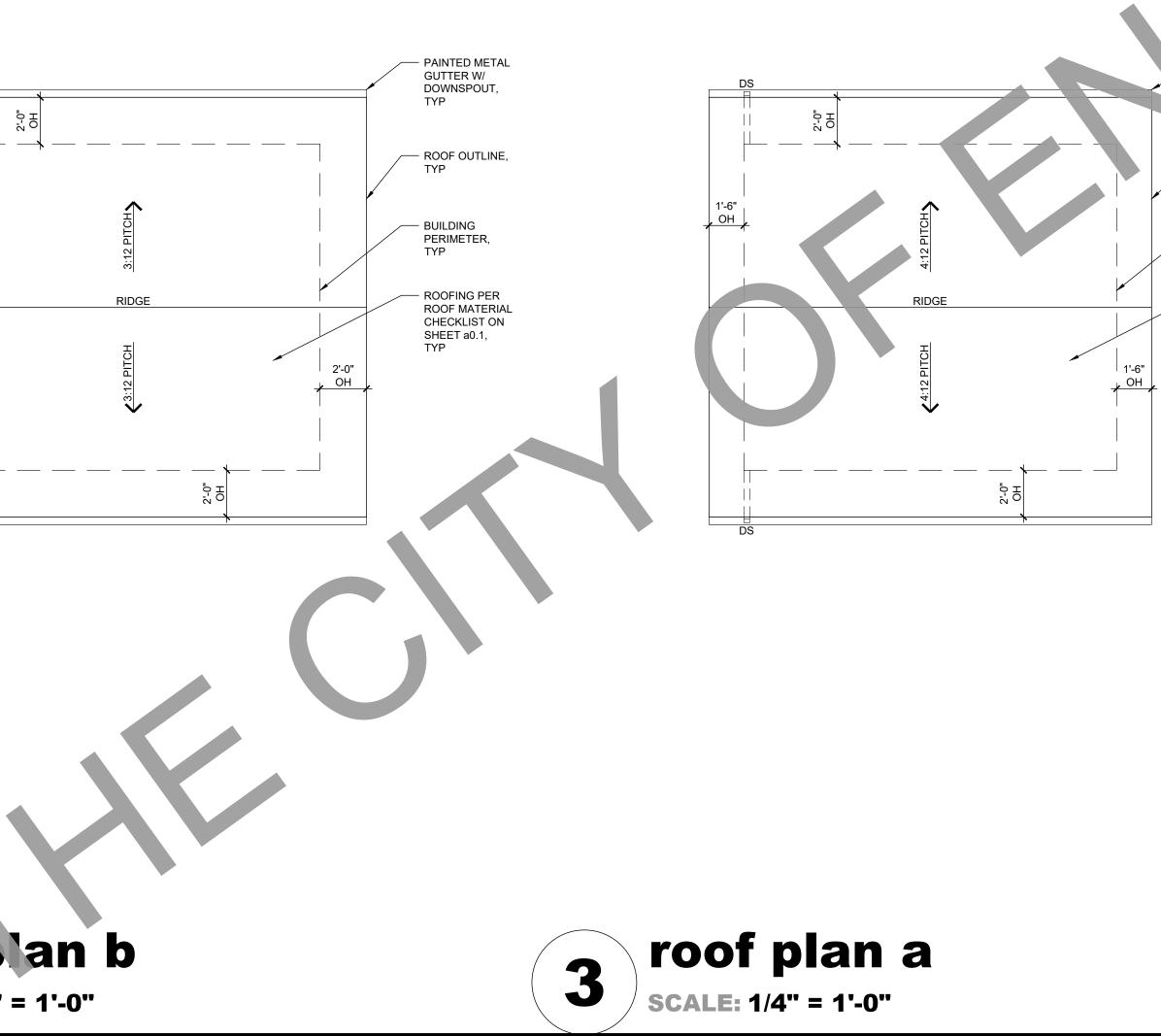
VIDEO CAMERA



2'-0"

OH

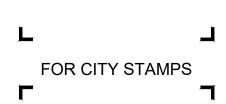




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**Toof plan notes:**1. ALL ROOFING SHALL BE CLASS A RATED.
2. ROOFING SELECTION PER ROOF MATERIAL CHECKLIST ON SHEET a0.1.
3. NO ATTICS PROPOSED, ATTIC VENTING NOT REQUIRED. DETAILS 86, 87 & 88/d0.4 PROVIDE INSULATION ALTERNATIVES.

PREPARER SIGNATURE



- PANTED A GUITER W/ DOWNSPOUT, TYP

— ROOF OUTLINE, TYP

BUILDING
 PERIMETER,
 TYP

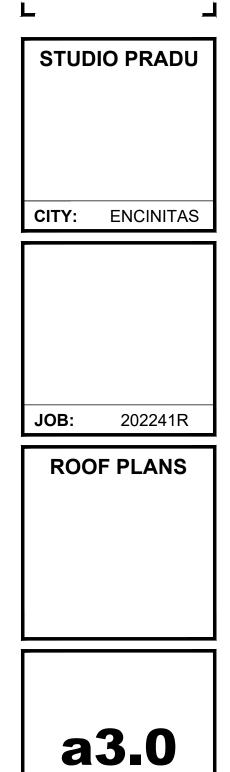
ROOFING PER
 ROOF MATERIAL
 CHECKLIST ON
 SHEET a0.1,
 TYP

0 1'

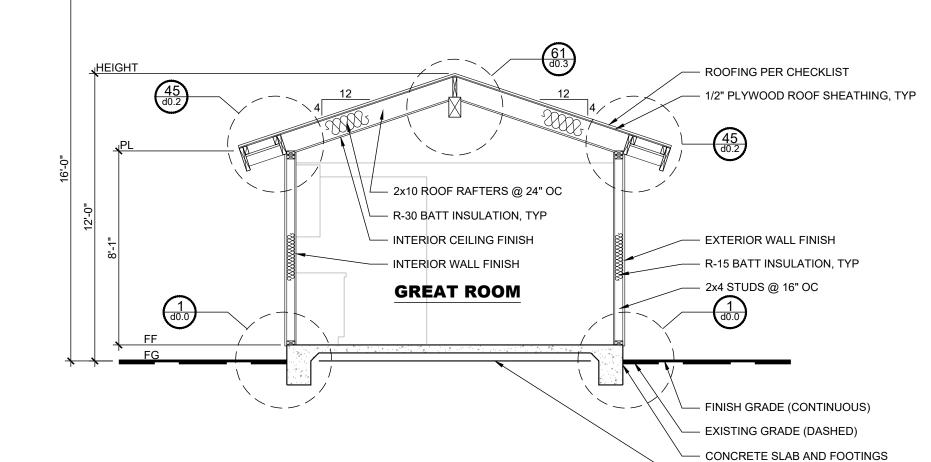
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6 8 2 S E C O N D S T E N C I N I T A S , C A ( 7 6 0 ) 7 5 3 2 4 6 4 DZNPARTNERS.COM

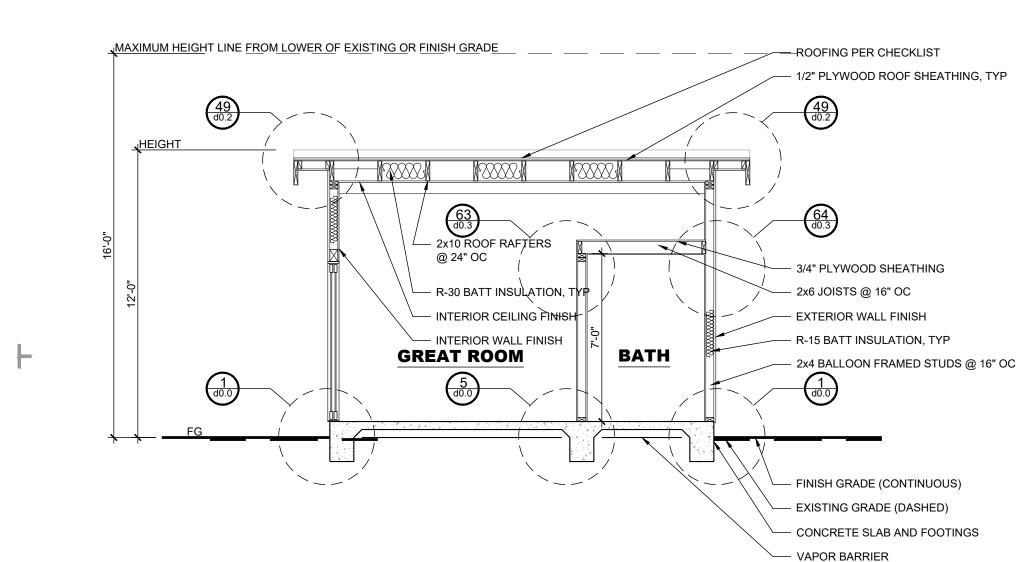


20'

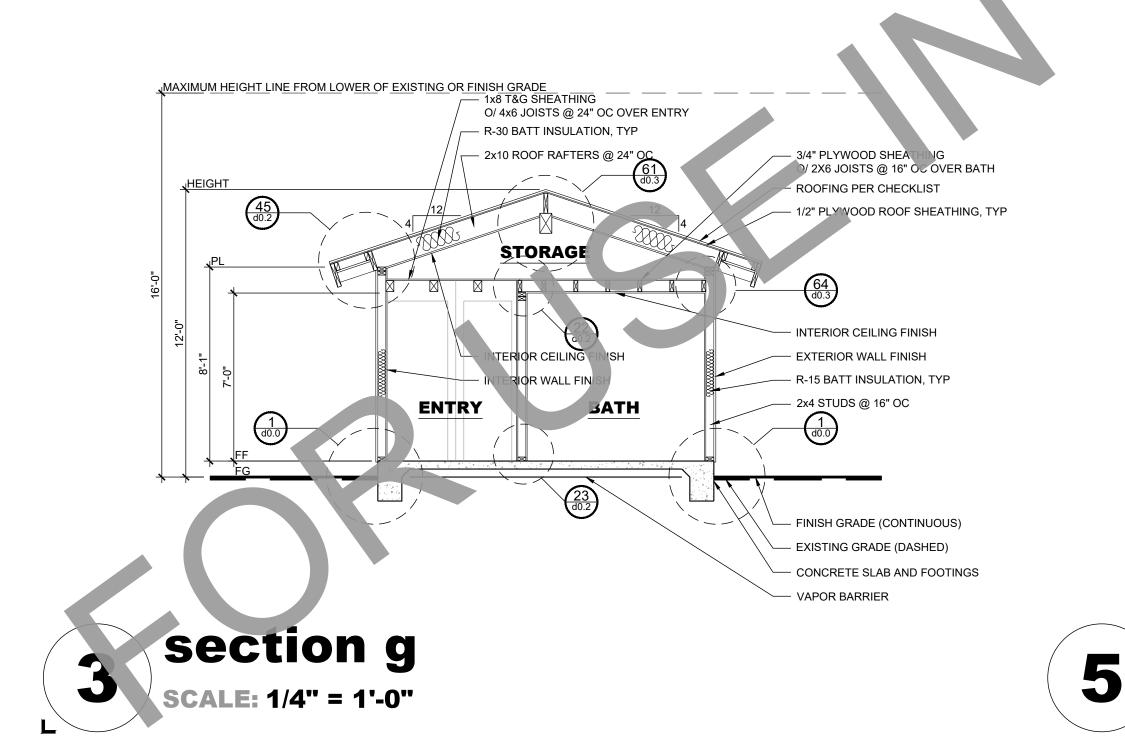


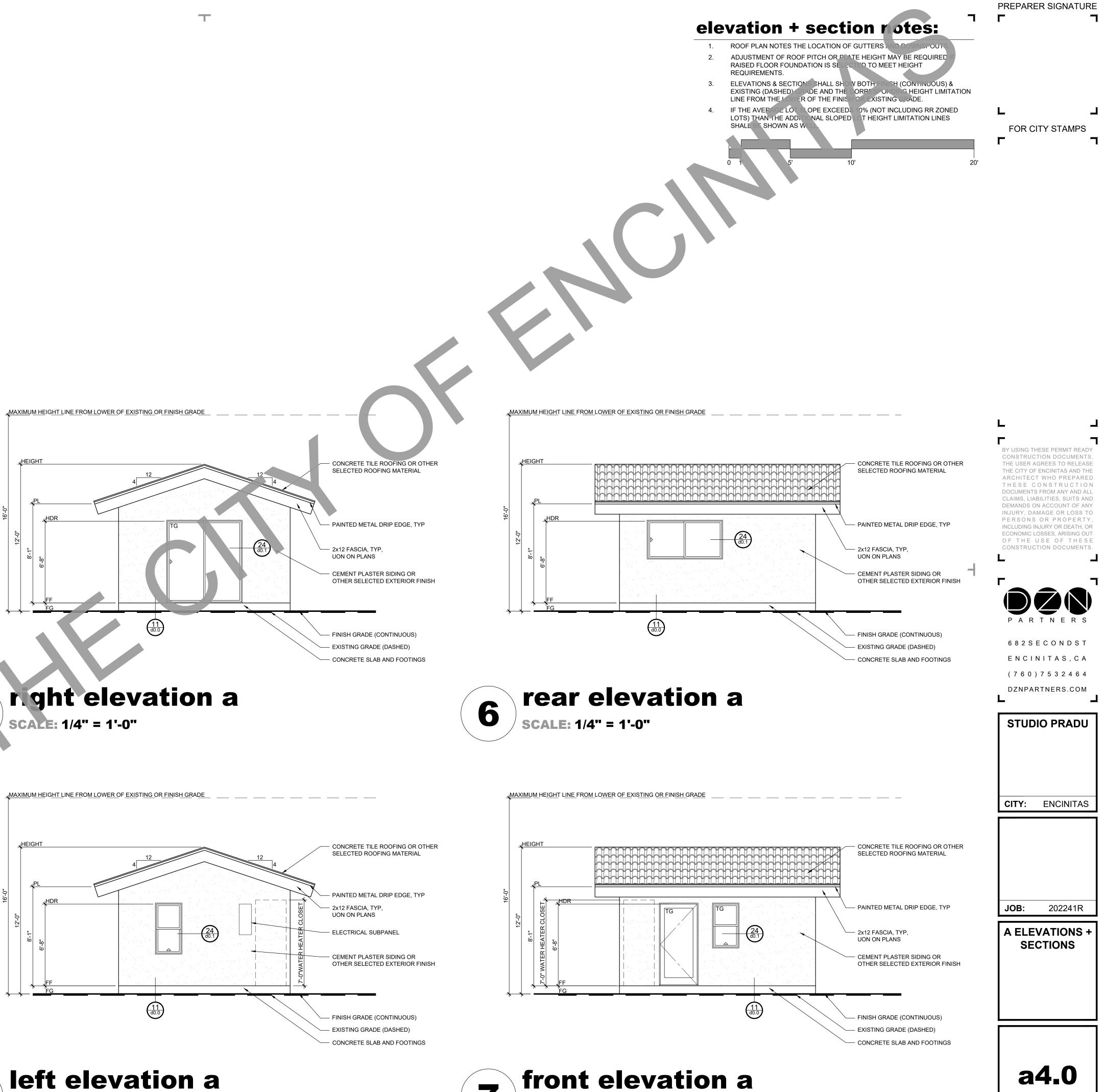
VAPOR BARRIER

section a SCALE: 1/4" = 1'-0"



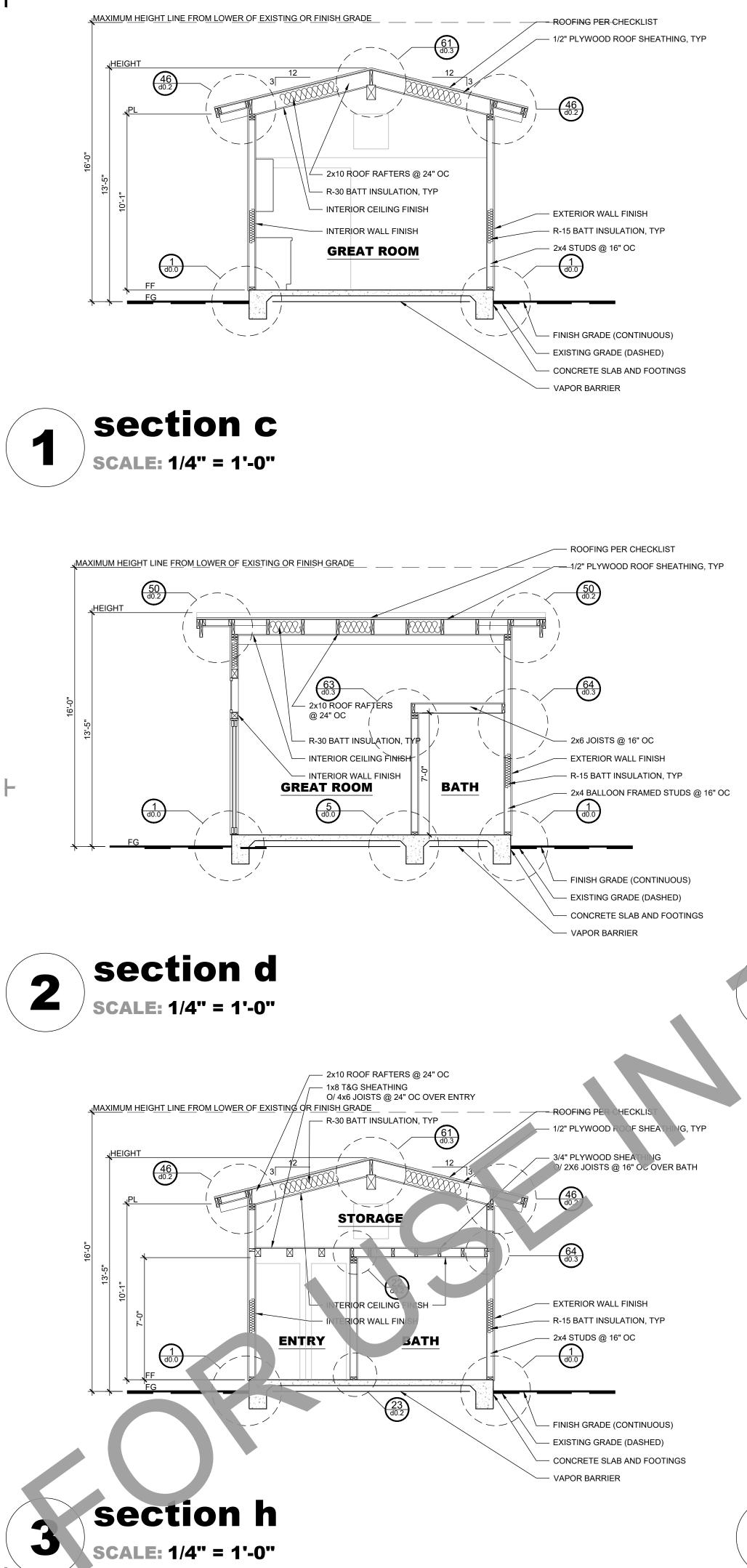


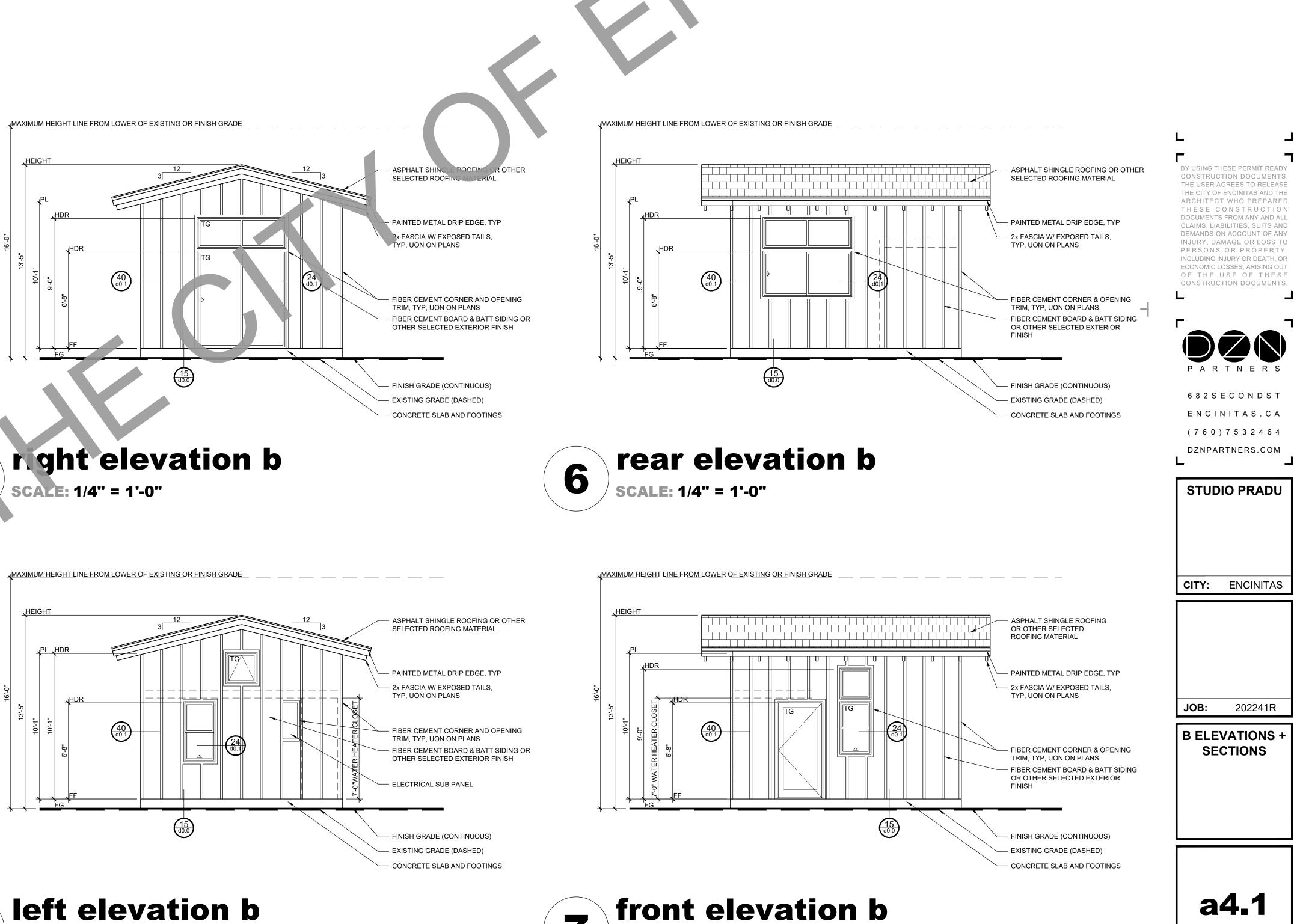


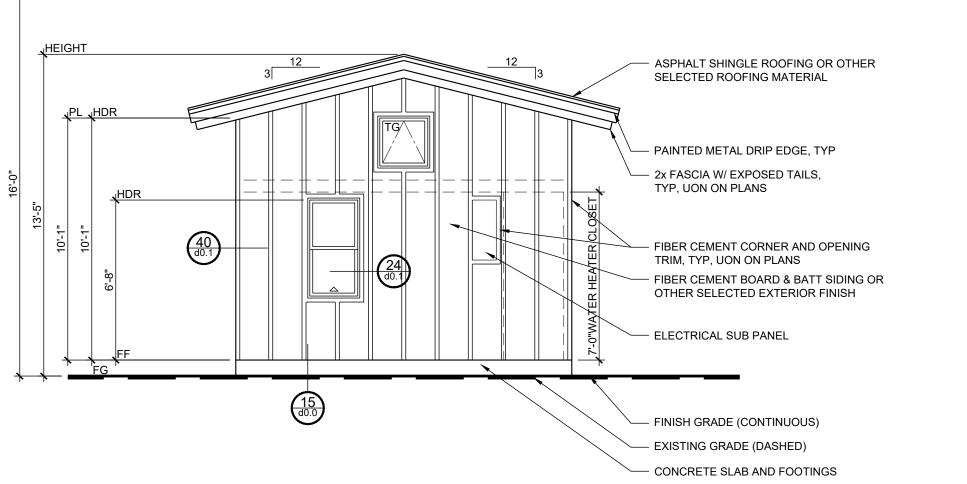






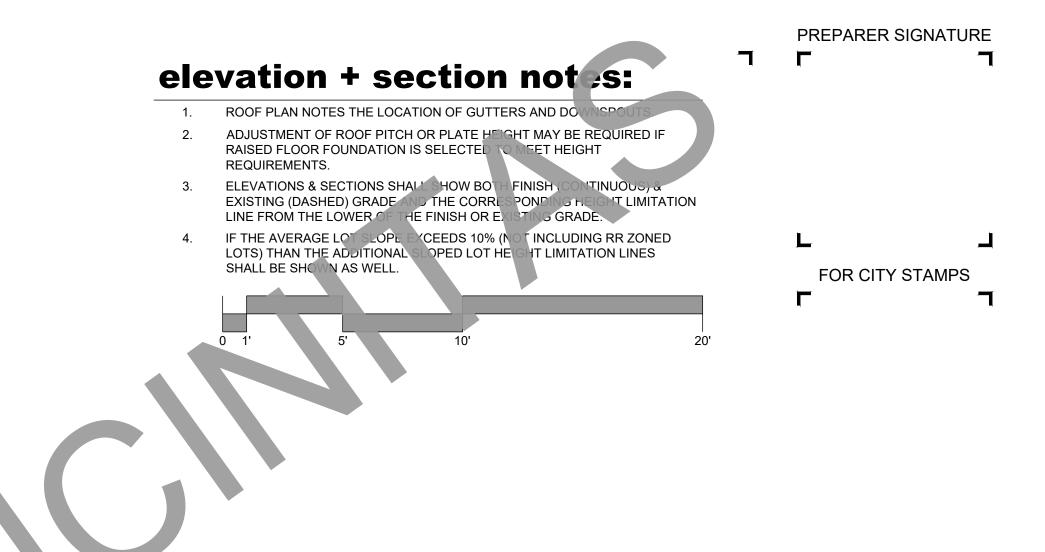


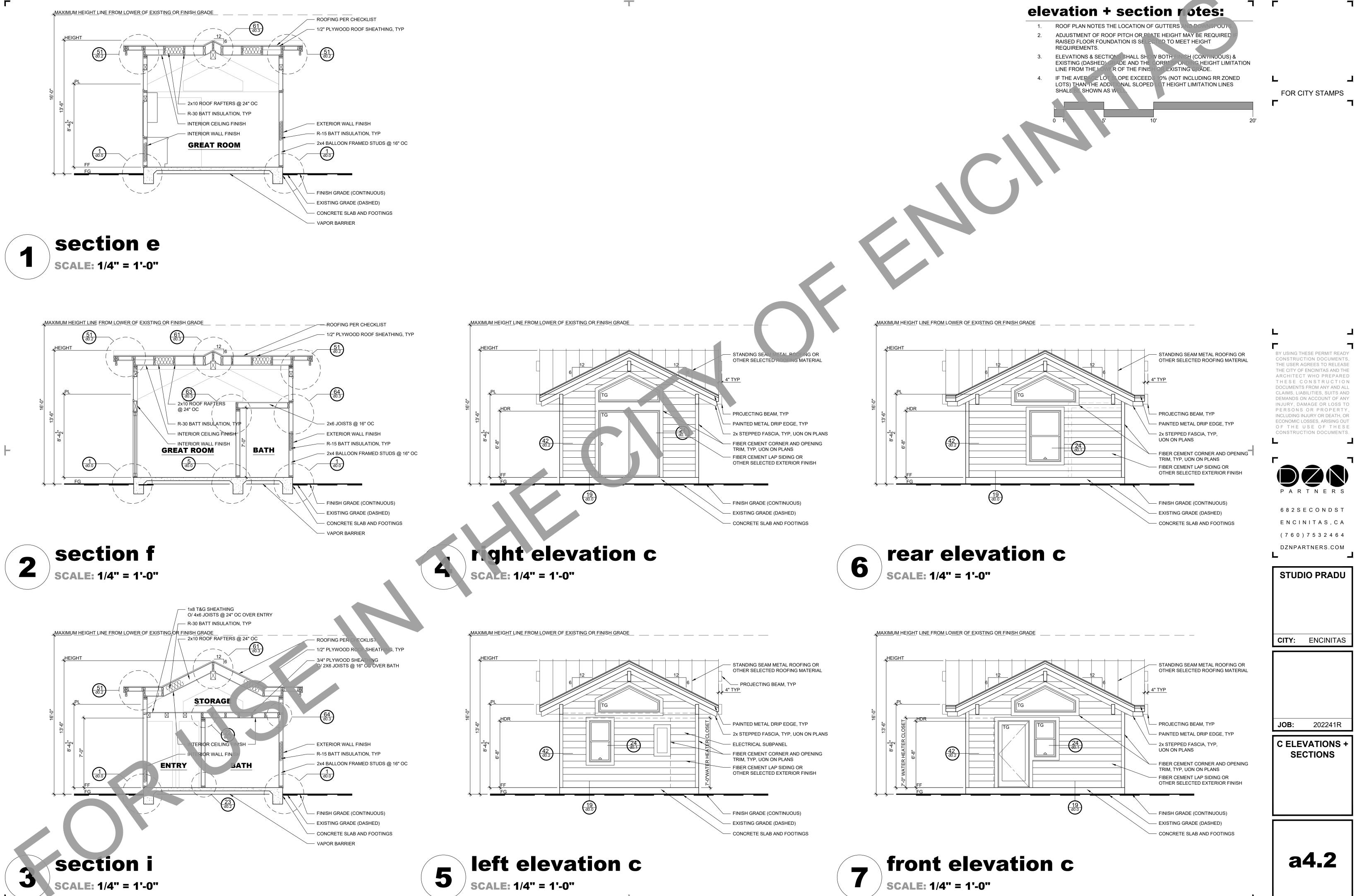






# SCALE: 1/4" = 1'-0"





PREPARER SIGNATURE T

VERTICAL	<b>ZSIGN</b>	desig		L DESIGN	
		SE	ISMIC	WIND	
LOAD	#/SF	ITEM	VALUE	ITEM	
ROOF DEAD =	18	SITE CLASS	= D	BASIC WIND SPEED =	-
ROOF LIVE =	20	IMPORTANCE FACTOR, I		IMPORTANCE FACTOR =	
ROOF SNOW =	N/A	OCCUPANCY CATEGORY	= 11	OCCUPANCY CATEGORY =	
FLOOR DEAD =	15	SEISMIC DESIGN CATEGORY	= D	WIND EXPOSURE = CATEGORY HEIGHT &	
FLOOR LIVE =	40	Ss	= 1.104	EXPOSURE = ADJ. COEFF.	
		SI	= 0.425	TOPO ADJ. FACTOR = SIMPLIFIED	
		Sds	= 0.779	DESIGN WIND = PRESSURE	
		Sdl	= 0.446	PRESSURE =	
		LATITUDE	= 33.191		
		LONGITUDE	= -117.423		
		PLYWOOD SHEAR, R	= 6.5		
		SEISMI	C FORCE G SYSTEMS :		
		Cs = Sds/(R/I)	= 0.120/1.4 (ASD)		
		V = Cs • W (A	SD) = 0.086 • W		

2406	.4 HAZARI	DOUS LOCATIONS.
•	-	CATIONS SPECIFIED IN SECTIONS 2406.4.1 THROUGH 2406.4.7 SHALL BE CONSIDERED SPECIFIC DOUS LOCATIONS REQUIRING SAFETY GLAZING MATERIALS.
2406.	4.1 GLAZIN	IG IN DOORS.
•	HAZARI	IG IN ALL FIXED & OPERABLE PANELS OF SWINGING, SLIDING, & BIFOLD DOORS SHALL BE CONSIDE DOUS LOCATION.
	EXCEPT	
1.	-	D OPENINGS OF A SIZE THROUGH WHICH A 3" Ø SPHERE IS UNABLE TO PASS.
2.		ATIVE GLAZING. G MATERIALS USED AS CURVED GLAZED PANELS IN REVOLVING DOORS.
3.	-	ERCIAL REFRIGERATED CABINET GLAZED DOORS.
		IG ADJACENT TO DOORS.
	GLAZIN EDGE C WHERE BE CON	G IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST VER OF THE GLAZING IS WITHIN A 24" ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSIT THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60" ABOVE THE WALKING SURFACE ISIDERED A HAZARDOUS LOCATION.
	EXCEPT	
1.		ATIVE GLAZING. THERE IS AN INTERVENING WALL OR OTHER REDMANENT RARRIER RETWEEN THE DOOR & CLAZU
2.		E THERE IS AN INTERVENING WALL OR OTHER PERMANENT BARRIER BETWEEN THE DOOR & GLAZII E ACCESS THROUGH THE DOOR IS TO A CLOSET OR STORAGE AREA 3 FEET (914 MM) OR LESS IN DI
3.	GLAZIN	G IN WALLS ON THE LATCH SIDE OF & PERPENDICULAR TO THE PLANE OF THE DOOR IN A CLOSE OF A
	POSITIC	ON IN ONE- & TWO-FAMILY DWELLINGS OR WITHIN DWELLING UNITS IN GROUP R-2.
2406.		IG IN WINDOWS. G IN AN INDIVIDUAL FIXED OR OPERABLE PANEL THAT MEETS ALL OF THE FOLLOWING CONDITIONS
	BE CON	ISIDERED TO BE A HAZARDOUS LOCATION:
1.		POSED AREA OF AN INDIVIDUAL PANE IS GREATER THAN I SQUARE FEET.
2.		OTTOM EDGE OF THE GLAZING IS LESS THAN 18" ABOVE THE FLOOR.
3.		P EDGE OF THE GLAZING IS GREATER THAN 36" ABOVE THE FLOOR.
4.	PLANE	R MORE WALKING SURFACE(S) ARE WITHIN 30", MEASURED HORIZONTALLY & IN A STRAIGHT LINE, O OF THE GLAZING.
	EXCEPT	
1.		ATIVE GLAZING. E A HORIZONTAL RAIL IS INSTALLED ON THE ACCESSIBLE SIDE(S) OF THE GLAZING 34" TO 38" ABOV
	WALKIN LINEAR	NG SURFACE. THE FAIL SHALL BE CAPABLE OF WITHSTANDING A HORIZONTAL LOAD OF 50 POUND FOOT WITHOUT CONTACTING THE GLASS & BE NOT LESS THAN 11/2" IN CROSS-SECTIONAL HEIGH
3.	THE GL	ARD PANES IN SULATING GLASS UNITS OF MULTIPLE GLAZING WHERE THE BOTTOM EXPOSED E ASS IS 25'-0" OF MORE ABOVE ANY FRADE, ICOF, WALKING SURFACE OR OTHER HORIZONTAL OF D (WITHIN 45° OF HORIZONTAL) SUFFACE ADJACENT TO THE GLASS EXTERIOR.
2406.		G IN GUARDS AND RAILINGS.
•	PANELS	G IN GUARDS & RAILINGS, INCLUDING STRUCTURAL BALUSTER PANELS & NONSTRUCTURAL IN-FIL REGARDLESS OF AREA OF HEIGHT ABOVE A WALKING SURFACE SHALL BE CONSIDERED TO BE A DUS LOCATION.
2406.	.5 GLAZIN	G AND WET SURFACES
	STEAM EXPOSE SURFAC	O IN WALLS, ENCLOSURES OR FENCES CONTAINING OR FACING HOT TUBS, SPAS, WHIRLPOOLS, S ROOMS, BATHTUBS, SHOWERS & INDOOR OR OUTDOOR SWIMMING POOLS WHERE THE BOTTOM ED EDGE OF THE GLAZING IS LESS THAN 60" MEASURED VERTICALLY ABOVE ANY STANDING OR W. CE SHALL BE CONSIDERED TO BE A HAZARDOUS LOCATION. THIS SHALL APPLY TO SINGLE GLAZIN NES IN MULTIPLE GLAZING.
	GLAZIN	G THAT IS MORE THAN 60", MEASURED HORIZONTALLY & IN A STRAIGHT LINE, FROM THE WATER'S ATHTUB, HOT TUB, SPA, WHIRLPOOL OR SWIMMING POOL.
2406.	*	IG ADJACENT TO STAIRWAYS AND RAMPS
	GLAZIN ADJACE	G WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60" ABOVE THE PLANE OF ENT WALKING SURFACE OF STAIRWAYS, LANDINGS BETWEEN FLIGHTS OF STAIRS & RAMPS SHALL DERED TO BE A HAZARDOUS LOCATION.
1.		DE OF A STAIRWAY, LANDING OR RAMP THAT HAS A GUARD COMPLYING WITH THE PROVISIONS OF INS 1015 AND 1607.9, AND THE PLANE OF THE GLASS IS GREATER THAN 18" FROM THE RAILING.
2.	GLAZIN	G 36" OR MORE MEASURED HORIZONTALLY FROM THE WALKING SURFACE.
2406.		NG ADJACENT TO THE BOTTOM STAIRWAY LANDING
•	ABOVE	G ADJACENT TO THE LANDING AT THE BOTTOM OF A STAIRWAY WHERE THE GLAZING IS LESS THA THE LANDING & WITHIN A 60" HORIZONTAL ARC THAT IS LESS THAN 180° FROM THE BOTTOM TREA S SHALL BE CONSIDERED TO BE A HAZARDOUS LOCATION. TION:
1.		G THAT IS PROTECTED BY A GUARD COMPLYING WITH CBC SECTIONS 1015 AND 1607.9 WHERE TH

## **2022 cbc/crc shear panel schedule:**

 FOUNDAT			SHEAR PANEL	STRUCTURAL 1	COMMON NAIL	ALLOWABLE		SLIDING ANCH	HOR SYSTEM <sup>4</sup>	
	•	2201011	DESIGNATION	APA-RATED	SPACING @	SHEAR/FT W/	5/8" Ø	FRAMING CLIP	16d	
				WOOD STRUCTURAL		WOOD STUDS @	ANCHOR BOLT	SPACING	COMMON NAIL	L
ITEM		VALUE		PANEL	EDGES (BN &EN)	16" OC	SPACING <sup>2</sup>	V=450# -	SPACING <sup>3</sup> 2x	;
		VALUE	X SP LENGTH (FT)				2x SILL - V=1184# 3x SILL - V=1520#	,	SOLE PLATE ONLY	2x ON
					(FN) @ 12" OC		3X SILL - V=1520#	OAE	V=121#	UN
SOIL	=	TYPE 5								
				THICKNESS	OC (INCH)	#/FT	OC (INCH)	OC (INCH)	OC (INCH)	
SITE CLASS	=	D, LATERAL DESIGN	A	3/8"	8d@6	280	48	18	5	
			B <sup>1</sup>	15/32"	8d@4	430	42	12	3	
	_	1 000 #/SE	C <sup>1</sup>	15/32"	8d@3	550	32	9	2	
PRESSURE	-	1,000 #/01	D <sup>1</sup>	15/32"	8d@2	730	24	7	$\rightarrow$	
			E <sup>1</sup>	15/32"	8d@2	870	20	6	$\rightarrow$	
RETAINI	NGV	WALLS	SW	SIMPSON CO. STRON	GWALL (SEE ATTAC	HED DETAIL SHEETS	S IF SPECIFIED FOR	PROJECT)		
			WSW	SIMPSON CO. WOOD	STRONGWALL (SEE	ATTACHED DETAIL	SHEETS IF SPECIFIE	D FOR PROJECT)		
RESTRAINED	_	N/A	SSW	SIMPSON CO. STEEL	STRONGWALL (SEE	ATTACHED DETAIL	SHEETS IF SPECIFIE	D FOR PROJECT)		
LOAD (EFP)	-	N/A	HF	HARDY FRAME (SEE A	ATTACHED DETAIL S	HEETS IF SPECIFIED	D FOR PROJECT)			
CANTILEVER			FOOTNOTES:							
LOAD (EFP)	=	N/A	1	. FRAMING AT FOUNDA						
PASSIVE SOIL				SHALL BE STAGGERE						
PRESSURE	=	N/A	2	. SIMPSON CO BP 5/8 E WEDGE ANCHORS (IC						
_				TABLE ABOVE.	500 ER-505 () MAT D		0 0 ANGI OR BOLT	SAT LAISTINGT OU		AOI
COEFFICIENT OF FRICTION	=	N/A	3	. ALL SILL NAILING SHA	ALL BE STAGGERED	A 1/2" MINIMUM, TYP	PICAL.			
			4	. WHEN A SHEAR PANE	EL IS SPECIFIED ON	BOTH SIDES OF A W	ALL, ALL SLIDING A	NCHOR CONNECTOR	RS SHALL BE ATTACI	HED \
SOILS	KEP	UKI		SPACINGS FROM THE						
BY	=	N/A	5	. MINIMUM 4" PENETRA	TION INTO 4x MATE	RIAL.				

VALUE

110 MPH

1.0

в

1.0

1.0

26.6 #/SF

(Ps30)

16.0 #/SF

PREPARER SIGNATURE ٦

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ING AND LOCATION

EACH END, TOENAIL

EACH END, TOENAIL

EACH JOIST, TOENAIL

2 TOENAILS ON ONE SIDE AND 1 TOENAIL ON OPPOSITE SIDE OF

RAFTER OR TRUSS<sup>C</sup>

FACE NAIL

FACE NAIL

FACE NAIL

FACE NAIL

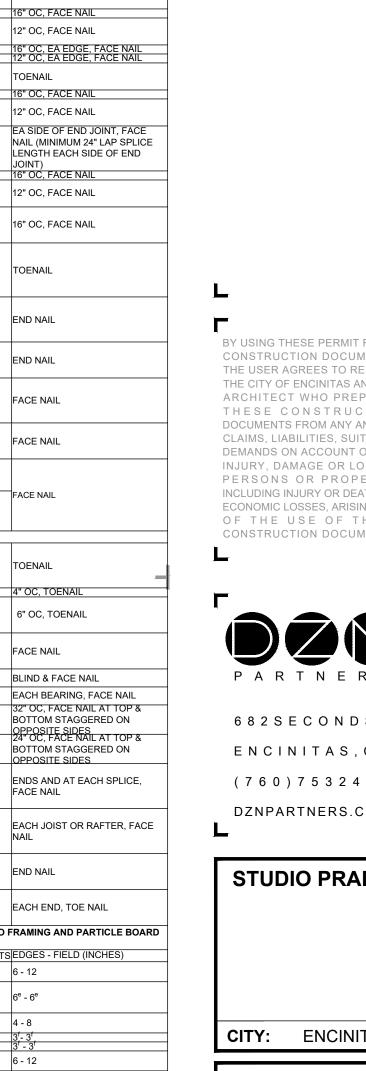
END NAIL

TOENAIL

24" OC, FACE NAIL

16" OC, FACE NAIL

# FOR CITY STAMPS



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**STUDIO PRADU CITY:** ENCINITAS 202241R JOB: STRUCTURAL NOTES

**s0.0** 

40. 1/4" 41. 3/8"

35. 3/4" AND LESS

37. 1- 1/8" - 1- 1/4"

38. 1/2" OR LESS

39. 5/8"

36. 7/8" - 1"

[(2-1/2" X 0.113") INTERIOR PANELING 4d CASING (1-1/2" x 0.080"); ( 4d FINISH (1-1/2" x 0.072") 6d CASING (2" x 0.099"); OR 6d FINISH (2" x 0.092") (PANEL SUPPORTS @ 24") FOR SI: 1 INCH = 25.4 MM a. NAILS SPACED @ 6" AT INTERMEDIATE SUPPORTS (FIELD) WHERE SPANS ARE 48" OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL & PARTICLE BOARD DIAPHRAGMS & SHEAR WALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING

DEFORMED (2-1/2" x 0.131" DEFORMED (2-1/2" x 0.120"

PANEL SIDING TO FRAMING

6d CORROSION-RESISTANT SIDING 6d CORROSION-RESISTANT SIDING (1-7/8" x 0.106"); OR 6d CORROSION-RESISTANT CASING (2" x 0.099") 8d CORROSION-RESISTANT SIDING (2-3/8" x 0.128"); OR 8d CORROSION-RESISTANT CASING (2-1/2" x 0.113")

6<sup>e</sup> - 6<sup>e</sup>

4 - 8

6-12

3 - 6

6 - 12

5 - 12

5 - 12

6 - 12

6 - 12

b. SPACING SHALL BE @ 6" OC ON THE EDGES & @ 12" OC @ INTERMEDIATE SUPPORTS (FIELD) FOR NON-STRUCTURAL APPLICATIONS. PANEL SUPPORTS @ 16" OC (20" OC IF STRENGTH AXIS IS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED) c. WHERE A RAFTER IS FASTENED TO AN ADJACENT PARALLEL CEILING JOIST IN ACCORDANCE WITH THIS SCHEDULE & THE CEILING JOIST IS FASTENED TO THE TOP PLATE ACCORDING TO THIS SCHEDULE, THE NUMBER OF TOENAILS IN THE RAFTER SHALL BE PERMITTED TO BE REDUCED BY 1 NAIL.

d, RSRS-01 IS A ROOF SHEATHING RING SHANK NAIL MEETING SPECIFICATIONS IN ASTM F1667. e. TABULATED FASTENER REQUIREMENTS APPLY WHERE THE ULTIMATE DESIGN WIND SPEED IS LESS THAN 140 MPH. FOR WOOD STRUCTURAL PANEL ROOF SHEATHING ATTACHED TO GABLE-END ROOF FRAMING & TO INTERMEDIATE SUPPORTS (FIELD) WITHIN 48" OF ROOF EDGES & RIDGES, NAILS SHALL BE SPACED @ 4" OC WHERE THE ULTIMATE DESIGN WIND SPEED IS GREATER THAN 130 MPH IN EXPOSURE B OR GREATER THAN 110 MPH IN EXPOSURE C. SPACING EXCEEDING 6" OC @ INTERMEDIATE SUPPORTS (FIELD) SHALL BE PERMITTED WHERE THE FASTENING IS DESIGNED PER THE AWC NDS.

f. FASTENING IS ONLY PERMITTED WHERE THE ULTIMATE DESIGN WIND SPEED IS LESS THAN OR EQUAL TO 110 MPH. g. NAILS & STAPLES ARE CARBON STEEL MEETING THE SPECIFICATIONS OF ASTM F1667. CONNECTIONS USING NAILS & STAPLES OF OTHER MATERIALS, SUCH AS STAINLESS STEEL, SHALL BE DESIGNED BY ACCEPTABLE ENGINEERING PRACTICE OR APPROVED PER SECTION104.11. 2304.10.2.1 ADDITIONAL REQUIREMENTS. FASTENERS USED FOR THE ATTACHMENT OF EXTERIOR WALL COVERINGS SHALL BE HOT-DIPPED ZINC-COATED GALVANIZED STEEL, MECHANICALLY DEPOSITED ZINC-COATED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER. THE COATINGS WEIGHTS FOR HOT-DIPPED ZINC-COATED FASTENERS SHALL BE IN ACCORDANCE WITH ASTM A153. THE COATING WEIGHTS FOR MECHANICALLY DEPOSITED ZINC-COATED FASTENERS SHALL BE IN ACCORDANCE WITH ASTM B695, CLASS 55 MINIMUM.

2022 CBC TABLE 2304.10 2 **FASTENING SCHEDULE** DESCRIPTION OF BUILDING ELEMENTS

 
 KOOF

 4-8d BOX (2-1/2"x0.113"); OR

 3-8d COMMON (2-1/2"x0

 3-10d BOX (3"x0.128"); (

 3-3"x0.131" NAILS; OR

 2-3"x0.400 C STADUES
 1. BLOCKING BETWEEN CEILING JOISTS, RAFTERS OR TRUSSES TO TOP PLATE OR OTHER FRAMING BELOW -3"14 GAGE STAPLES, -8d COMMON (2-1/2"x0 ONSIDERED A -3"x0.131" \AILS; OR BLOCKING BETWEEN RAFTERS OR TRUSS NOT \_\_<u>STAPLES</u> ...ION (3-1/2"x0.1 AT THE WALL TOP PLATE, TO RAFTER OR TRUSS 1" NAILS: OR GAGE STAPLES 3"x "NAILS @ 6" OC; OF 3"x14 `E STAPLES @ 6" O 3-8d C ON (2-1/2"x0.131" FLAT BLOCKING TO TRUSS AND WEB FILLER "x0.128"); OR "LS; OR 3-10d BC 3-3"x0.13 2. CEILING JOISTS TO TOP PLATE 3-3"14 GAC TAPLES,7/16" CF 3-16d COMN 3-1/2"x0.162"); 3. CEILING JOIST NOT ATTACHED TO FARALLEL RAFTER, LAPS OVER PARTITIONS (NO 1, ROST) 4-10d BOX (3 28"); OR 4-3"x0.131" NAILS OR 4-3" 14 GAGE S1. S,7/16" CROWN (SEE SECTION 2308.7.3.1, TABLE 2308.7.3.1) 4. CEILING JOIST ATTACHED PARALLEL RAFTER (HEEL JOINT) (SEE SECTION 2308.7.3.1. PER TABLE 2308.7.3.1 EST VERTICAL TABLE 2308.7 ) POSITION & COLLAR JRFACE SHALL RAFTER OR TRUSS TO TOP PLATE (SEE 3-16d BOX (3-1/2"x0.135"); OR 4-10d BOX (3-1/2"x0.135"); OR 4-3"x0.131" NAILS; OR 4-3"x1 4 GAGE STAPLES, 7/16" CROWN 2-16d COMMON (3-1/2"x0.162"); OR ECTION 2308.7.5, TABLE 2308.7.5) 2-16d COMMON (3-1/2"x0.162"); OR 3-16d BOX (3-1/2"x0.135"); OR 3-3"x0.131" NALLS; OR 3-3" x1 4 GAGE STAPLES,7/16" CROWN; OR 3-10d COMMON (3-1/2"x0.148"); OR 3-16d BOX (3-1/2"x0.135"); OR 4-10d BOX (3'x0.128"); OR 4-3"x0.131" NALLS; OR 4-3" x0.131" X0.128"; OR 4-3" x0.131" X0.128"; OR 4-3" x0.131" X0.135"; OR 4-3" x0.131" X0.131" X0.131" X0.135"; OR 4-3" x0.131" X0.131 7. ROOF RAFTERS TO RID JE, VALLEY OR HIP RAFTERS; OF ROOF RAFTER TO 2-INCH RIDGE BEAM GLAZING. S DEPTH. WALL 16d COMMON (3-1/2"x0.162"); 10d BOX (3"x0.128"); OR TUD TO STUD (NOT AT BRACED WALL 10d BOX (3"x0.128"); OR 3"x0.131" NAILS; OR 3-3" 14 GAGE STAPLES,7/16" CROWN 16d COMMON (3-1/2"x0.162") 16d BOX (3-1/2"x0.135"); OR 3"x0.131" NAILS; OR 3-3" 14 GAGE STAPLES,7/16" CROW 16d COMMON (3-1/2"x0.162"); OR 16d ROX (3-1/2"x0.136") NELS) 9. STUD TO STUD AND ABUTTING STUDS AT IONS SHALL INTERSECTING WALL CORNERS (AT BRACED WALL PANELS) 10. BUILT-UP HEADER (2" TO 2" HEADER) 6d BOX (3-1/2"x0.135") 4-8d COMMON (2-1/2"X.131"); OR 14-80 COMMON (2-1/2"X.131"); OR 4-10d BOX (3"x0.128"); OR 5-8d BOX (2-1/2"x0.113") 16d COMMON (3-1/2"x0.162") 10d BOX (23"x0.128"); OR 3"x0.131" NAILS; OR 3" 14 GAGE STAPLES,7/16" CROW, 8-16d COMMON (3-1/2"x0.162"); OR 1. CONTINUOUS HEADER TO STUD 12. TOP PLATE TO TOP PLATE LINE, OF THE 
 13. TOP PLATE TO TOP PLATE, AT END JOINTS
 12-10d BOX (3-1/2\*x0.135"); OR

 13. TOP PLATE TO TOP PLATE, AT END JOINTS
 12-10d BOX (3"x0.128"); OR

 14. BOTTOM PLATE TO JOIST, RIM JOIST, BAND
 16d COMMON (3-1/2"x0.135"); OR

 JOIST OR BLOCKING (NOT AT BRACED WALL
 16d BOX (3"x0.128"); OR

 14. BOTTOM PLATE TO JOIST, NIN GOOT, 2014
 16d BOX (3"x0.135"); OR

 JOIST OR BLOCKING (NOT AT BRACED WALL
 3"x0.131" NAILS; OR

 PANELS)
 3" 14 GAGE STAPLES, 7/16" CROW

 2- 16d COMMON (3-1/2"x0.162"); O
 2- 164 COMMON (3-1/2"x0.162"); O

 15. BOTTOM PLATE TO JOIST, RIM JOIST, BAND
 2- 16d COMMON (3-1/2"x0.162"); OR

 3.16d BOX (3"x0.135"); OR
 3-16d BOX (3"x0.135"); OR

 4-3"x0.131" NAILS; OR
 4-3"x0.131" NAILS; OR

 3.16d BOX (3-1/2"x0.135"); OR
 3-16d BOX (3-1/2"x0.135"); OR

 4.3" 14 GAGE STAPLES,7/16" CROWN
 3-16d BOX (3-1/2"x0.135"); OR

 4.48d COMMON (2-1/2"x0.135"); OR
 4-3"x0.131" NAILS; OR

 4.30 COMMON (0-1/2"x0.135"); OR
 4-3"x0.131" NAILS; OR

 4.3" 14 GAGE STAPLES,7/16" CROWN; OR
 4-3"x0.131" NAILS; OR

 4.48d BOX (3"x0.128"); OR
 4-3"x0.131" NAILS; OR

 4.3" 14 GAGE STAPLES,7/16" CROWN; OR
 2-16d COMMON (3-1/2"x0.131"); OR

 16. STUD TO TOP OR BOTTOM PLATE
 4-3" 14 GAGE STAPLES,7/16" CROWN; OR

 2-16d COMMON (3-1/2"x0.135"); OR
 3-16d BOX (3"x0.135"); OR

 " ABOVE THE POUNDS PER HEIGHT. SED EDGE OF TAL OR 2-16d COMMON (3-1/2"X0.162"); OR 3- 16d BOX (3"x0.138"); OR 3- 10d BOX (3"x0.128"); OR 3-3" x0.131" NAILS; OR 3-3" x0.131" NAILS; OR 3-3" 14 GAGE STAPLES,7/16" CROWN 2-16d COMMON (3-1/2"x0.162"); OR 3-3" x0.131" NAILS; OR 3-3" x0.131" NAILS; OR 3-3" x0.131" NAILS; OR 2-8d COMMON (2-1/2"x0.113"); OR 2-8d COMMON (2-1/2"x0.113"); OR 2-3" x0.131" NAILS; OR \_ IN-FILL 17. TOP PLATES, LAP AT CORNERS AND TO BE A INTERSECTIONS 18. 1" BRACE TO EACH STUD AND PLATE DOLS, SAUNAS, 3-8d BOX (2-1/2"x0.113"); OR 2-8d COMMON (2-1/2"x0.131"); OR 2-10d BOX (3"x0.128") 2-1-3/4" 16 GAGE STAPLES,1" CROWN 3-8d BOX (2-1/2"x0.131"); OR 3-8d BOX (2-1/2"x0.113"); OR 3-10d BOX (3"x0.128"); OR 3-10d BOX (3"x0.128"); OR ттом . 1"x6" SHEATHING TO EACH BEARING OR WALKING GLAZING AND 3-104 BOX (3 X0.128); OR 3-1-3/4" 16 GAGE STAPLES,1" CROWN WIDER THAN 1" x 8" 3-8d COMMON (2-1/2"x0.131"); OR 4-8d BOX (2-1/2"x0.113"); OR 3-10d BOX (3"x0.128"); OR 4-1-3/4" 16 GAGE STAPLES,1" CROWN ELOOP 20. 1"x8" AND WIDER SHEATHING TO BEARING ATER'S EDGE 
 IA-1-3/4" 16 GAGE STAPLES,1" CROWN

 FLOOR

 IA-8d BOX (2-1/2"x0.113"); OR

 3-8d COMMON (2-1/2"x0.131"); OR FLOOR

 3-10d BOX (3"x0.128"); OR

 3-3"x0.131" NAILS; OR

 3-3"x14 GAGE STAPLES,7/16" CROWN

 8d BOX (2-1/2"x0.113"); OR

 8d COMMON (2-1/2"x0.131"); OR

 8d COMMON (2-1/2"x0.131"); OR

 8d COMMON (2-1/2"x0.131"); OR
 . JOIST TO SILL, TOP PLATE OR GIRDER NE OF THE SHALL BE 22. RIM JOIST, BAND JOIST, OR BLOCKING TO 10d BOX (3"x0.128"); OR 3"x0.131" NAILS; OR TOP PLATE, SILL OR OTHER FRAMING BELOW 3"x14 GAGE STÁPLES,7/16" CROWN 3-8d BOX (2-1/2"x0.113"): OR -04 BOA (2-1/2 40: 113 40; ); OR -10d BOX (3\*X0.128"); OR -13/4" 16 GAGE STAPLES, 1" CROWN - 16d BOX (3-1/2"x0.135"); OR 23. 1"x6" SUBFLOOR OR LESS TO EACH JOIST ONS OF 24. 2" SUBFLOOR TO JOIST OR GIRDER <u>16d COMMON (3-1/2"x0.162")</u>
 <u>16d BOX (3-1/2"x0.135")</u>; OR 25. 2" PLANKS (PLANK & BEAM - FLOOR & ROOF) - 16d COMMON (3-1/2"x0.162" 20d COMMON (4"x0.192") 10d BOX (3"x0.128"); OR 3"x0.131" NAILS; OR ESS THAN 60" 26. BUILT-UP GIRDERS AND BEAMS, 2" LUMBER OM TREAD 3" 14 GAGE STAPLES,7/16" CROW AND: 22-20d COMMON (4"x0.192") 3-10d BOX (3"x0.128"); OR 3-3"x0.131" NAILS; OR 3-3" 14 GAGE STAPLES, 7/16" CROV 3-16d COMMON (3-1/2 x0.162"); OF 3- 16d COMMON (3-1/2"x0.162"); OR 4-16d BOX (3-1/2"x0.138"); OR 4-00 BOX (3"x0.128"); OR 4-3"x0.131" NALLS; OR 4-3" 14 GAGE STAPLES,7/16" CROW 3- 16d COMMON (3-1/2"x0.162"); OR RE THE PLANE 7. LEDGER STRIP SUPPORTING JOISTS OR RAFTERS 3- 104 COMMON (3-1/2 X0. 102 ), OR 4-104 BOX (3"X0.128"); OR 4-3"X0.131" NAILS; OR 4-3"X14 GAGE STAPLES,7/16" CROWN 2-8d COMMON (2-1/2"X0.131"); OR 28. JOIST TO BAND JOIST OR RIM JOIST 2-10d BOX (3"x0.128"); OR 2-3"x0.131" NAILS; OR 2-3"x14 GAGE STAPLES,7/16" CROWN 29. BRIDGING OR BLOCKING TO JOIST, RAFTER OR TRUSS WOOD STRUCTURAL PANELS (WSP), SUBFLOOR, ROOF AND INTERIOR WALL SHEATHING TO FRAMING AND PARTICLE BOARD WALL SHEATHING TO FRAMING<sup>a</sup> FIELD = INTERMEDIATE SUPPORTS EDGES - FIELD (INCHES) 6d COMMON OR DEFORMED (2" x 0.113"); OR 6 - 12 2-3/8" x 0.113" NAIL (SUBFLOOR & WALL) 8d COMMON OR DEFORMED (2-1/2"x0.131"x 0.281" HEAD) (ROOF) OR RSRS-01 (2-3/8"x0.113") NAIL (ROOF)<sup>d</sup> 1-3/4" 16 GAGE STAPLE, 7/16" CROWN 30. 3/8" - 1/2" (SUBFLOOR & WALL) 4 - 8 2-3/8" x 0.113" x 0.266" HEAD NAIL (ROOF) 3 - 3' 1-3/4" 16 GAGE STAPLE.7/16" CROWN (ROOF) 3 - 3' 8d COMMON (2-1/2"x0.131"); OR DEFORMED 6 - 12 (2" x 0.113")(SUBFLOOR &WALL) 8d COMMON OR DEFORMED (2-1/2" x 0.113" x 1/2"Ø . 19/32" - 3/4" 0.281" HEAD) (ROOF) OR RSRS-01 (2-3/8" x 0.261 HEAD) (ROOF) OR RSRS-01 (2-3/8 X 0.113") NAIL (ROOF) d 2-3/8" x 0.131" x 0.266" HEAD NAIL NAIL; OR 2" 16 GAGE STAPLE, 7/16" CROWN 10d COMMON (3" x 0.148"); OR DEFORMED (2-1/2" x 0.131" x 0.281' HEAD) OTHER EXTERIOR WALL SHEATHING 1-1/2" x 0.120" GALVANIZED ROOFING NAIL (7/16" HEAD Ø); OR 1.1/4" 16 CACE STAPLE W/ 7/16" OP 1" CROWN LAG SCREW SPACING <sup>5</sup> 32. 7/8" - 1-1/4" 2x SOLE PLATE ONLY V=880# 
 RD SHEATHING <sup>b</sup>
 (7/16" HEAD Ø); OR 1-1/4" 16 GAGE STAPLE W/ 7/16" OR 1" CROWN
 3 - 6

 RD SHEATHING <sup>b</sup>
 (1-3/4" x 0.120" GALVANIZED ROOFING NAIL (7/16" HEAD Ø); OR 1-3/4" x 0.120" GALVANIZED ROOFING NAIL (7/16" HEAD Ø); OR 1-1/2" 16 GAGE STAPLE W/ 7/16" OR 1" CROWN
 3 - 6

 WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING 8d COMMON (2-1/2" x 0.131"); OR DEFORMED (2" x 0.130"); OR DEFORMED (2" x 0.120")
 6 - 12

 Bd COMMON (2-1/2" x 0.131"); OR DEFORMED (2-1/2" x 0.113"); OR
 6 - 12

 DEFORMED (2-1/2" x 0.131"); OR DEFORMED (2-1/2" x 0.131"); OR
 6 - 12

 DEFORMED (2-1/2" x 0.131"); OR DEFORMED (2-1/2" x 0.131"); OR
 6 - 12

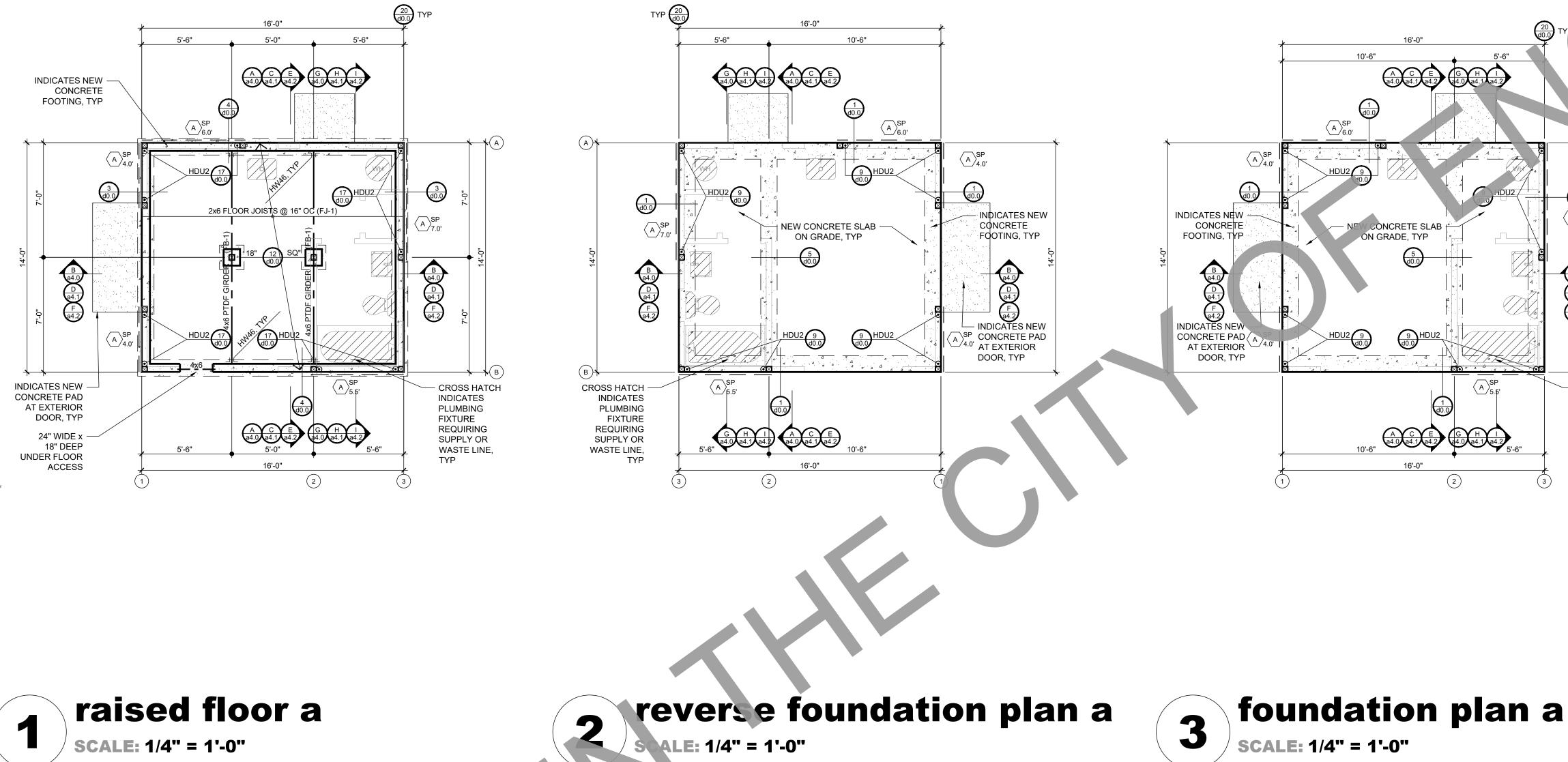
 DEFORMED (2-1/2" x 0.131"); OR
 6 - 12

 DEFORMED (2-1/2" x 0.131"); OR
 6 - 12

 DEFORMED (2-1/2" x 0.131"); OR
 6 - 12
 33. 1/2" FIBERBOARD SHEATHING 34. 5/8" FIBERBOARD SHEATHING b

ND ALL NAILS EVELS. WEDGE-ALL ACING PER

ED WITH





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PREPARER SIGNATURE

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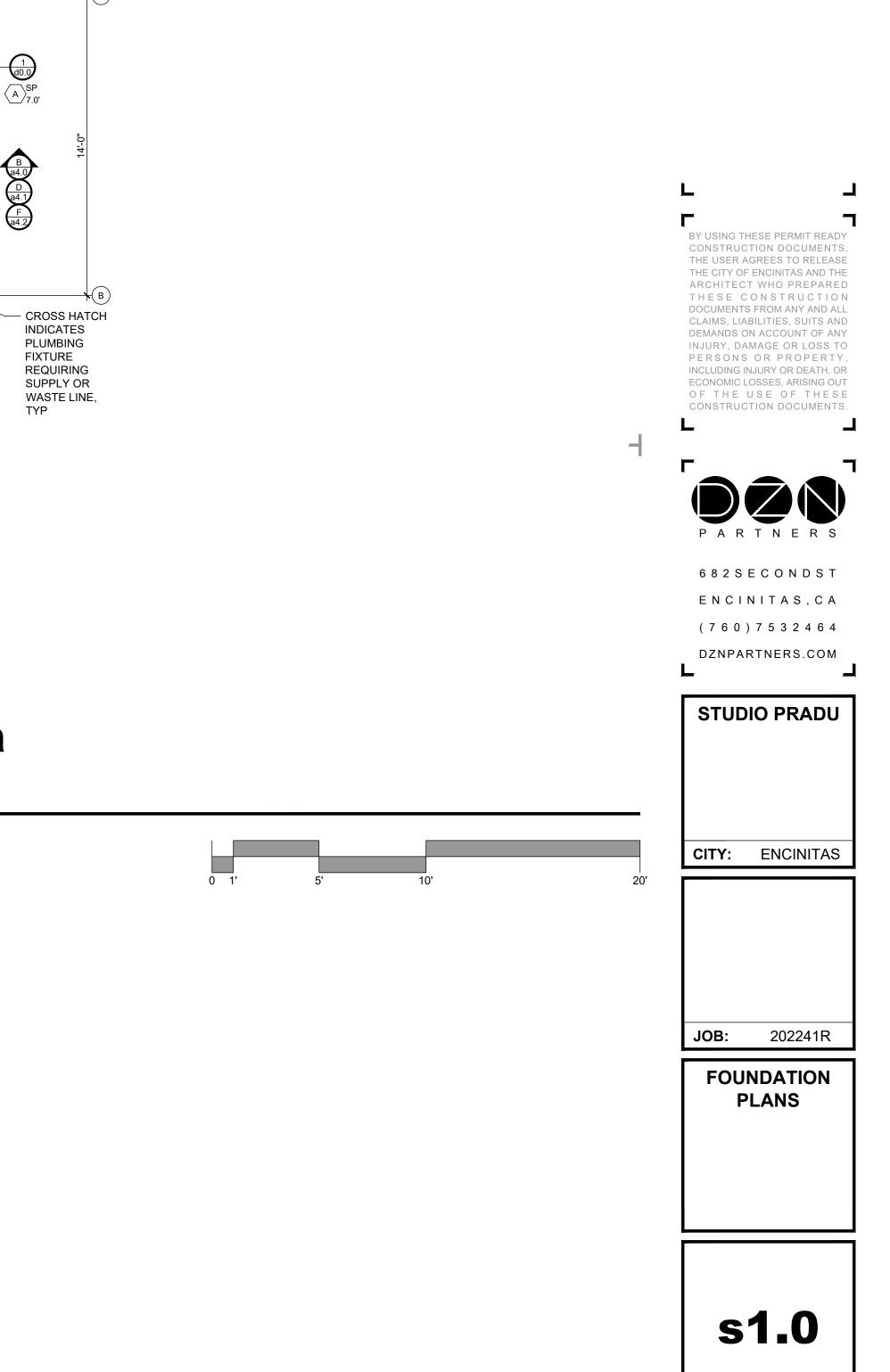
## foundation plan note 5:

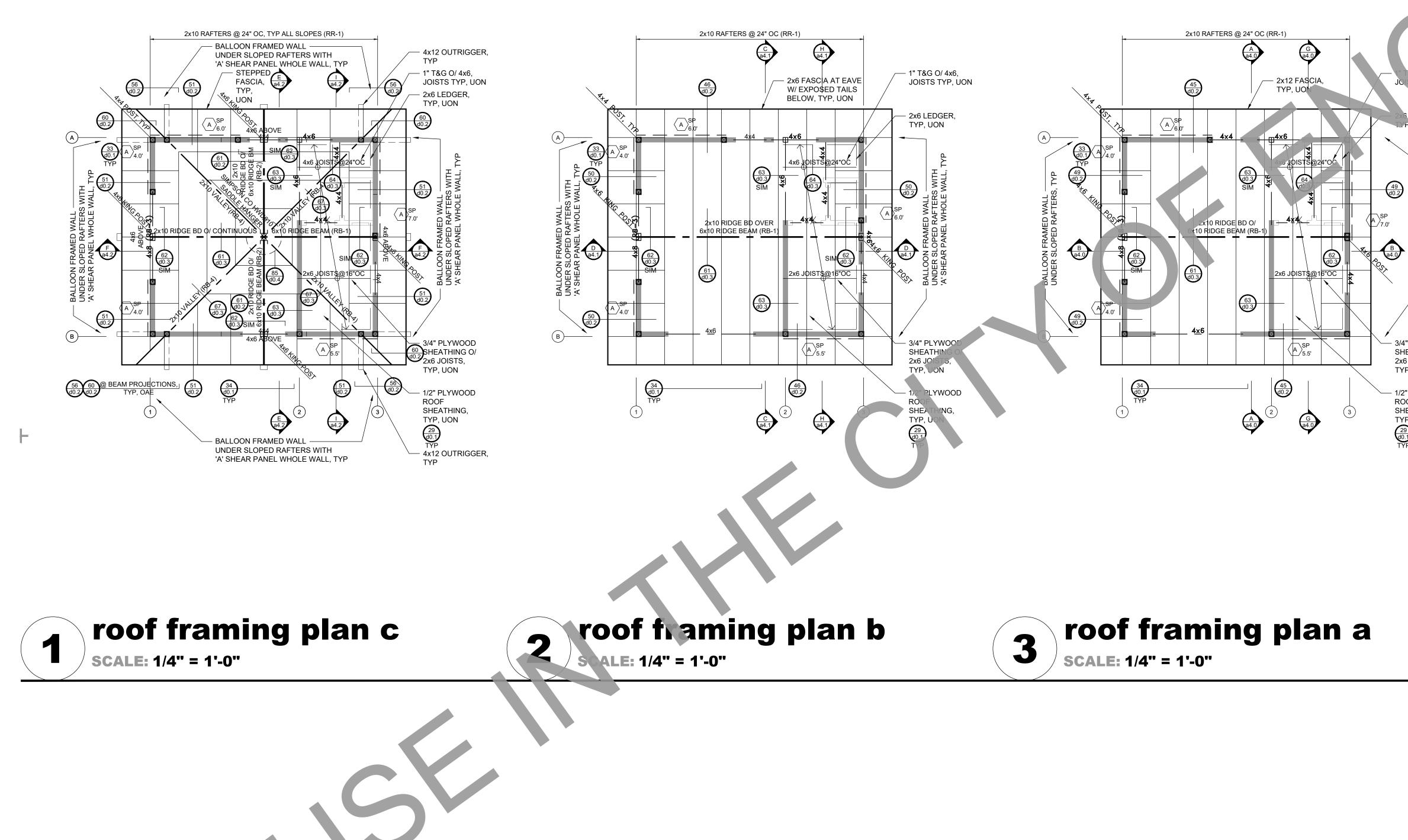
- 1 EXPANSIVE SOIL LOCATIONS SHALL SUBSTITUTE DE TAIL 2/d0
- 1/d0.0 AT PERIMETER FOOTINGS.
   EXPANSIVE SOIL LOCATIONS SHALL SUBSTITUTE DETAIL 6/d0.0 FOR DETAIL
- 5/d0.0 AT INTERIOR FOOTINGS.
   ROOF FRAMING PLAN FOR OTHER ELE ATIONS WAY HAVE DIFFERENT SHEAR PANEL LENGTHS. VERIFY SIZAR PANEL ENGTHS TO ROOF FRAMING PLAN PRIOR TO PLACING HC DOWN AND/OF ANC OR BOLTS

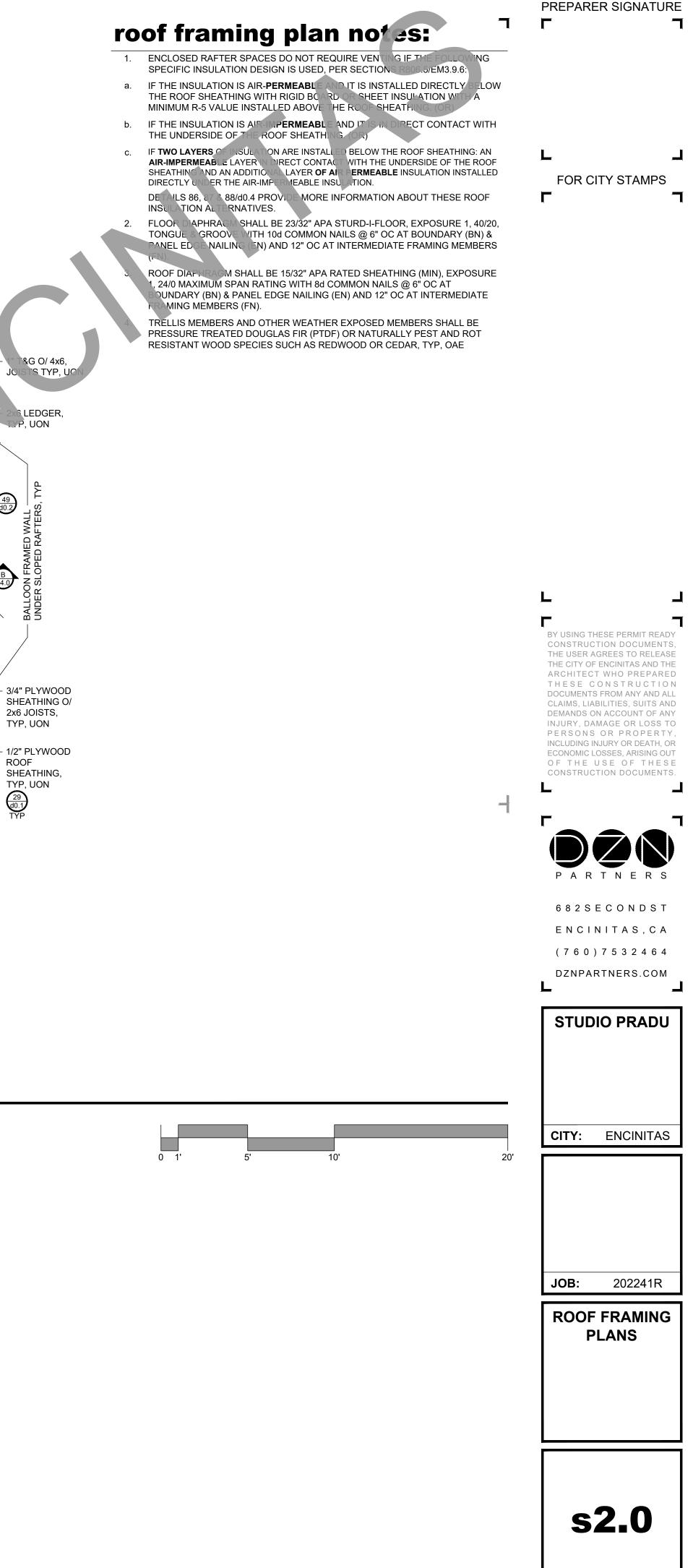
## raised floor plan notes:

- 1. EXPANSIVE SOIL CATIONS SHALL PROVIDE FOOTING DIMENSIONS SPECIFIED IN DETAILS 3, 4, 7, 12/ d0.0 FOR EXANSIVE SOILS.
- 2. ROOF FRAMING PLAN FOR OTHER ELEVATIONS MAY HAVE DIFFERENT SHEAR PANEL LENCT 'S. VER. SHEAR PANEL LENGTHS WITH ROOF FRAMING PLAN PROP TO PLAN NG HOLD DOWN AND/OR ANCHOR BOLTS.
- PROVIDE FOUNDATION VENTS FOR RAISED FLOOR AREA AT 1 SQ. FT. OF VENT REA FOR EVER 50 SQ. FT. OF RAISED FLOOR AREA. 224/150 = 1.5 SQ. FT. SIX[6] 14" FOUNDATION VENTS ARE REQUIRED AND SHALL BE EVENLY DISTRIBUTED AT TE FOUNDATION PERIMETER. CRC §408.1
- PROVIDE A 18"X24" FOUNDATION ACCESS TO RAISED FLOOR FOUNDATION AREAS. CRC §408.4
- 5. PROVIDE R-19 BATT INSULATION AT UNDER-FLOOR JOISTS, TYP.
- FLOOR DIAPHRAGM SHALL BE 23/32" APA STURD-I-FLOOR, EXPOSURE 1, 40/20, TONGUE & GROOVE WITH 10d COMMON NAILS @ 6" OC AT BOUNDARY (BN) & PANEL EDGE NAILING (EN) AND 12" OC AT INTERMEDIATE FRAMING MEMBERS (FN).

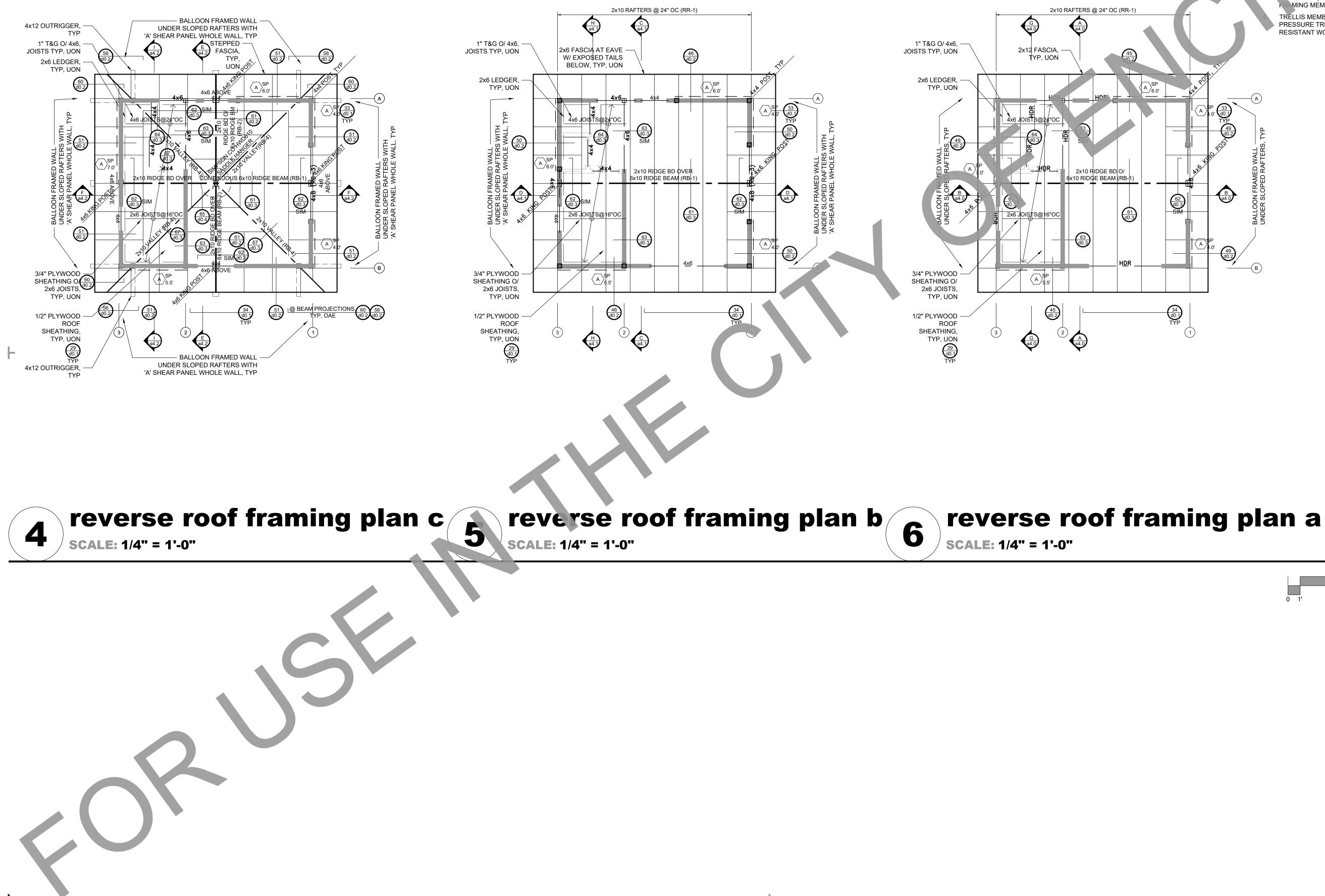








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PREPARER SIGNATURE ٦ roof framing plan not es: 1. ENCLOSED RAFTER SPACES DO NOT REQUIRE VENTING IF THE FOLLOWING SPECIFIC INSULATION DESIGN IS USED, PER SECTIONS R806.5/EM3.9.6: a. IF THE INSULATION IS AIR-**PERMEABL**E AND IT IS INSTALLED DIRECTLY BLOW THE ROOF SHEATHING WITH RIGID BC ADOR SHEET INSULATION WITH A MINIMUM R-5 VALUE INSTALLED ABOVE THE ROOT SHEATHING (OR) b. IF THE INSULATION IS AIR-IMPERMEABLE AND IT IS IN DIRECT CONTACT WITH THE UNDERSIDE OF THE ROOF SHEATHING (OR) c. IF TWO LAYERS OF INSULATION ARE INSTALLED BELOW THE ROOF SHEATHING: AN AIR-IMPERMEABLE LAYER IN DIRECT CONTACT WITH THE UNDERSIDE OF THE ROOF SHEATHIN'S AND AN ADDITIONAL LAYER **OF AIR PERMEABLE** INSULATION INSTALLED DIRECTLY UNDER THE AIR-IMPERMEABLE INSULATION. FOR CITY STAMPS DETAILS 86, 272 88/d0.4 PROVIDE MORE INFORMATION ABOUT THESE ROOF INSULATION ALTERNATIVES. FLOOR DIAPHRAGM SHALL BE 23/32" APA STURD-I-FLOOR, EXPOSURE 1, 40/20, 2. TONGUE & GROOVE WITH 10d COMMON NAILS @ 6" OC AT BOUNDARY (BN) & PANEL EDGE NAILING (EN) AND 12" OC AT INTERMEDIATE FRAMING MEMBERS

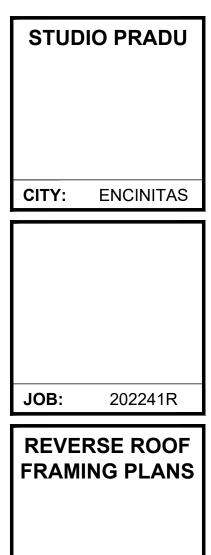
ROOF DIAPHRAGM SHALL BE 15/32" APA RATED SHEATHING (MIN), EXPOSURE 1, 24/0 MAXIMUM SPAN RATING WITH 8d COMMON NAILS @ 6" OC AT OUNDARY (BN) & PANEL EDGE NAILING (EN) AND 12" OC AT INTERMEDIATE MING MEMBERS (FN).

TRELLIS MEMBERS AND OTHER WEATHER EXPOSED MEMBERS SHALL BE PRESSURE TREATED DOUGLAS FIR (PTDF) OR NATURALLY PEST AND ROT RESISTANT WOOD SPECIES SUCH AS REDWOOD OR CEDAR, TYP, OAE

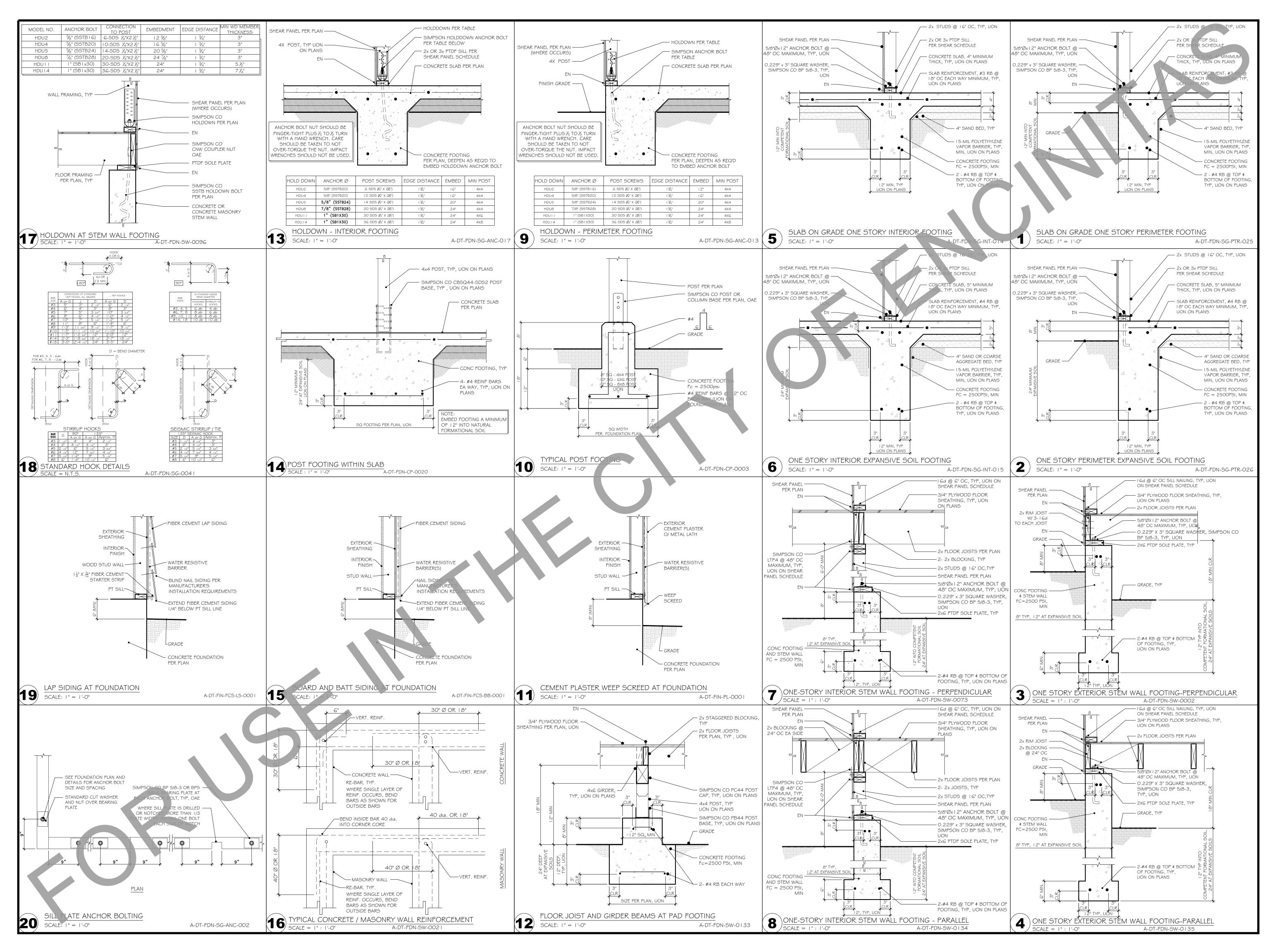
CONSTRUCTION DOCUMENTS. THE USER AGREES TO RELEASE THE CITY OF ENCINITAS AND THE ARCHITECT WHO PREPARED THESE CONSTRUCTION DOCUMENTS FROM ANY AND ALL CLAIMS, LIABILITIES, SUITS AND DEMANDS ON ACCOUNT OF ANY INJURY, DAMAGE OR LOSS TO PERSONS OR PROPERTY. INCLUDING INJURY OR DEATH, OR ECONOMIC LOSSES, ARISING OUT OF THE USE OF THESE CONSTRUCTION DOCUMENTS. 

BY USING THESE PERMIT READY

6 8 2 S E C O N D S T E N C I N I T A S , C A (760)7532464 DZNPARTNERS.COM



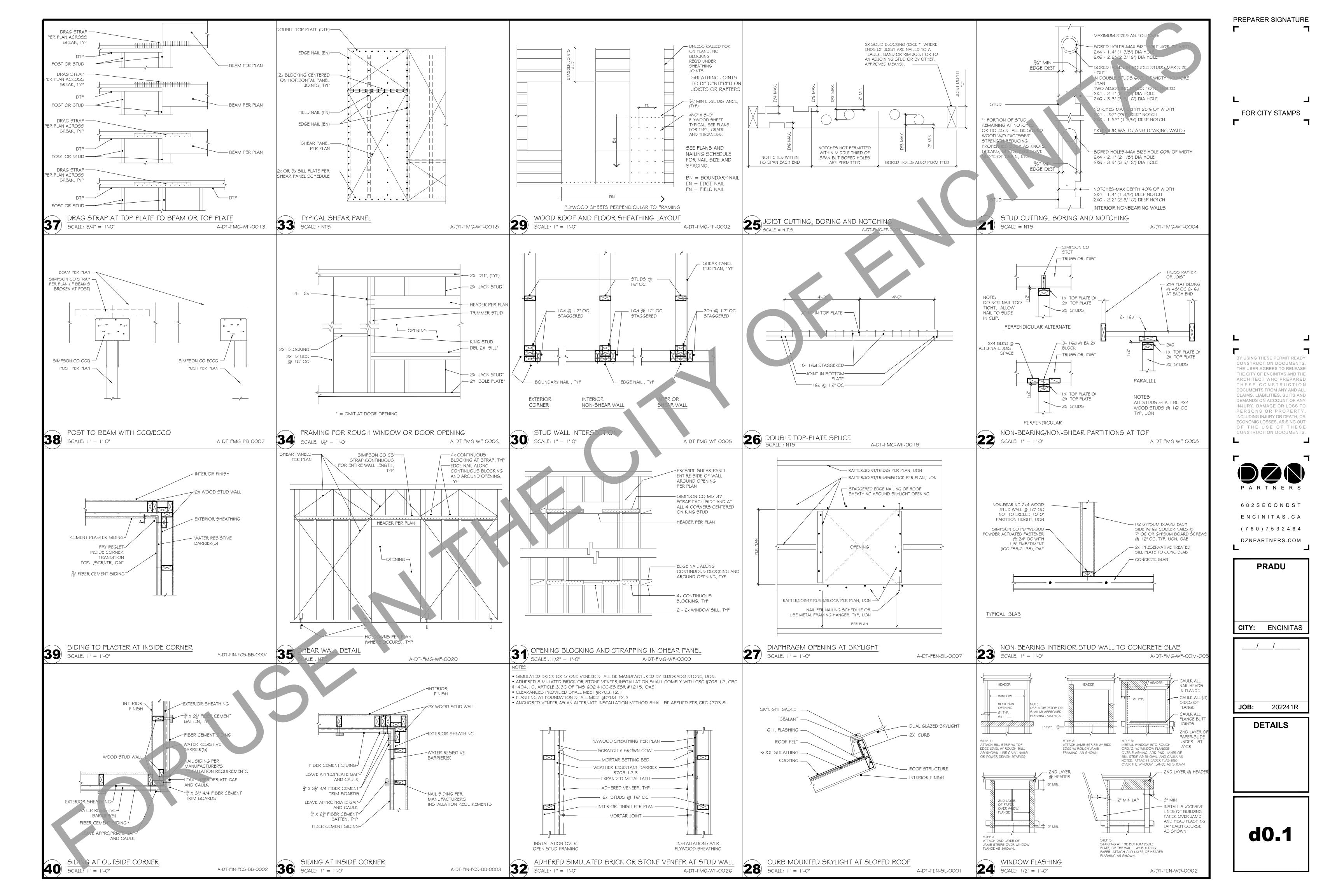
s2.1

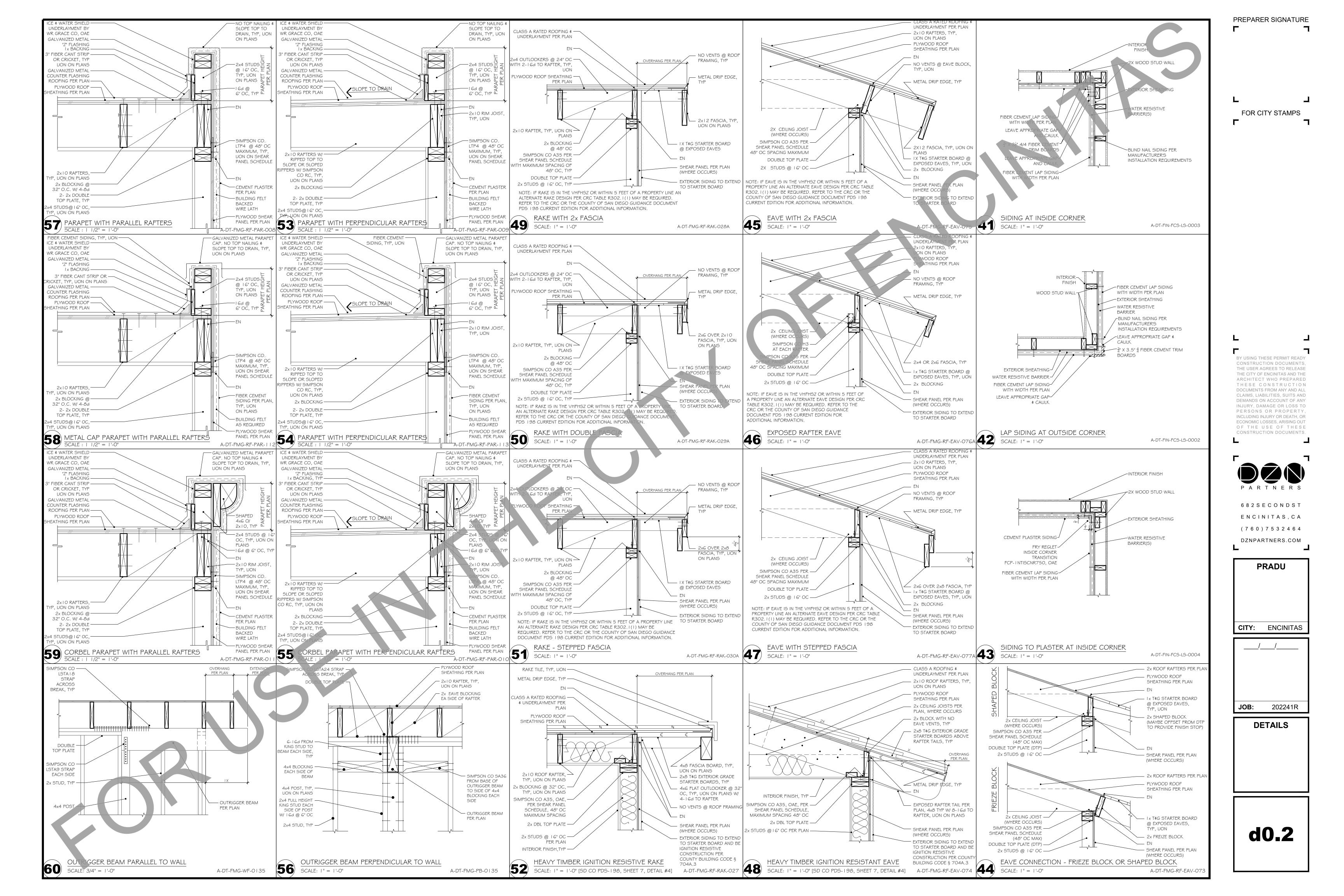


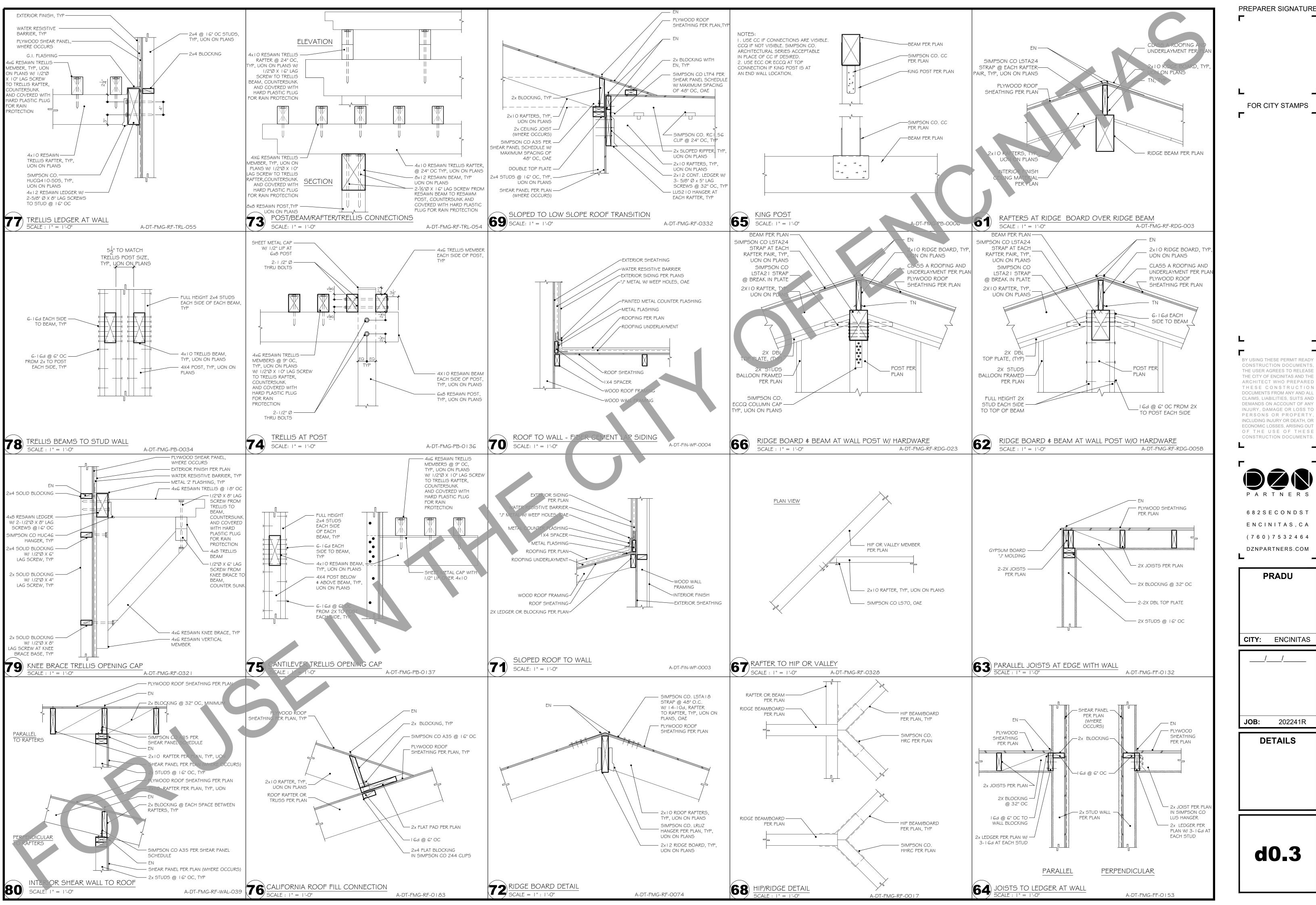


FOR CITY STAMPS

PREPARER SIGNATURE

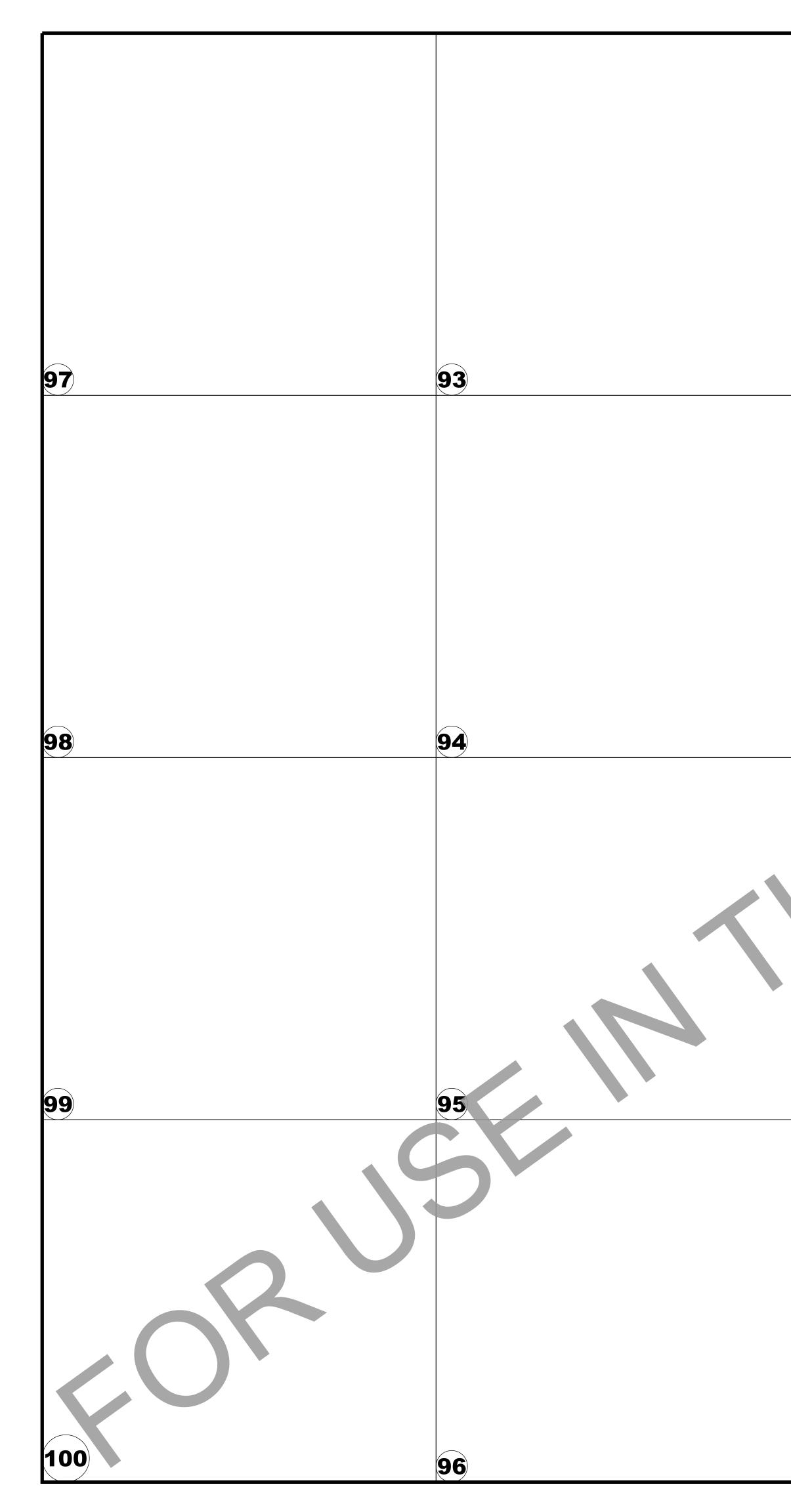


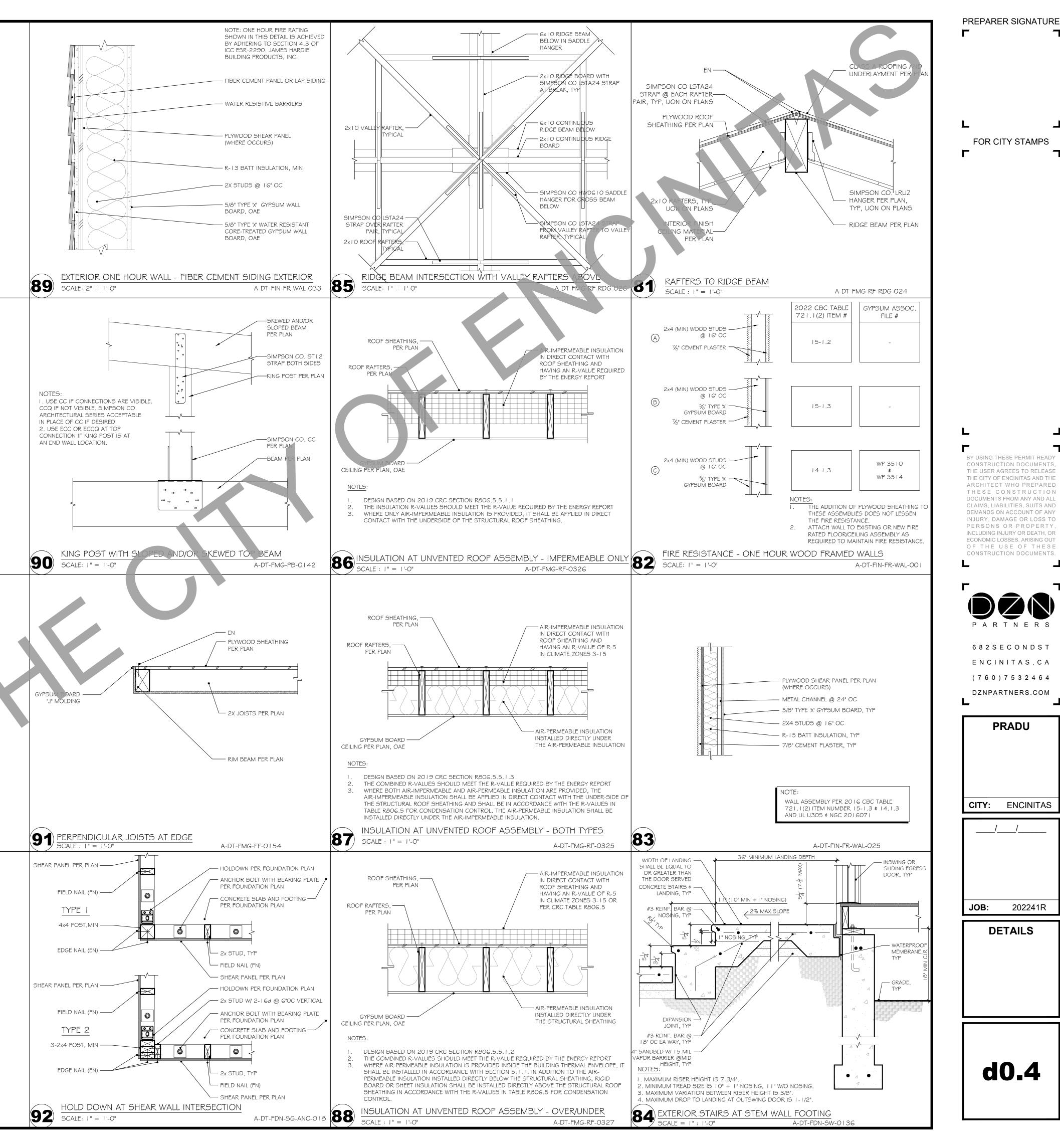




PREPARER SIGNATURE

FOR CITY STAMPS





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Project Name: Encinitas PRADU - Studio A Calculation Description: Title 24 Analysis

#### Calculation Date/Time: 2023-01-11T08:41:58-08:00 Input File Name: 23Q1019-SA.1-03.ribd22x

GENERAL I	NFORMATION				
01	Project Name	Encinitas PRADU - Studio A			
02	Run Title	Title 24 Analysis			
03	Project Location	Studio A Street			
04	City	Encinitas	05	Standards Version	202
06	Zip code	92024	07	Software Version	Ene
08	Climate Zone	7	09	Front Orientation (deg/ Cardinal)	All c
10	Building Type	Single family	11	Number of Dwelling Units	1
12	Project Scope	Newly Constructed	13	Number of Bedrooms	1
14	Addition Cond. Floor Area (ft <sup>2</sup> )	0	15	Number of Stories	1
16	Existing Cond. Floor Area (ft <sup>2</sup> )	n/a	17	Fenestration Average U-factor	0.58
18	Total Cond. Floor Area (ft <sup>2</sup> )	224	19	Glazing Percentage (%)	41.5
20	ADU Bedroom Count	n/a			
		a call		N INC	
COMPLIAN	CE RESULTS				
01	Building Complies with Computer	Performance E R S	PRO	VIDER	
02	This building incorporates feature	s that require field testing and/or verifi	ication by a cert	ified HERS rater under the supervision of a	CEC
03	This building incorporates one or	more Special Features shown below			

**Registration Number:** 223-P010003960A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance

Registration Date/Time: 2023-01-11 10:42:50 Report Version: 2022.0.000 Schema Version: rev 20220901

#### CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Encinitas PRADU - Studio A Calculation Description: Title 24 Analysis

Calculation Date/Time: 2023-01-11T08:41:58-08:00 Input File Name: 23Q1019-SA.1-03.ribd22x

ENERGY USE SUMMARY						
Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft <sup>2</sup> -yr)	Standard Design TDV Energy (EDR2) (kTDV/ft <sup>2</sup> -yr)	Proposed Design Source Energy (EDR1) (kBtu/ft <sup>2</sup> -yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft <sup>2</sup> -yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)
Space Heating	0	0	0.81	5.88	-0.81	-5.88
Space Cooling	3.55	57.55	1.26	27.99	2.29	29.56
IAQ Ventilation	0.75	8.02	0.75	8.02	0	0
Water Heating	6.59	77.44	4.71	58.22	1.88	19.22
Self Utilization/Flexibility Credit	λ			0		0
North Facing Efficiency Compliance Total	10.89	143.01		100.11	3.36	42.9
Space Heating	0	0	0.94 🌙 J	6.78	-0.94	-6.78
Space Cooling	3.55	H 57.55 R S	PR <sub>0.99</sub> VII	$D = P_{23.45}$	2.56	34.1
IAQ Ventilation	0.75	8.02	0.75	8.02	0	0
Water Heating	6.59	77.44	4.77	58.59	1.82	18.85
Self Utilization/Flexibility Credit				0		0
East Facing Efficiency Compliance Total	10.89	143.01	7.45	96.84	3.44	46.17

Registration Number:

223-P010003960A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance

Registration Date/Time: 2023-01-11 10:42:50 Report Version: 2022.0.000 Schema Version: rev 20220901

#### (Page 1 of 12)

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C-approved HERS provider.

## CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Encinitas PRADU - Studio A

Calculation Description: Title 24 Analysis

Input File Name: 23Q1019-SA.1-03.ribd22x

		Energy Design Ratings			Compliance Margins							
	Source Energy Efficiency <sup>1</sup> EDR Total <sup>2</sup> EDR (EDR1) (EDR2efficiency) (EDR2total)			Source Energy (EDR1)	Efficiency <sup>1</sup> EDR (EDR2efficiency)	Total <sup>2</sup> EDR (EDR2total)						
Standard Design	34.6	49.9	35.2									
Proposed Design												
North Facing 30.6 34.9 28.3 4 15 6.9												
East Facing 30.5 33.8 27.7 4.1 16.1												
South Facing	30.1	33.7	27.7	4.5	16.2	7.5						
West Facing	30.4	35.2	28.4	4.2	14.7	6.8						
	A C	RESULT	<sup>3</sup> : PASS	DC								
Efficiency EDR includes improvements like a Total EDR includes efficiency and demand re Building complies when source energy, effici	sponse measures such as p	hotovoltaic (PV) system a	nd batteries	DER met load hour limits are r	ot exceeded							

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CalCERTS inc. Report Generated: 2023-01-11 08:42:28

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223-P010003960A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance

Registration Number:

Registration Date/Time: 2023-01-11 10:42:50 Report Version: 2022.0.000 Schema Version: rev 20220901

#### CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Encinitas PRADU - Studio A

Calculation Description: Title 24 Analysis Input File Name: 23Q1019-SA.1-03.ribd22x										
ENERGY USE SUMMARY			-	-	-					
Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft <sup>2</sup> -yr)	Standard Design TDV Energy (EDR2) (kTDV/ft <sup>2</sup> -yr)	Proposed Design Source Energy (EDR1) (kBtu/ft <sup>2</sup> -yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft <sup>2</sup> -yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)				
Space Heating	0	0	0.56	3.93	-0.56	-3.93				
Space Cooling	3.55	57.55	1.05	27.16	2.5	30.39				
IAQ Ventilation	0.75	8.02	0.75	8.02	0	0				
Water Heating	6.59	77.44	4.65	57.56	1.94	19.88				
Self Utilization/Flexibility Credit				0		0				
South Facing Efficiency Compliance Total	10.89	143.01	7.01	96.67	3.88	46.34				
Space Heating	0	0	0.5	3.55	-0.5	-3.55				
Space Cooling	3.55	H 57.55 R S	PR <sup>1,36</sup> VII	DE 81.95	2.19	25.6				
IAQ Ventilation	0.75	8.02	0.75	8.02	0	0				
Water Heating	6.59	77.44	4.61	57.34	1.98	20.1				
Self Utilization/Flexibility Credit				0		0				
West Facing Efficiency Compliance Total	10.89	143.01	7.22	100.86	3.67	42.15				

HERS Provider:

CalCERTS inc. Report Generated: 2023-01-11 08:42:28

Registration Number: 223-P010003960A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance

Registration Date/Time: 2023-01-11 10:42:50 Report Version: 2022.0.000 Schema Version: rev 20220901

## Calculation Date/Time: 2023-01-11T08:41:58-08:00

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HERS Provider: CalCERTS inc. Report Generated: 2023-01-11 08:42:28

# Calculation Date/Time: 2023-01-11T08:41:58-08:00

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HERS Provider: CalCERTS inc. Report Generated: 2023-01-11 08:42:28

	General Notes	
CERTAR CERTAR	R19-04-30020 NR19-04-30020	
	COMPLIANCE DOCUMENTATION	
	TITLE 24, PART 6 ENERGY COMPLIANCE	
No.	Revision/Issue	Date
3431 DDN 4 CARLSBAD, (760) 635- wayne@bea	NDLOGIES CONSULTIN ARTURO DRI∨E, CALIFORNIA 92010	
	Address AS PRADU – STUDIO A STUDIO A STREE ITAS, CALIFORNIA 92	
Project 23Q1019-Sc Date 01/11/ Scale		01

Project Name: Encinitas PRADU - Studio A Calculation Description: Title 24 Analysis

Calculation Date/Time: 2023-01-11T08:41:58-08:00 Input File Name: 23Q1019-SA.1-03.ribd22x

	a		a	Marsin Darsontage
	Standard Design (kBtu/ft <sup>2</sup> - yr )	Proposed Design (kBtu/ft <sup>2</sup> - yr )	Compliance Margin (kBtu/ft <sup>2</sup> - yr )	Margin Percentage
orth Facing				
Gross EUI <sup>1</sup>	53.48	48.73	4.75	8.88
Net EUI <sup>2</sup>	15.16	10.41	4.75	31.33
ast Facing				
Gross EUI <sup>1</sup>	53.48	48.3	5.18	9.69
Net EUI <sup>2</sup>	15.16	9.98	5.18	34.17
outh Facing				
Gross EUI <sup>1</sup>	53.48	48.58	4.9	9.16
Net EUI <sup>2</sup>	15.16	10.25	4.91	32.39
Vest Facing	THE	RS PROV	TDER	
Gross EUI <sup>1</sup>	53.48	49.07	4.41	8.25
Net EUI <sup>2</sup>	15.16	10.74	4.42	29.16

2. Net EUI is Energy Use Total (including PV) / Total Building Area.

**Registration Number:** 223-P010003960A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance

Registration Date/Time: 2023-01-11 10:42:50 Report Version: 2022.0.000 Schema Version: rev 20220901

## CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Encinitas PRADU - Studio A Calculation Description: Title 24 Analysis

(Page 7 of 12) Calculation Date/Time: 2023-01-11T08:41:58-08:00 Input File Name: 23Q1019-SA.1-03.ribd22x

ZONE INFORMA	TION														
01			02		03		0	4			05		06		07
Zone Na	ne	z	one Type	HVAC	System Nam	e z	Zone Floo	r Area (ft	2)	Avg. C	eiling H	leight	Water Heating Sy	rstem 1	Status
ADU Stud	io A	Co	onditioned	Duct	ess Mini-Split	1	2	24			8		DHW Sys 1		New
OPAQUE SURFA	CES														
01		0	2	0	3		04		05			06	07		08
Name		Zo	ne	Constr	uction	A	zimuth	0	rientati	ion	Gros	s Area (ft <sup>2</sup> )	Window a Area		Tilt (deg)
Front Wal	Î j	ADU St	udio A	_WALL: 2x	4 Exterior		0		Front			128	23	r.	90
Left Wall		ADU St	udio A	_WALL: 2x	4 Exterior		90		Left			112	8	8 9	
Rear Wall		ADU St	udio A	_WALL: 2x	4 Exterior		180		Back			128	18	18 90	
Right Wal		ADU St	udio A	_WALL: 2x	4 Exterior		270		Right			112	40		90
OPAQUE SURFA	CES - CATHEDE	RAL CEI	LINGS		2	i (	-	R			Ir	C			
01	02		03	04		05	0	16		07		08	09	10	11
Name	Zone		Construction	Azimut	h Orie	ntation	Area	(ft²)		ight Area (ft <sup>2</sup> )	Roc	of Rise (x in 12)	Roof Reflectance	Roof Emittance	Cool Roof
Roof	ADU Studio	A	_ROOF: SLPD. CLG.	0	F	ront	2	24		0		4	0.1	0.85	No
FENESTRATION /	GLAZING						ń								
01	02		03	04	05	06	07	08	09		10	11	12	13	14
Name	Туре		Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Are (ft <sup>2</sup>	1 11.6	actor	U-factor Source	SHGC	SHGC Source	Exterior Shading
w1	Window	F	ront Wall	Front	0			1	7	0	.58	NFRC	0.65	NFRC	Bug Screen
d1	Window	F	ront Wall	Front	0			1	20	0	.58	NFRC	0.65	NFRC	Bug Screen
w2	Window		Left Wall	Left	90			1	8	0	.58	NFRC	0.65	NFRC	Bug Screen

Registration Number:

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#### HERS Provider:

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#### CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Encinitas PRADU - Studio A

#### Calculation Date/Time: 2023-01-11T08:41:58-08:00 Input File Name: 23Q1019-SA.1-03.ribd22x

Calculation Description: Title 24 Analysis

01 02 03 04 05 06 07 08 09 10 11 12												
DC System Size (kWdc) Exception Module Type Array Type Power Electronics CFI Azimuth (deg) Tilt: (x in 12) Inverter Eff. (%) (%) (%)												
1.6 NA Standard (14-17%) Fixed none true 150-270 n/a n/a <<=7:12 96 98												
<ul> <li>Whole house fan</li> <li>Exposed slab floor in conditioned zone</li> <li>Variable capacity heat pump compliance option (verification details from VCHP Staff report, Appendix B, and RA3)</li> <li>Northwest Energy Efficiency Alliance (NEEA) rated heat pump water heater; specific brand/model, or equivalent, must be installed</li> </ul>												
Horemeste	inergy enterency runare	ic (neerly rated near par	np mater medicity a	peeme brandy modely of	equiralei	ity max be ma						
IERS FEATURE SUMMARY												

- Indoor air quality ventilation
- Kitchen range hood
- Whole house fan airflow and fan efficacy

Registration Number:

- Verified SEER/SEER2
- Verified Refrigerant Charge
- Airflow in habitable rooms (SC3.1.4.1.7)
- Verified heat pump rated heating capacity
- Wall-mounted thermostat in zones greater than 150 ft2 (SC3.4.5)
- Ductless indoor units located entirely in conditioned space (SC3.1.4.1.8)

BUILDING - FEATURES INFORMA	ATION					
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
Encinitas PRADU - Studio A	224	1	1	1	1	1

HERS PROVID

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Registration Date/Time: 2023-01-11 10:42:50 Report Version: 2022.0.000 Schema Version: rev 20220901

#### CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Encinitas PRADU - Studio A

## Calculation Description: Title 24 Analysis

FENESTRATION / GLAZING 01 04 09 10 02 03 05 06 07 08 Area Width Height Surface Orientation **U**-factor Name Туре Azimuth Mult. (ft) (ft) (ft<sup>2</sup>) Rear Wall Back 180 18 0.58 w3 Window 270 0.58 Right 40 Window Right Wall d2

SLAB FLOORS									
01	02	03	04		05	06		07	08
Name	Zone	Area (ft <sup>2</sup> )	Perimeter (ft)	Edge Insul. R-value and Depth		Edge Insul. R-va and Depth	lue Ca	arpeted Fraction	Heated
Slab On Grade	ADU Studio A	224	60		none	0		0%	No
OPAQUE SURFACE CONST				R.		nc			
01	02	03	04		05	06	07		08
Construction Name	Surface Type	Construction Type	ERSP	R	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Asse	mbly Layers
_WALL: 2x4 Exterior	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C	e au S	R-15	None / None	0.095	Cavity / F	sh: Gypsum Board rame: R-15 / 2x4 ish: 3 Coat Stucco
_ROOF: SLPD. CLG.	Cathedral Ceilings	Wood Framed Ceiling	2x10 @ 24 in. O. (	<u>.</u>	R-30	None / None	0.035	Roof Siding/sh	Roof (Asphalt Shingle) Deck: Wood eathing/decking ame: R-30 / 2x10

Registration Number:

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deled energy p	erformance for this	computer analysis. Additional
ER		

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## Calculation Date/Time: 2023-01-11T08:41:58-08:00 Input File Name: 23Q1019-SA.1-03.ribd22x

11	12	13	14
U-factor Source	SHGC	SHGC Source	Exterior Shading
NFRC	0.65	NFRC	Bug Screen
NFRC	0.65	NFRC	Bug Screen

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HERS Provider:

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Inside Finish: Gypsum Board

$\overline{c}$	Ge	neral No	otes		7
&C CERTIN	HP VA	0011			
	24. PART 6 FNFRGY COMPLIANCE DOCUMENTATION				
	TITLE 24, PART 6 ENF				
				1	
No.	Re	vision/ls	sue	Date	
BEA 343 CAR (761 way htt	Name and Address R TECHNOLI 1 DON ARTU LSBAD, CAL D) 635-232 ne@bearted p://www.bed t Name and Addre NCINITAS P STU ENCINITAS	JGIES C JRO DRI IFORNIA 7 chconsu ntechc mss RADU - JDIO A S	√E, 92010 Ilting.com onsultin STUDI⊡ STREE	n g,⊂om A ADU	
1					기

Project Name: Encinitas PRADU - Studio A Calculation Description: Title 24 Analysis

### Calculation Date/Time: 2023-01-11T08:41:58-08:00 Input File Name: 23Q1019-SA.1-03.ribd22x

01	e	02 tallation (QII) High R-value Spray Foam Insulation		03		04 CFM50		
Quality Insulation	Installation (QII)			ding Envelope Air Lea	kage			
Not Rec	quired	Not Require	d	N/A		n/a		
WATER HEATING SY	STEMS							
01	02	03	04 05		06	07	Τ	
Name	System Type	Distribution Type	Water Heater Name	Number of Units	Solar Heating System	Compact Distribution	н	
DHW Sys 1	Domestic Hot Water (DHW)	Standard	DHW Heater 1	1	n/a	None	Γ	

01	02	03	04	05	06	
Name	# of Units	Tank Vol. (gal)	NEEA Heat Pump Brand	NEEA Heat Pump Model	Tank Location	Duct In
DHW Heater 1	1	50	AOSmith	AOSmithFPTU50	ADU Studio A	AD

#### WATER HEATING - HERS VERIFICATION

01	02	03	04	05	06
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution Type	Recirculation Control
DHW Sys 1 - 1/1	Not Required	Not Required	Not Required	None	Not Required

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#### CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Encinitas PRADU - Studio A

Calculation Description: Title 24 Analysis

Calculation Date/Time: 2023-01-11T08:41:58-08:00 Input File Name: 23Q1019-SA.1-03.ribd22x

INDOOR AIR QUALITY	Y (IAQ) FANS					-	
01	02	03	04	05	06	07	
Dwelling Unit	Airflow (CFM)	Fan Efficacy (W/CFM)	IAQ Fan Type	Includes Heat/Energy Recovery?	IAQ Recovery Effectiveness - SRE	Includes Fault Indicator Display?	ŀ
SFam IAQVentRpt	22	0.35	Exhaust	No	n/a	No	

## COOLING VENTILATION

		2					
01	02	03	04	05	06	07	
Name	Airflow Rate (CFM/ft2)	Cooling Vent CFM	Cooling Vent Watts/CFM	Total Watts	Number of Fans	CFVCS Type	
WH Fan 1	0.08	17	0.0588	1	1	Not a CFVCS	

PROJECT NOTES \*\*\*\*\*\* This report is based on the drawings received on 01/03/2023. \*\*\*\*\*\*\*\*\*\*\*\* PR

SCOPE OF WORK: Construct a ADU - Studio (A Elevation).

1) DO NOT USE FOR ACTUAL HEATING/COOLING DESIGN. 2) The Title 24 calculations used for this project are used for the purpose of complying with the current Title 24 code provisions and are intended to be used in order to obtain compliance per Title 24 regulations. They are NOT intended to be used as a substitute for the heating and cooling loads required for the structure(s) that are normally done by a mechanical engineer(s) or HVAC contractor(s) and in NO CIRCUMSTANCES is this to be used in lieu of the normal calculation methods used by a mechnical engineer(s) or HVAC contractor(s). 3) The assembly components found in this document are for modeling purposes only and may not reflect the actual conditions of the walls, roof(s), floor(s), windows and doors of the structure.

**Registration Number:** 223-P010003960A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance Registration Date/Time: 2023-01-11 10:42:50

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05 CFM50 n/a 09 08 Water Heater **HERS Verification** Name (#) DHW Heater 1 (1) n/a 07 08 Inlet Air Source Duct Outlet Air Source ADU Studio A ADU Studio A 07 Shower Drain Water Heat on Control Recovery

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Not Required

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08	09
HERS Verification	Status
Yes	
08	09
Exhausts to	HERS Verification
Outside	Required

#### CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Encinitas PRADU - Studio A

Calculation Description: Title 24 Analysis

#### Calculation Date/Time: 2023-01-11T08:41:58-08:00 Input File Name: 23Q1019-SA.1-03.ribd22x

SPACE CONDITIONIN	G SYSTEMS			_								_
01	02	03		04			05		06			
Name	System Type	Heating Uni	Heating Unit Name		leating Equipment Count		Cooling Unit Name		ame	Cooling Equipment		nt
Ductless Mini-Split1	Heat pump heating cooling	Heat Pump	System 1		Heat Pump System 1		tem		1			
HVAC - HEAT PUMPS												
01	02	03	04		05	0	6	07		08	09	Т
					Heati	ng					Cooling	-
Name	System Type	Number of Units	Efficie Typ		HSPF / HSPF2 / COP	Cap	o 47	Cap 17		ciency 'ype	SEER / SEER2	Γ
Heat Pump System 1	VCHP-ductless	1	HSP	F	8.5	112	800	7080	EE	RSEER	16.8	ľ
HVAC HEAT PUMPS -	HERS VERIFICATION				EB	~	_	PR	Č	5V	10	
01	02	03			04	1	ŕ	05	-		06	
Name	Verified Airflow	Airflow Ta	Airflow Target		fied EER/E	ER2	Verified SEER/SEER2		2	Verified Refrigerant Charge		
Heat Pump System 1-hers-htpump	Not Required	0	0 Not		Not Required		Required			Yes		
VARIABLE CAPACITY	HEAT PUMP COMPLIA	ANCE OPTION	- HERS V	/ERIFI	CATION							

01	02	03	04	05	06		
Name	Certified Low-Static VCHP System	Airflow to Habitable Rooms	Ductless Units in Conditioned Space	Wall Mount Thermostat	Air Filter Sizing & Pressure Drop Rating	Lo	
Heat Pump System 1	Not required	Required	Required	Required	Not required	No	

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## CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Encinitas PRADU - Studio A

Calculation De	escription: Title	24 Analysis
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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
. I certify that this Certificate of Compliance documentation is accurate and comp	lete.
Documentation Author Name:	Documentation Author Signature:
Wayne Seward	
lompany:	Signature Date:
Bear Technologies Consulting Inc.	2023-01-11 09:10:06
Address:	CEA/ HERS Certification Identificatio
3431 Don Arturo Drive	R19-04-30011
City/State/Zip:	Phone:
Carlsbad, CA 92010	760-635-2327
RESPONSIBLE PERSON'S DECLARATION STATEMENT	
and all doubt the standard and the standard the standard standard in	

I certify the following under penalty of perjury, under the laws of the State of California: 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. 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, З. calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application. Responsible Designer Name: sponsible Designer Signature: Bart M Smith Date Signed: 2023-01-11 10:42:50 ompany: HERS DZN Partners Address: License: C-22557 682 2nd Street Phone: 760-753-2464 City/State/Zip: Encinitas, CA 92024

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

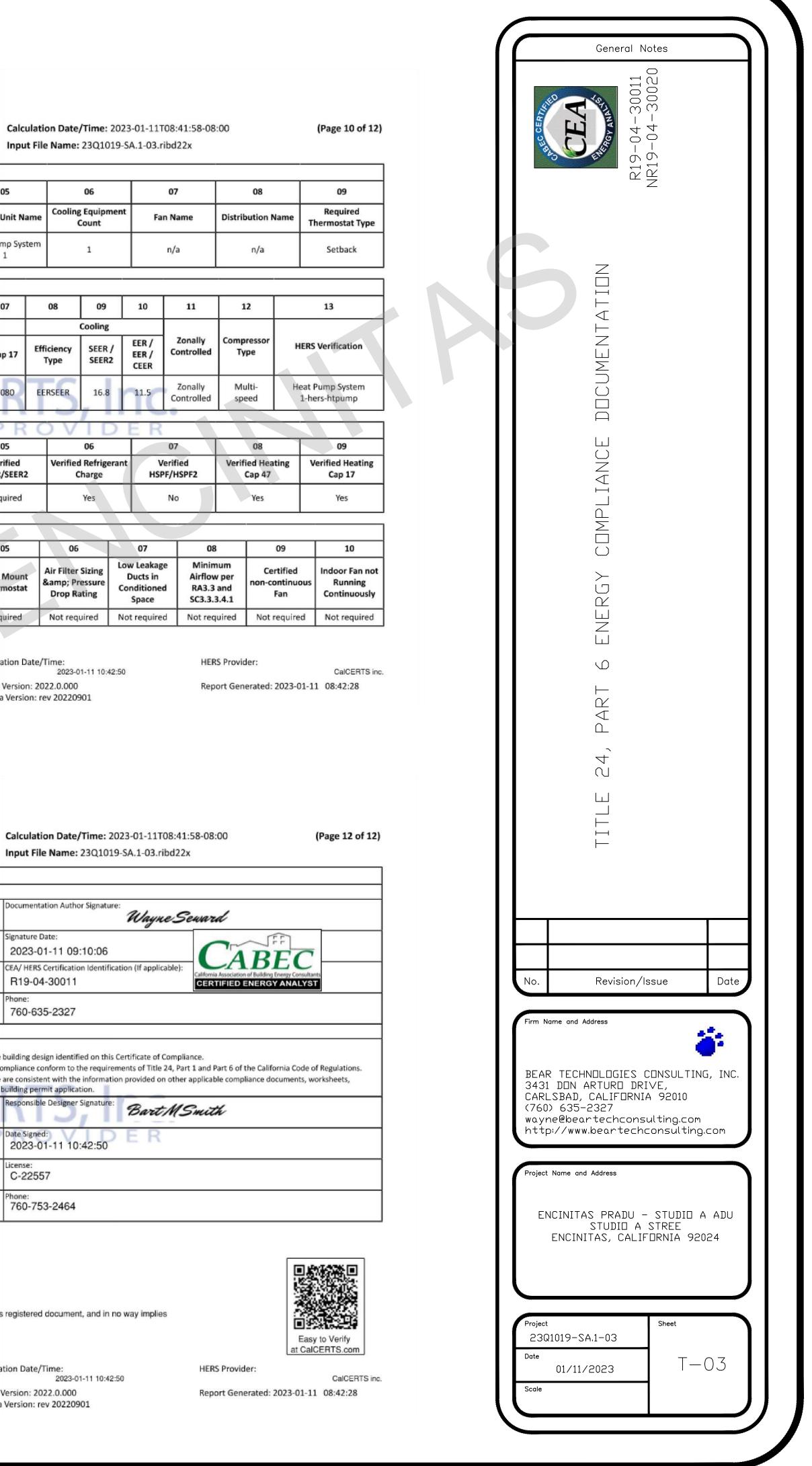
**Registration Number:** 

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### 2022 Single-Family Residential Mandatory Requirements Summary

NOTE: Single-family residential buildings subject to the Energy Codes must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information.

(04/2022)	
Building Envelope	
§ 110.6(a)1:	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 101/I.S.2/A440-2011. *
§ 110.6(a)5:	Labeling. Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	Field fabricated exterior doors and fenestration products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped.*
§ 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, or weather stripped.
§ 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(g):	Insulation Requirements for Heated Slab Floors. Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	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(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	Radiant Barrier. When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a):	Roof Deck, Ceiling and Rafter Roof Insulation. Roof decks in newly constructed attics in climate zones 4 and 8-16 area-weighted average U-factor not exceeding U-0.184. 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 alterations 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.
§ 150.0(b):	Loose-fill Insulation. Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	Wall Insulation. Minimum R-13 insulation in 2x4 inch 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. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102 Masonry walls must meet Tables 150.1-A or B.*
§ 150.0(d):	Raised-floor Insulation. Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.
§ 150.0(f):	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 per 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).
§ 150.0(g)1:	Vapor Retarder. In climate zones 1 through 16, the earth floor of unvented 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 §150.0(d).
§ 150.0(g)2: § 150.0(q):	<ul> <li>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 air-permeable insulation.</li> <li>Fenestration Products. Fenestration, including skylights, separating conditioned space from 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.</li> </ul>
	ative Gas Appliances, and Gas Log:
§ 110.5(e)	Pilot Light. Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1: § 150.0(e)2:	Closable Doors. Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox. Combustion Intake. Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device.
§ 150.0(e)3:	Flue Damper. Masonry or factory-built fireplaces must have a flue damper with a readily accessible control. *
pace Conditionin	g, Water Heating, and Plumbing System:
	Certification. Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other
§ 110.0-§ 110.3:	regulated appliances must be certified by the manufacturer to the California Energy Commission.
§ 110.2(a):	HVAC Efficiency. Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-N.*
§ 110.2(b):	Controls for Heat Pumps with Supplementary Electric Resistance Heaters. Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.
§ 110.2(c):	Thermostats. All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat. *
§ 110.3(c)3:	Insulation. Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating.
§ 110.3(c)6:	Isolation Valves. Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with

5/6/22



spa heaters.

## 2022 Single-Family Residential Mandatory Requirements Summary

Pilot Lights. Continuously burning pilot lights are prohibited for natural gas: fan-type central 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



	Space Conditioning Syste
	a hole for the placement of
§ 150.0(m)13:	be ≥ 350 CFM per ton of no
3	handlers and ≤ 0.58 watts p
	cooling capacity, and an air
	Defenses Decidential Aces

	2022 Single-Family Residential Mandatory Requirements Summary
§ 150.0(m)13:	Space Conditioning System Airflow Rate and Fan Efficacy. 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 supply plenum. Airflow must be $\geq$ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy $\leq$ 0.45 watts per CFM for gas furnace air handlers and $\leq$ 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow $\geq$ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy $\leq$ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3. *
entilation and In § 150.0(o)1:	door Air Quality: 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 subject to the amendments specified in § 150.0(o)1.*
§ 150.0(o)1B:	Central Fan Integrated (CFI) Ventilation Systems. Continuous operation of CFI air handlers is not allowed to provide the whole- dwelling unit ventilation airflow required per §150.0(o)1C. A motorized damper(s) must be installed on the ventilation duct(s) that prevents all airflow through the space conditioning duct system when the damper(s) is closed andcontrolled per §150.0(o)1Biii&iv. CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for compliance with §150.0(o)1C.
§ 150.0(o)1C:	Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and townhouses . Single-family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 150.0(o)1Ci-iii.
§ 150.0(o)1G:	Local Mechanical Exhaust. Kitchens and bathrooms must have local mechanical exhaust; nonenclosed kitchens must have demand- controlled exhaust system meeting requirements of §150.0(o)1Giii,enclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting §150.0(o)1Giii-iv. Airflow must be measured by the installer per §150.0(o)1Gv, and rated for sound per §150.0(o)1Gvi. *
§ 150.0(o)1H&I:	Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems. The airflow required per § 150.0(o)1C must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/grilles per Reference Residential Appendix RA3.7. Whole-Dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 §7.2 at no less than the minimum airflow rate required by §150.0(o)1C.
§ 150.0(o)2:	Field Verification and Diagnostic Testing. Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HRV and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per §150.0(o)1G
ool and Spa Sys	tems 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 MAEDbS; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating. *
§ 110.4(b)1:	Piping. Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2:	Covers. Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3:	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 set or programmed to run only during off-peak electric demand periods.
§ 110.5:	Pilot Light. Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p):	Pool Systems and Equipment Installation. Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.
ghting:	entrilling on each bibuilt minut and sector
	Lighting Controls and Components. All lighting control devices and systems, ballasts, and luminaires must meet the applicable
§ 110.9:	requirements of § 110.9.*
§ 150.0(k)1A:	Luminaire Efficacy. All installed luminaires must meet the requirements in Table 150.0-A, except lighting integral to exhaust fans, kitchen range hoods, bath vanity mirrors, and garage door openers; navigation lighting less than 5 watts; and lighting internal to drawers, cabinets, and linen closets with an efficacy of at least 45 lumens per watt.
150.0(k)1B:	Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1C:	Recessed Downlight Luminaires in Ceilings. Luminaires recessed into ceilings must not contain screw based sockets, must be airtight, and must be sealed with a gasket or caulk. California Electrical Code § 410.116 must also be met.
§ 150.0(k)1D:	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1E:	Blank Electrical Boxes. The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device shall be no more than the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor control, low voltage wiring, or fan speed control.
	Lighting Integral to Exhaust Fans. Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust

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<u>@</u>	:
§ 150.0(s)	Energy S equipment main serv
	source con near the

## 2022 Single-Family Residential Mandatory Requirements Summary

-Internet in the second	
§ 150.0(s)	Energy Storage System (ESS) I equipment with backed up capaci main service to a subpanel that s source collocated at a single pan- near the primary exit, and one cir 225 amps; sufficient space must l panelboard, with raceways install
§ 150.0(t)	Heat Pump Space Heater Ready unobstructed 240V branch circuit identified as "240V ready;" and a permanently marked as "For Futu
§ 150.0(u)	Electric Cooktop Ready. System 240V branch circuit wiring installe "240V ready;" and a reserved mai marked as "For Future 240V use.
§ 150.0(v)	Electric Clothes Dryer Ready. C dedicated unobstructed 240V bra the blank cover identified as "240 circuit breaker permanently mark

\*Exceptions may apply.

	apa notiona.
§ 150.0(h)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 § 150.0(h)2.
§ 150.0(h)3A:	Clearances. Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer.
§ 150.0(h)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.
§ 150.0(j)1:	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. *
§ 150.0(j)2:	Insulation Protection. Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment' maintenance, and wind as required by §120.3(b). Insulation exposed to weather must be water retardant and protected from UV 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-crushable casing or sleeve.
§ 150.0(n)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 2.5' x 2.5' x 7' 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
§ 150.0(n)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.
ucts and Fans:	
§ 110.8(d)3:	Ducts. Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1:	<b>CMC Compliance.</b> All air-distribution system ducts and plenums must meet CMC §§ 601.0-605.0 and ANSI/SMACNA-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-6.0 or higher; ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8) do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. 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 combination of mastic and either mesh or tape must be used to seal openings greater than ¼*, 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 not be used to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in
	these spaces must not be compressed.*
§ 150.0(m)2:	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 back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	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.
§ 150.0(m)7:	Backdraft Damper. Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8:	Gravity Ventilation Dampers. Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	Protection of Insulation. Insulation must be protected from damage due tosunlight, 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). Cellular foam insulation must be protected as above or painted with a water retardant and solar radiation-resistant coating.
§ 150.0(m)10:	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 vapor barrier.
§ 150.0(m)11:	Duct System Sealing and Leakage Test. When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1.
§ 150.0(m)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 have a two inch depth or can be one inch if sized per Equation 150.0-A. Clean-filter pressure drop and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service. Filter racks or grilles 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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	2022 Single-Family Residential Mandatory Requirements Summary
§ 150.0(k)1G:	Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8.*
§ 150.0(k)1H:	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)11:	Light Sources in Drawers, Cabinets, and Linen Closets. Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A 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.
§ 150.0(k)2A:	Interior Switches and Controls. All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	Interior Switches and Controls, Exhaust fans must be controlled separately from lighting systems.*
§ 150.0(k)2A:	Accessible Controls. Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned
§ 150.0(k)2B:	on and off. * Multiple Controls. Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed to comply with § 150.0(k).
§ 150.0(k)2C:	Mandatory Requirements. Lighting controls must comply with the applicable requirements of § 110.9.
§ 150.0(k)2D:	Energy Management Control Systems. 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 § 150.0(k)2A.
§ 150.0(k)2E:	Automatic Shutoff Controls. In bathrooms, garages, 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 fronts or doors must have controls that turn the light off when the drawer or door is closed.
§ 150.0(k)2F:	Dimmers. Lighting in habitable spaces (e.g., living rooms, dining 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 cut dimmers controlling LED ligh sources in these spaces must comply with NEMA SSL 7A.
§ 150.0(k)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.
§ 150.0(k)3A:	Residential Outdoor Lighting. For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch control) or an astronomical time clock. An energy management control system that provides the specified control functionality and meets applicable requirements may be used to meet these requirements.
§ 150.0(k)4:	Internally illuminated address signs. Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power.
§ 150.0(k)5:	Residential Garages for Eight or More Vehicles. Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.
olar Readiness:	
§ 110.10(a)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 § 110.10(b)-(e).
§110.10(b)1A:	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 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for building and have a total area no less than 250 square feet. *
£ 110 10/b)2-	Azimuth. All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.
§ 110.10(b)2: § 110.10(b)3A:	Shading. The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof
§ 110.10(b)3B:	mounted equipment. Shading. Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between 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(b)4:	Structural Design Loads on Construction Documents. For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c):	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 plumbing from the solar zone to the water-heating system.
§ 110.10(d):	Documentation. A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(c) must b provided to the occupant.
§ 110.10(e)1:	Main Electrical Service Panel. The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.10(e)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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**SS) Ready.** All single-family residences must meet all of the following: Either ESS-ready interconnection to apacity of 60 amps or more and four or more ESS supplied branch circuits, <u>or</u> a dedicated raceway from the that supplies the branch circuits in § 150.0(s); at least four branch circuits must be identified and have their a panelboard suitable to be supplied by the ESS, with one circuit supplying the refrigerator, one lighting circuit ne circuit supplying a sleeping room receptacle outlet; main panelboard must have a minimum busbar rating of must be reserved to allow future installation of a system isolation equipment/transfer switch within 3' of the main installed between the panelboard and the switch location to allow the connection of backup power source. **Ready.** Systems using gas or propane furnaces to serve individual dwelling units must include: A dedicated circuit wiring installed within 3' of the furnace with circuit conductors rated at least 30 amps with the blank cover and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker r Future 240V use."

Future 240V use." stems using gas or propane cooktop to serve individual dwelling units must include: A dedicated unobstructed talled within 3' of the cooktop with circuit conductors rated at least 50 amps with the blank cover identified as nain electrical service panel space to allow for the installation of a double pole circuit breaker permanently

Electric Clothes Dryer Ready. Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the dryer location with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."

General Notes	
R19-04-30011 NR19-04-30020	
TITLE 24, PART 6 ENERGY COMPLIANCE DOCUMENTATION	
No. Revision/Issue	Date
Firm Name and Address BEAR TECHNOLOGIES CONSULTING 3431 DON ARTURO DRIVE, CARLSBAD, CALIFORNIA 92010 (760) 635-2327 wayne@beartechconsulting.com http://www.beartechconsulting.	
Project Name and Address ENCINITAS PRADU - STUDIO A STUDIO A STREE ENCINITAS, CALIFORNIA 920	
Project Sheet 23Q1019-SA.1-03 Date 01/11/2023	04

Project Name: Encinitas PRADU - Studio B Calculation Description: Title 24 Analysis

#### Calculation Date/Time: 2023-01-09T11:17:14-08:00 Input File Name: 23Q1019-SB.1-03.ribd22x

					_
GENER	RAL INFORMATION				
01	Project Name	Encinitas PRADU - Studio B			
02	Run Title	Title 24 Analysis			
03	Project Location	Studio A Street			
04	City	Encinitas	05	Standards Version	20
06	Zip code	92024	07	Software Version	En
08	Climate Zone	7	09	Front Orientation (deg/ Cardinal)	Al
10	Building Type	Single family	11	Number of Dwelling Units	1
12	Project Scope	Newly Constructed	13	Number of Bedrooms	1
14	Addition Cond. Floor Area (ft <sup>2</sup> )	0	15	Number of Stories	1
16	Existing Cond. Floor Area (ft <sup>2</sup> )	n/a	17	Fenestration Average U-factor	0.
18	Total Cond. Floor Area (ft <sup>2</sup> )	224	19	Glazing Percentage (%)	55
20	ADU Bedroom Count	n/a	0	TC	
COMP	LIANCE RESULTS	Laice	<b>1</b>	<b>13</b> , <b>11C</b> .	
	01 Building Complies with Computer	Performance P P P P	R	OVIDER	
	02 This building incorporates feature	s that require field testing and/or verificatio	n by a c	ertified HERS rater under the supervision of a	CE
	03 This building incorporates one or	more Special Features shown below			_

Registration Number: 223-P010003962A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance

Registration Date/Time: 2023-01-11 10:42:50 Report Version: 2022.0.000 Schema Version: rev 20220901

HERS Provider:

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Encinitas PRADU - Studio B Calculation Description: Title 24 Analysis

Calculation Date/Time: 2023-01-09T11:17:14-08:00 Input File Name: 23Q1019-SB.1-03.ribd22x

Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft <sup>2</sup> -yr)	Standard Design TDV Energy (EDR2) (kTDV/ft <sup>2</sup> -yr)	Proposed Design Source Energy (EDR1) (kBtu/ft <sup>2</sup> -yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft <sup>2</sup> -yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2
Space Heating	0	0	0.77	5.42	-0.77	-5.42
Space Cooling	3.56	57.68	1.41	33.35	2.15	24.33
IAQ Ventilation	0.75	8.02	0.75	8.02	0	0
Water Heating	6.59	77.45	4.68	57.94	1.91	19.51
Self Utilization/Flexibility Credit	λ			0		0
North Facing Efficiency Compliance Total	10.9	143.15	7.61	104.73	3.29	38.42
Space Heating	0	0	1,04	7.39	-1.04	-7.39
Space Cooling	3.56	57.68 R S	P R 1.08	$D \in P_{26.8}$	2.48	30.88
IAQ Ventilation	0.75	8.02	0.75	8.02	0	0
Water Heating	6,59	77.45	4.77	58.55	1.82	18.9
Self Utilization/Flexibility Credit				o		0
East Facing Efficiency Compliance Total	10.9	143.15	7.64	100.76	3.26	42.39

Registration Number: 223-P010003962A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance

Registration Date/Time: 2023-01-11 10:42:50 Report Version: 2022.0.000 Schema Version: rev 20220901

#### (Page 1 of 13)

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#### CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Encinitas PRADU - Studio B Calculation Description: Title 24 Analysis

## Input File Name: 23Q1019-SB.1-03.ribd22x

		Energy Design Ratings				
	Source Energy (EDR1)	Efficiency <sup>1</sup> EDR (EDR2efficiency)	Total <sup>2</sup> EDR (EDR2total)	Sou		
Standard Design	34.6	49.9	35.2			
		Proposed	Design			
North Facing	30.7	36.5	28.9			
East Facing	30.7	35.1	28.2			
South Facing	30.2	34.8	28.1			
West Facing	30.5	36.9	29			
	C	RESULT <sup>3</sup>	: PASS	1		

<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: 1.60 kWdc Proposed PV Capacity Scaling: North (1.60 kWdc) East (1.60 kWdc) South (1.60 kWdc) West (1.60 kWdc)

CalCERTS inc. Report Generated: 2023-01-09 11:17:51

223-P010003962A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance

Project Name: Encinitas PRADU - Studio B

Calculation Description: Title 24 Analysis

ENERGY USE SUMMARY

Energy Use

Space Heating

Space Cooling

IAQ Ventilation

Water Heating

Self

Utilization/Flexibility

Credit

South Facing Efficiency Compliance

Total

Space Heating

Space Cooling

IAQ Ventilation

Water Heating

Self Utilization/Flexibility

Credit

West Facing Efficiency

**Compliance Total** 

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Standard Design TDV Energy

(EDR2) (kTDV/ft<sup>2</sup> -yr)

0

57.68

8.02

77.45

143.15

0

8.02

77.45

143.15

H 57.68 R C

C LCEDTC

Standard Design Source

Energy (EDR1) (kBtu/ft<sup>2</sup> -yr)

0

3.56

0.75

6.59

10.9

0

3.56

0.75

6.59

10.9

Registration Date/Time: 2023-01-11 10:42:50 Report Version: 2022.0.000 Schema Version: rev 20220901

**Proposed Design Source** 

Energy (EDR1) (kBtu/ft<sup>2</sup> -yr)

0.66

1.06

0.75

4.68

7.15

0.55

0.75

4.64

7.36

P R 1.42

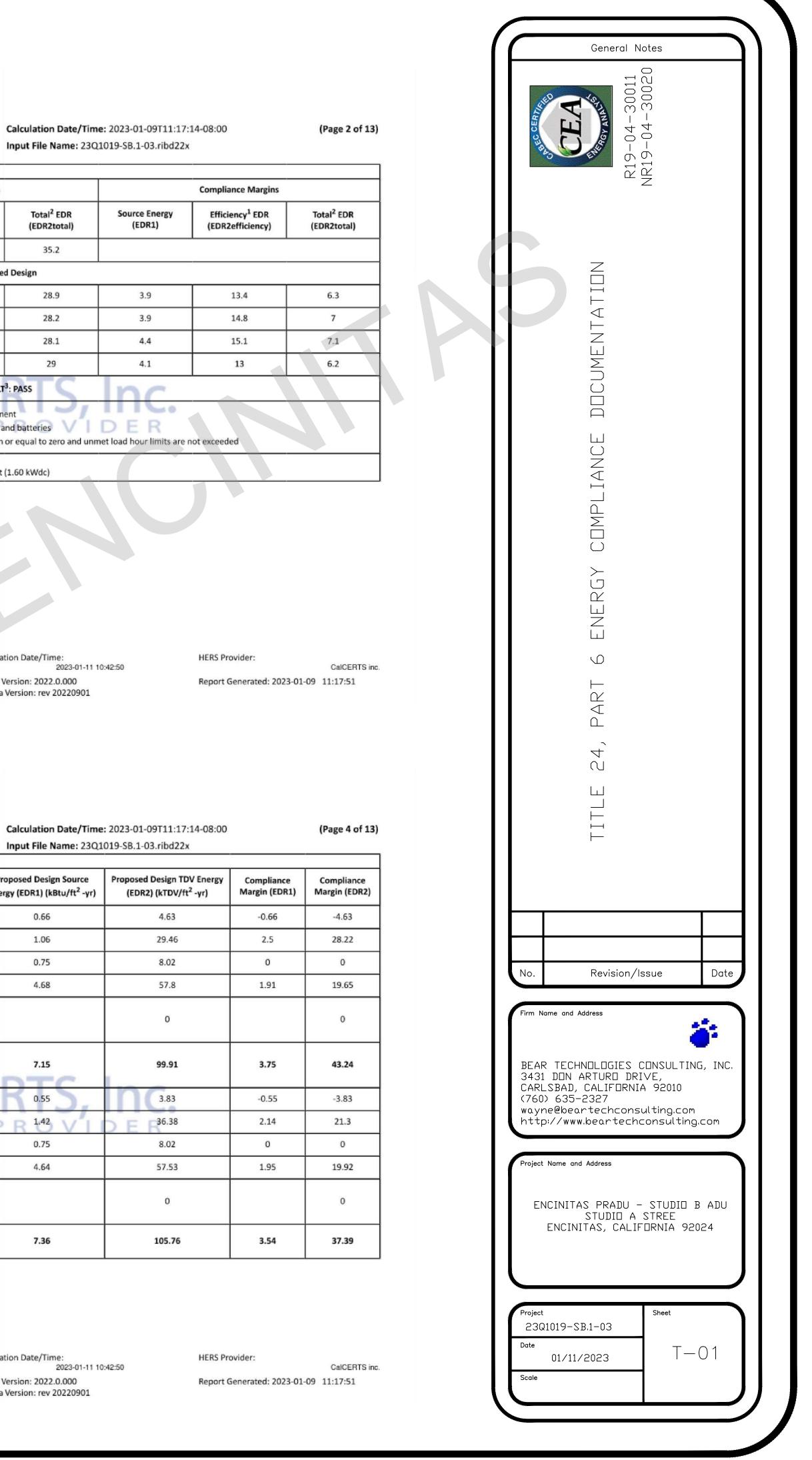
(Page 3 of 13)

223-P010003962A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance Registration Date/Time: 2023-01-11 10:42:50 Report Version: 2022.0.000 Schema Version: rev 20220901

**Registration Number:** 

HERS Provider: CalCERTS inc. Report Generated: 2023-01-09 11:17:51

Registration Number:



#### CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Encinitas PRADU - Studio B

Calculation Description: Title 24 Analysis

Calculation Date/Time: 2023-01-09T11:17:14-08:00 Input File Name: 23Q1019-SB.1-03.ribd22x

	Standard Design (kBtu/ft <sup>2</sup> - yr )	Proposed Design (kBtu/ft <sup>2</sup> - yr )	Compliance Margin (kBtu/ft <sup>2</sup> - yr )	Margin Percentage
North Facing				
Gross EUI <sup>1</sup>	53.5	49.66	3.84	7.18
Net EUI <sup>2</sup>	15.17	11.34	3.83	25.25
East Facing				
Gross EUI <sup>1</sup>	53.5	49	4.5	8.41
Net EUI <sup>2</sup>	15.17	10.68	4.49	29.6
South Facing				
Gross EUI <sup>1</sup>	53.5	49.23 TC	4.27	7.98
Net EUI <sup>2</sup>	15.17	10.91	4.26	28.08
West Facing	ЧН	RS PROV	TDER	
Gross EUI <sup>1</sup>	53.5	50.06	3.44	6.43
Net EUI <sup>2</sup>	15.17	11.73	3.44	22.68

Net EUI is Energy Use Total (including PV) / Total Building Area.

Registration Number: 223-P010003962A-000-000-0000000-0000

CA Building Energy Efficiency Standards - 2022 Residential Compliance

Registration Date/Time: 2023-01-11 10:42:50 Report Version: 2022.0.000 Schema Version: rev 20220901

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Encinitas PRADU - Studio B Calculation Description: Title 24 Analysis

Calculation Date/Time: 2023-01-09T11:17:14-08:00 Input File Name: 23Q1019-SB.1-03.ribd22x

02 Zone Type Conditioned 02 Zone ADU Studio B ADU Studio B ADU Studio B ADU Studio B	HVAC Syst	terior terior	04 Zone Floor A 224 04 Azimuth 0 90	rea (ft <sup>2</sup> ) 05 Orient Fro	ation	05 eiling Height 8 06 Gross Area (ft <sup>2</sup> ) 128	06 Water Heating Sy DHW Sys 1 07 Window a Area ( 31	nd Door ft2)	07 Status New 08 Tilt (deg) 90
Conditioned 02 Zone ADU Studio B ADU Studio B ADU Studio B	Ductless M 03 Constructio _WALL: 2x4 Ex _WALL: 2x4 Ex	Mini-Split1 on cterior cterior	04 0224 Azimuth 0	05 Orienta Fro	ation	8 06 Gross Area (ft <sup>2</sup> )	DHW Sys 1 07 Window a Area (	nd Door ft2)	New 08 Tilt (deg)
02 Zone ADU Studio B ADU Studio B ADU Studio B	03 Constructio _WALL: 2x4 Ex _WALL: 2x4 Ex	on Aterior Aterior	04 Azimuth 0	<b>Orient</b>	ation nt	06 Gross Area (ft <sup>2</sup> )	07 Window a Area (	nd Door ft2)	08 Tilt (deg)
Zone ADU Studio B ADU Studio B ADU Studio B	Construction _WALL: 2x4 Ex _WALL: 2x4 Ex	terior terior	Azimuth 0	<b>Orient</b>	ation nt	Gross Area (ft <sup>2</sup> )	Window a Area (	nd Door ft2)	Tilt (deg)
Zone ADU Studio B ADU Studio B ADU Studio B	Construction _WALL: 2x4 Ex _WALL: 2x4 Ex	terior terior	Azimuth 0	<b>Orient</b>	ation nt	Gross Area (ft <sup>2</sup> )	Window a Area (	nd Door ft2)	Tilt (deg)
ADU Studio B ADU Studio B ADU Studio B	_WALL: 2x4 Ex _WALL: 2x4 Ex	terior terior	0	Fro	nt		Area (	ft2)	
ADU Studio B ADU Studio B	_WALL: 2x4 Ex	terior	1/270			128	31		90
ADU Studio B			90	Lef					
	_WALL: 2x4 Ex	starlar		- Contraction	ft	112	12		90
ADU Studio B		terior	180	Bac	:k	128	30		90
ABO Studio B	_WALL: 2x4 Ex	terior	270	Rig	ht	112	52		90
EDRAL CEILINGS		al			-	nc		-	
03	04	05	06		07	08	09	10	11
e Constructio	on Azimuth	Orientati	ion Area (f	t <sup>2</sup> ) Sk	ylight Area (ft <sup>2</sup> )	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Cool Roo
udio BROOF: SLF	PD. 0	Front	224		0	3	0.1	0.85	No
e	03 Constructi	03 04 Construction Azimuth	03 04 05 Construction Azimuth Orientat	03     04     05     06       Construction     Azimuth     Orientation     Area (fr       io B     _ROOF: SLPD.     0     Front     224	03     04     05     06       Construction     Azimuth     Orientation     Area (ft <sup>2</sup> )       io B     _ROOF: SLPD.     0     Eront     224	03     04     05     06     07       Construction     Azimuth     Orientation     Area (ft <sup>2</sup> )     Skylight Area (ft <sup>2</sup> )       io B     _ROOF: SLPD.     0     Eront     224     0	03     04     05     06     07     08       Construction     Azimuth     Orientation     Area (ft <sup>2</sup> )     Skylight Area (ft <sup>2</sup> )     Roof Rise (x in 12)       io B     _ROOF: SLPD.     0     Eropt     224     0     3	03     04     05     06     07     08     09       Construction     Azimuth     Orientation     Area (ft <sup>2</sup> )     Skylight Area (ft <sup>2</sup> )     Roof Rise (x in (ft <sup>2</sup> )     Roof Rise (x in 12)     Roof Reflectance       io B    ROOF: SLPD.     0     Eront     224     0     3     0.1	03     04     05     06     07     08     09     10       Construction     Azimuth     Orientation     Area (ft <sup>2</sup> )     Skylight Area (ft <sup>2</sup> )     Roof Rise (x in 12)     Roof Reflectance     Roof Emittance       io B     _ROOF: SLPD.     0     Eropt     224     0     3     0.1     0.85

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Туре	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft <sup>2</sup> )	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
w5	Window	Front Wall	Front	0			1	4	0.58	NFRC	0.65	NFRC	Bug Screen
w1	Window	Front Wall	Front	0			1	7	0.58	NFRC	0.65	NFRC	Bug Screen
d1	Window	Front Wall	Front	0			1	20	0.58	NFRC	0.65	NFRC	Bug Screen

**Registration Number:** 

223-P010003962A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance Registration Date/Time: 2023-01-11 10:42:50

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#### HERS Provider:

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## HERS Provider:

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## CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

## Project Name: Encinitas PRADU - Studio B

#### Calculation Date/Time: 2023 Input File Name: 23Q1019-S

## Calculation Description: Title 24 Analysis

REQUIRED PV SYS	TEMS										
01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	Exception	Module Type	Аггау Туре	Power Electronics	CFI	Azimuth (deg)	Tilt Input	Array Angle (deg)	Tilt: (x in 12)	Inverter Eff. (%)	Annual Solar Acces (%)
1.6	NA	Standard (14-17%)	Fixed	none	true	150-270	n/a	n/a	<=7:12	96	98
<ul> <li>Whole hous</li> <li>Exposed sla</li> <li>Variable cap</li> </ul>	e fan b floor in conditioned pacity heat pump comp	zone pliance option (verification nee (NEEA) rated heat pur	on details from VCF	IP Staff report, Appendi	k B, and R	A3)					
HERS FEATURE SU	MMARY			CEDT							
		es <mark>that must be</mark> field-ver el <mark>ow. Reg</mark> istered CF2Rs a					eled ener	gy performanc	e for this com	puter analysis	. Additional
<ul> <li>Kitchen rang</li> </ul>	e fan airflow and fan e R/SEER2	efficacy	HER	SPRO	o v	ΊD	ER				

- Airflow in habitable rooms (SC3.1.4.1.7)
- Verified heat pump rated heating capacity
- Wall-mounted thermostat in zones greater than 150 ft2 (SC3.4.5) Ductless indoor units located entirely in conditioned space (\$C3.1.4.1.8)

BUILDING - FEATURES INFORMA	TION					
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
Encinitas PRADU - Studio B	224	1	1	1	1	1

#### **Registration Number:** 223-P010003962A-000-000-0000000-0000

CA Building Energy Efficiency Standards - 2022 Residential Compliance

## Registration Date/Time:

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#### CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Encinitas PRADU - Studio B

roject hame. E	inclined of the t	bo stadio b					curculu	Jon Duc	., inne. 2020	. 01 0011111			(1 466 0 01 10)
Calculation Desc	ription: Title	24 Analysis					Input Fi	le Name	: 23Q1019-S	B.1-03.ribd22	2x		
FENESTRATION / C	GLAZING												
01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Туре	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft <sup>2</sup> )	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
w6	Window	Left Wall	Left	90			1	4	0.58	NFRC	0.65	NFRC	Bug Screen
w2	Window	Left Wall	Left	90			1	8	0.58	NFRC	0.65	NFRC	Bug Screen
w3	Window	Rear Wall	Back	180			1	18	0.58	NFRC	0.65	NFRC	Bug Screen
w4	Window	Rear Wall	Back	180			1	12	0.58	NFRC	0.65	NFRC	Bug Screen
d2	Window	Right Wall	Right	270			1	40	0.58	NFRC	0.65	NFRC	Bug Screen
w4 2	Window	Right Wall	Right	270			1	12	0.58	NFRC	0.65	NFRC	Bug Screen

SLAB FLOORS		C		DTC			
01	02	03	04	05	06	07	08
Name	Zone	Area (ft <sup>2</sup> )	E Perimeter (ft) P	Edge Insul. R-value and Depth	Edge Insul. R-value and Depth	Carpeted Fraction	Heated
Slab On Grade	ADU Studio B	224	60	none	0	0%	No

## OPAQUE SURFACE CONSTRUCTIONS

OFAQUE SURFACE CONST	(benons			dil.	12 I		s
01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
_WALL: 2x4 Exterior	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-15	None / None	0.095	Inside Finish: Gypsum Board Cavity / Frame: R-15 / 2x4 Exterior Finish: All Other Siding

Registration Number:

223-P010003962A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance Registration Date/Time: 2023-01-11 10:42:50

Report Version: 2022.0.000 Schema Version: rev 20220901

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SB.1-03.ribd22x	

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HERS Provider: CalCERTS inc. Report Generated: 2023-01-09 11:17:51

# Calculation Date/Time: 2023-01-09T11:17:14-08:00

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HERS Provider: CalCERTS inc. Report Generated: 2023-01-09 11:17:51

(-	Ceneral Notes	7
CERT CERT	General Notes	
	ANCE DOCUMENTATION	
	24, PART 6 ENERGY COMPLIANCE DOI	
	TITLE 24, H	
No.	Revision/Issue Date	7
3431 DON CARLSBAD, (760) 635- wayne@bea	HNDLDGIES CONSULTING, INC. ARTURO DRI∨E, CALIFORNIA 92010	
	Ad Address AS PRADU – STUDIO B ADU STUDIO A STREE ITAS, CALIFORNIA 92024	
Project 23Q1019-S Date 01/11/	SB.1-03 /2023 T-02	

Project Name: Encinitas PRADU - Studio B

Calculation Date/Time: 2023-01-09T11:17:14-08:00 Input File Name: 23Q1019-SB.1-03.ribd22x

04

Cal	culation Description: Title 24 Analysis	
OP.	AQUE SURFACE CONSTRUCTIONS	

aming Total C R-val	· I Continuo	ous U-fac
24 in. O. C. R-3	30 None / No	one 0.03
	24 in. O. C. R-:	24 in. O. C. R-30 None / No

03

02 01

Quality Insulation I	nstallation (QII)	High R-value Spray Foa	m Insulation	Buile	ding Envelope Air Lea	kage	CFM50	
Not Requ	uired	Not Require	d		N/A		n/a	
WATER HEATING SYS	TEMS		Ca		-RI	S. I		
01	02	03	04	R	05 R	06	07	
Name	System Type	Distribution Type	Water Heater	r Name	Number of Units	Solar Heating System	Compact Distribution	•
DHW Sys 1	Domestic Hot Water (DHW)	Standard	DHW Heat	ter 1	1	n/a	None	

#### WATER HEATERS - NEEA HEAT PUMP

01	02	03	04	05	06	07
Name	# of Units	Tank Vol. (gal)	NEEA Heat Pump Brand	NEEA Heat Pump Model	Tank Location	Duct Inlet Air Source
DHW Heater 1	1	50	AOSmith	AOSmithFPTU50	ADU Studio B	ADU Studio B

Registration Number: 223-P010003962A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance

Registration Date/Time: 2023-01-11 10:42:50 Report Version: 2022.0.000 Schema Version: rev 20220901

#### CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Encinitas PRADU - Studio B

Calculation Description: Title 24 Analysis

Calculation Date/Time: 2023-01-09T11:17:14-08:00 Input File Name: 23Q1019-SB.1-03.ribd22x

01	02	03	04	05	06	07	08
Name	Certified Low-Static VCHP System	Airflow to Habitable Rooms	Ductless Units in Conditioned Space	Wall Mount Thermostat	Air Filter Sizing & Pressure Drop Rating	Low Leakage Ducts in Conditioned Space	Minimum Airflow pe RA3.3 and SC3.3.3.4.
Heat Pump System 1	Not required	Required	Required	Required	Not required	Not required	Not require

## INDOOR AIR QUALITY (IAQ) FANS

01	02	03	04	05	06	07	
Dwelling Unit	Airflow (CFM)	Fan Efficacy (W/CFM)	IAQ Fan Type	Includes Heat/Energy Recovery?	IAQ Recovery Effectiveness - SRE	Includes Fault Indicator Display?	,
SFam IAQVentRpt	22	0.35	Exhaust	No	n/a	No	Γ
би. -			Call				
COOLING VENTILATIO	DN .			FR		10	
01	02	03	04	05	06	07	Г
Name	Airflow Rate // (CFM/ft2)	Cooling Vent CFM	Cooling Vent Watts/CFM	Total Watts	Number of Fans	CFVCS Type	Γ
WH Fan 1	0.08	17	0.0588	1	1	Not a CFVCS	Γ

PROJECT NOTES

Registration Number: 223-P010003962A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance

Registration Date/Time: 2023-01-11 10:42:50 Report Version: 2022.0.000 Schema Version: rev 20220901

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08 Assembly Layers Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-30 / 2x10 Inside Finish: Gypsum Board 05 CFM50

		n/a
08		09
HERS Verificatio	n	Water Heater Name (#)
n/a		DHW Heater 1 (1)
07	Γ	08
nlet Air Source	D	uct Outlet Air Source

HERS Provider:

CalCERTS inc. Report Generated: 2023-01-09 11:17:51

ADU Studio B

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	09		10			
n er d	Certified non-continuo Fan	ous	Indoor Fan not Running Continuously			
ed	Not require	d	Not required			
	08		09			
HERS	Verification	Status				
	Yes					
	08		09			
Ex	hausts to	HERS Verification				
	Outside	Required				

inputric	nam

											General Notes
											0110011
CERTIFICATE OF COM			RMANCE CO	MPLIANCE M					-		-3001
Project Name: Encin Calculation Descript						lation Date/Time: 202 File Name: 23Q1019-		4-08:00	(Page )	L0 of 13)	9-04-0
WATER HEATING - HEP											R19- 019- 019-
01	02	2	03		04	05	ulle set in se	06	07		
Name	Pipe Insu		Parallel Pi		Compact Distribu	туре	Reci	rculation Control	Shower Drain Wa Recovery	'	
DHW Sys 1 - 1/1	Not Rec	quired	Not Requ	uired	Not Required	None		Not Required	Not Requir	ed	
SPACE CONDITIONING					05						Z
01	02	03	Heatir	04 ng Equipment	05	06 Cooling Equipment	07 t 5 Norma	08	09 Requi		
Name	System Type	Heating Unit N	Name	Count	Cooling Unit Nar	Count	Fan Name	Distribution f	Thermost	at Type	
Ductless Mini-Split1	Heat pump heating cooling	Heat Pump Sy 1	ystem	1	Heat Pump Syste 1	em 1	n/a	n/a	Setba	ack	
HVAC - HEAT PUMPS			-		-						
01	02	03	04	05 0	6 07	08 09	10 11	12	13		
	/	Number of	H	Heating HSPF /		Cooling	EER / Zona	lly Compressor			
Name	System Type	Units		HSPF2 / Cap COP	0 47 Cap 17	Efficiency SEER / Type SEER2	EER / Contro CEER		HERS Verifica	tion	
Heat Pump	VCHP-ductless	1	HSPF	8.5 120	000 7200	EERSEER 16.8	Q Zona		Heat Pump Sy		
System 1	<ul> <li>Second and the second se</li></ul>						2.4 Contro	lled speed	1-hers-htpu	mp	
HVAC HEAT PUMPS - H	HERS VERIFICATION	03		04	05	06	07	08	09		
Name	Verified Airflow	Airflow Tar	rget Verifi	ied EER/EER2	Verified	Verified Refrigeran	t Verified	Verified Hea	ting Verified I	leating	
Heat Pump System	Not Required	0		ot Required	SEER/SEER2 Required	Charge Yes	HSPF/HSPF2 No	Cap 47 Yes	Cap Ye:		$\succ$
1-hers-htpump	Not Neganea	Ů	NU	ze neguneu	Nequireu	163	NO	les	16.	,	
CERTIFICATE OF COM Project Name: Encine Calculation Descript	nitas PRADU - Studi tion: Title 24 Analy	io B sis		OMPLIANCE M	Calcu	lation Date/Time: 202 File Name: 23Q1019-		4-08:00	(Page :	12 of 13)	TITLE 24, PART
**************	the drawings receiv	ed on 01/03/20	)23.								
SCOPE OF WORK: Con	struct a ADU - Studio	) (B Elevation).									
intended to be used in normally done by a me	order to obtain com echanical engineer(s	pliance per Title ) or HVAC contra	e 24 regulation actor(s) and in	ns. They are NO NO CIRCUMST	OT intended to be ANCES is this to be	are used for the purpos used as a substitute for t e used in lieu of the norn nay not reflect the actua	the heating and coo mal calculation met	ling loads required t hods used by a mec	for the structure(s) nnical engineer(s) o	that are or HVAC	No. Revision/Issue Date
			C	alC	ER	TS, li	nc.				BEAR TECHNOLOGIES CONSULTING, INC. 3431 DON ARTURO DRIVE, CARLSBAD, CALIFORNIA 92010 (760) 635-2327 wayne@beartechconsulting.com
			ЧН	ERS	PR	OVID	ER				http://www.beartechconsulting.com Project Name and Address
											ENCINITAS PRADU - STUDIO B ADU STUDIO A STREE ENCINITAS, CALIFORNIA 92024
Registration Number: CA Building Energy Ef	223-P010003962A-000				Registration Da Report Version Schema Versior	2023-01-11 10:42:50 : 2022.0.000	2	HERS Provider: Report Generated:		CERTS inc.	Project         Sheet           23Q1019-SB.1-03         T-03           Date         01/11/2023           Scale         T-03

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CERTIFICATE OF CO			ORMANCE	COMPLIANCE		C-11-+1	- <b>D</b> -t- (Times 202	2 01 00711.17	14.00.00		(Da - 10 - 6	12)		A M			
Project Name: Enci Calculation Descrip							n Date/Time: 202 Name: 23Q1019-5				(Page 10 of :	13)		CE	-04.		
WATER HEATING - HE	ERS VERIFICATION						_							45 En	R19- NR19-		
01	02			13	04		05 Compact Distr	ibution	06		07 hower Drain Water He	aat	Ш		Ξ		
Name	Pipe Ins			l Piping	Compact Di		Туре	Ke	circulation	Control	Recovery	cat					
DHW Sys 1 - 1/1	I	quired	Not Re	equired	Not Req	uired	None		Not Requi	red	Not Required						
SPACE CONDITIONIN	G SYSTEMS 02	03		04	05		06	07		08	09	_		Z			
Name	System Type	Heating Unit	Hes	ating Equipmen	_		Cooling Equipment		Die	tribution Nar	Required						
Ductless	Heat pump	Heat Pump		Count	Heat Pump		Count	Tannam			Thermostat Typ	e	$N^{-}$	Ϋ́			
Mini-Split1	heating cooling	1	System	1	1	5ystem	1	n/a		n/a	Setback						
HVAC - HEAT PUMPS						-							11	U M E			
01	02	03	04	05	06 07	<b>_</b> 0	09	10 1	1	12	13		11				
Name	System Type	Number of		Heating	SIP	RO	Cooling	LLII/		mpressor	HERS Verification			D[			
Name	зузлент туре	Units	Efficiency Type		Cap 47 Cap	17 Effici Ty	iency SEER / pe SEER2	EER / Cont CEER	rolled	Туре	new vernication						
Heat Pump System 1	VCHP-ductless	1	HSPF	8.5	12000 720	0 EERS	SEER 16.8			Multi-	Heat Pump System 1-hers-htpump	1		ANC			
System 1								Cont	oneu	speed	1-ners-ntpump						
HVAC HEAT PUMPS - 01	HERS VERIFICATION	03		04	05		06	07		08	09						
Name	Verified Airflow	Airflow Ta	<u> </u>	rified EER/EER	Vorifi	ied \	Verified Refrigerant Charge			erified Heatin Cap 47		g					
Heat Pump System	Not Required	0		Not Required	Requi		Yes	No		Yes	Yes	_	Ш	$\succ$			
1-hers-htpump													11	NERG N			
CERTIFICATE OF CO Project Name: Enci Calculation Descrip	nitas PRADU - Stud otion: Title 24 Analy	io B /sis		COMPLIANCE	METHOD		20220901 n Date/Time: 202 Name: 23Q1019-5				(Page 12 of 1	13)		TITLE 24, PART			
SCOPE OF WORK: Cor	estruct a ADLL - Studie	o /R Elevation)											11				
Score or work. co		o (o cievacion).	•														
<ol> <li>DO NOT USE FOR A intended to be used in normally done by a m contractor(s).</li> <li>The structure.</li> </ol>	in order to obtain con nechanical engineer(s	npliance per Ti ) or HVAC cont	itle 24 regulat tractor(s) and	tions. They are in NO CIRCUN	NOT intended ISTANCES is this	to be used a s to be used	as a substitute for th I in lieu of the norm	he heating and control of the heating and control of the heating and the	ooling loads ethods used	required for by a mechni	the structure(s) that a cal engineer(s) or HVA	re C	No	n Name and Address	ision/Issue	Date	
					S P	<b>R</b> 0	<b>S, I</b>	<b>1C.</b> E R					34 C4 (7 wd	AR TECHNOLO 31 DON ARTUR ARLSBAD, CALI 60) 635-2327 Ayne@beartect tp://www.bear	RO DRIVE, FORNIA 92010 hconsulting.co	om	
														ject Name and Address ENCINITAS PR STUI ENCINITAS,			
Registration Number CA Building Energy E	r: 223-P010003962A-000 fficiency Standards -			œ	Report Ve	on Date/Tir ersion: 2022 /ersion: rev	2023-01-11 10:42:50 2.0.000		HERS Pro Report G		CalCERTS 23-01-09 11:17:51	i inc.		01/11/2023		-03	

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Project Name: Encir Calculation Descrip						culation Date/Time: 20 ut File Name: 23Q101		4-08:00	(Page 10 of 13	»)	
WATER HEATING - HE	RS VERIFICATION										R19- NR19-
01	02	2	C	)3	04	05 Compact Di		06	07 Shower Drain Water Hea		
Name	Pipe Inst			I Piping	Compact Distri	Typ	e Reci	rculation Control	Recovery	_	
DHW Sys 1 - 1/1	Not Rec	quired	Not Re	equired	Not Requir	ed Nor	e	Not Required	Not Required		
SPACE CONDITIONING	G SYSTEMS 02	03		04	05	06	07	08	09	-	Z
Name	System Type	Heating Uni	He	ating Equipment		Cooling Equipme		Distribution N	Required		
Ductless	Heat pump	Heat Pump		Count	Heat Pump Sy	Count			Thermostat Type		
Mini-Split1	heating cooling	1	System	1	1	1	n/a	n/a	Setback		
HVAC - HEAT PUMPS	_				~~~	TOI					
01	02	03	04	05	06 07	08 09	10 11	12	13		
Name	System Type	Number of	+	Heating HSPF /	STPF	Cooling	EER / Zona	lly Compressor	HERS Verification		$\overline{\Box}$
Name	System type	Units	Efficiency Type		Cap 47 Cap 17	Efficiency SEER / Type SEER2	EER / Contro CEER	lled Type	HERS VEHIcation		
Heat Pump	VCHP-ductless	1	HSPF	8.5 1	12000 7200	EERSEER 16.8	9.4 Zona		Heat Pump System	1	
System 1							2-4 Contro	lled speed	1-hers-htpump		
HVAC HEAT PUMPS - 01	HERS VERIFICATION 02	03		04	05	06	07	08	09	4	
Name	Verified Airflow	Airflow T		rified EER/EER2	Verified	Verified Refrigera		Verified Heat		1	
Heat Pump System	Not Required	0		Not Required	Required		No	Yes	Yes	-	
1-hers-htpump		-5.7							15-3300		
Registration Number	: 223-P010003962A-000	000 0000000 0	000		Registration	Date/Time: 2023-01-11 10:42:	50	HERS Provider:	CalCERTS ir		9
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Project Name: Encir						culation Date/Time: 2		4-08:00	(Page 12 of 13	3)	
Calculation Descrip	tion: Title 24 Analy	rsis			Inp	ut File Name: 23Q101	-SB.1-03.ribd22x			л —	
This report is based of	n the drawings receiv	ved on 01/03/2	2023.								
SCOPE OF WORK: Con	struct a ADU - Studio	o (B Elevation)									
									code provisions and are or the structure(s) that are		
contractor(s). 3) The a						be used in lieu of the no d may not reflect the actu			nical engineer(s) or HVAC ), windows and doors of		No. Revision/Issue Date
the structure.											Firm Name and Address
											BEAR TECHNOLOGIES CONSULTING, INC.
			- (	al	~ED	ΤC Ι	nc				3431 DON ARTURO DRIVE, CARLSBAD, CALIFORNIA 92010
				ai		RTS, I	IIC.				(760) 635-2327 wayne@beartechconsulting.com http://www.beartechconsulting.com
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											Project Name and Address
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											ENCINITAS, CALIFORNIA 92024
											Project Sheet
											23Q1019-SB.1-03
Registration Number	: 223-P010003962A-000	-000-0000000-0	000		Registration	Date/Time: 2023-01-11 10:42:	50	HERS Provider:	CalCERTS in	ıc.	01/11/2023 T-03
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roject Name: Encir	MPLIANCE - RESIDE nitas PRADU - Studi tion: Title 24 Analy: RS VERIFICATION	io B	ORMANCE C	OMPLIANC	CE METH	Calcu			3-01-09T11:17: B.1-03.ribd22x		(Page 10 of 1	.3)		19-04-30011 19-04-30011	
01	02	2	03	3		04		05		06	07			R10 NR1	
Name	Pipe Insu	ulation	Parallel	Piping	Com	pact Distribu	ution Cor	mpact Distrit Type	bution Red	irculation Control	Shower Drain Water He Recovery	at			
DHW Sys 1 - 1/1	Not Req	quired	Not Rec	quired	r	Not Required	1	None		Not Required	Not Required				
ACE CONDITIONING	G SYSTEMS								1						
01	02	03		04		05		06	07	08	09				
Name	System Type	Heating Unit	t Name Heat	ting Equipm Count	ent Coo	oling Unit Na		Equipment Count	Fan Name	Distribution N	lame Required Thermostat Type	2			- 11
Ductless Mini-Split1	Heat pump heating cooling	Heat Pump S	System	1	Hea	at Pump Syste	em	1	n/a	n/a	Setback				
Mini-Spitt	neating cooling	1				1									- 11
AC - HEAT PUMPS					CI		08		10 1:	1 12				CUME	
01	02	03	04	05 Heatin	06 1g	07	_	09 Cooling	10 1:	1 12	13				
Name	System Type	Number of Units	Efficiency Type	HSPF / HSPF2 /	Cap 47	Cap 17	Efficiency Type	SEER /	EER / Zons EER / Contr		HERS Verification				
Heat Pump	VCHP-ductless	1	HSPF	СОР 8.5	12000	7200	EERSEER	16.8	9.4 Zon		Heat Pump System	-		ANC	
System 1	·····································	-	1. A 70 E E						Contr	olled speed	1-hers-htpump				
	HERS VERIFICATION			A.	1	05		06				$\neg$			
01 Name	02 Verified Airflow	03 Airflow Ta	arget Ver	04 ified EER/EE	R2	05 Verified	Verified	06 Refrigerant		08 Verified Hea		:			
eat Pump System			-			SEER/SEER2		harge	HSPF/HSPF		Cap 17	_		$\succ$	
1-hers-htpump	Not Required	0	N	Not Required		Required		Yes	No	Yes	Yes				
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NOTE: Single-fam	ly residential buildings subject to the Energy Codes must comply with all applicable mandatory measures, regardless of the compliance approach
ised. Review the i 04/2022)	espective section for more information.
ilding Envelope	
§ 110.6(a)1:	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 101/I.S.2/A440-2011. *
110.6(a)5:	Labeling. Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
110.6(b):	Field fabricated exterior doors and fenestration products must use U-factors and solar heat gain coefficient (SHGC) values from
110.7:	Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped. Air Leakage. All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 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(g):	Insulation Requirements for Heated Slab Floors. Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	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(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	Radiant Barrier. When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a):	Roof Deck, Ceiling and Rafter Roof Insulation. Roof decks in newly constructed attics in climate zones 4 and 8-16 area-weighted average U-factor not exceeding U-0.184. 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 alterations 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.
§ 150.0(b):	Loose-fill Insulation. Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	Wall Insulation. Minimum R-13 insulation in 2x4 inch 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. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.10
	Masonry walls must meet Tables 150.1-A or B.
§ 150.0(d):	Raised-floor Insulation. Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.
§ 150.0(f):	Slab Edge Insulation. Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alon without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per 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).
§ 150.0(g)1:	Vapor Retarder. In climate zones 1 through 16, the earth floor of unvented 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 §150.0(d).
§ 150.0(g)2:	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 air-permeable insulation.
§ 150.0(q):	Fenestration Products. Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must hav a maximum U-factor of 0.45; or area-weighted average U-factor of all fenestration must not exceed 0.45.
replaces, Decor	tive Gas Appliances, and Gas Log:
§ 110.5(e)	Pilot Light. Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1:	Closable Doors. Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
150.0(e)2:	Combustion Intake. Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device.
§ 150.0(e)3:	Flue Damper. Masonry or factory-built fireplaces must have a flue damper with a readily accessible control.*
	g, Water Heating, and Plumbing System:
	Certification. Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other
§ 110.0-§ 110.3:	regulated appliances must be certified by the manufacturer to the California Energy Commission.
§ 110.2(a):	HVAC Efficiency. Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-N. Controls for Heat Pumps with Supplementary Electric Resistance Heaters. Heat pumps with supplementary electric resistance
§ 110.2(b):	heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.
§ 110.2(c):	Thermostats. All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat. *
§ 110.3(c)3:	Insulation. Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating.
§ 110.3(c)6:	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.

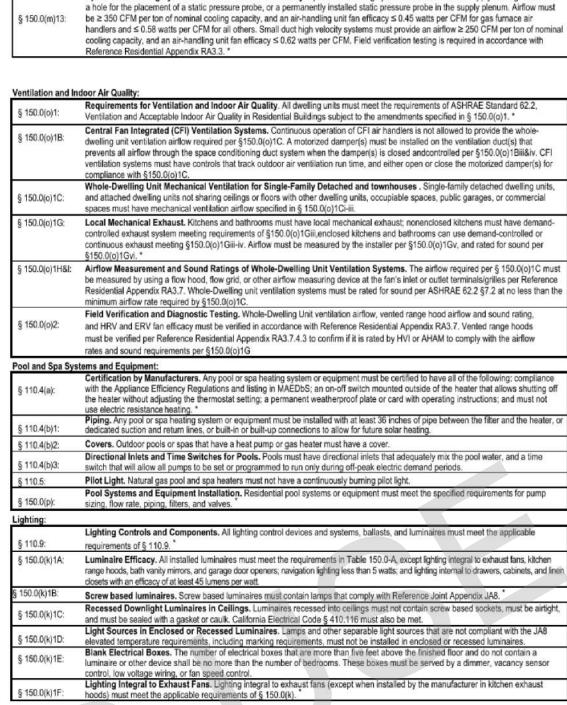
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2022 Single-Family Residential Mandatory Requirements Summary

Space Conditioning System Airflow Rate and Fan Efficacy. Space conditioning systems that use ducts to supply cooling must have



	2022 Single-Family Residential Mandatory Requirements Summary
§ 110.5:	Pilot Lights. Continuously burning pilot lights are prohibited for natural gas: fan-type central 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. *
§ 150.0(h)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 § 150.0(h)2.
§ 150.0(h)3A:	Clearances. Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer.
§ 150.0(h)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.
§ 150.0(j)1:	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. *
§ 150.0(j)2:	Insulation Protection. Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment' maintenance, and wind as required by §120.3(b). Insulation exposed to weather must be water retardant and protected from UV 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-crushable casing or sleeve.
§ 150.0(n)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 2.5' x 2.5' x 7' 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
§ 150.0(n)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(d)3:	Ducts. Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1:	CMC Compliance. All air-distribution system ducts and plenums must meet CMC §§ 601.0-605.0 and ANSI/SMACNA-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-6.0 or higher; ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8) do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. 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 combination of mastic and either mesh or tape must be used to seal openings greater than ½*, 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 not be used to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in
	these spaces must not be compressed.*
§ 150.0(m)2:	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 back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	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.
§ 150.0(m)7:	Backdraft Damper. Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8:	Gravity Ventilation Dampers. Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	Protection of Insulation. Insulation must be protected from damage due tosunlight, 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). Cellular foam insulation must be protected as above or painted with a water retardant and solar radiation-resistant coating.
§ 150.0(m)10:	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 vapor barrier.
§ 150.0(m)11:	Duct System Sealing and Leakage Test. When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1.
§ 150.0(m)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 have a two inch depth or can be one inch if sized per Equation 150.0-A. Clean-filter pressure drop and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service. Filter racks or grilles 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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2022 Single-Family Residential Mandatory Requirements Summary Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8.
 Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 150.0(k)1H: elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires. Light Sources in Drawers, Cabinets, and Linen Closets. Light sources internal to drawers, cabinetry or linen closets are not required § 150.0(k)11: to comply with Table 150.0-A 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. § 150.0(k)2A: Interior Switches and Controls. All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A. 150.0(k)2B: Interior Switches and Controls. Exhaust fans must be controlled separately from lighting systems.
 Accessible Controls. Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned 150.0(k)2A: on and off. \* Multiple Controls. Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed § 150.0(k)2B: to comply with § 150.0(k). § 150.0(k)2C: Mandatory Requirements. Lighting controls must comply with the applicable requirements of § 110.9. Energy Management Control Systems. An energy management control system (EMCS) may be used to comply with dimming, 150.0(k)2D: occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified in § 150.0(k)2A Automatic Shutoff Controls. In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire § 150.0(k)2E: must be controlled by an occupancy or vacancy sensor providing automatic-off functionality. Lighting inside drawers and cabinets with § 150.0(k)2E inductive of an exception of the sector of sources in these spaces must comply with NEMA SSL 7A. § 150.0(k)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. Residential Outdoor Lighting. For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to \$ 150.0(k)3A: other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch control) or an astronomical time clock. An energy management control system that provides the specified control functionality and meets a applicable requirements may be used to meet these requirements. Internally illuminated address signs. Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 150.0(k)4: watts of power Residential Garages for Eight or More Vehicles. Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0. 150.0(k)5: olar Readines Single-family Residences. Single-family residences located in subdivisions with 10 or more single-family 110.10(a)1: 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 § 110.10(b)-(e). 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 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 \$110.10(b)1A: square feet each 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(b)2: Azimuth. All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north. Shading. The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof 6 110.10(b)3A: mounted equipment. Shading. Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the 110.10(b)3B: horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane." Structural Design Loads on Construction Documents. For areas of the roof designated as a solar zone, the structural design loads for 110.10(b)4: roof dead load and roof live load must be clearly indicated on the construction documents. Interconnection Pathways. The construction documents must indicate: a location reserved for inverters and metering equipment and a \$ 110.10(c): 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 plumbing from the solar zone to the water-heating system. Documentation. A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(c) must be § 110.10(d): provided to the occupant. § 110.10(e)1: Main Electrical Service Panel. The main electrical service panel must have a minimum busbar rating of 200 amps. Main Electrical Service Panel. The main electrical service panel must have a reserved space to allow for the installation of a double pole § 110.10(e)2: circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric." Electric and Energy Storage Ready

5/6/22

#### CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

I certify that this Certificate of Compliance documentation is accurate and complete.

Project Name: Encinitas PRADU - Studio B	
Calculation Description: Title 24 Analysis	

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

Calculation Date/Time: 2023-0
Input File Name: 23Q1019-SB.1

#### Ocumentation Author Name: Documentation Author Signature: Wayne Seward Signature Date: 2023-01-11 09:13:09 Bear Technologies Consulting Inc. CEA/ HERS Certification Identification ( 3431 Don Arturo Drive R19-04-30011 City/State/Zip: Phone: 760-635-2327 Carlsbad, CA 92010 RESPONSIBLE PERSON'S DECLARATION STATEMENT certify the following under penalty of perjury, under the laws of the State of California: I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certification 2 of the Business and Professions Code to accept responsibility for the building design identified on this Certification. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements 3. The building design features or system design features identified on this Certificate of Compliance are consistent with the information procalculations, plans and specifications submitted to the enforcement agency for approval with this building permit application. Responsible Designer Name: insible Designer Signature Bart M Smith Date Signed: HEKS 2023-01-11 10:42:50 **DZN Partners** License: C-22557 682 2nd Street City/State/Zip: 760-753-2464 Encinitas, CA 92024

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

Registration Number: 223-P010003962A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance

Registration Date/Time: 2023-01-11 10:42:50 Report Version: 2022.0.000

Schema Version: rev 20220901



## 2022 Single-Family Residential Mandatory Requirements Summary

1	
§ 150.0(s)	Energy Storage System (ESS) Ready. All single-family residences must meet all of the following: Either ESS-ready interconnection equipment with backed up capacity of 60 amps or more and four or more ESS supplied branch circuits, <u>or</u> a dedicated raceway from the main service to a subpanel that supplies the branch circuits in § 150.0(s); at least four branch circuits must be identified and have their source collocated at a single panelboard suitable to be supplied by the ESS, with one circuit supplying the refrigerator, one lighting circuit near the primary exit, and one circuit supplying a sleeping room receptacle outlet; main panelboard must have a minimum busbar rating of 225 amps; sufficient space must be reserved to allow future installation of a system isolation equipment/transfer switch within 3' of the main panelboard, with raceways installed between the panelboard and the switch location to allow the connection of backup power source.
§ 150.0(t)	Heat Pump Space Heater Ready. Systems using gas or propane furnaces to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the furnace with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(u)	Electric Cooktop Ready. Systems using gas or propane cooktop to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the cooktop with circuit conductors rated at least 50 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(v)	Electric Clothes Dryer Ready. Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the dryer location with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."

\*Exceptions may apply.

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3431 DON ARTURO DRIVE,
CARLSBAD, CALIFORNIA 92010 (760) 635-2327
wayne@beartechconsulting.com http://www.beartechconsulting.com
Project Name and Address
ENCINITAS PRADU - STUDIO B ADU STUDIO A STREE ENCINITAS, CALIFORNIA 92024
Project Sheet 23Q1019-SB.1-03
Date 01/11/2023 T−04 Scale

Project Name: Encinitas PRADU - Studio C

Calculation Description: Title 24 Analysis

Input File Name: 23Q1019-SC.1-03.ribd22x

GENERAL INFORMATION						
01	Project Name	Encinitas PRADU - Studio C	incinitas PRADU - Studio C			
02	Run Title	Title 24 Analysis				
03	Project Location	Studio A Street				
04	City	Encinitas	05	Standards Version	2022	
06	Zip code	92024	07	Software Version	EnergyPro 9.0	
08	Climate Zone	7	09	Front Orientation (deg/ Cardinal)	All orientations	
10	Building Type	Single family	11	Number of Dwelling Units	1	
12	Project Scope	Newly Constructed 13 Number of Bedrooms 1				
14	Addition Cond. Floor Area (ft <sup>2</sup> )	0 15 Number of Stories 1				
16	Existing Cond. Floor Area (ft <sup>2</sup> )	n/a 17 Fenestration Average U-factor 0.58				
18	Total Cond. Floor Area (ft <sup>2</sup> )	Total Cond. Floor Area (ft <sup>2</sup> ) 224 19 Glazing Percentage (%) 67.00%			67.00%	
20	ADU Bedroom Count n/a					
COMPLIANCE RESULTS						
)	01 Building Complies with Computer	Building Complies with Computer Performance				
	02 This building incorporates feature	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	This building incorporates one or more Special Features shown below				

Registration Number: 223-P010003966A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance

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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Encinitas PRADU - Studio C Calculation Description: Title 24 Analysis

Calculation Date/Time: 2023-01-09T09:50:18-08:00 Input File Name: 23Q1019-SC.1-03.ribd22x

ENERGY USE SUMMARY						
Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft <sup>2</sup> -yr)	Standard Design TDV Energy (EDR2) (kTDV/ft <sup>2</sup> -yr)	Proposed Design Source Energy (EDR1) (kBtu/ft <sup>2</sup> -yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft <sup>2</sup> -yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2
Space Heating	0	0	1.15	8.12	-1.15	-8.12
Space Cooling	3.36	55.93	1.43	35.29	1.93	20.64
IAQ Ventilation	0.75	8.02	0.75	8.02	0	0
Water Heating	6.61	77.65	4.75	58.41	1.86	19.24
Self Utilization/Flexibility Credit	٨			0		0
North Facing Efficiency Compliance Total	10.72	141.6		109.84	2.64	31.76
Space Heating	0	Care		8.48	-1.2	-8.48
Space Cooling	3.36	H 55.93 R S	PRINVII	DE R <sub>30.44</sub>	2.23	25.49
IAQ Ventilation	0.75	8.02	0.75	8.02	0	0
Water Heating	6.61	77.65	4.77	58.51	1.84	19.14
Self Utilization/Flexibility Credit				0		0
East Facing Efficiency Compliance Total	10.72	141.6	7.85	105.45	2.87	36.15

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CA Building Energy Efficiency Standards - 2022 Residential Compliance

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ENERGY DESIGN RATINGS

	Energy Design Ratings		
	Source Energy (EDR1)	Efficiency <sup>1</sup> EDR (EDR2efficiency)	Total <sup>2</sup> EDF (EDR2total
Standard Design	34.3	49.2	35.1
		Proposed	Design
North Facing	31.2	38.2	29.7
East Facing	30.9	36.7	29
South Facing	30.7	37.5	29.4
West Facing	30.9	38.9	30

<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: 1.59 kWdc Proposed PV Capacity Scaling: North (1.59 kWdc) East (1.59 kWdc) South (1.59 kWdc) West (1.59 kWdc)

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**Registration Number:** 

Registration Date/Time:

Report Version: 2022.0.000 Schema Version: rev 20220901

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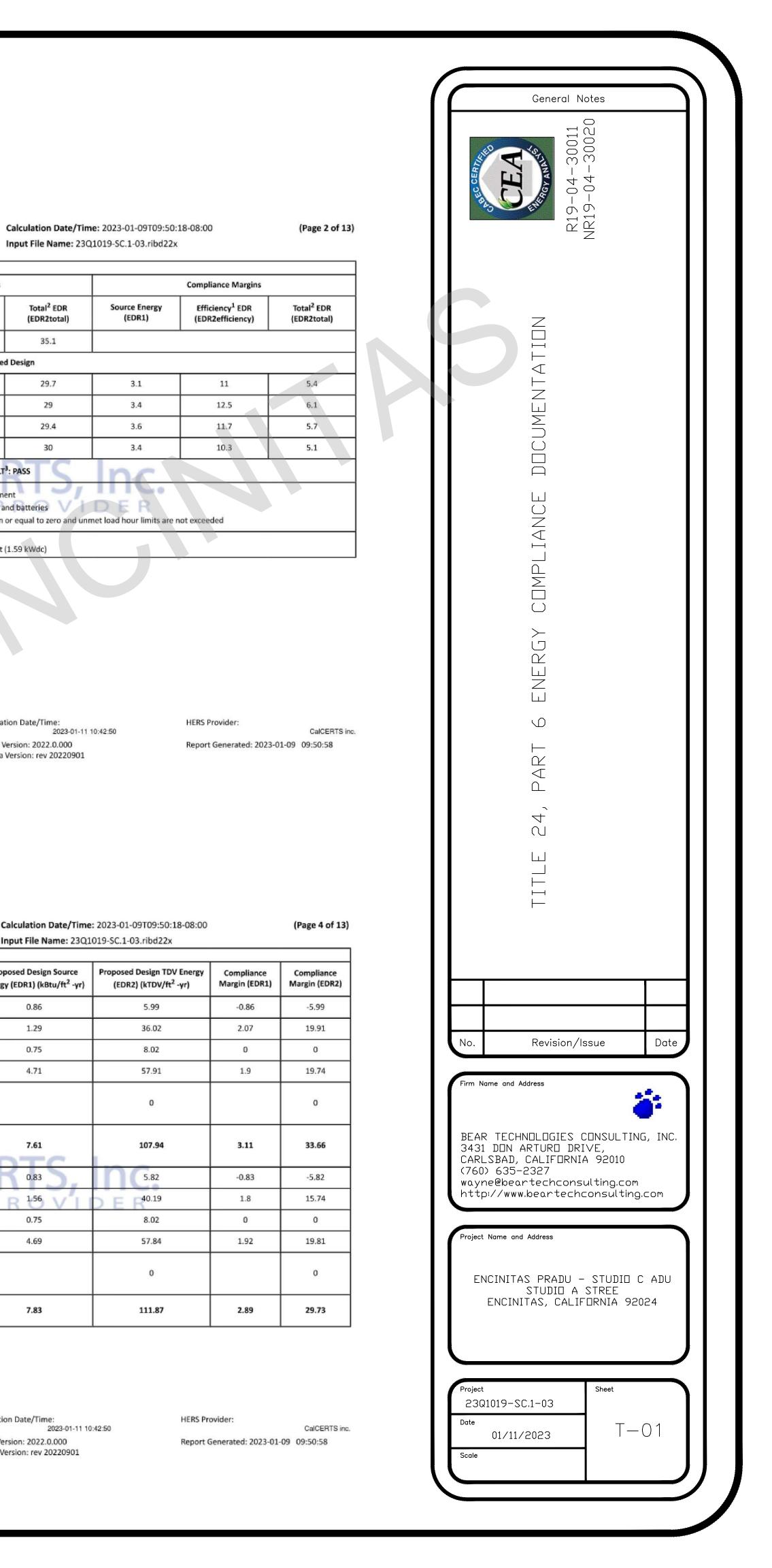
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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD	
Project Name: Encinitas PRADU - Studio C	Calculation
Calculation Description: Title 24 Analysis	Input File
ENERGY USE SUMMARY	

Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft <sup>2</sup> -yr)	Standard Design TDV Energy (EDR2) (kTDV/ft <sup>2</sup> -yr)	Proposed Design Source Energy (EDR1) (kBtu/ft <sup>2</sup> -yr)
Space Heating	0	0	0.86
Space Cooling	3.36	55.93	1.29
IAQ Ventilation	0.75	8.02	0.75
Water Heating	6.61	77.65	4.71
Self Utilization/Flexibility Credit	٨		
South Facing Efficiency Compliance Total	10.72	141.6	7.61
Space Heating	0	0	0.83
Space Cooling	3.36	H 55.93 R S	P R 1.56 V I
IAQ Ventilation	0.75	8.02	0.75
Water Heating	6.61	77.65	4.69
Self Utilization/Flexibility Credit			
West Facing Efficiency Compliance Total	10.72	141.6	7.83

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Registration Date/Time: Report Version: 2022.0.000 Schema Version: rev 20220901



CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Encinitas PRADU - Studio C Calculation I

n Description: Title	Input File Na	
E INTENSITY		
	Standard Design (kBtu/ft <sup>2</sup> - yr )	Proposed Design (kBtu/ft <sup>2</sup> - y

	Standard Design (kBtu/ft <sup>2</sup> - yr )	Proposed Design (kBtu/ft <sup>2</sup> - yr )	Compliance Margin (kBtu/ft <sup>2</sup> - yr )	Margin Percentage
North Facing		π		
Gross EUI <sup>1</sup>	53.24	50.31	2.93	5.5
Net EUI <sup>2</sup>	15.16	12.23	2.93	19.33
East Facing	•			
Gross EUI <sup>1</sup>	53.24	49.78	3.46	6.5
Net EUI <sup>2</sup>	15.16	11.7	3.46	22.82
South Facing	~ ~			
Gross EUI <sup>1</sup>	53.24	50.41	2.83	5.32
Net EUI <sup>2</sup>	15.16	12.33	2.83	18.67
West Facing	HE	RS PROV	IDER	
Gross EUI <sup>1</sup>	53.24	50.83	2.41	4.53
Net EUI <sup>2</sup>	15.16	12.75	2.41	15.9

1. Gross EUI is Energy Use Total (not including PV) / Total Building Area. 2. Net EUI is Energy Use Total (including PV) / Total Building Area.

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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Encinitas PRADU - Studio C Calculation Description: Title 24 Analysis

Calculation Date/Time: 2023-01-09T09:50:18-08:00 Input File Name: 23Q1019-SC.1-03.ribd22x

ONE INFORMATION				
01	02	03	04	
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft <sup>2</sup> )	Avg. Ce
ADU Studio C	Conditioned	Ductless Mini-Split1	224	
OPAQUE SURFACES				

UPAQUE SURFA	LES						
01	01 02		03		04	05	
Name		Zone	Constructio	on A	zimuth	Orientation	
Front Wa	II ADI	J Studio C	_WALL: 2x4 Ex	terior	0	Front	
Left Wal	eft Wall ADU Studio C		_WALL: 2x4 Exterior		90	Left	
Rear Wa	II ADI	J Studio C	_WALL: 2x4 Ex	terior	180		
Right Wa	II ADI	J Studio C	_WALL: 2x4 Ex	terior	270	Right	
OPAQUE SURFA	CES - CATHEDRAL	CEILINGS		ar	FR	5	1
01	02	03	04	05	06	07	
Name	Zone	Construction	Azimuth	Orientation	Area (ft <sup>2</sup> )	Skylight Are (ft <sup>2</sup> )	a
Roof ADU Studio C		_ROOF: SLPD. CLG.	0	Front	224	0	

#### FENESTRATION / GLAZING

TERESTINGTON /	de letto										-		
01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Туре	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft <sup>2</sup> )	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
w4	Window	Front Wall	Front	0			1	15	0.58	NFRC	0.65	NFRC	Bug Screen
w1	Window	Front Wall	Front	0			1	7	0.58	NFRC	0.65	NFRC	Bug Screen
d1	Window	Front Wall	Front	0			1	20	0.58	NFRC	0.65	NFRC	Bug Screen

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#### CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Encinitas PRADU - Studio C Calculation Description: Title 24 Analysis

Input File Name: 23Q1019-SC.1-03.ribd22x

## **REQUIRED PV SYSTEMS**

						- C.
01	02	03	04	05	06	0
DC System Size (kWdc)	Exception	Module Type	Array Type	Power Electronics	CFI	Azin (de
1.59	NA	Standard (14-17%)	Fixed	none	true	150

#### REQUIRED SPECIAL FEATURES

The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis. Whole house fan Exposed slab floor in conditioned zone Variable capacity heat pump compliance option (verification details from VCHP Staff report, Appendix B, and RA3)

Northwest Energy Efficiency Alliance (NEEA) rated heat pump water heater; specific brand/model, or equivalent, must be installed HERS FEATURE SUMMARY C CEDTC

	following is a summary of the features that must be ail is provided in the buildng tables be <mark>low. Registered</mark>									
•	Indoor air quality ventilation	н	F	R	<	Р	R	0	V	1
•	Kitchen range hood		la se	1	2		17	$\sim$	V	
100	Whole house fee siefless and fee officients									

Whole house fan airflow and fan efficacy Verified SEER/SEER2

Verified Refrigerant Charge

Airflow in habitable rooms (SC3.1.4.1.7) Verified HSPF

Verified heat pump rated heating capacity

Wall-mounted thermostat in zones greater than 150 ft2 (SC3.4.5) Ductless indoor units located entirely in conditioned space (SC3.1.4.1.8)

#### **BUILDING - FEATURES INFORMATION**

02	03			04	
nditioned Floor Area (ft <sup>2</sup> )	Number of Dw Units	elling	Number	of Bedrooms	Numb
224	1			1	
	nditioned Floor Area (ft <sup>2</sup> )	nditioned Floor Area (ft <sup>2</sup> ) Number of Dw Units	nditioned Floor Area (ft <sup>2</sup> ) Number of Dwelling Units	nditioned Floor Area (ft <sup>2</sup> ) Number of Dwelling Units Number	nditioned Floor Area (ft <sup>2</sup> ) Number of Dwelling Units Number of Bedrooms

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05 06 07 Water Heating System 1 Status Ceiling Height DHW Sys 1 New 06 07 08 Window and Door Tilt (deg) Gross Area (ft<sup>2</sup>) Area (ft2) 158 90 42 141 90 23 158 30 90 141 90 55 08 09 10 11 Roof Rise (x in Roof Cool Roof oof Emittance 12) Reflectance 0.1 0.85 6 No

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## CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project Name: Encinitas PRADU - Studio C Calculation Description: Title 24 Analysis FENESTRATION / GLAZING

Input File Name: 23Q1019-SC.1-03.ribd22x

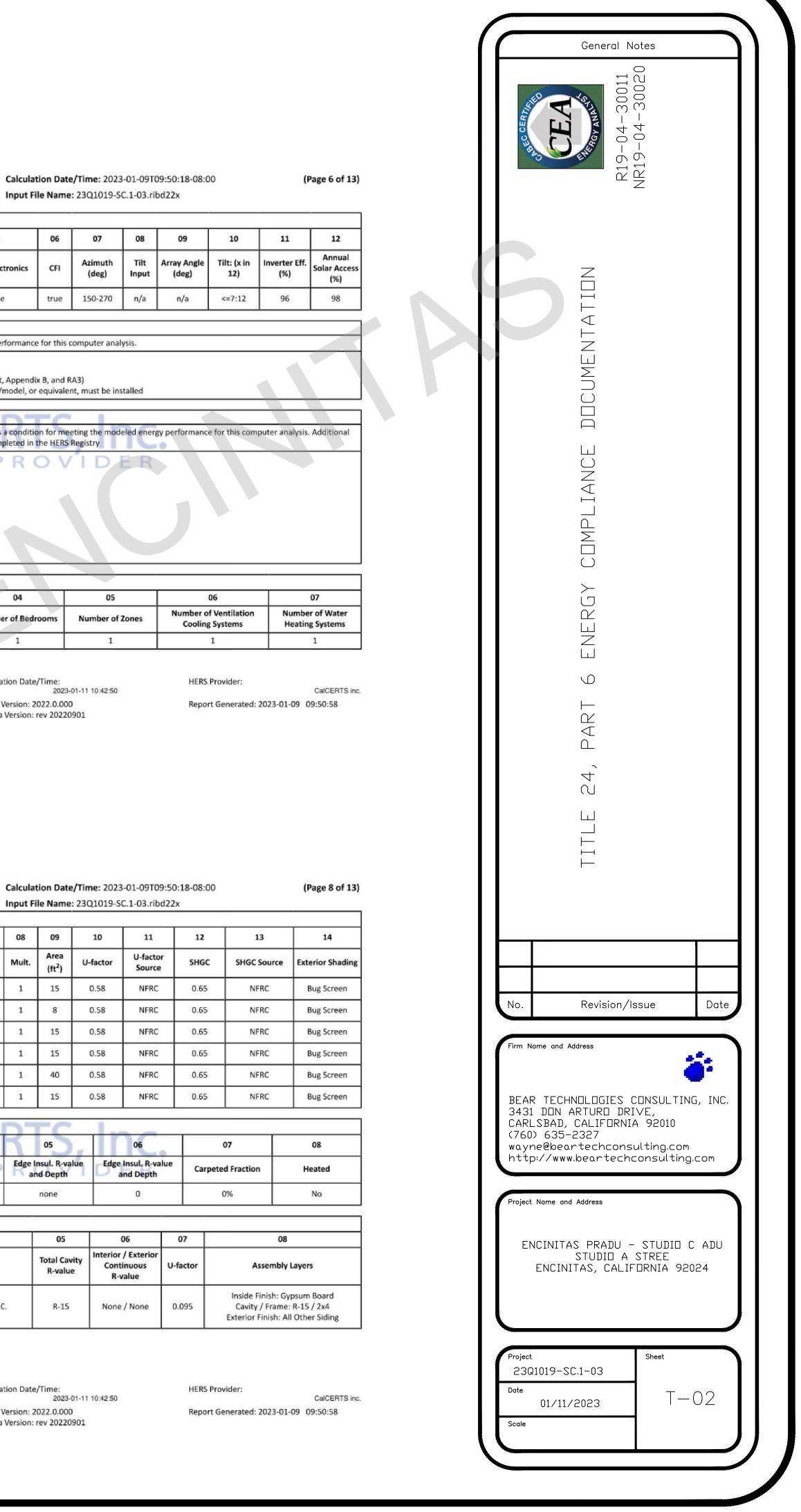
01	02	03	04	05	06	07	08	09	10
Name	Туре	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft <sup>2</sup> )	U-fac
w4 2	Window	Left Wall	Left	90			1	15	0.5
w2	Window	Left Wall	Left	90			1	8	0.5
w3	Window	Rear Wall	Back	180			1	15	0.5
w4 3	Window	Rear Wall	Back	180			1	15	0.5
d2	Window	Right Wall	Right	270			1	40	0.5
w4 4	Window	Right Wall	Right	270			1	15	0.5

SLAB FLOORS		C		DTC	
01	02	03	04	05	
Name	Zone	Area (ft <sup>2</sup> )	Perimeter (ft)	Edge Insul. R-value and Depth	E
Slab On Grade	ADU Studio C	224	60	none	

OF	PAQUE SURFACE CONSTR	RUCTIONS				
	01	02	03	04	05	
	Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Int
	_WALL: 2x4 Exterior	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-15	

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### CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Encinitas PRADU - Studio C

Input File Name: 2301019-SC 1-03 ribd22x

01	02	03	04	05
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value
_ROOF: SLPD. CLG.	Cathedral Ceilings	Wood Framed Ceiling	2x10 @ 24 in. O. C.	R-30

Calculation Descript	tion: Title 24 Ar	nalysis				Input F	ile Name: 23	Q1019-SC.1-03.rib	d22x			
OPAQUE SURFACE CO	NSTRUCTIONS					~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~						
01	0	2	03			04	05	06	07	0	8	
Construction Nam	e Surfac	е Туре	Constructio	n Type	n Type Framing		Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assemb	ly Layers	
_ROOF: SLPD. CLG	. Cathedra	l Ceilings	ilings Wood Frame Ceiling		2x10 @	9 24 in. O. C.	R-30	None / None	0.035	Roof Dee Siding/sheat Cavity / Fram	oofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-30 / 2x10 Inside Finish: Gypsum Board	
BUILDING ENVELOPE - HERS VERIFICATION												
01	- HERS VERIFICA		02		-	03		04		1	05	
Quality Insulation In	retallation (OII)	High Rap	lue Spray Foan	n Inculation	Build	ding Envelope Air L	oakago	CFM50			FM50	
Quality insulation in	istaliation (QII)	nigh N-Va	ide spray roan	in insulation	Build		eakage	Criviso			FINISU	
Not Requ	ired		Not Required			N/A		n/a			n/a	
		7		-			LC.	00				
WATER HEATING SYST	rems			6		ED			_			
01	02		03	0	A R C	05 R	dv'	DER	07	08	09	
Name	System Type	Distr	ibution Type	Water Hea	ater Name	Number of Units	Solar H Syst		npact bution	HERS Verification	Water Heater Name (#)	
DHW Sys 1	Domestic Hot Water (DHW)		Standard	DHW H	eater 1	1	n/	'a N	one	n/a	DHW Heater 1 (1)	
WATER HEATERS - NEEA HEAT PUMP												
									1 Had to			

01	02	03	04	05	06	07	08
Name	# of Units	Tank Vol. (gal)	NEEA Heat Pump Brand	NEEA Heat Pump Model	Tank Location	Duct Inlet Air Source	Duct Outlet Air Source
DHW Heater 1	1	50	AOSmith	AOSmithFPTU50	ADU Studio C	ADU Studio C	ADU Studio C

**Registration Number:** 223-P010003966A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance

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01		02	03	04	05	06	07	08	09	10
Name		Certified Low-Static VCHP System	Airflow to Habitable Rooms	Ductless Units in Conditioned Space	Wall Mount Thermostat	Air Filter Sizing & Pressure Drop Rating	Low Leakage Ducts in Conditioned Space	Minimum Airflow per RA3.3 and SC3.3.3.4.1	Certified non-continuous Fan	Indoor Fan not Running Continuously
Heat Pump Sys	tem 1	Not required	Required	Required	Required	Not required	Not required	Not required	Not required	Not required
NDOOR AIR QUALITY	(IAQ) FANS									
01	02		03	04	05	06	0	7	08	09
Dwelling Unit	Airflow (CFI		Efficacy /CFM)	IAQ Fan Type	Includes Heat/Energy Recovery?	IAQ Recover Effectiveness -		I HEE	S Verification	Status
SFam IAQVentRpt	22	0	0.35	Exhaust	No	n/a	N	o l	Yes	
OOLING VENTILATIO			- (		ED.	IS I	nc			
01	02		03	04	05	06	07	,	08	09
Name	Airflow Rat (CFM/ft2)	e Cooling	Vent CFM	Cooling Vent Watts/CFM	Total Watts	Number of Fa	ER			IERS Verification
WH Fan 1	0.08		17	0.0588	1	1	Not a (	CFVCS	Outside	Required

PROJECT NOTES

**Registration Number:** 223-P010003966A-000-000-0000000-0000

CA Building Energy Efficiency Standards - 2022 Residential Compliance

Registration Date/Time: 2023-01-11 10:42:50 Report Version: 2022.0.000 Schema Version: rev 20220901

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#### CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Encinitas PRADU - Studio C Calculation Description: Title 24 Analysis

WATER HEATING - HERS VERIFICATION

01	0	2	03	04 Compact Distribution	
Name	Pipe Ins	ulation Pa	rallel Piping		
DHW Sys 1 - 1/	/1 Not Re	quired N	ot Required	Not Required	
PACE CONDITIONI	NG SYSTEMS				
01	02	03	04	05	
Name	System Type	Heating Unit Name	Heating Equipment Count	Cooling Unit Name	Coo
Ductless Mini-Split1	Heat pump heating cooling	Heat Pump System 1	1	Heat Pump System 1	
IVAC - HEAT PUMP	s		010		-
01	02	03 04	05 0	6 07	08

	01	02	03	04	05	06	07	08
Ì					Heati	ng		
	Name	System Type	Number of Units	Efficiency Type	HSPF / HSPF2 / COP	Cap 47	Cap 17	Efficiency Type
	Heat Pump System 1	VCHP-ductless	1	HSPF	9.9	14500	8700	EERSEER

## HVAC HEAT PUMPS - HERS VERIFICATION

**Registration Number** 

01	02	03	04	05	
Name	Verified Airflow	Airflow Target	Verified EER/EER2	Verified SEER/SEER2	Verif
Heat Pump System 1-hers-htpump	Not Required	0	Not Required	Required	

223-P010003966A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance

Registration Date/Time: Report Version: 2022.0.000 Schema Version: rev 20220901

#### CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Encinitas PRADU - Studio C

Project Name: Encinitas PRADU - Studio C	é.
Calculation Description: Title 24 Analysis	
*******	

This report is based on the drawings received on 01/03/2023. \*\*\*\*\*\*\*\*\*\*\*\*\*

SCOPE OF WORK: Construct a ADU - Studio (C Elevation).

1) DO NOT USE FOR ACTUAL HEATING/COOLING DESIGN. 2) The Title 24 calculations used for this project are used for the purpose of complying with the current Title 24 code provisions and are intended to be used in order to obtain compliance per Title 24 regulations. They are NOT intended to be used as a substitute for the heating and cooling loads required for the structure(s) that are normally done by a mechanical engineer(s) or HVAC contractor(s) and in NO CIRCUMSTANCES is this to be used in lieu of the normal calculation methods used by a mechnical engineer(s) or HVAC contractor(s). 3) The assembly components found in this document are for modeling purposes only and may not reflect the actual conditions of the walls, roof(s), floor(s), windows and doors of

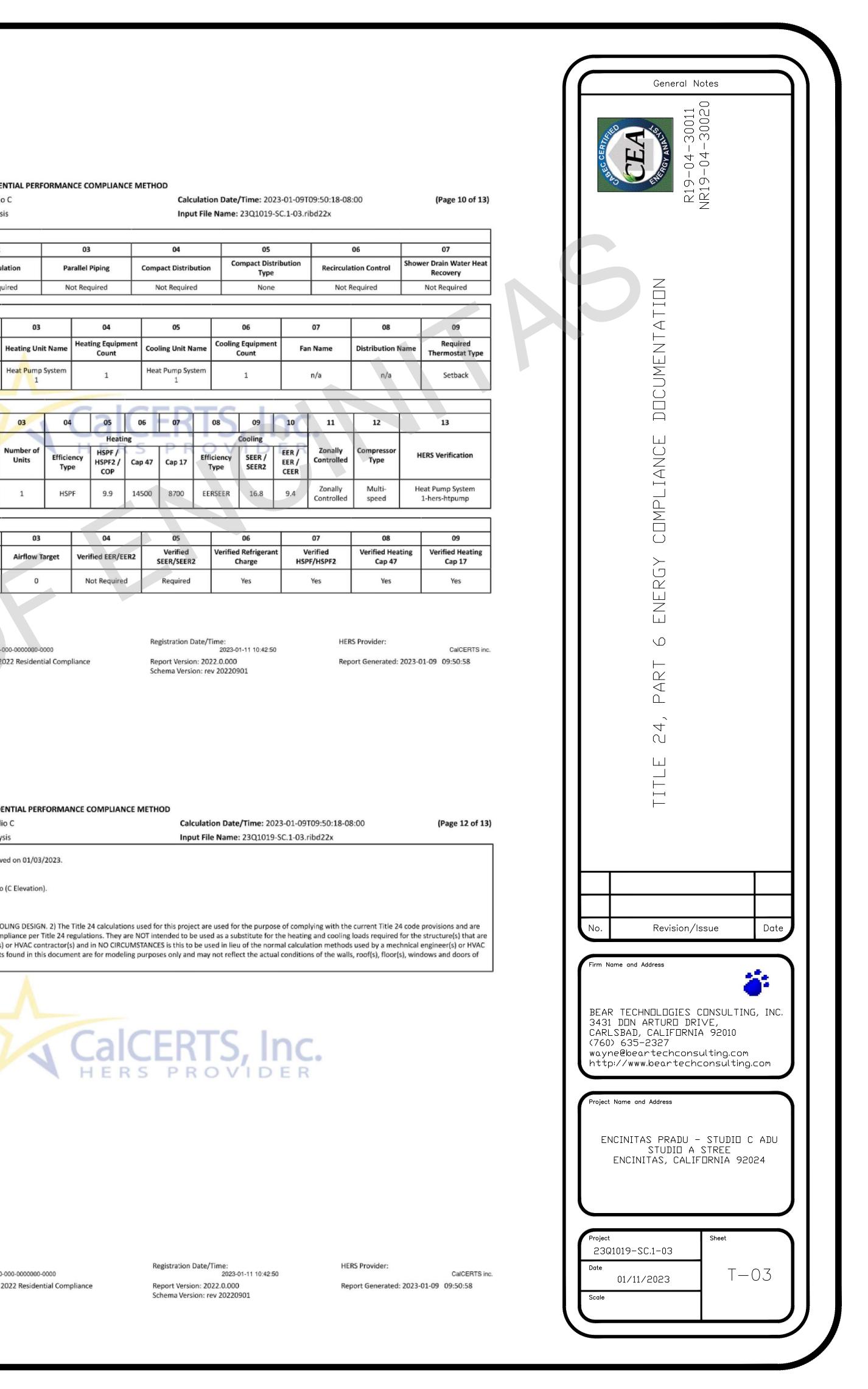
the structure.

## (Page 11 of 13)

Registration Number: 223-P010003966A-000-000-0000000-0000 Registration Date/Time: Report Version: 2022.0.000 Schema Version: rev 20220901

CA Building Energy Efficiency Standards - 2022 Residential Compliance

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2022 Single-Family Residential Mandatory Requirements Summary

<u>NOTE:</u> Single-family residential buildings subject to the Energy Codes must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. (04/2022) Building Envelope:

§ 110.6(a)1:	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 101/I.S.2/A440-2011. *
§ 110.6(a)5:	Labeling. Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	Field fabricated exterior doors and fenestration products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped.
§ 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, or weather stripped.
§ 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(g):	Insulation Requirements for Heated Slab Floors. Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	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(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	Radiant Barrier. When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a):	Roof Deck, Ceiling and Rafter Roof Insulation. Roof decks in newly constructed attics in climate zones 4 and 8-16 area-weighted average U-factor not exceeding U-0.184. 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 alterations 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.
§ 150.0(b):	Loose-fill Insulation. Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	Wall Insulation. Minimum R-13 insulation in 2x4 inch 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. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102
	Masonry walls must meet Tables 150.1-A or B.*
§ 150.0(d):	Raised-floor Insulation. Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.*
§ 150.0(f):	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 per 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).
§ 150.0(g)1:	Vapor Retarder. In climate zones 1 through 16, the earth floor of unvented 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 §150.0(d).
§ 150.0(g)2:	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 air-permeable insulation.
§ 150.0(q):	Fenestration Products. Fenestration, including skylights, separating conditioned space from 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.
ireplaces, Decor	ative Gas Appliances, and Gas Log:
§ 110.5(e)	Pilot Light. Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1:	Closable Doors. Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)2:	Combustion Intake. Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device.
§ 150.0(e)3:	Flue Damper. Masonry or factory-built fireplaces must have a flue damper with a readily accessible control. $^{\star}$
pace Conditioni	ng, Water Heating, and Plumbing System:
§ 110.0-§ 110.3:	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.
§ 110.2(a):	HVAC Efficiency. Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-N.*
§ 110.2(b):	Controls for Heat Pumps with Supplementary Electric Resistance Heaters. Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.
§ 110.2(c):	Thermostats. All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat. *
§ 110.3(c)3:	Insulation. Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating.
§ 110.3(c)6:	Isolation Valves. Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with

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2022 Single-Family Residential Mandatory Requirements Summary

 Space Conditioning System Airflow Rate and Fan Efficacy. 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 supply plenum. Airflow must be ≥ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.45 watts per CFM for gas furnace air handlers and ≤ 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3. \*

§ 150.0(o)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 subject to the amendments specified in § 150.0(o)1. *
§ 150.0(o)1B:	Central Fan Integrated (CFI) Ventilation Systems. Continuous operation of CFI air handlers is not allowed to provide the whole- dwelling unit ventilation airflow required per §150.0(o)1C. A motorized damper(s) must be installed on the ventilation duct(s) that prevents all airflow through the space conditioning duct system when the damper(s) is closed andcontrolled per §150.0(o)1Biii&iv. CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for compliance with §150.0(o)1C.
§ 150.0(o)1C:	Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and townhouses. Single-family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 150.0(o)1Ci-iii.
§ 150.0(o)1G:	Local Mechanical Exhaust. Kitchens and bathrooms must have local mechanical exhaust; nonenclosed kitchens must have demand- controlled exhaust system meeting requirements of §150.0(o)1Giii,enclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting §150.0(o)1Giii-iv. Airflow must be measured by the installer per §150.0(o)1Gv, and rated for sound per §150.0(o)1Gvi. *
§ 150.0(o)1H&I:	Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems. The airflow required per § 150.0(o)1C must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/grilles per Reference Residential Appendix RA3.7. Whole-Dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 §7.2 at no less than the minimum airflow rate required by §150.0(o)1C.
§ 150.0(o)2:	Field Verification and Diagnostic Testing. Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HRV and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per §150.0(o)1G
Pool and Spa Sys	stems 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 MAEDbS; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating. *
§ 110.4(b)1:	Piping. Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2:	Covers. Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3:	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 set or programmed to run only during off-peak electric demand periods.
§ 110.5:	Pilot Light. Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p):	Pool Systems and Equipment Installation. Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.
Lighting:	
§ 110.9:	Lighting Controls and Components. All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.
§ 150.0(k)1A:	Luminaire Efficacy. All installed luminaires must meet the requirements in Table 150.0-A, except lighting integral to exhaust fans, kitchen range hoods, bath vanity mirrors, and garage door openers; navigation lighting less than 5 watts; and lighting internal to drawers, cabinets, and linen closets with an efficacy of at least 45 lumens per watt.
§ 150.0(k)1B:	Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8.*
§ 150.0(k)1C:	Recessed Downlight Luminaires in Ceilings. Luminaires recessed into ceilings must not contain screw based sockets, must be airtight, and must be sealed with a gasket or caulk. California Electrical Code § 410.116 must also be met.
§ 150.0(k)1D:	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1E:	Blank Electrical Boxes. The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device shall be no more than the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor control, low voltage wiring, or fan speed control.
§ 150.0(k)1F:	Lighting Integral to Exhaust Fans. Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k).

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§ 110.5:	Pilot Ligh (except ap
§ 150.0(h)1:	spa heate Building Equipmen Standards
§ 150.0(h)3A:	Clearanc dryer.
§ 150.0(h)3B:	Liquid Li manufact
§ 150.0(j)1:	Water Pi piping mu
§ 150.0(j)2:	Insulation maintena adhesive include, o non-crush
§ 150.0(n)1:	Gas or P designate plumbing more that
§ 150.0(n)3:	Solar Wa Certificati R&T), or I
ucts and Fans:	
§ 110.8(d)3:	Ducts. In contractor
	CMC Con Duct Con R-6.0 or h do not rec
§ 150.0(m)1:	sealed wi The comb cavities, a flexible du
§ 150.0(m)1: § 150.0(m)2:	The comb cavities, a flexible du these spa Factory-I connectio
	The comb cavities, a flexible du these spa Factory-I
§ 150.0(m)2:	The comb cavities, a flexible du these spa Factory-I connectio duct tape: Field-Fat
§ 150.0(m)2: § 150.0(m)3:	The comb cavities, a flexible du these spa Factory-I connectio duct tape: Field-Fat mastics, s Backdraf dampers. Gravity V manually
§ 150.0(m)2: § 150.0(m)3: § 150.0(m)7:	The comb cavities, a flexible du these spa Factory-I connectio duct tape: Field-Fat mastics, s Backdraf dampers. Gravity V manually Protectio Insulation
§ 150.0(m)2: § 150.0(m)3: § 150.0(m)7: § 150.0(m)8:	The comb cavities, a flexible du these spa Factory-I connectio duct tape: Field-Fat mastics, s Backdraf dampers. Gravity V manually Protectio

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§ 150.0(k)1G:	Screw base
§ 150.0(k)1H:	Light Sour elevated ter
§ 150.0(k)11:	Light Sour
3 100.0(1)11.	to comply w power, emit linen closet
§ 150.0(k)2A:	Interior Sw
§ 150.0(k)2B:	Interior Sw
§ 150.0(k)2A:	Accessible on and off.
§ 150.0(k)2B:	Multiple Co
§ 150.0(k)2C:	to comply w Mandatory
3 100.0(1)20.	Energy Mar
§ 150.0(k)2D:	occupancy, a in § 150.0(k)
0.480.041.055	Automatic S
§ 150.0(k)2E:	must be con opaque fron
5 450 0/MOT	Dimmers. L
§ 150.0(k)2F:	mounted din sources in th
§ 150.0(k)2K:	Independer
0	shelves, light
§ 150.0(k)3A:	Residential other buildin
3 100.0(k)00.	control) or a
	applicable re
§ 150.0(k)4:	Internally il
	watts of pow Residential
§ 150.0(k)5:	applicable re
olar Readiness:	
§ 110.10(a)1:	Single-fami application for
	which do not Minimum S
	access, path
	requirement
§110.10(b)1A:	feet and are square feet
3110.10(D)1A	located on th
§ 110.10(b)2:	Azimuth. Al
§ 110.10(b)3A:	Shading. Th mounted equ
	Shading. An
§ 110.10(b)3B:	horizontal dis
	solar zone, m Structural D
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§ 110.10(c):	Interconnec pathway res
0	residences a
§ 110.10(d):	Documenta provided to t
§ 110.10(e)1:	Main Electri
	Main Electri
§ 110.10(e)2:	circuit break

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#### 2022 Single-Family Residential Mandatory Requirements Summary

ghts. Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour ); and pool and tage \*

Ing Cooling and Heating Loads. Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Inent Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Inds Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2. Inces. Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any

Line Drier. Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the acturer's instructions. Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation. All domestic hot water must be insulated as specified in § 609.11 of the California Plumbing Code. \*

ion Protection. Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment' hance, and wind as required by §120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no e tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and shable casing or sleeve. Propane Water Heating Systems. Systems using gas or propane water heaters to serve individual dwelling units must

te a space at least 2.5' x 2.5' x 7' suitable for the future installation of a heat pump water heater, and meet electrical and g requirements, based on the distance between this designated space and the water heater location; and a condensate drain no an 2" higher than the base of the water heater

than 2" higher than the base of the water heater Water-heating Systems. Solar water-heating systems and collectors must be certified and rated by the Solar Rating and ication Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO , or by a listing agency that is approved by the executive director.

#### Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a tor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.

compliance. All air-distribution system ducts and plenums must meet CMC §§ 601.0-605.0 and ANSI/SMACNA-006-2006 HVAC onstruction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to or higher; ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8) require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be with mastic, tape, or other duct-closure system that meets the applicable UL requirements, or aerosol sealant that meets UL 723. mbination of mastic and either mesh or tape must be used to seal openings greater than ¼", If mastic or tape is used. Building s, air handler support platforms, and plenums designed or constructed with materials other than sealed sheet metal, duct board or duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in means and is the present of the convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in the constructed with materials other than sealed sheet metal, duct board or duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in the constructed with materials other than sealed sheet metal.

spaces must not be compressed.\* y-Fabricated Duct Systems. Factory-fabricated duct systems must comply with applicable requirements for duct construction, ctions, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive pes unless such tape is used in combination with mastic and draw bands. Fabricated Duct Systems. Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, s, sealants, and other requirements specified for duct construction. Iraft Damper. Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic ers.

y Ventilation Dampers. Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, ly operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents. tion of Insulation. Insulation must be protected from damage due tosunlight, moisture, equipment maintenance, and wind. ion exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted canvas, or plastic Cellular foam insulation must be protected as above or painted with a water retardant and solar radiation-resistant coating. Inner Core Flex Duct. Porous inner cores of flex ducts must have a non-porous layer or air barrier between the inner core and apor barrier. System Sealing and Leakage Test. When space conditioning systems use forced air duct systems to supply conditioned air to an

§ 150.0(m)11: occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1.
 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 have a two inch depth or can be one inch if sized per Equation 150.0-A. Clean-filter pressure drop and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service. Filter racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters to and prevents air from bypassing the

## CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Project	: Name: Encinitas PRADU - Studio C	Calculation Date/Time: 2
Calcula	tion Description: Title 24 Analysis	Input File Name: 23Q10
DOCUN	IENTATION AUTHOR'S DECLARATION STATEMENT	
1. I cert	ify that this Certificate of Compliance documentation is accurate a	and complete.
Documei	ntation Author Name:	Documentation Author Signatu
Wayn	ne Seward	
Company	/1	Signature Date:
Bear	Technologies Consulting Inc.	2023-01-11 09:15:23
Address:		CEA/ HERS Certification Identifi
3431	Don Arturo Drive	R19-04-30011
City/Stat	e/Zip:	Phone:
Carls	bad, CA 92010	760-635-2327
RESPON	ISIBLE PERSON'S DECLARATION STATEMENT	
I certify t	the following under penalty of perjury, under t <mark>he la</mark> ws of the State of Calif	íornia:
1.	I am eligible under Division 3 of the Busin <mark>es</mark> s and Professions Code to	accept responsibility for the building design identified on thi
2.	I certify that the energy features and performance specifications ident	tified on this Certificate of Compliance conform to the requir
3.	The building design features or system design features identified on the calculations, plans and specifications submitted to the enforcement as	the second secon

Bart M Smith	CalCt	Responsible Designer Signatu
Company: DZN Partners	HERS	Date Signed: 2023-01-11 10:42:50
Address: 682 2nd Street		License: C-22557
City/State/Zip: Encinitas, CA 92024		Phone: 760-753-2464

Digitally signed by CalCERTS. This digital signature is provided in order to secure the content of this registered document, and in Registration Provider responsibility for the accuracy of the information.

Registration Number: 223-P010003966A-000-00000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance

Registration Date/Time: 2023-01-11 10 Report Version: 2022.0.000 Schema Version: rev 20220901

#### 2022 Single-Family Residential Mandatory Requirements Summary

I luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8.*
es in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 perature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
es in Drawers, Cabinets, and Linen Closets. Light sources internal to drawers, cabinetry or linen closets are not required In Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or a closed.
ches and Controls. All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
ches and Controls. Exhaust fans must be controlled separately from lighting systems.
controls. Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned
trols. Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed h § 150.0(k).
tequirements. Lighting controls must comply with the applicable requirements of § 110.9.
gement Control Systems. An energy management control system (EMCS) may be used to comply with dimming, id control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified A.
nutoff Controls. In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire olled by an occupancy or vacancy sensor providing automatic-off functionality. Lighting inside drawers and cabinets with or doors must have controls that turn the light off when the drawer or door is closed.
hting in habitable spaces (e.g., living rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall- ning controls that allow the lighting to be manually adjusted up and down. Forward phase cut dimmers controlling LED light se spaces must comply with NEMA SSL 7A.
controls. Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or ing in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting.
utdoor Lighting. For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to s on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch astronomical time clock. An energy management control system that provides the specified control functionality and meets al uirements may be used to meet these requirements.
minated address signs. Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 r.
arages for Eight or More Vehicles. Lighting for residential parking garages for eight or more vehicles must comply with the uirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.
Residences. Single-family residences located in subdivisions with 10 or more single-family residences and where the a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, have a photovoltaic system installed, must comply with the requirements of § 110.10(b)-(e).
ar Zone Area. The solar zone must have a minimum total area as described below. The solar zone must comply with ray, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 o less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 icch for buildings with roof areas greater than 10,000 square feet. For single-family residences, the solar zone must be roof or overbane of the building and have a total area no less than 250 square feet.

All sections of the building and have a total area no less than 250 square feet. \*
All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.
The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof
equipment.
Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the
distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the
, measured in the vertical plane.\*
Il Design Loads on Construction Documents. For areas of the roof designated as a solar zone, the structural design loads for
load and roof live load must be clearly indicated on the construction documents.
nection Pathways. The construction documents must indicate: a location reserved for inverters and metering equipment and a
eserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single-family
s and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
tation. A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(c) must be
to the occupant.

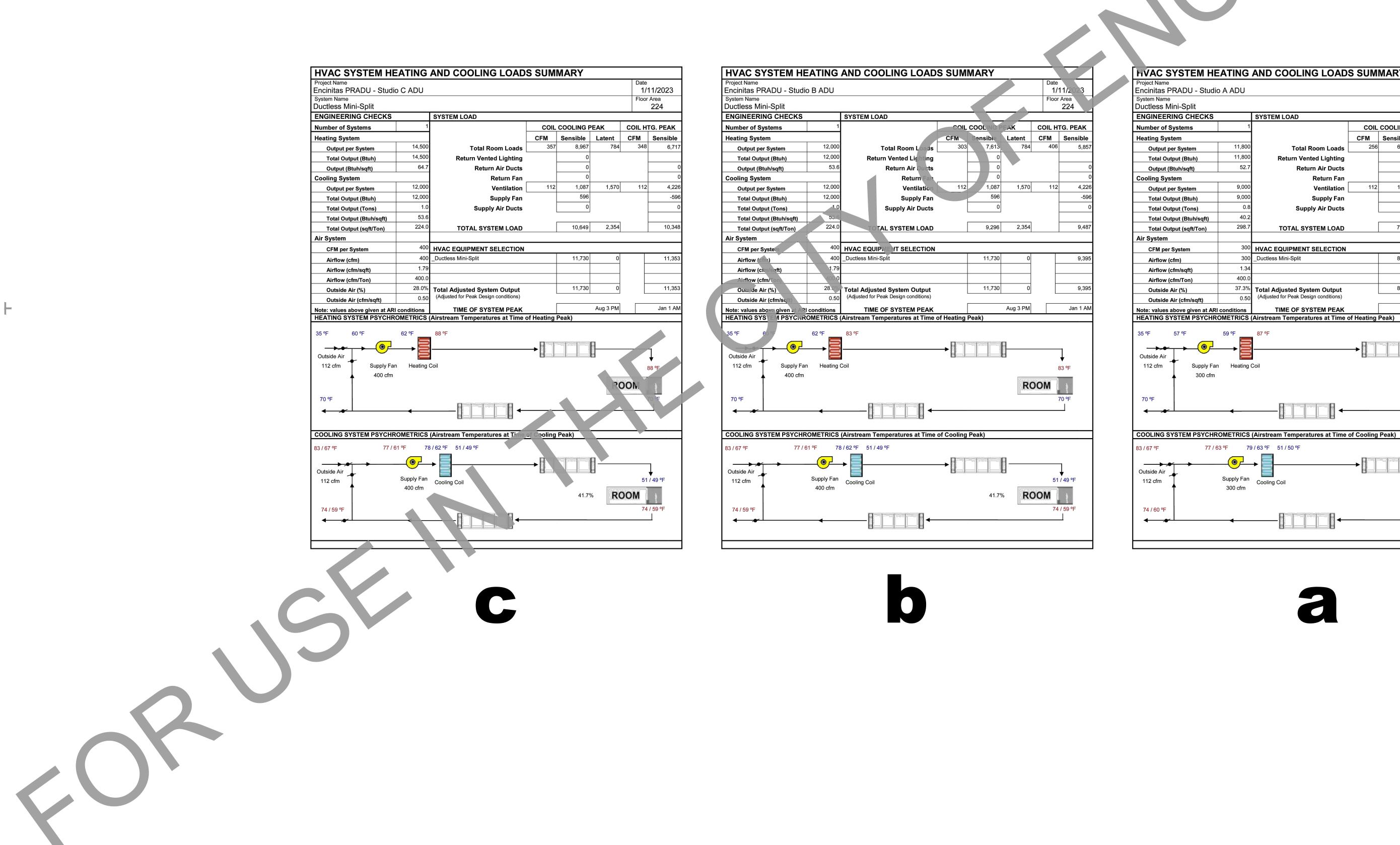
rical Service Panel. The main electrical service panel must have a minimum busbar raing of 200 amps. rical Service Panel. The main electrical service panel must have a reserved space to allow for the installation of a double pole ker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric." Readv:

2022 Single-Family Residential Mandatory Requirements Summary Energy Storage System (ESS) Ready. All single-family residences must meet all of the following: Either ESS-ready interconnection § 150.0(s) equipment with backed up capacity of 60 amps or more and four or more ESS supplied branch circuits, or a dedicated raceway from the main service to a subpanel that supplies the branch circuits in § 150.0(s); at least four branch circuits must be identified and have their source collocated at a single panelboard suitable to be supplied by the ESS, with one circuit supplying the refrigerator, one lighting circuit near the primary exit, and one circuit supplying a sleeping room receptacle outlet; main panelboard must have a minimum busbar rating of 225 amps; sufficient space must be reserved to allow future installation of a system isolation equipment/transfer switch within 3' of the main panelboard, with raceways installed between the panelboard and the switch location to allow the connection of backup power source. Heat Pump Space Heater Ready. Systems using gas or propane furnaces to serve individual dwelling units must include: A dedicated § 150.0(t) unobstructed 240V branch circuit wiring installed within 3' of the furnace with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use." Electric Cooktop Ready. Systems using gas or propane cooktop to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the cooktop with circuit conductors rated at least 50 amps with the blank cover identified as § 150.0(u) "240V ready," and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use." Electric Clothes Dryer Ready. Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A j 150.0(v) dedicated unobstructed 240V branch circuit wiring installed within 3' of the dryer location with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."

\*Exceptions may apply.

5/6/22

	General Notes
e: 2023-01-09T09:50:18-08:00 (Page 13 of 13) 1019-SC.1-03.ribd22x	R19-04-30011 NR19-04-30020
1013-30.1-03.115022X	
nature: Wayne Seward	
23 ntification (If applicable): California Association of Building Energy Consultants CERTIFIED ENERGY ANALYST	CUMENTATION
this Certificate of Compliance. wirements of Title 24, Part 1 and Part 6 of the California Code of Regulations. mation provided on other applicable compliance documents, worksheets, wre: BartMSmith	DDCUME
PER	CDMPLIANCE
I in no way implies	ENERGY
HERS Provider: CalCERTS inc. Report Generated: 2023-01-09 09:50:58	
	A A R A
	с 4
	No. Revision/Issue Date
	Firm Name and Address
	BEAR TECHNOLOGIES CONSULTING, INC.
	3431 DDN ARTURD DRIVE, CARLSBAD, CALIFORNIA 92010 (760) 635-2327 wayne@beartechconsulting.com
	http://www.beartechconsulting.com
	Project Name and Address ENCINITAS PRADU - STUDIO C ADU
	STUDIO A STREE ENCINITAS, CALIFORNIA 92024
	Project Sheet 23Q1019-SC.1-03
	Date T-04
	Scale



								PREPARER SIGNATURE	
C SYSTEM HE	EATING	AND COOLING LOAD	S SUMI	MARY					
<sub>lame</sub> as PRADU - Studio						Date	11/2023		
Name						Floor	Area		
ss Mini-Split							224		
		SYSTEM LOAD							
r of Systems	1	-		COOLING F			TG. PEAK		
g System	11,800	Tatal Doom Lood-	256	Sensible 6,198	Latent 784	<b>CFM</b> 286	Sensible 5,354		
tput per System al Output (Btuh)	11,800	Total Room Loads Return Vented Lighting	200	0,100			0,004		
tput (Btuh/sqft)	52.7	Return Air Ducts		0			0		ļ
g System		Return Fan		0			0		ſ
tput per System	9,000	Ventilation	112	1,087	1,373	112	4,226	BY USING THESE PERMIT READY	l
al Output (Btuh)	9,000	Supply Fan		596			-596	CONSTRUCTION DOCUMENTS,	
al Output (Tons)	0.8	Supply Air Ducts		0			0	THE USER AGREES TO RELEASE THE CITY OF ENCINITAS AND THE	
al Output (Btuh/sqft)	40.2		r					ARCHITECT WHO PREPARED	
al Output (sqft/Ton)	298.7	TOTAL SYSTEM LOAD		7,880	2,156		8,984	THESE CONSTRUCTION DOCUMENTS FROM ANY AND ALL	
	1								

8,959

8,959

Aug 3 PM

9,239

9,239

Jan 1 AM

87 °F

70 °F

51 / 50 ºF

74 / 60 ºF

43.7%

ROOM





<sup>300</sup> HVAC EQUIPMENT SELECTION

37.3%Total Adjusted System Output0.50(Adjusted for Peak Design conditions)

TIME OF SYSTEM PEAK

300 \_Ductless Mini-Split

87 °F

S

77 / 63 °F 79 / 63 °F 51 / 50 °F

Cooling Coil

\_**⊙**\_\_→

Supply Fan

300 cfm

57 °F

59 °F

Supply Fan Heating Coil

300 cfm

