

STUDIO SHED

1500 CHERRY STREET LOUISVILLE, CO 80027

Ph: **888.900.3933** WWW.**STUDIO**SHED.COM

04.12.2023

REVISIONS

16' X 38' ACCESSORY DWE

TYPE OF CONSTRUCTION

TYPE OF CONSTRUCTION

CLINTON HASLERIG

NAME

ODDS: 29

ADDRESS

ADDRESS

(303) 945-6973

04/19/23

24x36

**A-001** 



# 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.

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§ 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):	<b>Insulation Certification by Manufacturers.</b> 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):	<b>Wall Insulation.</b> 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.

§ 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 firebo
§ 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 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. *
Space Conditioni	ng, Water Heating, and Plumbing System:
§ 110.0-§ 110.3:	<b>Certification.</b> 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

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	§ 110.2(c):	<b>Thermostats</b> . All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat. *
	§ 110.3(c)3:	<b>Insulation.</b> 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: 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

Isolation Valves. Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with

ENERGY COMMISSION	
§ 150.0(k)1G:	Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1H:	<b>Light Sources in Enclosed or Recessed Luminaires.</b> 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)1I:	<b>Light Sources in Drawers, Cabinets, and Linen Closets.</b> 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 on and off. *
§ 150.0(k)2B:	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 light sources in these spaces must comply with NEMA SSL 7A.
§ 150.0(k)2K:	<b>Independent controls.</b> 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 to 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.
§ 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.

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§ 110.10(a)1:	<b>Single-family Residences.</b> 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 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.

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§ 110.10(b)3A:	<b>Shading.</b> The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and mounted equipment.*
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§ 110.10(b)3B:	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.*
8 110 10(b)4·	Structural Design Loads on Construction Documents. For areas of the roof designated as a solar zone, the structural design loads for

§ 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.
	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.
0.440.40(.)0	Main Electrical Service Panel. The main electrical service panel must have a reserved space to allow for the installation of a doub

<sup>§ 110.10(</sup>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:



# 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 poc 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 wat 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 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 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 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 (IAPMC

# R&T), or by a listing agency that is approved by the executive director. Ducts and Fans: 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. 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

	Table 1 1 ability 1 ability and a great more and a great and a great a
	Factory-Fabricated Duct Systems. Factory-fabricated duct systems must comply with applicable requirements for duct construction,
	these spaces must not be compressed.*
	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
150.0(m)1:	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 1/4", If mastic or tape is used. Building
	do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be
	R-6.0 or higher; ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8)
	Duct Construction Standards Metal and Hexible Std Editions. For tions of supply-all and return-all ducts and plending must be insulated to

§ 150.0(m)2:	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.
	Field-Fabricated Duct Systems. Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes,
§ 150.0(m)3:	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

3(,	dampers.
	Gravity Ventilation Dampers. Gravity ventilating systems serving conditioned space must have either automatic or readily accessible,
§ 150.0(m)8:	manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
	Protection of Insulation. Insulation must be protected from damage due tosunlight, moisture, equipment maintenance, and wind.
§ 150.0(m)9:	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

§ 150.0	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	0(m)11:	<b>Duct System Sealing and Leakage Test.</b> When space conditioning systems use forced air duct systems to supply conditioned air to a 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

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# 2022 Single-Family Residential Mandatory Requirements Summary

§ 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 mair 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.

# 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 § 150.0(m)13: 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. \*

### Ventilation and Indoor Air Quality:

§ 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 and controlled 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

#### rates and sound requirements per §150.0(o)1G Pool and Spa Systems and Equipment:

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§ 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:	<b>Piping.</b> Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, 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:	<b>Directional Inlets and Time Switches for Pools.</b> 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):	<b>Pool Systems and Equipment Installation.</b> Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves. *

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

Lighting:	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 liner 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. *
8 150 0(k)1C:	Recessed Downlight Luminaires in Ceilings. Luminaires recessed into ceilings must not contain screw based sockets, must be airtight,
§ 150.0(k)1C:	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:	<b>Lighting Integral to Exhaust Fans.</b> Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k). *

MARIN COUNTY REVIEW STAMP

STUDIO SHED" 1500 CHERRY STREET

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1\04.12.2023

REVISIONS

PREPARER OF PLANS:

ANDREW LANGDON ALANGDON@STUDIOSHED.COM (303) 945-6973

#### MARIN COUNTY REVIEW STAMP 5. SUMMARIZING ENERGY END USE (CHECK BOXES AND INPUT VALUES): MARIN COUNTY GREEN BUILDING FORM MARIN COUNTY 2022 GREEN BUILDING CHECKLIST MARIN COUNTY 2022 CALGREEN CHECKLIST ☐ Total Conditioned Floor Area within the Project Scope 608 STANDARDS FOR MULTI-FAMILY AND HOTEL/MOTEL RENOVATIONS LESS THAN 750 SQ. FT. STANDARDS FOR MULTI-FAMILY AND HOTEL/MOTEL RENOVATIONS LESS THAN 750 SQ. FT. STANDARDS FOR MULTI-FAMILY AND HOTEL/MOTEL RENOVATIONS LESS THAN 750 SQ. FT. SELECT either the Performance or Prescriptive-based Compliance Pathway below and submit This checklist is effective January 1, 2023 and applies to additions and alterations of multi-family dwellings, The provisions of this checklist apply to projects where the cumulative scope of the permitted work is PROJECT ADDRESS: 410 CEDAR RD, BOLINAS, CA 94924 less than 750 square feet. These green building standards have been established to ensure that appropriate documentation as requested (Check One of the Following): hotels, motels, lodging houses, dormitories, condominiums, shelters, congregate residences, employee STUDIO SHED" residential renovations (aka additions and alterations) such as multi-family residences, hotel/motels, and housing, factory-built housing and other types of dwellings containing sleeping accommodations, and accessory ☑ For projects using the Performance Based Pathway to Compliance, submit data extract in APN: 192-092-29 APPLICANT NAME: .xml format from the 2022 Energy Code Compliance Software (CBECC or EnergyPro) other dwellings in Marin County is healthy for occupants, has limited impact on the environment, reduces 1500 CHERRY STREET demand for energy, and results in cost savings from building operation. The four-step process below 1. GREEN BUILDING AND EV READINESS The provisions of this checklist apply to projects where the cumulative scope of the permitted work helps applicants understand and comply with the County's green building requirements. Please reference ☐ For projects using the Prescriptive Based Pathway to Compliance (Check One of the LOUISVILLE, CO 80027 ☑ Complete this Marin County 2022 Green Building Checklist AND CALGreen Checklist: being added to or altered is less than 750 square feet. Existing site and landscaping improvements that Title 19.04 and 19.07 of the Marin County Building Code to comply. Following): Standards for Multifamily Residential Renovations Less Than 750 sq. ft. are not otherwise disturbed are not subject to CALGreen. ☐ Submit data extract in .xml format from the 2022 Energy Code Compliance Software Ph: **888.900.3933 GREEN BUILDING PROJECT PROCESS** (CBECC or EnergyPro), OR Submit this CALGreen checklist accompanied with the 2022 Marin County Green Building Checklist (see VERIFICATION: The checklist will be verified by a County plans examiner. WWW.**STUDIO**SHED.COM page 2 above) with your plans to demonstrate compliance with the green building ordinance. This ☐ If Energy Code Compliance Software was not used, please select the following measures 1 PROJECT DESIGN checklist includes modifications specific to Marin County. For more information on the County's Green Building 2. ENERGY EFFICIENCY AND ELECTRIFICATION planned for installation in Table 1 below, within the scope of your project (check all that apply): It is important for project owners, architects, engineers, and designers to understand the requirements, please visit www.maringreenbuilding.org ☑ Meet the standards outlined for the project in the 2022 State Building Energy Efficiency applicable state and local green building requirements prior to project design. Early Table 1. Measures and Appliances Installed Standards. While local standards for renovations less than 750 square feet do not require For more information on CALGreen and complete measure language, see Marin County Building Code, consideration of these standards allows for design of buildings and systems that are applicants to exceed statewide energy efficiency codes, be aware of the mandatory Chapter 19.04, Subchapter 2 which requires (with amendments) CALGreen Chapters 4 and Appendix A4. compliant, energy efficient, and cost effective, and minimize back and forth. ISSUE DATE requirements established by the state that may apply to your project. Changes that may trigger additional requirements or HERS verification may include, but are not limited to, the Measures Installed Measures Installed PROJECT DETAILS 2 PLANNING APPLICATION (IF REQUIRED) 1\04.12.2023 addition, alteration, or expansion of If your project is subject to planning review, be prepared to identify in your planning Apply Apply Fenestration, including windows, skylights, and doors with more than 3 sq.ft. of glass 410 CEDAR RD, BOLINAS, CA 94924 192-092-29 application what compliance methods you've selected and how you plan to meet the Heat Pump Water Heater, High requirements. If you anticipate difficulties meeting the requirements outlined in the Green Air Sealing Project Address New space heating and cooling, water heating, and ventilation systems Efficiency, NEEA Tier 3 Building Checklist, these concerns and any requests for exemptions should be identified in VERIFICATION: Attach Title 24 Energy Reports that complies with State minimum energy code Hot water pipe and tank insulation, lowyour planning application. Cool Roof Applicant Name (Please Print) 3. LOW CARBON CONCRETE (Check One of the Following) INITIAL BUILDING PERMIT SUBMITTAL ☑ Permit application includes completed Cement or Embodied Carbon limit compliance forms that ☐ Duct Sealing Induction Cooktop All the following MUST be included with your initial application for a building permit: can be found on the County's Low-Carbon Concrete Requirements webpage. PROJECT VERIFICATION REVISIONS ☑ Completed Marin County 2022 Green Building Checklist (pages 2-3) Exterior Photosensor LED lamp vs CFL VERIFICATION: Compliance forms must be signed re-submitted after completion of poured ☑ Completed Marin County 2022 CALGreen Checklist (pages 4-10), with plan sheet The green building professional has reviewed the plans and certifies that the mandatory and elective concrete along with batch (proof) receipts. references where applicable Heat Pump Dryer New Ducts measures listed below are hereby incorporated into the project plans and will be implemented into the project ☑ Energy Code compliance documents as required under State Energy Code ☐ Not applicable; the project does not include pouring new concrete. in accordance with the requirements set forth in the 2022 California Green Building Standards Code as Heat Pump HVAC R-49 Attic Insulation amended by the County of Marin. 4 FINAL INSPECTION Heat Pump HVAC, High When the project is completed, submit the following to have the green building hold lifted: This form and all referenced forms herein have been completed by Solar PV \_\_\_\_ kW DC Efficiency, SEER 21 or ☑ Re-submit the final Green Building and CALGreen checklists in step 3 above \_\_(name) of \_\_ (company), the party greater; HSPF 11 or greate ☑ Submit a Certificate of Compliance from Home Energy Rating System (HERS) provider responsible for this building permit application for the above listed project who affirms under Heat Pump Water Heater ☑ Other necessary supporting permit material (if applicable) Battery (storage) \_\_\_\_ kWh penalty of perjury that it accurately represents the project plans. Applicant still must complete Name (Please Print) the CALGreen Checklist and/or Low Carbon Concrete form, as applicable. DEFINITION OF "NEW CONSTRUCTION" Other (please describe): Removal or substantial modification of more than 75 percent of the linear sum of a building's exterior walls for each story shall be considered demolition of the building (County of Marin Development Code Chapter 22.130.030), triggering the new construction requirements. If your VERIFICATION: Compliance will be verified by 1) submitting 2022 Energy Code Compliance renovation (addition and alteration) project meets this definition, please see the guide for new Software data extract (.xml) and attaching Title 24 Energy Reports that complies with State minimum construction. Name (Please Print) <sup>1</sup> A qualified building professional can be an architect, engineer, contractor, or qualified green building professional, such energy code, OR 2) completing Table 1 above. as a CALGreen Special inspector or LEED AP. FOR PROJECTS SUBMITTED ON OR AFTER JANUARY 1, 2023 FOR PROJECTS SUBMITTED ON OR AFTER JANUARY 1, 2023 FOR PROJECTS SUBMITTED ON OR AFTER JANUARY 1, 2023 FOR PROJECTS SUBMITTED ON OR AFTER JANUARY 1, 2023 4.304.1 Outdoor Water Use (MANDATORY) - Residential developments shall comply with local water 4.408.1 Construction Waste Reduction, Disposal and Recycling (MANDATORY) - Recycle and/or A4.106.5 (MANDATORY) Roofing materials shall have a minimum 3-year aged solar reflectance and thermal **DIVISION 4.1 PLANNING AND DESIGN** emittance or a minimum Solar Reflectance Index (SRI) equal to or greater than the values specified in Tables efficient landscape ordinance or the current California Department of Water Resources Model Water Efficient salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in ✓ All measures are required (MANDATORY) unless not in project scope. A4.106.5.1(3). Landscape Ordinance (MWELO), whichever is more stringent. accordance with the reporting standards outlined by Zero Waste Marin. Completed ☑ N/A ☐ Plan sheet reference (if applicable): A-000 COVER In Marin County, this measure does not apply to low-rise residential. This measure applies only to high-rise ✓ Use the Checkboxes (図) to mark as Completed, Not Applicable (N/A), or the measure selected. Completed □ N/A ☑ Plan sheet reference (if applicable): residential buildings, hotels, and motels with a roof slope >2:12. 4.106.2 (MANDATORY) A plan is developed and implemented to manage stormwater runoff from the Completed □ N/A ☑ Plan sheet reference (if applicable): A4.408.1 Construction Waste Reduction, Disposal and Recycling (MANDATORY) - Construction waste construction activities through compliance with the County of Marin's Stormwater Runoff Pollution Prevention 4.305.1 Water Reuse Systems (MANDATORY) – Newly constructed residential developments, where generated at the site is diverted to recycle or salvage in compliance with at least a 65 percent reduction. Any disinfected tertiary recycled water is available from a municipal source to a construction site, may be required mixed recyclables that are sent to mixed-waste recycling facilities shall include a qualified third party verified to have recycled water supply systems installed, allowing the use of recycled water for residential landscape Completed □ N/A ☑ Plan sheet reference (if applicable): facility average diversion rate. Verification of diversion rates shall meet minimum certification eligibility **DIVISION 4.2 ENERGY EFFICIENCY** guidelines, acceptable to the local enforcing agency. Completed □ N/A ☑ Plan sheet reference (if applicable): \_ Completed ☑ N/A ☐ Plan sheet reference (if applicable): A-000 COVER ✓ All measures are required (MANDATORY) unless not in project scope. 4.106.3 (MANDATORY) Construction plans shall indicate how site grading or a drainage system will manage ✓ Use the Checkboxes (☑) to mark as Completed, Not Applicable (N/A), or the measure selected. all surface water flows to keep water from entering buildings. 4.410.1 Building Maintenance and Operation (MANDATORY) - An operation and maintenance manual Completed □ N/A ☑ Plan sheet reference (if applicable): 4.201.1 (MANDATORY) Building meets or exceeds the requirements of the California Building Energy DIVISION 4.4 MATERIAL CONSERVATION & RESOURCE EFFICIENCY shall be provided to the building occupant or owner. Completed ☑ N/A ☐ Plan sheet reference (if applicable): E-100 ELECTRICAL ✓ All measures are required (MANDATORY) unless not in project scope. Completed ☑ N/A ☐ Plan sheet reference (if applicable): ✓ Use the Checkboxes (☑) to mark as Completed, Not Applicable (N/A), or the measure selected. 4.106.4.1.2 (MANDATORY) For existing multifamily buildings, comply with EV Charging and parking space requirements as amended from CALGreen, in accordance with Marin County Building Code, Chapter 4.410.2 Building Maintenance and Operation (MANDATORY) - Where 5 or more multifamily dwelling units A4.403.2 Foundation Systems (MANDATORY) - Cement use in foundation mix design is reduced in are constructed on a building site, provide readily accessible areas that serve all buildings on the site and is 19.04.135, Section 4.106.4.1.2, for: accordance with <u>Marin County Building Code, Chapter 19.07 – Carbon Concrete Requirements</u>. Select one Pathway and submit the appropriate compliance forms during Plan Review AND for Final Inspection: DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a ☐ PROJECTS UPGRADING THE SERVICE PANEL (select one of the following) minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted ✓ All measures are required (MANDATORY) unless not in project scope. local recycling ordinance if more restrictive. □ Cement Limit Pathway ☐ Add designated electrical capacity for 20% of onsite parking spaces to be Level 2 EV Ready ✓ Use the Checkboxes (☑) to mark as Completed, Not Applicable (N/A), or the measure selected. Completed □ N/A ☑ Plan sheet reference (if applicable): \_\_\_\_ ☐ For Plan Review: Design Team (Structural Engineer/Architect) Low Carbon Concrete 4.303.1 Indoor Water Use (MANDATORY) Plumbing fixtures (water closets and urinals) and fittings (faucets Cement Compliance Form □ PROJECTS MODIFYING (PAVING MATERIAL AND CURBING REMOVED) THE PARKING LOT and showerheads) installed in residential buildings shall comply with the prescriptive requirements of Sections ☐ For Final Inspection: Contractor Low Carbon Concrete Cement Compliance Form (select one of the following): 4.303.1.1 through 4.303.1.4.5. accompanied by batch receipts from ready-mix supplier **DIVISION 4.5 ENVIRONMENTAL QUALITY** ☐ Add raceway (aka conduit) to a minimum of 50% of exposed parking spaces. OF Plan sheet reference (if applicable): Completed ☑ N/A □ □ Add raceway to a minimum of 20% of exposed parking spaces AND install at minimum 5% ✓ All measures are required (MANDATORY) unless not in project scope. □ Embodied Carbon Pathway EVCS to parking spaces requiring any combination of Level 2 and Direct Current Fast ✓ Use the Checkboxes ( ☒) to mark as Completed, Not Applicable (N/A), or the measure selected. ☐ For Plan Review: Design Team (Structural Engineer/Architect) Low Carbon Concrete EC Charging EV supply equipment (EVSE), except at least one Level 2 EVSE shall be provided. 4.303.1.4.3 Indoor Water Use (MANDATORY) - Metering faucets in residential buildings shall not deliver Compliance Form 4.503.1 Fireplaces (MANDATORY) - Any installed gas fireplace shall be a direct-vent sealed-combustion ☐ IF EXISTING ELECTRICAL SERVICE WILL NOT BE UPGRADED in the project scope, designate ☐ For Final Inspection: Contractor Low Carbon Concrete EC Compliance Form accompanied type. Any installed woodstove or pellet stove shall comply with the U.S. EPA New Source Performance Completed ☑ N/A ☐ Plan sheet reference (if applicable): capacity for parking spaces to the maximum extent that does not require an upgrade to existing Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified electrical service. to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances in accordance with Marin County Building Code, Chapter 19.08 Plan sheet reference (if applicable): 4.303.2 Indoor Water Use (MANDATORY) – Submeters for multifamily building and dwelling units in Plan sheet reference (if applicable): Completed □ N/A ☑ Plan sheet reference (if applicable): mixed-use residential/commercial buildings. Submeters shall be installed to measure water usage of A4.405.3 Material Sources (MANDATORY) – Postconsumer or preconsumer recycled content value (RCV) individual rental dwelling units in accordance with the California Plumbing Code. A4.106.2.3 (MANDATORY) Displaced topsoil shall be stockpiled for reuse in a designated area and covered Completed ☑ N/A ☐ Plan sheet reference (if applicable): A-100 - FIRST FLOOR PLAN materials are used on the project, not less than a 10 percent recycled content value. 4.504.1 Pollutant Control (MANDATORY) – Duct openings and other related air distribution component or protected from erosion. Completed □ N/A ☑ Plan sheet reference (if applicable): \_ 4.303.3 Indoor Water Use (MANDATORY) – Plumbing fixtures and fittings required in Section 4.303.1 shall openings shall be covered during construction. Completed □ N/A ☑ Plan sheet reference (if applicable): Completed ☑ N/A ☐ Plan sheet reference (if applicable): A-100 - FIRST FLOOR PLAN be installed in accordance with the California Plumbing Code and shall meet the applicable referenced PREPARER OF PLANS 4.406.1 Enhanced Durability and Reduced Maintenance (MANDATORY) - Annular spaces around pipes, A4.106.4 (MANDATORY) Permeable paving is utilized for not less than 20 percent of the total parking, Completed ☑ N/A ☐ Plan sheet reference (if applicable): electric cables, conduits, or other openings in plates at exterior walls shall be protected against the passage of 4.504.2.1 Pollutant Control (MANDATORY) - Adhesives, sealants and caulks shall be compliant with VOC rodents by closing such openings with cement mortar, concrete masonry or similar method acceptable to the walking, or patio surfaces. and other toxic compound limits. **ANDREW LANGDON** Completed □ N/A ☑ Plan sheet reference (if applicable): Completed ☑ N/A ☐ Plan sheet reference (if applicable): E-100 - ELECTRICAL PLAN Completed ☑ N/A ☐ Plan sheet reference (if applicable): A-100 - FIRST FLOOR PLAN ALANGDON@STUDIOSHED.COM (303) 945-6973 FOR PROJECTS SUBMITTED ON OR AFTER JANUARY 1, 2023 FOR PROJECTS SUBMITTED ON OR AFTER JANUARY 1, 2023 FOR PROJECTS SUBMITTED ON OR AFTER JANUARY 1, 2023 FOR PROJECTS SUBMITTED ON OR AFTER JANUARY 1, 2023 04/19/23 4.504.2.2 Pollutant Control (MANDATORY) - Paints, stains and other coatings shall be compliant with VOC 4.506.1 Indoor Air Quality and Exhaust (MANDATORY) - Each bathroom shall be provided with the A-100 - FIRST FLOOR PLAN Completed ☑ N/A ☐ Plan sheet reference (if applicable): ENERGY STAR fans ducted to terminate outside the building. 2. Fans must be controlled by a humidity control (Separate or built-in); OR functioning as a component of a whole-house ventilation system. 4.504.2.3 Pollutant Control (MANDATORY) - Aerosol paints and coatings shall be compliant with product 3. Humidity controls with manual or automatic means of adjustment, capable of adjustment between a weighted MIR Limits for ROC and other toxic compounds. A-100 - FIRST FLOOR PLAN relative humidity range of ≤ 50 percent to a maximum of 80 percent. Completed ☑ N/A ☐ Plan sheet reference (if applicable): Completed □ N/A ☑ Plan sheet reference (if applicable): \_\_\_\_\_ 4.504.2.4 Pollutant Control (MANDATORY) - Documentation shall be provided to verify that compliant VOC limit finish materials have been used. 4.507.2 Environmental Comfort (MANDATORY) - Duct systems are sized, designed, and equipment is A-100 - FIRST FLOOR PLAN Completed ☑ N/A ☐ Plan sheet reference (if applicable): selected using the following methods: 1. Establish heat loss and heat gain values according to ANSI/ACCA 2 Manual J-2016 or equivalent. Size duct systems according to ANSI/ACCA 1 Manual D – 2016 or equivalent. 4.504.3 Pollutant Control (MANDATORY) - Carpet and carpet systems shall be compliant with VOC limits. 3. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S-2014 or equivalent. Completed ☐ N/A ☑ Plan sheet reference (if applicable): A-100 - FIRST FLOOR PLAN Completed □ N/A ☑ Plan sheet reference (if applicable): \_\_\_\_\_ 4.504.4 Pollutant Control (MANDATORY) – 80 percent of floor area receiving resilient flooring shall comply with specified VOC criteria. A-100 - FIRST FLOOR PLAN Completed ☑ N/A ☐ Plan sheet reference (if applicable): 4.504.5 Pollutant Control (MANDATORY) - Particleboard, medium density fiberboard (MDF), and hardwood plywood used in interior finish systems shall comply with low formaldehyde emission standards. A4.504.2 Pollutant Control (MANDATORY) - Install VOC compliant resilient flooring systems. Ninety (90) percent of floor area receiving resilient flooring shall comply with the VOC-emission limits established in A-100 - FIRST FLOOR PLAN Completed ☑ N/A ☐ Plan sheet reference (if applicable): A4.504.3 Pollutant Control (MANDATORY) – Thermal insulation installed in the building shall be in compliance with VOC limits. Completed ☑ N/A ☐ Plan sheet reference (if applicable): 4.505.2 Interior Moisture Control (MANDATORY) – Vapor retarder and capillary break is installed at slab on S-100 - FOUNDATION PLAN

Completed ☑ N/A ☐ Plan sheet reference (if applicable):

Completed ☑ N/A ☐ Plan sheet reference (if applicable): FOR PROJECTS SUBMITTED ON OR AFTER JANUARY 1, 2023

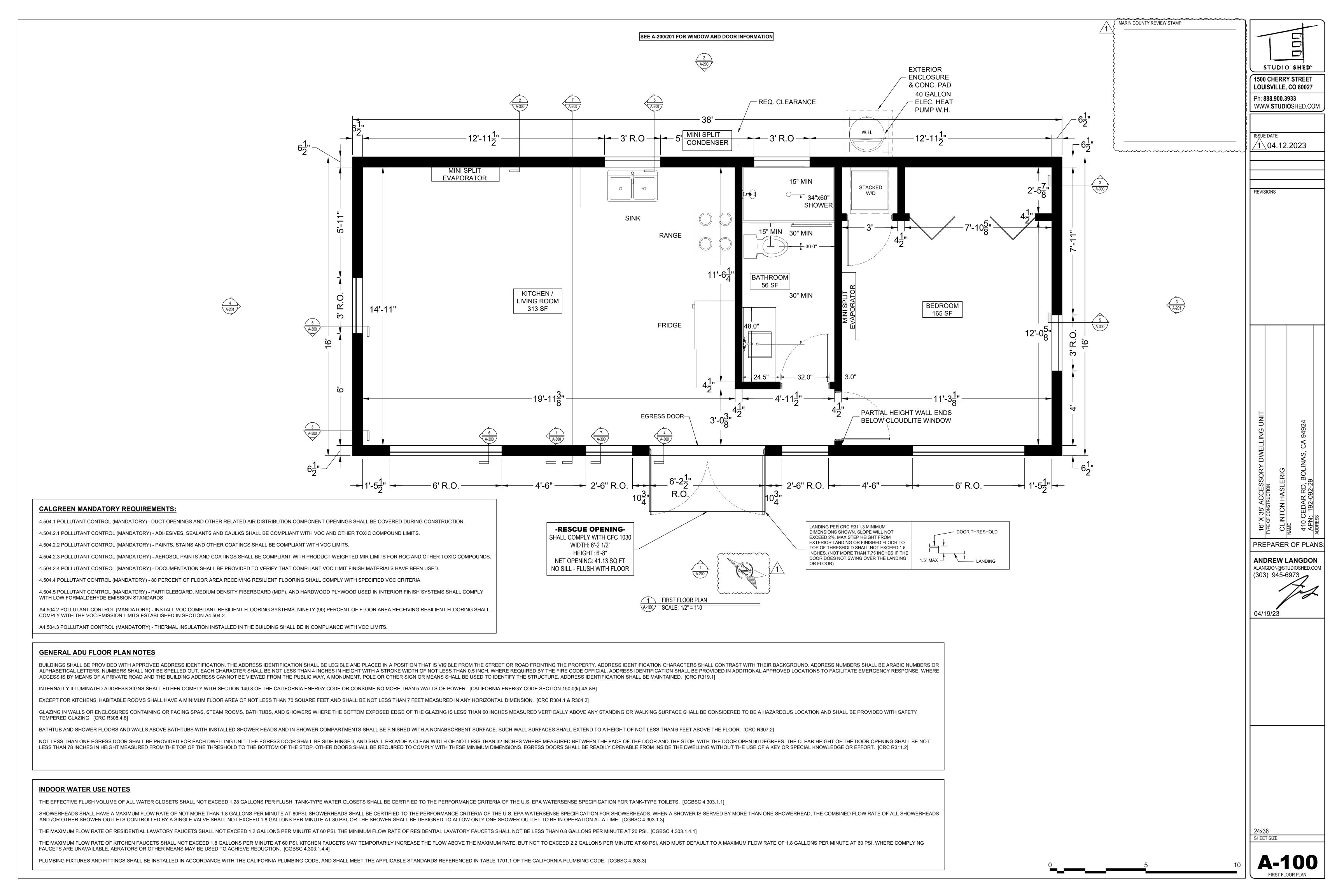
floor framing is checked before enclosure.

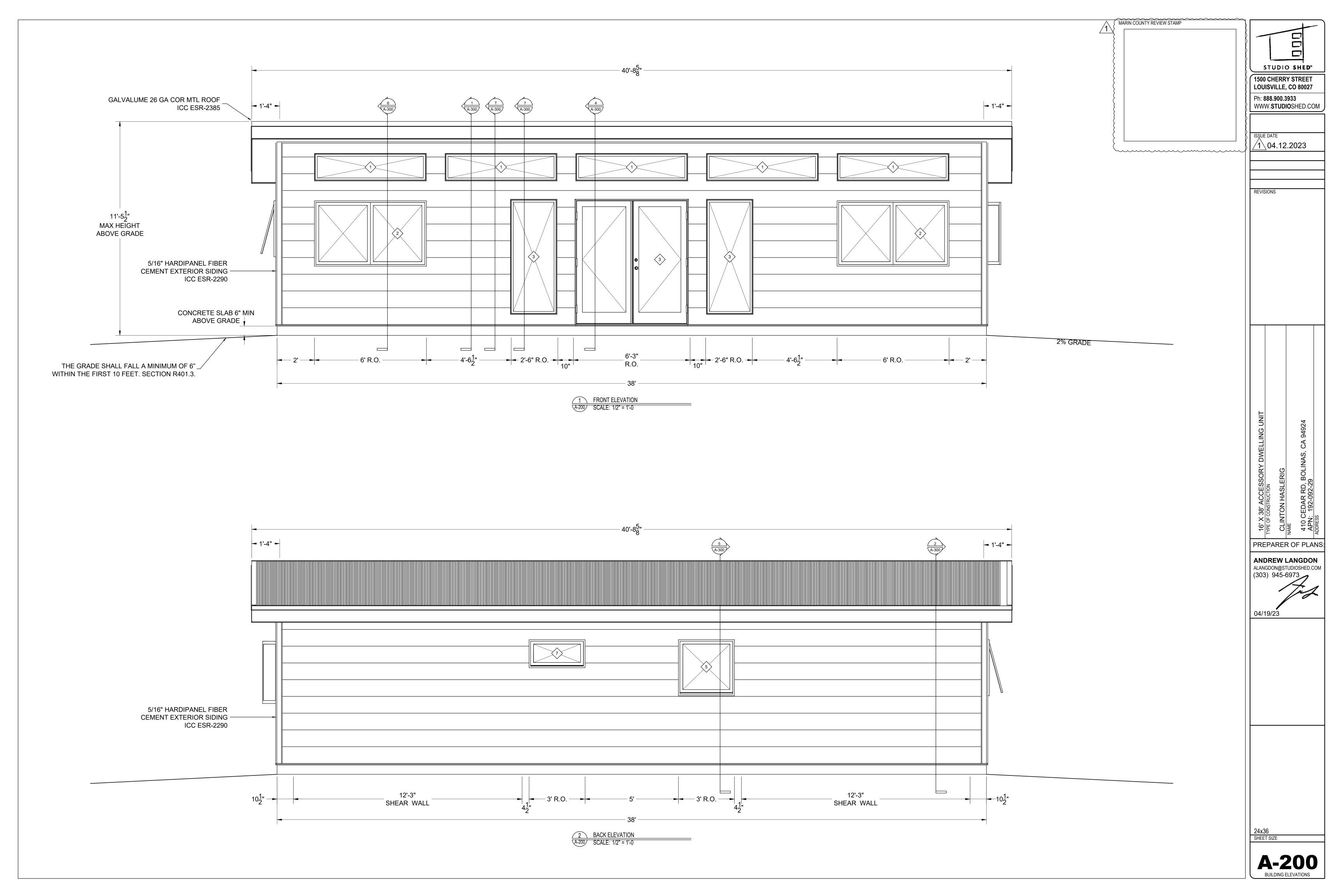
4.505.3 Interior Moisture Control (MANDATORY) - Moisture content of building materials used in wall and

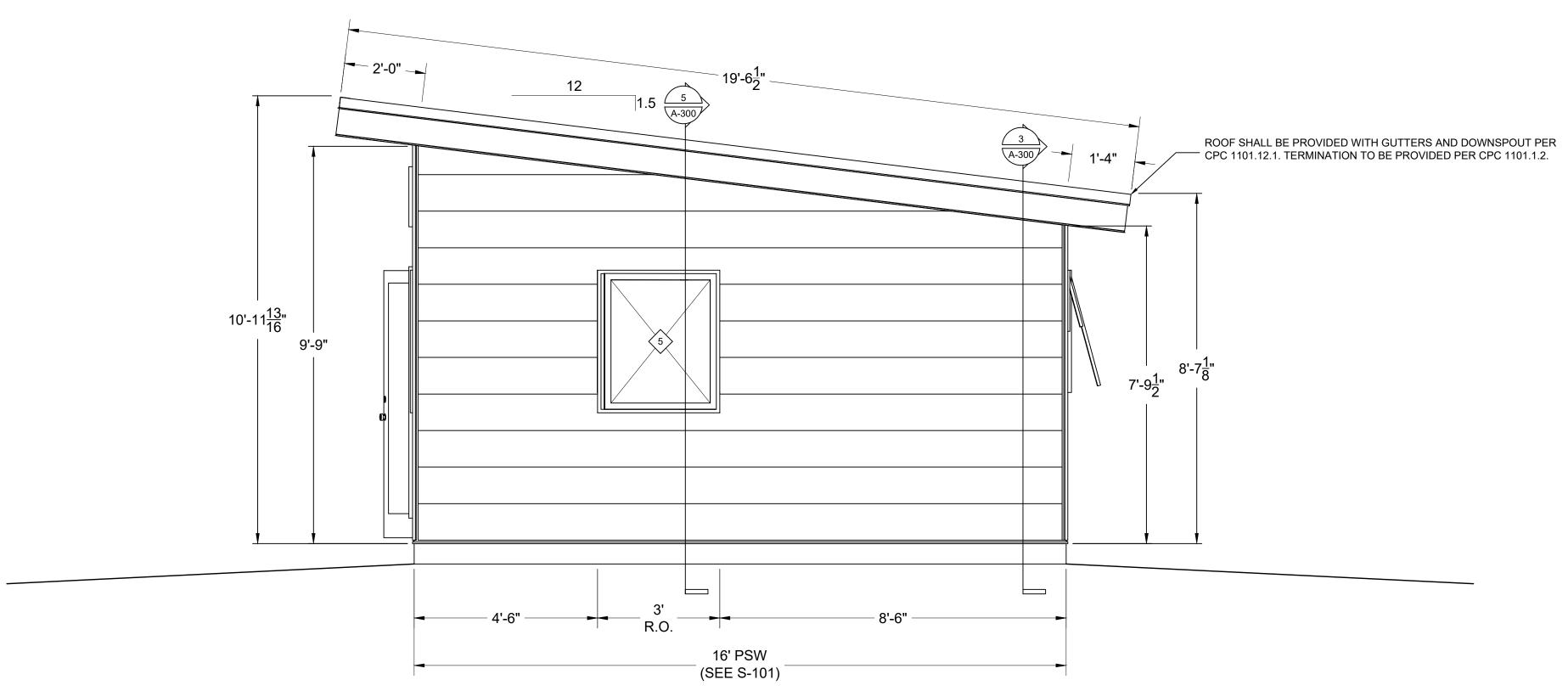
S-001 - STRUCTURAL GENERAL NOTES

FOR PROJECTS SUBMITTED ON OR AFTER JANUARY 1, 2023

S W W W W







3 RIGHT ELEVATION
A-201/ SCALE: 1/2" = 1'-0

		$\Diamond$		WINDOW AI	ND DOOR SCHEDULE			
NO.	SIZE (WIDTH x HEIGHT)	FRAME	QTY	LOCATION	DESCRIPTION	MAKE / MODEL	U-FACTOR	SHGC
1	6'-1" x 1'-5 3/4"	FIBERGLASS	5	FRONT ELEVATION	FIXED, DOUBLE PANE, LOW-E, TEMPERED	MARVIN ESSENTIALS	.32	.37
2	6'-0" x 3'-6"	FIBERGLASS	2	FRONT ELEVATION	OPERABLE GLIDER, DOUBLE PANE, LOW-E, TEMPERED	MARVIN ESSENTIALS	.30	.33
3	2'-6" x 6'-2"	FIBERGLASS	2	FRONT ELEVATION	FIXED, DOUBLE PANE, LOW-E, TEMPERED	MARVIN ESSENTIALS	.32	.37
4	6'-2 1/2" x 6'-8 3/4"	FIBERGLASS	1	FRONT ELEVATION	72" OUTSWING, LHO, DOUBLE PANE, LOW- E, TEMPERED	THERMATRU	.27	.18
5	3'-0" x 3'-0"	FIBERGLASS	2	BACK AND LEFT ELEVATION	OPERABLE AWNING, DOUBLE PANE, LOW-E, TEMPERED	MARVIN ESSENTIALS	.32	.30
6	3'-0" x 3'-6"	FIBERGLASS	1	RIGHT ELEVATION	OPERABLE AWNING, DOUBLE PANE, LOW-E, TEMPERED	MARVIN ESSENTIALS	.32	.29
7	3'-0" x 1'-6"	FIBERGLASS	1	FRONT AND RIGHT ELEVATION	OPERABLE AWNING, DOUBLE PANE, LOW-E, TEMPERED	MARVIN ESSENTIALS	.32	.30

MIN FINISHED CEILING HEIGHT: 7'-9 1/2"
MAX FINISHED CEILING HEIGHT: 9'-9"
AVERAGE FINISHED CEILING HEIGHT: 8'-9"

ROOF SHALL BE PROVIDED WITH GUTTERS AND DOWNSPOUT PER CPC 1101.12.1. TERMINATION TO BE PROVIDED PER CPC 1101.1.2.	19'-6 <sup>1</sup> / <sub>2</sub> "
8'-7 <sup>1</sup> / <sub>8</sub> " 7'-9 <sup>1</sup> / <sub>2</sub> "	9'-9"
	6'-6"  R.O.  16' PSW (SEE S-101)  4 LEFT ELEVATION (A-201) SCALE: 1/2" = 1'-0

Ph: **888.900.3933** WWW.**STUDIO**SHED.COM 1 04.12.2023 REVISIONS 16' X 38' ACCESSORY
TYPE OF CONSTRUCTION
CLINTON HASLERIG
NAME
410 CEDAR RD, BOLIN
APN: 192-092-29
ADDRESS PREPARER OF PLANS: ANDREW LANGDON
ALANGDON@STUDIOSHED.COM
(303) 945-6973

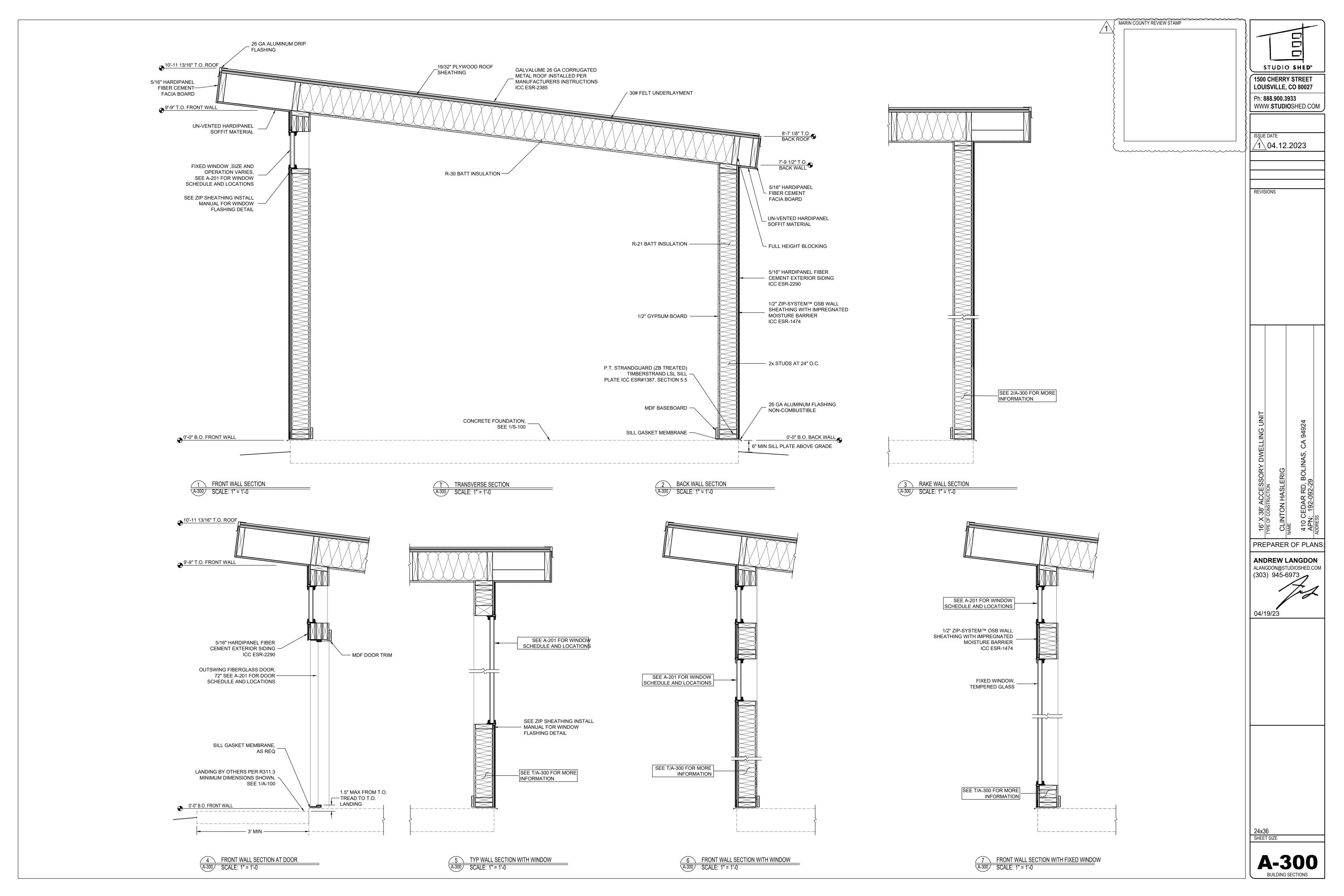
STUDIO SHED"

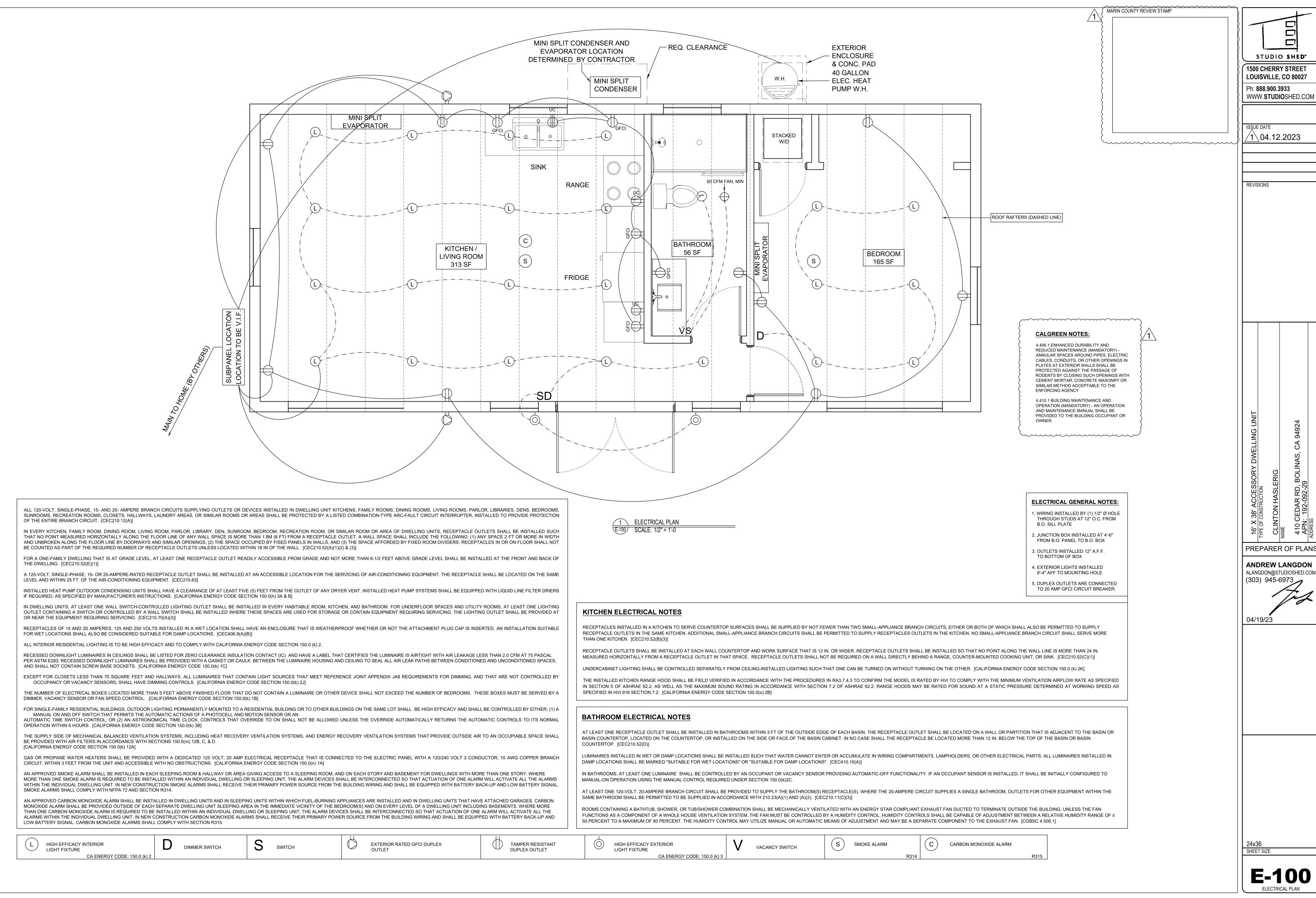
1500 CHERRY STREET

LOUISVILLE, CO 80027

MARIN COUNTY REVIEW STAMP

A-201
BUILDING ELEVATIONS





#### PROJECT DESCRIPTION: 608 SQ FT OF NEW CONSTRUCTION (STAND ALONE STRUCTURE) 16'-0 x 38'-0 ACCESSORY DWELLING UNIT (ADU) STRUCTURAL GENERAL NOTES: **DESIGN LOADS**: 2022 CALIFORNIA BUILDING CODE WITH MARIN COUNTY AND CITY OF BOLINAS LOCAL AMENDMENTS **ASCE 7-16 RISK CATEGORY** II STANDARD ROOFS: **15 PSF** ROOF DEAD LOAD **20 PSF** ROOF LIVE LOAD 0 PSF **GROUND SNOW LOAD** WALLS: 10 PSF EXT WALL DEAD LOAD ULTIMATE DESIGN WIND SPEED, VULT, (3-SECOND GUST) = 100 MPH INTERNAL PRESSURE COEFFICIENT = 0.18 (ENCLOSED) WIND EXPOSURE = C COMPONENTS AND CLADDING DESIGN WIND PRESSURES (ULTIMATE) WALLS: +21.8 PSF -29.2 PSF ZONE 5 **ZONE 4** +21.8 PSF -23.6 PSF ROOFS: ZONE 3 +16.0 PSF -36.6 PSF ZONE 3' +16.0 PSF -51.4 PSF ZONE 2 +16.0 PSF -27.3 PSF ZONE 2' +16.0 PSF -32.9 PSF ZONE <sup>2</sup> +16.0 PSF -23.6 PSF OVERHANGS: ZONE 3 +16.0 PSF -48.0 PSF ZONE 3' +16.0 PSF -62.8 PSF ZONE 2 +16.0 PSF -38.8 PSF ZONE 2' +16.0 PSF -44.3 PSF PRESSURES MAY BE REDUCED FOR EFFECTIVE WIND AREAS LARGER THAN 10 SQUARE FEET, BUT NOT BELOW 16 PSF. SEISMIC: SPECTRAL RESPONSE ACCELERATION PARAMETERS SHORT PERIOD SS 2.442G SDS 1.954G S1 1.024G SD1 1.161G ONE SECOND SOILS SITE CLASS SEISMIC IMPORTANCE FACTOR SEISMIC DESIGN CATEGORY BASIC SEISMIC-FORCE-RESISTING SYSTEM(S) LIGHT-FRAMED WALLS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE DESIGN BASE SHEAR(S) 7.213 KIPS (ULTIMATE) SEISMIC RESPONSE COEFFICIENT(S), CS RESPONSE MODIFICATION COEFFICIENT(S), R 6.5 ANALYSIS PROCEDURE **EQUIVALENT LATERAL FORCE**

# **FOUNDATION DESIGN:**

FOUNDATIONS ARE DESIGNED WITH AN ENGINEER'S SOIL INVESTIGATION PREFORMED BY AGNEW CIVIL ENGINEERING ON NOVEMBER 1ST, 2022.

# **SLAB ON GRADE**

DESIGN OF SLAB ON GRADE IS BASED ON MAXIMUM ALLOWABLE BEARING PRESSURE 1800 PSF BEAR ON THE NATURAL UNDISTURBED SOIL OR COMPACTED STRUCTURAL FILL. ALL EARTHWORK AND PAD PREPARATION SHALL BE COMPLETED PER THE ABOVE-REFERENCED GEOTECHNICAL REPORT (SECTION 9.5.2).

# STRUCTURAL GENERAL NOTES:

### REINFORCED CONCRETE:

DESIGN IS BASED ON ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" AND ACI 332 "REQUIREMENTS FOR RESIDENTIAL CONCRETE CONSTRUCTION." CONCRETE WORK SHALL CONFORM TO ACI 301 "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE."

STRUCTURAL CONCRETE SHALL HAVE THE FOLLOWING PROPERTIES:

MAX		SLUMP,	ENTRAINE	ED		ADMIXTURES,
F'C, PSI	W/C	MAXIMUM	INCHES	AIR, PERCENT	CEMENT	
INTENDED USE   28 DAY	RATIO	AGGREGATE	(+/- 1")	(+/- 1.5%)	TYPE	COMMENTS
SLAB ON GRADE   3000	0.45	3/4" STONE	4	3	V	

PER A4.403.2: CEMENT USE IN FOUNDATION MIX DESIGN IS REDUCED IN ACCORDANCE WITH MARIN COUNTY BUILDING CODE 19.07 - CEMENT REDUCTION PATHWAY

DETAILING, FABRICATION, AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT."

REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60, EXCEPT TIES OR BARS SHOWN TO BE FIELD-BENT, WHICH SHALL BE GRADE 60.

BARS TO BE WELDED SHALL CONFORM TO ASTM 706.

AT CORNERS AND INTERSECTIONS, MAKE HORIZONTAL BARS CONTINUOUS OR PROVIDE MATCHING CORNER BARS FOR EACH LAYER OF REINFORCEMENT

#### REINFORCED CONCRETE CONTINUED:

UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS, LAP BARS 50 DIAMETERS (MINIMUM) EXCEPT AS NOTED ON THE DRAWINGS, CONCRETE PROTECTION FOR REINFORCEMENT IN CAST-IN-PLACE CONCRETE SHALL BE AS FOLLOWS:

CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: **EXPOSED TO EARTH OR WEATHER:** 1-1/2" #5 BAR, W31 OR D31 WIRE, AND SMALLER NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: SLABS, WALLS, JOISTS: #11 BARS AND SMALLER 3/4" **BEAMS AND COLUMNS:** PRIMARY REINFORCEMENT 1-1/2" STIRRUPS, TIES, SPIRALS 1-1/2"

### STRUCTURAL WOOD & TIMBER

DESIGN IS BASED ON ANSI/AF&PA NDS "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION WITH SUPPLEMENT DESIGN VALUES FOR WOOD CONSTRUCTION" AND ANSI/AF&PA SDPWS "SPECIAL DESIGN PROVISIONS FOR WIND AND SEISMIC"

2X FRAMING SHALL BE S4S SPF#2 OR BETTER UNLESS NOTED OTHERWISE.

ALL LUMBER SHALL BE 19% MAXIMUM MOISTURE CONTENT, UNLESS NOTED OTHERWISE.

STUDS SHALL BE SPF NO. 2 AND BETTER OR STUD GRADE.

TOP AND BOTTOM PLATES SHALL BE SPF NO. 2 AND BETTER OR STUD GRADE.

FASTENERS FOR USE WITH TREATED WOOD SHALL COMPLY WITH CRC SECTION R317.3

WOOD IN CONTACT WITH CONCRETE SHALL BE PRESSURE-TREATED DOUGLAS FIR-LARCH OR SOUTHERN YELLOW PINE. PRESERVATIVE TREATED WOOD SHALL BE TREATED IN ACCORDANCE WITH AWPA U1 AND AEPA M4.

CONVENTIONAL LIGHT FRAMING SHALL COMPLY WITH CRC SECTIONS R502, R602, AND R802.

MINIMUM NAILING SHALL BE PROVIDED AS SPECIFIED IN CBC TABLE 2304.10.1 "FASTENER SCHEDULE FOR STRUCTURAL MEMBERS."

METAL FRAMING ANCHORS SHOWN OR REQUIRED, SHALL BE SIMPSON STRONG-TIE OR EQUAL CODE APPROVED CONNECTORS AND INSTALLED WITH THE NUMBER AND TYPE OF NAILS RECOMMENDED BY THE MANUFACTURER TO DEVELOP THE MAXIMUM RATED CAPACITY.

NOTE THAT HEAVY-DUTY HANGERS AND SKEWED HANGERS MIGHT NOT BE STOCKED LOCALLY AND REQUIRE SPECIAL ORDER FROM THE FACTORY.

LEAD HOLES FOR LAG SCREWS SHALL BE 40%-70% OF THE SHANK DIAMETER AT THE THREADED SECTION AND EQUAL TO THE SHANK DIAMETER AT THE UNTHREADED SECTION PER NDS SECTION 11.1.3.

CONNECTOR BOLTS AND LAG SCREWS SHALL CONFORM TO ANSI/ASME B18.2.1 AND ASTM SAE J429 GRADE 1. NAILS AND SPIKES SHALL CONFORM TO ASTM F1667.

WOOD SCREWS SHALL CONFORM TO ANSI/ASME B18.6.1

# **WOOD FRAMING NOTES:**

ALL BEAMS SHALL BE BRACED AGAINST ROTATION AT POINTS OF BEARING.

PROVIDE CONTINUOUS WALL STUDS EACH SIDE OF OPENINGS EQUAL TO ONE-HALF OR GREATER THE NUMBER OF STUDS

INTERRUPTED BY OPENING UNLESS NOTED OTHERWISE ALL WALL STUDS SHALL BE CONTINUOUS FROM FLOOR TO FLOOR OR FROM FLOOR TO ROOF.

PROVIDE SOLID BLOCKING OR RIM JOISTS AT ALL JOIST SUPPORTS AND JOIST ENDS.

SOLE PLATE AT ALL PERIMETER WALLS AND AT DESIGNATED SHEAR WALLS SHALL BE NAILED WITH

(3) 10D BOX NAILS (COATED OR DEFORMED SHANK) AT 16".

ALL ROOF RAFTERS, JOISTS, BEAMS SHALL BE ANCHORED TO SUPPORTS WITH METAL FRAMING ANCHORS.

# **WOOD SHEATHING:**

PLYWOOD AND ORIENTED STRAND BOARD (OSB) FLOOR AND ROOF SHEATHING SHALL BE APA RATED WITH STAMP INCLUDING APA TRADEMARK AND PANEL SPAN RATING.

MINIMUM ROOF SHEATHING: 19/32" OSB OR CDX PLYWOOD, APA 32/16, NAILED.

MINIMUM WALL SHEATHING: 7/16" OSB OR CDX PLYWOOD, APA 24/16, BLOCKED AND NAILED

NAIL SHEATHING WITH MINIMUM 8D COMMON OR 10D BOX AT 6" AT PANEL EDGES, AND 12" AT INTERMEDIATE FRAMING EXCEPT AS NOTED. BLOCK AND NAIL ALL EDGES BETWEEN STUDS. MINIMUM (3) 8D NAILS PER STUD TO PLATES. NAIL ALL PLATES USING EDGE NAIL SPACING INDICATED.

SHEATHE ALL EXTERIOR WALLS. SHEATHE INTERIOR WALLS AS DESIGNATED ON THE DRAWINGS.

SHEATHING SHALL BE CONTINUOUS FROM BOTTOM PLATE TO TOP PLATE. CUT IN "L" AND "T" SHAPES AROUND OPENINGS.

# STRUCTURAL GENERAL NOTES:

### PLANT FABRICATED / PRE-ENGINEERED WOOD FRAMING:

MEMBERS NOTED AS LSL (LAMINATED STRAND LUMBER) ON PLAN SHALL BE PLANT-FABRICATED AND HAVE THE FOLLOWING MINIMUM ALLOWABLE DESIGN VALUES:

Fb=1700 PSI Fv=400 PSI Fcpar=1400 PSI Fcperp-=680 PSI E=1300 KSI

MEMBERS NOTED AS LVL STUDS (LAMINATED VENEER LUMBER) ON PLAN SHALL BE 1-1/2" WIDE x DEPTH INDICATED, PLANT-FABRICATED, AND HAVE THE

FOLLOWING MINIMUM ALLOWABLE DESIGN VALUES:

Fb=2400 PSI Fv=285 PSI Fcpar=3000 PSI E=1700 KSI

MEMBERS NOTED AS LVL RAFTERS (LAMINATED VENEER LUMBER) ON PLAN SHALL BE 1-3/4" WIDE x DEPTH INDICATED, PLANT-FABRICATED, AND HAVE THE FOLLOWING MINIMUM ALLOWABLE DESIGN VALUES:

Fb=2600 PSI Fv=285 PSI Fcpar=2460 PSI Fcperp=750 PSI E=1900 KSI

### STRUCTURAL ERECTION AND BRACING REQUIREMENTS

THE STRUCTURAL DRAWINGS ILLUSTRATE AND DESCRIBE THE COMPLETED STRUCTURE WITH ELEMENTS IN THEIR FINAL POSITIONS, PROPERLY SUPPORTED, CONNECTED, AND/OR BRACED

THE STRUCTURAL DRAWINGS ILLUSTRATE TYPICAL AND REPRESENTATIVE DETAILS TO ASSIST THE GENERAL CONTRACTOR. DETAILS SHOWN APPLY AT ALL SIMILAR CONDITIONS UNLESS OTHERWISE INDICATED. ALTHOUGH DUE DILIGENCE HAS BEEN APPLIED TO MAKE THE DRAWINGS AS COMPLETE AS POSSIBLE. NOT EVERY DETAIL IS ILLUSTRATED AND NOT EVERY EXCEPTIONAL CONDITION IS ADDRESSED.

ALL PROPRIETARY CONNECTIONS AND ELEMENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS.

ALL WORK SHALL BE ACCOMPLISHED IN A WORKMANLIKE MANNER AND IN ACCORDANCE WITH THE APPLICABLE CODES AND LOCAL ORDINANCES.

THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL WORK, INCLUDING LAYOUT AND DIMENSION VERIFICATION, MATERIALS COORDINATION, SHOP DRAWING REVIEW, AND THE WORK OF SUBCONTRACTORS. ANY DISCREPANCIES OR OMISSIONS DISCOVERED IN THE COURSE OF THE WORK SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR RESOLUTION. CONTINUATION OF WORK WITHOUT NOTIFICATION OF DISCREPANCIES RELIEVES THE ARCHITECT AND STRUCTURAL ENGINEER FROM ALL CONSEQUENCES. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL ALL FLOORS, WALLS, ROOFS AND ANY OTHER

SUPPORTING ELEMENTS ARE IN PLACE THESE PLANS HAVE BEEN ENGINEERED FOR CONSTRUCTION AT ONE SPECIFIC BUILDING SITE. BUILDER ASSUMES ALL RESPONSIBILITY FOR USE OF THESE PLANS AT ANY OTHER BUILDING SITE.PLANS SHALL NOT BE USED FOR CONSTRUCTION AT ANY OTHER BUILDING SITE WITHOUT SPECIFIC REVIEW BY THE ENGINEER LICENSED IN THAT

#### **SPECIAL INSPECTIONS:**

### PER THE CBC

JURISDICTION.

1705.3 – SPECIAL INSPECTION SHALL BE REQUIRED WHEN THE SPECIFIED CONCRETE COMPRESSIVE STRENGTH PER THE APPROVED PLANS IS GREATER THAN 2500 PSI AND WHEN THE FOOTINGS OR TURNDOWNS SUPPORTING WALLS ARE NOT CONTINUOUS.

1705.4 - NO SPECIAL INSPECTION WILL BE REQUIRED BECAUSE WE DO NOT SHOW MASONRY CONSTRUCTION. 1705.5 – WE ARE USING UNBLOCKED ROOF DIAPHRAGMS PER THE SDPWS. THIS IS NOT CONSIDERED HIGH LOAD AND DOES NOT REQUIRE SPECIAL INSPECTION.

1705.12.2 – PERIODIC SPECIAL INSPECTIONS ARE NOT REQUIRED FOR SHEAR WALLS WITH 6 INCH ON CENTER PANEL EDGE NAILING. WHEN THE SHORT PERIOD ACCELERATION, SDS, IS GREATER THAN 0.5 OR THE BUILDING HEIGHT IS GREATER THAN 35 FEET, PERIODIC INSPECTIONS ARE REQUIRED FOR SHEAR WALLS WITH 4 INCH ON CENTER EDGE NAILING OR LESS.

			NAIL	SIZES			
PENNYWEIGHT	TYPE	DIAMETER	LENGTH	PENNYWEIGHT	TYPE	DIAMETER	LENGTH
8d	COMMON	0.131"	2 1/2"	12d	COMMON	0.148"	3 1/4"
8d	BOX	0.113"	2 1/2"	12d	BOX	0.128"	3 1/4"
8d	SINKER	0.113"	2 3/8"	12d	SINKER	0.135"	3 1/8"
8d	GUN	0.113"	2 3/8"	12d	GUN	0.131"	3 1/4"
10d	COMMON	0.148"	3"	16d	COMMON	0.162"	3 1/2"
10d	BOX	0.128"	3"	16d	BOX	0.135"	3 1/2"
10d	SINKER	0.120"	2 7/8"	16d	SINKER	0.148"	3 1/4"
10d	GUN	0.131"	3"				

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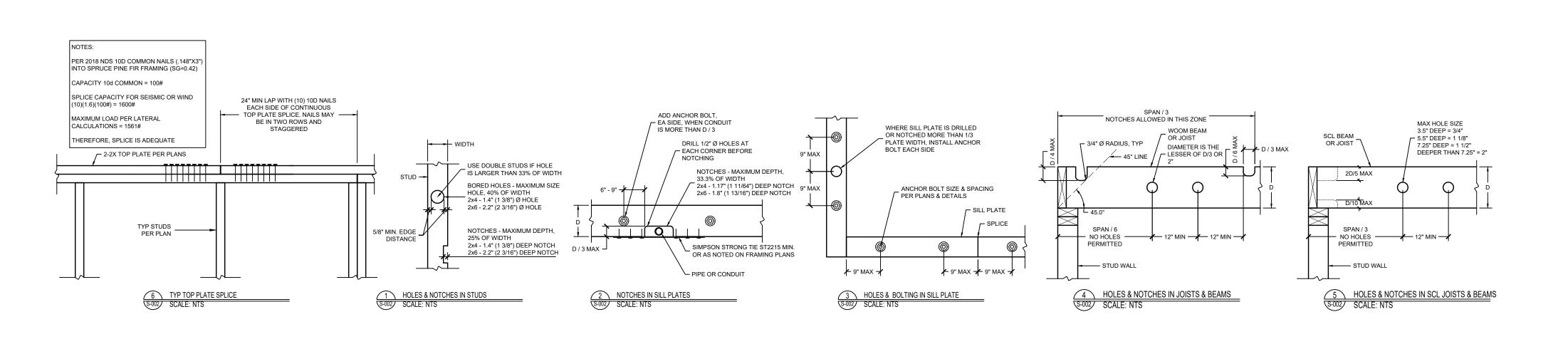
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REVISIONS

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PREPARER OF PLANS

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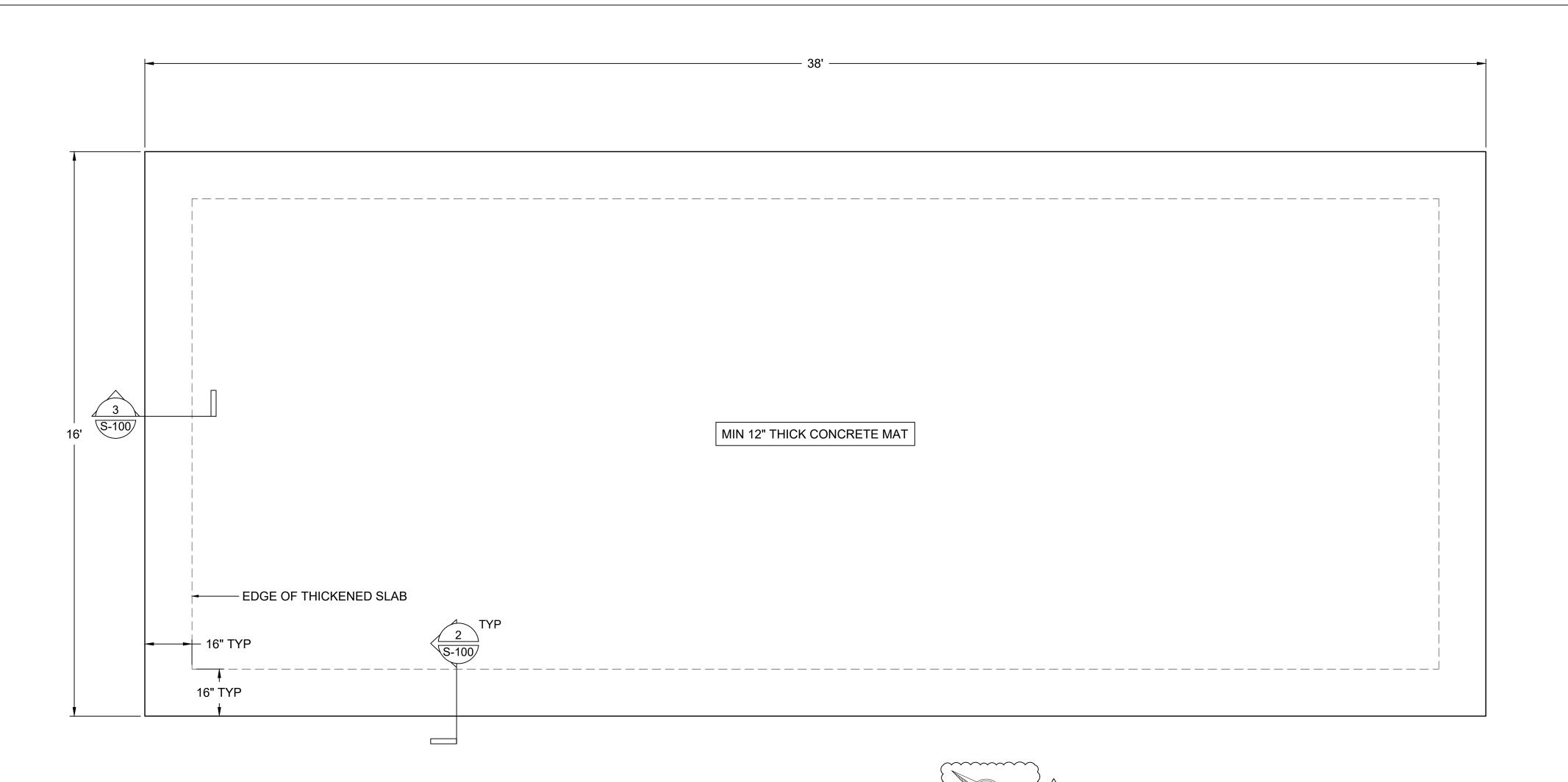
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REVISIONS

FASTENING SCHEDULE 2022 CALIFORNIA BUILDING CODE TABLE 2304.10.1

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION	DESCRIPTION OF BUILDING	ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION					
	ROOF  3-8d COMMON (2 ½" x 0.131")		11. CONTINUOUS HEADER TO STUD	4-8d COMMON (2 ½" x 0.131") 4-10d BOX (3" x 0.128")	TOENAIL			10d BOX (2 ½" x 0.128") 3" x 0.131" NAILS 3" 14 GAGE STAPLES, ½" CROWN	24" O.C., FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES					
1. BLOCKING BETWEEN CEILIING JOISTS, RAFTERS OR TRUSSESS TO TOP PLATE OR	3-10d BOX (3" x 0.128")	EACH END, TOENAIL		16d COMMON (3 ½" x 0.162")	16" O.C. FACE NAIL	27. BUILT-UP GIRDERS AND BEAM	S, 2" LUMBER	AND:	ON OFF OSITE SIDES					
OTHER FRAMING BELOW	3-3" x 0.131" NAILS 3-3" 14 GAGE STAPLES, $\frac{7}{16}$ " CROWN 2-8d COMMON (2 $\frac{1}{2}$ " x 0.131")	LACTICIAL, TOLIVIL	12. TOP PLATE TO TOP PLATE	10d BOX (3" x 0.128") 3" x 0.131" NAILS 3" 14 GAGE STAPLES, <sup>7</sup> / <sub>16</sub> " CROWN	12" O.C. FACE NAIL	LAYERS (CONT.)		2-20d COMMON (4" x 0.192") 3-10d BOX (3" x 0.128") 3-3" x 0.131" NAILS 3-3" 14 GAGE STAPLES, 7/16" CROWN	ENDS AND AT EACH SPLICE, FACE NAIL					
BLOCKING BETWEEN RAFTERS OR TRUSS NOT AT THE WALL TOP PLATE, TO RAFTER OR TRUSS	2-3" x 0.131" NAÌLS 2-3" 14 GAGE STAPLES 2-16d COMMON (3 $\frac{1}{2}$ " x 0.162")	EACH END, TOENAIL	13. TOP PLATE TO TOP PLATE, AT END JOINTS	8-16d COMMON (3 ½" x 0.162") 12-10d BOX (3" x 0.128") 12-3" x 0.131" NAILS 12-3" 14 GAGE STAPLES, ½" CROWN	EACH SIDE OF END JOINT, FACE NAIL (MINIMUM 24" LAP SPLICE LENGTH EACH SIDE OF END JOINT)	28. LEDGER STRIP SUPPORTING J RAFTERS	OISTS OR	3-16d COMMON (3 ½" x 0.162") 4-10d BOX (3" x 0.128") 4-3" x 0.131" NAILS	EACH JOIST OR RAFTER, FACE NAIL					
OK TROSS	3-3" x 0.131" NAILS 3-3" 14 GAGE STAPLES	END NAIL	14. BOTTOM PLATE TO JOIST, RIM JOIST, BAND	16d COMMON (3 ½" x 0.162")	16" O.C. FACE NAIL			4-3" 14 GAGE STAPLES, $\frac{7}{16}$ " CROWN 3-16d COMMON (3 $\frac{1}{2}$ " x 0.162") 4-10d BOX (3" x 0.128")						
FLAT BLOCKING TO TRUSS AND WEB FILLER	2-16d COMMON (3 ½" x 0.162") 3-3" x 0.131" NAILS @ 6" O.C.	FACE NAIL	JOIST OR BLOCKING (NOT AT BRACED WALL PANELS)	16d BOX (3 $\frac{1}{2}$ " x 0.135") 3" x 0.131" NAILS 3" 14 GAGE STAPLES, $\frac{7}{16}$ " CROWN	12" O.C. FACE NAIL	29. JOIST TO BAND JOIST OR RIM	JOIST	4-3" x 0.131" NAILS 4-3" 14 GAGE STAPLES, 7/16" CROWN	END NAIL	TINU				
TEAT BEOCKING TO TROOG AND WEBTILLER	3-3" 14 GAGE STAPLES @ 6" O.C.  3-8d COMMON (2 ½" x 0.131")	TAGE NAIL	15. BOTTOM PLATE TO JOIST, RIM JOIST, BAND JOIST OR BLOCKING (AT BRACED WALL	2-16d COMMON (3 ½" x 0.162") 3-16d BOX (3 ½" x 0.135") 4-3" x 0.131" NAILS	16" O.C. FACE NAIL	30. BRIDGING OR BLOCKING JOIST TRUSS	Γ, RAFTER OR	2-8d COMMON (2 $\frac{1}{2}$ " x 0.131") 2-10d BOX (3" x 0.128") 2-3" x 0.131" NAILS	EACH END, TOENAIL	VELLING				
2. CEILING JOIST TO TOP PLATE	3-10d BOX (3" x 0.128")	EACH JOIST, TOENAIL	PANELS)	4-3" 14 GAGE STAPLES, 7/16" CROWN				2-3" 14 GAGE STAPLES, 7/16" CROWN						
	3-3" x 0.131" NAILS 3-3" 14 GAGE STAPLES, <sup>7</sup> / <sub>16</sub> " CROWN	2, (31, (31, (12, (12, (12, (12, (12, (12, (12, (1		4-8d COMMON (2 ½" x 0.131")		WOOD STRUCTURAL PANELS,SUE  WALL SHEATHING TO FRAMING	BFLOOR,ROOF AN	ID INTERIOR WALL SHEATHING TO F	RAMING AND PARTICLEBOARD ES INTERMEDIATE SUPPORTS	NOS VA				
3. CEILING JOIST NOT ATTACHED TO PARALLEL	3-16d COMMON (3 ½" x 0.162")		46 CTUD TO TOD OD DOTTOM DI ATE	4-10d BOX (3" x 0.128") 4-3" x 0.131" NAILS 4-3" 14 GAGE STAPLES, <sup>7</sup> / <sub>16</sub> " CROWN	TOENAIL		6d COMMON OR I	DEFORMED (2" x 0.113")		CCESS				
RAFTER, LAPS OVER PARTITIONS (NO THRUST) (SEE SECTION 2308.7.3.1, TABLE 2308.7.3.1)	4-10d BOX (3" x 0.128") 4-3" x 0.131" NAILS 4-3" 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL	16. STUD TO TOP OR BOTTOM PLATE	16. STUD TO TOP OR BOTTOM PLATE	2-16d COMMON (3 ½" x 0.162") 3-10d BOX (3" x 0.128")	END NAIL	<u> </u>		RMED (2 1/2" x 0.113") (ROOF) 6' (SUBFLOOR AND WALL) 6'		X 38' A			
CEILING JOIST ATTACHED TO PARALLEL RAFTER (HEEL JOINT)	PER TABLE 2308.7.3.1	FACE NAIL		3-3" x 0.131" NAILS 3-3" 14 GAGE STAPLES, <sup>7</sup> / <sub>16</sub> " CROWN		31. \frac{3}{8}" - \frac{1}{2}"	1 3/4" 16 GAGE STA (SUBFLOOR AND	· 10	' 8"	HAENA 16'				
(SEE SECTION 2308.7.3.1, TABLE 2308.7.3.1)		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	17. TOP OR BOTTOM PLATE TO STUD	2-16d COMMON (3 ½" x 0.162") 3-10d BOX (3" x 0.128")	ENID MAII		2 <sup>3</sup> / <sub>8</sub> " x 0.113" NAIL	(ROOF) 4	' 8"					
	3-10d COMMON (3" x 0.148")			3-3" x 0.131" NAILS 3-3" 14 GAGE STAPLES, 7/16" CROWN	END NAIL		•	PLE, $\frac{7}{16}$ " CROWN (ROOF) 3	6"	ANDRE ALANGDOI				
. COLLAR TIE TO RAFTER	4-10d BOX (3" x 0.128") 4-3" x 0.131" NAILS 4-3" 14 GAGE STAPLES, 7/16" CROWN	FACE NAIL	18. TOP PLATES,LAPS AT CORNERS AND	2-16d COMMON (3 ½" x 0.162") 3-10d BOX (3" x 0.128")	FACE NAIL	22 19" 3"	8d COMMON (2 $\frac{1}{2}$ " 6d DEFORMED (2" 2 $\frac{3}{8}$ " x 0.113" NAIL	" x 0.113")	12"	(303) 9				
S. RAFTER OR ROOF TRUSS TO TOP PLATE	3-10d COMMON (3" x 0.148") 3-16d BOX (3 ½" x 0.135") 4-10d BOX (3" x 0.128") 4-3" x 0.131" NAILS 4-3" 14 GAGE STAPLES, 7/16" CROWN	3-16d BOX (3 $\frac{1}{2}$ " x 0.135")	-16d BOX (3 ½" x 0.135")	3-16d BOX (3 ½" x 0.135")	3-16d BOX (3 $\frac{1}{2}$ " x 0.135")	TOENAIL°	INTERSECTIONS	3-3" x 0.131" NAILS 3-3" 14 GAGE STAPLES, <sup>7</sup> / <sub>16</sub> " CROWN 2-8d COMMON (2 <sup>1</sup> / <sub>2</sub> " x 0.131")		33 7" _ 1 1"	2" 16 GAGE STAP 10d COMMON (3" 8d DEFORMED (2	LE, $\frac{7}{16}$ " CROWN 4	' 12"	04/19/2
(SEE SECTION 2308.7.5, TABLE 2308.7.3.1		IOENAIL	19. 1" BRACE TO EACH STUD AND PLATE	2-10d BOX (3" x 0.128") 2-3" x 0.131" NAILS 2-3" 14 GAGE STAPLES, <sup>7</sup> / <sub>16</sub> " CROWN	FACE NAIL		•	TERIOR WALL SHEATHING		0 17 1072				
							1 ½" GALVANIZED	ROOFING NAIL (7/16" HEAD						
	2-16d COMMON (3 ½" x 0.162") 3-10d BOX (3" x 0.128") 4-3" x 0.131" NAILS	EACH END	20.1" x 6" SHEATHING TO EACH BEARING 21.1" x 8" AND WIDER SHEATHING TO EACH	2-8d COMMON (2 ½" x 0.131") 2-10d BOX (3" x 0.128") 3-8d COMMON (2 ½" x 0.131")	FACE NAIL	34. ½" FIBERBOARD SHEATIHNG	DIAMETER) 1 <sup>1</sup> / <sub>4</sub> " 16 GAGE STA CROWN	PLE WITH 7/16" CROWN OR 1"	6"	1				
7. ROOF RAFTERS TO RIDGE VALLEY OR HIP RAFTERS; OR ROOF RAFTER TO 2-INCH	4-3" 14 GAGE STAPLES, 7/16" CROWN		BEARING	3-10d BOX (3" x 0.128")	FACE NAIL		-T	ROOFING NAIL (7/16" HEAD		1				
RIDGE BEAM	3-10d COMMON (3" x 0.148") 3-16d BOX (3 ½" x 0.135") 4-10d BOX (3" x 0.128")	TOENAIL		FLOOR  3-8d COMMON (2 ½" x 0.131")		35. 32" FIBERBOARD SHEATHING	DIAMETER) 1½" 16 GAGE STA CROWN	PLE WITH $\frac{7}{16}$ " CROWN OR 1"	6"					
	4-3" x 0.131" NAILS 4-3" 14 GAGE STAPLES, <sup>7</sup> / <sub>16</sub> " CROWN		22. JOIST TO SILL, TOP PLATE, OR GIRDER	3-10d BOX (3" x 0.128")	TOENAIL			BINATION SUBFLOOR UNDERLAYME	NT TO FRAMING					
	WALL		·	3-3" x 0.131" NAILS 3-3" 14 GAGE STAPLES, 7/16" CROWN		30. 4 AND LESS	8d COMMON (2 $\frac{1}{2}$ " 6d DEFORMED (2)	" x 0.113")	12"					
	16d COMMON (3 ½" x 0.162")	24" O.C. FACE NAIL	23. RIM JOIST, BAND JOIST, OR BLOCKING TO TOP	8d COMMON (2 ½" x 0.131") 10d BOX (3" x 0.128")		37. <sup>7</sup> / <sub>8</sub> " - 1"	8d COMMON (2 $\frac{1}{2}$ " 8d DEFORMED (2	x 0.131") <sup>1</sup> / <sub>2</sub> " x 0.131")	12"					
8. STUD TO STUD (NOT AT BRACED WALL	10d BOX (3" x 0.128")		PLATE, SILL, OR OTHER FRAMING BELOW	3" x 0.131" NAILS	6" O.C., TOENAIL	38 1 ½" _ 1 ½"	10d COMMON (3"	x 0.148")	12"					
PANELS)	3" x 0.131" NAILS 3-3" 14 GAGE STAPLES, <sup>7</sup> / <sub>16</sub> " CROWN	16" O.C. FACE NAIL	24.1" x 6" SUBFLOOR OR LESS TO EACH JOIST	3" 14 GAGE STAPLES, $\frac{7}{16}$ " CROWN 2-8d COMMON (2 $\frac{1}{2}$ " x 0.131")	FACE NAII			L SIDING TO FRAMING						
	16d COMMON (3 ½" x 0.162")	16" O.C. FACE NAIL	27.1 X 0 0001 LOOK OK LLOO 10 LAOI 100101	2-10d BOX (3" x 0.128")		1 39 = ANII 1 F 3 3		RESISTANT SIDING $(1\frac{7}{8}" \times 0.106")$ RESISTANT CASING (2" x 0.099")	12"	1 18/2				
9. STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS (AT BRACED WALL PANELS)	16d BOX (3 ½" x 0.135") 3" x 0.131" NAILS	12" O.C. FACE NAIL	25. 2" SUBFLOOR TO JOIST OR GIRDER 26. 2" PLANKS (PLANK AND BEAM-FLOOR & ROOF)	2-16d COMMON (3 ½" x 0.162")  2-16d COMMON (3 ½" x 0.162")	FACE NAIL  EACH BEARING, FACE NAIL	40 <u>5</u> "	8d CORROSION-R 8d CORROSION-R	ESISTANT SIDING $(2\frac{3}{8}" \times 0.128")$ ESISTANT CASING $(2\frac{1}{2}" \times 0.113")$	12"	× REGI				
	3-3" 14 GAGE STAPLES, 7/16" CROWN	16" O.C. EACH EDGE, FACE			32" O.C., FACE NAIL AT TOP	1 4 1 -	4d CASING (1 ½" x	0.080")	' 12"					
0. BUILT-UP HEADER (2" TO 2" HEADER)	16d COMMON (3 ½" x 0.162")  16d BOX (3 ½" x 0.135")	NAIL 12" O.C. EACH EDGE, FACE NAII	27. BUILT-UP GIRDERS AND BEAMS, 2" LUMBER LAYERS	20d COMMON (4" x 0.192")	AND BOTTOM STAGGERED	42 3"	4d FINISH (1 $\frac{1}{2}$ " x 0 6d CASING (2" x 0	,	12"	24x36 SHEET SIZ				

a. NAILS SPACED AT 6 INCHES AT INTERMEDIATE SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLEBOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305. NAILS FOR SHEATHING ARE PERMITTED TO BE COMMON, BOX, OR CASING. b. SPACING SHALL BE 6 INCHES ON CENTER ON THE EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS FOR NONSTRUCTURAL APPLICATIONS. PANEL SUPPORTS AT 16 INCHES (20 INCHES IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).



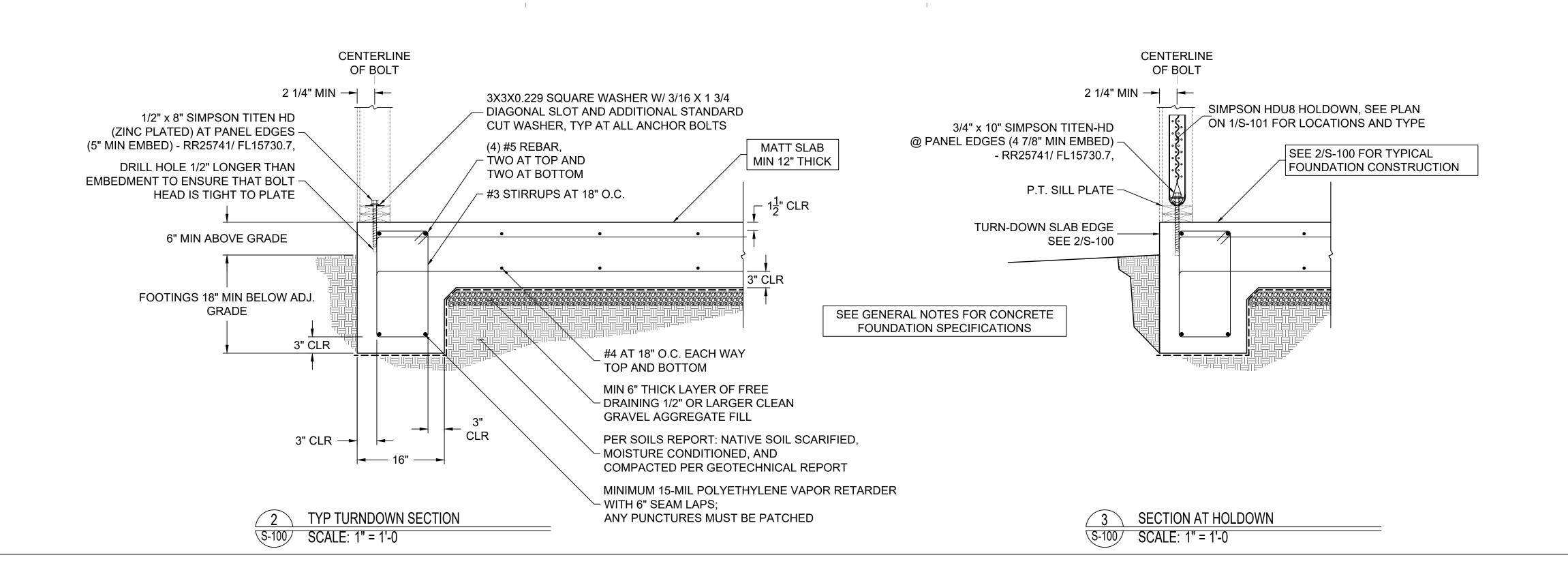
1 FOUNDATION PLAN S-100 SCALE: 1/2" = 1'-0

# **PLAN NOTES:**

HOLD-DOWN CONNECTOR BOLTS THROUGH WOOD FRAMING REQUIRE APPROVED PLATE WASHERS; AND HOLD-DOWNS SHALL BE FINGER TIGHT AND 1/2 WRENCH TURN JUST PRIOR TO COVERING THE WALL FRAMING. CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE STEEL PLATE WASHERS ON THE POST ON THE OPPOSITE SIDE OF THE ANCHORAGE DEVICE. PLATE SIZE SHALL BE A MINIMUM OF 0.229 INCH BY 3 INCHES BY 3 INCHES. (2305.5)

ALL BOLT HOLES SHALL BE DRILLED 1/32" TO 1/16" OVERSIZED. (APPLIES ONLY TO HOLES DRILLED THROUGH WOOD MEMBERS.)

(12.1.3.2, 2018 NDS)



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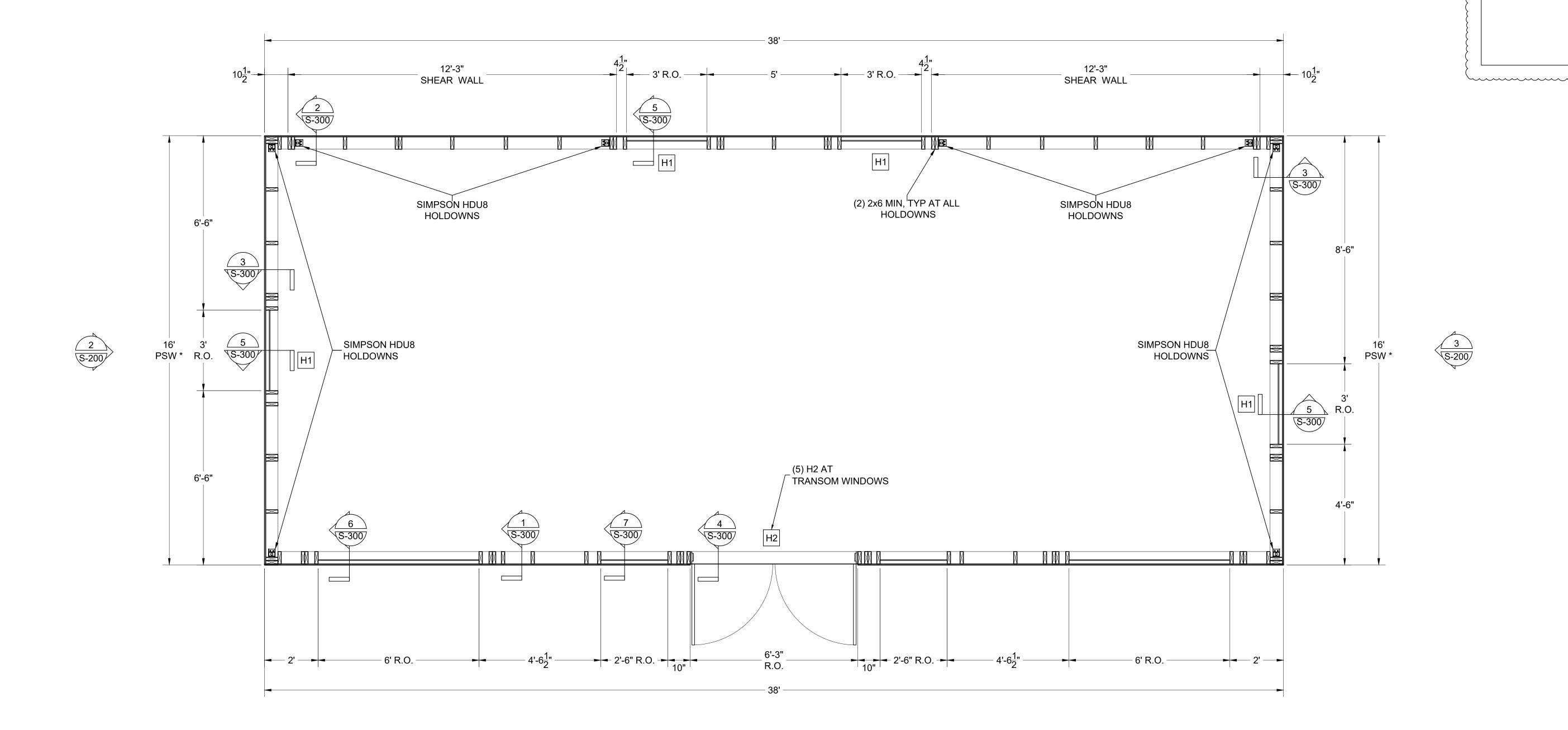
CLINTON HASLERIG PREPARER OF PLANS:

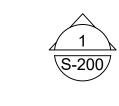
ANDREW LANGDON ALANGDON@STUDIOSHED.COM (303) 945-6973 04/19/23

24x36 SHEET SIZE

**S-100** 









# 1 FIRST FLOOR FRAMING PLAN

PLAN NOTES:

PROVIDE LEAD HOLE 40% - 70% OF THREADED SHANK DIAMETER AND FULL DIAMETER FOR SMOOTH SHANK PORTION.

OPEN FRONT STRUCTURE:

\* - PERFORATED SHEAR WALL PER SDPWS SECTION 4.3.2.3.

THE PROPOSED STRUCTURE IS AN OPEN FRONT STRUCTURE. THE FRONT WALL HAS NO SHEAR LOAD PER THAT DEFINITION AND AS ALLOWED BY SDPWS SECTION 4.2.5.2.1. SEE SHEET L2 OF THE STRUCTURAL CALCULATIONS FOR THE NECESSARY ASPECT RATIO CRITERIA AND A COMPLETE ROTATIONAL ANALYSIS ON SHEET L4.

WALL SCHEDULE											
MARK	STUDS	SHEATHING	NAILS	PANEL EDGE NAIL SPACING	FIELD NAIL SPACING	ANCHORS	WASHERS	SEISMIC CAPACITY	WIND CAPACITY		
SHEAR WALLS	2x6 SPF#2 @ 24" O.C. MAX	7/16" APA (24/16) EXTERIOR	8d COMMON NAILS (0.131"x2 1/2")	6"	12"	3/4"x10" @ 32" O.C. WITH CONCRETE	SEE 2/S-100	220 PLF	308 PLF		
OTHER WALLS	2x6 SPF#2 @ 24" O.C. MAX	7/16" APA (24/16) EXTERIOR	8d COMMON NAILS (0.131"x2 1/2")	6"	12"	1/2"x8" @ 48" O.C. WITH CONCRETE	SEE 2/S-100	-	-		

TYPICAL FOR ALL SHEAR WALL NAILING:

PER CBC / AWC SDPWS, SHEATHING NAILS SHALL BE DRIVEN FLUSH BUT SHALL NOT FRACTURE THE SURFACE OF THE SHEATHING. SHEATHING PANEL NAILING NOT CONFORMING TO THIS SECTION WILL NOT BE ACCEPTABLE AND WILL HAVE TO BE REINSTALLED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE NAIL GUNS USED FOR FASTENING ARE SET AT THE PROPER DEPTH AND/OR AIR PRESSURE TO ACHIEVE THE REQUIRED PENETRATION

H# HEADER - SEE STRUCTURAL CALCULATIONS FOR ADDITIONAL INFORMATION

GENERAL NOTES:
1. 3" SCREWS @ 12" O.C. INTO STUDS BETWEEN WALL PANEL JOINTS
2. 3" SCREWS INTO STUDS BETWEEN SHEAR WALL PANEL JOINTS, MATCH SHEAR WALL PANEL EDGE NAIL SPACING.
3. OSB (P.W.) (ZIP) SHEATHING MUST CONTINUE TO THE DOUBLE TOP PLATE

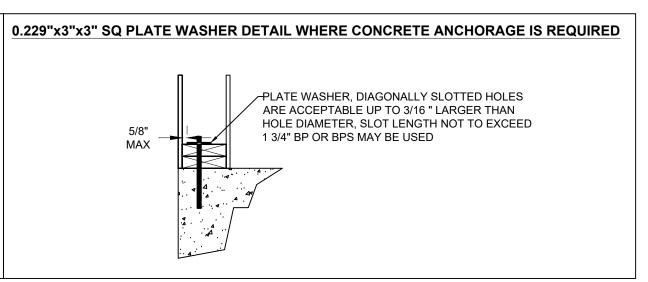
4. ONE TRIM STUD AND ONE KING STUD TYPICAL AT ALL HEADERS, UNO
5. SEE SHEET 1/S-101 FOR HOLDOWN TYPE AND LOCATION
6. NUMBER OF STUDS AT EACH END OF SHEAR WALLS IS CALLED OUT ON PLAN, UNO
7. NO PENETRATIONS GREATER THAN 12"x12" IN SHEAR WALLS BLOCK AND NAIL ALL EDGES. CUT SHEATHING INTO "L" AND "T" SHAPES

7. NO PENETRATIONS GREATER THAN 12"x12" IN SHEAR WALLS, BLOCK AND NAIL ALL EDGES. CUT SHEATHING INTO "L" AND "T" SHAPES AROUND OPENINGS IN NON-SHEAR WALLS.

8. ALL EDGES IN SHEARS WALLS TO BE BLOCKED WITH 2x MEMBERS

9. ALL WALLS HAVE (2) 2x TOP PLATES AND (2) 2x BOTTOM PLATE EQUAL TO WIDTH OF STUD SIZE, TYP UNO
10. SEE DETAILS ON S-300 FOR ATTACHMENT OF DIAPHRAGMS TO SHEAR WALL PLATES, TYPICAL
11. NAIL WALL SHEATHING WITH MINIMUM 8D COMMON, 10D GUN, OR 10D BOX AS INDICATED IN THE WALL SCHEDULE

12. MINIMUM (3) 8D NAILS PER STUD
13. SHEATHE ALL EXTERIOR WALLS. SHEATHE INTERIOR WALLS AS DESIGNATED ON THE DRAWINGS



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REVISIONS

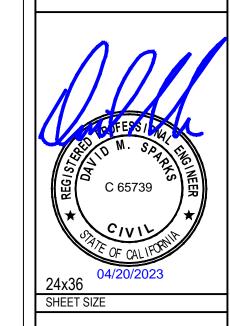
16' X 38' ACCESSORY DWELLING UNIT
TYPE OF CONSTRUCTION

CLINTON HASLERIG
NAME

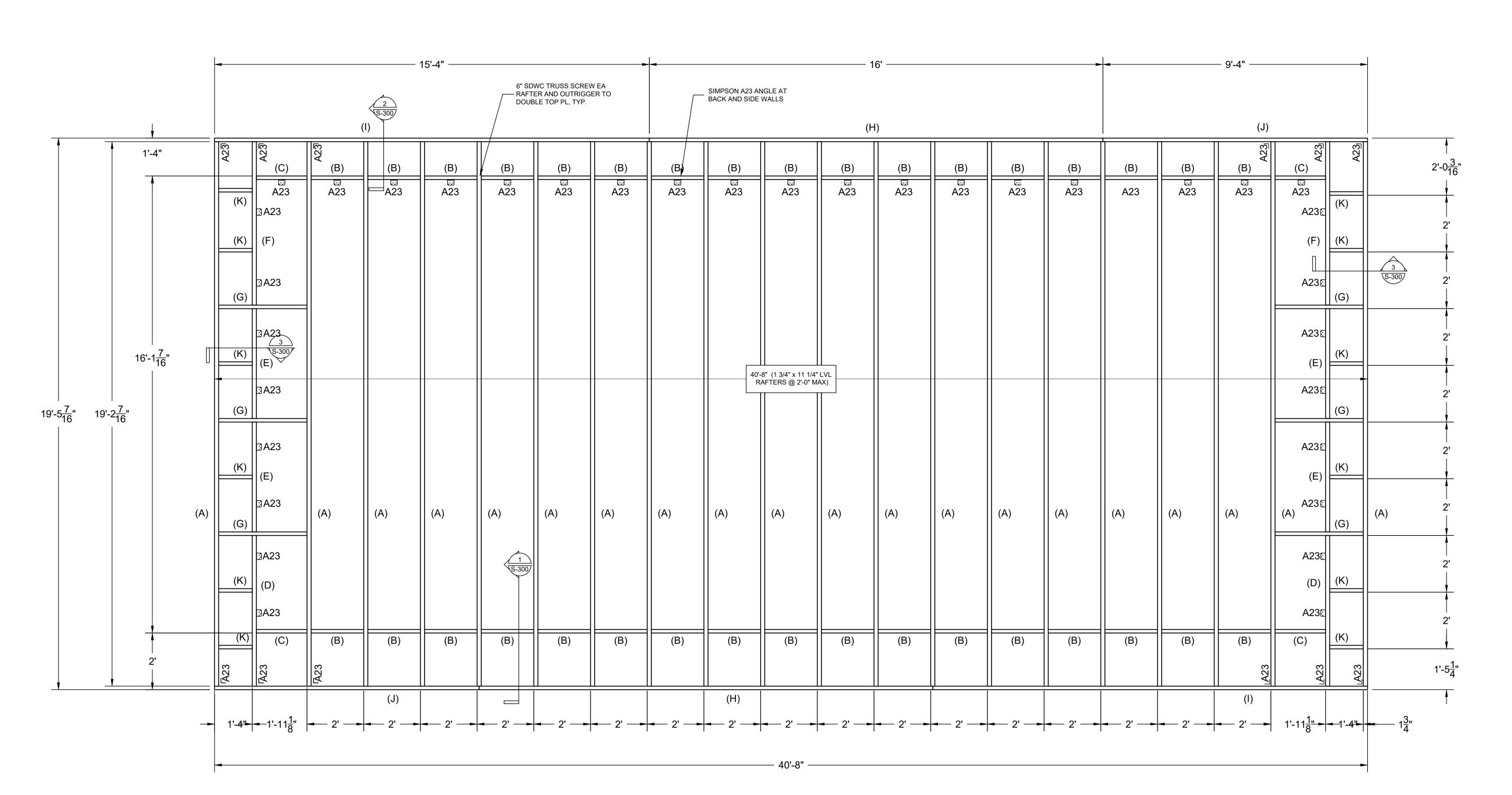
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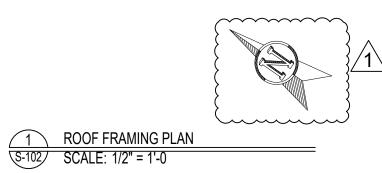
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S-101
FIRST FLOOR FRAMING PLAN





ROOF DIAPHRAGM:

TABLE 4.2C (UNBLOCKED WOOD STRUCTURAL PANEL DIAPHRAGMS)

19/32" SHEATHING AND SINGLE-FLOOR W/ 8d COMMON (0.131x2.5) OVER 2x FRAMING MEMEBERS OF SG = 0.5 (DOUG FIR OR LVL)

PLAN NOTES:

ALL DIAPHRAGM AND SHEAR WALL NAILING SHALL UTILIZE COMMON NAILS OR GALVANIZED BOX NAILS. SEE GENERAL NOTES AND WALL SCHEDULE FOR ATTACHMENT. FACE GRAIN OF PLYWOOD SHALL BE PERPENDICULAR TO SUPPORTS.

		ASD			
		SEISMIC	WIND		
(STRONG)	CASE 1	240 PLF	335 PLF		
(WEAK)	CASE 3	180 PLF	253 PLF		

- (A) - RAFTER - 1 3/4" x 11 1/4" LVL - (B) - BLOCKING - NO. 2 2x12 DOUGLAS FIR - (C) - BLOCKING - NO. 2 2x12 DOUGLAS FIR - (D) - RAFTER BLOCKING - NO. 2 2x12 DOUGLAS FIR - (E) - RAFTER BLOCKING - NO. 2 2x12 DOUGLAS FIR - (F) - RAFTER BLOCKING - NO. 2 2x12 DOUGLAS FIR - (G) - OUTRIGGER - NO. 2 2x12 DOUGLAS FIR - (H) - SUB-FASCIA - NO. 2 2x12 DOUGLAS FIR - (I) - SUB-FASCIA - NO. 2 2x12 DOUGLAS FIR - (J) - SUB-FASCIA - NO. 2 2x12 DOUGLAS FIR - (K) - SOFFIT NAILER - NO. 2 2x4 DOUGLAS FIR

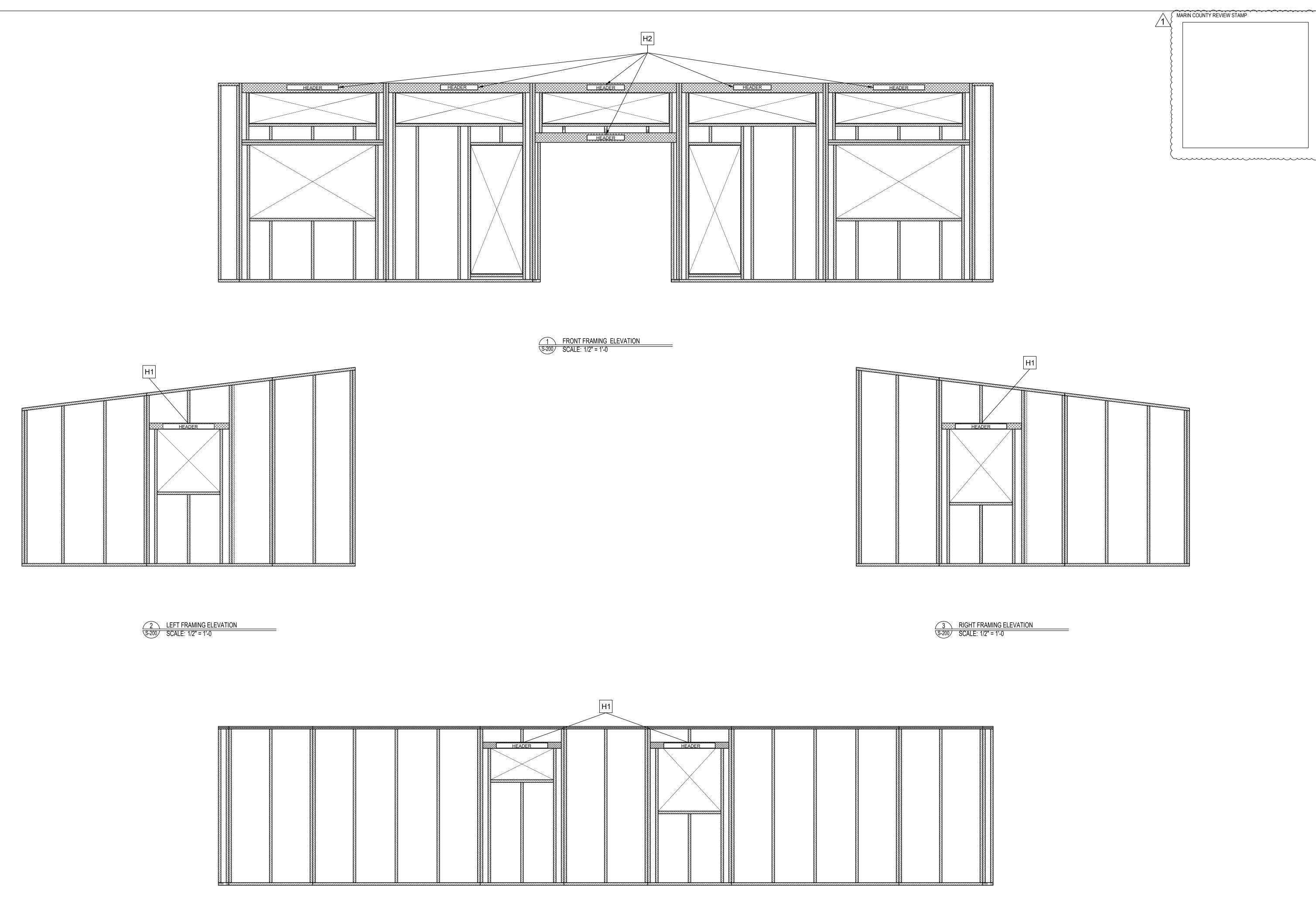
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1500 CHERRY STREET LOUISVILLE, CO 80027 Ph: **888.900.3933** WWW.**STUDIO**SHED.COM 1\04.12.2023 REVISIONS CLINTON HASLERIG

PREPARER OF PLANS:

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BACK FRAMING ELEVATION
S-200 SCALE: 1/2" = 1'-0

STUDIO SHED

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ISSUE DATE
1 04.12.2023

REVISIONS

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S-200
WALL FRAMING PLAN

