

★ 100% CALIFORNIA RESIDENTIAL CODE (CRC SECTION R105.2) PERMIT-EXEMPT ★

THE SUTTER EXECUTIVE 15×8 MAN CAVE

120.0 SQ FT DETACHED SANCTUARY • OFF-GRID SOLAR & INVERTER CLIMATE EDITION

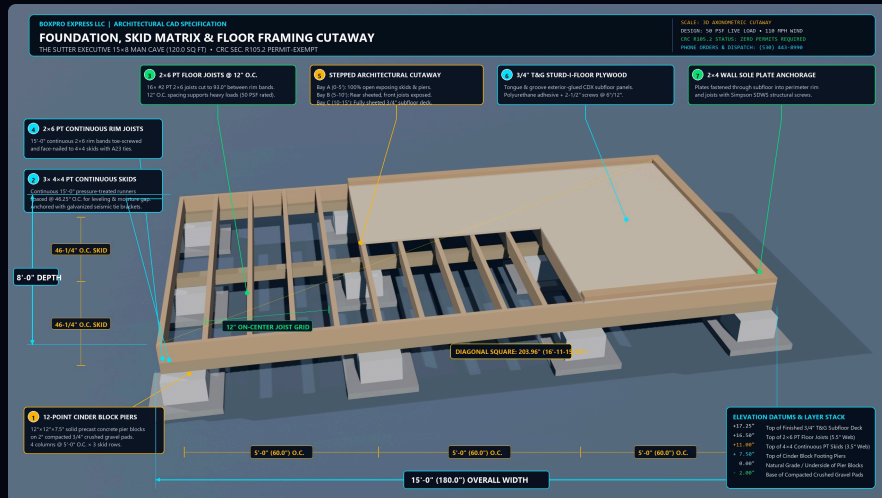
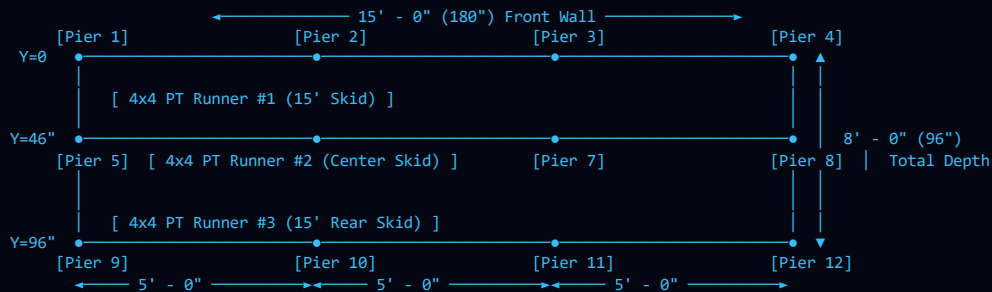


Architectural Concept: Hand-framed on-site timber sanctuary engineered for luxury backyard entertainment. Features a continuous 15' 4×12 Douglas Fir solid beam, centered 36" full-lite glass door, dual 36"×56" picture windows, 3 upper clerestory transoms, 800W rooftop solar array, and 3.84 kWh LiFePO4 battery hub.

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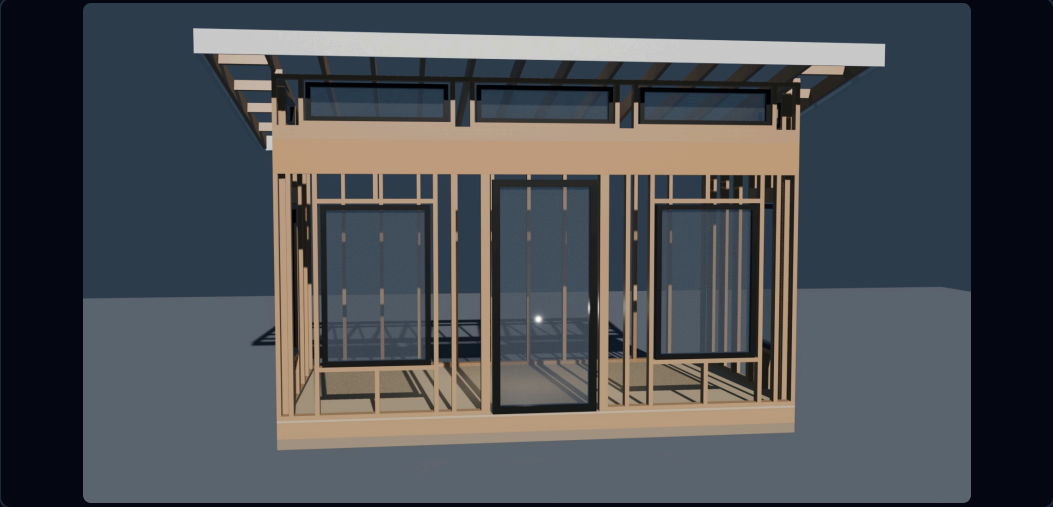
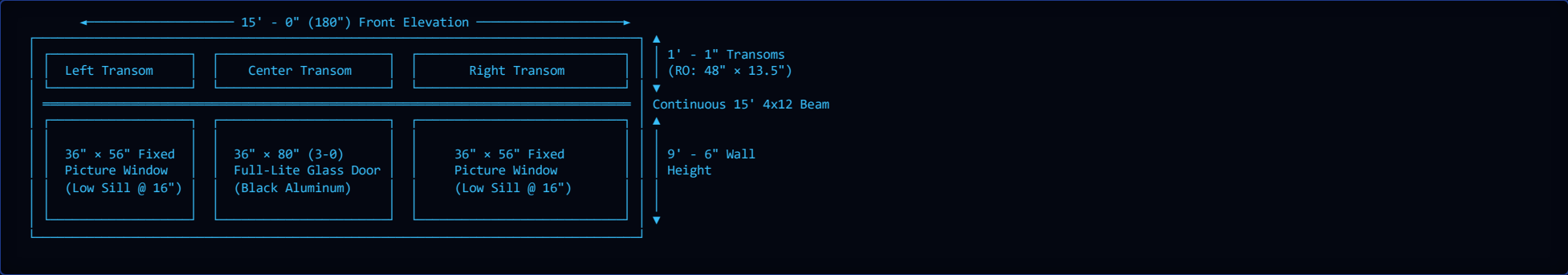
Builder: Boxpro Express LLC • Yuba City, CA 95993 • (530) 443-8990
All framing complies with standard Western Platform Framing & California CRC R105.2.



- **Footprint Geometry:** Exactly 15'-0" Wide x 8'-0" Deep = 120.0 Sq Ft. Strictly adheres to California CRC Section R105.2 (Permit-Exempt).
- **Diagonal Squareness Rule:** Corner-to-corner measurement must equal **203.96 inches (16' - 11-15/16")** before fastening rim bands.
- **Floor Joist Framing:** 2x6 Pressure-Treated joists spaced **12" On-Center** (16 joists total @ 93.0" length) for zero floor deflection under heavy gym loads or lounge recliners.
- **Skid Runners:** 3 continuous 4x4 pressure-treated runners set @ 46.25" O.C. resting upon 12 solid 12x12 cinder blocks over compacted gravel beds.
- **Subfloor Deck:** 3/4" Sturd-I-Floor Tongue & Groove exterior-glue plywood, fastened with 2-1/2" ring-shank screws & construction adhesive.

46.25" O.C.

50 PSF (Exceeds Code)



- **Continuous 15' 4x12 Douglas Fir Solid Timber Beam:** Spans the entire 15-foot front wall at 81.75" AFF, bridging the centered 36" full-lite glass door (38.0" W x 81.75" H RO) and dual picture windows (38.0" W x 56.0" H RO, sill @ 16" AFF) with zero deflection and zero short cripples.
- **3 Upper Clerestory Transoms:** 48" x 13.5" rough openings inside the upper pony wall, aligned 1:1:1 directly over the left window, center door, and right window for continuous natural daylighting.
- **King & Jack Stud System:** Double king studs and jack studs on left and right outer perimeters; solid 4x4 timber lintel bearing posts centered between fenestrations.
- **Cantilevered Eave Overhang:** 20-inch forward cantilevered modern studio roof overhang with recessed IP65 LED soffit pot lights.

BEAM SPAN

15'-0" Continuous 4x12

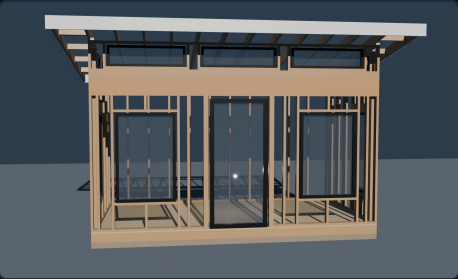
CENTER DOOR RO

38.0" x 81.75" (3-0 Door)

1. FRONT ELEVATION (15'-0" Panoramic Facade)



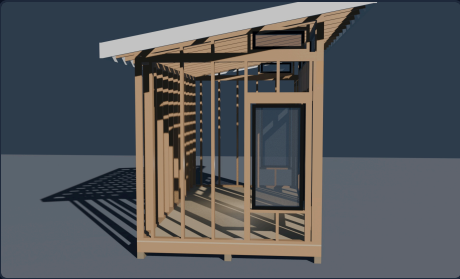
Framing Details: Symmetrical tripartite front facade. Centered 36" (3'-0) exterior full-lite glass door, dual 36"×56" picture windows (16" low sill), continuous 15' 4×12 Douglas Fir lintel beam @ 81.75" AFF, and 3 upper clerestory transoms.



2. LEFT ELEVATION (West Rake Wall & Eave)



Framing Details: Standard 8'-0" perimeter platform wall capped with double top plates @ 96.0" AFF. Features matching 26"×54" low-sill picture window + 26"×9" upper clerestory transom framed inside triangular rake pony wall, and 18-inch ladder lookout overhang.



FRONT GLAZING RATIO

48% Daylight Transparency

SIDE OVERHANGS

18-Inch Cantilever Lookouts

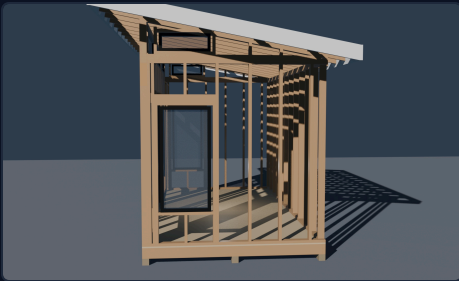
EXTERIOR CLADDING

Board & Batten California Redwood

3. RIGHT ELEVATION (East Rake Wall & Eave)



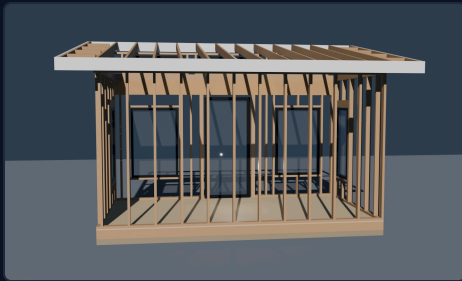
Framing Details: Symmetrical 8'-0" platform wall + stacked triangular rake pony wall with matching 26"×54" picture window and 26"×9" upper clerestory transom, 4×6 solid timber header, and 18-inch side overhang with notched outriggers tying back to primary interior rafter.



4. REAR ELEVATION (South Shear Defense Wall)



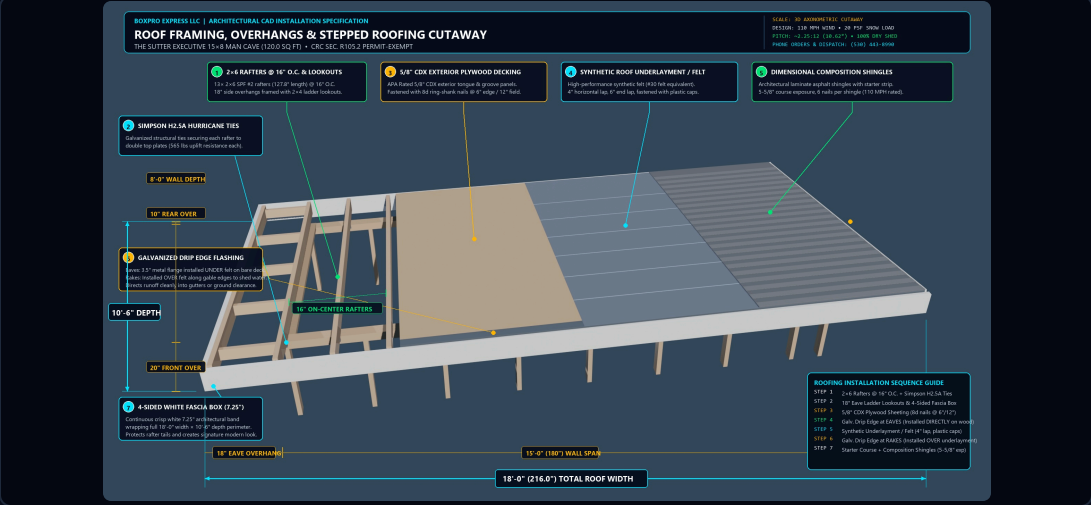
Framing Details: Solid high-shear rear defense wall, 12 pre-cut studs @ 16" O.C. capped by double top plates @ 8'-0" (96.0" AFF). Continuous CDX plywood shear sheathing provides 110 MPH wind resistance and seismic stability with zero fenestration penetrations.



REAR STUD SPACING
16" On-Center Continuous

SHEAR WALL DEFENSE
1/2" CDX Structural Sheathing

ROOF PITCH SLOPE
2.5:12 Mono-Pitch Fall

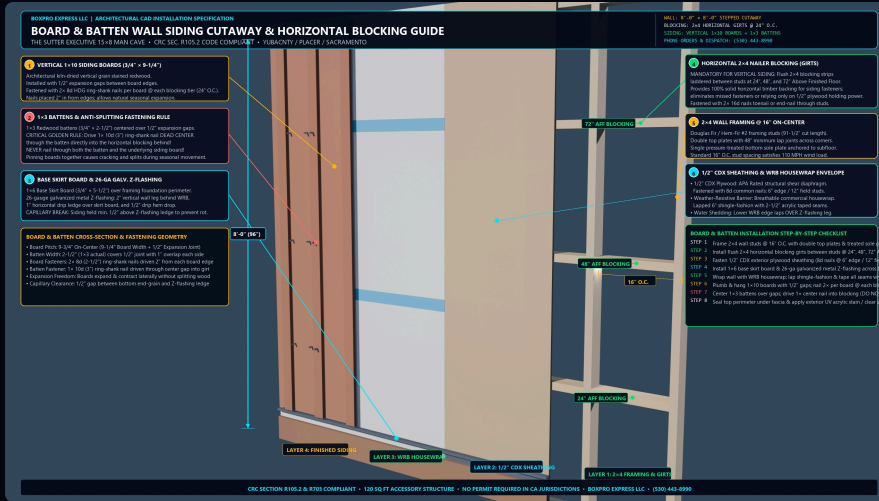


- **Mono-Pitch Rafter System:** 13 rafters (2x6 #2 SPF @ 114" length) spaced 16" O.C. with precision birdsmouth cuts seated on double top plates.
- **Cantilevered Lookouts:** 18" left/right gable overhangs constructed with ladder lookouts notched into gable rafters; 20" cantilevered front eave.
- **Standing Seam Metal Roofing:** 26-gauge commercial matte black concealed-fastener standing seam panels over full-coverage synthetic ice & water shield.
- **Seismic & Wind Defense:** 26 Simpson Strong-Tie H2.5A hurricane ties (1 per rafter bearing) securing rafters against 110 MPH wind uplift.

ROOF FALL SLOPE
2.5:12 Mono-Pitch

HURRICANE TIES
26x Simpson H2.5A

Exterior Face → [1x2 Batten Strips @ 12" O.C. (Covering Board Seams)]
[1x10 Rough-Sawn Vertical Redwood / Cedar Siding Boards (Face Nailed)]
[Vapor-Permeable Weather-Resistive Barrier (Taped Tyvek Envelope)]
[1/2" CDX Structural Plywood Shear Sheathing (8d Ring-Shank @ 6" Edge)]
[2x4 Horizontal Blocking Girts @ 24" O.C. (Between 16" O.C. Studs)]
[2x4 SPF Wall Studs (16" O.C.) with R-13 Thermal Batt Insulation]



- **Cladding Architecture:** Handcrafted vertical board-and-batten siding in rich stained California redwood / Western red cedar with factory penetrating UV sealer.
- **Horizontal Blocking Girts:** 2x4 horizontal nailer blocking installed flush between studs @ 24" vertical intervals to provide solid structural backing for every siding nail.
- **Anti-Splitting Nail Specification:** 2" hot-dip galvanized ring-shank siding nails driven strictly through the center of battens between the boards—preventing board splitting during California seasonal expansion.
- **Waterproof Envelope:** Taped vapor-permeable Tyvek housewrap with integrated self-adhering flashing tape at all corners, sill plates, and window rough openings.

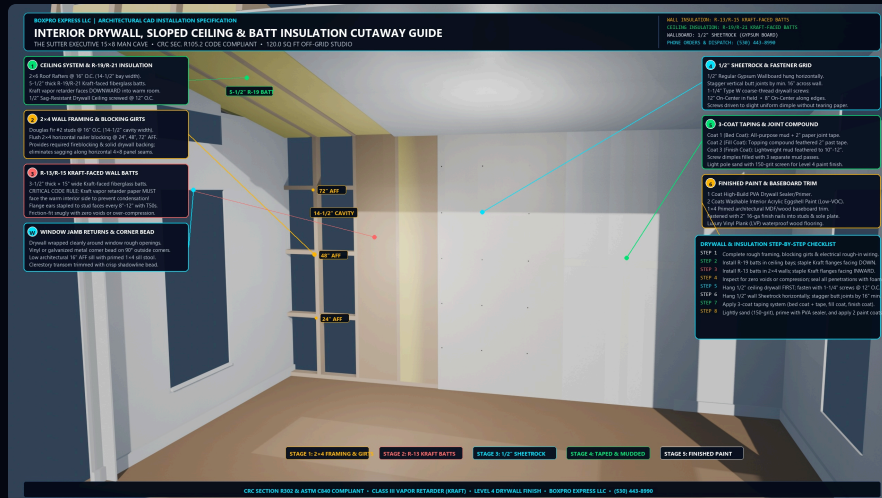
BLOCKING GIRTS

24" Vertical O.C.

FASTENER SPEC

2" HDG Ring-Shank (Center Batten)

Wall Assembly → [2x4 Stud Cavities with R-13 High-Density Acoustic/Thermal Batts]
[1/2" Taped, Mudded & Textured Drywall (Sherwin-Williams Neutral)]



- **Thermal Cocoon:** R-13 high-density fiberglass wall batts + R-19 ceiling batts combined with a dual-sided radiant barrier foil reflecting 97% of California summer solar heat gain.
- **Acoustic Soundproofing (STC 40dB):** Decoupled wall framing and high-density batts absorb 40dB of acoustic transmission—allowing loud sports cheering without disturbing the main house.
- **Mono-Sloped Cathedral Ceiling:** 1/2" drywall fastened directly to rafter undersides, rising from 7'-6" at the rear wall to a towering 10'-0" at the front glass facade.
- **Finishing Standard:** Level 4 smooth mudded and taped drywall, primed with PVA sealer and finished in premium designer washable matte paint.

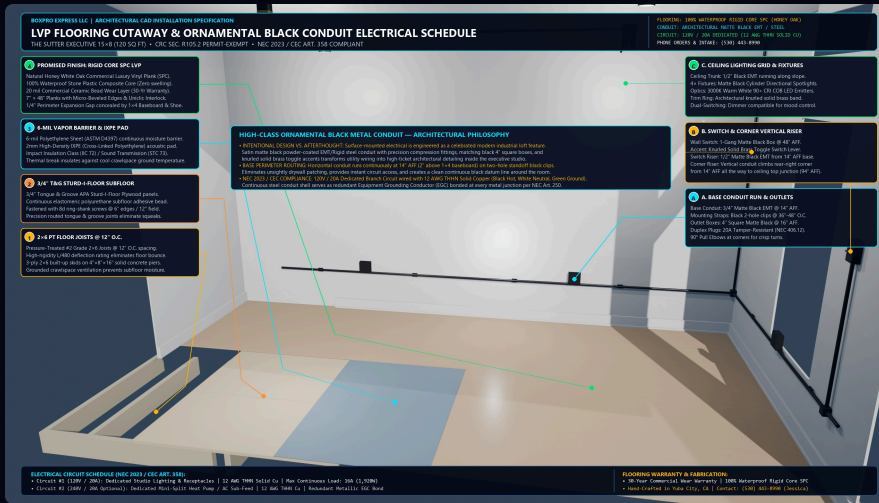
WALL INSULATION

R-13 Kraft-Faced Batts

CEILING INSULATION

R-19 + 97% Radiant Barrier

Subfloor Base →	[3/4" Sturd-I-Floor Tongue & Groove Subfloor Panels (Glued & Screwed)]
	[2mm High-Density IXPE Sound Dampening Acoustic Foam Underlayment]
	[Commercial Honey Oak Rigid Core SPC Luxury Vinyl Plank (20 Mil Layer)]
Electrical Grid→	[1/2" Surface-Mounted Industrial Matte Black EMT Steel Conduit]
	[Architectural Matte Black Quad Receptacles & Decora Rocker Switches]
	[Dedicated In-Wall Low-Voltage HDMI 2.1 & Media Pass-Through Conduit]



- **Waterproof Rigid Core LVP:** 100% waterproof Stone Plastic Composite (SPC) vinyl planks with a commercial 20 mil wear layer, resistant to spills, party foot traffic, and pets.
- **Acoustic Footfall Muffling:** Integrated 2mm IXPE closed-cell acoustic backing pad (IIC 72 rating) deadens hollow footsteps and subfloor vibration.
- **Matte Black Electrical Raceway:** Modern exposed 1/2" EMT steel conduit in satin black finish feeds four dedicated quad 120V outlet boxes around perimeter baseboards.
- **Media Box & Halo Backlight:** Recessed behind the TV with surge suppression, pre-wired HDMI 2.1 to soundbar, and dedicated warm amber 2700K LED halo perimeter backlighting.

LVP WEAR LAYER

20 Mil Commercial Rigid Core

CONDUIT SYSTEM

1/2" Matte Black Steel EMT

Rooftop Array →	[(2) 400W Tier-1 Monocrystalline Solar Panels = 800W Peak Capacity]
	[S-5 Standing Seam Non-Penetrating Aluminum Clamps (Zero Roof Leaks)]
Energy Hub →	[Aker SOLIX 3.84 kWh (3,840Wh) Ultra-Durable LiFePO4 (LFP) Battery]
	[Integrated 6,000W Pure Sine Wave Split-Phase Inverter & Charger]
Climate Core →	[9,000 BTU 20SEER Whisper-Quiet Inverter Mini-Split Heat Pump & A/C]
	[Whisper 19 dB Sound Rating • Eco Mode Draws Just 350-480W Continuous]



- **\$0 Electric Bill Forever:** Complete off-grid solar architecture powers TV, soundbar, draft beer cooler, LED lighting, and climate control indefinitely without touching utility grid.
- **Zero Yard Trenching:** Eliminates \$4,000+ in electrical trenching costs, utility permits, and lawn damage. Self-contained on-structure microgrid.
- **LiFePO4 Chemistry:** 3,000+ full charge cycles with a 10+ year battery lifespan, monitored via Bluetooth/Wi-Fi smartphone app for live watt generation and state of charge.
- **Whisper-Quiet Mini-Split:** 19 dB indoor sound rating (quieter than a library whisper) provides instant heating down to 5°F and cooling up to 115°F exterior temperatures.

HVAC EFFICIENCY

20 SEER Inverter Heat Pump

[VERTICAL WALNUT ACOUSTIC SLAT WALL - NRC 0.85]
Flush-Mounted 65"-75" 4K Smart TV | Amber LED Halo Perimeter Glow | Slim Soundbar

[LIVE-EDGE CALIFORNIA WALNUT CONTINUOUS BAR TOP (2.5" THICK)]

[COMMERCIAL KEGERATOR]
Triple-Tap Tower (3T)
Front-Venting Base
Key Lock (Per Ref 1)

[MATCHING WALNUT CABINETS]
Concealed Storage Credenza
Soft-Close Doors & Drawers
Heavy-Duty Sub-Structure

[BEVERAGE MINI-FRIDGE]
Blue LED Glass-Door Cooler
Chilled Cans & Craft Brews
Commercial Stainless Trim

VIEW A — MASTER ENTERTAINMENT WALL & PANORAMIC GLAZING



Highlights 3 upper clerestory transoms over the continuous 15' 4×12 timber beam, centered 36" black aluminum door, left rake window, walnut acoustic wall with mounted 75" TV, and live-edge walnut bar with commercial triple-tap draft tower.

ACOUSTIC SLAT FELT
NRC 0.85 Sound Absorption

DRAFT BEER TOWER
Commercial Triple-Tap (3 Kegs)

VIEW B — EXECUTIVE LOUNGE & GABLE RAKE GLAZING



Reverse perspective showcasing right rake gable transom window, mid-century cognac leather lounge with ottoman, handcrafted walnut bar credenza with beverage cooler, illuminated backbar bottle display, and honey oak SPC flooring.

BAR COUNTERTOP
2.5" Solid Live-Edge Walnut

FOUNDATION & FLOOR ASSEMBLY (22 PIECES)

MARK	NOMINAL	CUT LENGTH	PURCHASE	NOTES / PLACEMENT
FND_Skid_1-3	4x4 PT	180.0" (15' 0")	4x4 x 16'	Ground contact skids on piers @ 5' spacing (3 pcs)
FLR_Rim_F/R	2x6 PT	180.0" (15' 0")	2x6 x 16'	Continuous 15' front & rear rim bands (2 pcs)
FLR_Joist_1-16	2x6 PT	93.0" (7' 9")	2x6 x 10'	12" O.C. zero-bounce floor joists (16 pcs total)
FLR_Subfloor	3/4" T&G	48" x 96"	4x8 Sheet	Sturd-I-Floor CDX glued & screwed (4 sheets)

REAR SOUTH SHEAR DEFENSE WALL (16 PIECES)

MARK	NOMINAL	CUT LENGTH	PURCHASE	NOTES / PLACEMENT
W_REAR_Sole	2x4 SPF	180.0" (15' 0")	2x4 x 16'	Single bottom sole plate anchored to subfloor
W_REAR_Stud_1-12	2x4 SPF	91.5" (7' 7.5")	2x4 x 8'	Pre-cut wall studs @ 16" O.C. (12 pcs)
W_REAR_Top_1-2	2x4 SPF	180.0" (15' 0")	2x4 x 16'	Double top plate cap @ 96.0" AFF datum (2 pcs)
W_REAR_Shear	1/2" CDX	48" x 96"	4x8 Sheet	Exterior shear plywood sheathing (4 sheets)

FRONT PANORAMIC WALL & TIMBER LINTEL (32 PIECES)

MARK	NOMINAL	CUT LENGTH	PURCHASE	NOTES / PLACEMENT
W_FRT_Beam	4x12 DF	180.0" (15' 0")	4x12 x 16'	Solid Douglas Fir continuous lintel beam @ 81.75" AFF
W_FRT_Sole_L/R	2x4 SPF	56.0" & 56.0"	2x4 x 10'	Sole plates beneath left & right picture windows
W_FRT_King_1-4	2x4 SPF	114.0" (9' 6")	2x4 x 10'	Full-height front corner & opening king studs (4 pcs)
W_FRT_Jack_1-6	2x4 SPF	81.75" (6' 9.75")	2x4 x 8'	Lintel beam bearing jack studs beneath 4x12 (6 pcs)
W_FRT_Pony_Stud	2x4 SPF	18.0" (1' 6")	2x4 x 8'	Upper pony wall studs between clerestory transoms (8 pcs)
W_FRT_Top_1-2	2x4 SPF	180.0" (15' 0")	2x4 x 16'	Front upper double top plates @ 114.0" AFF (2 pcs)

ROOF SYSTEM & OVERHANG LOOKOUTS (41 PIECES)

MARK	NOMINAL	CUT LENGTH	PURCHASE	NOTES / PLACEMENT
RF_Rafter_1-13	2x6 SPF	114.0" (9' 6")	2x6 x 10'	Birdsmouth cut mono-pitch rafters @ 16" O.C. (13 pcs)
RF_Lookout_1-16	2x6 SPF	18.0" (1' 6")	2x6 x 8'	Left & right 18" ladder lookout outriggers (16 pcs)
RF_Fascia_F/R	2x6 SPF	216.0" (18' 0")	2x6 x 20'	Continuous front & rear sub-fascia boards (2 pcs)
RF_Barge_L/R	2x6 SPF	114.0" (9' 6")	2x6 x 10'	Fly rafter barge boards for gable eaves (2 pcs)
RF_Sheathing	5/8" CDX	48" x 96"	4x8 Sheet	Exterior roof deck sheathing (5 sheets)

* Full cut list includes 162 total framing components. All timber specified as kiln-dried SPF #2 or Douglas Fir structural grade.

ITEM DESCRIPTION	QUANTITY	UNIT	CATEGORY	ENGINEERING PURPOSE & SPECIFICATION
4x4 x 16' Pressure-Treated Skids	3	pcs	Foundation	Ground contact skid runners on cinder block piers
2x6 x 16' Pressure-Treated Rim Joists	2	pcs	Subfloor	Continuous 15' front and rear perimeter rim bands
2x6 x 10' Pressure-Treated Floor Joists	16	pcs	Subfloor	Cut to 93" @ 12" On-Center (zero deflection floor grid)
3/4" Tongue & Groove Sturd-I-Floor Plywood	4	sheets	Subfloor	4x8 Exterior glue subfloor panels (glued & screwed)
2x4 x 16' SPF #2 Wall Plates	8	pcs	Wall Framing	Front, rear, and side sole plates & double top plates
2x4 x 10' SPF #2 Pre-Cut Front Studs	22	pcs	Wall Framing	Front high wall studs, king studs, and upper cripples
2x4 x 8' SPF #2 Pre-Cut Rear & Rake Studs	26	pcs	Wall Framing	Rear 91.5" studs and angled side rake studs
Continuous 15' 4x12 Douglas Fir Solid Beam	1	pc	Wall Framing	Solid timber lintel spanning entire front wall @ 81.75" AFF
2x6 x 10' SPF #2 Roof Rafters	13	pcs	Roof Assembly	Cut to 114" with birdsmouth cuts @ 16" On-Center
26-Gauge Standing Seam Metal Roof (Black)	140	sq ft	Roof Assembly	Concealed fastener commercial standing seam panels
Western Red Cedar Board & Batten Siding	14	sheets	Exterior Siding	Vertical 4x8 & 4x10 rich stained redwood/cedar siding
36" x 80" Full-Lite Exterior Glass Door	1	unit	Doors & Glazing	Tempered Low-E dual-pane glass door (Black Aluminum)
36" x 56" Fixed Picture Windows (Black)	2	units	Doors & Glazing	Fixed Low-E dual-pane low-sill picture windows (16" AFF)
44" x 12" Clerestory Transom Windows	3	units	Doors & Glazing	Upper daylight transoms aligned over lower door & windows
Simpson Strong-Tie H2.5A Hurricane Ties	26	pcs	Hardware	Rafter-to-top plate seismic & 110 MPH wind anchoring
R-13 Wall + R-19 Ceiling Batt Insulation	5	bags	Insulation	Complete 4-season thermal & 40dB acoustic barrier
Commercial Rigid Core SPC LVP Flooring	135	sq ft	Interior Finish	100% waterproof luxury vinyl plank + acoustic underlayment
9,000 BTU Inverter Mini-Split Heat Pump	1	system	Climate Defense	Whisper-quiet 19 dB heating & cooling (115V, 20 SEER)
800W Monocrystalline Rooftop Solar Array	2	panels	Off-Grid Solar	2x 400W Tier 1 panels with S-5 standing seam clamps
Anker SOLIX 3.84 kWh LiFePO4 Energy Hub	1	unit	Off-Grid Solar	3,840Wh battery system (\$0 electric bill forever)

Certified by Boxpro Express LLC Autonomous CAD Engine • Rapid On-Site Framing Phase • Yuba City, CA 95993