

ENERGY CALCULATIONS

THESE VALUES WERE USED TO CALCULATE CBECC RES 2022 COMPLIANCE USING THE RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

**NOTE:**  
AIR FILM VALUES SOURCED FROM THE 2021 ASHRAE FUNDAMENTALS, CHAPTER 26, PAGE 26.21, TABLE 10

**WALL ASSEMBLY**  
OUTSIDE AIR FILM: 0.25  
5.75" EPS WALL PANEL: 22.54 (ASSUMES R VALUE OF 3.92/INCH) VARIES ANYWHERE FROM 3.5 TO 4.0  
1/4" MGO BOARD: 0  
INSIDE AIR FILM: 0.68  
• TOTAL FOR WALL ASSEMBLY: R= 23.47 U= 0.0426

**FLOOR ASSEMBLY**  
OUTSIDE AIR FILM: 0.25  
6.75" EPS WALL PANEL: 26.46 (ASSUMES R VALUE OF 3.92/INCH) VARIES ANYWHERE FROM 3.5 TO 4.0  
1/4" MGO BOARD: 0  
INSIDE AIR FILM: 0.92  
• TOTAL FOR FLOOR ASSEMBLY: R= 27.63 U= 0.0362

**ROOF ASSEMBLY**  
OUTSIDE AIR FILM: 0.25  
6.75" EPS WALL PANEL: 26.46 (ASSUMES R VALUE OF 3.92/INCH) VARIES ANYWHERE FROM 3.5 TO 4.0  
1/4" MGO BOARD: 0  
INSIDE AIR FILM: 0.61  
• TOTAL FOR ROOF ASSEMBLY: R= 27.32 U= 0.0366

**ADDITIONAL SITE INSTALLED INSULATION REQUIREMENTS:**  
• CLIMATE ZONES 1-3 + 5-7: FACTORY INSTALLED INSULATION IS COMPLIANT. SEE A3.0 FOR DETAILS.  
• CLIMATE ZONES 4, 10, + 12-16: ADDITIONAL INSULATION IS REQUIRED TO BE INSTALLED ON SITE. SEE A3.1 FOR DETAILS.  
• CLIMATE ZONES 8-9 +11: ADDITIONAL INSULATION IS REQUIRED TO BE INSTALLED ON SITE. SEE A3.2 FOR DETAILS.

**NOTES:**  
• R VALUES NOTED ABOVE (R 3.92/IN) ARE REFERENCED IN ICC EVALUATION REPORT ESR 1962, FOR EXPANDED POLYSTYRENE INSULATION. THIS INSULATION IS LISTED AS THE INSULATION USED IN THE ICC ES EVALUATION REPORT ESR 4725 FOR STRUCTURAL INSULATION PANELS.  
• SIP PANEL ASSEMBLY R-VALUES WERE CALCULATED USING LISTED INSULATION VALUES AND AIR BARRIER. INTERNAL AND EXTERNAL SHEATHING WAS NOT FACTORED INTO TOTAL PANEL PERFORMANCE.

MODEL DATA

OCCUPANCY CLASSIFICATION: R-3 ACCESSORY DWELLING UNIT (ADU)  
TOTAL BUILDING AREA: 361 SQFT  
BUILDING HEIGHT: 10'-9"  
CONSTRUCTION TYPE: V-B (STRUCTURAL INSULATING PANELS)  
FIRE SUPPRESSION: AUTOMATIC FIRE SPRINKLERS ARE NOT PROVIDED. FIRE SPRINKLERS WILL BE REVIEWED AND INSTALLED UNDER LOCAL AUTHORITIES

**TESTS PASSED:**  
• NFPA 286 CORNER BURN TEST  
• ASTM E84 NON-COMBUSTIBLE MATERIAL CONSTRUCTION  
• ICC EVALUATION REPORT ESR 4725

BOXABL

STUDIO CASITA  
TWO DOOR - MODEL BXB-000012  
(CALIFORNIA)

MODEL CONTACTS

<b>MANUFACTURER</b> BOXABL 5345 EAST NORTH BELT ROAD LAS VEGAS, NV 89115	<b>ARCHITECT</b> SEVAN DESIGN SOLUTIONS P.C. 3025 HIGHLAND PARKWAY, SUITE 850 DOWNERS GROVE, ILLINOIS 630-294-4583 JOE DEFILIPPIS	<b>ELECTRICAL ENGINEER</b> DICKERSON ENGINEERING, INC 3343 NORTH RIDGE ARLINGTON HEIGHTS, IL 60004 847-966-0790 GREGORY DOFFIN	<b>MECHANICAL &amp; PLUMBING ENGINEER</b> WCW ENGINEERS, INC. 760 CREEL DRIVE WOOD DALE, IL 60191 630-595-8800 JOSEPH G. THOMAS	<b>STRUCTURAL ENGINEER</b> SIP ENGINEERING CONSULTANTS, LLC 14845 SW MURRAY SCHOLLS DR SUITE 110 PMB 306 BEAVERTON, OR 97007 503-564-4178 MIKE NELSON
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MODEL INFORMATION

**ADDRESS:**  
ADDRESS:  
CITY:  
COUNTY:  
STATE: CALIFORNIA  
CLIMATE ZONE: ALL CLIMATE ZONES

**BUILDING CODE:**  
• BUILDING CODE: 2021 INTERNATIONAL RESIDENTIAL CODE  
• MECHANICAL CODE: 2021 UNIFORM MECHANICAL CODE  
• ELECTRICAL CODE: 2020 NATIONAL ELECTRICAL CODE  
• PLUMBING CODE: 2021 UNIFORM PLUMBING CODE  
• ENERGY CODE: 2022 CALIFORNIA ENERGY CODE  
2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN)  
• FIRE PREVENTION CODE: 2021 INTERNATIONAL FIRE CODE

GENERAL NOTES

THE ARCHITECT AND HIS CONSULTANTS DO NOT WARRANTY OR GUARANTEE THE COMPLETENESS OF THE WORK BEYOND A REASONABLE DILIGENCE. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS ARE FOUND TO EXIST IN THE WORK PRODUCT, THE ARCHITECT SHALL BE PROMPTLY NOTIFIED SO THAT HE MAY HAVE THE OPPORTUNITY TO TAKE WHATEVER STEPS NECESSARY TO RESOLVE THE ISSUE. FAILURE TO PROMPTLY NOTIFY THE ARCHITECT OF SUCH CONDITIONS, SHALL ABSOLVE THE ARCHITECT FROM ANY RESPONSIBILITY OF SUCH FAILURE. ACTION TAKEN WITHOUT THE KNOWLEDGE AND CONSENT OF THE ARCHITECT, IN CONTRADICTION TO THE WORK PRODUCT, OR THE RECOMMENDATIONS OF THE ARCHITECT SHALL BECOME THE RESPONSIBILITY OF THE PARTIES RESPONSIBLE FOR TAKING SUCH ACTION.

THESE DRAWINGS WERE PREPARED BASED ON THE ASSUMPTION THAT ANY CONTRACTOR, SUBCONTRACTOR, SUPPLIER, OR VENDOR INVOLVED IN THE CONSTRUCTION OF THE WORK DESCRIBED HEREIN HAS EXPERIENCE IN THEIR RESPECTIVE AREAS OR DISCIPLINES THAT MAKE UP THE SCOPE OF THE PROJECT.

MANUFACTURERS COMPLIANCE CERTIFICATE CAN BE FOUND INSIDE THE ELECTRICAL SUB PANEL DOOR.

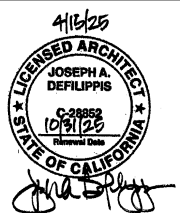
THESE UNITS ARE PREFABRICATED FACTORY BUILT ACCESSORY DWELLING UNITS. PLUMBING, ELECTRICAL, & HVAC ARE PRE-INSTALLED, AND ARE CONNECTED TO INCOMING UTILITIES WHEN THE UNIT IS SET ON SITE.

FOUNDATION SYSTEM IS PERMITTED & INSTALLED SEPARATELY BY THE UNIT OWNER.  
THIS SET IS INTENDED TO BE USED IN CONJUNCTION WITH THE MANUFACTURERS PANEL DRAWINGS AND STRUCTURAL DRAWINGS.

STAMP OF APPROVAL:

Approved For State of California  
**Factory Built Housing**  
By  
MA Consulting & Engineering (MA&E), LLC  
Third Party Design Approval Agency (DAAA)  
Certificate Number: DF1570823  
These plans have been approved pursuant to the provisions of the State of California Health and Safety Code, Division 15, Part and California Code of Regulations, Title 25, Chapter 9, Subchapter 1.  
Approval herein does not constitute or approve any violation or deviation from State laws or valid local ordinances nor do they apply to enforcement of rules over highways, county roads or city streets.  
**Generic Foundation Design Approved**  
Occurs: Roof LL Wind Imp Seismic Ctr  
R3 30 psf 115 C E  
Plan Approval No: **MAC-FBH 10153**  
By: **Joseph A. Defilippis**  
Approval Date: **5/26/2025**  
Expiration Date: **1/11/2028**

PROFESSIONAL SEAL:



DATE:	REV:	DESCRIPTION:	PROFESSIONAL SEAL:
02-19-25	1	CLIENT REVISIONS	I HEREBY CERTIFY THAT THESE DRAWINGS HAVE BEEN PREPARED UNDER MY DIRECT SUPERVISION AND THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE CODES AND ORDINANCES FOR PREFABRICATED DWELLING UNITS.
03-05-25	2	CLIENT REVISIONS	
04-18-25	3	CLIENT REVISIONS	

<b>sevan</b> DESIGN SOLUTIONS, P.C.	
Corporate Office: 3025 Highland Parkway   Suite 850 Downers Grove, IL 60515	Contact Information: info@sevensolutions.com www.sevensolutions.com
INTEGRITY   RESPECT   TEAMWORK   EXCELLENCE   CHARITY	

SHEET MANAGEMENT
SHEET FORMAT: ARCH C
SHEET SCALE: 1:3
CREATED BY: KD
RELEASE DATE: 7/12/2024

**MODEL: BXB-000012**  
**2 DOOR CASITA**  
**(CALIFORNIA)**

**SHEET: G1.0**

**BOXABL INC.**  
5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA  
+1(702) 500-9000 HELLO@BOXABL.COM

PROPRIETARY AND CONFIDENTIAL  
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DRAWING INDEX

REVISIONS

DRAWING INDEX

REVISIONS

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**STAMP OF APPROVAL:**

Approved For State of California  
**Factory Built Housing**  
 By  
 MA Consulting & Engineering MAC&E, LLC.  
 Third Party Design Approval Agency (DAAA)  
 Certificate Number: DFE1570823

These plans have been approved pursuant to the provisions of the State of California Health and Safety Code, Division 15, Part 6 and California Code of Regulations, Title 25, Chapter 9, Subchapter 1. Approval herein does not authorize or approve any variation or deviation from State laws or valid local ordinances nor is applicable to movement of units over highways, county roads or city streets.

**Generic Foundation Design Approved**

Occupancy: Roof LL, Wind, Imp, Seismic Cat  
 223 20 psf 115 C E  
 Plan Approval No: **MAC-FBH 10153**  
 By: **Yyoban J. Jelis**  
 Approval Date: **5/26/2025**  
 Expiration Date: **1/11/2028**

**PROFESSIONAL SEAL:**

4/16/25  
  
 JOSEPH A. DEFILIPPIS  
 C-28852  
 10/31/25  
 Expiration Date

DATE:	REV:	DESCRIPTION:	PROFESSIONAL SEAL:
02-19-25	1	CLIENT REVISIONS	I HEREBY CERTIFY THAT THESE DRAWINGS HAVE BEEN PREPARED UNDER MY DIRECT SUPERVISION AND THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE CODES AND ORDINANCES FOR PREFABRICATED DWELLING UNITS.
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04-18-25	3	CLIENT REVISIONS	

**sevan**  
 DESIGN SOLUTIONS, P.C.

Corporate Office: 3025 Highland Parkway | Suite 850 Downers Grove, IL 60515  
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INTEGRITY | RESPECT | TEAMWORK | EXCELLENCE | CHARITY

**SHEET MANAGEMENT**

SHEET FORMAT: ARCH C  
 SHEET SCALE: 1:3  
 CREATED BY: KD  
 RELEASE DATE: 7/12/2024

**MODEL:** BXB-00012  
 2 DOOR CASITA  
 (CALIFORNIA)

**SHEET:** G1.1

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PRE-CONSTRUCTION DISCLOSURE (DELINEATION OF PLAN REVIEW AND INSPECTION)

ABBREVIATIONS

CALIFORNIA FACTORY-BUILT HOUSING

BXB-000012 - 2 DOOR CASITA - CALIFORNIA

BOXABL

NOTES:

- WHEN DRAWINGS AND OTHER DOCUMENTS INCLUDE BOTH FACTORY BUILT AND SITE BUILT CONSTRUCTION, DAA'S APPROVAL STAMP APPLIES ONLY THE ITEMS MARKED TO BE REVIEWED BY DAA IN THE LIST ABOVE.
- FOR ANY ITEMS NOT INCLUDED IN THE LIST ABOVE, PLAN REVIEW AND INSPECTION WILL BE ACCORDING TO THE FOLLOWING RULES:
  - FACTORY BUILT ELEMENTS WILL BE REVIEWED BY DAA AND INSPECTED BY QAA
  - CONNECTIONS BETWEEN FACTORY BUILT COMPONENTS OR BETWEEN FACTORY BUILT AND SITE BUILT COMPONENTS WILL BE REVIEWED BY DAA AND INSPECTED BY LEA.
  - SITE BUILT ELEMENTS WILL BE REVIEWED AND INSPECTED BY LEA UNLESS NOTED OTHERWISE.
- RESERVED
- ALL OTHER SITE WORK NOTE MENTIONED ABOVE WILL BE REVIEWED AND INSPECTED BY LEA UNLESS NOTED OTHERWISE.
- PER HCD PUBLISHED HANDBOOK OF FACTORY-BUILT HOUSING, PAGE 5:  
 FBH DESIGN AND APPROVAL BY HCD THIRD-PARTY AGENCIES TYPICALLY CONSISTS OF THE FACTORY-CONSTRUCTED STRUCTURE ONLY, BUT MAY ALSO INCLUDE THE FOUNDATION, AND OTHER SITE-INSTALLED ELEMENTS, IF NOTED AND APPROVED BY THE DAA ON THE APPROVED SET OF PLANS.  
 THE APPROVAL OF DAA ON THIS SET OF PLANS INCLUDES THE FOLLOWING:
  - GENERIC FOUNDATION DESIGN
  - AN OPTION FOR A PITCHED OR TRUSSED, SITE-BUILT ROOF CONSTRUCTION AND ROOFING DESIGN

FBH	FACTORY-BUILT HOUSING
HCD	CALIFORNIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DAA	HCD APPROVED DESIGN APPROVAL AGENCY
QAA	HCD APPROVED QUALITY ASSURANCE AGENCY
LEA	LOCAL ENFORCING AGENCY

SECTION / DESCRIPTION

PLAN REVIEW  
DAA LEA

CODE SECTION

INSPECTION  
QAA LEA

CODE SECTION

FBH COMPLIANCE WITH TITLE 24, CCR PARTS 2, 2.5, 3, 4, 5, 6, 11	X		TITLE 25, CCR §3070	X	X	TITLE 25, CCR §3070 HSC §19992
DESIGN CODES, DESIGN LOADS, DESIGN CRITERIA	X		TITLE 25, CCR §3070	X		TITLE 25, CCR §3070
COMPLIANCE WITH LOCAL PLANNING AND ZONING REQUIREMENTS, INCLUDES: - LOCAL ZONE USE REQUIREMENTS - LOCAL SNOW LOAD REQUIREMENTS - LOCAL WIND PRESSURE REQUIREMENTS - STATE FIRE ZONE REQUIREMENTS - LOCAL FIRE ZONE REQUIREMENTS - BUILDING SETBACK REQUIREMENTS - SIDE AND REAR YARD REQUIREMENTS - SITE DEVELOPMENT REQUIREMENTS - PROPERTY LINE REQUIREMENTS - ARCHITECTURAL AND AESTHETIC REQUIREMENTS		X	HSC §19993		X	HSC §19993
INSTALLATION INSTRUCTIONS AND DETAILS	X		TITLE 25, CCR §3028		X	HSC §19992
MECHANICAL, ELECTRICAL, PLUMBING, STRUCTURAL, FIRE SAFETY, FIRE PROTECTION, FIRE ALARM SYSTEMS AND COMPLIANCE WITH CALIFORNIA GREEN AND ENERGY CODES; FACTORY-BUILT COMPONENTS	X		TITLE 25, CCR §3070	X		TITLE 25, CCR §3070
MECHANICAL, ELECTRICAL, PLUMBING, STRUCTURAL, FIRE SAFETY, FIRE PROTECTION, FIRE ALARM SYSTEMS AND COMPLIANCE WITH CALIFORNIA GREEN AND ENERGY CODES; INTER-MODULAR CONNECTIONS	X		TITLE 25, CCR §3070		X	HSC §19992
MECHANICAL, ELECTRICAL, PLUMBING, STRUCTURAL, FIRE SAFETY, FIRE PROTECTION, FIRE ALARM SYSTEMS AND COMPLIANCE WITH CALIFORNIA GREEN AND ENERGY CODES; SITE-BUILT COMPONENTS		X	TITLE 25, CCR §3070		X	HSC §19992
GRADING AND EXCAVATION		X			X	HSC §19992
SITE PLAN: FOR THE ONLY PURPOSE OF CHECKING FIRE-RATING OF EXTERIOR WALLS	X		TITLE 25, CCR §3070	X		TITLE 25, CCR §3070
SITE PLAN: ALL OTHER ELEMENTS OF SITE PLAN		X	HSC §19993		X	HSC §19993
CUSTOM FOUNDATIONS		X	TITLE 25, CCR §3028		X	HSC §19992
PRE-APPROVED GENERIC FOUNDATIONS		X			X	
FACTORY-BUILT UNITS CONNECTIONS TO THE FOUNDATION		X	TITLE 25, CCR §3028		X	HSC §19992
FACTORY-BUILT UNITS CONNECTIONS TO SITE-BUILT STRUCTURES		X	TITLE 25, CCR §3028		X	HSC §19992
FIRE SPRINKLERS (IF REQUIRED)		X	TITLE 25, CCR §3070		X	HSC §19992
SITE -BUILT STRUCTURES (BASEMENTS, DECKS, GARAGES, STAIRS, RAMPS, RAILS, ETC.)		X			X	HSC §19992
CONNECTIONS TO PUBLIC UTILITIES		X			X	HSC §19992
ALL FINISH WORK THAT WAS NOT INCLUDED IN THE FACTORY-BUILT UNITS OR REQUIRED TO BE DONE AFTER INSTALLATION (PAINTING, FLOORING, ROOFING, SIGNAGE, ETC.)		X	TITLE 25, CCR §3028		X	HSC §19992
CUSTOM PITCHED OR TRUSSED ROOF CONSTRUCTION AND ROOFING		X			X	
PRE-APPROVED PITCHED OR TRUSSED ROOF CONSTRUCTION & ROOFING		X			X	
EXTENSION OF VENT PIPES THROUGH AND ABOVE SITE INSTALLED PITCHED OR TRUSSED ROOF		X			X	
INSTALLATION AND TESTING OF SMOKE DETECTOR - CO ALARM COMBO		X			X	
INSTALLATION AND TESTING OF OUTDOOR HVAC CONDENSING UNIT		X			X	
FLUSHING OF PEX LINES		X			X	CA PLUM CODE 604.1.2
ADDITIONAL SITE INSTALLED INSULATION		X			X	

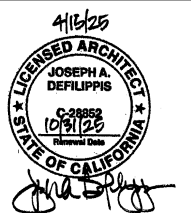
CA FACTORY-BUILT HOUSING PROGRAM NOTES

- THESE PLANS ARE SUBMITTED TO CALIFORNIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT (HCD) UNDER THE CALIFORNIA FACTORY-BUILT HOUSING PROGRAM, IN ACCORDANCE WITH CALIFORNIA HEALTH AND SAFETY CODE - HSC, DIVISION 13 – HOUSING, PART 6 – FACTORY-BUILT HOUSING AND CALIFORNIA CODE OF REGULATIONS, TITLE 25, CHAPTER 3, SUBCHAPTER 1
- FBH MODEL PLANS ARE NOT LIMITED TO A SPECIFIC SITE AND CAN BE INSTALLED WITHIN THE STATE OF CALIFORNIA WHEREVER THE DESIGN CRITERIA MATCH OR EXCEED SITE CRITERIA, PURSUANT TO PROVISIONS AND LIMITATIONS SET FORTH IN CALIFORNIA HEALTH AND SAFETY CODE, ARTICLES 19981 AND 19993
- PURSUANT TO SECTION 19981(A) OF THE HEALTH AND SAFETY CODE: ALL FACTORY-BUILT HOUSING BEARING AN INSIGNIA OF APPROVAL PURSUANT TO SECTION 19980 SHALL BE DEEMED TO COMPLY WITH THE REQUIREMENTS OF ALL ORDINANCES OR REGULATIONS ENACTED BY ANY CITY, CITY AND COUNTY, COUNTY, OR DISTRICT WHICH MAY BE APPLICABLE TO THE CONSTRUCTION OF HOUSING. NO CITY, CITY AND COUNTY, COUNTY, OR DISTRICT SHALL REQUIRE SUBMITTAL OF PLANS FOR ANY FACTORY-BUILT HOUSING MANUFACTURED, OR TO BE MANUFACTURED, PURSUANT TO THIS PART FOR THE PURPOSE OF DETERMINING COMPLIANCE WITH THIS PART OR THE REGULATIONS PROMULGATED THEREUNDER, OR FOR DETERMINING COMPLIANCE WITH ANY LOCAL CONSTRUCTION REQUIREMENT, EXCEPT AS PROVIDED IN SECTION 19993.
- PURSUANT TO SECTION 19981(B) OF THE HEALTH AND SAFETY CODE, NO FACTORY-BUILT HOUSING BEARING A DEPARTMENT INSIGNIA OF APPROVAL PURSUANT TO SECTION 19980 SHALL BE IN ANY WAY MODIFIED PRIOR TO INSTALLATION UNLESS APPROVAL IS FIRST OBTAINED FROM THE DEPARTMENT
- PURSUANT TO SECTION 19981(C) OF THE HEALTH AND SAFETY CODE, NO FACTORY-BUILT HOUSING SHALL BE IN ANY WAY MODIFIED DURING INSTALLATION UNLESS APPROVAL FOR SUCH MODIFICATION IS FIRST OBTAINED FROM THE LOCAL ENFORCEMENT AGENCY
- PURSUANT TO SECTION 19993 OF THE HEALTH AND SAFETY CODE: (A) LOCAL USE ZONE REQUIREMENTS, LOCAL SNOW LOAD REQUIREMENTS, LOCAL WIND PRESSURE REQUIREMENTS, LOCAL FIRE ZONES, BUILDING SETBACK, SIDE AND REAR YARD REQUIREMENTS, SITE DEVELOPMENT AND PROPERTY LINE REQUIREMENTS, AS WELL AS THE REVIEW AND REGULATION OF ARCHITECTURAL AND AESTHETIC REQUIREMENTS ARE HEREBY SPECIFICALLY AND ENTIRELY RESERVED TO LOCAL JURISDICTIONS NOTWITHSTANDING ANY REQUIREMENT OF THIS PART.
- (B) LOCAL REQUIREMENTS IMPOSED ON FACTORY-BUILT HOUSING PURSUANT TO THE AUTHORITY GRANTED BY THIS SECTION SHALL NOT VARY SUBSTANTIALLY FROM THE REQUIREMENTS IMPOSED ON OTHER RESIDENTIAL BUILDINGS OF SIMILAR SIZE

STAMP OF APPROVAL:

Approved For State of California  
**Factory Built Housing**  
 By  
 MA Consulting & Engineering (MACE), LLC,  
 Third Party Design Approval Agency (DAA)  
 Certificate Number: DPE1570823  
These plans have been approved pursuant to the provisions of the State of California Health and Safety Code, Division 13, Part and California Code of Regulations, Title 25, Chapter 3, Subchapter 1.  
 Approval herein does not authorize or approve any variation or deviation from State laws or valid local ordinances nor is applicable to enforcement of such over highways, county roads or city streets.  
 Generic Foundation Design Approved  
 Occurrences: Rev:11, Wind: E, Sp: C, Seismic: C  
 2/3 20 pgs 115 C E  
 Plan Approval No: **MAC-FBH 10153**  
 By: **Yyoban J. Jelin**  
 Approval Date: **5/26/2025**  
 Expiration Date: **1/11/2028**

PROFESSIONAL SEAL:



DATE:	REV:	DESCRIPTION:	PROFESSIONAL SEAL:
02-19-25	1	CLIENT REVISIONS	I HEREBY CERTIFY THAT THESE DRAWINGS HAVE BEEN PREPARED UNDER MY DIRECT SUPERVISION AND THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE CODES AND ORDINANCES FOR PREFABRICATED DWELLING UNITS.
03-05-25	2	CLIENT REVISIONS	
04-18-25	3	CLIENT REVISIONS	

**sevan**  
 DESIGN SOLUTIONS, P.C.

Corporate Office: 3025 Highland Parkway | Suite 850 Downers Grove, IL 60515  
 Contact Information: info@sevanolutions.com www.sevanolutions.com

INTEGRITY | RESPECT | TEAMWORK | EXCELLENCE | CHARITY

**SHEET MANAGEMENT**

SHEET FORMAT: ARCH C  
 SHEET SCALE: 1:3  
 CREATED BY: KD  
 RELEASE DATE: 7/12/2024

**MODEL:** BXB-000012  
**2 DOOR CASITA (CALIFORNIA)**

**SHEET:** G1.2

**BOXABL INC.**  
 5345 EAST NORTH BELT ROAD  
 NORTH LAS VEGAS, NV 89115, USA  
 +1(702) 500-9000 HELLO@BOXABL.COM

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**DATE:** 02-19-25  
**REV:** 3  
**DESCRIPTION:** CLIENT REVISIONS

**FACTORY SCOPE OF WORK**

- ALL EXTERIOR AND INTERIOR WALLS, FLOORS AND ROOFS ARE PRE-BUILT IN THE FACTORY AND PRE-FINISHED. SOME TOUCH UP WORK MAY BE NECESSARY AT PANEL HINGE POINTS ON-SITE.
- ALL INTERIOR ELECTRICAL DEVICES ARE PRE-INSTALLED AND TESTED EXCEPT FOR SMOKE DETECTORS, INTERNAL PENDANT LIGHT, AND EXTERIOR SCONCE WHICH ARE PROVIDED BUT FIELD INSTALLED.
- ALL INTERIOR PLUMBING WATER LINES & DRAINS ARE FACTORY INSTALLED EXCEPT FOR THE REFRIGERATOR WATER LINE CONNECTION AND HEAT PUMP WATER HEATER INSTALLATION.
- ALL APPLIANCES EXCEPT FOR THE REFRIGERATOR ARE PRE-INSTALLED. REFRIGERATOR AND HEAT PUMP WATER HEATER ARE INCLUDED BUT SITE-INSTALLED.
- OTHER MISCELLANEOUS COMPONENTS PER "CUSTOMER INSTALL KIT" ARE INCLUDED BUT MUST BE FIELD INSTALLED. THESE MAY INCLUDE BUT NOT BE LIMITED TO:
  - BREAKFAST BAR COUNTERTOP COMPONENTS
  - OVER THE REFRIGERATOR CABINET
  - MISC. ACCENT LIGHTING
  - SMOKE DETECTORS
  - INTERIOR AND EXTERIOR TRIM COMPONENTS

**RESUME OF SITE-WORK**

- REFERENCE INSTALLATION MANUAL: BXB-000012 INSTALLATION GUIDE
- BUILDING FOUNDATION (FOR MODULE)
- UNDERGROUND ELECTRICAL METER ON MODULE EXTERIOR
- UNDERGROUND SANITARY LINE TO MODULE
- UNDERGROUND WATER LINE TO MODULE
- PLACEMENT OF BLDG MODULE ONTO BLDG MODULE FOUNDATIONS
- "UNPACK" BUILDING MODULE. OPEN UP HINGED PANELS TO FORM WALLS; FLOOR + ROOF OF MODULE UPON COMPLETION OF THE ASSEMBLY OF THE MODULE.
- FINISH + SEAL PLUMBING VENTS ON SITE. BOXABL TO PROVIDE FACTORY INSTALLED HUB FITTINGS IN ROOF PANELS TO ACCOMMODATE THE VERTICAL PLUMBING VENTS.
- THE OWNER, OR FORCES UNDER THEIR DIRECTION, IS RESPONSIBLE FOR INSTALLING THE FOLLOWING:
  - BATHROOM MIRROR
  - EXTERIOR LIGHT SCONCES
  - INTERIOR PENDANT LIGHTS
  - SMOKE DETECTOR
  - REFRIGERATOR
  - RANGE
  - HEAT PUMP WATER HEATER
  - WALL MOUNTED CABINETRY OVER REFRIGERATOR
  - INTERIOR TRIM COMPONENTS
  - WEATHER RESISTANT ENCLOSURE AROUND EXTERIOR INSTALLED HEAT PUMP WATER HEATER
  - PITCHED ROOF & ADDITIONAL INSULATION AS REQUIRED FOR CLIMATE ZONE COMPLIANCE. SEE A3.0 - A3.2 FOR DETAILS.

**STRUCTURAL DESIGN CRITERIA**

**SECTION 1 - HCD INSIGNIA OF APPROVAL INFORMATION:**

- INSIGNIA NO: TO BE PROVIDED BY AHJ
- MANUFACTURER: BOXABL
- MODEL: BXB-000012
- UNIT SERIAL NUMBER: TO BE DETERMINED
- DATE OF MANUFACTURE: TO BE DETERMINED
- PLAN APPROVAL NO: SEE APPROVAL STAMP
- DESIGN ROOF LIVE LOAD: 20 psf
- SEISMIC ZONE (CATEGORY): E
- DESIGN WIND LOAD: 112 MPH
- EXPOSURE: C

**OTHER DESIGN CRITERIA:**

- CLIMATE ZONE: ALL CLIMATE ZONES
- AUTOMATIC FIRE SPRINKLER SYSTEM: NO
- WILDLAND-URBAN INTERFACE FIRE ZONE: BUILDING IS DESIGNED TO BE LOCATED IN A WILDLAND-URBAN INTERFACE FIRE AREA. SEE A2.0 - A2.5 FOR CONSTRUCTION DETAILS
- FIRE SUPPRESSION: AUTOMATIC FIRE SPRINKLERS ARE NOT PROVIDED. FIRE SPRINKLERS WILL BE REVIEWED AND INSTALLED UNDER LOCAL AUTHORITIES

CODE: 2022 CBC

**SECTION 2 - APPLIED LOADS**

- ROOF LIVE LOAD: 20 psf
- SNOW LOAD: SEE TABLE AT RIGHT AND SHEET S1.1
- ROOF DEAD LEAD: 4 psf + 3 psf ALLOTTED FOR SITE INSTALLED EPDM. FOR HIGH-PITCHED ROOFS, THE ADDITIONAL WEIGHT VARIES. SEE TABLE 4 ON S1.1 FOR ROOFING MATERIAL WEIGHT LIMITS.
- FLOOR LIVE LOAD: 40 psf
- FLOOR DEAD LOAD: 5 psf
- BASIC WIND SPEED: SEE LIMITS IN TABLE AT RIGHT. (ASD)  $q_h = q_z = 16.0$  psf (MAX-LOW PITCH ROOFS) = 14.7 psf (MAX-HIGH PITCH ROOFS) ASEC7-16 26.10.2

**SECTION 3 - SEISMIC FACTORS:**

- T=1 SEE TABLE AT RIGHT FOR S<sub>m</sub>s & S<sub>s</sub> LIMITS
- SITE CLASS = D (default) Fa = 1.2 (MINIMUM)
- SEISMIS DESIGN CATEROGY = E (MAX ALLOWED).
- BASIC SEISMIC FORCE RESISTING SYSEM = LIGHT - FRAMED WALLS w/SHEAR PANELS OF MGO & STEEL
- R = 6.5 PER ICC-ESR #4725
- ANALYSIS PROCEDURE: EQUIV. LATERAL FORCE

**SECTION 4 - LIMITATIONS: WIND<sup>2</sup> - SNOW - SEISMIC**

WIND EXPOSURE <sup>3</sup>	LOW PITCH ( 1/2: 12 ) ROOFS		HIGH PITCH ROOFS GABLE ( 3: 12, 6:12, 9:12 ), MONOSLOPE (3:12), HIP (3:12)
	B	C	
MAX. ALLOWED <sup>4</sup> WIND SPEED	140 mph	120 mph	<b>SEE SHEET S1.1</b>
MAXIMUM ALLOWED GROUND SNOW LOAD <sup>3</sup> (P <sub>g</sub> )	40 psf		
MAXIMUM ALLOWED SEISMIC S <sub>m</sub> s <sup>5</sup>	3.30 3.1 IF STUCCO USED		<b>SEE SHEET S1.2</b>
MAXIMUM ALLOWED SEISMIC S <sub>s</sub> <sup>5</sup>	2.75 2.58 IF STUCCO USED		<b>SEE SHEET S1.2</b>

1. EXPOSURE B IS URBAN AND SUBURBAN AREAS, WOODED AREAS, OR OTHER TERRAIN w/ NUMEROUS, CLOSELY SPACED OBSTRUCTIONS THAT HAVE A SIZE OF A SINGLE-FAMILY DWELLING. THESE CONDITIONS PREVAIL IN THE UPWIND DIRECTION FOR A DISTANCE GREATER THAN 1,500 FT. LARGE NEARBY FIELDS OR PARKING LOTS CAN TRIGGER EXPOSURE C.

EXPOSURE C IS OPEN TERRAIN w/ SCATTERED OBSTRUCTIONS THAT HAVE HEIGHTS GENERALLY LESS THAN 30 FT. THIS INCLUDES FLAT, OPEN COUNTRY AND GRASSLANDS.

EXPOSURE D ( NOT ALLOWED ) IS FLAT, UNOBSTRUCTED AREAS ( MUD FLATS, SALT FLATS ) AND WATER SURFACES. THESE CONDITIONS PREVAIL IN THE UPWIND DIRECTION FOR A DISTANCE > 5,000 FT. THIS EXPOSURE ALSO APPLIES WHERE EXPOSURE B OR C OCCURS WITHIN THE FIRST 600 FT OF THE SITE.

2. CASITAS LOCATED ON HILLS OR WITHIN 1,000 FT OF AN ESCARPMENT WILL REQUIRE SPECIAL EVALUATION BY THE STRUCTURAL ENGINEER.

3. IF LOCATED TIGHT IN AMONG CONIFER TREES MULTIPLY LOAD BY 0.83

4. N/A

5. BASIC ( ULTIMATE ) WIND SPEED AS DEFINED BY THE INTERNATIONAL BUILDING CODE.

6. FIND WIND SPEED, GROUND SNOW LOAD, SEISMIC CATEGORY AND SEISMIC S<sub>m</sub>s & S<sub>s</sub> VALUES AT ASCEHAZARDTOOL.ORG USING ASCE/SEI 7-16, RISK CATEGORY II, SITE SOIL CLASS: "D-DEFAULT". VERIFY BASIC (ULTIMATE) WIND AND GROUND SNOW LOAD VALUES WITH THE LOCAL OR COUNTY BUILDING DEPARTMENT. INSTALLER IS RESPONSIBLE FOR VERIFYING THEIR WIND, SNOW & SEISMIC FACTORS ARE WITHIN THE ALLOWABLE LIMITS IN TABLE ABOVE.

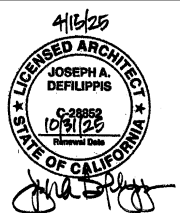
**STAMP OF APPROVAL:**

Approved For State of California  
Factory Built Housing  
By  
MA Consulting & Engineering MA&E, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: DF1570823

This plan has been approved pursuant to the provisions of the State of California Health and Safety Code, Division 15, Part and California Code of Regulations, Title 25, Chapter 9, Subchapter 1. Approval herein does not authorize or approve any variation or deviation from State laws or valid local ordinances nor is it applicable to enforcement of rules over highways, county roads or city streets.

Generic Foundation Design Approved  
Occurrence: Roof LL Wind Imp Seismic Cat  
R3 30 psf 115 C E  
Plan Approval No: **MAC-FBH 10153**  
By: **Y. Johnson, J. J. J. J.**  
Approval Date: **5/26/2025**  
Expiration Date: **1/11/2028**

**PROFESSIONAL SEAL:**



\*NOTE TO DEALER/INSTALLER: SEE STRUCTURAL SHEET S1 TO COMPLETE SITE-SPECIFIC WIND, SEISMIC AND FLOOD CONDITIONS.

DATE:	REV:	DESCRIPTION:	PROFESSIONAL SEAL:
02-19-25	1	CLIENT REVISIONS	I HEREBY CERTIFY THAT THESE DRAWINGS HAVE BEEN PREPARED UNDER MY DIRECT SUPERVISION AND THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE CODES AND ORDINANCES FOR PREFABRICATED DWELLING UNITS.
03-05-25	2	CLIENT REVISIONS	
04-18-25	3	CLIENT REVISIONS	

**sevan**  
DESIGN SOLUTIONS, P.C.

Corporate Office: 3025 Highland Parkway | Suite 850  
Downers Grove, IL 60515

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www.sevanolutions.com

INTEGRITY | RESPECT | TEAMWORK | EXCELLENCE | CHARITY

SHEET MANAGEMENT	
SHEET FORMAT:	ARCH C
SHEET SCALE:	1:3
CREATED BY:	KD
RELEASE DATE:	7/12/2024

**MODEL:** BXB-000012  
**2 DOOR CASITA (CALIFORNIA)**

**SHEET:** G1.3

**BOXABL INC.**  
5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA  
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2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
RESIDENTIAL MANDATORY MEASURES, SHEET 2 (January 2023)

MAXIMUM INCREMENTAL REACTIVITY (MIR)... PRODUCT WEIGHTED MIR (PWMI)... MOISTURE CONTROL... VOC... REACTIVE ORGANIC COMPOUND (ROC)... 4.503 FIREPLACES... 4.504 POLLUTANT CONTROL... 4.504.2 FINISH MATERIAL POLLUTANT CONTROL... 4.504.2.1 Adhesives, Sealants and Caulks... 4.504.2.2 Aerosol Adhesives and Coatings... 4.504.2.3 Aerosol Finishes and Coatings... 4.504.2.4 Verification... TABLE 4.504.1 - ADHESIVE VOC LIMIT...

TABLE 4.504.2 - SEALANT VOC LIMIT (Less Water and Less Exempt Compounds in Grams per Liter)
SEALANTS VOC LIMIT
ARCHITECTURAL 250
MARINE DECK 750
NONMETALLIC ROOF 300
ROADWAY 250
SINGLE-PLY ROOF MEMBRANE 400
OTHER 400
SEALANT PRIMERS
ARCHITECTURAL 250
NON POROUS 775
POROUS 500
MODIFIED BITUMINOUS 500
MARINE DECK 750
OTHER 750

TABLE 4.504.5 - FORMALDEHYDE LIMITS (MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION)
PRODUCT CURRENT LIMIT
HARDWOOD PLYWOOD VENEER CORE 0.05
HARDWOOD PLYWOOD COMPOSITE CORE 0.09
PARTICLE BOARD 0.09
MEDIUM DENSITY FIBERBOARD 0.11
THIN MEDIUM DENSITY FIBERBOARD 0.13
DIVISION 4.5 ENVIRONMENTAL QUALITY (continued)
4.504.3 CARPET SYSTEMS... 4.504.3.1 Carpet cushion... 4.504.3.2 Carpet adhesive... 4.504.4 FLOORING SYSTEMS... 4.504.4.1 Adhesive... 4.504.4.2 Documentation... 4.505 INTERIOR MOISTURE CONTROL... 4.505.1 General... 4.505.2 Concrete slab foundations... 4.505.3 Capillary break... 4.505.4 MOISTURE CONTENT OF BUILDING MATERIALS... 4.506 INDOOR AIR QUALITY AND EXHAUST... 4.506.1 Bathroom exhaust fans... 4.507 ENVIRONMENTAL COMFORT... 4.507.1 HEATING AND AIR-CONDITIONING SYSTEM DESIGN...

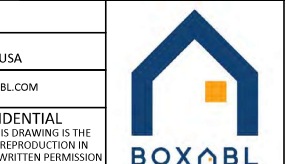
CHAPTER 7 INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS
702 QUALIFICATIONS
702.1 INSTALLER TRAINING... 702.2 SPECIAL INSPECTION (HCD)... 703 VERIFICATIONS
703.1 DOCUMENTATION... STAMP OF APPROVAL: Approved For State of California Factory Built Housing... MA Consulting & Engineering MACCE, LLC... THESE PLANS HAVE BEEN APPROVED TO THE PROVISIONS OF THE STATE OF CALIFORNIA HEALTH AND SAFETY CODE... APPROVAL LETTERS DO NOT AUTHORIZE OR APPROVE ANY MATERIALS OR METHODS... PROFESSIONAL SEAL: JOSEPH A. DEFILIPPIS, LICENSED ARCHITECT, STATE OF CALIFORNIA

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

REVISIONS TABLE
DATE: REV: DESCRIPTION: PROFESSIONAL SEAL:
02-19-25 1 CLIENT REVISIONS
03-05-25 2 CLIENT REVISIONS
04-18-25 3 CLIENT REVISIONS

sevan DESIGN SOLUTIONS, P.C.
Corporate Office: 3025 Highland Parkway | Suite 850 Downers Grove, IL 60515
Contact Information: info@sevensolutions.com www.sevensolutions.com
SHEET MANAGEMENT
SHEET FORMAT: ARCH C
SHEET SCALE: 1:3
CREATED BY: KD
RELEASE DATE: 7/12/2024
MODEL: BXB-00012
2 DOOR CASITA (CALIFORNIA)
SHEET: G2.1

BOXABL INC.
7535 EAST NORTH BELT ROAD NORTH LAS VEGAS, NV 89115, USA
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### LEGEND

	KEY NOTE		WINDOW TAG SEE A1.0
	SIP PANEL		DOOR TAG SEE A1.0
	INTERIOR WALL		

### FLOOR PLAN KEYNOTES

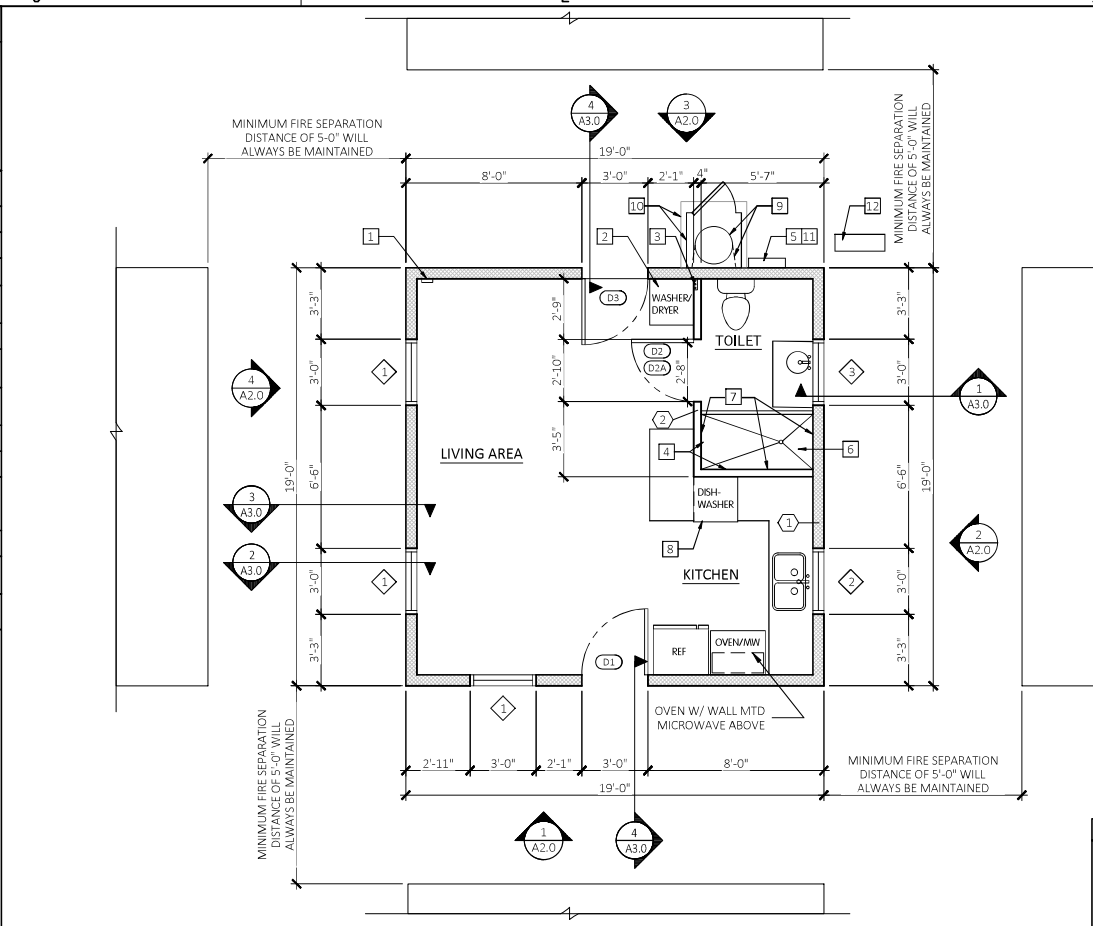
1	WALL MOUNTED SMOKE DETECTOR 20' AWAY FROM COOKING APPLIANCE
2	VENTLESS COMBO WASHER/DRYER UNIT
3	WASHER OUTLET BOX. RUN HOSES THRU PARTITIONS TO CONNECT TO WASHER/DRYER UNIT
4	PREFABRICATED SHOWER ENCLOSURE PREPPED TO RECEIVE FIELD INSTALLED GRAB BARS IF REQUIRED
5	HCD INSGNIA OF APPROVAL TO BE PLACED AT INSIDE DOOR OF ELECTRICAL PANEL.
6	30" x 60" SHOWER WITH 2" CURB OR 30" x 60" BATHTUB SEE SHT P2.0 + P3.0 FOR SHOWER; SHT P2.1 + P3.1 FOR BATHTUB
7	BATHTUB AND/OR SHOWER FLOORS AND WALLS SHALL BE FINISHED WITH A NON-ABSORBENT SURFACE A MINIMUM OF 6'-0" ABOVE FLOOR.
8	UNDER COUNTER DISHWASHER
9	HEAT PUMP WATER HEATER. PROVIDE STRAPS AND ANCHORAGE TO WALL
10	30" x 30" (MIN.) GALVANIZED STEEL WATER HEATER ENCLOSURE SET ON A 36" X 36" PRECAST CONCRETE PAD. INSTALL ENCLOSURE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
11	NEW ELECTRICAL SUB PANEL. MAINTAIN 36" CLEARANCE IN FRONT OF PANEL
12	NEW GROUND MOUNTED CONDENSING UNIT SET ON A PRECAST CONCRETE PAD. MAINTAIN CLEARANCE TO ELEC. PANELS AS REQUIRED.

### NOTES

- ELECTRICAL OUTLETS, SWITCHES, AND CONTROLS (INCLUDING HVAC CONTROLS) SHALL BE PLACED NOT MORE THAN 48" AND NOT LESS THAN 15" ABOVE THE FINISHED FLOOR
- FIRE SPRINKLER INSTALLATION WHERE REQUIRED BY THE AHJ. IS THE RESPONSIBILITY OF THE OWNER AND INSTALLED BY OTHERS
- SEE MANUFACTURER'S DRAWINGS FOR UTILITY CONNECTIONS, PANEL DETAILS, MODULAR CONNECTIONS & ALL RELATED STRUCTURAL DETAILS
- FINAL DIMENSIONS ARE WITHIN ±1" OF DIMENSIONS SHOWN BASED ON MANUFACTURING TOLERANCES

#### AGING-IN-PLACE ACCOMMODATIONS:

- INSTALLING AN AGING-IN-PLACE COMPLIANT SHOWER SURROUND TO COMPLY WITH SECTION R327.1.1
- A FLOOR-MOUNTED WATER CLOSET GRAB-BAR MAY BE INSTALLED ON-SITE (BOXABL DOES NOT PROVIDE ONE)
- INTERIOR BATHROOM DOOR HAS A NET OPENING OF NOT LESS THAN 32" MEASURED WITH THE DOOR AT AN ANGLE OF 90° FROM THE CLOSED POSITION TO COMPLY WITH SECTION R327.1.3
- ELECTRICAL RECEPTACLE OUTLETS, SWITCHES, DOORBELL & CONTROL HEIGHTS ARE NO MORE THAN 48" MEASURED THE TOP OF THE OUTLET BOX AND NOT LESS THAN 15" MEASURED FROM THE BOTTOM OF THE OUTLET BOX ABOVE THE FINISHED FLOOR PER SECTION 327.1.2 & R327.1.4



### WINDOW & DOOR SCHEDULE

NUMBER	PRODUCT	CONFIGURATION	SIZE	MATERIAL	U-FACTOR	SOLAR HEAT GAIN (SHGC)	DPI	MANUFACTURER	MODEL	BOXABL PART #	NOTES
1	WINDOW	SINGLE HUNG	3'-0" X 6'-0"	VINYL	0.29	0.23	+20/-20	JELD-WEN	#QW3535	WIN-000008	APPROVED OR EQUIVALENT
2	WINDOW	FIXED	3'-0" X 4'-0"	VINYL	0.26	0.25	+20/-20	JELD-WEN	#QT4326	WIN-000007	APPROVED OR EQUIVALENT
3	WINDOW	FIXED	3'-0" X 2'-0"	VINYL	0.26	0.25	+20/-20	JELD-WEN	#RE3866	WIN-000005	APPROVED OR EQUIVALENT
D1	DOOR	ENTRY DOOR	3'-0" X 8'-0"	FIBERGLASS	0.16	0	+55/-60	FANGDA	F-16 NO GRIDS	DOR-000005	APPROVED OR EQUIVALENT
D2	DOOR	STANDARD TOILET DOOR	2'-10" X 8'-0"	WOOD/GLASS	N/A	N/A	N/A	FANGDA	JHK-G01	DOR-000021	TEMPERED, FROSTED SAFETY GLASS
D2A	DOOR	OPTIONAL TOILET DOOR	2'-10" X 8'-0"	WOOD	N/A	N/A	N/A	FANGDA	LO1206147	DOR-000022	SOLID DOOR
D3	DOOR	REAR DOOR	3'-0" X 8'-0"	FIBERGLASS	0.16	0	+55/-60	FANGDA	F-16 NO GRIDS	DOR-000005	APPROVED OR EQUIVALENT

1  
A1.0

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

NOTE:  
SEE SHEET G1.3 FOR EXTENT OF WORK TO BE DONE ON SITE.

NOTE:  
ALL WINDOWS CONTAIN WUI COMPLIANT OUTER PANE

#### STAMP OF APPROVAL:

Approved For State of California  
**Factory Built Housing**  
By  
MA Consulting & Engineering MAC&E, LLC.  
Third Party Design Approval Agency (DAAA)  
Certificate Number: DF1570823

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Generic Foundation Design Approved  
Occurrence: Rev:11    Wind:    Exp:    Seismic: Ctr  
R3    20 psf    15 S    C    E  
Plan Approval No: **MAC-FBH 10153**  
By: **Y. Johnson, J. J. J. J.**  
Approval Date: **5/26/2025**  
Expiration Date: **1/11/2028**

#### PROFESSIONAL SEAL:

41625

JOSEPH A. DEFILIPPIS  
C-28852  
10/31/28  
Expiration Date

DATE:	REV:	DESCRIPTION:
02-19-25	1	CLIENT REVISIONS
03-05-25	2	CLIENT REVISIONS
04-18-25	3	CLIENT REVISIONS

#### PROFESSIONAL SEAL:

I HEREBY CERTIFY THAT THESE DRAWINGS HAVE BEEN PREPARED UNDER MY DIRECT SUPERVISION AND THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE CODES AND ORDINANCES FOR PREFABRICATED DWELLING UNITS.

## sevan

### DESIGN SOLUTIONS, P.C.

Corporate Office: 3025 Highland Parkway | Suite 850 Downers Grove, IL 60515  
Contact Information: info@sevanolutions.com www.sevanolutions.com

INTEGRITY | RESPECT | TEAMWORK | EXCELLENCE | CHARITY

#### SHEET MANAGEMENT

SHEET FORMAT:	ARCH C
SHEET SCALE:	1:3
CREATED BY:	KD
RELEASE DATE:	7/12/2024

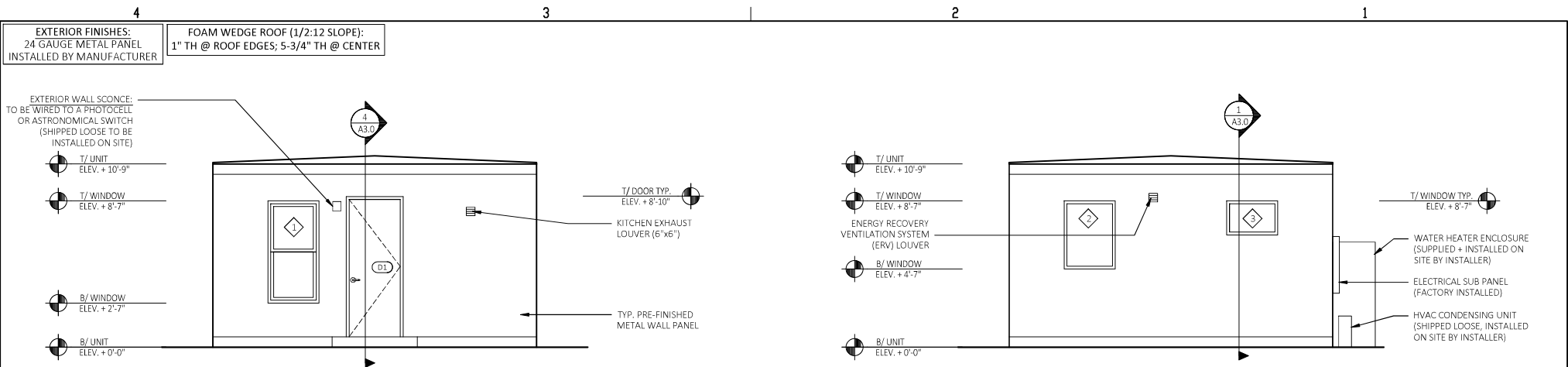
**MODEL: BXB-00012**  
**2 DOOR CASITA (CALIFORNIA)**

**SHEET: A1.0**

**BOXABL INC.**  
5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA  
+1(702) 500-9000    HELLO@BOXABL.COM

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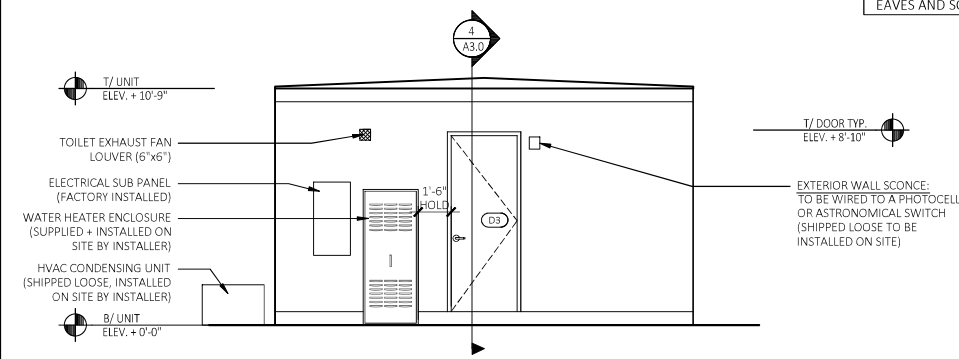




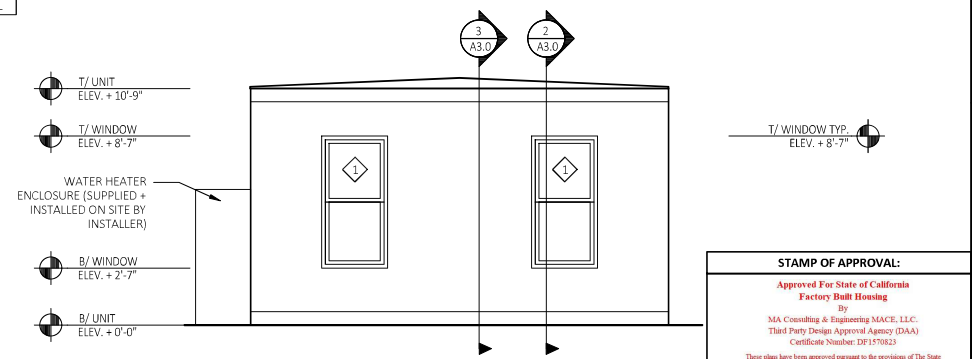
1 FRONT ELEVATION  
A2.0 SCALE: 1/4" = 1'-0"  
OPENING PERCENTAGE = 20.56%

2 RIGHT ELEVATION  
A2.0 SCALE: 1/4" = 1'-0"  
OPENING PERCENTAGE = 8.81%

IF UNIT IS INSTALLED IN A  
WILDLIFE-URBAN INTERFACE  
AREA, INSTALLER MUST  
PROVIDE AND INSTALL WUI  
COMPLIANT ROOFING, FASCIA,  
EAVES AND SOFFIT MATERIAL



3 REAR ELEVATION  
A2.0 SCALE: 1/4" = 1'-0"  
OPENING PERCENTAGE = 11.75%



4 LEFT ELEVATION  
A2.0 SCALE: 1/4" = 1'-0"  
OPENING PERCENTAGE = 17.62%

**MAXIMUM AREA OF EXT. WALL OPENINGS AND  
FIRE SEPARATION DISTANCE / DEGREE OF OPENING PROTECTION**

BASED OFF IRC TABLE R302.1 (1) EXT. WALLS

FIRE SEPARATION DISTANCE (FEET)	DEGREE OF OPENING PROTECTION	ALLOWABLE AREA
0 TO LESS THAN 3	UNPROTECTED, NONSPRINKLERED	NOT PERMITTED
3 TO LESS THAN 5	UNPROTECTED, NONSPRINKLERED	NOT PERMITTED
5 TO LESS THAN 10	UNPROTECTED, NONSPRINKLERED	10%
10 TO LESS THAN 15	UNPROTECTED, NONSPRINKLERED	15%
15 TO LESS THAN 20	UNPROTECTED, NONSPRINKLERED	25%

**NOTE:**  
ALL INTAKES, GRILLES, + LOUVERS TO BE  
PROTECTED W/CORROSION RESISTANT SCREENS  
NOT LESS THAN 1/4" & NOT MORE THAN 1/2" IN  
SIZE (FACTORY INSTALLED)

**NOTE:**  
AS PART OF THE INSTALLATION PROCESS  
OUTLINED IN THE APPROVED INSTALLATION  
MANUAL, APPROVAL # MAC-FBH-10121, THE  
INSTALLATION CONTRACTOR SHALL FIELD INSTALL  
WEATHER BARRIER FLASHING TAPE TO ALL PANEL  
SEAMS. REFER TO MANUFACTURER'S  
INSTALLATION MANUAL FOR DETAILS AND  
RECOMMENDATIONS

**STAMP OF APPROVAL:**

Approved For State of California  
Factory Built Housing  
By  
MA Consulting & Engineering MAC&E, LLC.  
Third Party Design Approval Agency (DAAA)  
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Generic Foundation Design Approved

Occurrence: Roof LL, Wind, Eqp, Seismic Ctr  
R3 30 psf, 115 C, E

Plan Approval No: **MAC-FBH 10153**

By: **Yyoban J. Jelis**

Approval Date: **5/26/2025**  
Expiration Date: **1/11/2028**

**PROFESSIONAL SEAL:**

41625  
JOSEPH A. DEFILIPPIS  
C-28852  
10/31/20  
Professional Seal  
STATE OF CALIFORNIA

DATE:	REV:	DESCRIPTION:	PROFESSIONAL SEAL:
02-19-25	1	CLIENT REVISIONS	I HEREBY CERTIFY THAT THESE DRAWINGS HAVE BEEN PREPARED UNDER MY DIRECT SUPERVISION AND THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE CODES AND ORDINANCES FOR PREFABRICATED DWELLING UNITS.
03-05-25	2	CLIENT REVISIONS	
04-18-25	3	CLIENT REVISIONS	

**sevan**  
DESIGN SOLUTIONS, P.C.

Corporate Office: 3025 Highland Parkway | Suite 850  
Downers Grove, IL 60515

Contact Information: info@sevanolutions.com  
www.sevanolutions.com

INTEGRITY | RESPECT | TEAMWORK | EXCELLENCE | CHARITY

**SHEET MANAGEMENT**

SHEET FORMAT: ARCH C  
SHEET SCALE: 1:3  
CREATED BY: KD  
RELEASE DATE: 7/12/2024

**MODEL:** BXB-00012  
2 DOOR CASITA  
(CALIFORNIA)

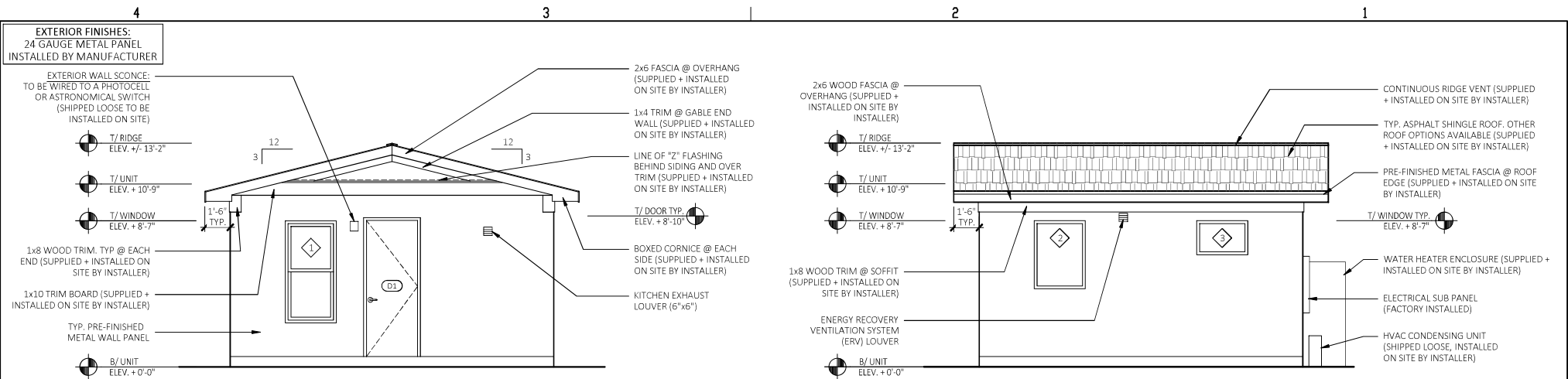
**SHEET:** A2.0

**BOXABL INC.**  
5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA

+1(702) 500-9000 HELLO@BOXABL.COM

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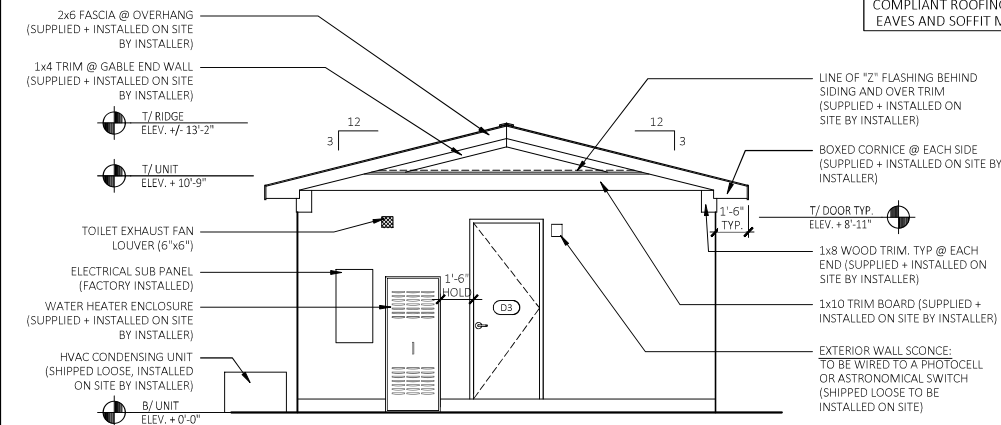




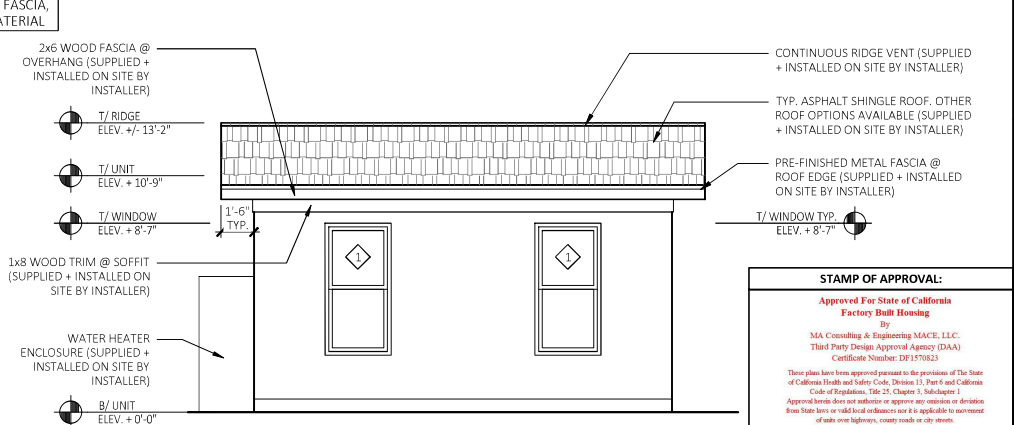
**1 FRONT ELEVATION**  
 A2.1 SCALE: 1/4" = 1'-0"  
 OPENING PERCENTAGE = 20.56%

**2 RIGHT ELEVATION**  
 A2.1 SCALE: 1/4" = 1'-0"  
 OPENING PERCENTAGE = 8.81%

IF UNIT IS INSTALLED IN A WILDLIFE-URBAN INTERFACE AREA, INSTALLER MUST PROVIDE AND INSTALL WUI COMPLIANT ROOFING, FASCIA, EAVES AND SOFFIT MATERIAL



**3 REAR ELEVATION**  
 A2.1 SCALE: 1/4" = 1'-0"  
 OPENING PERCENTAGE = 11.75%



**4 LEFT ELEVATION**  
 A2.1 SCALE: 1/4" = 1'-0"  
 OPENING PERCENTAGE = 17.62%

**MAXIMUM AREA OF EXT. WALL OPENINGS AND FIRE SEPARATION DISTANCE / DEGREE OF OPENING PROTECTION**  
 BASED OFF IRC TABLE R302.1 (1) EXT. WALLS

FIRE SEPARATION DISTANCE (FEET)	DEGREE OF OPENING PROTECTION	ALLOWABLE AREA
0 TO LESS THAN 3	UNPROTECTED, NONSPRINKLERED	NOT PERMITTED
3 TO LESS THAN 5	UNPROTECTED, NONSPRINKLERED	NOT PERMITTED
5 TO LESS THAN 10	UNPROTECTED, NONSPRINKLERED	10%
10 TO LESS THAN 15	UNPROTECTED, NONSPRINKLERED	15%
15 TO LESS THAN 20	UNPROTECTED, NONSPRINKLERED	25%

**GABLE ROOF 3:12 SLOPE**  
 46.7 & 70 PSF SNOW LOADS.

THESE ARE TRUSS CAPACITIES ONLY. ALLOWABLE ROOF SNOW LOADS BASED ON WALL STRENGTH ARE OFTEN LESS, DEPENDING ON WIND AND SEISMIC CONDITIONS. GROUND SNOW LOADS ARE ABOUT 43% HIGHER. SEE S1.1, S1.2 AND S1.3

**NOTE:**  
 ALL INTAKES, GRILLES, + LOUVERS TO BE PROTECTED W/CORROSION RESISTANT SCREENS NOT LESS THAN 1/4" & NOT MORE THAN 1/2" IN SIZE (FACTORY INSTALLED)

**NOTE:**  
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**STAMP OF APPROVAL:**  
 Approved For State of California  
**Factory Built Housing**  
 By  
 MA Consulting & Engineering MAC&E, LLC.  
 Third Party Design Approval Agency (DAAA)  
 Certificate Number: DPE1570323  
These plans have been approved pursuant to the provisions of the State of California Health and Safety Code, Division 11, Part and California Code of Regulations, Title 24, Chapter 9, Subchapter 1.  
 Approval herein does not constitute or approve any variation or deviation from State laws or valid local ordinances nor is applicable to enforcement of such over highways, county roads or city streets.  
**Generic Foundation Design Approved**  
 Occurrence: Roof LL, Wind, Imp, Seismic Ctr  
 Risk: 30 psf, S1S, C, E  
 Plan Approval No: **MAC-FBH 10153**  
 By: **Jayden J. Jelis**  
 Approval Date: **5/26/2025**  
 Expiration Date: **1/11/2028**

**PROFESSIONAL SEAL:**  
  
 JOSEPH A. DEFILIPPIS  
 C-28852  
 12/31/28  
 Expiration Date

DATE:	REV:	DESCRIPTION:	PROFESSIONAL SEAL:
02-19-25	1	CLIENT REVISIONS	I HEREBY CERTIFY THAT THESE DRAWINGS HAVE BEEN PREPARED UNDER MY DIRECT SUPERVISION AND THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE CODES AND ORDINANCES FOR PREFABRICATED DWELLING UNITS.
03-05-25	2	CLIENT REVISIONS	
04-18-25	3	CLIENT REVISIONS	

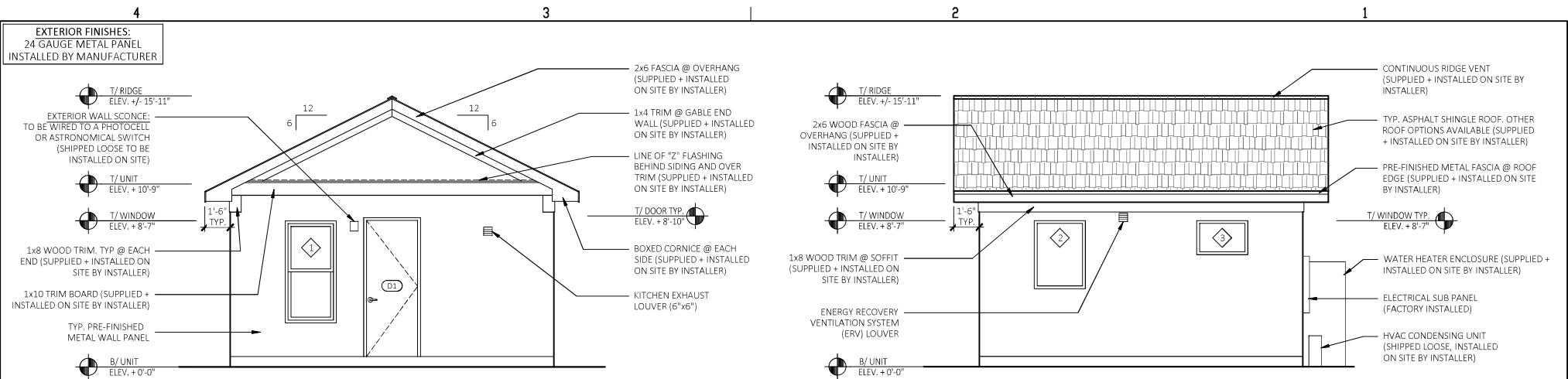
**sevan**  
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 Downers Grove, IL 60515  
 Contact Information:  
 info@sevensolutions.com  
 www.sevensolutions.com  
 INTEGRITY | RESPECT | TEAMWORK | EXCELLENCE | CHARITY

**SHEET MANAGEMENT**  
 SHEET FORMAT: ARCH C  
 SHEET SCALE: 1:3  
 CREATED BY: KD  
 RELEASE DATE: 7/12/2024

**MODEL:** BXB-00012  
**2 DOOR CASITA (CALIFORNIA)**  
**SHEET:** A2.1

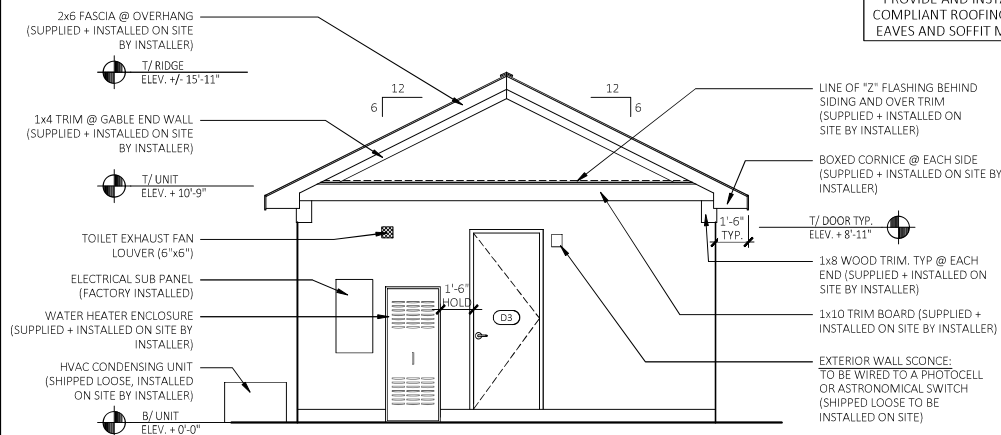
**BOXABL INC.**  
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 NORTH LAS VEGAS, NV 89115, USA  
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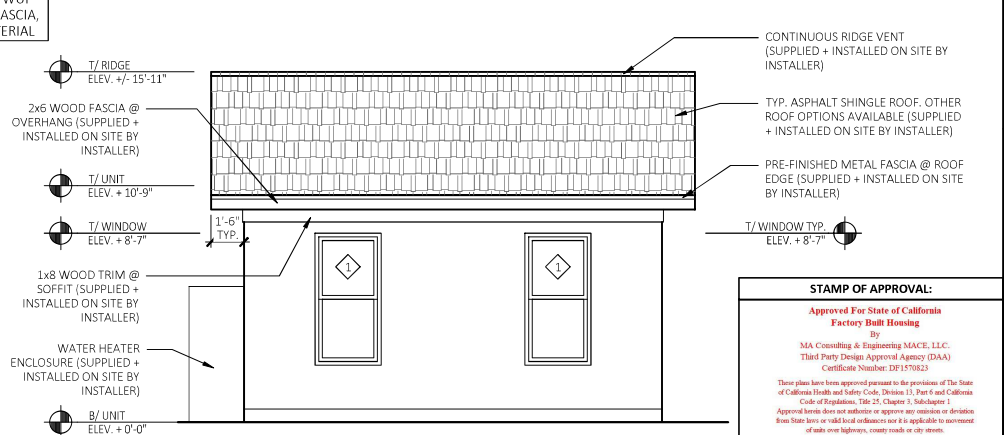


**1 FRONT ELEVATION**  
 SCALE: 1/4" = 1'-0"  
 OPENING PERCENTAGE = 20.56%

**2 RIGHT ELEVATION**  
 SCALE: 1/4" = 1'-0"  
 OPENING PERCENTAGE = 8.81%



**3 REAR ELEVATION**  
 SCALE: 1/4" = 1'-0"  
 OPENING PERCENTAGE = 11.75%



**4 LEFT ELEVATION**  
 SCALE: 1/4" = 1'-0"  
 OPENING PERCENTAGE = 17.62%

IF UNIT IS INSTALLED IN A WILDLIFE-URBAN INTERFACE AREA, INSTALLER MUST PROVIDE AND INSTALL WUI COMPLIANT ROOFING, FASCIA, EAVES AND SOFFIT MATERIAL

**STAMP OF APPROVAL:**  
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 By  
 MA Consulting & Engineering MACCE, LLC.  
 Third Party Design Approval Agency (DAAA)  
 Certificate Number: DPE1570623  
This plan has been approved pursuant to the provisions of the State of California Health and Safety Code, Division 15, Part and California Code of Regulations, Title 25, Chapter 9, Subchapter 1.  
 Approval herein does not constitute or approve any variation or deviation from State laws or valid local ordinances nor is applicable to enforcement of such over highways, county roads or city streets.  
**Generic Foundation Design Approved**  
 Occurrence: Roof 11, Wind 1mp, Seismic Ctr B3  
 30 psf S15 C E  
 Plan Approval No: **MAC-FBH 10153**  
 By: *Y. Johnson*  
 Approval Date: 5/26/2025  
 Expiration Date: 1/11/2028

**MAXIMUM AREA OF EXT. WALL OPENINGS AND FIRE SEPARATION DISTANCE / DEGREE OF OPENING PROTECTION**  
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5 TO LESS THAN 10	UNPROTECTED, NONSPRINKLERED	10%
10 TO LESS THAN 15	UNPROTECTED, NONSPRINKLERED	15%
15 TO LESS THAN 20	UNPROTECTED, NONSPRINKLERED	25%

**GABLE ROOF 6:12 SLOPE**  
 46.7 & 70 PSF SNOW LOADS.  
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**NOTE:**  
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**PROFESSIONAL SEAL:**  
 41625  
**JOSEPH A. DEFILIPPIS**  
 C-28852  
 10/31/23  
 Expiration Date  
 State of California  
*Joseph A. DeFilippis*

DATE:	REV:	DESCRIPTION:
02-19-25	1	CLIENT REVISIONS
03-05-25	2	CLIENT REVISIONS
04-18-25	3	CLIENT REVISIONS

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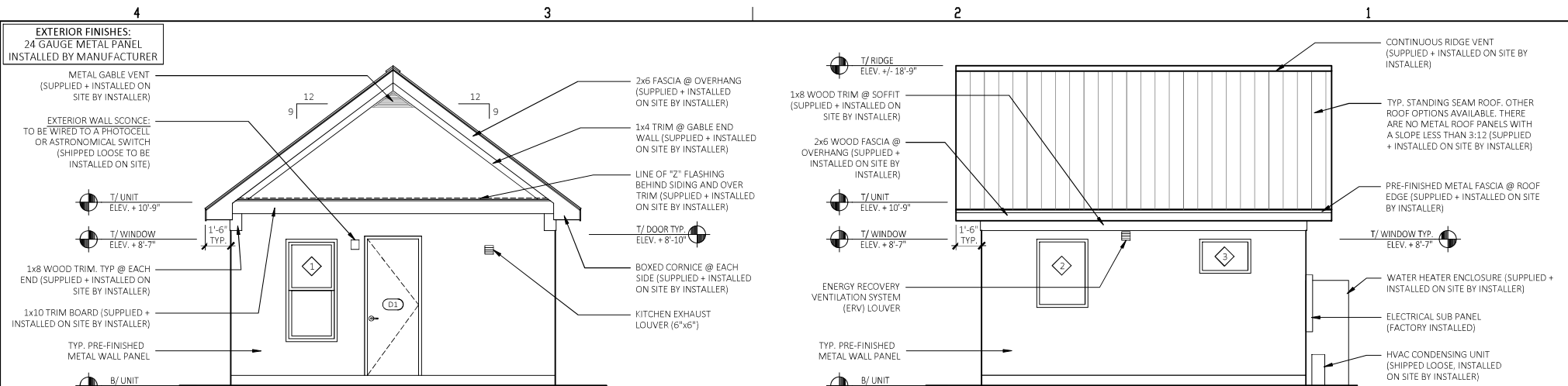
**SHEET MANAGEMENT**

SHEET FORMAT:	ARCH C
SHEET SCALE:	1:3
CREATED BY:	KD
RELEASE DATE:	7/12/2024

**MODEL:** BXB-00012  
**2 DOOR CASITA (CALIFORNIA)**  
**SHEET:** A2.2

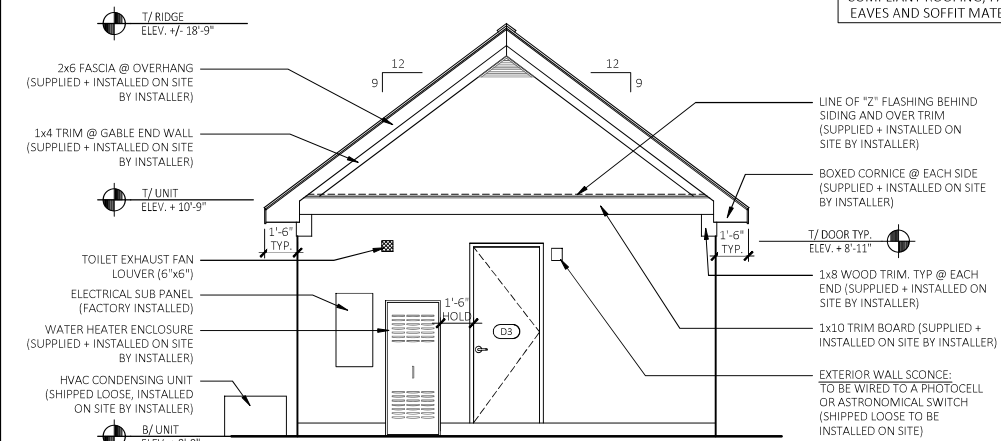
**BOXABL INC.**  
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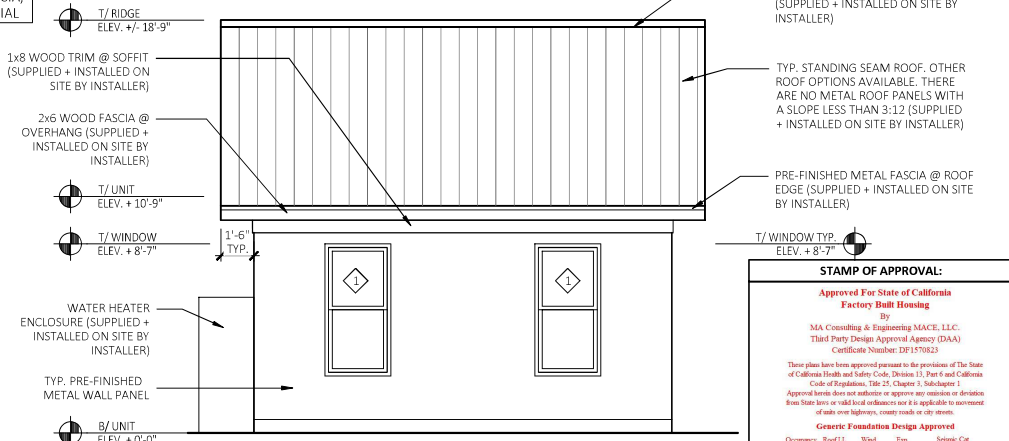


**1 FRONT ELEVATION**  
SCALE: 1/4" = 1'-0"  
OPENING PERCENTAGE = 20.56%

**2 RIGHT ELEVATION**  
SCALE: 1/4" = 1'-0"  
OPENING PERCENTAGE = 8.81%



**3 REAR ELEVATION**  
SCALE: 1/4" = 1'-0"  
OPENING PERCENTAGE = 11.75%



**4 LEFT ELEVATION**  
SCALE: 1/4" = 1'-0"  
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**STAMP OF APPROVAL:**  
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Factory Built Housing  
By  
MA Consulting & Engineering MACCE, LLC.  
Third Party Design Approval Agency (DAAA)  
Certificate Number: DPE1570823  
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Approval herein does not constitute or approve any variation or deviation from State laws or valid local ordinances nor is it applicable to enforcement of such over highways, county roads or city streets.  
Generic Foundation Design Approved  
Occupancy: Roof LI, Wind, E, Seismic C, E  
R3 30 psf 115 C  
Plan Approval No: **MAC-FBH 10153**  
By: **Joseph A. Defilippis**  
Approval Date: **5/26/2025**  
Expiration Date: **1/11/2028**

**MAXIMUM AREA OF EXT. WALL OPENINGS AND FIRE SEPARATION DISTANCE / DEGREE OF OPENING PROTECTION**  
BASED OFF IRC TABLE R302.1 (1) EXT. WALLS

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10 TO LESS THAN 15	UNPROTECTED, NONSPRINKLERED	15%
15 TO LESS THAN 20	UNPROTECTED, NONSPRINKLERED	25%

**GABLE ROOF 9:12 SLOPE**  
151.5 PSF SNOW LOADS  
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**PROFESSIONAL SEAL:**  
41625  
**JOSEPH A. DEFILIPPIS**  
C-28852  
10/31/23  
Expiration Date  
STATE OF CALIFORNIA  
*Joseph A. Defilippis*

DATE:	REV:	DESCRIPTION:	PROFESSIONAL SEAL:
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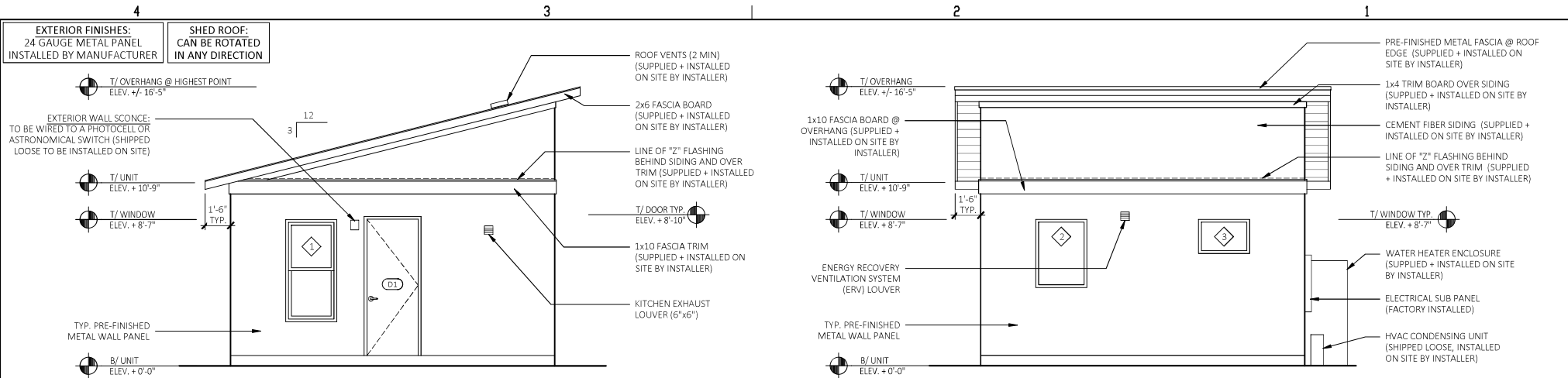
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SHEET MANAGEMENT
SHEET FORMAT: ARCH C
SHEET SCALE: 1:3
CREATED BY: KD
RELEASE DATE: 7/12/2024

**MODEL:** BXB-00012  
**2 DOOR CASITA (CALIFORNIA)**  
**SHEET:** A2.3

**BOXABL INC.**  
5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA  
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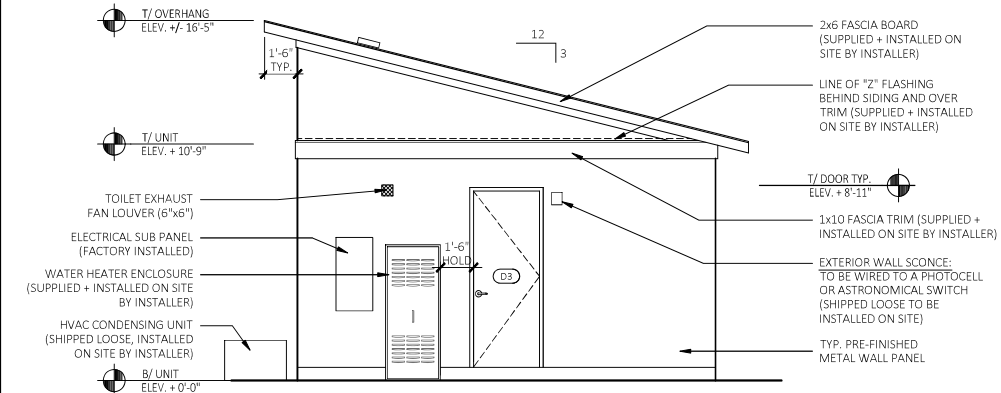




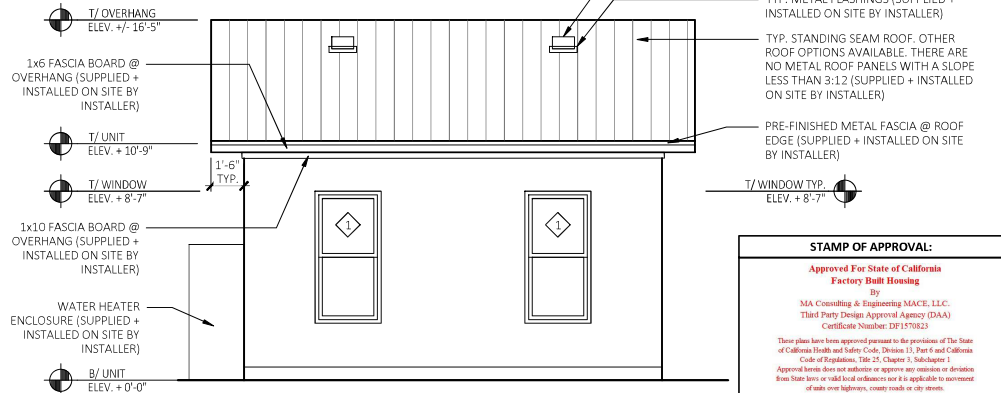
**1 FRONT ELEVATION**  
 SCALE: 1/4" = 1'-0"  
 OPENING PERCENTAGE = 20.56%

**2 RIGHT ELEVATION**  
 SCALE: 1/4" = 1'-0"  
 OPENING PERCENTAGE = 8.81%

IF UNIT IS INSTALLED IN A WILDLIFE-URBAN INTERFACE AREA, INSTALLER MUST PROVIDE AND INSTALL WUI COMPLIANT ROOFING, FASCIA, EAVES AND SOFFIT MATERIAL



**3 REAR ELEVATION**  
 SCALE: 1/4" = 1'-0"  
 OPENING PERCENTAGE = 11.75%



**4 LEFT ELEVATION**  
 SCALE: 1/4" = 1'-0"  
 OPENING PERCENTAGE = 17.62%

**STAMP OF APPROVAL:**  
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 By  
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**Generic Foundation Design Approved**  
 Occurrence: Roof LL, Wind, Imp, Seismic Ctr  
 R33 30 psf 315 C E  
 Plans Approval No: **MAC-FBH 10153**  
 By: *Joseph A. Defilippis*  
 Approval Date: 5/26/2025  
 Expiration Date: 1/11/2028

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 10/31/23  
 Expiration Date  
*Joseph A. Defilippis*

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10 TO LESS THAN 15	UNPROTECTED, NONSPRINKLERED	15%
15 TO LESS THAN 20	UNPROTECTED, NONSPRINKLERED	25%

**SHED ROOF 3:12 SLOPE**  
 46.7 & 70 PSF SNOW LOADS.  
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**sevan**  
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Contact Information:  
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**MODEL:** BXB-00012  
**2 DOOR CASITA (CALIFORNIA)**

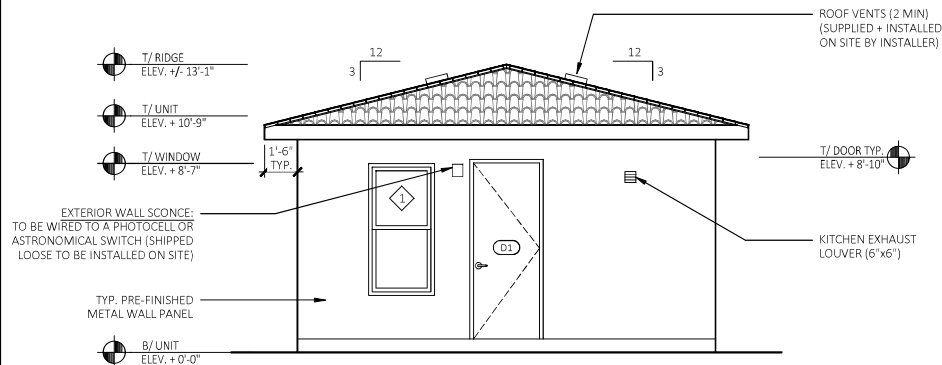
**SHEET:** A2.4

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 NORTH LAS VEGAS, NV 89115, USA  
 +1(702) 500-9000 HELLO@BOXABL.COM

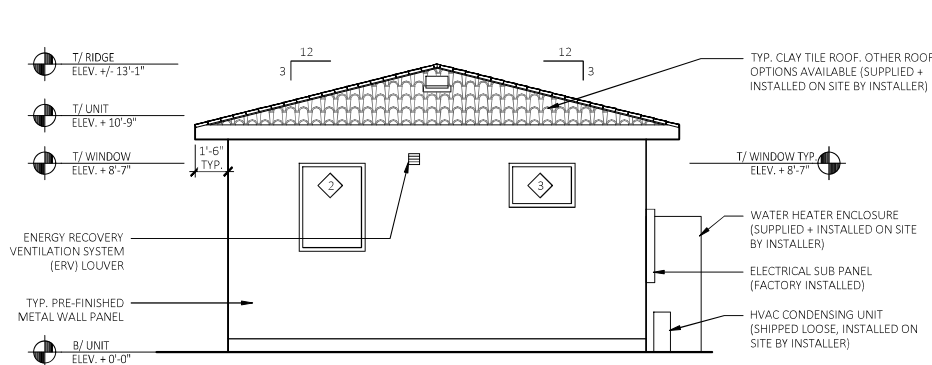
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**EXTERIOR FINISHES:**  
24 GAUGE METAL PANEL  
INSTALLED BY MANUFACTURER

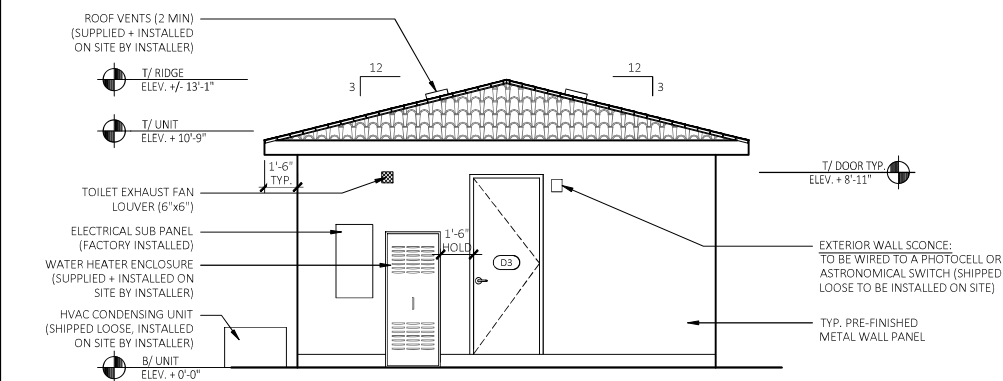


**1 FRONT ELEVATION**  
SCALE: 1/4" = 1'-0"  
OPENING PERCENTAGE = 20.56%

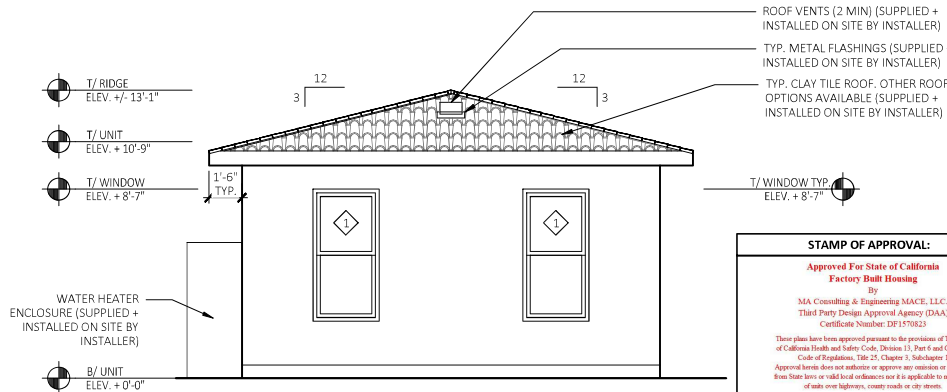


**2 RIGHT ELEVATION**  
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IF UNIT IS INSTALLED IN A WILDLIFE-URBAN INTERFACE AREA, INSTALLER MUST PROVIDE AND INSTALL WUI COMPLIANT ROOFING, FASCIA, EAVES AND SOFFIT MATERIAL



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**4 LEFT ELEVATION**  
SCALE: 1/4" = 1'-0"  
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10 TO LESS THAN 15	UNPROTECTED, NONSPRINKLERED	15%
15 TO LESS THAN 20	UNPROTECTED, NONSPRINKLERED	25%

**HIP ROOF 3:12 SLOPE**  
46.7 PSF SNOW LOADS

THESE ARE TRUSS CAPACITIES ONLY. ALLOWABLE ROOF SNOW LOADS BASED ON WALL STRENGTH ARE OFTEN LESS, DEPENDING ON WIND AND SEISMIC CONDITIONS. GROUND SNOW LOADS ARE ABOUT 43% HIGHER. SEE S1.1, S1.2 AND S1.3

**NOTE:**  
ALL INTAKES, GRILLES, + LOUVERS TO BE PROTECTED W/CORROSION RESISTANT SCREENS NOT LESS THAN 1/4" & NOT MORE THAN 1/2" IN SIZE (FACTORY INSTALLED)

**NOTE:**  
AS PART OF THE INSTALLATION PROCESS OUTLINED IN THE APPROVED INSTALLATION MANUAL, APPROVAL # MAC-FBH-10121, THE INSTALLATION CONTRACTOR SHALL FIELD INSTALL WEATHER BARRIER FLASHING TAPE TO ALL PANEL SEAMS. REFER TO MANUFACTURER'S INSTALLATION MANUAL FOR DETAILS AND RECOMMENDATIONS

**STAMP OF APPROVAL:**

Approved For State of California  
Factory Built Housing  
By  
MA Consulting & Engineering MACCE, LLC.  
Third Party Design Approval Agency (DAAA)  
Certificate Number: DPE1570823

These plans have been approved pursuant to the provisions of the State of California Health and Safety Code, Division 15, Part and California Code of Regulations, Title 25, Chapter 3, Subchapter 1.

Approval herein does not constitute or approve any violation or deviation from State laws or valid local ordinances nor is applicable to movement of units over highways, county roads or city streets.

**Generic Foundation Design Approved**

Occurrence: Roof LL, Wind, Imp, Seismic Ctr  
R33 30 psf S15 C E  
Plan Approval No: **MAC-FBH 10153**  
By: **Joseph A. Defilippis**  
Approval Date: **5/26/2025**  
Expiration Date: **1/11/2028**

**PROFESSIONAL SEAL:**

**JOSEPH A. DEFILIPPIS**  
C-28852  
10/31/23  
Expiry Date  
STATE OF CALIFORNIA

DATE:	REV:	DESCRIPTION:
02-19-25	1	CLIENT REVISIONS
03-05-25	2	CLIENT REVISIONS
04-18-25	3	CLIENT REVISIONS

**PROFESSIONAL SEAL:**

I HEREBY CERTIFY THAT THESE DRAWINGS HAVE BEEN PREPARED UNDER MY DIRECT SUPERVISION AND THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE CODES AND ORDINANCES FOR PREFABRICATED DWELLING UNITS.

**sevan**  
DESIGN SOLUTIONS, P.C.

Corporate Office: 3025 Highland Parkway | Suite 850  
Downers Grove, IL 60515

Contact Information: info@sevanolutions.com  
www.sevanolutions.com

INTEGRITY | RESPECT | TEAMWORK | EXCELLENCE | CHARITY

**SHEET MANAGEMENT**

SHEET FORMAT:	ARCH C
SHEET SCALE:	1:3
CREATED BY:	KD
RELEASE DATE:	7/12/2024

**MODEL:** BXB-00012  
**2 DOOR CASITA (CALIFORNIA)**

**SHEET:** A2.5

**BOXABL INC.**  
5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA

+1(702) 500-9000 HELLO@BOXABL.COM

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**TYPICAL ROOF COVERING (PITCHED ROOF):**

SLOPED ROOF TRUSS KIT & ROOF COVERING (ASPHALT SHINGLES, CLAY TILES, ETC.) TO BE PURCHASED SEPARATELY BY THE UNIT OWNER. ROOFS TO BE INSTALLED + INSPECTED ON SITE.

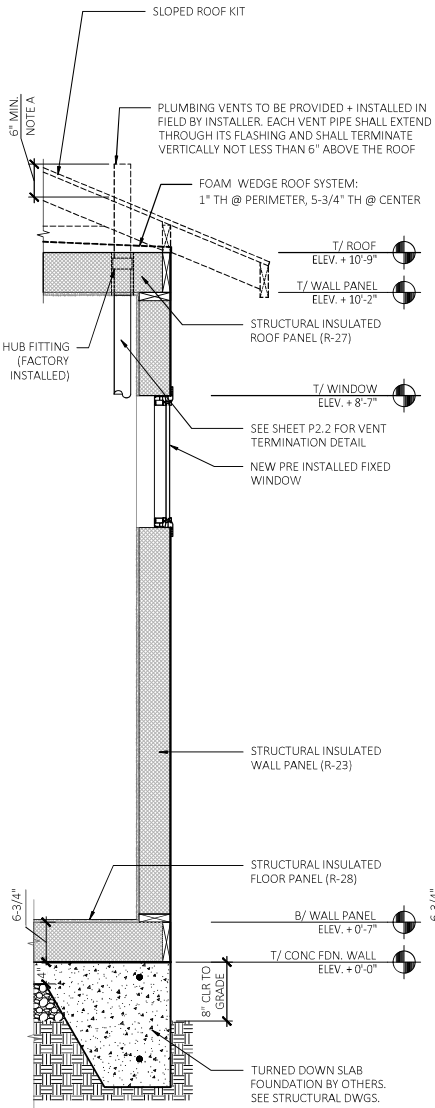
**TYPICAL ROOF COVERING (LOW SLOPE ROOF):**

GAF TPO FULLY ADHERED SINGLE PLY MEMBRANE OR APPROVED ADHERE EPDM ROOFING MEMBRANE WITH ALL REQUIRED FLASHINGS, AND ACCESSORIES AS NECESSARY FOR A COMPLETE AND WATERTIGHT INSTALLATION. BASE INSULATION: 1" TH @ ROOF EDGES, 5-3/4" TH @ CENTER (1/2: 12 SLOPE) (FOAM WEDGE ROOF). ROOFS TO BE INSTALLED + INSPECTED ON SITE.

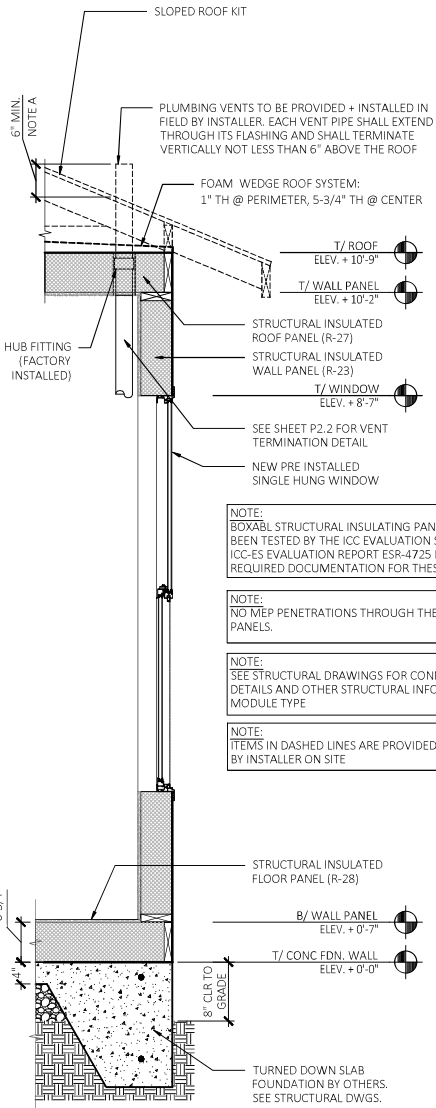
CLIMATE ZONES 1-3 + 5-7

**STANDARD WALL CONSTRUCTION TYPES**

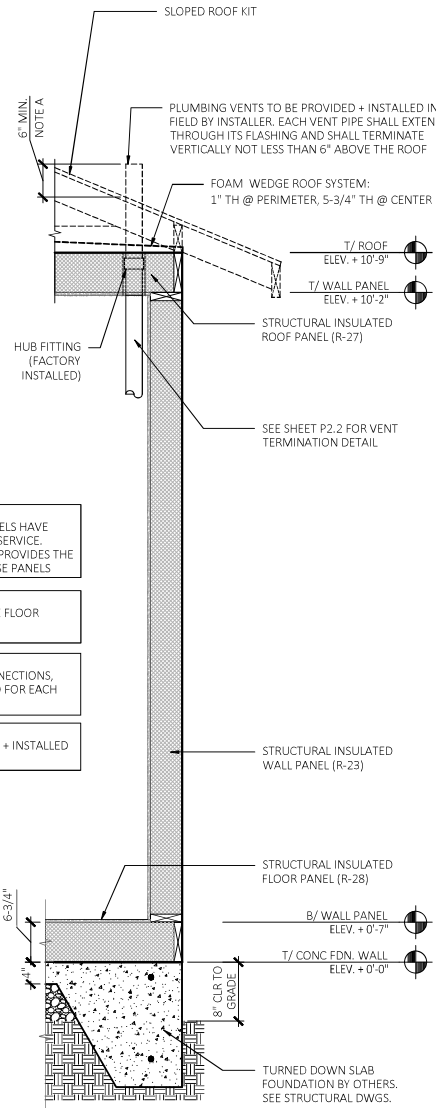
- TYPICAL STRUCTURAL INSULATED WALL PANEL
- 1/4" MGO BOARD ADHERED TO 5 3/4" EPS FOAM INSULATION W/ 24 GAUGE METAL PANEL AS OUTSIDE FINISH.
- TYPICAL STRUCTURAL INSULATED ROOF PANEL
- 1/4" MGO BOARD ADHERED TO 6 3/4" EPS FOAM INSULATION W/ TPO ROOFING MEMBRANE AS OUTSIDE FINISH
- TYPICAL STRUCTURAL INSULATED FLOOR PANEL
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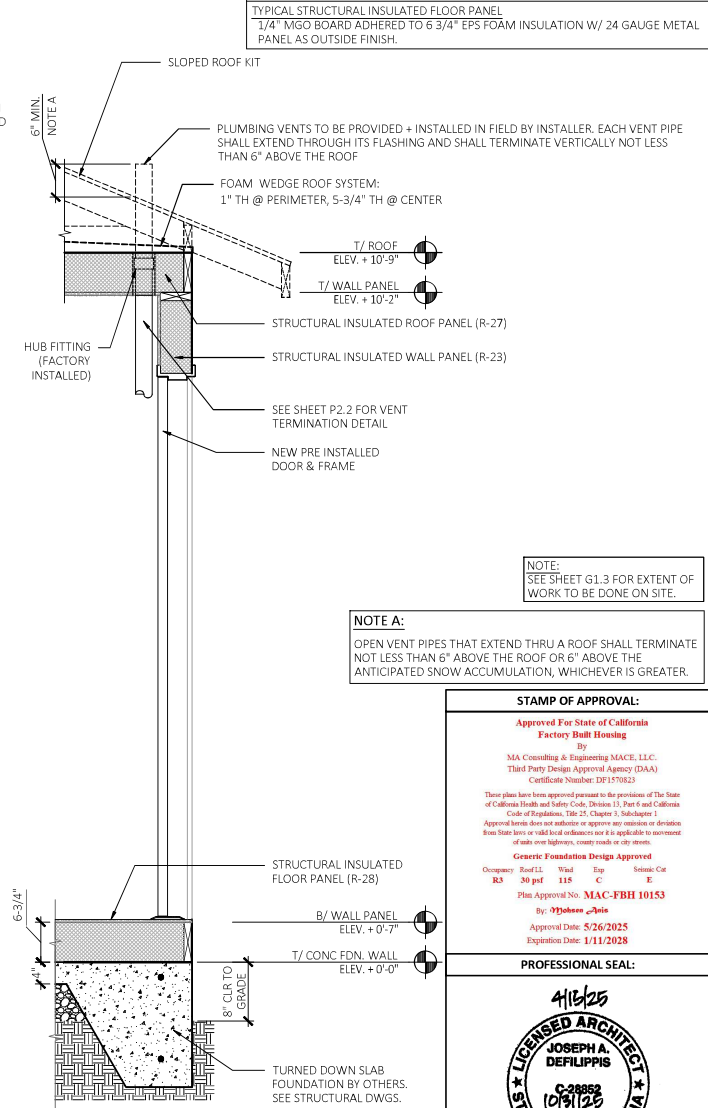
**1 WALL SECTION**  
A3.0 SCALE: 3/4" = 1'-0"



**2 WALL SECTION**  
A3.0 SCALE: 3/4" = 1'-0"



**3 WALL SECTION**  
A3.0 SCALE: 3/4" = 1'-0"



**4 WALL SECTION**  
A3.0 SCALE: 3/4" = 1'-0"

- NOTE: BOXABL STRUCTURAL INSULATING PANELS HAVE BEEN TESTED BY THE ICC EVALUATION SERVICE. ICC-ES EVALUATION REPORT ESR-4725 PROVIDES THE REQUIRED DOCUMENTATION FOR THESE PANELS
- NOTE: NO MEP PENETRATIONS THROUGH THE FLOOR PANELS.
- NOTE: SEE STRUCTURAL DRAWINGS FOR CONNECTIONS, DETAILS AND OTHER STRUCTURAL INFO FOR EACH MODULE TYPE
- NOTE: ITEMS IN DASHED LINES ARE PROVIDED + INSTALLED BY INSTALLER ON SITE

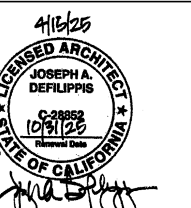
NOTE A:  
OPEN VENT PIPES THAT EXTEND THRU A ROOF SHALL TERMINATE NOT LESS THAN 6" ABOVE THE ROOF OR 6" ABOVE THE ANTICIPATED SNOW ACCUMULATION, WHICHEVER IS GREATER.

NOTE:  
SEE SHEET G1.3 FOR EXTENT OF WORK TO BE DONE ON SITE.

**STAMP OF APPROVAL:**

Approved For State of California  
**Factory Built Housing**  
By  
MA Consulting & Engineering MACCE, LLC.  
Third Party Design Approval Agency (DAAA)  
Certificate Number: DF1570823  
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Approval herein does not authorize or approve any variation or deviation from State laws or valid local ordinances nor is applicable to movement of units over highways, county roads or city streets.  
**Generic Foundation Design Approved**  
Occurrence: Roof LL, Wind, Imp, Seismic Ctr  
R3 20 pcf, 1.5 C, E  
Plan Approval No: **MAC-FBH 10153**  
By: **Yehoram J. Jalis**  
Approval Date: **5/26/2025**  
Expiration Date: **1/11/2028**

**PROFESSIONAL SEAL:**



DATE:	REV:	DESCRIPTION:	PROFESSIONAL SEAL:
02-19-25	1	CLIENT REVISIONS	I HEREBY CERTIFY THAT THESE DRAWINGS HAVE BEEN PREPARED UNDER MY DIRECT SUPERVISION AND THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE CODES AND ORDINANCES FOR PREFABRICATED DWELLING UNITS.
03-05-25	2	CLIENT REVISIONS	
04-18-25	3	CLIENT REVISIONS	

<b>sevan</b> DESIGN SOLUTIONS, P.C.	
Corporate Office: 3025 Highland Parkway   Suite 850 Downers Grove, IL 60515	Contact Information: info@sevanolutions.com www.sevanolutions.com
INTEGRITY   RESPECT   TEAMWORK   EXCELLENCE   CHARITY	

SHEET MANAGEMENT
SHEET FORMAT: ARCH C
SHEET SCALE: 1:3
CREATED BY: KD
RELEASE DATE: 7/12/2024

**MODEL: BXB-00012**  
**2 DOOR CASITA**  
**(CALIFORNIA)**

**SHEET: A3.0**

**BOXABL INC.**  
5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA  
+1(702) 500-9000 HELLO@BOXABL.COM

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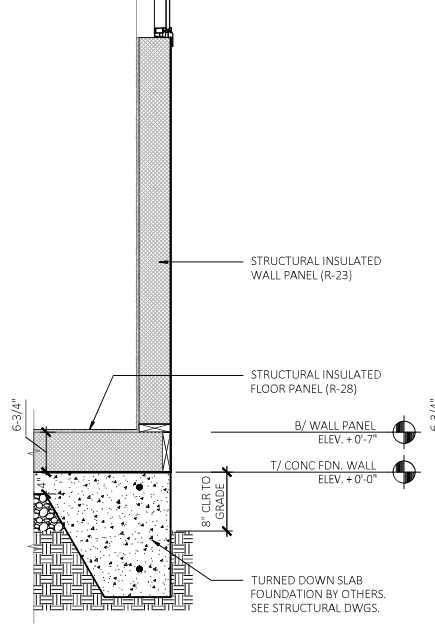
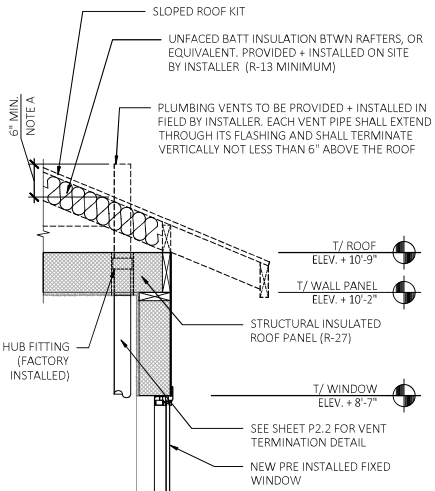
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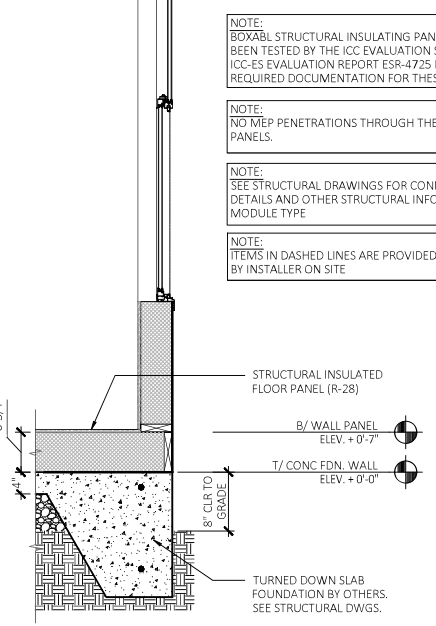
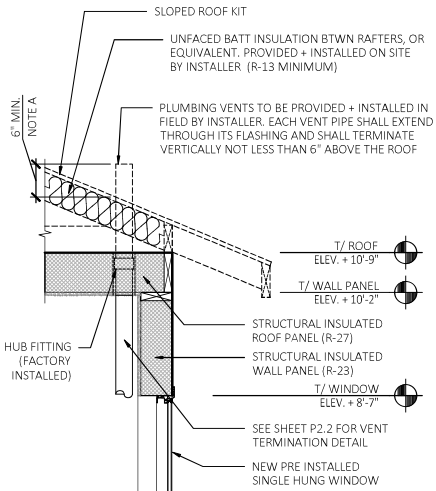
CLIMATE ZONES 4, 10 + 12-16

**STANDARD WALL CONSTRUCTION TYPES**

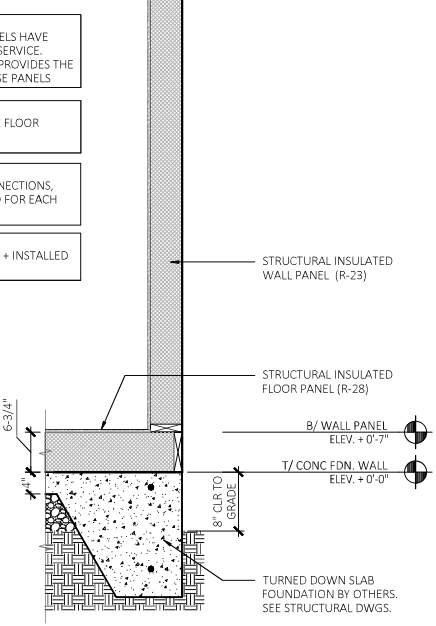
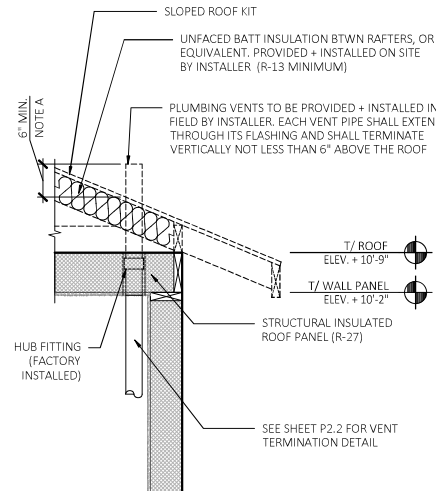
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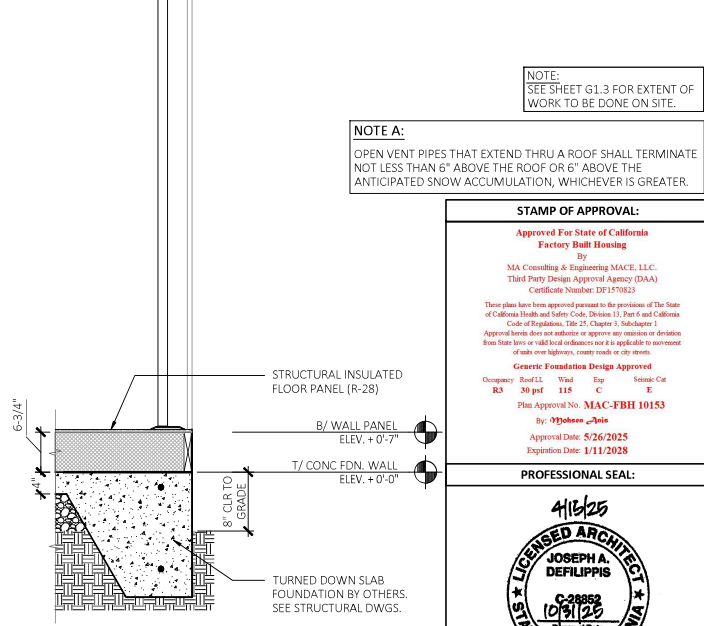
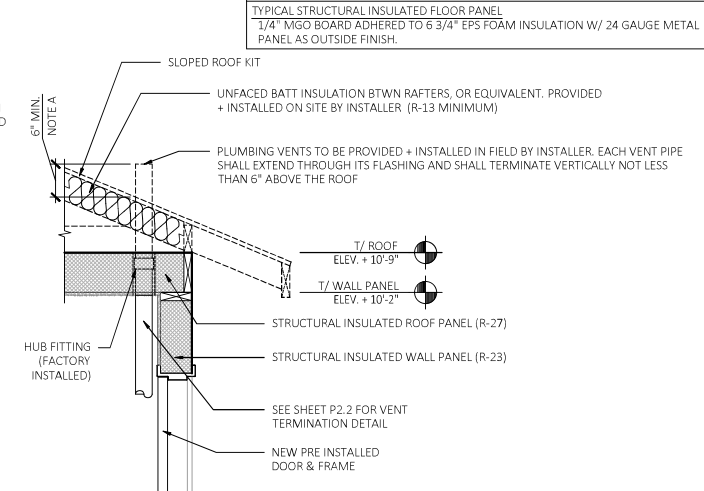
**1 WALL SECTION**  
A3.1 SCALE: 3/4" = 1'-0"



**2 WALL SECTION**  
A3.1 SCALE: 3/4" = 1'-0"



**3 WALL SECTION**  
A3.1 SCALE: 3/4" = 1'-0"



**4 WALL SECTION**  
A3.1 SCALE: 3/4" = 1'-0"

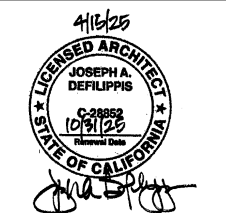
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- NOTE: SEE STRUCTURAL DRAWINGS FOR CONNECTIONS, DETAILS AND OTHER STRUCTURAL INFO FOR EACH MODULE TYPE
- NOTE: ITEMS IN DASHED LINES ARE PROVIDED + INSTALLED BY INSTALLER ON SITE

**NOTE A:**  
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Approved For State of California  
**Factory Built Housing**  
By  
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Certificate Number: DF1570823  
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**Generic Foundation Design Approved**  
Occurrence: Roof LL, Wind, Imp, Seismic Cr  
R3 20 psf, 115 C, E  
Plan Approval No: **MAC-FBH 10153**  
By: **Jayden J. Jelis**  
Approval Date: **5/26/2025**  
Expiration Date: **1/11/2028**

**PROFESSIONAL SEAL:**



DATE:	REV:	DESCRIPTION:
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03-05-25	2	CLIENT REVISIONS
04-18-25	3	CLIENT REVISIONS

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Contact Information: info@sevanolutions.com www.sevanolutions.com

INTEGRITY | RESPECT | TEAMWORK | EXCELLENCE | CHARITY

**MODEL:** BXB-00012  
**2 DOOR CASITA (CALIFORNIA)**

**SHEET:** A3.1

**BOXABL INC.**  
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NORTH LAS VEGAS, NV 89115, USA  
+1(702) 500-9000 HELLO@BOXABL.COM

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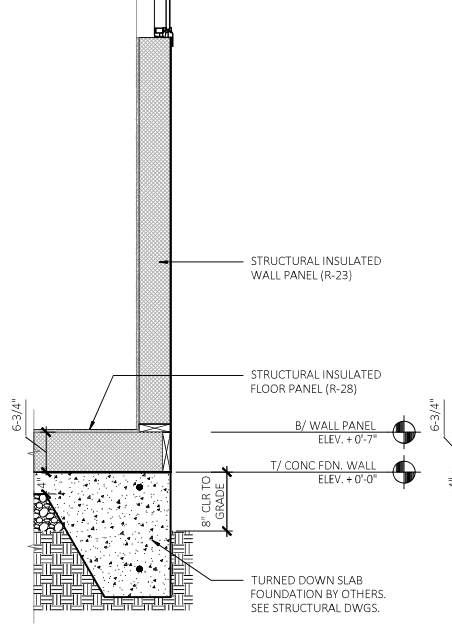
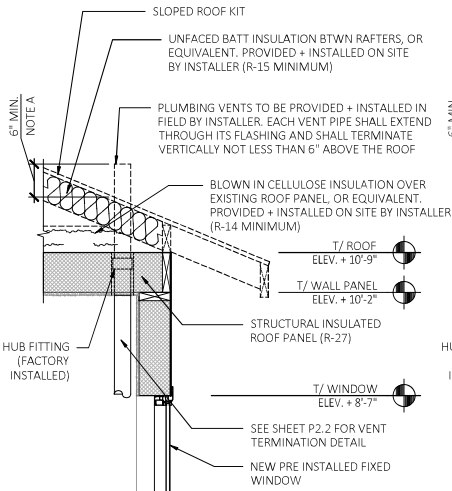
4  
**TYPICAL ROOF COVERING (PITCHED ROOF):**

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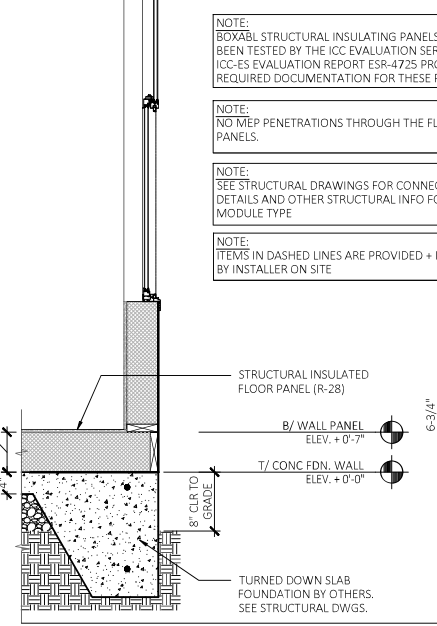
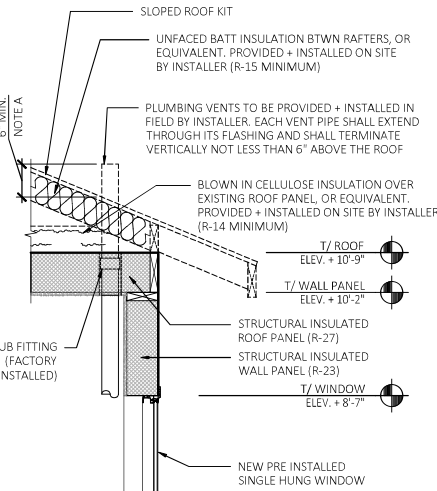
CLIMATE ZONES 8-9 + 11

1  
**STANDARD WALL CONSTRUCTION TYPES**

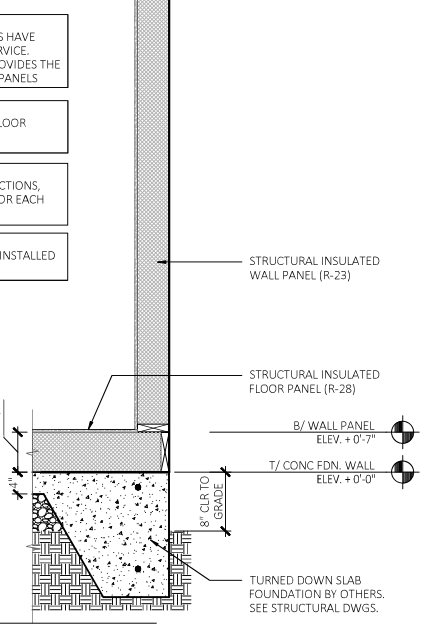
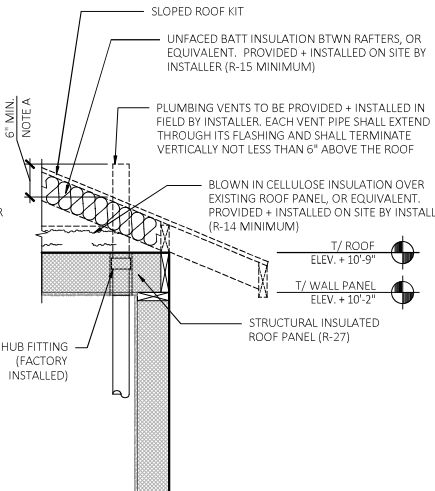
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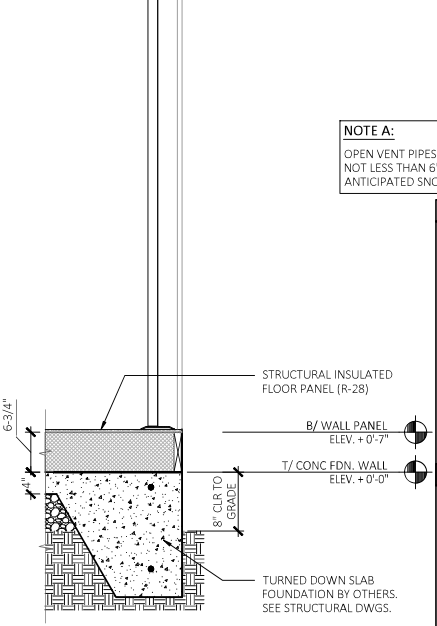
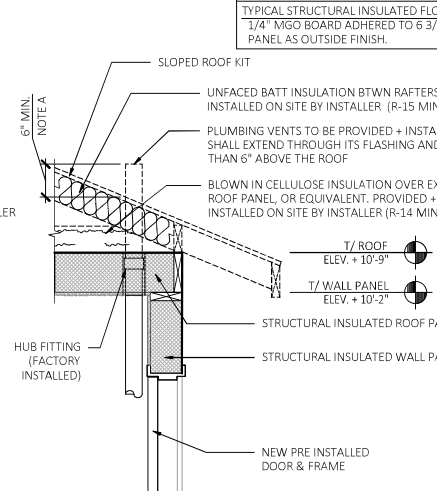
1 WALL SECTION  
A3.2 SCALE: 3/4" = 1'-0"



2 WALL SECTION  
A3.2 SCALE: 3/4" = 1'-0"



3 WALL SECTION  
A3.2 SCALE: 3/4" = 1'-0"



4 WALL SECTION  
A3.2 SCALE: 3/4" = 1'-0"

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NOTE: NO ME/P PENETRATIONS THROUGH THE FLOOR PANELS.

NOTE: SEE STRUCTURAL DRAWINGS FOR CONNECTIONS, DETAILS AND OTHER STRUCTURAL INFO FOR EACH MODULE TYPE

NOTE: ITEMS IN DASHED LINES ARE PROVIDED + INSTALLED BY INSTALLER ON SITE

NOTE: SEE SHEET G1.3 FOR EXTENT OF WORK TO BE DONE ON SITE.

NOTE A:  
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Approved For State of California

Factory Built Housing

By

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Third Party Design Approval Agency (DAAA)

Certificate Number: DF1570823

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Generic Foundation Design Approved

Occurrence: Roof LL, Wind, Eqp, Seismic Ctr

R3 30 psf 115 C E

Plan Approval No: MAC-FBH 10153

By: Y. Yeh

Approval Date: 5/26/2025

Expiration Date: 1/11/2028

**PROFESSIONAL SEAL:**



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03-05-25	2	CLIENT REVISIONS	
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Downers Grove, IL 60515

Contact Information:  
Info@sevanolutions.com  
www.sevanolutions.com

INTEGRITY | RESPECT | TEAMWORK | EXCELLENCE | CHARITY

**SHEET MANAGEMENT**

SHEET FORMAT: ARCH C  
SHEET SCALE: 1:3  
CREATED BY: KD  
RELEASE DATE: 7/12/2024

**MODEL: BXB-00012  
2 DOOR CASITA  
(CALIFORNIA)**

**SHEET: A3.2**

**BOXABL INC.**  
5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA  
+1(702) 500-9000 HELLO@BOXABL.COM

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**GENERAL**

- ALL WORK SHALL BE IN ACCORDANCE WITH ALL AUTHORITIES HAVING JURISDICTION AND SUBJECT TO INSPECTION.
- HOOK-UP CHARGES, PERMITS AND ALL OTHER EXPENSES RELATED TO A COMPLETE AND FUNCTIONING PLUMBING SYSTEM ARE INCLUDED AS PART OF THE PLUMBING WORK.
- ALL AUTHORITIES HAVING JURISDICTION SHALL BE NOTIFIED AT LEAST THREE WORKING DAYS PRIOR TO COMMENCEMENT OF WORK.
- THE WORK INCLUDED PROVIDING THE PLUMBING SYSTEM AND PROVIDING NEW MATERIALS, FITTINGS AND ACCESSORIES NECESSARY FOR A COMPLETE FUNCTIONING PLUMBING SYSTEM.
- THE INTENT OF THE DRAWINGS IS TO INDICATE THE GENERAL EXTENT OF WORK REQUIRED FOR THE PROJECT. THE DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, FIXTURE AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. REFER TO MANUFACTURER'S STANDARD ROUGH-IN DRAWINGS FOR PLUMBING FIXTURES FOR EXACT LOCATIONS.

**BASIC MATERIALS AND METHODS**

- MATERIALS SHALL BEAR UNDERWRITER LABEL WHERE SUCH STANDARDS HAVE BEEN ESTABLISHED AND LISTED BY UNDERWRITER LABORATORIES. INC. MATERIALS, EQUIPMENT AND APPLIANCES SHALL CONFORM TO THE LATEST STANDARDS OF:
  - ANSI - AMERICAN NATIONAL STANDARDS INSTITUTE
  - ASHRAE - AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS
  - ASME - AMERICAN SOCIETY OF MECHANICAL ENGINEERS
  - ASTM - AMERICAN SOCIETY FOR TESTING ENGINEERS
  - NEMA - NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION

**COORDINATION**

- COORDINATE WITH THE WORK OF OTHER TRADES.
- REFER TO ARCHITECTURAL DRAWINGS OR CONSULT ARCHITECT FOR EXACT LOCATION OF FIXTURES, EQUIPMENT, ETC., AND FINAL FINISHED ELEVATIONS PRIOR TO ANY INSTALLATION WORK.
- COORDINATE WITH GENERAL CONTRACTOR WHO SHALL CONSULT WITH THE OWNER FOR ALLOWABLE DAYS THAT WORK CAN BE PERFORMED AND TO SCHEDULE SYSTEM SHUT DOWNS AS REQUIRED FOR RELOCATION OF RISERS, ETC.

**INSTALLATION - GENERAL**

- LISTED AND APPROVED THROUGH PENETRATION SYSTEM SHALL BE USED ON ALL PLUMBING PENETRATIONS OF FIRE RATED ASSEMBLIES.
- EXPOSED PIPING IN FINISHED AREA SHALL BE WITH CHROME PLATED ESCUTCHEON AT PIPE ENTRY TO FINISHED AREA.
- ALL PIPING SHALL BE CONCEALED IN CABINETS AND FIXED FURNISHINGS UNLESS OTHERWISE INDICATED.
- CUT AND PATCH EXISTING FLOOR, WALL OR CEILING CONSTRUCTION AS REQUIRED FOR THE INSTALLATION WORK.
- SLEEVE OR CORE-DRILL FLOOR SLABS, WALLS, ETC., AS REQUIRED FOR PIPING AND FIRE STOP OPENING AROUND PIPE. VERIFY LOCATION OF STRUCTURAL BEAMS, JOIST, ETC. BEFORE DRILLING.
- WHEREVER FOUNDATION WALLS, OUTSIDE WALLS, ROOF, ETC. ARE PENETRATED FOR INSTALLATION OF SYSTEMS, THEY SHALL BE PATCHED TO MATCH EXISTING CONSTRUCTION AND SEALED WEATHER TIGHT. WORK SHALL BE PERFORMED BY CRAFTSMAN SKILLED IN THEIR RESPECTIVE TRADES.
- ALL PIPING SHALL BE RUN PARALLEL TO BUILDING LINES AND SUPPORTED AND ANCHORED AS REQUIRED TO FACILITATE EXPANSION AND CONTRACTION. ALL PIPING SHALL BE CONCEALED EXCEPT IN UNFINISHED SPACES. INSTALL AS REQUIRED TO MEET ALL CONSTRUCTION CONDITIONS AND TO ALLOW FOR INSTALLATION OF OTHER WORK INCLUDING DUCTS AND ELECTRICAL CONDUIT. AT ALL CONNECTIONS BETWEEN FERROUS PIPING AND NONFERROUS PIPING, PROVIDE AN ISOLATING DIELECTRIC UNION.
- PROVIDE ALL FITTINGS, ACCESSORIES, OFFSETS AND MATERIALS NECESSARY TO FACILITATE THE PLUMBING SYSTEMS FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT INDICATED.
- PIPING ROUTED IN EXTERIOR WALLS SHALL BE ROUTED ON THE INTERIOR SIDE OF BUILDING WALL INSULATION.
- ACCESS PANELS SHALL BE PROVIDED WHERE CONCEALED CONTROL DEVICES, VALVES, CLEANOUTS, ETC. ARE CONCEALED WITHIN CEILINGS AND WALLS. WHERE ACCESS FOR ADJUSTMENT AND MAINTENANCE IS POSSIBLE THRU LAY-IN SUSPENDED CEILINGS, ACCESS PANELS ARE NOT REQUIRED.

- THOROUGHLY CLEAN ITEMS BEFORE INSTALLATION. CAP PIPE OPENINGS TO EXCLUDE DIRT UNTIL FIXTURES ARE INSTALLED AND FINAL CONNECTIONS HAVE BEEN MADE. SET FIXTURES LEVEL AND IN PROPER ALIGNMENT. INSTALL SUPPLIES IN PROPER ALIGNMENT WITH FIXTURES. INSTALL SILICONE SEALANT BETWEEN FIXTURES AND ADJACENT MATERIAL FOR SANITARY JOINT.

**DOMESTIC WATER PIPING**

- PROVIDE PRESSURE REDUCING VALVE ON PLUMBING SYSTEMS WHERE THE INCOMING WATER SERVICE PRESSURE IS IN EXCESS OF 80 PSI.
- HOT AND COLD WATER PIPING SHALL BE PEX TUBING. PROVIDE WATER HAMMER ARRESTORS PER DRAWINGS.
- PROVIDE ISOLATION VALVES FOR EACH BRANCH OFF MAIN SUPPLY.
- SHUT-OFF VALVES WITH UNIONS SHALL BE PROVIDED FOR SERVICE TO EACH PLUMBING FIXTURE OR OTHER EQUIPMENT ITEM TO FACILITATE ISOLATION FOR REPAIR OR REPLACEMENT.
- VALVE LOCATION TAGS REQUIRED ON ALL SHUT-OFFS AND LOCATION CHART REQUIRED.
- THE DOMESTIC WATER SYSTEM SHALL BE FLUSHED, PRESSURE TESTED AND PURIFIED. TEST WATER UNDER 80-100 PSIG HYDROSTATIC PRESSURE FOR 15 MINUTES MINIMUM. WHEN TESTING INDICATES MATERIALS OR WORKMANSHIP IS DEFICIENT, REPLACE OR REPAIR AS REQUIRED, AND REPEAT UNTIL STANDARDS ARE ACHIEVED. ALL PIPING SYSTEMS SHALL BE SUBJECTED TO A DISINFECTION PROCEDURE PER THE RULES AND REGULATIONS OF THE LOCAL AUTHORITIES.
- HOT WATER PIPING SHALL BE INSULATED AND HAVE A MINIMUM WALL THICKNESS OF NOT LESS THAN THE DIAMETER OF THE PIPE PER 2022 CPC 609.12.2.
- HEAT PUMP WATER HEATER WATER PIPING CONNECTIONS ARE ROUTED TO THE EXTERIOR FROM THE FACTORY. CONNECT TO WATER HEATER ON-SITE WITH EXTERIOR RATED PIPING.

**SANITARY SEWER, STORM SEWER, AND VENT PIPING**

- ALL OPENINGS IN DRAINAGE AND/OR VENT SYSTEMS AS A RESULT OF DEMOLITION OR INSTALLATION ROUGH-IN SHALL BE PROTECTED WITH A TEST PLUG THAT IS SECURELY LOCKED IN PLACE UNTIL FINAL FINISHED CONNECTIONS ARE INSTALLED.
- PROVIDE A COMPLETE SYSTEM OF PVC VENT PIPING.
- CONDENSATE AND INDIRECT DRAIN PIPING SHALL BE TYPE PVC OR CLEAR VINYL TUBING UP TO 1" ID.
- DRAINAGE PIPING UNDERGROUND AND OUTSIDE THE BUILDING SHALL BE PVC PIPE AND FITTINGS. (ALTERNATE MATERIALS MAY BE ALLOWED IF APPROVED BY LOCAL CODE AUTHORITIES.)
- DRAINAGE PIPING INSIDE THE BUILDING SHALL BE PVC PIPE AND FITTINGS WITH SCHEDULE 40 PVC VENTS TO A VENT THRU THE ROOF.
- PROVIDE CLEANOUTS AT THE END OF EACH HORIZONTAL RUN, AND AT THE BASE OF ALL VERTICAL WASTE AND DRAIN PIPES. CLEANOUTS SHALL BE OF THE SAME SIZE AS THE PIPES THEY SERVE. FIELD VERIFY LOCATION OF ALL EXISTING CLEANOUTS AND ADJUST TO NEW FINISHED FLOOR ELEVATIONS AND PROVIDE ACCESS PANELS FOR ALL WALLS AND CEILINGS.
- ALL DRAINAGE PIPING SHALL BE UNIFORMLY PITCHED, 1/4" PER FOOT UNLESS OTHERWISE REQUIRED BY EXISTING CONDITIONS. MINIMUM SLOPE SHALL BE PER CODE.
- ALL FLOOR DRAINS SHALL BE CONNECTED TO THE SANITARY SEWER SYSTEM.
- THE DRAINAGE SYSTEMS SHALL BE FLUSHED AND PRESSURE TESTED.
- CONNECT CONDENSATE, T&P, AND PAN DRAIN PIPING FOR WATER HEATER ON-SITE WITH EXTERIOR RATED MATERIAL.

**SUBSTITUTIONS**

- THE NAMING OF MANUFACTURER'S IN THE SPECIFICATIONS SHALL NOT BE CONSTRUED AS ELIMINATING THE MATERIALS, PRODUCTS OR SERVICES OF OTHER MANUFACTURERS AND SUPPLIERS HAVING EQUIVALENT ITEMS. ANY SUBSTITUTED ITEMS MUST BE EQUAL TO THOSE SPECIFIED, PROVIDE COST SAVINGS AND BE AVAILABLE TO MEET THE CONSTRUCTION SCHEDULE.

**PLUMBING SYMBOLS**

— CWS —	COLD WATER SUPPLY PIPING
— HWS —	HOT WATER SUPPLY PIPING
— SAN —	SANITARY WASTE PIPING
— V —	SANITARY VENT PIPING
— — — — —	COLD WATER SUPPLY PIPING
— — — — —	HOT WATER SUPPLY PIPING
— — — — —	SANITARY VENT PIPING
BFP	BACKFLOW PREVENTER
CO	CLEANOUT
CP	CHROME PLATED
DN	DOWN
DW	DISHWASHER
ET	EXPANSION TANK
FD	FLOOR DRAIN
GALV	GALVANIZED
INV. EL.	INVERT ELEVATION
IM	ICE MAKER
LAV	LAVATORY
NC	NEW CONNECTION
PRV	PRESSURE REDUCING VALVE
PSIG	POUNDS PER SQUARE INCH
S	SANITARY
SHR	SHOWER
SK	SINK
TMV	THERMOSTATIC MIXING VALVE
V	VENT
VTR	VENT THRU ROOF
W	WASTE
WC	WATER CLOSET
WH	WATER HEATER
	LINE SIZE BALL GATE VALVE
	LINE SIZE BALANCING VALVE
	LINE SIZE BALL VALVE (2" & SMALLER) OR LINE SIZE BUTTERFLY VALVE (2-1/2" & LARGER)
	LINE SIZE CHECK VALVE
	LINE SIZE UNION
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	REDUCER
	THERMOMETER

**STAMP OF APPROVAL:**

Approved For State of California  
**Factory Built Housing**  
 By  
 MA Consulting & Engineering MACCE, LLC.  
 Third Party Design Approval Agency (DAA)  
 Certificate Number: DF1570823  
 These plans have been approved pursuant to the provisions of The State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 24, Chapter 15, Subchapter 1.  
 Approval herein does not authorize or approve any condition or deviation from State laws or valid local ordinances nor is it applicable to enforcement of units over lighters, county roads or city streets.  
 Generic Foundation Design Approval  
 Occupancy: Residential Wood Single-Family  
 Plan Approval No. **MAC-FBI 10153**  
 By: **Debrah Jolie**  
 Approval Date: **5/26/2025**  
 Expiration Date: **1/11/2028**

**PROFESSIONAL SEAL:**



**WCW**  
 Engineers, Inc.  
 755 Grand Drive  
 West Haven, Illinois 60591  
 Tel. 630.705.8500  
 Fax. 630.705.8518  
 www.WCWengineers.com

**PLUMBING NOTES, SYMBOLS & ABBREVIATIONS**

**MODEL:** BXB-00012  
**2 DOOR CASITA**  
**(CALIFORNIA)**

**BOXABL INC.**  
 5345 EAST NORTH BELT ROAD  
 NORTH LAS VEGAS, NV 89115, USA  
 +1(702) 500-9000 HELLO@BOXABL.COM

**SHEET: P1.0**

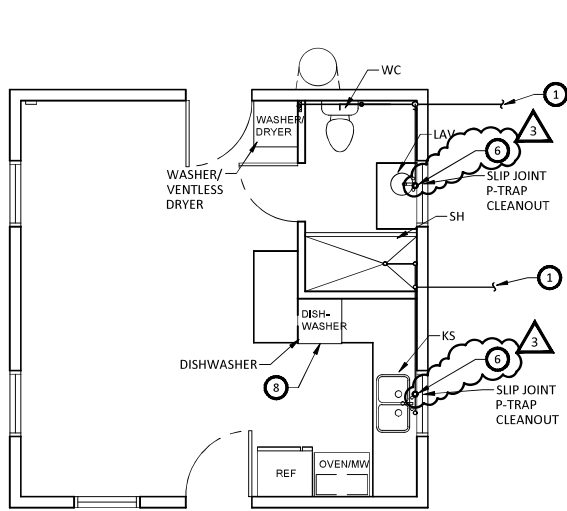


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03-05-25	2	CLIENT REVISIONS	
04-18-25	3	CLIENT REVISIONS	

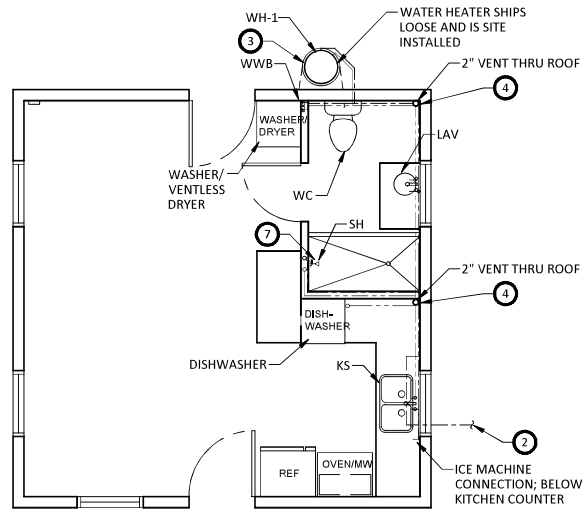
**sevan**  
 DESIGN SOLUTIONS, P.C.  
 Corporate Office: 3025 Highland Parkway | Suite 850  
 Downers Grove, IL 60515  
 Contact Information: info@sevansolutions.com  
 www.sevansolutions.com  
 INTEGRITY | RESPECT | TEAMWORK | EXCELLENCE | CHARITY

**SHEET MANAGEMENT**  
 SHEET FORMAT: ARCH C  
 SHEET SCALE: 1:3  
 CREATED BY: KD  
 RELEASE DATE: 7/12/2024

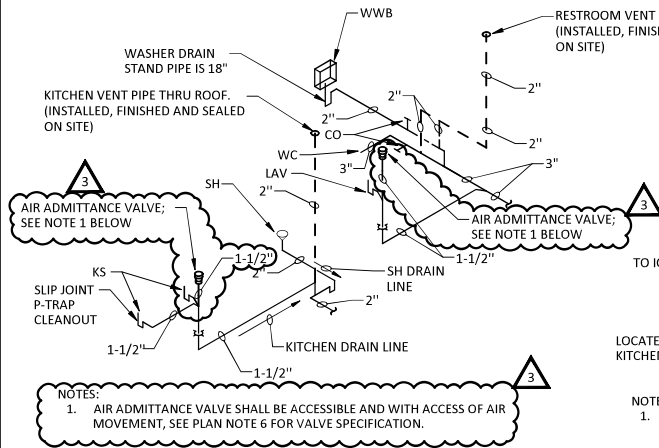
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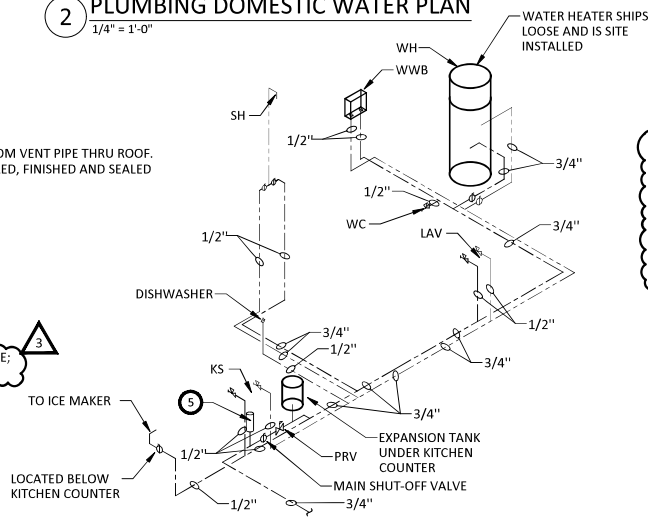
**1 PLUMBING SANITARY PLAN**  
1/4" = 1'-0"



**2 PLUMBING DOMESTIC WATER PLAN**  
1/4" = 1'-0"



**3 PLUMBING SANITARY ISOMETRIC**  
NOT TO SCALE



**4 PLUMBING DOMESTIC WATER ISOMETRIC**  
NOT TO SCALE

PLAN NOTES	
1	PROVIDE 2" & 3" SANITARY PIPING TO THE NEW BOXABL HOUSE. COORDINATE WITH CIVIL DRAWINGS THE EXACT LOCATION OF THE NEW SANITARY PIPING.
2	PROVIDE 3/4" DOMESTIC COLD WATER TO NEW BOXABL HOUSE. COORDINATE WITH CIVIL DRAWINGS THE EXACT LOCATION OF THE NEW DOMESTIC COLD WATER PIPING.
3	TANK WATER HEATER LOCATED IN A SHED, SEE ARCHITECTURAL DRAWINGS FOR SHED. PROVIDE SHUT-OFF VALVE IN BOTH HOT AND COLD WATER PIPING TO WATER HEATER
4	2" VENT THRU ROOF, SEE PIPING ISOMETRICS FOR ALL VENT PIPING. 2" COUPLING HUB AT EXTERIOR ROOF PANEL FOR ROOF VENT CONNECTION ON SITE. VENT SHALL BE 10' ABOVE BOTTOM OF FLOOR OF UNIT.
5	WHOLE HOUSE WATER HAMMER ARRESTOR MIFAB MODEL CL-A-NPB. WATER HAMMER ARRESTOR TO BE MANUFACTURED BY MIFAB OR AN APPROVED EQUIVALENT.
6	AIR ADMITTANCE VALVE FOR ENGINEERED VENT SYSTEM. GATEY SURE-VENT AIR ADMITTANCE VALVE, 1.5" x 2" PVC SCHEDULE 40 ADAPTER. VALVE SHALL BE RATED FOR 24 STACK DFU'S AND 160 BRANCH DFU'S. VALVE SHALL BE LISTED PER ANSI/ASSE 1050 AND 1051, IPC, AND IRC. SEE ICCESR-1664 FOR EVALUATION REPORT. SEE DRAINAGE FIXTURE UNIT CALCULATION TABLE ON P3.0.
7	CONTROL VALVES AND SHOWERHEADS SHALL BE LOCATED ON THE SIDEWALL OF SHOWER COMPARTMENTS OR OTHERWISE ARRANGED SO THAT THE SHOWERHEAD DOES NOT DISCHARGE DIRECTLY AT THE ENTRANCE TO THE COMPARTMENT SO THAT THE BATHER CAN ADJUST THE VALVES PRIOR TO STEPPING INTO THE SHOWER SPRAY.
8	EXTEND 5/8" HOSE FROM DISHWASHER TO PRE-INSTALLED AIR GAP DEVICE LOCATED IN THE KITCHEN SINK TAILPIECE ABOVE THE 'P' TRAP.

**NO PLUMBING PIPES/LINES SHALL RUN WITHIN THE WALL/FLOOR/ROOF PANELS.**

PLUMBING PLANS

**STAMP OF APPROVAL:**  
 Approval For State of California  
 Factory Built Housing  
 By  
 MA Consulting & Engineering MACE, LLC  
 Third Party Design Approval Agency (DAA)  
 Certificate Number: DF1570823  
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 Generic Foundation Design Approved  
 Occupancy: Residential Wood Eng. Seismic Ctr.  
 R3 30 psf 115 c  
 Plan Approval No. **MAC-FBH 10153**  
 By: **Joseph G. Thomas**  
 Approval Date: **5/26/2025**  
 Expiration Date: **1/11/2028**

**PROFESSIONAL SEAL:**  
  
**WCV** 750 Grand Drive, West Valley, Nevada 89119  
 Engineers, Inc. Tel: 432-7035-8000 Fax: 432-7035-8018 www.WCVengineers.com

DATE:	REV:	DESCRIPTION:	PROFESSIONAL SEAL:
02-19-25	1	CLIENT REVISIONS	I HEREBY CERTIFY THAT THESE DRAWINGS HAVE BEEN PREPARED UNDER MY DIRECT SUPERVISION AND THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE CODES AND ORDINANCES FOR PREFABRICATED DWELLING UNITS.
03-05-25	2	CLIENT REVISIONS	
04-18-25	3	CLIENT REVISIONS	

**sevan**  
 DESIGN SOLUTIONS, P.C.  
 Corporate Office: 3025 Highland Parkway | Suite 850  
 Downers Grove, IL 60515  
 Contact Information: info@sevan.com  
 www.sevan.com

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SHEET MANAGEMENT
SHEET FORMAT: ARCH C
SHEET SCALE: 1:3
CREATED BY: KD
RELEASE DATE: 7/12/2024

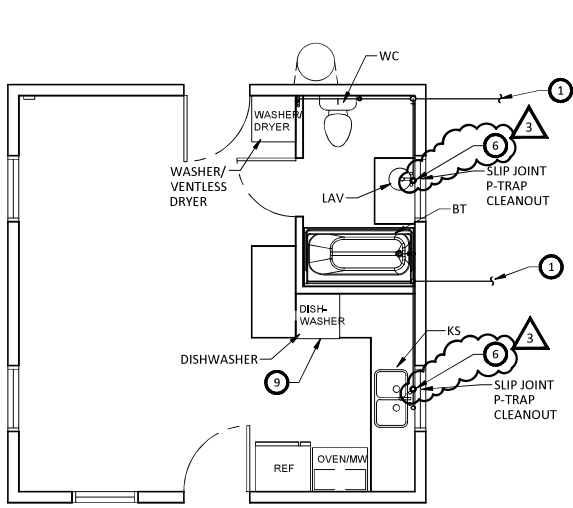
**MODEL:** BXB-00012  
**2 DOOR CASITA (CALIFORNIA)**

**SHEET:** P2.0

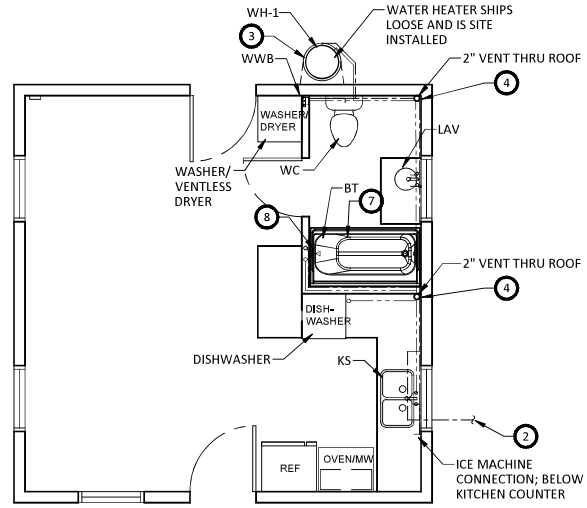
**BOXABL INC.**  
 5345 EAST NORTH BELT ROAD  
 NORTH LAS VEGAS, NV 89115, USA  
 (702) 500-9000 HELLO@BOXABL.COM

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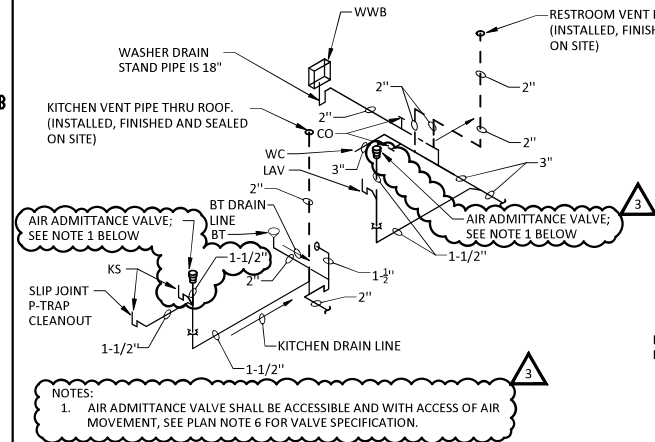




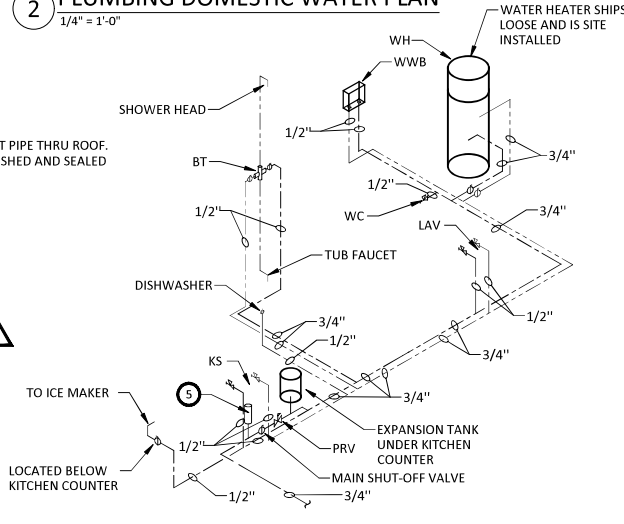
**1 PLUMBING SANITARY PLAN**  
1/4" = 1'-0"



**2 PLUMBING DOMESTIC WATER PLAN**  
1/4" = 1'-0"



**3 PLUMBING SANITARY ISOMETRIC**  
NOT TO SCALE



**4 PLUMBING DOMESTIC WATER ISOMETRIC**  
NOT TO SCALE

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7	PROVIDE BATH TUB, COORDINATE EXACT MODEL, COLOR AND SIZE WITH OWNER.
8	CONTROL VALVES AND SHOWERHEADS SHALL BE LOCATED ON THE SIDEWALL OF SHOWER COMPARTMENTS OR OTHERWISE ARRANGED SO THAT THE SHOWERHEAD DOES NOT DISCHARGE DIRECTLY AT THE ENTRANCE TO THE COMPARTMENT SO THAT THE BATHER CAN ADJUST THE VALVES PRIOR TO STEPPING INTO THE SHOWER SPRAY.
9	EXTEND 5/8" HOSE FROM DISHWASHER TO PRE-INSTALLED AIR GAP DEVICE LOCATED IN THE THE KITCHEN SINK TAILPIECE ABOVE THE 'P' TRAP.

**NO PLUMBING PIPES/LINES SHALL RUN WITHIN THE WALL/FLOOR/ROOF PANELS.**

**STAMP OF APPROVAL:**

Approved For State of California  
Factory Built Housing  
By  
MA Consulting & Engineering MACCE, LLC  
Third Party Design Approval Agency (DA)A  
Certificate Number: DF1570823

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Generic Foundation Design Approved  
Occupancy: Residential Wood Eng. Seismic Ctr.  
R3 30 psf 115 c  
Plan Approval No. **MAC-FBH 10153**  
By: **Joseph G. Thomas**  
Approval Date: **5/26/2025**  
Expiration Date: **1/11/2028**

**PROFESSIONAL SEAL:**

**JOSEPH G. THOMAS**  
LICENSED PROFESSIONAL ENGINEER  
M 31400  
Exp. 5/20/25  
MECHANICAL  
STATE OF CALIFORNIA

**WCW Engineers, Inc.**  
700 Grand Drive  
West Valley, Nevada 89119  
Tel. 432.915.8000  
Fax 432.915.8018  
www.WCWengineers.com

DATE:	REV:	DESCRIPTION:
02-19-25	1	CLIENT REVISIONS
03-05-25	2	CLIENT REVISIONS
04-18-25	3	CLIENT REVISIONS

**PROFESSIONAL SEAL:**

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**sevan**  
DESIGN SOLUTIONS, P.C.

Corporate Office: 3025 Highland Parkway | Suite 850 Downers Grove, IL 60515  
Contact Information: info@sevansolutions.com www.sevansolutions.com

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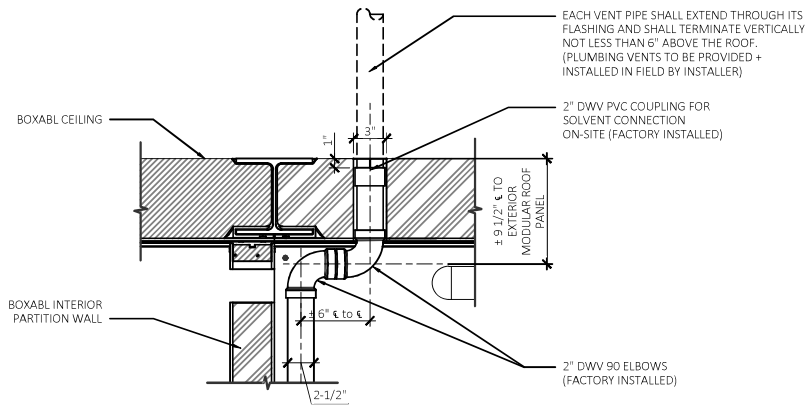
**MODEL:** BXB-00012  
**2 DOOR CASITA (CALIFORNIA)**

**SHEET:** P2.1

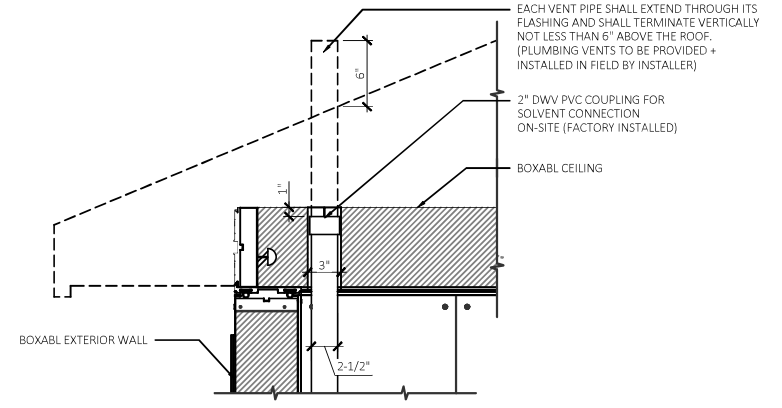
**BOXABL INC.**  
5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA  
+1(702) 500-9000 HELLO@BOXABL.COM

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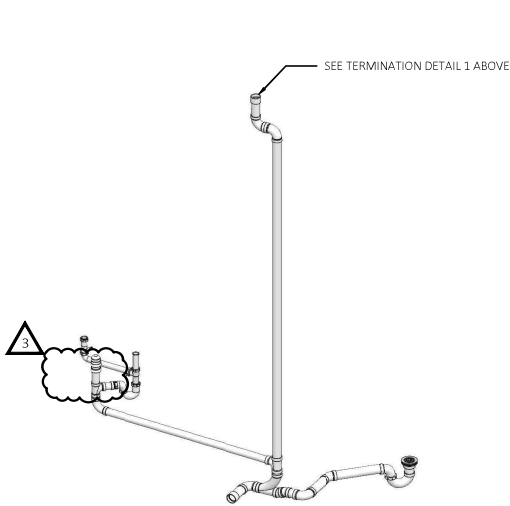




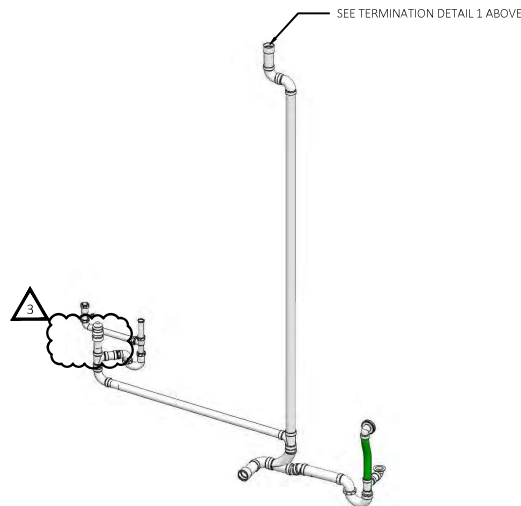
**1 KITCHEN VENT TERMINATION DETAIL**  
SCALE: 1-1/2"=1'-0"



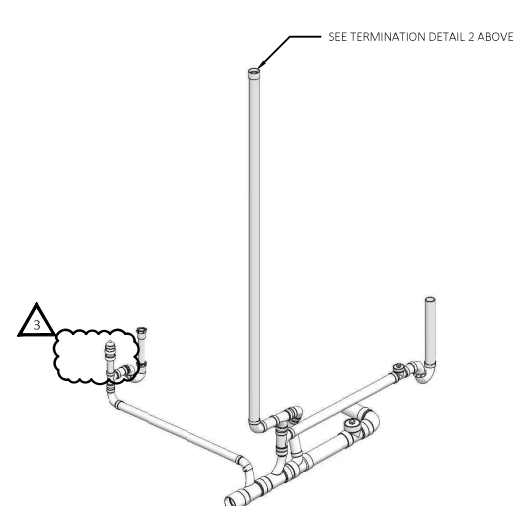
**2 BATHROOM VENT TERMINATION DETAIL**  
SCALE: 1-1/2"=1'-0"



**KITCHEN + SHOWER PIPING DIAGRAM**  
NOT TO SCALE



**KITCHEN + BATHTUB PIPING DIAGRAM**  
NOT TO SCALE



**BATHROOM PIPING DIAGRAM**  
NOT TO SCALE

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**Generic Foundation Design Approved**  
Occupancy: Roof/L: Wood: Exp: Seismic: Ctr:  
R2: 30 psf: 115: C: R:  
By: **Joseph G. Thomas**  
Plan Approval No. **MAC-FBH 10153**  
Approval Date: **5/26/2025**  
Expiration Date: **1/11/2028**

**PROFESSIONAL SEAL:**  
  
**WCW Engineers, Inc.**  
760 Owen Drive  
West Grove, Illinois 60191  
Tel: 630-595-8800  
Fax: 630-595-8818  
www.WCWengineers.com

**PLUMBING VENT PLANS**

DATE:	REV:	DESCRIPTION:
02-19-25	1	CLIENT REVISIONS
03-05-25	2	CLIENT REVISIONS
04-18-25	3	CLIENT REVISIONS

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**sevan**  
DESIGN SOLUTIONS, P.C.

Corporate Office: 3025 Highland Parkway | Suite 850  
Downers Grove, IL 60515

Contact Information: info@sevansolutions.com  
www.sevansolutions.com

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SHEET MANAGEMENT
SHEET FORMAT: ARCH C
SHEET SCALE: 1:3
CREATED BY: KD
RELEASE DATE: 7/12/2024

**MODEL:** BXB-00012  
2 DOOR CASITA  
(CALIFORNIA)

**SHEET:** P2.2

**BOXABL INC.**  
5345 EAST NORTH BELT ROAD  
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## FIXTURE SCHEDULES

FIXTURE	TYPE	MFG'R.	MODEL NO.	COLOR	FAUCET	TRAP	TRIM	SUPPLY FITTING	REMARKS
WC	WATER CLOSET	SANIFLO	083 & 005	WHITE	N/A	INTERGRAL P-TRAP	N/A	3/8"	1.28 GALLONS/FLUSH
LAV	LAVATORY	BEELEE	BL6790BH	MATTE BLACK	1.2 GPM	N/A	MATTE BLACK	3/8"	
KS	KITCHEN FAUCET	MOEN	5925BL	MATTE BLACK	1.5 GPM	N/A	MATTE BLACK	3/8"	
SH	SHOWER	MOEN	T2472EPBL	MATTE BLACK	1.75 GPM	N/A	MATTE BLACK	1/2"	
WWB-1	WASHER WALL BOX	SIoux CHIEF	688-G10	WHITE	N/A	N/A	N/A	2 @ 1/2"	

BOXABL PART NUMBER
PLU-000178/PLU-000181
PLU-000510
PLU-000291
PLU-000141/PLU-000172
PLU-000158

CA FIXTURE FLOW REQUIREMENTS	
WC - WATER CLOSETS	1.28 GALLONS/FLUSH
LAV - LAVATORIES	1.2 GPM @ 60 PSI
KITCHEN SINK	1.8 GPM @ 60 PSI
SHOWER	1.8 GPM @ 80 PSI

NOTE: FIXTURES TO BE PROVIDED BY MANUFACTURER AS SCHEDULED OR AN APPROVED EQUIVALENT.

## HEAT PUMP WATER HEATER SCHEDULE

DESIGN'N.	TYPE	MFG'R.	MODEL NO.	NOMINAL GALLON CAPACITY	FIRST HOUR RATING GALLONS	ELECTRICAL			RECOVERY AT 90°F RISE	TANK LINING	WARRANTY	UEF	REMARKS	BOXABL PART NUMBER
						KW	VOLTAGE	PHASE						
WH-1	TANK	RHEEM	PROPH40 T2 RH375-30 700470	40	60	4.5	240	SINGLE	27	YES	YES	3.83	WATER HEATER TO BE C.E.C. LISTED.	APP-000050

NOTE: WATER HEATER TO BE MANUFACTURED BY RHEEM OR AN APPROVED EQUAL. WATER HEATER IS UNVENTED TYPE AND IS NOT PROVIDED WITH A FLUE COLLAR. WATER HEATER DOES NOT HAVE A VENT CONNECTION PER MANUFACTURER INSTALLATION MANUAL. WATER HEATER IS LISTED TO UL 174 WHICH DOES NOT STATE ANY REQUIREMENT FOR ELECTRIC WATER HEATER VENTILATION. PER CPC SECTION 509.2.1, VENTING IS NOT REQUIRED.

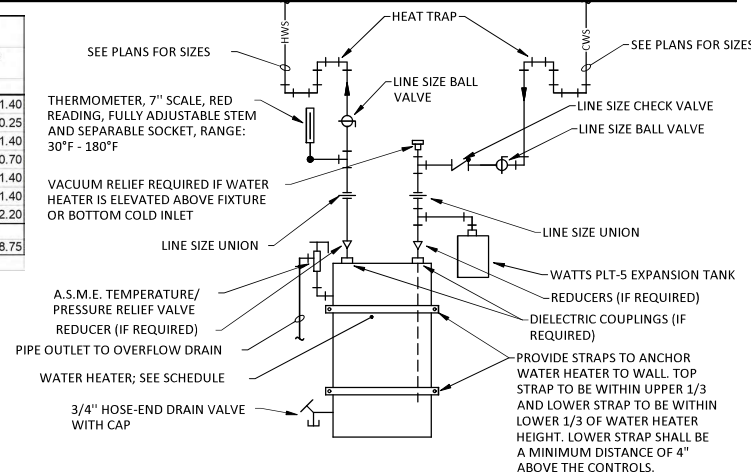
BOXABL PART NUMBER
APP-000050

### WATER SUPPLY FIXTURE UNITS

Quantity	Fixture Tag	Fixture	Occupancy	Type of Supply Control	Load Values in water supply fixture units (wsfu)			Total Load Values in water supply fixture units (wsfu)		
					Cold	Hot	Total	Cold	Hot	Total
1	DW	Dishwashing machine	Private	Automatic	0.00	1.40	1.40	0.00	1.40	1.40
1	IM	Ice Machine	Private	3/8" valve	0.25	0.00	0.25	0.25	0.00	0.25
1	KS	Kitchen sink	Private	Faucet	1.00	1.00	1.40	1.00	1.00	1.40
1	LAV	Lavatory	Private	Faucet	0.50	0.50	0.70	0.50	0.50	0.70
1	SH	Shower head	Private	Mixing valve	1.00	1.00	1.40	1.00	1.00	1.40
1	WM	Washing machine (8 lb)	Private	Automatic	1.00	1.00	1.40	1.00	1.00	1.40
1	WC	Water closet	Private	Flush tank	2.20	0.00	2.20	2.20	0.00	2.20
Total WSFU								5.95	4.90	8.75

### DRAINAGE FIXTURE UNITS

Quantity	Fixture Tag	Fixture Type	Drainage Fixture Unit Value As Load Factors	Minimum Size of Trap (inches)	Total Drainage Fixture Unit Value As Load Factors
1	WM	Automatic clothes washers, residential	2.00	2.00	2.00
1	DW	Dishwashing machine, domestic	2.00	1.50	2.00
1	KS	Kitchen sink, domestic	2.00	1.50	2.00
1	LAV	Lavatory	1.00	1.25	1.00
1	SH1	Shower Flow Rate 5.7 gpm or less	2.00	1.50	2.00
1	WC	Water closet, private (1.6 gpf)	3.00	3.00	3.00
Total DFU's					12.00



**DOMESTIC WATER HEATER PIPING DETAIL - ELECTRIC**  
NOT TO SCALE

**STAMP OF APPROVAL:**

Approved For State of California  
Factory Built Housing  
By  
MA Consulting & Engineering MACCE, LLC  
Third Party Design Approval Agency (DAA)  
Certificate Number: DF1570823

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**Generic Foundation Design Approved**

Occupancy: Res/LI    Wind: Exp    Seismic: Ctr  
R3    30 pcf    115    C    R

Plan Approval No. **MAC-FBH 10153**  
By: **Johnnie**  
Approval Date: **5/26/2025**  
Expiration Date: **1/11/2028**

**PROFESSIONAL SEAL:**

JOSEPH G. THOMAS

M 31400

Exp. 6/30/25

MECHANICAL

STATE OF CALIF.

**WCW Engineers, Inc.**  
755 Grand Drive, West Valley, Nevada 89111  
Tel: 630705-8000 Fax: 630705-8018  
www.WCWengineers.com

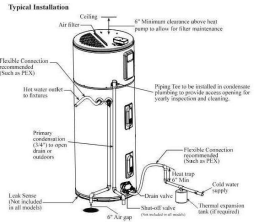
### Professional Prestige® ProTerra Hybrid Electric Heat Pump Specifications

DESCRIPTION		ENERGY INFO		FEATURES		SHIPPING WEIGHTS	
NOMINAL GALLON CAPACITY	RATED GALLON CAPACITY	MODEL NUMBER	MODEL NUMBER	ELECTRIC BREAKER SIZE	UNIFORM ENERGY FACTOR (UEF)	COMPRESSION RATIO	NET WEIGHT (LBS)
40	36	PROPH40 T2 RH375-30	700470	30	3.83	4.200	60
<b>ProTerra 30 Amp</b>							
							27
							4,000
							5,000
							21
							157
							174

DESCRIPTION		DIMENSIONS (SHOWN IN INCHES)									
NOMINAL GALLON CAPACITY	MODEL NUMBER	A	B	C	D	E	F	G	H	I	J
40	PROPH40	62-5/16	20-1/4	47	3-5/8	39-5/8	29-3/8	20-1/2	78-7/8	22-3/8	21-3/4

### DOMESTIC WATER HEATER TECHNICAL INFORMATION

NOT TO SCALE



DATE:	REV:	DESCRIPTION:	PROFESSIONAL SEAL:
02-19-25	1	CLIENT REVISIONS	I HEREBY CERTIFY THAT THESE DRAWINGS HAVE BEEN PREPARED UNDER MY DIRECT SUPERVISION AND THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE CODES AND ORDINANCES FOR PREFABRICATED DWELLING UNITS.
03-05-25	2	CLIENT REVISIONS	
04-18-25	3	CLIENT REVISIONS	

# sevan

## DESIGN SOLUTIONS, P.C.

Corporate Office: 3025 Highland Parkway | Suite 850 Downers Grove, IL 60515  
Contact Information: info@sevansolutions.com www.sevansolutions.com

INTEGRITY | RESPECT | TEAMWORK | EXCELLENCE | CHARITY

SHEET MANAGEMENT
SHEET FORMAT: ARCH C
SHEET SCALE: 1:3
CREATED BY: KD
RELEASE DATE: 7/12/2024

**MODEL:** **BOXB-000012**  
**2 DOOR CASITA (CALIFORNIA)**

**SHEET:** **P3.0**

**BOXABL INC.**  
5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA  
+1(702) 500-9000 HELLO@BOXABL.COM

PROPRIETARY AND CONFIDENTIAL  
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## FIXTURE SCHEDULES

FIXTURE	TYPE	MFG'R.	MODEL NO.	COLOR	FAUCET	TRAP	TRIM	SUPPLY FITTING	REMARKS	BOXABL PART NUMBER
WC	WATER CLOSET	SANIFLO	083 & 005	WHITE	N/A	INTERGRAL P-TRAP	N/A	3/8"	1.28 GALLONS/FLUSH	PLU-000178/PLU-000181
LAV	LAVATORY	BEELEE	BL6790BH	MATTE BLACK	1.2 GPM	N/A	MATTE BLACK	3/8"		PLU-000510
KS	KITCHEN FAUCET	MOEN	5925BL	MATTE BLACK	1.5 GPM	N/A	MATTE BLACK	3/8"		PLU-000291
BT	TUB/SHOWER	FAUCET: MOEN FIXTURE: AQUAMATIC	FAUCET: T2473EPBL FIXTURE: G032STTM OR 2603SMTH	FAUCET: MATTE BLACK FIXTURE: PER OWNER	1.75 GPM	N/A	MATTE BLACK	1/2"	PROVIDE WITH INTEGRAL GRAB BAR SUPPORT	PLU-000141/PLU-000172
WWB-1	WASHER WALL BOX	SIOUX CHIEF	688-G10	WHITE	N/A	N/A	N/A	2 @ 1/2"		PLU-000158

NOTE: FIXTURES TO BE PROVIDED BY MANUFACTURER AS SCHEDULED OR AN APPROVED EQUIVALENT.

## CA FIXTURE FLOW REQUIREMENTS

WC - WATER CLOSETS	1.28 GALLONS/FLUSH
LAV - LAVATORIES	1.2 GPM @ 60 PSI
KITCHEN SINK	1.8 GPM @ 60 PSI
TUB/SHOWER	1.8 GPM @ 80 PSI

## HEAT PUMP WATER HEATER SCHEDULE

DESIGN'N.	TYPE	MFG'R.	MODEL NO.	NOMINAL GALLON CAPACITY	FIRST HOUR RATING GALLONS	ELECTRICAL			RECOVERY AT 90°F RISE	TANK LINING	WARRANTY	UEF	REMARKS	BOXABL PART NUMBER
						KW	VOLTAGE	PHASE						
WH-1	TANK	RHEEM	PROPH40 T2 RH375-30 700470	40	60	4.5	240	SINGLE	27	YES	YES	3.83	WATER HEATER TO BE C.E.C. LISTED.	APP-000050

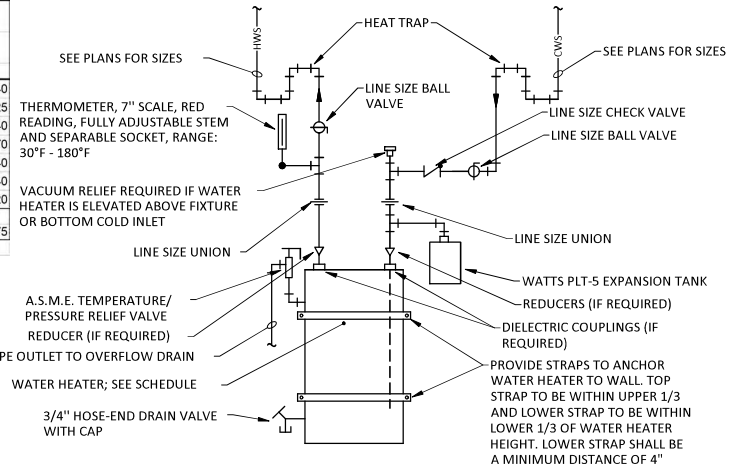
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### WATER SUPPLY FIXTURE UNITS

Quantity	Fixture Tag	Fixture	Occupancy	Type of Supply Control	Load Values in water supply fixture units (wsfu)			Total Load Values in water supply fixture units (wsfu)		
					Cold	Hot	Total	Cold	Hot	Total
1	DW	Dishwashing machine	Private	Automatic	0.00	1.40	1.40	0.00	1.40	1.40
1	IM	Ice Machine	Private	3/8" valve	0.25	0.00	0.25	0.25	0.00	0.25
1	KS	Kitchen sink	Private	Faucet	1.00	1.00	1.40	1.00	1.00	1.40
1	LAV	Lavatory	Private	Faucet	0.50	0.50	0.70	0.50	0.50	0.70
1	BT	Tub/Shower	Private	Mixing valve	1.00	1.00	1.40	1.00	1.00	1.40
1	WM	Washing machine (8 lb)	Private	Automatic	1.00	1.00	1.40	1.00	1.00	1.40
1	WC	Water closet	Private	Flush tank	2.20	0.00	2.20	2.20	0.00	2.20
Total WSFU								5.95	4.90	8.75

### DRAINAGE FIXTURE UNITS

Quantity	Fixture Tag	Fixture Type	Drainage Fixture Unit Value As Load Factors	Minimum Size of Trap (inches)	Total Drainage Fixture Unit Value As Load Factors
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1	BT	Tub/Shower Flow Rate 5.7 gpm or less	2.00	1.50	2.00
1	WC	Water closet, private (1.6 gpf)	3.00		3.00
Total DFUs					12.00



**DOMESTIC WATER HEATER PIPING DETAIL - ELECTRIC**  
NOT TO SCALE

**STAMP OF APPROVAL:**

Approved For State of California  
Factory Built Housing  
By  
MA Consulting & Engineering MACCE, LLC  
Third Party Design Approval Agency (DAA)  
Certificate Number: DF1570823

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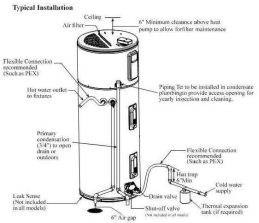
**Generic Foundation Design Approved**  
Occupancy: Residential    Wind: Exp    Seismic: Ctr  
R3    30 pcf    115    C    R

Plan Approval No. **MAC-FBH 10153**  
By: **Johnnie**  
Approval Date: **5/26/2025**  
Expiration Date: **1/11/2028**

**PROFESSIONAL SEAL:**

**JOSEPH G. THOMAS**  
Professional Engineer  
M 31400  
Exp. 6/30/25  
STATE OF CALIFORNIA

**WCW Engineers, Inc.**  
765 Crowl Drive, Westlake, CA 91391  
Tel: 818-705-8100  
Fax: 818-705-8118  
www.WCWengineers.com



### Professional Prestige® ProTerra Hybrid Electric Heat Pump Specifications

DESCRIPTION		ENERGY INFO			FEATURES				SHIPPING WEIGHTS				
NOMINAL GALLON CAPACITY	RATED GALLON CAPACITY	MODEL NUMBER	MODEL VARIANT	ELECTRIC HEATER SIZE	SEER/ESEER FACTOR	COMPRESSION MOTOR	UP FIRST DR. (GPM)	RECOVERY (90°F RISE)	ELBANK W/UTS	TOTAL UNIT WEIGHTS	MAX. AMP	UNIT NET WT. (LBS)	APPROX. DIM. (IN)
<b>ProTerra 30 Amp</b>													
40	30	PROPH40 T2 RH375-30	700470	30	3.83	4,200	66	27	4,500	5,000	21	157	174

DESCRIPTION		DIMENSIONS (SHOWN IN INCHES)										
NOMINAL GALLON CAPACITY	MODEL NUMBER	A	B	C	D	E	F	G	H	I	J	
40	PROPH40	62-5/16	20-1/4	47	3-5/8	39-5/8	28-3/8	20-1/2	78-7/8	22-3/8	21-3/4	

### DOMESTIC WATER HEATER TECHNICAL INFORMATION

NOT TO SCALE

DATE:	REV:	DESCRIPTION:
02-19-25	1	CLIENT REVISIONS
03-05-25	2	CLIENT REVISIONS
04-18-25	3	CLIENT REVISIONS

**PROFESSIONAL SEAL:**

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**sevan**  
DESIGN SOLUTIONS, P.C.

Corporate Office: 3025 Highland Parkway | Suite 850  
Downers Grove, IL 60515

Contact information: info@sevan-solutions.com  
www.sevan-solutions.com

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SHEET MANAGEMENT	
SHEET FORMAT:	ARCH C
SHEET SCALE:	1:3
CREATED BY:	KD
RELEASE DATE:	7/12/2024

**MODEL:** BXB-00012  
**2 DOOR CASITA (CALIFORNIA)**

**SHEET:** P3.1

**BOXABL INC.**

5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA

+1(702) 500-9000    HELLO@BOXABL.COM

**PROPRIETARY AND CONFIDENTIAL**  
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FAN COIL UNIT SCHEDULE																				
DESIGN	MFG'R	MODEL NO.	AIR QUANTITY (CFM)	COOLING				HEATING				ELECTRICAL				COMPRESSOR	TYPE OF MOUNTING	HSPF	SEER	BOXABL PART NUMBER
				E.A.T. DB °F/WB °F	L.A.T. DB °F/WB °F	TOTAL CAPACITY (BTU/HR)	REFRIGERANT	REFRIGERANT CHARGE	E.A.T. (°F)	L.A.T. (°F)	TOTAL CAPACITY @ 47°F	VOLTAGE	PHASE (Ø)	MCA	MOCPC					
CU-1	MITSUBISHI	MUZ-WR12NA	400	75.0/62.3	55.0/53.4	12,000	R410A	1 LB 12 OZ	60.0	88.2	12,200	230	1	10	15	ROTORRY INVERTER	ON GRADE			HVC-000019
	LG	LSU120HFV3										230	1	10	15					
FCU-1	MITSUBISHI	MSZ-WR12NA	400	75.0/62.3	55.0/53.4	12,000	R410A	1 LB 12 OZ	60.0	88.2	12,200					WALL HUNG		8.50	16.00	HVC-000003
	LG	LSN120HFV3	459												8.50			17.00		

NOTE: UNITS TO BE MANUFACTURED BY MITSUBISHI, LG OR AN APPROVED EQUIVALENT UNIT.

**Table 4-5c: Residential Space-Cooling systems Pipe Insulation (thickness in inches) (Refrigerant)**

Fluid Operating Temperature Range °F	Insulation Conduct. (Btu-in/h-ft <sup>2</sup> -°F)	Insulation Mean Rating Temperature (°F)	Pipe Diameter < 1"	REMARKS
40-60	0.21-0.27	75	0.75	

Note: Insulation used for refrigerant suction lines outside of a conditioned space, must include a Class I or Class II vapor retarder. The vapor retarder and insulation must be protected from physical damage, UV deterioration and moisture with a covering that can be removed for equipment maintenance without destroying the insulation.

EXHAUST FAN SCHEDULE															
DESIGN	SERVICE	MFG'R	MODEL NO.	TYPE	CFM	STATIC PRESSURE ("W.C.)	DRIVE	ELECTRICAL			BACKDRAFT DAMPER	OPER. WEIGHT (LBS.)	ENERGY STAR COMPLIANT	EFFICIENCY RATING CFM/WATT	BOXABL PART NUMBER
								H.P. (WATTS)	PHASE (Ø)	VOLTAGE					
EF-1	RESTROOM	DELTA	SLM 70	WALL	70	0.250	DIRECT	(11.5)	1	115	GRAVITY	8	YES	5.8	HVC-000052

NOTE: UNITS TO BE MANUFACTURED BY ADDVENT, DELTA, OR AN APPROVED EQUIVALENT UNIT.

**Table 4-6: Minimum Cooling Efficiencies for Central Air Conditioners and Heat Pumps**

Appliance	Type	SEER Required	EER Required	SEER Specified	REMARKS
Central air source heat	Split System	14.0	NR	16.0	

**Table 4-3: Minimum Heating Efficiency for Heat Pumps**

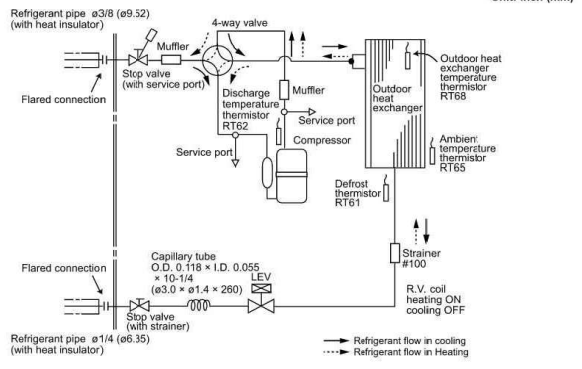
Equipment Type	Reference	Configuration/Size	Minimum Heating Efficiency	Heating efficiency Specified	REMARKS
Single-phase air source heat pumps (NAECA)	Table C-3	< 65,000 Bth/h cooling	Split 8.2 HSPF	8.5 HSPF	

**ENERGY RECOVERY VENTILATOR SCHEDULE**

DESIGN	MANUFACTURER MODEL NO.	CFM	REGENERATION EFFICIENCY %	ELECTRICAL	
				POWER (WATTS)	CURRENT (A)
ERV-1	ECO PAIR PLUS AV-TTWS-W	47.0	97	7	0.05

NOTE: UNIT TO BE MANUFACTURED BY ECO PAIR PLUS OR AN APPROVED EQUIVALENT UNIT.

**MUZ-WR09NA MUZ-WR12NA**



**REFRIGERATION PIPING SYSTEM SCHEMATIC DETAIL**  
NOT TO SCALE

**STAMP OF APPROVAL:**

Approved For State of California  
Factory Built Housing  
By  
MA Consulting & Engineering MACCE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: DF1570823

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Generic Foundation Design Approved  
Occupancy: Roof LI, Wind Exp, Seismic Ctr  
R3 30 psf 115 c

Plan Approval No. **MAC-FBH 10153**  
By: **Joseph G. Thomas**  
Approval Date: **5/26/2025**  
Expiration Date: **1/11/2028**

**PROFESSIONAL SEAL:**

**JOSEPH G. THOMAS**  
LICENSED PROFESSIONAL ENGINEER  
M 31400  
Exp. 5/20/25  
MECHANICAL  
STATE OF CALIFORNIA

**WCW Engineers, Inc.**  
705 Crowl Drive  
West Valley, Nevada 89119  
Tel. 832015-8000  
Fax. 832015-8118  
www.WCWengineers.com

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03-05-25	2	CLIENT REVISIONS	
04-18-25	3	CLIENT REVISIONS	

**sevan**  
DESIGN SOLUTIONS, P.C.

Corporate Office: 3025 Highland Parkway | Suite 850 Downers Grove, IL 60515  
Contact Information: info@sevansolutions.com www.sevansolutions.com

INTEGRITY | RESPECT | TEAMWORK | EXCELLENCE | CHARITY

**MODEL:** **BXB-000012**  
**2 DOOR CASITA**  
**(CALIFORNIA)**

**SHEET:** **M3.0**

**BOXABL INC.**  
5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA  
+1(702) 500-9000 HELLO@BOXABL.COM

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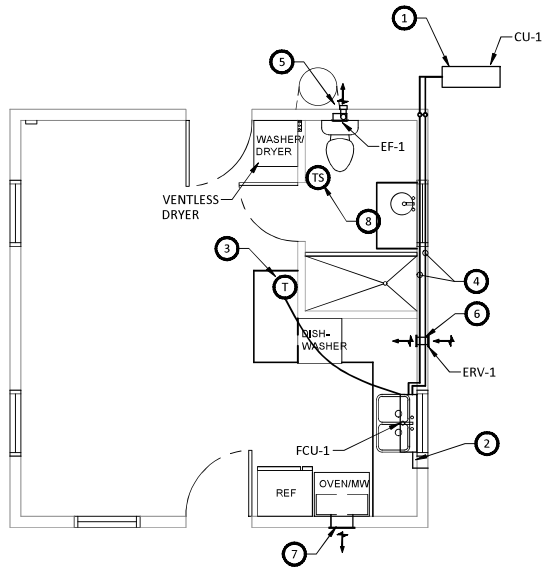


MECHANICAL DETAILS

WHOLE HOUSE VENTILATION SYSTEM SHALL BE COMPRISED OF TOILET EXHAUST FAN, 70 CFM AND ERV. VENTILATION RATE OF 20 CFM IS BASED ON EQUATION 15-1 USING 361 SQUARE FEET AND ONE BEDROOM. PER THESE CAPACITIES THE TOILET EXHAUST FAN WILL OPERATE 25% OF EACH 4 HOUR SEGMENT.

**PLAN NOTES**

- 1 NEW CONDENSING UNIT, CU-1. PROVIDE CONCRETE PAD TO HAVE THE CONDENSING UNIT ON A LEVEL SURFACE. COORDINATE EXACT LOCATION WITH ARCHITECT AND BUILDING OWNER.
- 2 TERMINATE CONDENSATE DRAIN FROM FCU-1 TO EXTERIOR. PROVIDE SPLASH BLOCK ON GRADE. COORDINATE EXACT LOCATION WITH ARCHITECT AND BUILDING OWNER.
- 3 PROVIDE THERMOSTAT, LG MODEL PREMTBVC3. MOUNT TOP OF THERMOSTAT 48" AFF MAXIMUM.
- 4 REFRIGERANT PIPING ROUTED IN WALL, SEE MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR SIZING.
- 5 PROVIDE WUI COMPLIANT EXTERIOR WALL VENT
- 6 ERV-1 FOR WHOLE HOUSE VENTILATION SYSTEM. SEE SCHEDULE ON M3.0. INTAKE TO BE LOCATED ABOVE UPPER CABINETS. PROVIDE WUI COMPLIANT EXTERIOR WALL VENT.
- 7 EXHAUST DISCHARGE FROM EXHAUST FAN THAT IS INTEGRAL TO THE MICROWAVE. EXHAUST CAPACITY SHALL BE 300 CFM AND BE EXHAUSTED DIRECTLY TO THE OUTDOORS. EXHAUST FAN TO HAVE MANUAL SWITCH FOR CONTROL. PROVIDE WUI COMPLIANT EXTERIOR WALL VENT.
- 8 TIMER SWITCH TO CONTROL BATHROOM EXHAUST FAN. EXHAUST FAN IS A COMPONENT OF WHOLE HOUSE VENTILATION SYSTEM SO A HUMIDITY CONTROL IS NOT REQUIRED PER TITLE 24 4.506.1.



1 MECHANICAL PLAN  
1/4" = 1'-0"

MECHANICAL PLAN

**STAMP OF APPROVAL:**  
 Approved For State of California  
**Factory Built Housing**  
 By  
 MA Consulting & Engineering MAC&E, LLC.  
 Third Party Design Approval Agency (DAA)  
 Certificate Number: DF1570823  
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**Generic Foundation Design Approved**  
 Occupancy: R2L1    Wood: Exp    Seismic: Ctr  
 R3    30 pcf    115    C    R  
 Plan Approval No. **MAC-FBH 10153**  
 By: **Debra J. Jolie**  
 Approval Date: **5/26/2025**  
 Expiration Date: **1/11/2028**

**PROFESSIONAL SEAL:**  
  
**WCW Engineers, Inc.**  
 755 Crowl Drive  
 North Las Vegas, Nevada 89119  
 Tel. 630.705.8000  
 Fax. 630.705.8118  
 www.WCWengineers.com

DATE:	REV:	DESCRIPTION:
02-19-25	1	CLIENT REVISIONS
03-05-25	2	CLIENT REVISIONS
04-18-25	3	CLIENT REVISIONS

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**sevan**  
 DESIGN SOLUTIONS, P.C.  
 Corporate Office: 3025 Highland Parkway | Suite 850  
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 INTEGRITY | RESPECT | TEAMWORK | EXCELLENCE | CHARITY

**SHEET MANAGEMENT**  
 SHEET FORMAT: ARCH C  
 SHEET SCALE: 1:3  
 CREATED BY: KD  
 RELEASE DATE: 7/12/2024

**MODEL:** BXB-00012  
**2 DOOR CASITA (CALIFORNIA)**  
**SHEET:** M2.0

**BOXABL INC.**  
 5345 EAST NORTH BELT ROAD  
 NORTH LAS VEGAS, NV 89115, USA  
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 PROPRIETARY AND CONFIDENTIAL  
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**GENERAL**

- MECHANICAL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE BUILDING CODES.
- DRAWINGS FOR MECHANICAL WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENTS. REFER TO MANUFACTURERS STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS AS REQUIRED. FURNISH AND INSTALL DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS AND MATERIALS NECESSARY TO FACILITATE THE SYSTEMS FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT INDICATED. THE WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES AND ORDINANCES AND SUBJECT TO INSPECTION.
- THE MECHANICAL SYSTEMS SHALL BE COMPLETE WITH ALL NECESSARY APPURTENANCES FOR A COMPLETE OPERATING SYSTEM.
- THE CONTRACTOR SHALL WARRANT ALL MATERIAL AND GUARANTEE ALL WORKMANSHIP FOR ONE YEAR FROM SUBSTANTIAL COMPLETION.

**BASIC MATERIALS AND METHODS**

- MATERIALS SHALL BEAR UNDERWRITERS LABEL OR OTHER CERTIFIED LISTING AGENCIES WHERE SUCH STANDARDS HAVE BEEN ESTABLISHED AND LISTED BY UNDERWRITERS LABORATORIES, INC. MATERIALS, EQUIPMENT AND APPLIANCES SHALL CONFORM TO THE LATEST STANDARDS OF:
  - AMCA -AIR MOVING AND CONDITIONING ASSOCIATIONS, INC.
  - SMACNA -SHEET METAL AND AIR CONDITIONING CONTRACTOR NATIONAL ASSOCIATION, INC.
  - ASHRAE -AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS
  - ASME -AMERICAN SOCIETY OF MECHANICAL ENGINEERS
  - ASTM -AMERICAN SOCIETY FOR TESTING MATERIALS
  - NEMA -NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
  - ARI -AIR CONDITIONING AND REFRIGERATION INSTITUTE
  - ANSI -AMERICAN NATIONAL STANDARDS INSTITUTE
  - IAPMO -INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS

**COORDINATION**

- COORDINATE WITH GENERAL CONTRACTOR FOR ALLOWABLE DAYS OF WEEK AND TIMES OF DAY FOR SYSTEMS SHUT DOWNS AS REQUIRED FOR THE CONSTRUCTION WORK.
- THE MECHANICAL CONTRACTOR SHALL COORDINATE DUCTWORK INSTALLATION WITH ARCHITECTS/OWNERS REPRESENTATIVE IN FIELD AND OTHER TRADES.
- THE MECHANICAL CONTRACTOR SHALL COORDINATE VOLTAGE OF ALL EQUIPMENT WITH ELECTRICAL PRIOR TO ORDERING EQUIPMENT.

**INSTALLATION**

- CORE-DRILL OR SAW-CUT FLOOR, WALL, ROOF, ETC. AS REQUIRED FOR PIPING OR DUCTWORK AND FIRE STOP OPENING AROUND PIPE OR DUCTWORK. VERIFY LOCATION OF STRUCTURAL BEAMS, JOISTS, ETC. BEFORE DRILLING OR CUTTING. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
- WHEREVER FOUNDATION WALLS, OUTSIDE WALLS, ROOFS, ETC. ARE CUT FOR INSTALLATION OF SYSTEMS, THEY SHALL BE PATCHED TO MATCH EXISTING CONSTRUCTION AND SEALED WEATHER-TIGHT. WORK SHALL BE PERFORMED BY CRAFTSMEN SKILLED IN THEIR RESPECTIVE TRADES.
- ALL PIPING THAT IS EXPOSED TO VIEW SHALL BE ROUTED AS HIGH AS POSSIBLE AND TIGHT TO THE UNDERSIDE OF THE STRUCTURAL ABOVE.
- ALL OUTSIDE AIR INTAKES SHALL BE A MINIMUM OF 10'-0" AWAY FROM EXHAUST DISCHARGE OPENINGS AND PLUMBING VENT STACKS.

**EQUIPMENT**

- THE MECHANICAL CONTRACTOR SHALL INSTALL MECHANICAL SYSTEMS AS SHOWN, NOTED AND SPECIFIED. EQUIPMENT MAY NOT BE SUBSTITUTED UNLESS WRITTEN APPROVAL BY THE ARCHITECT, ENGINEER OR OWNER'S REPRESENTATIVE IS OBTAINED. ANY CHANGES TO THE DUCTWORK LAYOUT WILL NECESSITATE SUBMISSION OF SHEET METAL SHOP DRAWINGS FOR ENGINEER'S REVIEW. ANY UNAUTHORIZED CHANGES WILL BE REMOVED AT CONTRACTOR'S EXPENSE, IF DEEMED NECESSARY BY ARCHITECT, ENGINEER, OR OWNER'S REPRESENTATIVE.
- UPON SELECTION OF THE MECHANICAL APPLIANCES, SUBMIT THE MANUFACTURER'S INSTALLATION INSTRUCTIONS TO THE BUILDING DEPARTMENT, INCLUDING LISTING FOR OUTSIDE INSTALLATION WHERE APPLICABLE.

**AIR DISTRIBUTION**

- ALL DUCTWORK SHALL BE FABRICATED ACCORDING TO THE SMACNA LOW VELOCITY DUCT MANUAL ASHRAE HANDBOOK VOLUME "HVAC SYSTEMS AND EQUIPMENT" AND TYPICAL DUCTWORK DETAILS SHOWN IN THESE DRAWINGS. ALL ELBOWS SHALL HAVE PROPER RADIUS. SIZES SHOWN ON PLAN ARE INSIDE FREE AREA.
- ALL FLEXIBLE DUCTWORK SHALL FACTORY ASSEMBLED CLASS 1 AIR DUCT (UL 181) WITH FIBERGLASS INSULATION AND REINFORCED OUTER PROTECTIVE COVER/VAPOR BARRIER. FLEX DUCT SHALL MEET NFPA 90A WITH FLAME SPREAD UNDER 25, SMOKE DEVELOPED UNDER 50, AND SHALL BE RATED FOR 2" W.C. PRESSURE AND 0 TO 250 DEGREE TEMPERATURE. MAXIMUM STRETCHED OUT LENGTH SHALL BE AS PER CODES.
- PROVIDE UL APPROVED FIRE DAMPERS FOR ALL PENETRATIONS THROUGH FIRE RATED WALLS, PARTITIONS, CEILINGS, AND FLOORS. INSTALL FIRE DAMPERS AS PER MANUFACTURER'S DIRECTIONS AND PER UL GUIDELINES. PROVIDE ACCESS AS REQUIRED FOR SERVICING OF FIRE DAMPERS.
- ALL CONTRACTOR FABRICATED AND MANUFACTURER FABRICATED COMPONENTS OF THE

OUTSIDE AIR, SUPPLY AIR, RETURN AIR AND EXHAUST SYSTEMS SHALL BE CONSTRUCTED AND INSTALLED AIR TIGHT. THE INSTALLED SYSTEMS SHALL BE PRESSURE TESTED AS SPECIFIED. PIPE OPENINGS IN SYSTEM COMPONENTS SHALL HAVE SHEET METAL BAFFLES, SET IN SEALANT, TO PREVENT LEAKAGE.

**AUTOMATIC TEMPERATURE CONTROLS**

- CONTRACTOR SHALL FURNISH AND INSTALL ALL CONTROL WIRING AS REQUIRED. THERMOSTATS SHALL BE AS SPECIFIED OR AS FURNISHED WITH THE EQUIPMENT. PROVIDE TRANSFORMERS AS REQUIRED.

**TESTING AND BALANCING**

- BALANCING CONTRACTOR SHALL BALANCE SYSTEMS TO AIR QUANTITIES SHOWN ON PLAN. BALANCING CONTRACTOR SHALL USE DUCT MOUNTED MANUAL DAMPERS FOR AIR SYSTEM BALANCING. USE OF A TERMINAL DAMPER IS NOT ACCEPTABLE.
- TESTING AND BALANCING CONTRACTOR SHALL TEST ALL HVAC EQUIPMENT TO ENSURE PROPER OPERATION, TEST ALL CONTROLS TO ENSURE PROPER OPERATION, CALIBRATION AND ADJUSTMENT OF CONTROLS, AND TEST ECONOMIZERS TO ENSURE PROPER OPERATION.
- THE ARCHITECT AND/OR OWNER'S REPRESENTATIVE SHALL BE NOTIFIED 48 HOURS OR MORE PRIOR TO FINAL TESTING AND BALANCING WORK SO THAT THEY AND/OR THE ENGINEER MAY BE PRESENT TO OBSERVE THIS WORK. THE BALANCING CONTRACTOR SHALL SUBMIT WRITTEN REPORTS OF ALL AIR FLOW READINGS, STATIC PRESSURES, CFM RATES, PRESSURE READINGS, TEMPERATURE READINGS, MOTOR AMPERAGE, ETC., TO DOCUMENT PROPERLY OPERATING AND BALANCED MECHANICAL SYSTEMS IN ALL AREAS. A COPY OF THE TEST AND BALANCE REPORT SHALL BE SUBMITTED TO THE AUTHORITIES HAVING JURISDICTION PRIOR TO FINAL INSPECTION AND REQUESTING OCCUPANCY.

**CLOSEOUT DOCUMENTATION**

- THE CONTRACTOR SHALL FURNISH TO THE BUILDING OWNER WITHIN 90 DAYS OF DATE OF RECEIPT OF THE CERTIFICATE OF OCCUPANCY THE FOLLOWING:
  - OPERATING AND MAINTENANCE MANUAL. MANUAL SHALL CONSIST OF MANUFACTURER'S RECOMMENDATIONS, PROGRAMMING PROCEDURES AND DATA POINTS, NARRATIVE AND OTHER MEANS OF ILLUSTRATING TO THE OWNER HOW THE BUILDING, EQUIPMENT AND SYSTEMS ARE INTENDED TO BE INSTALLED, MAINTAINED AND OPERATED.
  - AS-BUILT HVAC DRAWINGS.
  - BALANCE REPORT OF HVAC SYSTEMS.

**MECHANICAL ABBREVIATIONS**

A.D.	ACCESS DOOR
A.F.F.	ABOVE FINISHED FLOOR
ACCU	AIR COOLED CONDENSING UNIT
CC	COOLING COIL
CV	CONTROL VALVE
EF	EXHAUST AIR FAN
F.C.U	FAN COIL UNIT
N.T.S.	NOT TO SCALE
S.C.D.	SEE CONSTRUCTION DRAWINGS
S.S.	STAINLESS STEEL
T	THERMOSTAT
U.N.O.	UNLESS NOTED OTHERWISE
ARCH	ARCHITECT OR ARCHITECTURAL
BLD'G	BUILDING
BOT.	BOTTOM
CL.G.	CEILING
CONC.	CONCRETE
DET.	DETAIL
DN.	DOWN
DWG.	DRAWING
E.A.T.	ENTERING AIR TEMPERATURE
GA.	GAUGE
H/AC	HEATING AND AIR CONDITIONING
L.A.T.	LEAVING AIR TEMPERATURE
M/T/D	MOUNTED
S.S.T.	SATURATED SUCTION TEMPERATURE
T.S.P.	TOTAL STATIC PRESSURE
W/	WITH
Ø	DIAMETER/ROUND
0'-0"	ELEVATION FROM FINISH FLOOR

**MECHANICAL SYMBOLS**

	DEVICE THERMOSTAT WITH DEVICE CONTROLLED.
	CONDENSATE DRAINAGE PIPING
	REFRIGERANT LIQUID PIPING
	REFRIGERANT SUCTION PIPING
	LINE SIZE GATE VALVE
	LINE SIZE BALL VALVE (2" & SMALLER) OR LINE SIZE BUTTERFLY VALVE (2-3/2" & LARGER)
	LINE SIZE BALANCING VALVE
	LINE SIZE CHECK VALVE
	LINE SIZE UNION

**Mandatory Measures**

- THERMOSTAT PROVIDED SHALL BE A SET-BACK TYPE, CAPABLE OF ALLOWING THE OCCUPANT TO PROGRAM SET POINTS FOR AT LEAST FOUR PERIODS WITH-IN 24 HOUR TIME SPAN.

**STAMP OF APPROVAL:**

Approved For State of California  
**Factory Built Housing**  
 By  
 MA Consulting & Engineering MACE, LLC  
 Third Party Design Approval Agency (DAA)  
 Certificate Number: DF1570823

These plans have been approved pursuant to the provisions of The State of California Health and Safety Code, Division 1, Part 6 and California Code of Regulations, Title 24, Chapter 9, Subchapter 1  
 Approval herein does not authorize or approve any condition or deviation from State laws or valid local ordinances nor is it applicable to enforcement of units over highways, county roads or city streets.

**Generic Foundation Design Approved**

Occupancy: Residential Wood Frame  
 R3 30 pcf 115 c  
 Plan Approval No. **MAC-FBH 10153**  
 By: **Johnnie Jolie**  
 Approval Date: **5/26/2025**  
 Expiration Date: **1/11/2028**

**PROFESSIONAL SEAL:**



**MECHANICAL NOTES SYMBOLS & ABBREVIATIONS**

**MODEL: BXB-00012**  
**2 DOOR CASITA**  
**(CALIFORNIA)**

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DATE:	REV:	DESCRIPTION:	PROFESSIONAL SEAL:
02-19-25	1	CLIENT REVISIONS	I HEREBY CERTIFY THAT THESE DRAWINGS HAVE BEEN PREPARED UNDER MY DIRECT SUPERVISION AND THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE CODES AND ORDINANCES FOR PREFABRICATED DWELLING UNITS.
03-05-25	2	CLIENT REVISIONS	
04-18-25	3	CLIENT REVISIONS	

**sevan**  
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SHEET MANAGEMENT
SHEET FORMAT: ARCH C
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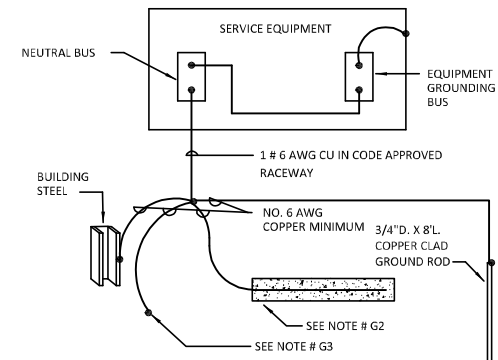


# ELECTRICAL SPECIFICATIONS:

- E1. A QUALIFIED ELECTRICIAN SHALL FURNISH AND INSTALL ALL LABOR, TOOLS, MATERIAL, EQUIPMENT, SERVICES, AND RELATED ACCESSORIES NECESSARY FOR THE COMPLETE INSTALLATION OF ELECTRICAL WORK SHOWN ON THE DRAWINGS, SPECIFIED IN THE NOTES, AND REQUIRED BY LOCAL CODE AUTHORITIES.
- E2. ALL WORK SHALL COMPLY WITH THE 2022 CEC AND 2022 CALIFORNIA RESIDENTIAL CODE.
- E3. OBTAIN AND PAY FOR ALL PERMITS AND FEES RELATING TO ELECTRICAL SYSTEM.
- E4. IT IS INTENDED THAT ALL ITEMS OF WORK AND SYSTEMS BE COMPLETE AND WIRED COMPLETE IN ALL DETAILS, READY FOR SATISFACTORY OPERATION AND SERVICE. APPARATUS REQUIRED SHALL BE FURNISHED, EVEN THOUGH NOT SPECIFICALLY MENTIONED HEREIN, OR SHOWN ON THE DRAWINGS.
- E5. PROVIDE GROUNDING OF ELECTRICAL WORK IN STRICT ACCORDANCE WITH THE APPLICABLE CODES AND THEIR AUTHORITIES.
- E6. COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO ANY INSTALLATION.
- E7. PROVIDE CODE APPROVED CLEARANCES AROUND ELECTRICAL EQUIPMENT.
- E8. MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL CONFORM TO THE NEMA STANDARDS, CALIFORNIA ELECTRICAL CODE (CEC) IN EVERY CASE, WHERE SUCH STANDARDS HAVE BEEN ESTABLISHED. ALL ELECTRICAL MATERIALS, DEVICES, APPLIANCES, FITTINGS AND OTHER EQUIPMENT SHALL BE LISTED AND LABELED BY A QUALIFIED TESTING AGENCY AND SHALL BE CONNECTED IN AN APPROVED MANNER WHEN INSTALLED.
- E9. TESTING - AFTER WIRES ARE IN PLACE AND CONNECTED TO DEVICES AND EQUIPMENT, THE SYSTEM SHALL BE TESTED FOR SHORTS AND GROUNDS. ALL HOT WIRES, IF SHORTED OR GROUNDED, SHALL BE REMOVED AND REPLACED.
- E10. ALL METERS, INSTRUMENTS, CABLE CONNECTION, EQUIPMENT, OR APPARATUS NECESSARY FOR MAKING ALL TESTS, SHALL BE FURNISHED BY THIS CONTRACTOR AT HIS OWN EXPENSE.
- E11. AFTER THE COMPLETION OF THE INSTALLATION, THE ENTIRE SYSTEM SHALL BE THOROUGHLY CLEANED. CLEAN ALL FOREIGN MATTER, PAINT, OIL, DIRT, UNREQUIRED LABELS, GREASE, AND STICKERS FROM FIXTURES AND EQUIPMENT. REMOVE FROM THE PREMISES ALL RUBBISH, DEBRIS, ETC. ACCUMULATED BY THE ELECTRICAL INSTALLATION.
- E12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EQUIPMENT AND SYSTEMS AGAINST HARMFUL EXPOSURE, OR ACCUMULATION OF DUST/MOISTURE, FLOODING, CORROSION, OR OTHER FORMS OF DAMAGE. CLEAN AND RESTORE DAMAGED FINISHES AND EQUIPMENT TO PLACE INSTALLATION IN A LIKE-NEW CONDITION.
- E13. UNLESS SPECIFICALLY NOTED OTHERWISE, ALL INTERIOR WIRING SHALL BE NM-B CABLE. ELECTRICIAN SHALL PROVIDE EXTENSION OF ALL CABLE FROM JUNCTION BOX TO ELECTRICAL PANEL. PROVIDE CODE COMPLIANT RACEWAY AND WIRING FROM INTERIOR JUNCTION BOX TO EXTERIOR PANEL. SEAL OPENING WEATHERTIGHT. PROVIDE INTERCONNECTION OF CABLES BETWEEN THE WALLS AND ROOF PANELS. THERE MAY BE SEVERAL CIRCUITS IN EACH PANEL EACH IS LABELED WITH CIRCUIT NAME, CONNECT CIRCUITS OF LIKE NAMES.
- E14. DISCONNECT SWITCHES SHALL BE QUICK-MAKE, QUICK-BREAK TYPE IN NEMA ENCLOSURE TO MATCH LOAD AND USE. SWITCHES SHALL BE LISTED FOR THEIR USE.
- E15. PANEL/LOAD CENTER SHALL BE AS SHOWN ON THE DRAWINGS WITH 100A-2P MAIN BREAKER, 225A BUSSING AND BRANCH BREAKERS AS SCHEDULED. UNIT IS PROVIDED IN A NEMA 3R ENCLOSURE FOR EXTERIOR MOUNTING. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. INSTALL BREAKERS AS REQUIRED. PANEL/LOAD CENTERS SHALL BE SQUARE D QO SERIES WITH QO BREAKERS OR Eaton, Siemens or General Electric EQUIVALENT. TERMINATE ALL CABLES AND WIRING AT PANEL/LOAD CENTER IN ACCORDANCE WITH CEC REQUIREMENTS.
- E16. INSTALL COMBINATION WASHER/DRYER BACKBOX WIRING AND PLUG IN WALL.
- E17. ASSEMBLE AND INSTALL PENDANT LIGHT FURNISHED WITH UNIT. PENDANT LIGHT SHALL BE LISTED PER 410.10(D).
- E18. INSTALL SMOKE DETECTOR FURNISHED WITH UNIT.
- E19. ASSEMBLE AND INSTALL EXTERIOR SCONE LIGHT FURNISHED WITH UNIT BY FRONT AND BACK DOORS. SEAL LIGHT TO EXTERIOR WALL TO BE WEATHER TIGHT.
- E20. ALL EQUIPMENT LOCATED OUTDOORS SHALL BE WEATHERPROOF TYPE.
- E21. FURNISH AND INSTALL A COMPLETE AND OPERABLE SYSTEM OF SERVICE AND DISTRIBUTION FROM THE UTILITY COMPANY TRANSFORMERS OR FROM FEED FROM ANOTHER STRUCTURE TO THE PANEL/LOAD CENTER AS REQUIRED. PROVIDE A 120/240V, 1PH, 3W, SERVICE OR FEEDER TO THE LOAD CENTER RATED AT 100 AMPERES WITH 225A MINIMUM BUSSING. MINIMUM FEEDER SIZE TO THE HOUSE SHALL BE 3 # 1 AWG COPPER CONDUCTORS. COORDINATE FINAL GROUNDING WITH METHOD OF FEEDING. SUGGESTED SERVICE GROUNDING DETAIL IS FOR UTILITY FED BUILDING.

- E22. TWO SMALL APPLIANCE 20A BRANCH CIRCUITS HAVE BEEN PROVIDED PER CEC 210.11 (C)(1) SERVING ONLY ABOVE COUNTER RECEPTACLES.
- E23. LAUNDRY AREA 20A BRANCH CIRCUITS HAS BEEN PROVIDED PER CEC 210.11 (C)(2) SERVING ONLY LAUNDRY AREA.
- E24. INDIVIDUAL APPLIANCE BRANCH CIRCUITS HAVE BEEN PROVIDED SERVING DEDICATED APPLIANCES INCLUDING HEAT A/C UNIT, REFRIGERATOR, MICROWAVE, DISHWASHER AND ELECTRIC RANGE.
- E25. BATHROOM RECEPTACLE 20A BRANCH CIRCUIT HAS BEEN PROVIDED PER CEC 210.11 (C)(3) SERVING ONLY BATHROOM RECEPTACLES.
- E26. RECEPTACLE OUTLETS HAVE BEEN INSTALLED IN ACCORDANCE WITH CEC 210.52. ALL RECEPTACLES SHALL BE LISTED AND GROUNDED TYPE AND INSTALLED IN ACCORDANCE WITH CEC 406.4. ALL RECEPTACLES SHALL BE PROVIDED WITH AFCI PROTECTION. ALL 15A AND 20A KITCHEN, BATHROOM, LAUNDRY, AND OUTDOOR RECEPTACLES SHALL BE GFCI TYPE. ALL OUTDOOR RECEPTACLES SHALL BE WEATHER RESISTANT TYPE WITH WEATHERPROOF COVERS AND WEATHER SEALED TO BUILDING FRAME. ALL 15A AND 20A RECEPTACLES SHALL BE TAMPER RESISTANT TYPE PER CEC 406.12 TAMPER-RESISTANT RECEPTACLES. ALL 15- AND 20-AMPERE, 125- AND 250-VOLT NONLOCKING-TYPE RECEPTACLES IN THE AREAS SPECIFIED IN 406.12(1) THROUGH (7) SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES. (1) DWELLING UNITS IN ALL AREAS SPECIFIED IN 210.52
- E27. PROVIDE GROUNDING AND BONDING PER CEC 250.
- E28. FITTINGS AND CONNECTORS THAT ARE INTENDED TO BE CONCEALED AT THE TIME OF ASSEMBLY SHALL BE LISTED AND IDENTIFIED FOR THE INTERCONNECTION OF BUILDING COMPONENTS. SUCH FITTING SHALL BE EQUAL TO THE WIRING METHOD EMPLOYED IN INSULATION, TEMPERATURE RISE, AND FAULT-CURRENT WITHSTANDING AND SHALL BE CAPABLE OF ENDURING THE VIBRATION AND SHOCK OCCURRING IN TRANSPORT.
- E29. GROUNDING OF BOTH ELECTRICAL AND NON ELECTRICAL METAL PARTS SHALL BE THROUGH CONNECTION TO A GROUNDING BUS IN THE PANEL/LOAD CENTER AND SHALL BE CONNECTED THROUGH THE GREEN-COLORED INSULATED CONDUCTOR IN THE FEEDER WIRING TO THE GROUNDING BUS IN THE SERVICE ENTRANCE EQUIPMENT.
- E30. THE INSTALLATION OF THE SERVICE EQUIPMENT SHALL COMPLY WITH ARTICLE 230. MEANS SHALL BE PROVIDED FOR THE CONNECTION OF A GROUNDING ELECTRODE CONDUCTOR TO THE SERVICE EQUIPMENT AND ROUTING IT OUTSIDE THE STRUCTURE. BONDING AND GROUNDING OF THE SERVICE SHALL BE IN ACCORDANCE WITH ARTICLE 250. THE MANUFACTURER SHALL INCLUDE IN ITS WRITTEN INSTALLATION INSTRUCTIONS ONE METHOD OF GROUNDING THE SERVICE EQUIPMENT AT THE INSTALLATION SITE. THE INSTRUCTIONS SHALL CLEARLY STATE THAT OTHER METHODS OF GROUNDING ARE FOUND IN ARTICLE 250. THE MINIMUM SIZE GROUNDING ELECTRODE CONDUCTOR SHALL BE # 8 AWG COPPER.  
  
A WARNING LABEL SHALL BE MOUNTED ON OR ADJACENT TO THE SERVICE EQUIPMENT. THE LABEL SHALL STATE THE FOLLOWING:  
"WARNING DO NOT PROVIDE ELECTRICAL POWER UNTIL THE GROUNDING ELECTRODE(S) IS INSTALLED AND CONNECTED (SEE INSTALLATION INSTRUCTIONS)."  
  
WHERE THE SERVICE EQUIPMENT IS NOT INSTALLED IN OR ON THE UNIT, THE INSTALLATION SHALL COMPLY WITH THE OTHER PROVISIONS OF THE CEC.
- E31. ALL LIGHTING SHALL BE CALIFORNIA TITLE 24 COMPLIANT.
- E32. OUTDOOR LIGHTING SHALL LED LIGHT SOURCES. OUTDOOR LIGHTING IS CONTROLLED BY INTEGRAL PHOTOCELL OR ASTRONOMICAL TIMELOCK PER 210.70(A)(2)(2) EXCEPTION.
- E33. ALL ELECTRICAL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE.
- E34. THE INSTALLING CONTRACTOR SHALL PROVIDE EITHER ESS READY INTERCONNECTION EQUIPMENT WITH A MINIMUM BACKED UP CAPACITY OF 60A AND A MINIMUM OF 4 ESS SUPPLIED BRANCH CIRCUITS OR A DEDICATED RACEWAY FROM THE MAIN SERVICE TO A PANELBOARD (SUBPANEL) THAT SUPPLIES THE BRANCH CIRCUITS LISTED BELOW. ALL BRANCH CIRCUIT ARE PERMITTED TO BE SUPPLIED BY THE MAIN SERVICE PANEL PRIOR TO THE INSTALLATION OF THE ESS. THE TRADE SIZE OF THE RACEWAY SHALL NOT BE LESS THAN 1". THE PANEL BOARD THAT SUPPLIES THE BRANCH CIRCUITS (SUBPANEL) MUST BE LABELED "SUBPANEL SHALL INCLUDE ALL BACKED UP LOAD CIRCUITS"  
  
A MINIMUM OF 4 BRANCH CIRCUIT SHALL BE IDENTIFIED AND HAVE THEIR SOURCE OF SUPPLY COLLOCATED AT A SINGLE PANELBOARD SUITABLE TO BE SUPPLIED BY THE ESS. AT LEAST ONE CIRCUIT SHALL SUPPLY THE REFRIGERATOR, ONE LIGHTING CIRCUIT SHALL BE LOCATED NEAR THE PRIMARY EGRESS AND AT LEAST ONE CIRCUIT SHALL SUPPLY A SLEEPING ROOM RECEPTACLE OUTLET.  
  
THE MAIN PANELBOARD SHALL HAVE A MINIMUM BUS BAR RATING OF 225A.  
  
SUFFICIENT SPACE SHALL BE RESERVED TO ALLOW FUTURE INSTALLATION OF A SYSTEM ISOLATION EQUIPMENT/TRANSFER SWITCH WITHIN 3 FEET OF THE MAIN PANELBOARD. RACEWAYS SHALL BE INSTALLED BETWEEN THE PANELBOARD AND THE SYSTEM ISOLATION EQUIPMENT / TRANSFER SWITCH LOCATION TO ALLOW THE CONNECTION OF THE BACKUP POWER SOURCE.
- E35. PER AGING IN PLACE REQUIREMENTS, ELECTRICAL RECEPTACLE OUTLETS, SWITCHES AND CONTROLS (INCLUDING CONTROLS FOR HEATING, VENTILATION AND AIR CONDITIONING) INTENDED TO BE USED BY OCCUPANTS SHALL BE LOCATED NO MORE THAN 48 INCHES (1219.2 MM) MEASURED FROM THE TOP OF THE OUTLET BOX AND NOT LESS THAN 15 INCHES MEASURED FROM THE BOTTOM OF THE OUTLET BOX ABOVE THE FINISH FLOOR.

SYMBOL LIST	
SYMBOL	DESCRIPTION
	JUNCTION BOX - WALL OR CEILING MOUNTED
	NON - FUSED DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
	MOTOR CONNECTION - H.P. AS NOTED ON DRAWINGS
	NM-B CABLE RUN CONCEALED IN CEILING OR WALLS. X DENOTES GROUND WIRE   DENOTES NEUTRAL CONDUCTOR ! DENOTES HOT CONDUCTOR
	LOAD CENTER
	DUPLEX RECEPTACLE (NEMA 5-20R) (+18" AFF UNLESS NOTED OTHERWISE)
	DUPLEX RECEPTACLE (NEMA 5-20R) (MOUNTED 6" ABOVE COUNTER TOP UNLESS NOTED OTHERWISE)
	DUPLEX CONVENIENCE OUTLET (NEMA 5-15R)
	SPECIAL OUTLET. REFER TO POWER PLAN ON SHEET E1.0 FOR REQUIREMENTS
	SINGLE NEMA 5-20R RECEPTACLE
	CEILING MOUNTED COMBINATION SMOKE/HRE/CARBON MONOXIDE ALARM - USI ELECTRIC # NLS300S HARDWIRED ALARM WITH 10 YEAR SEALED BATTERY OR EQUAL.
A.	DENOTES AMPERES
A.C.	DENOTES ABOVE COUNTER
A.F.F.	DENOTES ABOVE FINISHED FLOOR
AFCI	DENOTES ARC-FAULT CIRCUIT INTERRUPTER
C.	DENOTES CONDUIT
GFCI	DENOTES GROUND FAULT CIRCUIT INTERRUPTER
GRD.	DENOTES GROUND
M.L.O.	DENOTES MAIN LUGS ONLY
WP	DENOTES WEATHERPROOF (NEMA 3R)



## SUGGESTED SERVICE GROUND DETAIL

NO SCALE

### NOTES:

- G1. CONTRACTOR SHALL OBTAIN APPROVAL FROM LOCAL CODE AUTHORITIES BEFORE INSTALLING GROUNDING.
- G2. CONCRETE ENCASED ELECTRODE ENCASED BY A MINIMUM OF 2" OF CONCRETE ON ALL SIDES LOCATED WITHIN AND NEAR THE BOTTOM OF A CONCRETE FOOTING OR FOUNDATION. ELECTRODE SHALL CONSIST OF A MINIMUM OF 20' OF BARE COPPER CONDUCTOR (# 4) WHERE APPLICABLE. (SEE CEC 250.52 (A) (3) (2))
- G3. BOND TO REBAR STUBOUT IN FOUNDATION PER CEC 250 WHERE APPLICABLE (SEE CEC 250.52 (A) (3) (1))

**STAMP OF APPROVAL:**

Approved For State of California  
**Factory Built Housing**  
 By  
 MA Consulting & Engineering MA&E, LLC.  
 Third Party Design Approval Agency (DPA)  
 Certificate Number: DF1570823

*(This plan has been approved pursuant to the provisions of the State of California Health and Safety Code, Division 15, Part and California Code of Regulations, Title 25, Chapter 9, Subchapter 1)*

Approval limits does not authorize or approve any variation or deviation from State laws or valid local ordinances nor do it apply to movement of walls over highways, county roads or city streets.

Generic Foundation Design Approved

Occupancy	Res'd	Wind	Imp	Seismic	Cir
303	30	psf	15	C	E

Plan Approval No: **MAC-FBH 10153**

By: **Yyoban, Jatin**

Approval Date: **5/26/2025**  
 Expiration Date: **1/11/2028**

**PROFESSIONAL SEAL:**

SIGNATURE: \_\_\_\_\_ DATE: 04/18/2025

EXPIRATION DATE: 09/30/2026

DATE:	REV:	DESCRIPTION:	PROFESSIONAL SEAL:
02-19-25	1	CLIENT REVISIONS	
03-05-25	2	CLIENT REVISIONS	
04-18-25	3	CLIENT REVISIONS	

**sevan**  
DESIGN SOLUTIONS, P.C.

Corporate Office: 3025 Highland Parkway | Suite 850  
Downers Grove, IL 60515

Contact Information: info@sevansolutions.com  
www.sevansolutions.com

INTEGRITY | RESPECT | TEAMWORK | EXCELLENCE | CHARITY

SHEET MANAGEMENT	
SHEET FORMAT:	ARCH C
SHEET SCALE:	1:3
CREATED BY:	KD
RELEASE DATE:	7/12/2024

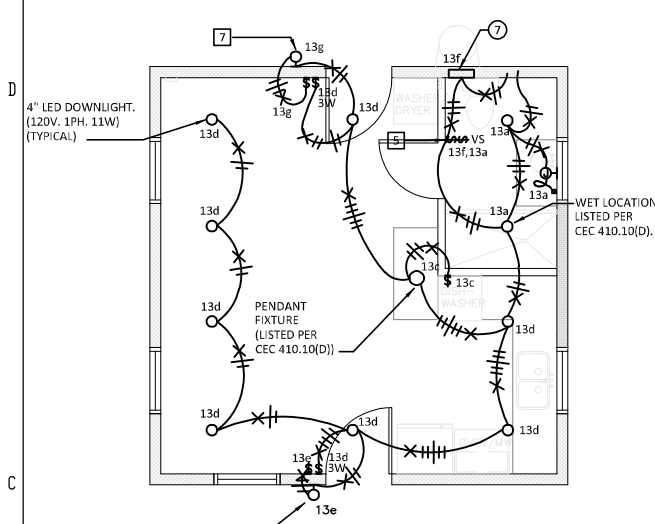
**MODEL: BXB-00012**  
**2 DOOR CASITA (CALIFORNIA)**

**SHEET: E1.0**

**BOXABL INC.**  
 5345 EAST NORTH BELT ROAD  
 NORTH LAS VEGAS, NV 89115, USA  
 +(702) 500-9000 HELLO@BOXABL.COM

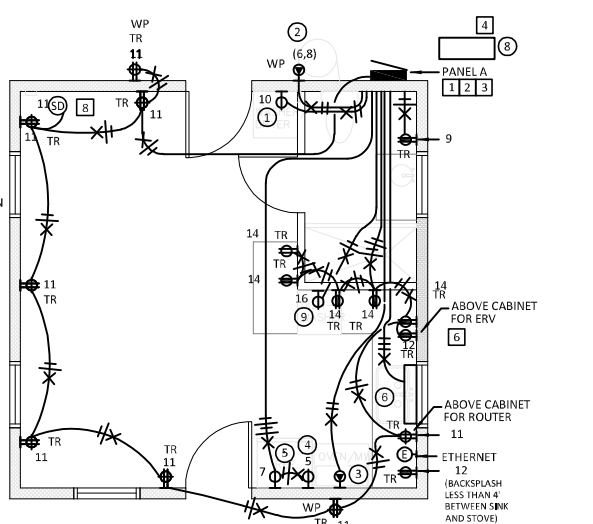
**PROPRIETARY AND CONFIDENTIAL**  
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**LIGHTING PLAN**

SCALE: 1/4"=1'-0"  
0' 4' 8' 12' 16'



**POWER PLAN**

SCALE: 1/4"=1'-0"  
0' 4' 8' 12' 16'

**POWER NOTES:**

- LOAD CENTER FULLY ASSEMBLED AND INSTALLED IN FACTORY.
- ELECTRICIAN TO PROVIDE ELECTRICAL FEEDER/ELECTRICAL SERVICE FROM SITE TO LOAD CENTER.
- ELECTRICIAN TO PROVIDE SERVICE GROUND/BUILDING GROUND PER CEC REQUIREMENTS.
- ELECTRICIAN TO WIRE OUTDOOR CONDENSER UNIT EXTEND WIRING AND INTERCONNECT WIRING FROM INDOOR FAN COIL PER MANUFACTURERS DIRECTIONS. COORDINATE INSTALLATION WITH MECHANICAL CONTRACTOR AS TO NOT IMPEDE CODE REQUIRED CLEARANCE FOR ELECTRICAL PANELS/SERVICE DISCONNECTS. PROVIDE GFCI PROTECTION PER CEC 210.8 (F).
- PROVIDE BATH FAN SWITCH WITH VENTILATION CONTROL & DELAY TIMER. (LEGRAND RADIANT 4 BUTTON DIGITAL TIMER # RT2BKCCV4 OR EQUAL). PROVIDE BATHROOM VACANCY SENSOR WITH MANUAL ON AND AUTOMATIC OFF, TITLE 24 COMPLIANT, LUTRON # VS306JU VACANCY SENSOR SWITCH OR EQUAL.
- WHOLE HOUSE VENTILATION SYSTEM FAN 120V., 1PH., 7W. WIRE TO CIRCUIT 14.
- OUTDOOR WALL LAMP WITH INTEGRAL PHOTOCELL OR WITH ASTRONOMICAL TIMECLOCK (FURNISHED WITH UNIT INSTALLED ON SITE)
- COMBINATION SMOKE/FIRE/CARBON MONOXIDE ALARM WITH BATTERY BACKUP. UNIVERSAL SECURITY INSTRUMENTS # MIC1509S HARDWIRED 3 IN 1 SMART ALARM WITH 10 YEAR SEALED BATTERY OR EQUAL. DETECTOR SHALL BE LOCATED MINIMUM OF 20 FEET FROM COOKING APPLIANCE. SHIPPED LOOSE, INSTALLED AND TESTED ONSITE.

**CIRCUIT PROTECTION NOTES:**

- ARC FAULT CIRCUIT INTERRUPTER PROTECTION SHALL BE PROVIDED FOR ALL 15 AND 20A BRANCH CIRCUITS SUPPLYING OUTLETS AND DEVICES IN ACCORDANCE WITH CEC 210.12(A).
- GROUND FAULT CIRCUIT INTERRUPTER PROTECTION SHALL BE PROVIDED FOR ALL 15A AND 20A RECEPTACLES AND EQUIPMENT IN ACCORDANCE WITH CEC 210.8.

TR ADJACENT TO RECEPTACLE INDICATES TAMPER RESISTANT.  
ALL 15A AND 20A RECEPTACLES SHALL BE TAMPER RESISTANT TYPE PER CEC 406.12 TAMPER-RESISTANT RECEPTACLES. ALL 15- AND 20-AMPERE, 125- AND 250-VOLT NONLOCKING-TYPE RECEPTACLES IN THE AREAS SPECIFIED IN 406.12(1) THROUGH (7) SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.  
(1) DWELLING UNITS IN ALL AREAS SPECIFIED IN 210.52

**ELECTRICAL CALCULATIONS (CEC)** 17-Apr-2025

PROJECT: CALIFORNIA	DATE: 17-Apr-2025
JOB NUMBER: 24137	
CALCULATION BY: SB	

**California Casita BXB-000012**

PANEL DESIGNATION: A	TOTAL AREA (SQ FT): 361	SERVICE: 120/240V, 1PH, 3W
GENERAL LIGHTING LOAD CALC:	AREA: 361 X	3 WTR/SQ FT WTR/SQ FT: 1083 W GEN. LIGHTING
SMALL APPLIANCE LAUNDRY:	2 X 1 QTY OF UNITS X 150 WATTS	300 W SM APP
LAUNDRY:	1 X 1 QTY OF UNITS X 150 WATTS	150 W LAUNDRY
SUBTOTAL:		668
DEMAND:		
187.29 KW AT 100%:	590	= 590
WATER HEATER:	5000 X 100%:	5000
DISHWASHER:	300 X 100%:	300
MSC:	X 100%:	0
FAN COIL:	240 X 100%:	240
AC:	2400 X 100%:	2400
ELECTRIC RANGE:	9600 X 80%:	7680
LARGHEST MOTOR:	0 X 25%:	0
<b>TOTAL DEMAND:</b>		<b>21,803 WATTS</b>
<b>VOLTAGE:</b> 240	<b>1 PHASE</b>	<b>22 KW</b>
<b>AMPS:</b> 90.8		
<b>MINIMUM SERVICE SIZE:</b> 81 AMPS		
<b>SERVICE SIZE:</b> 100 AMPS	<b>PANEL MUST HAVE 225A BUSSING</b>	

**EQUIPMENT SCHEDULE**

#	MARK	EQUIPMENT DESCRIPTION	VOLTAGE	PHASE	AMPS	RECEPTACLE TYPE	CIRCUIT NUMBER	CIRCUIT DATA			BOXABL PART NUMBER	
								QTY.	SIZE	EO. GND.		HEIGHT
1		WASHER DRYER	120	1	10.0	5-20R	A-10	2	#12	#12	18" A.F.F.	APP-00013
2		HEAT PUMP WATER HEATER	240	1	21	6-30R	A-(6,8)	2	#10	#10	18" A.F.F.	APP-000050
3		RANGE	240	1	40.0	14-50R*	A-(2,4)	2	#6	#10	18" A.F.F.	APP-000011
4		REFRIGERATOR	120	1	12	5-20R	A-5	2	#12	#12	18" A.F.F.	APP-000008
5		MICROWAVE	120	1	12	5-20R	A-7	2	#12	#12	84" A.F.F.	APP-000005
6		FAN COIL UNIT FCU-1	240	1	1.0	-	WIRE TO CU-1	3	#14	#14	-	HVC-000003
7		EXHAUST FAN EF-1	120	1	11	-	A-13f	2	#12	#12	-	HVC-000052
8		OUTDOOR CONDENSER CU-1	240	1	15.0	-	A-(15,17)	2	#10	#10	-	HVC-000019
9		DISHWASHER	120	1	12	5-20R	A-16	2	#12	#12	-	APP-000002

\*14-50R IS A THREE PHASE RECEPTACLE ONLY TWO PHASES USED. COORDINATE PHASING.

**PANEL DATA SCHEDULE**

LOCATION: OUTDOOR  
SERVICE: 120/240V, 1PH, 3W  
MAIN BREAKER: 100A-2P MINIMUM  
MAIN LUGS ONLY  
NEUTRAL BUS: 225A  
GROUND BUS: YES  
SHORT CIRCUIT RATING: 10,000  
NOTES: NEMA 3R - SERVICE ENTRANCE RATED - MINIMUM OF 3 #2 AWG SERVICE 225A MINIMUM BUSSING  
\* DENOTES LOCK-OUT CLIP; \*\* DENOTES GFI BREAKER; \*\*\* DENOTES VIA TIMECLOCK; \*\*\*\* DENOTES VIA CONTACTOR

**PANEL NAME: A**

CONNECTED LOAD  
PHASE A: 13.19 KVA  
PHASE B: 13.60 KVA  
TOTAL: 26.79 KVA  
RMS SYM AMPS: 112

**DEMAND LOAD**

DEMAND LOAD: 10.87 KVA  
FLUSH SURFACE: 6.30 KVA  
KEY: L: LIGHTING; R: RECEPTACLES; M: MOTORS; P: PANELS; T: TRANSFORMERS; E: EQUIPMENT; S & X: SPARE & SPACE

CIRCUIT USE	CONNECTED LOAD		CIRCUIT NO.	CIRCUIT BREAKER	CONNECTED LOAD		CIRCUIT NO.	CIRCUIT BREAKER	CIRCUIT USE
	A	B			A	B			
R: WHOLE HOUSE	0	0	1	20A-2P	50A-2P	2	4,800	E: RANGE	
R: SURGE PROTECTION DEVICE	0	0	3			4	4,800	E:	
R: REFRIGERATOR	1,440	1,440	5	20A-1P AFCI	30A-2P	6	2,500	M: WATER HEATER	
R: MICROWAVE	960	960	7	20A-1P AFCI		8	2,500	M:	
R: BATHROOM RECEPTACLE	360	1,260	9	20A-1P AFCI	20A-1P AFCI	10	1,200	R: WASHER/DRYER	
R: LIVING ROOM/EXTERIOR RECEPTS.	1,260	1,260	11	20A-1P AFCI	20A-1P AFCI	12	1,500	R: ROUTER/KITCHEN SMALL APPL.	
L: BATH/KITCHEN/LIVING ROOM LTS	192	1,200	13	15A-1P AFCI	20A-1P AFCI	14	1,500	R: DINING/KITCHEN SMALL APPL./ERV	
M: CU-1/FCU-1	1,200	1,200	15	30A-2P	20A-1P AFCI	16	900	R: DISHWASHER	
M:	1,200	1,200	17	BLANKSPACE	BLANKSPACE	18	0	X: BLANKSPACE	
X: BLANKSPACE	0	0	19	BLANKSPACE	BLANKSPACE	20	0	X: BLANKSPACE	
SUB TOTAL	3,192	3,900					10,000	9,700	

**STAMP OF APPROVAL:**  
Approved For State of California  
Factory Built Housing  
By  
MA Consulting & Engineering MACCE, LLC  
Third Party Design Approval Agency (DAAA)  
Certificate Number: DFE1570823  
These plans have been approved pursuant to the provisions of the State of California Health and Safety Code, Division 15, Part and California Code of Regulations, Title 25, Chapter 3, Subchapter 1.  
Approval herein does not constitute or approve any violation or deviation from State laws or valid local ordinances nor do we apply to enforcement of such laws, ordinances, county, roads or city rules.  
Generic Foundation Design Approved  
Occupant: Roof LL Wind Imp Seismic Ctr  
R3 30 psf 115 C  
Plan Approval No: MAC-FBH 10153  
By: Yubhan J. Jolis  
Approval Date: 5/26/2025  
Expiration Date: 1/11/2028

**PROFESSIONAL SEAL:**  
REGISTERED PROFESSIONAL ENGINEER  
GREGORY L. DOFFNER  
No. 20793  
STATE OF CALIFORNIA  
ELECTRICAL  
SIGNATURE: [Signature]  
DATE: 04/18/2025  
EXPIRATION DATE: 04/18/2026

DATE:	REV:	DESCRIPTION:	PROFESSIONAL SEAL:
02-19-25	1	CLIENT REVISIONS	
03-05-25	2	CLIENT REVISIONS	
04-18-25	3	CLIENT REVISIONS	

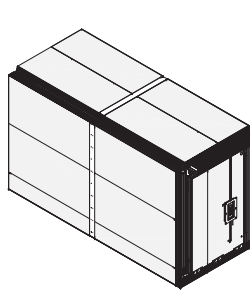
**sevan**  
DESIGN SOLUTIONS, P.C.  
Corporate Office: 3025 Highland Parkway | Suite 850 Downers Grove, IL 60515  
Contact Information: info@sevan.com www.sevan.com

**SHEET MANAGEMENT**  
SHEET FORMAT: ARCH C  
SHEET SCALE: 1:3  
CREATED BY: KD  
RELEASE DATE: 7/12/2024

**MODEL: BXB-000012**  
**2 DOOR CASITA (CALIFORNIA)**  
**SHEET: E2.0**

**BOXABL INC.**  
5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA  
(702) 500-9000 HELLO@BOXABL.COM  
PROPRIETARY AND CONFIDENTIAL  
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**BOXABL**



**OPTIONAL EXTERIOR WALL CLADDING OPTIONS:**

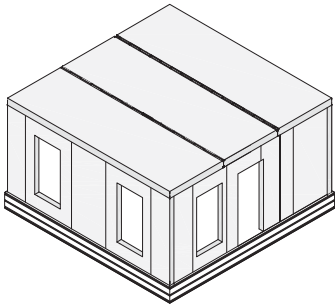
1-COAT STUCCO ( 5 psf MAX. ALLOWED) OR OTHER WALL SIDING CONNECTIONS TO THE WALLS MUST BE DESIGNED BY OTHERS AND APPROVED AT THE LOCAL LEVEL BY THE AUTHORITY HAVING JURISDICTION. SEE S1.2 FOR SEISMIC LIMITS. SIDING OTHER THAN HARDI-PANEL OR HARDI PLANKS MUST NOT EXCEED THE WEIGHT OF THOSE PRODUCTS WITHOUT SPECIAL EVALUATION BY THE ENGINEER.

**STATEMENT OF SPECIAL INSPECTIONS:**

THE OWNER OR OWNER'S REPRESENTATIVE SHALL HIRE A SPECIAL INSPECTOR, APPROVED BY THE AUTHORITY HAVING JURISDICTION, TO PERFORM PERIODIC INSPECTION OF THE INSTALLATION OF THE TITEN HD ANCHORS SPECIFIED ON DETAIL A / S3. INSPECTION TO INCLUDE VERIFICATION OF THE ANCHOR TYPE, ANCHOR DIMENSIONS, HOLE CLEANING PROCEDURE, CONCRETE TYPE, COMPRESSIVE STRENGTH, HOLE DIMENSION, ANCHOR SPACING, EDGE DISTANCE, INSTALLATION TORQUE, MAXIMUM IMPACT WRENCH TORQUE RATING AND ADHERENCE TO SIMPSON'S PUBLISHED INSTALLATION INSTRUCTIONS.

SPECIAL INSPECTION AND QUALITY CONTROL/ASSURANCE REQ'TS OF THE STEEL BEAM, HINGE AND HINGE WELDING, FOUND IN THE BOXABL QUALITY CONTROL MANUAL, TO BE BASED ON THE REQ'TS OF IBC SECTION 1704 AND 1705.2.1 AND MODELED ON THE RELEVANT REQ'TS OF ASCE 360-22 CHAPTER N. ALTERNATIVELY, ( OR IN ADDITION ) DESTRUCTIVE TESTING, OBSERVED BY AN INDEPENDENT, 3rd PARTY INSPECTOR, SHALL OCCUR AT REGULAR, ADJUSTABLE INTERVALS AS DETERMINED BY THE ENGINEER AND/OR THE CALIFORNIA DEPT. OF HOUSING & COMMUNITY DEVELOPMENT. ADDITIONAL SPECIAL INSPECTIONS WITH RESPECT TO IBC SECTION 1705.1.1 TO BE AT THE DISCRETION OF THE CALIFORNIA DEPT. OF HOUSING & COMMUNITY DEVELOPMENT.

THESE DRAWINGS REPRESENT THE UNDERSTANDING OF SIP ENGINEERING CONSULTANTS, LLC REGARDING THE CONSTRUCTION DETAILS USED BY BOXABL, INC. IN THIS FACTORY. IF DISCREPANCIES ARE DISCOVERED BETWEEN THESE DRAWINGS AND ACTUAL CONSTRUCTION, THE ENGINEER SHALL BE PROMPTLY NOTIFIED SO THAT HE MAY HAVE THE OPPORTUNITY TO REVISE THE DRAWINGS AND ENGINEERING, IF REQUIRED. FAILURE TO PROMPTLY NOTIFY THE ENGINEER OF SUCH DISCREPANCIES, SHALL RELIEVE THE ENGINEER FROM ANY RESPONSIBILITY OF SUCH FAILURE. ACTION TAKEN WITHOUT THE KNOWLEDGE AND CONSENT OF THE ENGINEER IS BY ENGINEERING CONSULTANTS, LLC IN CONTRADICTION TO THESE DRAWINGS OR THE RECOMMENDATIONS OF THE ENGINEER SHALL BECOME THE RESPONSIBILITY OF THE PARTIES RESPONSIBLE FOR TAKING SUCH ACTION.



**ROOF REQUIREMENTS & LIMITATIONS:**

SEE TABLE 4 ON S1.1 FOR MAXIMUM ALLOWED ROOFING WEIGHTS. HIGHER WEIGHTS MAY BE POSSIBLE, BUT REQUIRES A CUSTOM ANALYSIS BY THE ENGINEER.

SHINGLES OR TILE ATTACHMENT TO ROOF SHEATHING TO BE DESIGNED BY OTHERS FOR A MINIMUM OF 35 psf APPLIED WIND UPLIFT.

ROOFING IN A WILDLAND-URBAN INTERFACE (WUI) TO HAVE A CLASS "A" FIRE RATING PER ASTM E108 OR UL790.

SEE SHEETS S9 THRU S18 FOR MORE INFORMATION ON TAPERED INSULATION ROOFS & OPTIONAL AFTERMARKET ROOF TRUSS REQ'TS.

THESE DRAWINGS SHALL NOT BE USED FOR SITE-SPECIFIC INSTALLATION OR SUBMITTED TO ANY BUILDING DEPARTMENT FOR PERMIT UNLESS FIRST APPROVED BY THE CALIFORNIA DEPT. OF HOUSING & COMMUNITY DEVELOPMENT

THE INSTALLER IS RESPONSIBLE FOR VERIFYING THE WIND, SNOW AND SEISMIC CONDITIONS ARE WITHIN ALLOWABLE LIMITS INDICATED ON SHEETS S1 THRU S1.3, AS WELL AS INVESTIGATING FOR SOIL LIQUIFICATION POTENTIAL, COLLAPSIBLE SOIL, CORROSIVE SOIL OR EXPANSIVE SOIL CONDITIONS - EACH OF WHICH REQUIRES A CUSTOM, SITE-SPECIFIC ENGINEERED FOUNDATION DESIGN

**EXPIRATION:**

THESE DRAWINGS EXPIRE ON AND MUST BE RE-SUBMITTED UPON CALIFORNIA'S ADOPTION OF THE NEXT IBC/IRC, OR THE ENGINEER'S LICENSE EXPIRATION DATE INDICATED BELOW:

EXPIRES 6-30-26

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DATE:	REV:	DESCRIPTION:	* CONFIDENTIAL
4-18-25	1	NOTE CHANGES	



**SIP ENGINEERING CONSULTANTS, LLC**

14845 SW MURRAY SCHOLLS DR., SUITE 110 PMB 306 BEAVERTON, OR 97007

PHONE : 503-664-4178  
Mike@SIPconsultants.com

**SITE-SPECIFIC**

**WIND, SEISMIC, FLOOD CONDITIONS**

TO BE FILLED IN BY THE DEALER/INSTALLER AT EACH SITE FOR LOCAL PERMITTING AFTER THESE DRAWINGS HAVE BEEN PRE-APPROVED FOR STATE-WIDE USE BY THE CALIFORNIA DEPT. OF HOUSING & COMMUNITY DEVELOPMENT

SITE ADDRESS: \_\_\_\_\_

WIND EXPOSURE: \_\_\_\_\_

WIND SPEED: \_\_\_\_\_ mph ALLOWED WIND SPEED: \_\_\_\_\_ mph

SITE SEISMIC S<sub>ms</sub> : \_\_\_\_\_ ALLOWED S<sub>ms</sub> : \_\_\_\_\_

SITE SEISMIC S<sub>s</sub> : \_\_\_\_\_ ALLOWED S<sub>s</sub> : \_\_\_\_\_

SITE GROUND SNOW LOAD : \_\_\_\_\_ psf  
ALLOWED GROUND SNOW LOAD : \_\_\_\_\_ psf

SITE IS ABOVE LOCAL CODE-REQ'D HEIGHT ABOVE THE BASE FLOOD ELEV. (BFE) IF IN A FLOOD HAZARD AREA  N/A

SOIL SUITABILITY CONSIDERED ( SEE NOTES ON S3) AND DISCUSSED WITH OWNER

SITE IS NOT ON A HILL OR WITHIN 1,000 FT. OF AN ESCARPMENT

DEALER/INSTALLER COMPANY : \_\_\_\_\_

PRINTED NAME : \_\_\_\_\_

DATE: \_\_\_\_\_

**LIMITATIONS: WIND - SNOW - SEISMIC**

SEE FOOTNOTE 5 FOR DETERMINATION OF WIND LOADS, SNOW LOADS & SEISMIC FACTORS AT SITE OF INSTALLATION	LOW-PITCH ( 1/2 : 12 ) ROOFS		HIGH PITCH ROOFS GABLE ( 3:12, 6:12, 9:12 ), MONOSLOPE (3:12), HIP (3:12)	
WIND EXPOSURE <sup>1</sup>	B	C	SEE SHEET S1.1 <input type="checkbox"/>	
MAX. ALLOWED <sup>4</sup> WIND SPEED	140 mph	120 mph		
MAXIMUM ALLOWED GROUND SNOW LOAD (Pg) <sup>3</sup>	40 psf			
MAXIMUM ALLOWED SEISMIC S <sub>ms</sub> <sup>5</sup>	3.30 3.1 IF STUCCO USED	2.75 2.58 IF STUCCO USED	SEISMIC CATEGORY A,B, C .75 IF SITE VALUE IS HIGHER USE CAT. D, E	SEISMIC CATEGORY D, E SEE SHEET S1.2
MAXIMUM ALLOWED SEISMIC S <sub>s</sub> <sup>5</sup>			SEISMIC CATEGORY A,B, C .63 IF SITE VALUE IS HIGHER USE CAT. D, E	SEISMIC CATEGORY D, E SEE SHEET S1.2

- EXPOSURE B IS URBAN AND SUBURBAN AREAS, WOODED AREAS, OR OTHER TERRAIN W/ NUMEROUS CLOSELY SPACED OBSTRUCTIONS THAT ARE A TYPE OF SHALLOW CANOPY. THESE CONDITIONS PREVAIL IN THE UPWIND DIRECTION FOR A DISTANCE GREATER THAN 1,000 FT. (SEE TABLE 4 ON S1.1 FOR ROOFING MATERIAL WEIGHT LIMITS). EXPOSURE C IS OPEN TERRAIN W/ SCATTERED OBSTRUCTIONS THAT HAVE HEIGHTS GENERALLY LESS THAN 30 FT. THIS INCLUDES FLAT, OPEN COUNTRY AND GRASSLANDS.
- CASITAS LOCATED ON HILLS OR WITHIN 1,000 FT OF AN ESCARPMENT WILL REQUIRE SPECIAL EVALUATION BY THE STRUCTURAL ENGINEER.
- IF LOCATED TIGHT IN AMONG CONIFER TREES MULTIPLY LOAD BY 0.83
- BASIC ( ULTIMATE ) WIND SPEED AS DEFINED BY THE INTERNATIONAL BUILDING CODE.
- FIND WIND SPEED, GROUND SNOW LOAD, SEISMIC CATEGORY B, SEISMIC S<sub>ms</sub> & S<sub>s</sub> VALUES AT ASCE/HAZARD/TOOL.ORG USING ASCE/SEI 7-16, RISK CATEGORY II, ASSUMED SOIL CLASS "D". VERIFY BASIC (ULTIMATE) WIND AND GROUND SNOW LOAD VALUES WITH THE LOCAL OR COUNTY BUILDING DEPARTMENT. DEALER/INSTALLER IS RESPONSIBLE FOR VERIFYING THE WIND, SNOW & SEISMIC FACTORS ARE WITHIN THE ALLOWABLE LIMITS IN THIS TABLE.

**FOUNDATIONS :**

FOUNDATIONS SHOULD NOT BE LOCATED IN AREAS WHERE SOIL IS SUBJECT TO CORROSION, EXPANSION, LIQUIFICATION OR COLLAPSE - INSTALLER TO VERIFY BEFORE CUSTOMER MAKES A PURCHASE.

THE FOUNDATION DESIGN SHOWN ON S3 IS INTENDED FOR LEVEL GROUND, EXTENDING AT LEAST 6 FT AWAY FROM THE PERIMETER. FOR SLOPED GRADE CONDITIONS, FLOOD CONDITIONS, OR FOR OTHER FOUNDATION TYPES, THE ENGINEER BELOW.

**California Department of Housing and Community Development**

**2-Door Studio Casita**

**Model # BXB-000012**

**DESIGN CRITERIA ( CODE: 2022 CBC ):**

APPLIED LOADS

ROOF LIVE LOAD : 20 psf

SNOW LOAD : SEE TABLE AT LEFT AND SHEET S1.1

ROOF DEAD LOAD :

SIP ROOF: 4 psf + 3 psf ALLOTTED FOR SITE INSTALLED EPDM.

FOR HIGH-PITCHED ROOFS THE ADDITIONAL WEIGHT VARIES. SEE TABLE 4 ON S1.1 FOR ROOFING MATERIAL WEIGHT LIMITS.

FLOOR LIVE LOAD : 40 psf FLOOR DEAD LOAD: 5 psf

BASIC WIND SPEED : SEE LIMITS IN TABLE AT LEFT.

(ASD) q<sub>h</sub> = q<sub>z</sub> = 16.0 psf (MAX) FOR LOW-PITCH ROOFS = 14.7 psf (MAX) FOR HIGH-PITCH ROOFS

ASCE7-16 26.10.2

SEISMIC FACTORS:

I = 1 SEE TABLE AT LEFT FOR S<sub>ms</sub> & S<sub>s</sub> LIMITS

SITE CLASS = D (default) Fa = 1.2 ( MINIMUM )

SEISMIC DESIGN CATEGORY = E ( MAX. ALLOWED ).

BASIC SEISMIC FORCE RESISTING SYSTEM = LIGHT-FRAMED WALLS w/ SHEAR PANELS OF MGO & STEEL

R = 6.5 PER ICC-ESR #4725

ANALYSIS PROCEDURE: EQUIV. LATERAL FORCE

**STAMP OF APPROVAL**

Approved For State of California Factory Built Housing

By: MA Consulting & Engineering MAACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: 20170623

These plans have been approved pursuant to the provisions of the State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 1, Sub-Chapter 1.

Approval herein does not constitute or approve any condition or deviation from State laws or valid local ordinances nor is it applicable to movement of plans over boundaries, except noted on site plans.

Generic Foundation Design Approved

Occupancy: Res/L, Wind: Exp, Seismic Cat: RB, 30 psf, 11F, E, E

Plan Approval No: MAC-FBH 10153

By: **939shane**

Approval Date: 5/26/2025  
Expiration Date: 1/11/2028

CLIENT: **BOXABL INC.**  
5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA  
+1(702) 500-9000 HELLO@BOXABL.COM



MODEL: 2 DOOR CASITA

MODEL #: BXB-000012

**CALIFORNIA**

UNITS:	FT-IN
SHEET FORMAT:	ARCH C
SHEET SCALE:	NONE
CREATED BY:	MN
RELEASE DATE:	11/18/2024
SHEET:	<b>S1</b>

MAXIMUM ALLOWED TOTAL WT OF SOLAR PANEL SYSTEM ≤ 3,025 lb

12  
9

ROOF TRUSSES DESIGNED, SUPPLIED, & SITE-INSTALLED BY OTHERS. SEE S9 to S17

MAXIMUM ALLOWED TOTAL WT OF SOLAR PANEL SYSTEM ≤ 2,700 lb

12  
6

ROOF TRUSSES DESIGNED, SUPPLIED, & SITE-INSTALLED BY OTHERS. SEE S9 to S17

**TABLE 1**  
9:12 GABLE ROOF

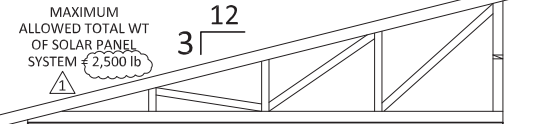
CALIFORNIA - MAX. ALLOWED BASIC ( ULTIMATE) WIND SPEED ( mph)											
GROUND 1 SNOW WT	3-TAB ASPHALT SHINGLES		CONCRETE TILE		CLAY TILE		METAL ROOF w/ SLIDING SNOW		METAL ROOF SNOW SLIDE RESTRAINED		EXPOSURE C
	EXPOSURE B	EXPOSURE C	EXPOSURE B	EXPOSURE C	EXPOSURE B	EXPOSURE C	EXPOSURE B	EXPOSURE C	EXPOSURE B	EXPOSURE C	
0-30	135	115	135	115	135	115	135	115	135	115	
40	134	110	120	98	131	107	135	115	135	115	
50	121	99	105	86	117	96	135	115	131	107	
60	106	87	89	73	103	84	135	115	118	97	
70	90	74	NOT ALLOWED		85	70	135	115	104	85	
80	NOT ALLOWED		NOT ALLOWED		NOT ALLOWED		135	111	NOT ALLOWED		
90	NOT ALLOWED		NOT ALLOWED		NOT ALLOWED		128	105	NOT ALLOWED		
100	NOT ALLOWED		NOT ALLOWED		NOT ALLOWED		121	99	NOT ALLOWED		
110	NOT ALLOWED		NOT ALLOWED		NOT ALLOWED		114	93	NOT ALLOWED		
120	NOT ALLOWED		NOT ALLOWED		NOT ALLOWED		105	86	NOT ALLOWED		
130	NOT ALLOWED		NOT ALLOWED		NOT ALLOWED		95	78	NOT ALLOWED		
140	NOT ALLOWED		NOT ALLOWED		NOT ALLOWED		NOT ALLOWED		NOT ALLOWED		

1 IF LOCATED TIGHT IN AMONG CONIFER TREES MULTIPLY THE SITE SNOW LOAD BY 1.2 BEFORE USING THE TABLE.

**TABLE 2**  
6:12 GABLE ROOF

CALIFORNIA - MAX. ALLOWED BASIC ( ULTIMATE) WIND SPEED ( mph)											
GROUND 1 SNOW WT	3-TAB ASPHALT SHINGLES		CONCRETE TILE		CLAY TILE		METAL ROOF w/ SLIDING SNOW		METAL ROOF SNOW SLIDE RESTRAINED		EXPOSURE C
	EXPOSURE B	EXPOSURE C	EXPOSURE B	EXPOSURE C	EXPOSURE B	EXPOSURE C	EXPOSURE B	EXPOSURE C	EXPOSURE B	EXPOSURE C	
0-30	135	115	135	115	135	115	135	115	135	115	
35	135	115	132	108	135	115	135	115	135	115	
40	135	115	126	103	134	112	135	115	135	115	
45	132	108	120	98	131	107	135	115	135	115	
55	118	97	105	86	97	118	135	115	131	107	
65	105	86	89	73	104	85	135	115	118	97	
75	89	73	NOT ALLOWED		NOT ALLOWED		134	110	104	85	
85	NOT ALLOWED		NOT ALLOWED		NOT ALLOWED		125	102	NOT ALLOWED		
115	NOT ALLOWED		NOT ALLOWED		NOT ALLOWED		94	77	NOT ALLOWED		
130	NOT ALLOWED		NOT ALLOWED		NOT ALLOWED		NOT ALLOWED		NOT ALLOWED		

1 IF LOCATED TIGHT IN AMONG CONIFER TREES MULTIPLY THE SITE SNOW LOAD BY 1.2 BEFORE USING THE TABLE.



**TABLE 3**  
**3:12 MONOSLOPE ROOF**

**CALIFORNIA MAX. ALLOWED BASIC ( ULTIMATE) WIND SPEED ( mph)**

GROUND 1 SNOW WT	3-TAB ASPHALT SHINGLES		CONCRETE TILE		CLAY TILE		STANDING SEAM METAL	
	EXPOSURE B	EXPOSURE C	EXPOSURE B	EXPOSURE C	EXPOSURE B	EXPOSURE C	EXPOSURE B	EXPOSURE C
0-30	135	115	135	115	135	115	135	115
40	135	115	128	105	135	115	135	115
50	126	103	116	95	126	103	134	113
60	115	94	101	83	114	93	125	102
70	96	79	NOT ALLOWED		98	80	112	92
80	NOT ALLOWED		NOT ALLOWED		NOT ALLOWED		95	78
90	NOT ALLOWED		NOT ALLOWED		NOT ALLOWED		NOT ALLOWED	

1 IF LOCATED TIGHT IN AMONG CONIFER TREES MULTIPLY THE SITE SNOW LOAD BY 1.2 BEFORE USING THE TABLE.

**TABLE 4**  
CALIFORNIA GROUND SNOW LOAD LIMITS (psf)<sup>5,6</sup>  
BASED ON TRUSS BEARING STRESS OR WALL STRENGTH LIMITATIONS<sup>1</sup>

TRUSS SPACING	3-TAB ASPHALT SHINGLES Weight = 3 psf (MAX)		CONCRETE TILE Weight = 11 psf (MAX)		CLAY TILE Weight = 6.5 psf (MAX)		METAL ROOF w/ SLIDING SNOW Weight = 1.75 psf (MAX)		METAL ROOF SNOW SLIDE RESTRAINED Weight = 1.75 psf (MAX)	
	24"oc	16"oc	24"oc	16"oc	24"oc	16"oc	24"oc	16"oc	24"oc	16"oc
9:12 GABLE	36	68	28	60	35	68	75	130	44	77
6:12 GABLE	40	73 <sup>4</sup>	32	65	39	73 <sup>4</sup>	68	115 <sup>3</sup>	47	80 <sup>4</sup>
3:12 GABLE	41	75	34	68	41	74 <sup>4</sup>	48	81 <sup>4</sup>	48	81 <sup>4</sup>
3:12 QUAD HIP	41	63 <sup>2</sup>	34	56 <sup>2</sup>	41	63 <sup>2</sup>	48 <sup>2</sup>	70 <sup>2</sup>	48 <sup>2</sup>	70 <sup>2</sup>
3:12 MONOSLOPE	41	74	34	67	41	74	48	81	48	81

1 WALL STRENGTH LIMITS ARE BASED ON WIND SPEED LIMIT OF 93 mph, EXPOSURE "B". WHERE WIND SPEEDS ARE GREATER AND/OR FOR WIND EXPOSURE "C" CONDITIONS, THE ALLOWABLE SNOW LOADS MAY BE SMALLER. (SEE WIND SPEED vs SNOW LOAD TABLES). VALUES MAY DIFFER FROM THE TRUSS MFR'S MORE THOROUGH ANALYSIS, AND, IF LOWER, CAN BE INCREASED WITH ADD-ON BEARING BLOCKS DESIGNED BY THE TRUSS MFR, BUT SHALL NOT EXCEED THE TABULATED VALUES ABOVE, OR THE VALUES FOUND IN THE WIND SPEED vs SNOW LOAD TABLES.

- 2 GROUND SNOW LOADS > 46.7 psf WILL REQUIRE A TRUSS DESIGN THAT IS NOT CURRENTLY INCLUDED IN THE TRUSS MFR'S AVAILABLE PRE-ENGINEERED OPTIONS.
- 3 GROUND SNOW LOADS > 98 psf (ADJUSTED TO 70 psf DUE TO SLIDING) WILL REQUIRE A TRUSS DESIGN THAT IS NOT CURRENTLY INCLUDED IN THE TRUSS MFR'S AVAILABLE PRE-ENGINEERED OPTIONS ( IF ORDERING TRUSSES THRU BOXABL, INC.).
- 4 GROUND SNOW LOADS > 70 psf WILL REQUIRE A TRUSS DESIGN THAT IS NOT CURRENTLY INCLUDED IN THE TRUSS MFR'S AVAILABLE PRE-ENGINEERED OPTIONS.
- 5 IF LOCATED TIGHT IN AMONG CONIFER TREES MULTIPLY SNOW LOAD LIMITS BY 0.8
- 6 CASITAS MUST BE LOCATED FAR ENOUGH FROM TALLER ADJACENT BUILDINGS SO THAT SNOW DRIFT OR SLIDING SNOW BUILD-UP DOES NOT OCCUR.
- 7 THE AREA SURROUNDING THE CASITA MUST BE CLEAR OF ANY OBSTRUCTIONS OR ADJACENT STRUCTURES THAT COULD LIMIT THE AMOUNT OF SNOW THAT COULD SLIDE OFF THE ROOF.
- 8 ROOFING MATERIALS IN A WILDLAND-URBAN INTERFACE (WUI) MUST HAVE A CLASS "A" FIRE RATING BY ASTM E1308 OR UL790.

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**TABLE 5**  
3:12 GABLE or QUAD HIP ROOF

CALIFORNIA MAX. ALLOWED BASIC ( ULTIMATE) WIND SPEED ( mph)											
GROUND 1 SNOW WT	3-TAB ASPHALT SHINGLES		CONCRETE TILE		CLAY TILE		STANDING SEAM METAL				
	EXPOSURE B	EXPOSURE C	EXPOSURE B	EXPOSURE C	EXPOSURE B	EXPOSURE C	EXPOSURE B	EXPOSURE C			
0-30	135	115	135	115	135	115	135	115			
40	135	115	131	107	135	115	135	115			
50	128	105	116	95	128	105	134	114			
60	116	95	103	84	115	94	127	98			
70	101	83	NOT ALLOWED		99	81	114	93			
80	NOT ALLOWED		NOT ALLOWED		NOT ALLOWED		98	80			
90	NOT ALLOWED		NOT ALLOWED		NOT ALLOWED		NOT ALLOWED				

1 IF LOCATED TIGHT IN AMONG CONIFER TREES MULTIPLY THE SITE SNOW LOAD BY 1.2 BEFORE USING THE TABLE.

2 ROOF TRUSSES WITH GROUND SNOW LOAD > 46 psf WILL REQUIRE A SPECIAL ORDER FROM THE TRUSS MANUFACTURER ( IF USING US INDUSTRIES, INC. STANDARD BOXABL DESIGNS).

SITES THAT EXCEED THE LIMITS IN THESE TABLES MIGHT BE STILL BE ACCEPTABLE IF THE COMBINATION OF SOLAR PANEL SYSTEM WEIGHT & ROOF MATERIAL WEIGHTS ( SEE GROUND SNOW LOAD LIMITS TABLE) ARE LESS THAN THOSE INDICATED. CONTACT BOXABL OR THE ENGINEER IF A SITE-SPECIFIC ENGINEERING ANALYSIS IS DESIRED.

## WIND vs SNOW LIMITS IN CALIFORNIA

### ATTN: DEALER / INSTALLER

FIND BASIC (ULTIMATE) WIND SPEEDS & SNOW LOADS AT [ASCEHAZARDOOL.ORG](http://ASCEHAZARDOOL.ORG) USING: ASCE/SEI 7-16 RISK CATEGORY II

VERIFY VALUES WITH THE AUTHORITY HAVING JURISDICTION ( IF THEY ONLY PROVIDE "NOMINAL" WIND SPEEDS, MULTIPLY BY 1.29 TO GET "ULTIMATE" SPEEDS. IF THEY ONLY PROVIDE "ROOF" SNOW LOADS, MULTIPLY BY 1.43 TO GET "GROUND SNOW LOADS").

**EXPOSURE B** IS URBAN AND SUBURBAN AREAS, WOODED AREAS, OR OTHER TERRAIN w/ NUMEROUS, CLOSELY SPACED OBSTRUCTIONS THAT HAVE A SIZE OF A SINGLE-FAMILY DWELLING. THESE CONDITIONS PREVAIL IN THE UPWIND DIRECTION FOR A DISTANCE GREATER THAN 1,500 FT. LARGE, NEARBY FIELDS OR PARKING LOTS MAY TRIGGER EXPOSURE "C". IF UNSURE, USE EXPOSURE "C".

**EXPOSURE C** IS OPEN TERRAIN w/ SCATTERED OBSTRUCTIONS THAT HAVE HEIGHTS GENERALLY LESS THAN 30 FT. THIS INCLUDES FLAT, OPEN COUNTRY AND GRASSLANDS.

**EXPOSURE D** ( NOT ALLOWED ) IS FLAT, UNOBSTRUCTED AREAS ( MUD FLATS, SALT FLATS ) AND WATER SURFACES. THESE CONDITIONS PREVAIL IN THE UPWIND DIRECTION FOR A DISTANCE > 5,000 FT. THIS EXPOSURE ALSO APPLIES WHERE EXPOSURE B OR C OCCURS WITHIN THE FIRST 600 FT OF THE SITE.

CASITAS LOCATED ON HILLS OR WITHIN 1,000 FT OF AN ESCARPMENT WILL REQUIRE SPECIAL EVALUATION BY THE STRUCTURAL ENGINEER.

**STAMP OF APPROVAL**

Approved For State of California  
**Factory Built Housing**

By  
MA Consulting & Engineering MAECE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: 20170423

These plans have been approved pursuant to the provisions of the State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 9, Subchapter 1.  
Approval herein does not constitute an approval or certification or endorsement from State laws or valid local ordinances nor is it applicable to movement of plans over jurisdiction, except made on site review.

**Generic Foundation Design Approved**  
Company: Boxabl, Inc. | Wind: Eng | Seismic: Eng  
RS: 30 psf | 118' C | E  
Plan Approval No: **MAC-FBH 10153**  
By: **9393shen@boxabl**

Approval Date: 5/26/2025  
Expiration Date: 1/11/2028

ROOF TRUSSES DESIGNED,  
SUPPLIED, & SITE-INSTALLED  
BY OTHERS. SEE S9 to S17

DATE:	REV:	DESCRIPTION:	* CONFIDENTIAL
4-18-25	1	MISC. CHANGES	

MAECE  
Mike Nelson  
CIVIL ENGINEER  
STATE OF CALIFORNIA  
EXP. 6-30-26  
5-18-25

**SIP ENGINEERING CONSULTANTS, LLC**

14845 SW MURRAY SCHOLLS DR,  
SUITE 110 PMB 306  
BEAVERTON, OR 97007  
PHONE: 503-664-4178  
Mike@SIPconsultants.com

UNITS:	FT-IN
SHEET FORMAT:	ARCH C
SHEET SCALE:	NONE
CREATED BY:	MN
RELEASE DATE:	11/18/2024
SHEET:	<b>S1.1</b>

MODEL: 2 DOOR CASITA  
MODEL #: BXB-000012  
**CALIFORNIA**

CLIENT: **BOXABL INC.**  
5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA  
+1(702) 500-9000 HELLO@BOXABL.COM



**9:12 GABLE ROOF** **NO STUCCO OR SIDING**  
(EXCEPT SIDING ALLOWED ON GABLE END TRUSSES)

**CALIFORNIA SEISMIC LIMITS FOR HIGH PITCH ROOFS IN CATEGORY D & E**

GROUND SNOW (in.)	3-TAB ASPHALT SHINGLES		CONCRETE TILE		CLAY TILE		METAL ROOF w/ SLIDING SNOW		METAL ROOF SNOW SLIDE RESTRAINED	
	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT
0-20	1.73	1.44	1.46	1.22	1.70	1.42	2.08	1.73	2.08	1.73
30	1.73	1.44	1.42	1.18	1.79	1.42	2.08	1.73	2.08	1.73
40	1.67	1.39	1.36	1.13	1.62	1.35	2.08	1.73	2.08	1.73
50	1.57	1.31	1.28	1.07	1.52	1.27	2.08	1.73	1.90	1.58
60	1.46	1.22	1.20	1.00	1.43	1.19	2.08	1.73	1.78	1.48
70	NOT ALLOWED	NOT ALLOWED	1.33	1.11	2.08	1.73	1.65	1.38		
80	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.95	1.63	1.73	NOT ALLOWED			
90	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.87	1.56	1.73	NOT ALLOWED			
100	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.81	1.51	1.73	NOT ALLOWED			
110	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.73	1.44	1.73	NOT ALLOWED			
120	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.66	1.38	1.73	NOT ALLOWED			
130	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.58	1.32	1.73	NOT ALLOWED			
140	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.73	NOT ALLOWED			

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**9:12 GABLE ROOF** **1-COAT STUCCO (5 psf MAX.)**

**CALIFORNIA SEISMIC LIMITS FOR HIGH PITCH ROOFS IN CATEGORY D & E**

GROUND SNOW (in.)	3-TAB ASPHALT SHINGLES		CONCRETE TILE		CLAY TILE		METAL ROOF w/ SLIDING SNOW		METAL ROOF SNOW SLIDE RESTRAINED	
	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT
0-20	1.44	1.20	1.25	1.04	1.43	1.19	1.69	1.41	1.69	1.41
30	1.44	1.20	1.22	1.02	1.43	1.19	1.69	1.41	1.69	1.41
40	1.41	1.18	1.22	1.02	1.39	1.16	1.69	1.41	1.69	1.41
50	1.35	1.13	1.16	.97	1.30	1.08	1.69	1.41	1.58	1.32
60	1.21	1.01	1.07	0.89	1.26	1.05	1.69	1.41	1.47	1.23
70	NOT ALLOWED	NOT ALLOWED	1.16	.97	1.69	1.41	1.38	1.15		
80	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.59	1.33	1.44	NOT ALLOWED			
90	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.54	1.28	1.44	NOT ALLOWED			
100	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.48	1.23	1.44	NOT ALLOWED			
110	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.43	1.19	1.44	NOT ALLOWED			
120	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.38	1.15	1.44	NOT ALLOWED			
130	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.33	1.11	1.44	NOT ALLOWED			
140	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.44	NOT ALLOWED			

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**9:12 GABLE ROOF** **HARDI® PANEL SIDING**  
**HARDI® PLANK SIDING**

**CALIFORNIA SEISMIC LIMITS FOR HIGH PITCH ROOFS IN CATEGORY D & E**

GROUND SNOW (in.)	3-TAB ASPHALT SHINGLES		CONCRETE TILE		CLAY TILE		METAL ROOF w/ SLIDING SNOW		METAL ROOF SNOW SLIDE RESTRAINED	
	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT
0-20	1.49	1.24	1.32	1.10	1.52	1.27	1.81	1.51	1.81	1.51
30	1.49	1.24	1.30	1.08	1.52	1.27	1.81	1.51	1.81	1.51
40	1.42	1.18	1.28	1.07	1.48	1.23	1.81	1.51	1.81	1.51
50	1.35	1.13	1.18	.98	1.37	1.14	1.81	1.51	1.69	1.51
60	1.27	1.06	1.11	.93	1.29	1.08	1.81	1.51	1.57	1.31
70	NOT ALLOWED	NOT ALLOWED	1.21	1.01	1.81	1.51	1.47	1.23		
80	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.73	1.44	1.44	NOT ALLOWED			
90	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.64	1.37	1.44	NOT ALLOWED			
100	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.58	1.32	1.44	NOT ALLOWED			
110	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.53	1.28	1.44	NOT ALLOWED			
120	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.47	1.23	1.44	NOT ALLOWED			
130	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.41	1.18	1.44	NOT ALLOWED			
140	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.44	NOT ALLOWED			

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THE SEISMIC FACTORS IN THE TABLES ASSUME A SOIL SITE CLASS OF "D". IF A GEOTECHNICAL ANALYSIS YIELDS A SITE CLASS OF "C" OR LESS, THEN THE SITE SEISMIC S<sub>ms</sub> & S<sub>s</sub> FACTORS WILL BE ABOUT 84% OF THOSE UNDER SITE CLASS "D" INQUIRE WITH A LOCAL GEOTECHNICAL ENGINEER ABOUT THE LIKELIHOOD OF A SITE CLASS "B".

ALSO, SITES THAT EXCEED THE LIMITS IN THESE TABLES MIGHT BE STILL BE ACCEPTABLE IF THE COMBINATION OF SOLAR PANEL SYSTEM WEIGHT & ROOF MATERIAL WEIGHTS (SEE GROUND SNOW LOAD LIMITS TABLE) ARE LESS THAN THOSE INDICATED. CONTACT BOXABL OR THE ENGINEER IF A SITE-SPECIFIC ENGINEERING ANALYSIS IS DESIRED.

SEE ALSO SHEET S1.3 FOR HIGHER ALLOWABLE S<sub>ms</sub> & S<sub>s</sub> IF SOLAR PANELS ARE NOT USED AND/OR RE-ROOF ALLOWANCE FOR ASPHALT SHINGLES IS NOT USED.

**6:12 GABLE ROOF** **NO STUCCO OR SIDING**  
(EXCEPT SIDING ALLOWED ON GABLE END TRUSSES)

**CALIFORNIA SEISMIC LIMITS FOR HIGH PITCH ROOFS IN CATEGORY D & E**

GROUND SNOW (in.)	ASPHALT SHINGLES		CONCRETE TILE		CLAY TILE		METAL ROOF w/ SLIDING SNOW		METAL ROOF SNOW SLIDE RESTRAINED	
	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT
0-30	1.82	1.52	1.60	1.33	1.85	1.54	2.24	1.87	2.24	1.87
40	1.78	1.48	1.55	1.29	1.81	1.51	2.24	1.87	2.24	1.87
50	1.68	1.40	1.46	1.22	1.71	1.43	2.24	1.87	2.12	1.77
60	1.57	1.31	1.36	1.13	1.60	1.33	2.24	1.87	1.97	1.64
70	1.45	1.21	1.28	1.07	1.48	1.23	2.12	1.77	1.83	1.53
80	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	2.03	1.69	1.68	1.40			
90	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.93	1.61	1.68	1.40			
100	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.83	1.53	1.68	1.40			
110	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.73	1.44	1.68	1.40			
120	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.68	1.40			

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**6:12 GABLE ROOF** **1-COAT STUCCO (5 psf MAX.)**

**CALIFORNIA SEISMIC LIMITS FOR HIGH PITCH ROOFS IN CATEGORY D & E**

GROUND SNOW (in.)	ASPHALT SHINGLES		CONCRETE TILE		CLAY TILE		METAL ROOF w/ SLIDING SNOW		METAL ROOF SNOW SLIDE RESTRAINED	
	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT
0-30	1.53	1.28	1.37	1.14	1.56	1.30	1.83	1.53	1.83	1.53
40	1.49	1.24	1.32	1.10	1.51	1.26	1.83	1.53	1.83	1.52
50	1.41	1.18	1.35	1.04	1.43	1.19	1.83	1.53	1.71	1.43
60	1.33	1.11	1.18	.98	1.35	1.13	1.83	1.53	1.63	1.36
70	1.25	1.04	1.12	0.92	1.27	1.06	1.72	1.43	1.51	1.26
80	NOT ALLOWED	NOT ALLOWED	1.05	0.88	1.65	1.38	1.41	1.18		
90	NOT ALLOWED	NOT ALLOWED	1.01	0.85	1.58	1.32	1.41	1.18		
100	NOT ALLOWED	NOT ALLOWED	1.01	0.85	1.51	1.26	1.41	1.18		
110	NOT ALLOWED	NOT ALLOWED	1.01	0.85	1.44	1.20	1.41	1.18		
120	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.44	1.20	1.41	1.18		

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**6:12 GABLE ROOF** **HARDI® PANEL SIDING**  
**HARDI® PLANK SIDING**

**CALIFORNIA SEISMIC LIMITS FOR HIGH PITCH ROOFS IN CATEGORY D & E**

GROUND SNOW (in.)	ASPHALT SHINGLES		CONCRETE TILE		CLAY TILE		METAL ROOF w/ SLIDING SNOW		METAL ROOF SNOW SLIDE RESTRAINED	
	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT
0-30	1.68	1.40	1.45	1.21	1.66	1.38	1.96	1.63	1.96	1.63
40	1.64	1.37	1.42	1.18	1.62	1.35	1.96	1.63	1.96	1.63
50	1.55	1.29	1.31	1.09	1.52	1.27	1.96	1.63	1.83	1.53
60	1.46	1.22	1.23	1.03	1.43	1.19	1.96	1.63	1.72	1.43
70	1.36	1.13	1.14	0.96	1.34	1.12	1.85	1.54	1.61	1.34
80	NOT ALLOWED	NOT ALLOWED	1.07	0.90	1.77	1.48	1.50	1.25		
90	NOT ALLOWED	NOT ALLOWED	1.07	0.90	1.69	1.41	1.50	1.25		
100	NOT ALLOWED	NOT ALLOWED	1.07	0.90	1.61	1.34	1.50	1.25		
110	NOT ALLOWED	NOT ALLOWED	1.07	0.90	1.53	1.28	1.50	1.25		
120	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.53	1.28	1.50	1.25		

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**ROOF TRUSSES DESIGNED, SUPPLIED, & SITE-INSTALLED BY OTHERS**

**3:12 GABLE ROOF MONOSLOPE ROOF** **NO STUCCO OR SIDING**  
(EXCEPT SIDING ALLOWED ON GABLE END TRUSSES)

**CALIFORNIA SEISMIC LIMITS FOR HIGH PITCH ROOFS IN CATEGORY D & E**

GROUND SNOW (in.)	ASPHALT SHINGLES		CONCRETE TILE		CLAY TILE		STANDING SEAM METAL	
	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT
0-30	1.98	1.65	1.69	1.41	1.95	1.63	2.34	1.95
40	1.98	1.65	1.64	1.37	1.95	1.63	2.34	1.95
50	1.81	1.51	1.50	1.25	1.76	1.47	2.16	1.80
60	1.68	1.40	1.40	1.17	1.65	1.38	2.00	1.68
70	1.56	1.30	1.30	1.08	1.53	1.28	1.87	1.56
80	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.72	1.43	1.43	1.43	
90	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	NOT ALLOWED	1.72	1.43	1.43	

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**3:12 GABLE ROOF MONOSLOPE ROOF** **1-COAT STUCCO (5 psf MAX.)**

**CALIFORNIA SEISMIC LIMITS FOR HIGH PITCH ROOFS IN CATEGORY D & E**

GROUND SNOW (in.)	ASPHALT SHINGLES		CONCRETE TILE		CLAY TILE		STANDING SEAM METAL	
	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT
0-30	1.63	1.36	1.42	1.18	1.61	1.34	1.87	1.56
40	1.63	1.36	1.39	1.16	1.61	1.34	1.87	1.56
50	1.53	1.28	1.29	1.08	1.48	1.23	1.74	1.45
60	1.41	1.18	1.22	1.02	1.39	1.16	1.64	1.37
70	1.33	1.11	1.11	0.92	1.31	1.09	1.54	1.28
80	NOT ALLOWED	NOT ALLOWED	1.11	0.92	1.44	1.20	1.54	1.28
90	NOT ALLOWED	NOT ALLOWED	1.11	0.92	1.44	1.20	1.54	1.28

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**3:12 GABLE ROOF MONOSLOPE ROOF** **HARDI® PANEL SIDING**  
**HARDI® PLANK SIDING**

**CALIFORNIA SEISMIC LIMITS FOR HIGH PITCH ROOFS IN CATEGORY D & E**

GROUND SNOW (in.)	ASPHALT SHINGLES		CONCRETE TILE		CLAY TILE		STANDING SEAM METAL	
	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT	S <sub>WS</sub> LIMIT	S <sub>S</sub> LIMIT
0-30	1.69	1.41	1.51	1.26	1.71	1.43	2.01	1.68
40	1.68	1.41	1.47	1.23	1.71	1.43	2.01	1.68
50	1.54	1.28	1.36	1.13	1.57	1.31	1.97	1.56
60	1.45	1.21	1.28	1.07	1.47	1.23	1.76	1.47
70	1.36	1.13	1.14	0.96	1.38	1.15	1.65	1.38
80	NOT ALLOWED	NOT ALLOWED	1.07	0.90	1.53	1.28	1.65	1.38
90	NOT ALLOWED	NOT ALLOWED	1.07	0.90	1.53	1.28	1.65	1.38

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**3:12 QUAD HIP ROOF** **NO STUCCO OR SIDING**  
(EXCEPT SIDING ALLOWED ON GABLE END TRUSSES)

**CALIFORNIA SEISMIC LIMITS FOR HIGH PITCH ROOFS IN CATEGORY D & E**

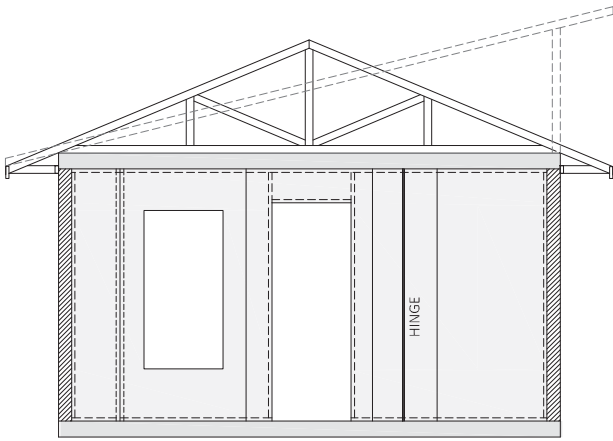
GROUND SNOW (in.)	ASPHALT SHINGLES		CONCRETE TILE		CLAY TILE	
-------------------	------------------	--	---------------	--	-----------	--

4

3

2

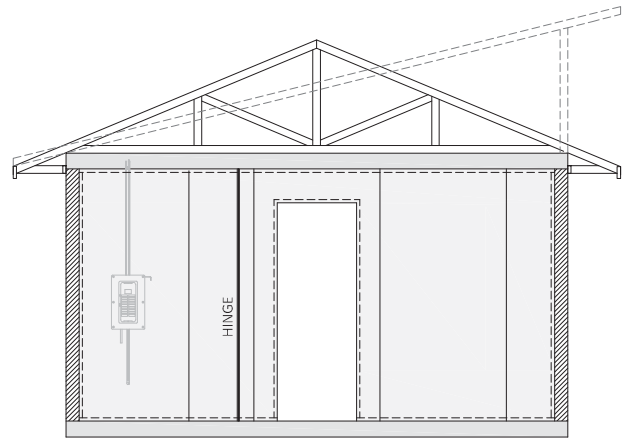
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FRONT DOOR SIDE

**HIGH-PITCHED ROOFS**  
**USING PRE-ENGINEERED ROOF TRUSS, SUPPLIED & SITE INSTALLED BY OTHERS.**  
 ( REQ'D FOR SNOW LOADS EXCEEDING THE LOW PITCH ROOF LIMIT SPECIFIED ON SHEET S1 )

SEE S9 THRU S17



BACK SIDE

# ALLOWABLE ACCESSORY OPTIONS

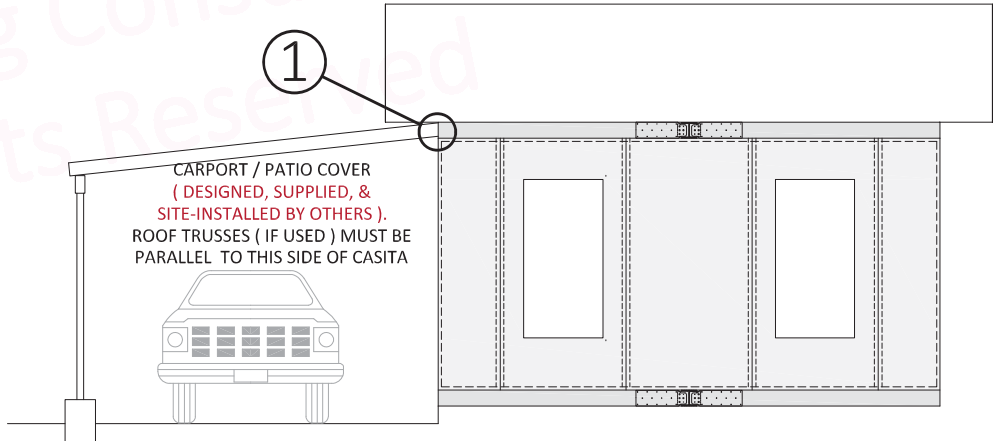
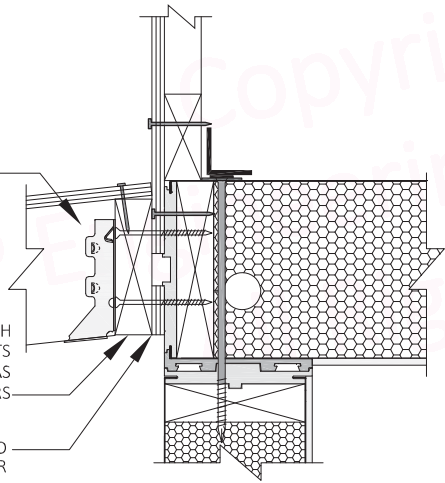
SEE ARCHITECTURAL DRAWINGS FOR ADD'L INFORMATION

CARPORIT JOISTS & HANGER DESIGNED, SUPPLIED, AND SITE INSTALLED BY OTHERS

2 x LEDGER OF SAME DEPTH AS CARPORT JOISTS w/ (2) ROWS OF SCREWS AS DESIGNED BY OTHERS

1/2" PW GLUED TO LEDGER

① CARPORT ROOF-TO-CASITA CONN.



CARPORIT / PATIO COVER ( DESIGNED, SUPPLIED, & SITE-INSTALLED BY OTHERS ). ROOF TRUSSES ( IF USED ) MUST BE PARALLEL TO THIS SIDE OF CASITA

LEFT SIDE

**STAMP OF APPROVAL**

Approved For State of California  
 Factory Built Housing

By  
 MA Consulting & Engineering MACE, LLC,  
 Third Party Design Approval Agency (DAA)  
 Certificate Number: 20170623

These plans have been approved pursuant to the provisions of The State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 15, Sub-Chapter 1. Approval herein does not constitute or approve any condition or deviation from State laws or valid local ordinances nor is it applicable to movement of units over highways, county roads or city streets.

Generic Foundation Design Approved

Occupancy: Res/LL    Wind: Exp    Seismic: Ctr  
 RS    30 psf    11F    E

Plan Approval No.: **MAC-FBH 10153**  
 By: *935hshw*  
 Approval Date: 5/26/2025  
 Expiration Date: 1/11/2028

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EXPIRES 6-30-26

DATE:	REV:	DESCRIPTION:

**\* CONFIDENTIAL**

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**SIP ENGINEERING CONSULTANTS, LLC**

14845 SW MURRAY SCHOLLS DR., SUITE 110 PMB 306 BEAVERTON, OR 97007  
 PHONE : 503-664-4178  
 Mike@SIPconsultants.com

UNITS:	FT-IN
SHEET FORMAT:	ARCH C
SHEET SCALE:	NONE
CREATED BY:	MN
RELEASE DATE:	11/18/2024
SHEET:	<b>S1.4</b>

**MODEL: 2 DOOR CASITA**

MODEL #: **BXB-000012**

**CALIFORNIA**

CLIENT: **BOXABL INC.**

5345 EAST NORTH BELT ROAD  
 NORTH LAS VEGAS, NV 89115, USA

+1(702) 500-9000    HELLO@BOXABL.COM

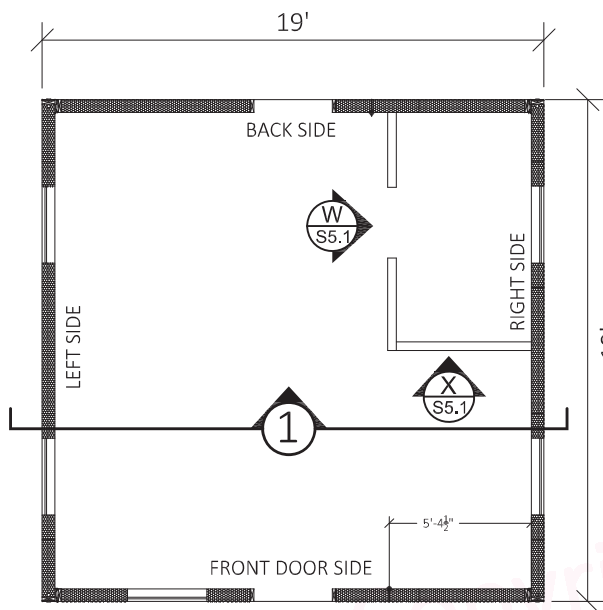


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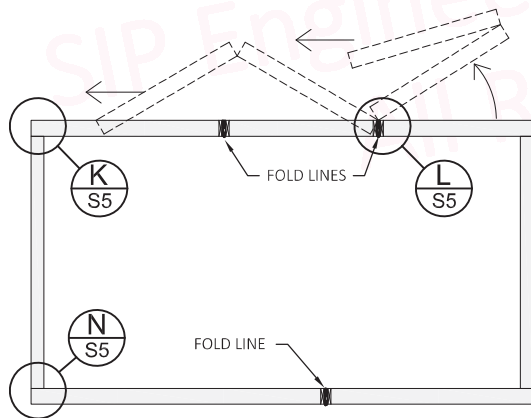
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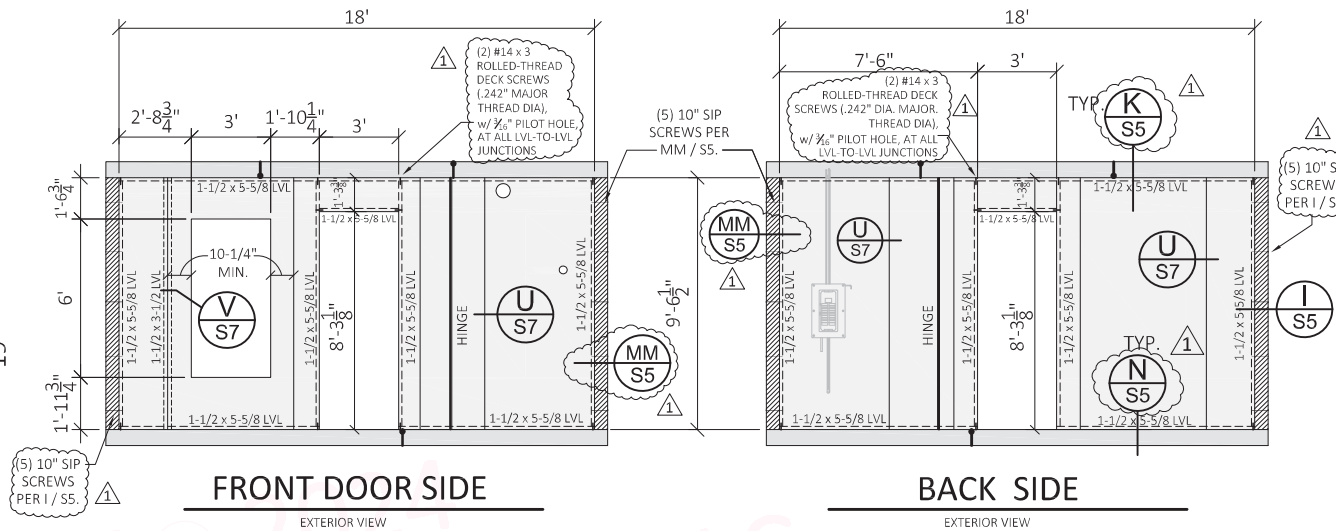
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WALL PLAN

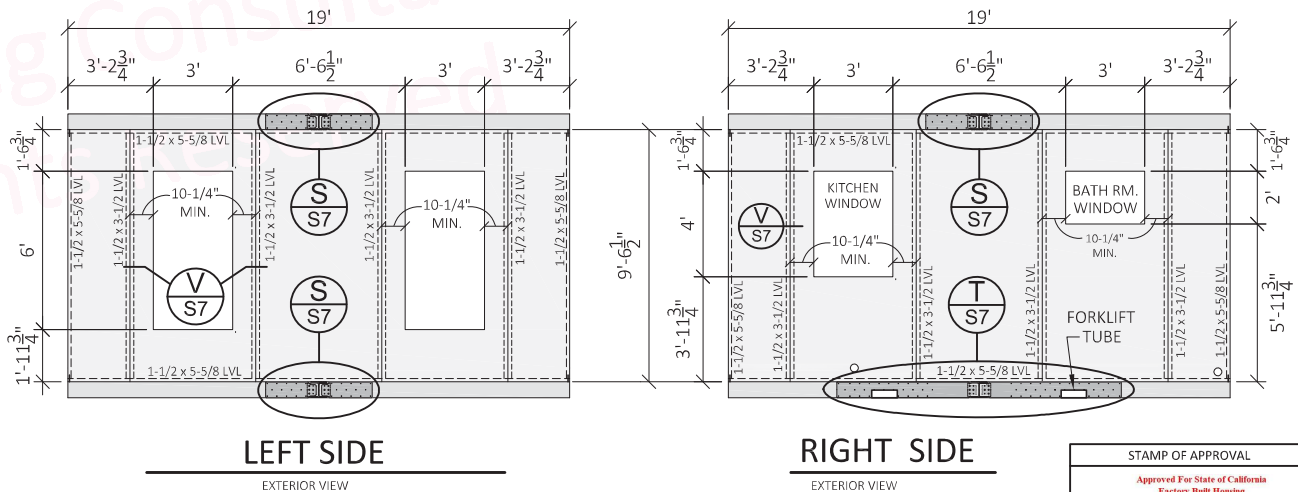


SECTION 1



FRONT DOOR SIDE

BACK SIDE



LEFT SIDE

RIGHT SIDE

- NOTES: 1. EXCEPT FOR THE 19' OVERALL DIMENSIONS, ALL OTHERS HAVE A 1/4" +/- TOLERANCE.  
 2. ROUND HOLES SHOWN ARE APPROX. IN SIZE AND LOCATION.  
 3. LVL TO HAVE A MIN. FLEXURAL STRENGTH, Fb = 2,800 psi, AND MIN. MODULUS OF ELASTICITY, E = 2,000,000 PSI

**STAMP OF APPROVAL**

Approved For State of California  
 Factory Built Housing

By  
 MA Consulting & Engineering MACE, LLC.  
 Third Party Design Approval Agency (DAA)  
 Certificate Number: 2017023

These plans have been approved pursuant to the provisions of the State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 1, Subchapter 1.  
 Approval herein does not constitute an approval or certification or endorsement from State herein or valid local ordinances nor is it applicable to movement of plans over boundaries, except made on site.

Generic Foundation Design Approved  
 Occupancy Res/LL Wind Exp Seismic Cnt  
 RS 30 psf 115' E F  
 Plan Approval No: MAC-FBH 10153  
 By: *Yashwanth Malle*

Approval Date: 5/26/2025  
 Expiration Date: 1/11/2028

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EXPIRES 6-30-26

DATE:	REV:	DESCRIPTION:	* CONFIDENTIAL
4-18-25	1	DETAIL REFERENCE FIX & NOTE 3 ADDED.	AS INSTRUMENTS OF SERVICE, THESE DRAWINGS SHALL REMAIN THE PROPERTY OF SIP ENGINEERING CONSULTANTS, LLC WHO SHALL RETAIN ALL COMMON LAW, STATUTORY & OTHER RESERVED RIGHTS, INCLUDING COPYRIGHTS, ONLY FOR BIDDING WITHIN THE MAIN DRAWING AREA. REPRODUCTION IS PROHIBITED WITHOUT THE EXPRESSED, WRITTEN PERMISSION OF SIP ENGINEERING CONSULTANTS, LLC.



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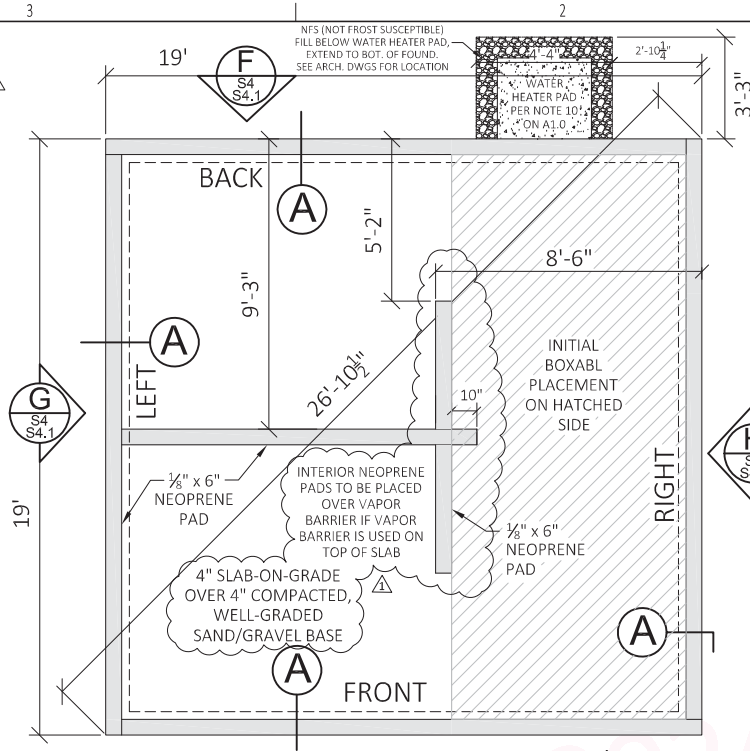
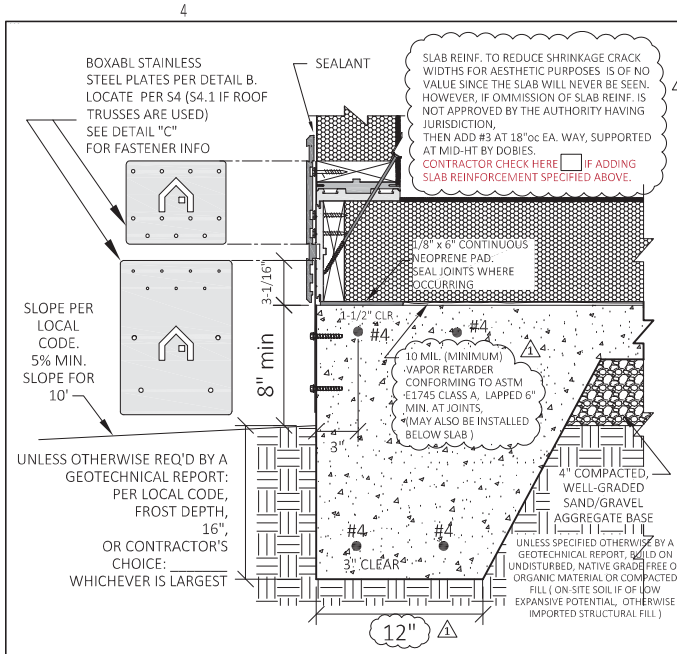
PHONE: 503-664-4178  
 Mike@SIPconsultants.com

UNITS: FT-IN  
 SHEET FORMAT: ARCH C  
 SHEET SCALE: NONE  
 CREATED BY: MN  
 RELEASE DATE: 11/18/2024  
 SHEET: **S2**

MODEL: 2 DOOR CASITA  
 MODEL #: BXB-000012  
**CALIFORNIA**

CLIENT: **BOXABL INC.**  
 5345 EAST NORTH BELT ROAD  
 NORTH LAS VEGAS, NV 89115, USA  
 +1(702) 500-9000 HELLO@BOXABL.COM





**NOTES:**

TOP SURFACE OF PERIMETER CONCRETE SHALL BE FLAT AND LEVEL TO WITHIN 1/8" BETWEEN ANY TWO POINTS AROUND THE PERIMETER.

PERIMETER & DIAGONAL DIMENSIONS HAVE NO MARGIN FOR ERROR FOR ANCHORAGE HARDWARE TO WORK AS INTENDED.

CONCRETE TO HAVE A MIN. 28 DAY COMPRESSIVE STRENGTH,  $f_c = 2,500$  psi WHERE WEATHERING POTENTIAL IS NEGLIGIBLE. WHERE NOT NEGLIGIBLE,  $f_c$  TO INCREASE TO 3,000 PSI AND CONCRETE TO HAVE 5% TO 7% AIR ENTRAINMENT (BY VOLUME) - SPECIAL INSPECTION IS NOT REQ'D SINCE STRUCTURAL DESIGN IS STILL BASED ON 2,500 PSI. CONTRACTOR MUST HAVE EXPERIENCE AND EXPERTISE IN PROPER CURING METHODS WHEN POURING IN HOT AND COLD WEATHER.

DEALER, OWNER, INSTALLER, OR CONTRACTOR TO VERIFY w/ BUILDING DEPARTMENT IF ANY SPECIAL INSPECTIONS ARE REQUIRED BY THE CITY BEFORE START OF CONSTRUCTION, AND IF SO, THE OWNER TO HIRE A SPECIAL INSPECTOR ACCEPTABLE TO THE BUILDING DEPARTMENT AND COORDINATE AN INSPECTION SCHEDULE WITH THE CONTRACTOR.

CONCRETE TO BE TYPE II, WITH MAXIMUM WATER/CEMENT RATIO = .5. USE TYPE V CEMENT IF SOIL HAS HIGH SULFATE CONCENTRATION (DETERMINED BY OTHERS).

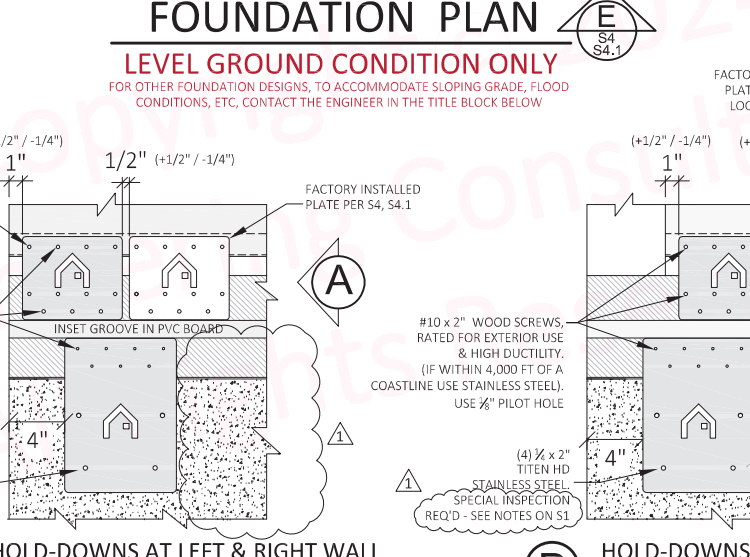
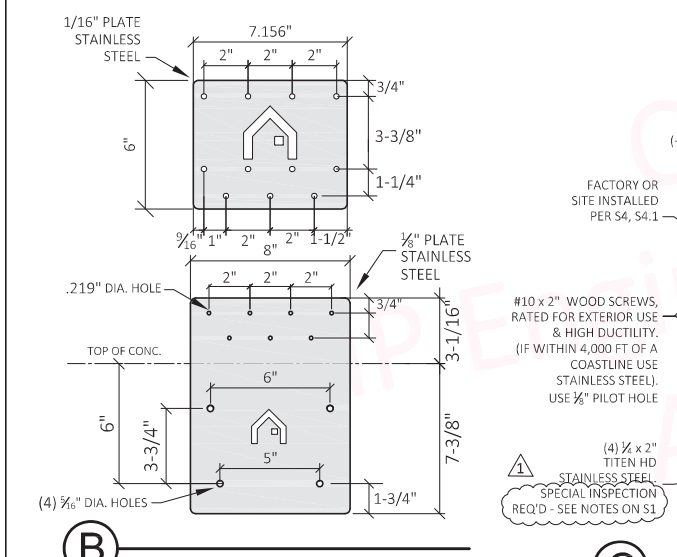
5.5 SACK MINIMUM PORTLAND CEMENT COMPLYING WITH ASTM C150. AGGREGATES TO CONFORM TO ASTM C33 CALCIUM CHLORIDE NOT ALLOWED, HOWEVER, WATER REDUCING ADMIXTURES MAY BE USED PER ASTM C494 AND PER MINER'S SPECIFICATIONS. CONCRETE MIXING, DELIVERY & SLUMP TOLERANCE TO CONFORM TO ASTM C94. FIELD MEASURED SLUMP SHALL COMPLY WITH THE CONCRETE MIX DESIGN.

STEEL REINFORCEMENT SHALL COMPLY WITH THE REQ'TS OF ASTM A615, WITH MIN. YIELD STRENGTH = 60 ksi (GRADE 60). REIN. TO BE CONTINUOUS, w #4 BENT CORNER BARS w/ 12" LEGS TIED TO MAIN REIN.

ASSUMED ALLOWABLE SOIL BEARING PRESSURE = 1,500 PSF TO AVOID A GEOTECHNICAL INVESTIGATION PER IRC SECTION R401.1. HOWEVER, **THIS DESIGN IS BASED ON THE ASSUMPTION THAT THERE IS NO EXPANSIVE SOIL, COLLAPSIBLE SOIL, CORROSIVE SOIL, SOIL SUBJECT TO LIQUIFICATION OR SOIL IN A FLOOD HAZARD ZONE, ALL OF WHICH REQUIRE A SITE-SPECIFIC DESIGN. VERIFICATION OF THE ABSENCE OF THESE CONDITIONS IS THE RESPONSIBILITY OF THE DEALER, AND/OR OWNER PRIOR TO START OF CONSTRUCTION.**

AN INITIAL ASSESSMENT MAY COME IN THE FORM OF TALKING TO PEOPLE HAVING HISTORICAL KNOWLEDGE OF THE AREA, INCLUDING NEIGHBORS, REAL ESTATE AGENTS, LOCAL CONTRACTORS AND THE LOCAL BUILDING DEPT. IF IN DOUBT, GET A GEOTECHNICAL REPORT AND VERIFY THAT THE RECOMMENDATIONS ARE CONSISTENT WITH THE SPECIFICATIONS IN DETAIL "A". A REVIEW OF THE REPORT BY A STRUCTURAL ENGINEER IS RECOMMENDED TO DETERMINE IF ANY DESIGN MODIFICATIONS ARE REQ'D.

BOXABL AND THE ENGINEER ACCEPT NO RESPONSIBILITY OR LIABILITY FOR THE PERFORMANCE OF FOUNDATIONS ON SOIL THAT IS NOT ADEQUATELY PREPARED OR OTHERWISE IN COMPLIANCE WITH A GEOTECHNICAL REPORT IF ONE IS AVAILABLE.



**STAMP OF APPROVAL**

Approved For State of California  
Factory Built Housing

by  
MA Consulting & Engineering MAACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: 20170623

These plans have been approved pursuant to the provisions of the State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 1, Subchapter 1.  
Approval herein does not constitute an approval or certification or determination from State laws or valid local ordinances nor is it applicable to movement of state over highways, county roads or city streets.

Generic Foundation Design Approved  
Occupancy Res'LL Wind Exp Seismic Ctr  
RS 30 psf 118' E F  
Plan Approval No: MAC-FBH 10153  
By: *9388888*

Approval Date: 5/26/2025  
Expiration Date: 1/11/2028

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4-18-25	1	NOTE CHANGES	

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**SIP ENGINEERING CONSULTANTS, LLC**

14845 SW MURRAY SCHOLLS DR., SUITE 110 PMB 306 BEAVERTON, OR 97007

PHONE: 503-664-4178  
Mike@SIPconsultants.com

UNITS:	FT-IN
SHEET FORMAT:	ARCH C
SHEET SCALE:	NONE
CREATED BY:	MN
RELEASE DATE:	11/18/2024
SHEET:	<b>S3</b>

MODEL: 2 DOOR CASITA

MODEL #: BXB-000012

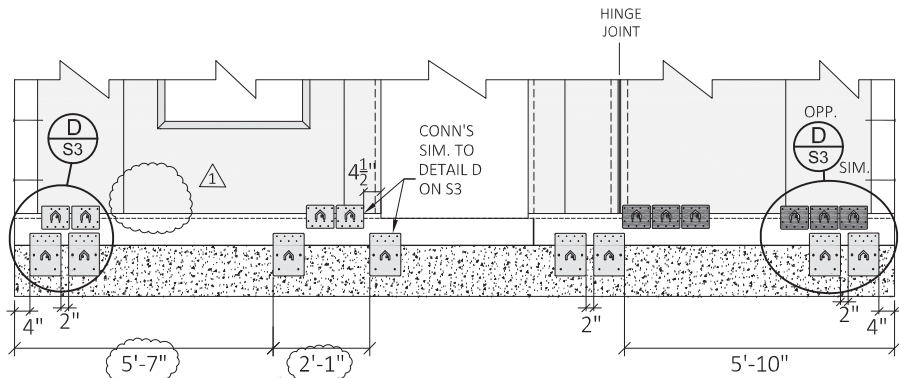
**CALIFORNIA**

CLIENT: **BOXABL INC.**

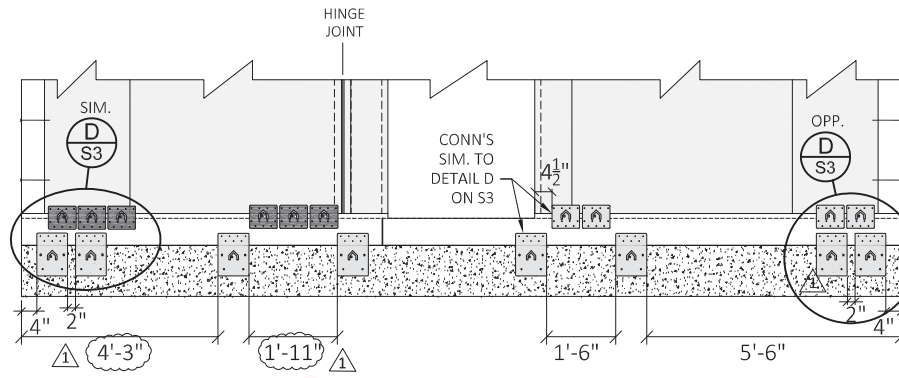
5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA

+1(702) 500-9000 HELLO@BOXABL.COM





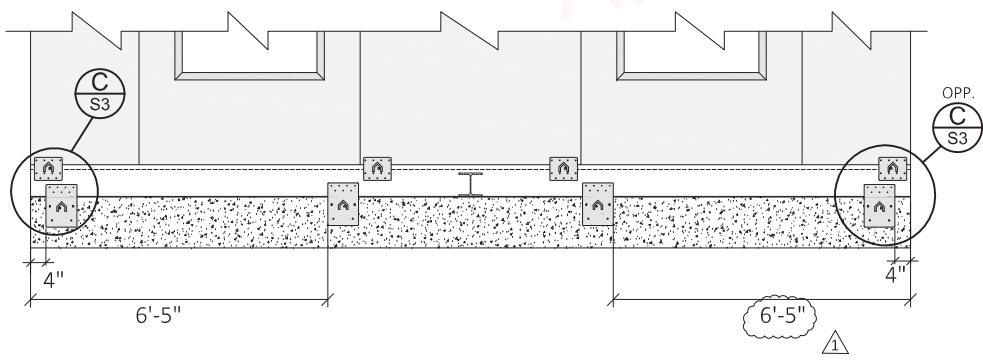
**E FRONT WALL**



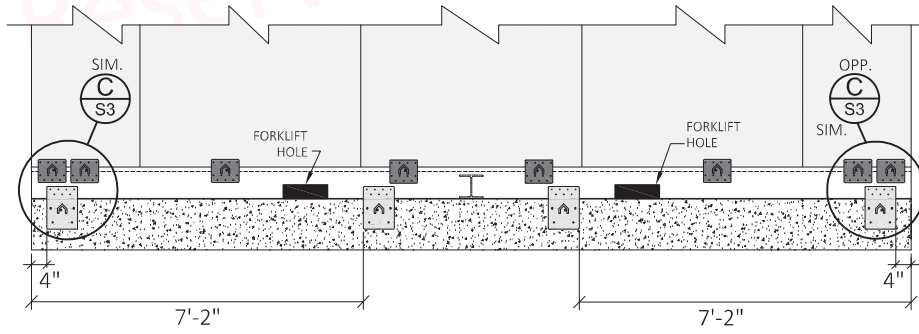
**F BACK WALL**

SEE S4.1 IF ROOF TRUSSES ARE USED

- FACTORY INSTALLED BOXABL PLATES (FIELD INSTALL IF ANY ARE MISSING)
- FIELD INSTALLED BOXABL PLATES
- FIELD INSTALLED BOXABL PLATES



**G LEFT WALL**



**H RIGHT WALL  
KITCHEN SIDE**

**STAMP OF APPROVAL**

Approved For State of California  
Factory Built Housing

by  
MA Consulting & Engineering MACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: 20170623

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Generic Foundation Design Approved

Occupancy	Res/LL	Wind	Exp	Seismic	Cat
RS	30	pdf	11F	E	E

Plan Approval No: **MAC-FBH 10153**

by: **Yyshaww**

Approval Date: 5/26/2025  
Expiration Date: 1/11/2028

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4-18-25	1	PL. LOCATION UPDATE	AS INSTRUMENTS OF SERVICE, THESE DRAWINGS SHALL REMAIN THE PROPERTY OF SIP ENGINEERING CONSULTANTS, LLC WHO SHALL RETAIN ALL COMMON LAW, STATUTORY & OTHER RESERVED RIGHTS, INCLUDING COPYRIGHTS, ONLY FOR BIDDING WITHIN THE MAIN DRAWING AREA. REPRODUCTION IS PROHIBITED WITHOUT THE EXPRESSED, WRITTEN PERMISSION OF SIP ENGINEERING CONSULTANTS, LLC.



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SUITE 110 PMB 306  
BEAVERTON, OR 97007

PHONE : 503-664-4178  
Mike@SIPconsultants.com

UNITS:	FT-IN
SHEET FORMAT:	ARCH C
SHEET SCALE:	NONE
CREATED BY:	MN
RELEASE DATE:	11/18/2024
SHEET:	<b>S4</b>

MODEL: 2 DOOR CASITA

MODEL #: BXB-000012

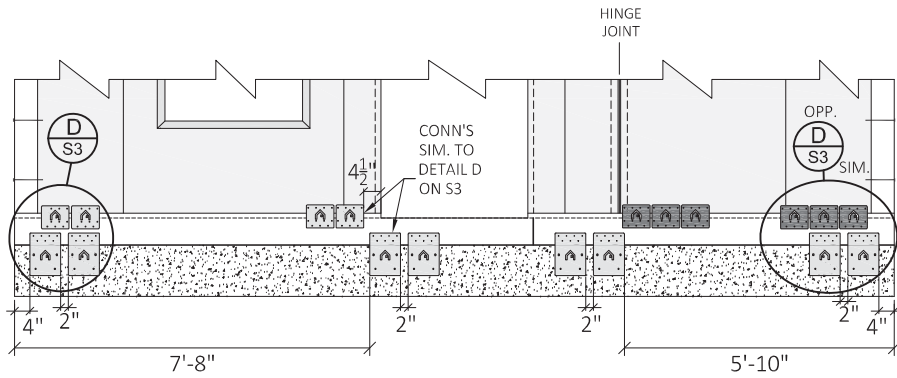
**CALIFORNIA**

CLIENT: **BOXABL INC.**

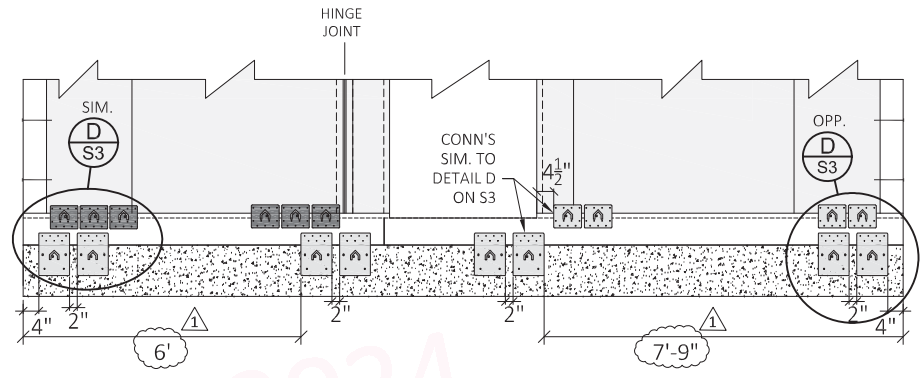
5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA

+1(702) 500-9000 HELLO@BOXABL.COM








**E FRONT WALL**

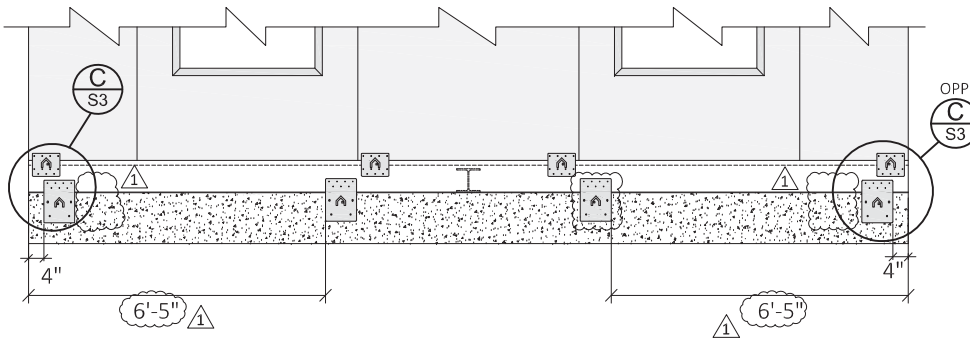


**F BACK WALL**

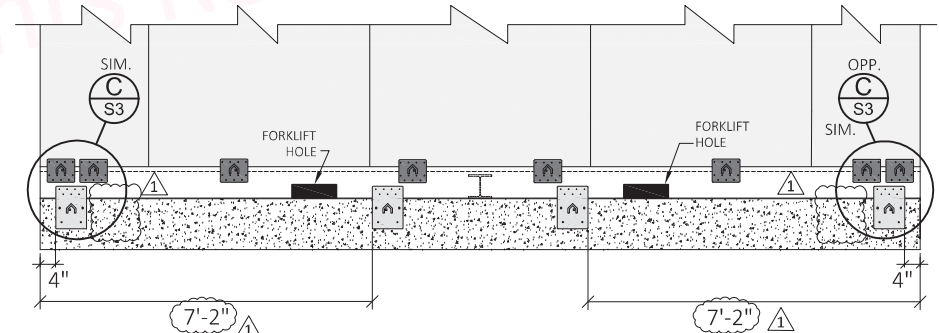
**PLATE LAYOUT IF ROOF TRUSSES ARE USED**

-  FACTORY INSTALLED BOXABL PLATES (FIELD INSTALL IF ANY ARE MISSING)
-  FIELD INSTALLED BOXABL PLATES
-  FIELD INSTALLED BOXABL PLATES

**TRUSSES & PARAPETS SUPPLIED, AND SITE-INSTALLED BY OTHERS**



**G LEFT WALL**



**H RIGHT WALL KITCHEN SIDE**

**STAMP OF APPROVAL**

Approved For State of California  
Factory Built Housing

By  
MA Consulting & Engineering MACE, LLC,  
Third Party Design Approval Agency (DAA)  
Certificate Number: 20170623

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Approval herein does not constitute or approve any condition or deviation from State laws or valid local ordinances nor is it applicable to movement of units over highways, county roads or city streets.

Generic Foundation Design Approved

Occupancy: Res/LL, Wind: Exp, Seismic: Cse  
RS: 30 psf, 118' C, E

Plan Approval No: **MAC-FBH 10153**  
By: *Yashwanth Jale*

Approval Date: 5/26/2025  
Expiration Date: 1/11/2028

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EXPIRES 6-30-26

DATE:	REV:	DESCRIPTION:	* CONFIDENTIAL
4-18-25	1	PL. LOCATION UPDATE	AS INSTRUMENTS OF SERVICE, THESE DRAWINGS SHALL REMAIN THE PROPERTY OF SIP ENGINEERING CONSULTANTS, LLC WHO SHALL RETAIN ALL COMMON LAW, STATUTORY & OTHER RESERVED RIGHTS, INCLUDING COPYRIGHTS, ONLY FOR BLDG. WITHIN THE MAIN DRAWINGS AREA. REPRODUCTION IS PROHIBITED WITHOUT THE EXPRESS, WRITTEN PERMISSION OF SIP ENGINEERING CONSULTANTS, LLC.



**SIP ENGINEERING CONSULTANTS, LLC**

14845 SW MURRAY SCHOLLS DR., SUITE 110 PMB 306 BEAVERTON, OR 97007

PHONE : 503-664-4178  
Mike@SIPconsultants.com

UNITS:	FT-IN
SHEET FORMAT:	ARCH C
SHEET SCALE:	NONE
CREATED BY:	MN
RELEASE DATE:	11/18/2024
SHEET:	<b>S4.1</b>

MODEL: 2 DOOR CASITA

MODEL #: BXB-000012

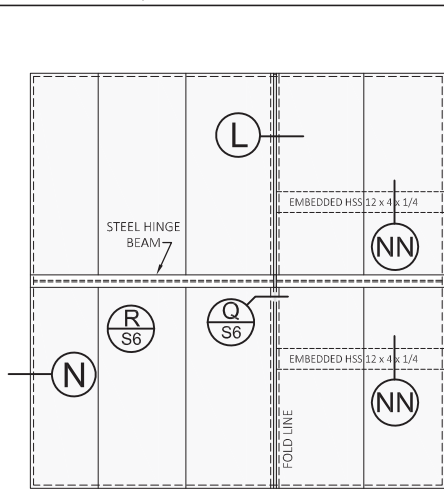
**CALIFORNIA**

CLIENT: **BOXABL INC.**

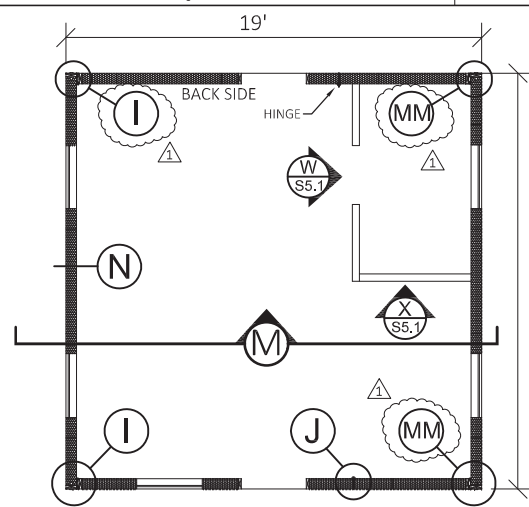
5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA

+1(702) 500-9000 HELLO@BOXABL.COM

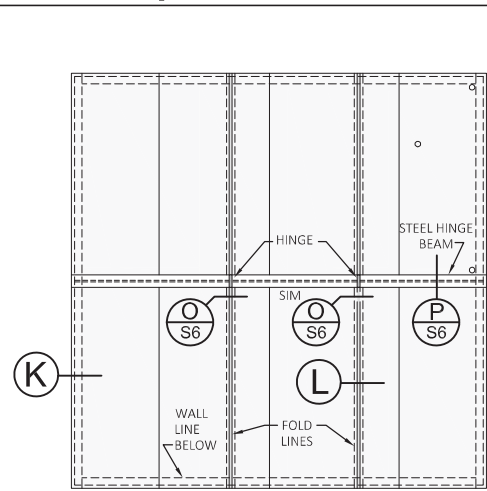




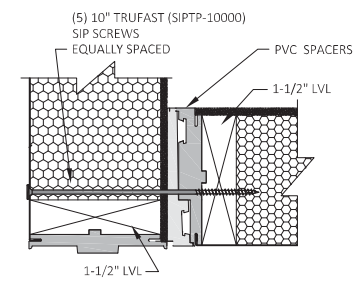
**FLOOR PANEL LAYOUT**



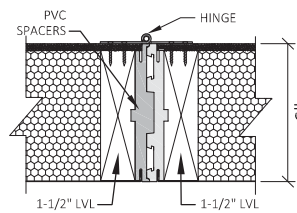
**WALL PLAN**



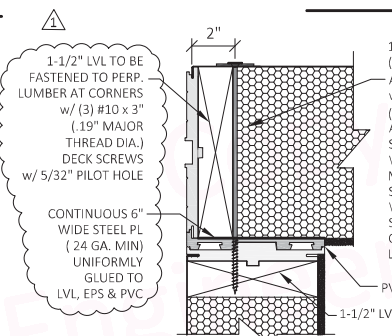
**ROOF PANEL LAYOUT**



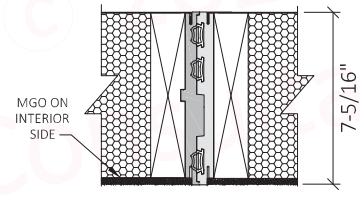
**I CORNER CONN. SWING WALLS**  
SCALE: NONE



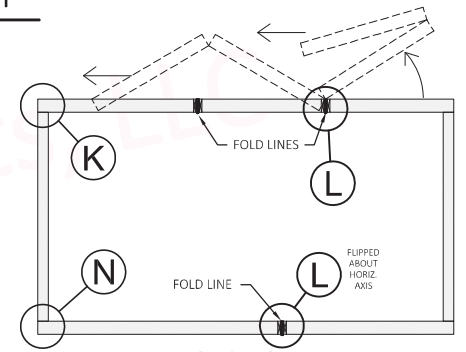
**J WALL HINGE CONN.**  
SCALE: NONE



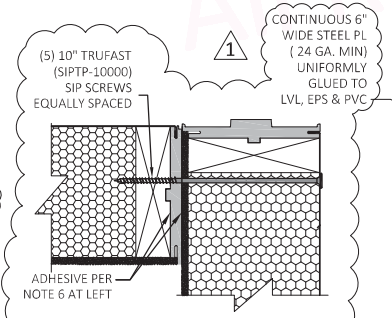
**K ROOF / WALL CONN.**  
SCALE: NONE



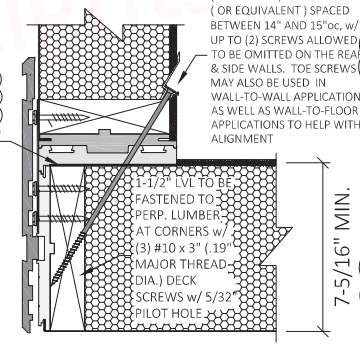
**L ROOF / FLOOR JOINT AT FOLD LINE**  
SCALE: NONE



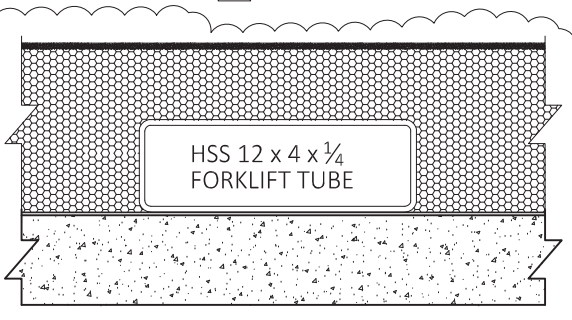
**M SECTION**



**MM FIXED WALL CORNER CONN.**  
SCALE: NONE



**N FLOOR / WALL CONN.**  
SCALE: NONE



**NN FLOOR / WALL CONN.**  
SCALE: NONE

- NOTES:**
- EMBEDDED LUMBER TO BE LAMINATED VENEER LUMBER (LVL), GRADE 2.0E, Fb = 2,800 psf MIN.
  - 24 GA. STEEL OUTER SKIN: ASTM A1003 STRUCTURAL GRADE 33 (GRADE 230) TYPE H.
  - HSS TUBE STEEL TO COMPLY w/ ASTM A 500 , GRADE B OR ASTM A 1085.
  - EPS CORE: 1 pcf DENSITY
  - INNER SKIN: 1/2" MGO (MADE w/o SOREL CEMENT)
  - THE FOLLOWING ADJOINING SURFACES TO BE COATED w/ ADHESIVE:  
PVC-TO-MGO, PVC-TO-WOOD, EPS-TO-PVC, WOOD-TO-MGO, WOOD-TO-METAL SKIN, WOOD-TO-PVC, WOOD-TO-EPS, EPS-TO-METAL SKIN, EPS-TO-MGO.  
ADHESIVE TO COMPLY w/ TYPE II, CLASS 2 PERFORMANCE REQ'TS SET FORTH IN ICC-ES ACCEPTANCE CRITERIA FOR SANDWICH PANELS (AC05).
  - ALL STRUCTURAL INSULATED PANELS TO BE TESTED ACCORDING TO THE APPROVED JUNE 2019 (EDITORIALLY REVISED DECEMBER 2020) VERSION OF ACCEPTANCE CRITERIA ICC-ES AC04 INCLUDING, BUT NOT LIMITED TO: ASTM E72 ASTM E136-04 ASTM E331

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EXPIRES 6-30-26

**STAMP OF APPROVAL**

Approved For State of California  
Factory Built Housing

By  
MA Consulting & Engineering MACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: 20170623

These plans have been approved pursuant to the provisions of The State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 15, Subchapter 1.

Approval herein does not constitute or approve any condition or deviation from State laws or valid local ordinances nor is it applicable to movement of state over highways, create roads or city streets.

Generic Foundation Design Approved

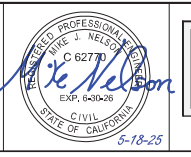
Occupancy Res/LL Wind Exp Seismic Cnt  
RS 30 psf 11F E E

Plan Approval No: MAC-FBH 10153  
By: *9350806* Mike

Approval Date: 5/26/2025  
Expiration Date: 1/11/2028

DATE:	REV:	DESCRIPTION:	* CONFIDENTIAL
4-18-25	1	MISC. UPDATES	

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**SIP ENGINEERING CONSULTANTS, LLC**

14845 SW MURRAY SCHOLLS DR., SUITE 110 PMB 306 BEAVERTON, OR 97007

PHONE: 503-664-4178  
Mike@SIPconsultants.com

UNITS:	FT-IN
SHEET FORMAT:	ARCH C
SHEET SCALE:	NONE
CREATED BY:	MN
RELEASE DATE:	11/18/2024
SHEET:	<b>S5</b>

**MODEL: 2 DOOR CASITA**

**MODEL #: BXB-000012**

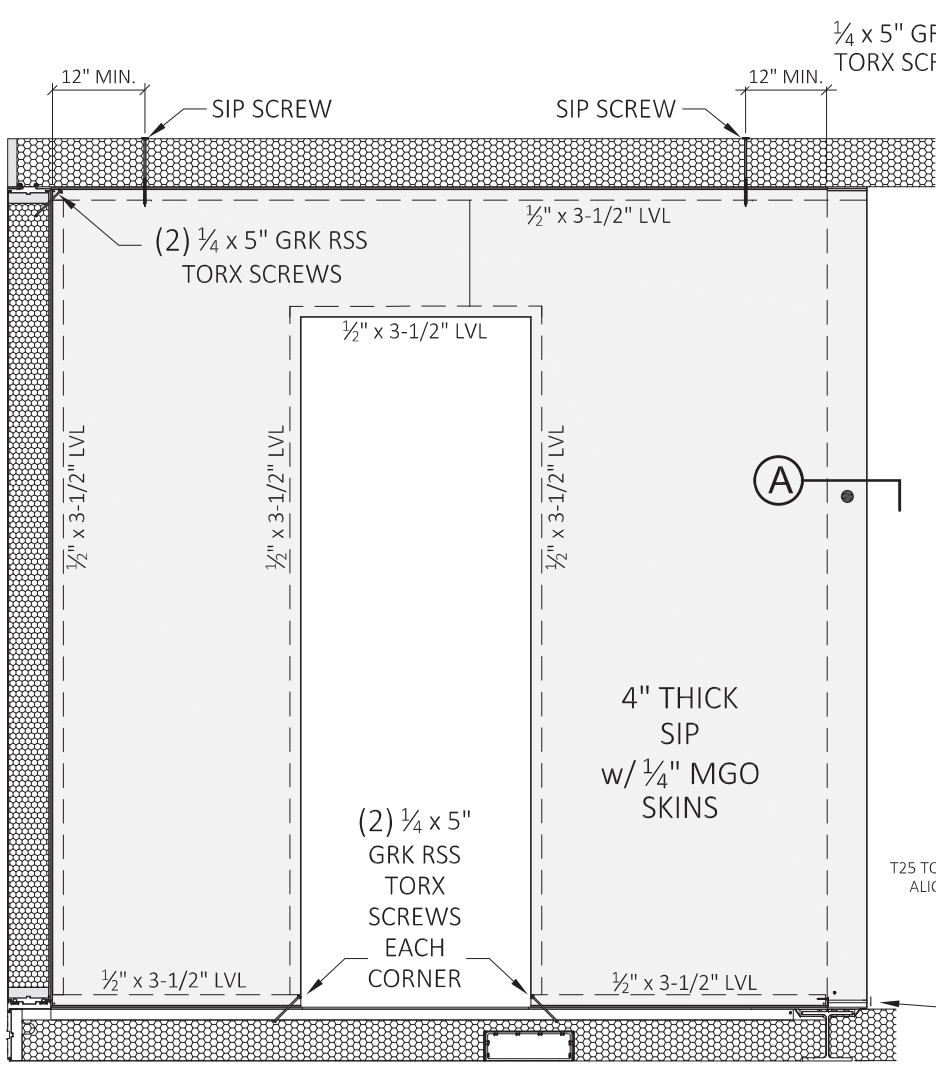
**CALIFORNIA**

CLIENT: **BOXABL INC.**

5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA

+1(702) 500-9000 HELLO@BOXABL.COM

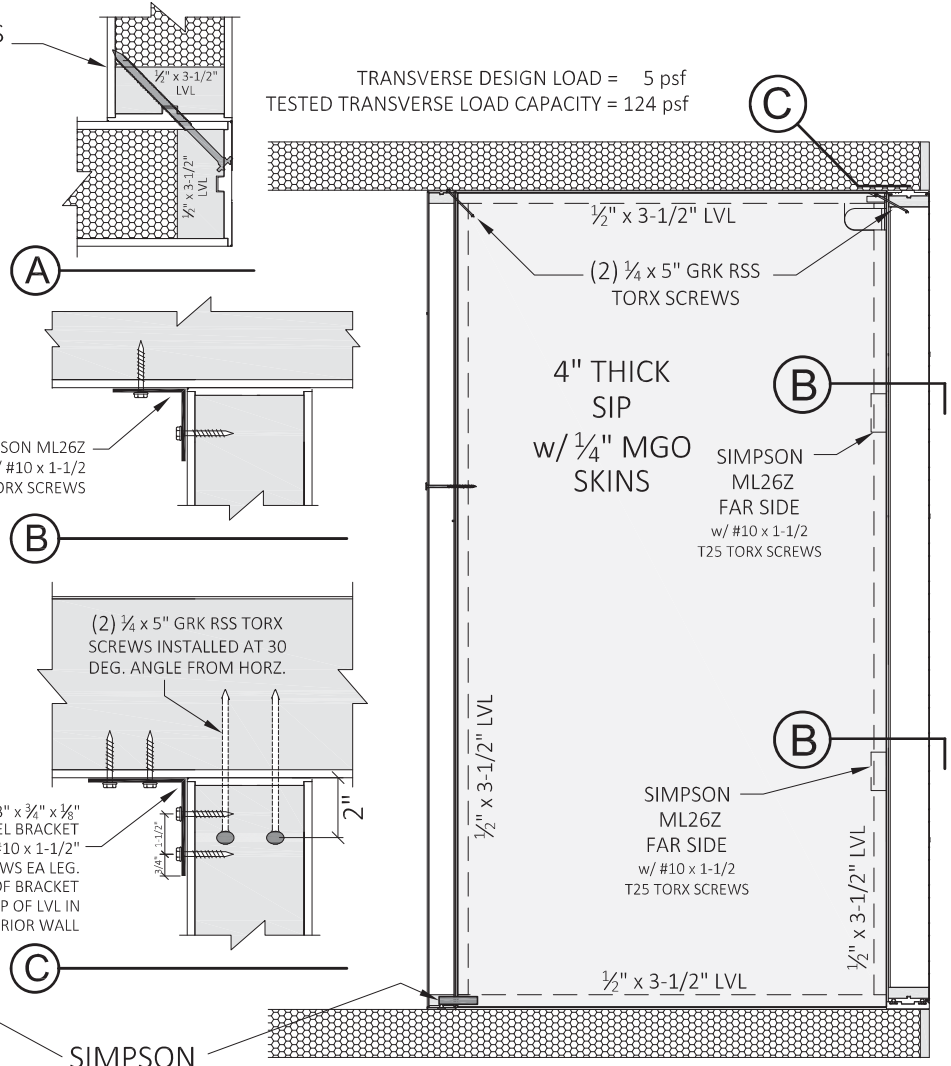




**W**

**PARTITION WALL**

SCALE: NONE



**X**

**PARTITION WALL**

SCALE: NONE

**STAMP OF APPROVAL**

Approved For State of California  
Factory Built Housing

By  
MA Consulting & Engineering MACE, LLC,  
Third Party Design Approval Agency (DAA)  
Certificate Number: 20170623

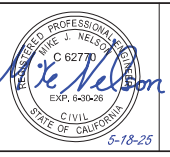
These plans have been approved pursuant to the provisions of the State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 15, Subchapter 1.

Approval herein does not constitute or approve any condition or deviation from State laws or valid local ordinances nor is it applicable to movement of main steel members, concrete cracks or dry rot.

**Generic Foundation Design Approved**

Occupancy: Res/LL, Wind: Exp, Seismic: Cse  
RS: 30 psf, IFR: E, E:  
Plan Approval No.: **MAC-FBH 10153**  
By: **Yashwanth Nole**  
Approval Date: 5/26/2025  
Expiration Date: 1/11/2028

DATE:	REV:	DESCRIPTION:	* CONFIDENTIAL
12-13-24	3	NEW DETAILS	AS INSTRUMENTS OF SERVICE, THESE DRAWINGS SHALL REMAIN THE PROPERTY OF SIP ENGINEERING CONSULTANTS, LLC WHO SHALL RETAIN ALL COMMON LAW, STATUTORY & OTHER RESERVED RIGHTS, INCLUDING COPYRIGHTS, ONLY FOR BIDDING WITHIN THE MAIN DRAWING AREA. REPRODUCTION IS PROHIBITED WITHOUT THE EXPRESSED, WRITTEN PERMISSION OF SIP ENGINEERING CONSULTANTS, LLC.



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14845 SW MURRAY SCHOLLS DR., SUITE 110 PMB 306 BEAVERTON, OR 97007

PHONE: 503-664-4178  
Mike@SIPconsultants.com

UNITS:	FT-IN
SHEET FORMAT:	ARCH C
SHEET SCALE:	NONE
CREATED BY:	MN
RELEASE DATE:	11/18/2024
SHEET:	<b>S5.1</b>

MODEL: 2 DOOR CASITA

MODEL #: BXB-000012

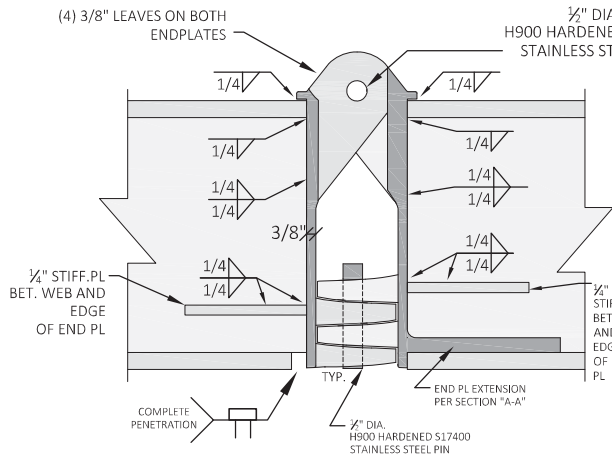
**CALIFORNIA**

CLIENT: **BOXABL INC.**

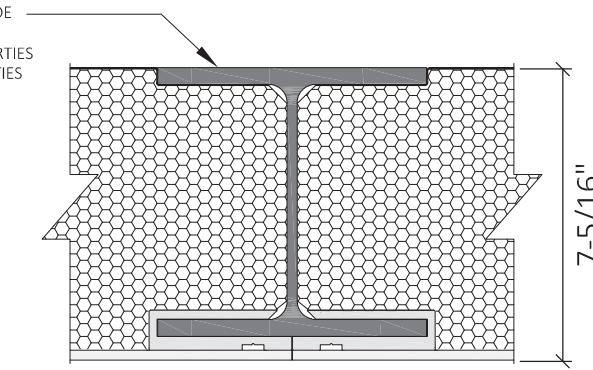
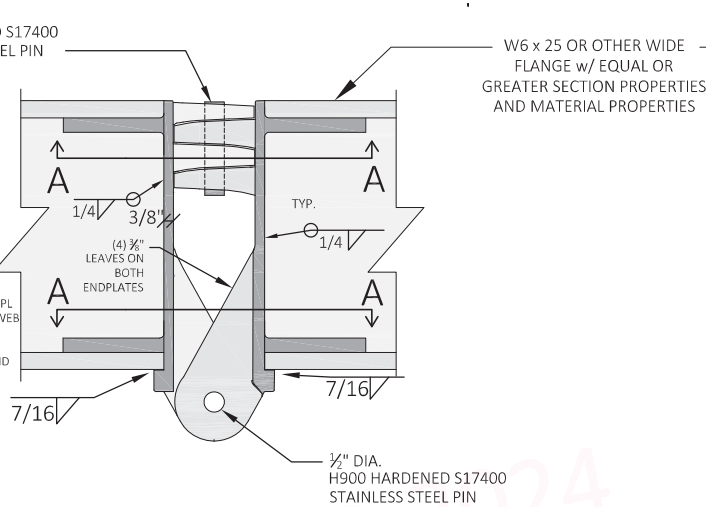
5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA

+1(702) 500-9000 HELLO@BOXABL.COM



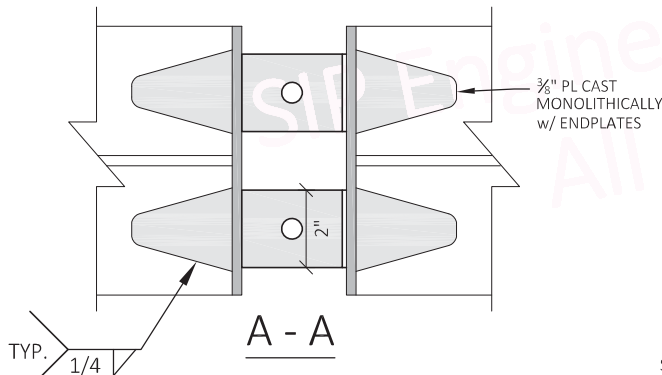


**SIM. CONDITION**



**P ROOF HINGE BEAM**  
SCALE: NONE

**O ROOF BEAM HINGE CAST MONOLITHICALLY w/ END PLATES**



STEEL ELECTRODE SHALL CONFORM TO AWS 5.1, E70XX.

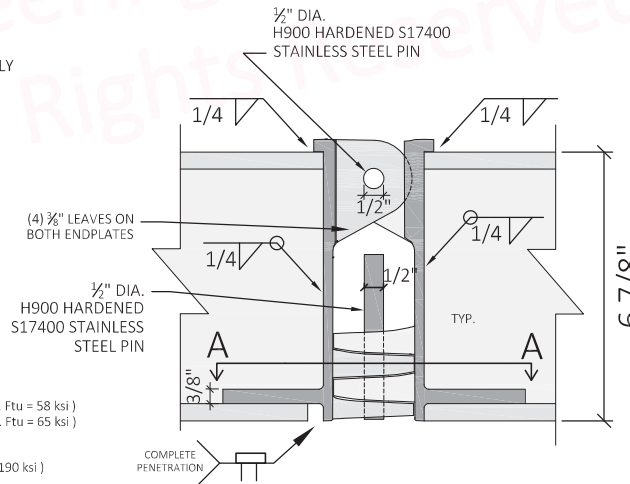
ALL WELDED CONNECTION SHALL BE WELDED ACCORDING TO THE "STRUCTURAL WELDING CODE - STEEL", AWS-D1.1, LATEST EDITION. WELDING SHALL BE PERFORMED BY WELDERS CERTIFIED FOR THE WELDS TO BE MADE.

MATERIALS TO BE SUPPLIED BY CERTIFIED FABRICATORS. SPECIAL INSPECTION OF WELDS IS REQUIRED

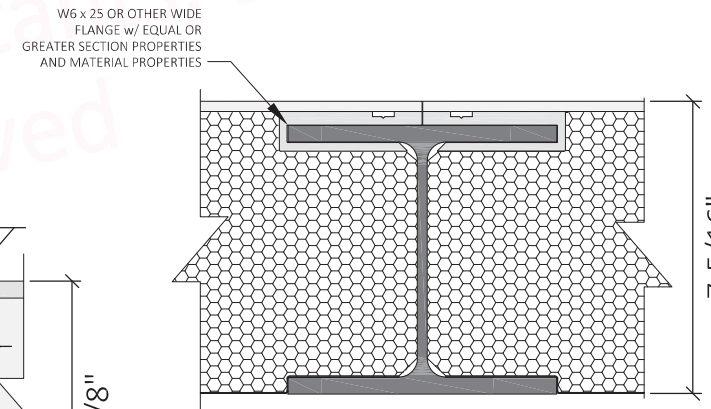
STEEL MATERIAL PROPERTIES:

HINGE BEAM: ASTM A36 (MIN. Fy = 36 ksi, MIN. Ftu = 58 ksi)  
HINGE: ASTM A572 GR. 50 (MIN. Fy = 50 ksi, MIN. Ftu = 65 ksi)

HINGE BEAM PINS: H900 HARDENED S17400 S.S. (MIN. Fy = 170 ksi, MIN. Ftu = 190 ksi)



**Q FLOOR HINGE CAST MONOLITHICALLY**  
SCALE: NONE



**R FLOOR HINGE BEAM**  
SCALE: NONE

**STAMP OF APPROVAL**

Approved For State of California  
Factory Built Housing

By  
MA Consulting & Engineering MACE, LLC  
Third Party Design Approval Agency (DAA)  
Certificate Number: 20170623

These plans have been approved pursuant to the provisions of The State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 5, Subchapter 1.

Approval herein does not constitute or approve any condition or deviation from State laws or valid local ordinances nor is it applicable to movement of state over highway, create roads or city streets.

Generic Foundation Design Approved

Occupancy: Roof/LL, Wind, Exp, Seismic Cnt  
RS 30 pdf 118' E

Plan Approval No: **MAC-FBH 10153**  
By: **Yashwanth Jale**

Approval Date: 5/26/2025  
Expiration Date: 1/11/2028

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EXPIRES 6-30-26

DATE:	REV:	DESCRIPTION:	* CONFIDENTIAL



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14845 SW MURRAY SCHOLLS DR., SUITE 110 PMB 306 BEAVERTON, OR 97007

PHONE: 503-664-4178  
Mike@SIPconsultants.com

UNITS:	FT-IN
SHEET FORMAT:	ARCH C
SHEET SCALE:	NONE
CREATED BY:	MN
RELEASE DATE:	11/18/2024
SHEET:	<b>S6</b>

MODEL: 2 DOOR CASITA

MODEL #: BXB-000012

**CALIFORNIA**

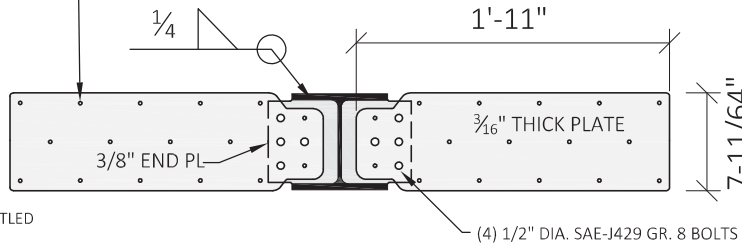
CLIENT: **BOXABL INC.**

5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA

+1(702) 500-9000 HELLO@BOXABL.COM



#10 x 1-1/2" CUT-THREAD WOOD SCREWS TO LVL AT EDGE OF ROOF

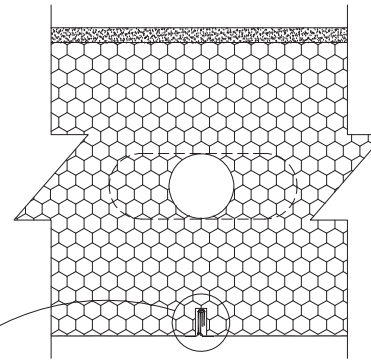


SEE BOXABL DRAWING TITLED "I-BEAM BOLT PLATE B" PART NO. P-STP-IBP-0005 FOR HOLE LOCATION INFO. PART NO. P-STP-IBP-0005

### HINGE BEAM END PLATE



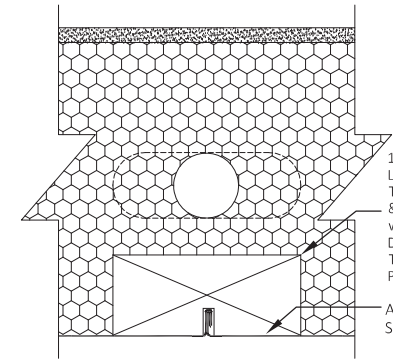
SCALE: NONE



### STEEL SKIN SEAM NOT NEAR WINDOWS



SCALE: NONE



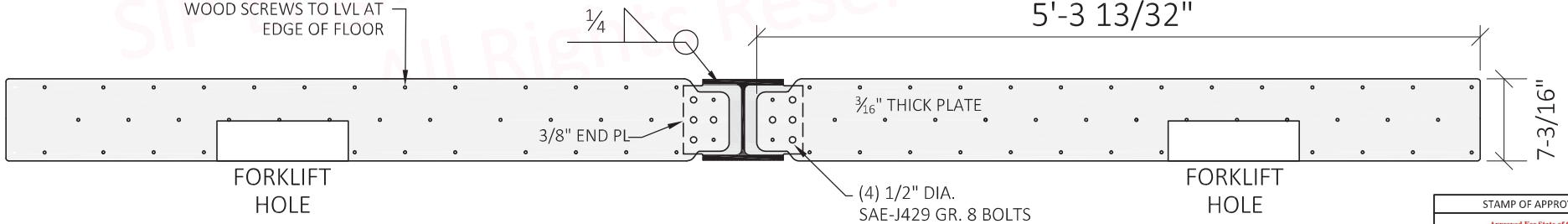
### STEEL SKIN SEAM NEAR SIDES OF WINDOWS



SCALE: NONE

1-1/2" x 3-1/2" LVL, FASTENED TO WALL TOP & BOT. PLATES w/ (2) #14 x 3" DECK SCREWS TO TOP & BOT. PLATES. ADHESIVE ALL SIDES OF LVL

#10 x 1-1/2" CUT-THREAD WOOD SCREWS TO LVL AT EDGE OF FLOOR



SEE BOXABL DRAWING TITLED "FORK TUBE PLATE A 1.2" PART NO. P-STP-FTP-0003 FOR HOLE LOCATION INFO.



### FLOOR HINGE BEAM END PLATES AT RIGHT SIDE

SCALE: NONE

#### STAMP OF APPROVAL

Approved For State of California  
Factory Built Housing

By  
MA Consulting & Engineering MACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: DP170623

These plans have been approved pursuant to the provisions of The State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 9, Subchapter 1. Approval herein does not constitute or approve any condition or deviation from State laws or valid local ordinances nor is it applicable to movement of state laws or valid local ordinances, except made to the extent.

Generic Foundation Design Approved

Occupancy: Res/LL, Wind: Exp, Seismic: Cse

RS: 30 psf, 118' E

Plan Approval No: MAC-FBH 10153

By: *Michael J. Mace*

Approval Date: 5/26/2025

Expiration Date: 1/11/2028

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14845 SW MURRAY SCHOLLS DR., SUITE 110 PMB 306 BEAVERTON, OR 97007

PHONE : 503-664-4178  
Mike@SIPconsultants.com

UNITS:	FT-IN
SHEET FORMAT:	ARCH C
SHEET SCALE:	NONE
CREATED BY:	MN
RELEASE DATE:	11/18/2024
SHEET:	<b>S7</b>

MODEL: 2 DOOR CASITA

MODEL #: BXB-000012

**CALIFORNIA**

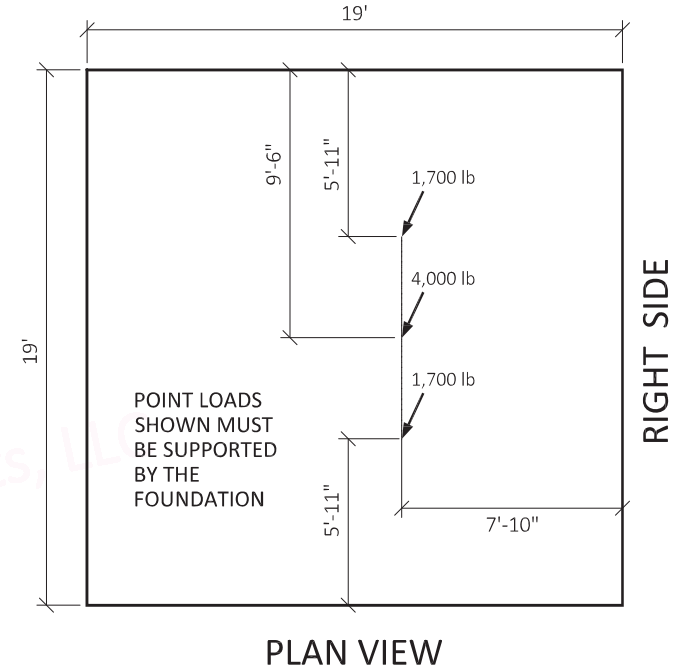
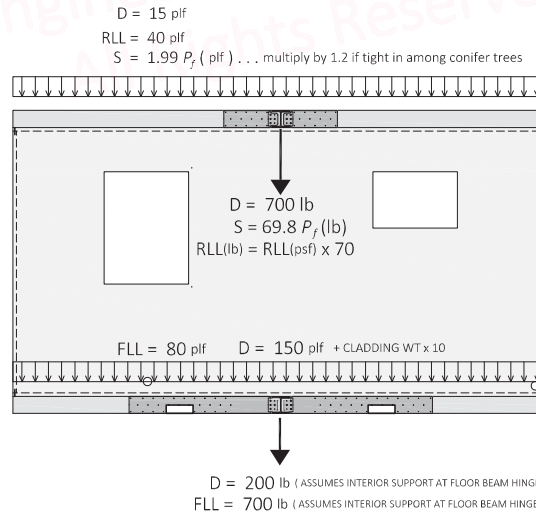
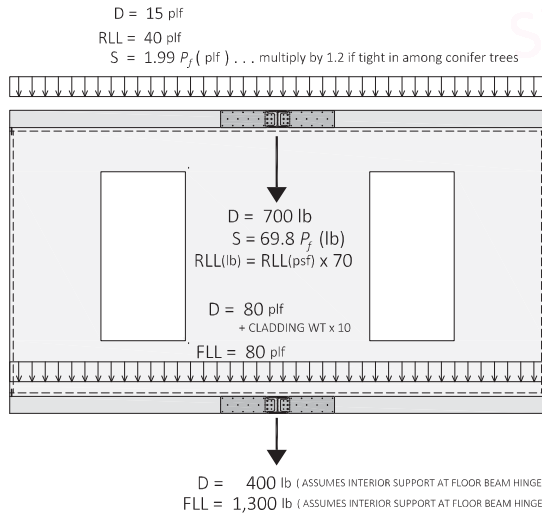
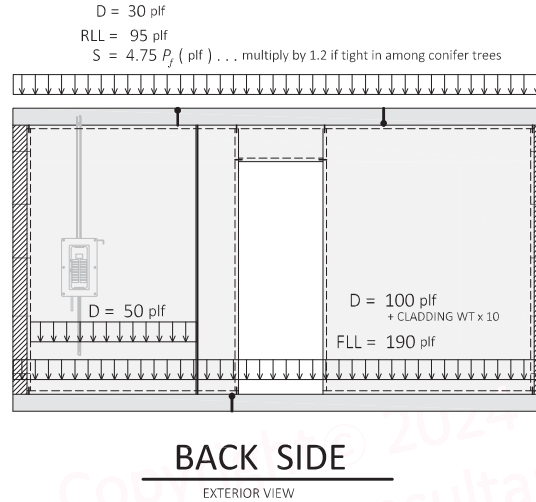
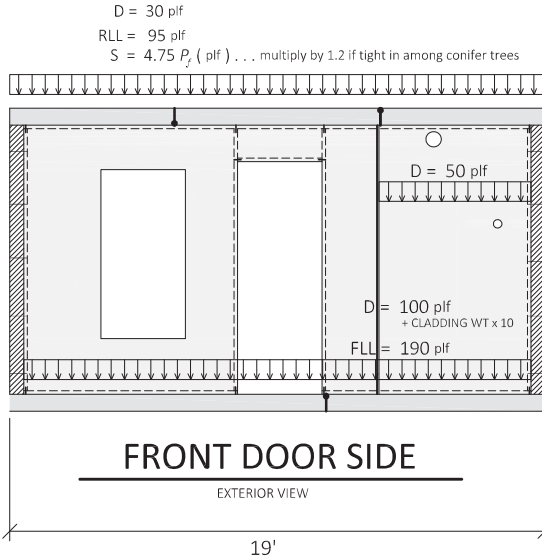
CLIENT: **BOXABL INC.**

5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA

+1(702) 500-9000 HELLO@BOXABL.COM



# GRAVITY LOADING FOR CASITAS w/ EPDM ROOFS PER S18



ASSUMED WALL CLADDING WEIGHTS WHEN USED:

- STUCCO : 5.0 psf
- HARDI PLANK: 3.8 psf
- HARDI PANEL: 3.5 psf

ROOF LOADING ASSUMES NO SOLAR PANELS ARE USED

LOADING PROVIDED AS A COURTESY AND SHOULD BE VERIFIED BY ANYONE DESIGNING ALTERNATIVE FOUNDATIONS. PRE-ENGINEERED FOUNDATION ALTERNATIVES AVAILABLE FROM THE ENGINEER IN THE TITLE BLOCK

**STAMP OF APPROVAL**

Approved For State of California  
Factory Built Housing

By  
MA Consulting & Engineering MACE, LLC  
Third Party Design Approval Agency (DAA)  
Certificate Number: 20170623

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Generic Foundation Design Approved

Occupancy	Res/LL	Wind	Exp	Seismic	Cat
RS	30 psf	11E	E	E	E

Plan Approval No: **MAC-FBH 10153**  
By: **9258886**  
Approval Date: 5/26/2025  
Expiration Date: 1/11/2028

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EXPIRES 6-30-26

DATE:	REV:	DESCRIPTION:
12-13-24	3	LOAD UPDATE

**\* CONFIDENTIAL**

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**SIP ENGINEERING CONSULTANTS, LLC**

14845 SW MURRAY SCHOLLS DR., SUITE 110 PMB 306 BEAVERTON, OR 97007

PHONE : 503-664-4178  
Mike@SIPconsultants.com

UNITS: FT-IN

SHEET FORMAT: ARCH C

SHEET SCALE: NONE

CREATED BY: MN

RELEASE DATE: 11/18/2024

SHEET: **S8**

MODEL: 2 DOOR CASITA

MODEL #: BXB-000012

**CALIFORNIA**

CLIENT: **BOXABL INC.**

5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA

+1(702) 500-9000 HELLO@BOXABL.COM

# GRAVITY LOADING FOR HIGH-SLOPE CASITAS ( w/ ROOF TRUSSES )

ROOF TRUSSES  
DESIGNED, SUPPLIED,  
& SITE-INSTALLED BY  
OTHERS

$$D = [ 30 + \text{Projected Roof Truss System wt ( 11' )} ] \text{ plf ( trusses perp. to wall)}$$

$$D = [ 30 + \text{Projected Roof Truss System wt ( 3.5' )} ] \text{ plf ( trusses perp. to wall)}$$

$$RLL = 20 ( 11' ) = 220 \text{ plf}$$

$$S = 11 P_r ( \text{plf} ) \dots \text{ multiply by 1.2 if tight in among conifer trees}$$

$$D = [ 30 + \text{Projected Roof Truss System wt ( 11' )} ] \text{ plf ( trusses perp. to wall)}$$

$$D = [ 30 + \text{Projected Roof Truss System wt ( 3.5' )} ] \text{ plf ( trusses perp. to wall)}$$

$$RLL = 20 ( 11' ) = 220 \text{ plf}$$

$$S = 11 P_r ( \text{plf} ) \dots \text{ multiply by 1.2 if tight in among conifer trees}$$

MAXIMUM ALLOWED "PROJECTED"  
TRUSS ROOF SYSTEM WEIGHTS  
( INCL. TRUSS WT, SHEATHING,  
INSULATION, MISC., BUT NOT  
SOLAR PANELS ):

### 9:12 GABLE ROOFS:

- CONCRETE TILE: 24.7 psf
- CLAY TILE: 19.2 psf
- ASPHALT SHINGLE: 21.1 psf
- METAL ROOF: 13.2 psf

SOLAR PANELS: 6.2 psf ⚠

### 6:12 GABLE ROOFS:

- CONCRETE TILE: 21.6 psf
- CLAY TILE: 16.7 psf
- ASPHALT SHINGLE: 18.4 psf
- METAL ROOF: 11.3 psf

SOLAR PANELS: 5.5 psf ⚠

### 3:12 GABLE & HIP ROOFS:

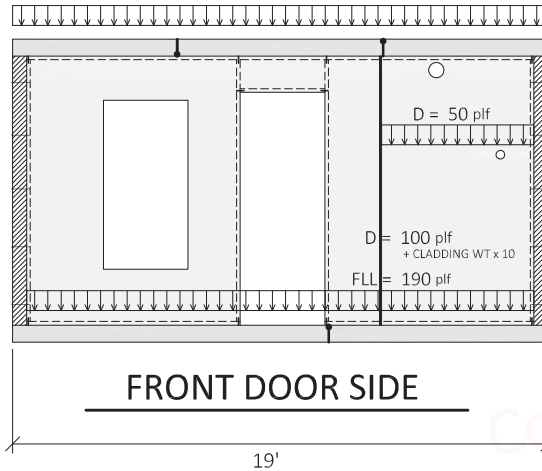
- CONCRETE TILE: 20.4 psf
- CLAY TILE: 15.9 psf
- ASPHALT SHINGLE: 18.4 psf
- METAL ROOF: 10.9 psf

SOLAR PANELS: 5.2 psf ⚠

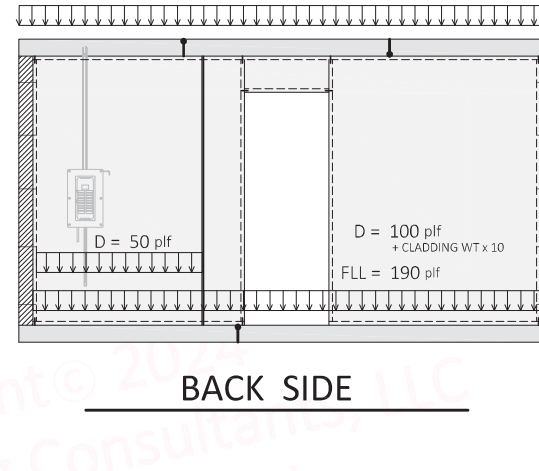
### 3:12 MONOSLOPE ROOFS:

- CONCRETE TILE: 20.8 psf
- CLAY TILE: 16.3 psf
- ASPHALT SHINGLE: 17.9 psf
- METAL ROOF: 11.3 psf

SOLAR PANELS: 5.2 psf ⚠



FRONT DOOR SIDE



BACK SIDE

$$D = [ 15 + \text{Projected Roof Truss System wt ( 11' )} ] \text{ plf ( trusses perp. to wall)}$$

$$D = [ 15 + \text{Projected Roof Truss System wt ( 3.5' )} ] \text{ plf ( trusses perp. to wall)}$$

$$RLL = 20 ( 11' ) = 220 \text{ plf}$$

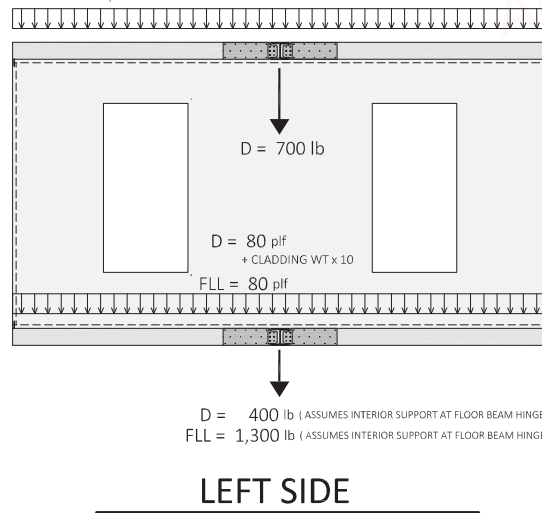
$$S = 11 P_r ( \text{plf} ) \dots \text{ multiply by 1.2 if tight in among conifer trees}$$

$$D = [ 15 + \text{Projected Roof Truss System wt ( 11' )} ] \text{ plf ( trusses perp. to wall)}$$

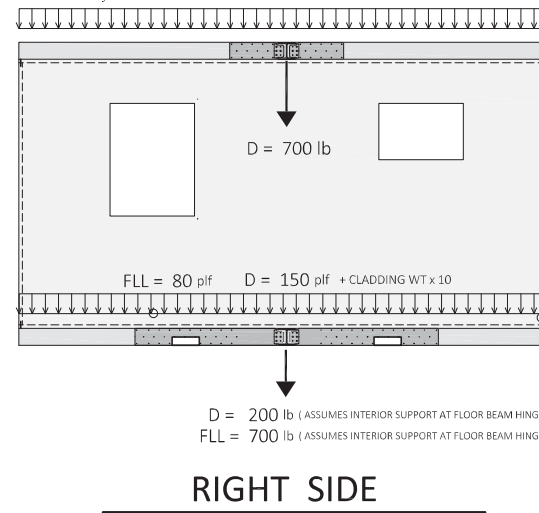
$$D = [ 15 + \text{Projected Roof Truss System wt ( 3.5' )} ] \text{ plf ( trusses perp. to wall)}$$

$$RLL = 20 ( 11' ) = 220 \text{ plf}$$

$$S = 11 P_r ( \text{plf} ) \dots \text{ multiply by 1.2 if tight in among conifer trees}$$



LEFT SIDE



RIGHT SIDE

$$D = 400 \text{ lb ( ASSUMES INTERIOR SUPPORT AT FLOOR BEAM HINGE)}$$

$$FLL = 1,300 \text{ lb ( ASSUMES INTERIOR SUPPORT AT FLOOR BEAM HINGE)}$$

$$D = 200 \text{ lb ( ASSUMES INTERIOR SUPPORT AT FLOOR BEAM HINGE)}$$

$$FLL = 700 \text{ lb ( ASSUMES INTERIOR SUPPORT AT FLOOR BEAM HINGE)}$$

SEE PLAN  
VIEW ON S8  
FOR INTERIOR  
FOUNDATION  
LOADING

ASSUMED WALL CLADDING  
WEIGHTS WHEN USED:

- STUCCO: 5.0 psf
- HARDI PLANK: 3.8 psf
- HARDI PANEL: 3.5 psf

ROOF LOADING ASSUMES NO  
SOLAR PANELS ARE USED

LOADING PROVIDED AS A  
COURTESY AND SHOULD  
BE VERIFIED BY ANYONE  
DESIGNING ALTERNATIVE  
FOUNDATIONS.  
PRE-ENGINEERED  
FOUNDATION  
ALTERNATIVES AVAILABLE  
FROM THE ENGINEER IN  
THE TITLE BLOCK

**STAMP OF APPROVAL**

Approved For State of California  
Factory Built Housing

By  
MA Consulting & Engineering MAACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: 20170623

These plans have been approved pursuant to the provisions of the State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 15, Subchapter 1. Approval herein does not constitute or approve any condition or deviation from State laws or valid local ordinances nor is it applicable to movement of main steel members, create loads or site events.

Generic Foundation Design Approved

Occupancy: Res/LL Wind: Exp Seismic: Cx  
RS: 30 psf 11F E  
Plan Approval No.: MAC-FBH 10153  
By: *Yashwanth Jale*

Approval Date: 5/26/2025  
Expiration Date: 1/11/2028

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EXPIRES 6-30-26

EXTERIOR VIEW

DATE:	REV:	DESCRIPTION:	* CONFIDENTIAL
4-18-25	1	SOLAR PANEL WT CHANGE	AS INSTRUMENTS OF SERVICE, THESE DRAWINGS SHALL REMAIN THE PROPERTY OF SIP ENGINEERING CONSULTANTS, LLC WHO SHALL RETAIN ALL COMMON LAW, STATUTORY & OTHER RESERVED RIGHTS, INCLUDING COPYRIGHTS, ONLY FOR BLDG. WITHIN THE MAIN DRAWINGS AREA. REPRODUCTION IS PROHIBITED WITHOUT THE EXPRESSED, WRITTEN PERMISSION OF SIP ENGINEERING CONSULTANTS, LLC.



**SIP ENGINEERING CONSULTANTS, LLC**

14845 SW MURRAY SCHOLLS DR., SUITE 110 PMB 306 BEAVERTON, OR 97007

PHONE: 503-664-4178  
Mike@SIPconsultants.com

UNITS: FT-IN

SHEET FORMAT: ARCH C

SHEET SCALE: NONE

CREATED BY: MN

RELEASE DATE: 11/18/2024

SHEET: **S8.1**

MODEL: 2 DOOR CASITA

MODEL #: BXB-000012

**CALIFORNIA**

CLIENT: **BOXABL INC.**

5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA

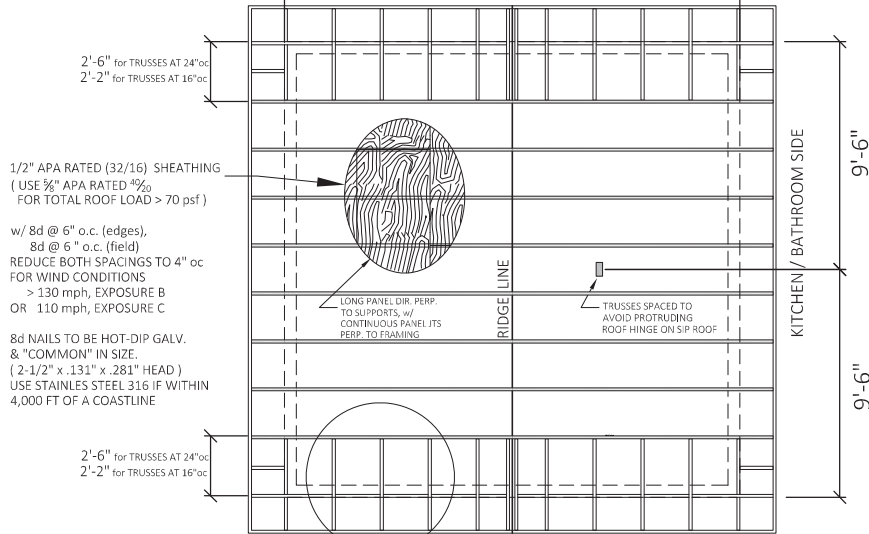
+1(702) 500-9000 HELLO@BOXABL.COM

# 3:12 GABLE

## DESIGN CRITERIA

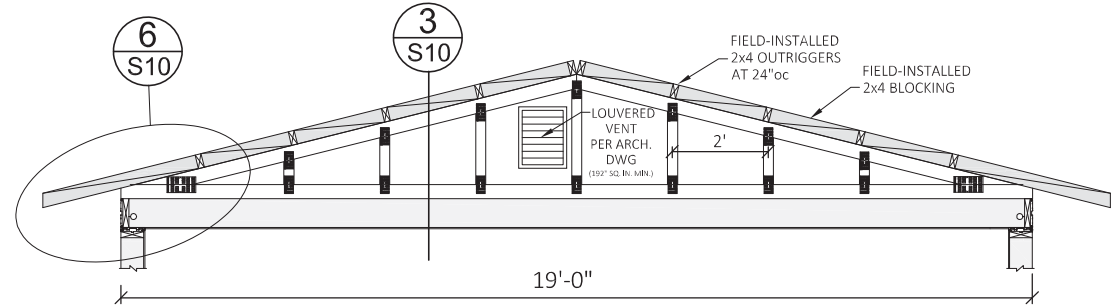
PER LOCAL CONDITIONS  
BUT NEED NOT EXCEED MAXIMUM DEAD  
LOAD, WIND SPEED/EXPOSURE, AND  
GROUND SNOW LOAD LIMITS FOUND ON  
SHEETS S1, S1.1

TRUSSES MAY  
BE ROTATED  
90 deg.

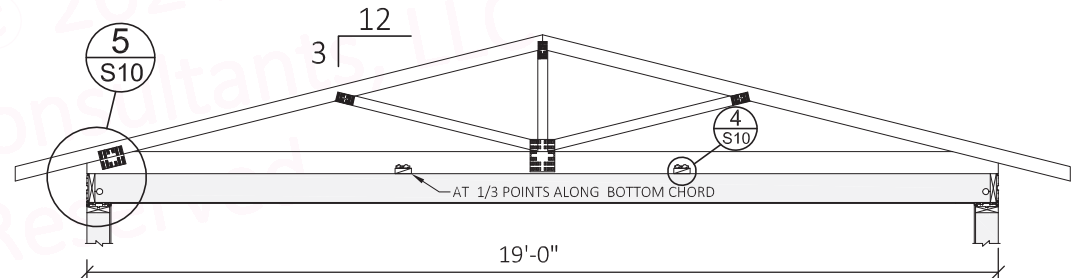


## 7 GABLE ROOF PLAN

24" oc SPACING SHOWN.  
USE 16"oc AS REQ'D FOR  
HIGH SNOW LOADS



## 1 PRE-ENGINEERED WOOD END TRUSS



## 2 PRE-ENGINEERED WOOD TRUSS

ROOF TRUSSES DESIGNED,  
SUPPLIED, &  
SITE-INSTALLED BY OTHERS

### STAMP OF APPROVAL

Approved For State of California  
Factory Built Housing

By  
MA Consulting & Engineering MACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: 20170623

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of California Health and Safety Code, Division 13, Part 6 and California  
Code of Regulations, Title 25, Chapter 1, Subchapter 1.  
Approval herein does not constitute or approve any condition or deviation  
from State laws or valid local ordinances nor is it applicable to movement  
of state over highway, create roads or city streets.

Generic Foundation Design Approved

Occupancy Res./LL Wind Exp. Seismic Cnt  
RS 30 psf 115' E

Plan Approval No. MAC-FBH 10153

By: *MACE*

Approval Date: 5/26/2025

Expiration Date: 1/11/2028

### NOTES:

- 1) ASSUME VERTICAL TRUSS SUPPORT ONLY AT THE WALLS.
- 2) ASSUME BOTTOM CHORD OF EACH TRUSS WILL BE RESTRAINED AGAINST LATERAL MOVEMENT IN BOTH HORIZONTAL DIRECTIONS BY THE A34 CLIPS INDICATED ON THE TRUSS PROFILES. DESIGN EACH TRUSS TO TRANSMIT LATERAL WIND FROM THE TOP CHORD TO THE BOTTOM CHORD. TRUSS WEB COMPRESSION MEMBERS TO BE DESIGNED TO AVOID THE NEED FOR LATERAL BRACING AGAINST BUCKLING.
- 3) INSTALL SIMPSON STRONG-TIE HARDWARE PER SIMPSON SPECIFICATIONS, U.N.O.
- 4) STABILITY DURING ERECTION TO BE DESIGNED & SUPPLIED BY OTHERS.
- 5) TRUSSES TO BE FABRICATED BY A CERTIFIED MEMBER OF THE TRUSS PLATE INSTITUTE AND SHALL COMPLY WITH THEIR STANDARDS.
- 6) CONNECTION PLATES SHALL BE IBC/ICBO APPROVED.
- 7) ALL TRUSSES MEMBERS SHALL HAVE LUMBER GRADE STAMPS.
- 8) THE TRUSS DESIGN AND ERECTION DRAWINGS SHALL BE MADE BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE IN QUESTION.
- 9) ERECTION PLANS SHALL SHOW THE TRUSS SPACING, TRUSS MARK (CALCULATION) NUMBERS, CONCENTRATED LOADS, & PERMANENT BRACING/BLOCKING AS REQUIRED BY THE TRUSS DESIGN.
- 10) SHOP DRAWINGS SHALL INCLUDE DIMENSIONS, CONFIGURATIONS, NOMINAL LUMBER SIZE AND GRADE, SPECIFICATIONS FOR CONNECTOR PLATES, THEIR SIZE AND LOCATIONS.
- 11) PROVIDE TEMPORARY ERECTION BRACING PER BCSI-B1 SUMMARY SHEET GUIDE FOR HANDLING, INSTALLING & BRACING OF METAL PLATED CONNECTED TRUSSES.

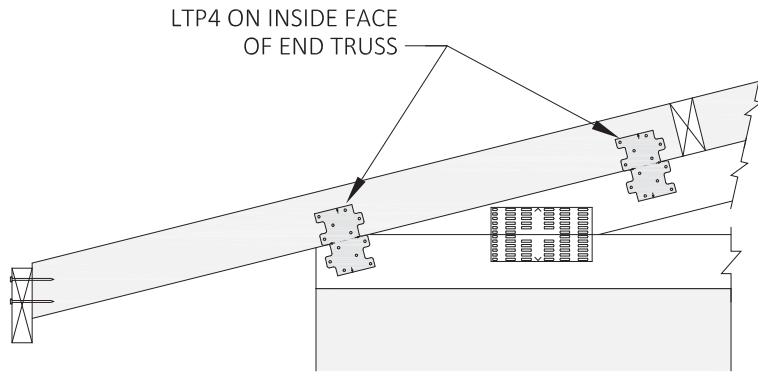
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EXPIRES 6-30-26

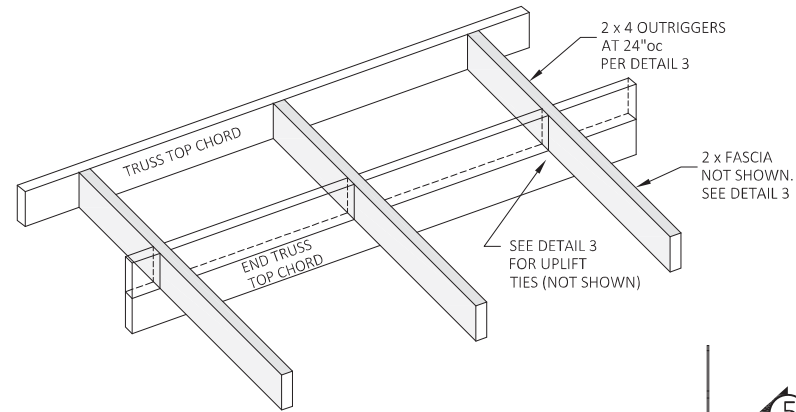
DATE:	REV:	DESCRIPTION:	* CONFIDENTIAL			14845 SW MURRAY SCHOLLS DR. SUITE 110 PMB 306 BEAVERTON, OR 97007  PHONE : 503-664-4178 Mike@SIPconsultants.com	UNITS: FT-IN SHEET FORMAT: ARCH C SHEET SCALE: NONE CREATED BY: MN RELEASE DATE: 12/13/2024 SHEET: S9	MODEL: 2 DOOR CASITA  MODEL #: BXB-000012  CALIFORNIA	CLIENT: BOXABL INC. 5345 EAST NORTH BELT ROAD NORTH LAS VEGAS, NV 89115, USA +1(702) 500-9000 HELLO@BOXABL.COM	
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# 3:12 GABLE

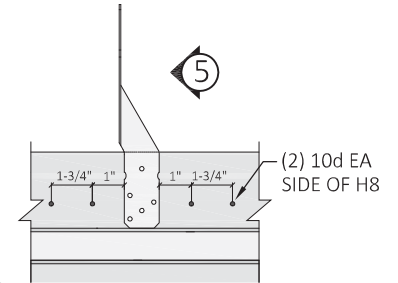
ROOF TRUSSES DESIGNED, SUPPLIED, & SITE-INSTALLED BY OTHERS



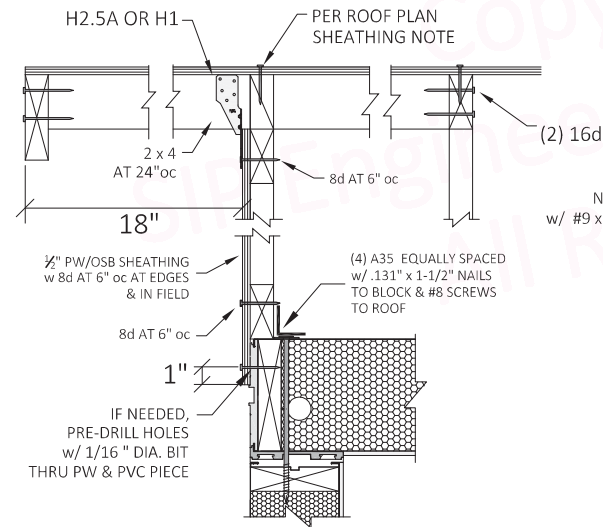
**6** BLOCKING OVERHANG AT END TRUSS



**7** RAKE AT ENDWALLS

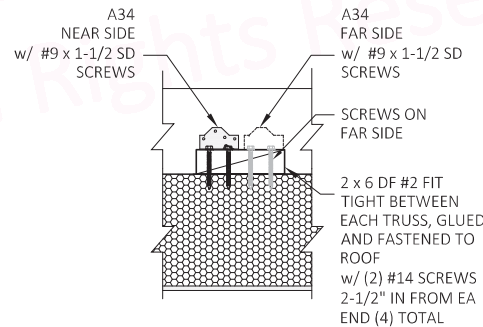


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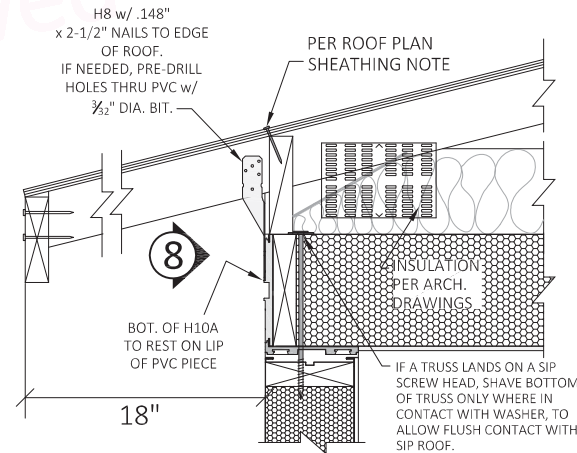


**3** GABLE END TRUSS TO ROOF EDGE

IF WITHIN 4,000 FT OF A COASTLINE USE STAINLESS STEEL VERSIONS OF HARDWARE, NAILS AND SCREWS SPECIFIED



**4** TRUSS BOT. CHORD BRACING AGAINST UPLIFT BUCKLING



**5** TRUSS-TO-SIP ROOF AT EAVE

**STAMP OF APPROVAL**

Approved For State of California  
Factory Built Housing

By  
MA Consulting & Engineering MACE, LLC  
Third Party Design Approval Agency (DAA)  
Certificate Number: 20170623

These plans have been approved pursuant to the provisions of The State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 1, Subchapter 1.  
Approval herein does not constitute or approve any condition or deviation from State laws or valid local ordinances nor is it applicable to movement of plans over distances, except made on site plans.

Generic Foundation Design Approved  
Occupancy: Res/LL, Wind: Exp, Seismic: C  
RS: 30 psf, 11F, E, E  
Plan Approval No.: MAC-FBH 10153  
By: *[Signature]*

Approval Date: 5/26/2025  
Expiration Date: 1/11/2028

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EXPIRES 6-30-26

DATE:	REV:	DESCRIPTION:	* CONFIDENTIAL
			AS INSTRUMENTS OF SERVICE, THESE DRAWINGS SHALL REMAIN THE PROPERTY OF SIP ENGINEERING CONSULTANTS, LLC WHO SHALL RETAIN ALL COMMON LAW, STATUTORY & OTHER RESERVED RIGHTS, INCLUDING COPYRIGHTS, ONLY FOR BLDG. WITHIN THE MAIN DRAWING AREA. REPRODUCTION & FORTHRIGHT WITHOUT THE EXPRESSED, WRITTEN PERMISSION OF SIP ENGINEERING CONSULTANTS, LLC.



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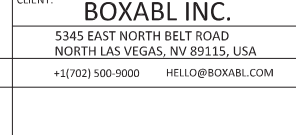
14845 SW MURRAY SCHOLLS DR., SUITE 110 PMB 306 BEAVERTON, OR 97007

PHONE : 503-664-4178  
Mike@SIPconsultants.com

UNITS:	FT-IN
SHEET FORMAT:	ARCH C
SHEET SCALE:	NONE
CREATED BY:	MN
RELEASE DATE:	12/13/2024
SHEET:	<b>S10</b>

MODEL:	2 DOOR CASITA
MODEL #:	BXB-000012
<b>CALIFORNIA</b>	

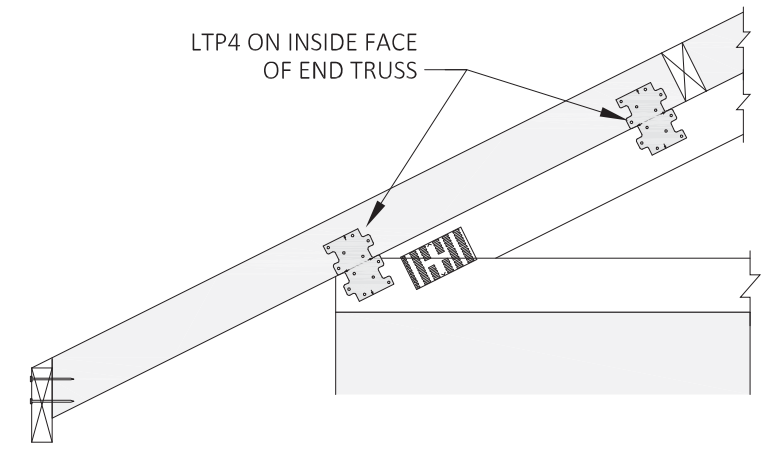
CLIENT:	<b>BOXABL INC.</b>
5345 EAST NORTH BELT ROAD NORTH LAS VEGAS, NV 89115, USA	
+1(702) 500-9000 HELLO@BOXABL.COM	



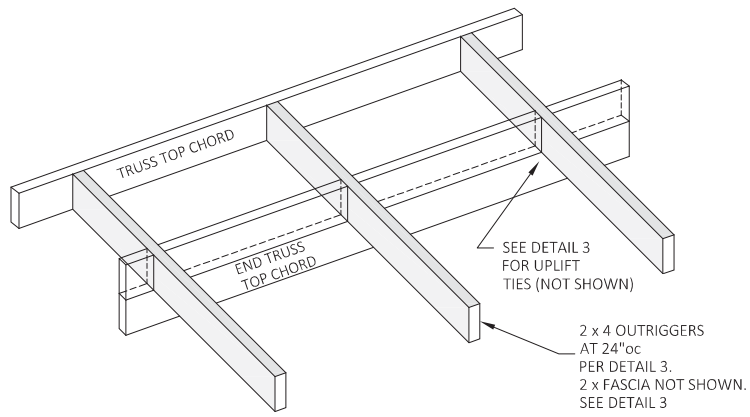


# 6:12 GABLE

ROOF TRUSSES DESIGNED, SUPPLIED, & SITE-INSTALLED BY OTHERS

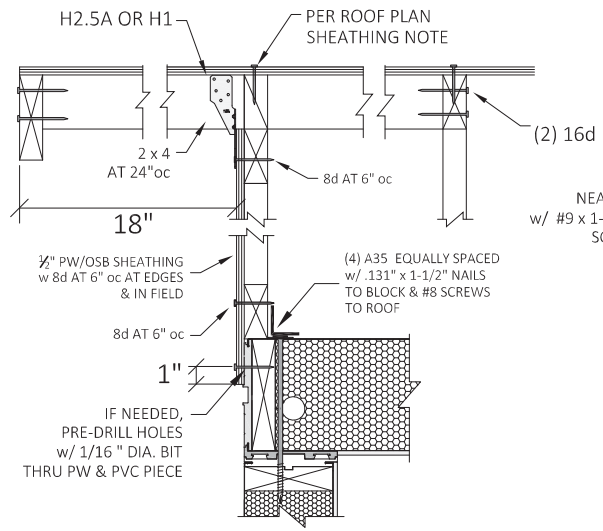


**6** BLOCKING OVERHANG AT END TRUSS

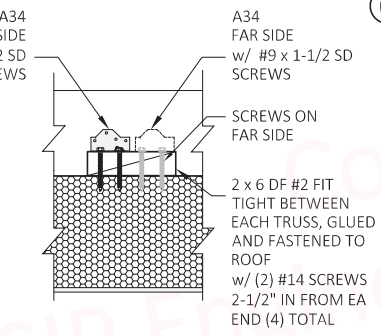


**7** RAKE AT ENDWALLS

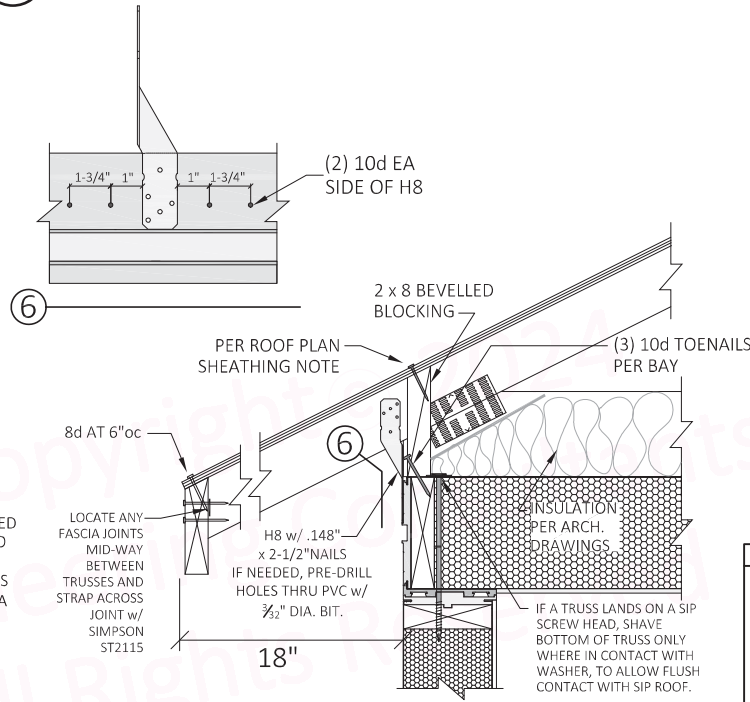
IF WITHIN 4,000 FT OF A COASTLINE USE STAINLESS STEEL VERSIONS OF HARDWARE, NAILS AND SCREWS SPECIFIED



**3** GABLE END TRUSS TO ROOF EDGE



**4** TRUSS BOT. CHORD BRACING AGAINST UPLIFT BUCKLING



**5** TRUSS-TO-SIP ROOF AT EAVE

**STAMP OF APPROVAL**

Approved For State of California  
Factory Built Housing

By  
MA Consulting & Engineering MACE, LLC,  
Third Party Design Approval Agency (DAA)  
Certificate Number: 201710623

These plans have been approved pursuant to the provisions of The State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 15, Subchapter 1.

Approval herein does not constitute or approve any condition or deviation from State laws or valid local ordinances nor is it applicable to movement of plans over boundaries, except made on site plans.

Generic Foundation Design Approved

Occupancy Rev/L Wind Exp Seismic Ctr  
RB 30 pdf 11F C E

Plan Approval No: MAC-FBH 10153  
By: *Yoshino, Mike*

Approval Date: 5/26/2025  
Expiration Date: 1/11/2028

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EXPIRES 6-30-26

DATE:	REV:	DESCRIPTION:	* CONFIDENTIAL



**SIP ENGINEERING CONSULTANTS, LLC**

14845 SW MURRAY SCHOLLS DR.,  
SUITE 110 PMB 306  
BEAVERTON, OR 97007

PHONE : 503-664-4178  
Mike@SIPconsultants.com

UNITS:	FT-IN
SHEET FORMAT:	ARCH C
SHEET SCALE:	NONE
CREATED BY:	MN
RELEASE DATE:	12/13/2024
SHEET:	<b>S12</b>

MODEL: 2 DOOR CASITA

MODEL #: BXB-000012

**CALIFORNIA**

CLIENT: **BOXABL INC.**

5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA

+1(702) 500-9000 HELLO@BOXABL.COM

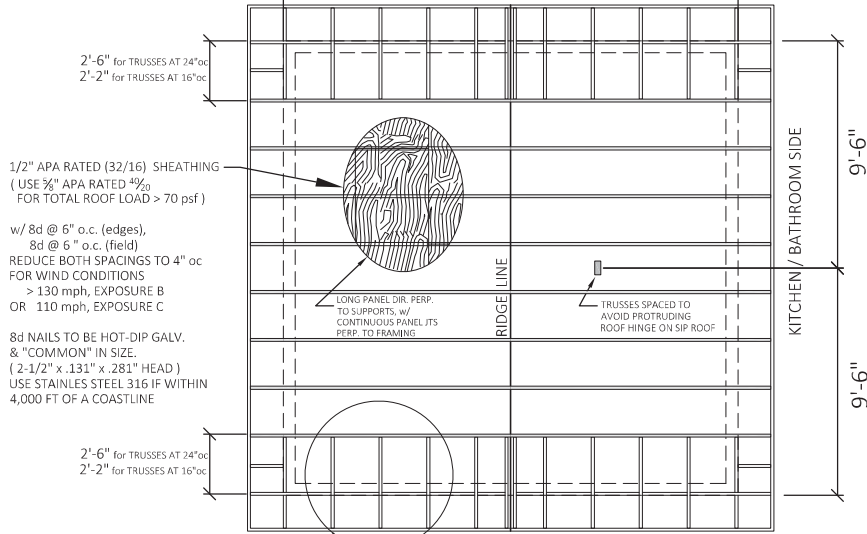


## DESIGN CRITERIA

PER LOCAL CONDITIONS  
BUT NEED NOT EXCEED MAXIMUM DEAD  
LOAD, WIND SPEED/EXPOSURE, AND  
GROUND SNOW LOAD LIMITS FOUND ON  
SHEETS S1, S1.1

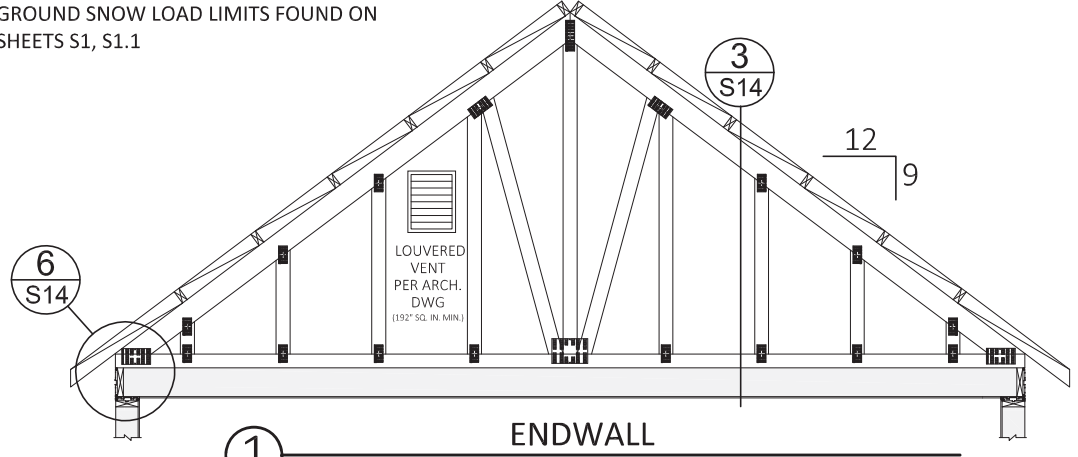
# 9:12 GABLE

TRUSSES MAY  
BE ROTATED  
90 deg.

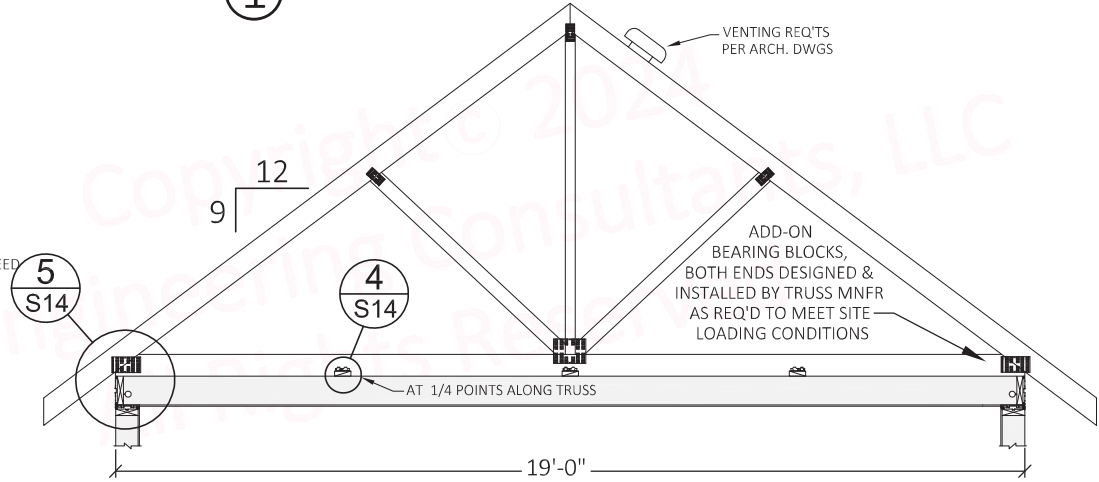


**7**  
S14  
**GABLE ROOF PLAN**

24" o.c. SPACING SHOWN.  
USE 16" o.c. AS REQ'D FOR  
HIGH SNOW LOADS



**1**  
**ENDWALL**



**2**  
**PRE-ENGINEERED WOOD TRUSS**

**ROOF TRUSSES DESIGNED,  
SUPPLIED, &  
SITE-INSTALLED BY OTHERS**

**NOTES:**

- 1) ASSUME VERTICAL TRUSS SUPPORT ONLY AT THE WALLS.
- 2) ASSUME BOTTOM CHORD OF EACH TRUSS WILL BE RESTRAINED AGAINST LATERAL MOVEMENT IN BOTH HORIZONTAL DIRECTIONS BY THE A34 CLIPS INDATED ON THE TRUSS PROFILES. DESIGN EACH TRUSS TO TRANSMIT LATERAL WIND FROM THE TOP CHORD TO THE BOTTOM CHORD. TRUSS WEB COMPRESSION MEMBERS TO BE DESIGNED TO AVOID THE NEED FOR LATERAL BRACING AGAINST BUCKLING.
- 3) INSTALL SIMPSON STRONG-TIE HARDWARE PER SIMPSON SPECIFICATIONS, U. N. O.
- 4) STABILITY DURING ERECTION TO BE DESIGNED & SUPPLIED BY OTHERS.
- 5) TRUSSES TO BE FABRICATED BY A CERTIFIED MEMBER OF THE TRUSS PLATE INSTITUTE AND SHALL COMPLY WITH THEIR STANDARDS.
- 6) CONNECTION PLATES SHALL BE IBC/ICBO APPROVED.
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- 11) PROVIDE TEMPORARY ERECTION BRACING PER BCSI-B1 SUMMARY SHEET GUIDE FOR HANDLING, INSTALLING & BRACING OF METAL PLATED CONNECTED TRUSSES.

**STAMP OF APPROVAL**

Approved For State of California  
Factory Built Housing

By  
MA Consulting & Engineering MACE, LLC,  
Third Party Design Approval Agency (DAA)  
Certificate Number: DP170623

These plans have been approved pursuant to the provisions of The State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 1, Subchapter 1. Approval herein does not constitute or approve any condition or deviation from State laws or valid local ordinances nor is it applicable to movement of plans over boundaries, except made on site plans.

Generic Foundation Design Approved  
Occupancy: Res/LL, Wind: Exp, Seismic: Cse  
RS: 30 psf, IFR: E  
Plan Approval No.: MAC-FBH 10153  
By: *Michael J. Mac*  
Approval Date: 5/26/2025  
Expiration Date: 1/11/2028

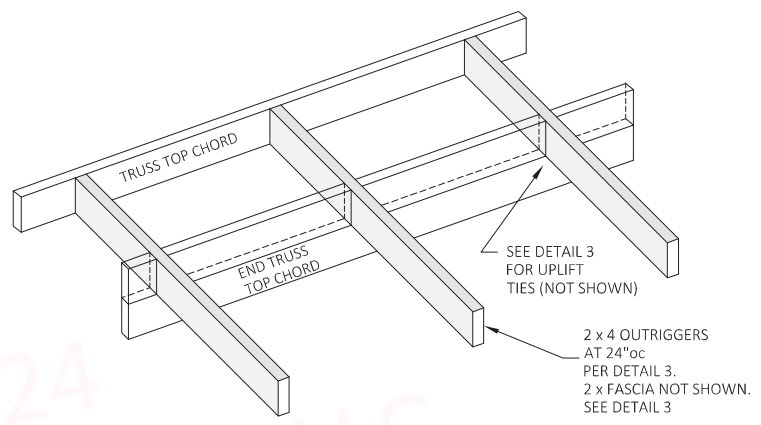
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EXPIRES 6-30-26

DATE:	REV:	DESCRIPTION:	* CONFIDENTIAL			14845 SW MURRAY SCHOLLS DR. SUITE 110 PMB 306 BEAVERTON, OR 97007  PHONE : 503-664-4178 Mike@SIPconsultants.com	UNITS: FT-IN SHEET FORMAT: ARCH C SHEET SCALE: NONE CREATED BY: MN RELEASE DATE: 12/13/2024 SHEET: <b>S13</b>	MODEL: 2 DOOR CASITA  MODEL #: BXB-000012  <b>CALIFORNIA</b>	CLIENT: <b>BOXABL INC.</b> 5345 EAST NORTH BELT ROAD NORTH LAS VEGAS, NV 89115, USA +1(702) 500-9000 HELLO@BOXABL.COM	
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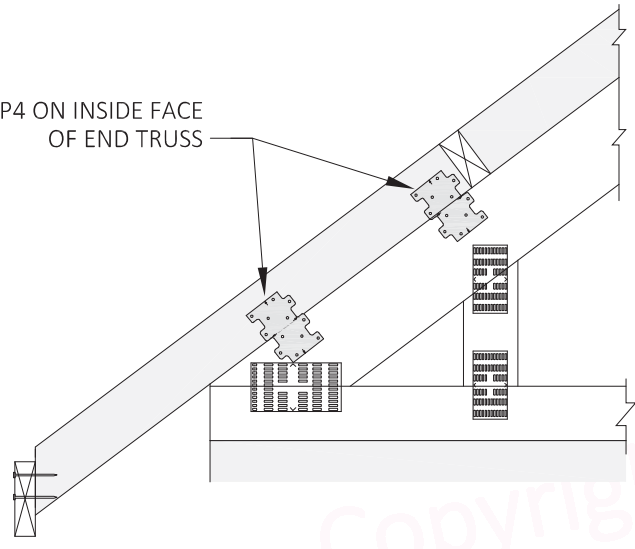
# 9:12 GABLE

ROOF TRUSSES  
DESIGNED,  
SUPPLIED, &  
SITE-INSTALLED  
BY OTHERS



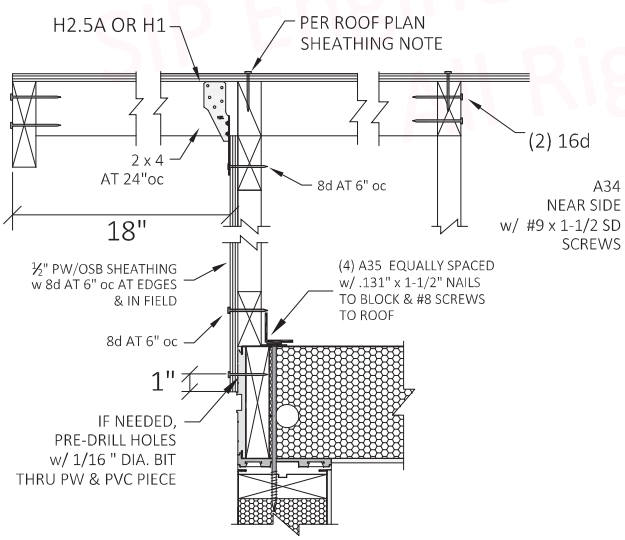
7 RAKE AT ENDWALLS

LTP4 ON INSIDE FACE OF END TRUSS

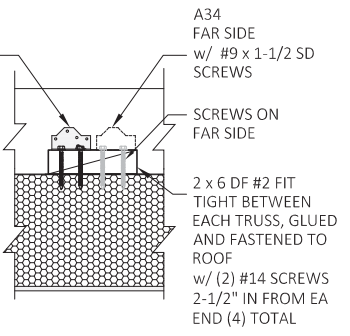


6 BLOCKING OVERHANG AT END TRUSS

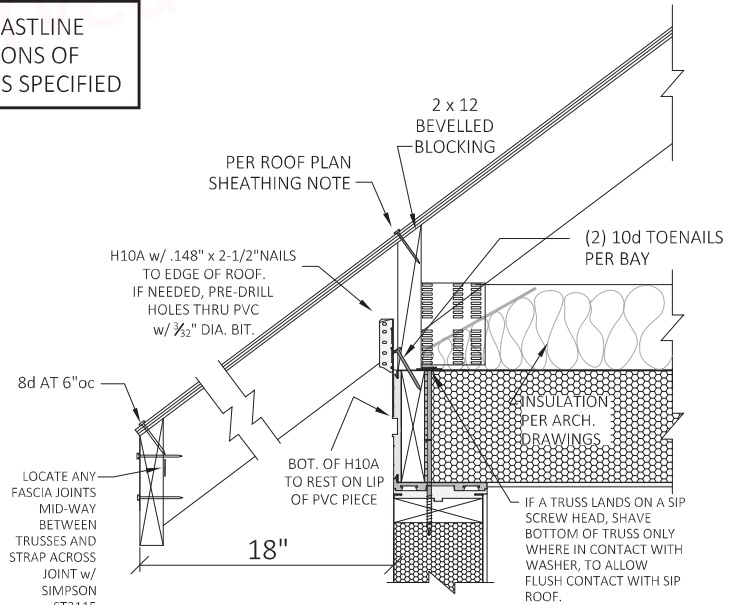
IF WITHIN 4,000 FT OF A COASTLINE  
USE STAINLESS STEEL VERSIONS OF  
HARDWARE, NAILS AND SCREWS SPECIFIED



3 GABLE END TRUSS TO ROOF EDGE



4 TRUSS BOT. CHORD BRACING AGAINST UPLIFT BUCKLING



5 TRUSS-TO-SIP ROOF AT EAVE

**STAMP OF APPROVAL**

Approved For State of California  
Factory Built Housing

By  
MA Consulting & Engineering MACE, LLC,  
Third Party Design Approval Agency (DAA)  
Certificate Number: DP170623

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Approval herein does not constitute an approval or certification of the design or construction of the building or any component thereof.

Generic Foundation Design Approved

Occupancy: Res/LL, Wind: Exp, Seismic: C

RS: 30 pcf, 11R, C, E

Plan Approval No.: MAC-FBH 10153

By: *Yashwanth Nalle*

Approval Date: 5/26/2025  
Expiration Date: 1/11/2028

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EXPIRES 6-30-26

DATE:	REV:	DESCRIPTION:	* CONFIDENTIAL
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**SIP ENGINEERING CONSULTANTS, LLC**

14845 SW MURRAY SCHOLLS DR., SUITE 110 PMB 306 BEAVERTON, OR 97007

PHONE : 503-664-4178  
Mike@SIPconsultants.com

UNITS:	FT-IN
SHEET FORMAT:	ARCH C
SHEET SCALE:	NONE
CREATED BY:	MN
RELEASE DATE:	12/13/2024
SHEET:	<b>S14</b>

MODEL: 2 DOOR CASITA

MODEL #: BXB-000012

**CALIFORNIA**

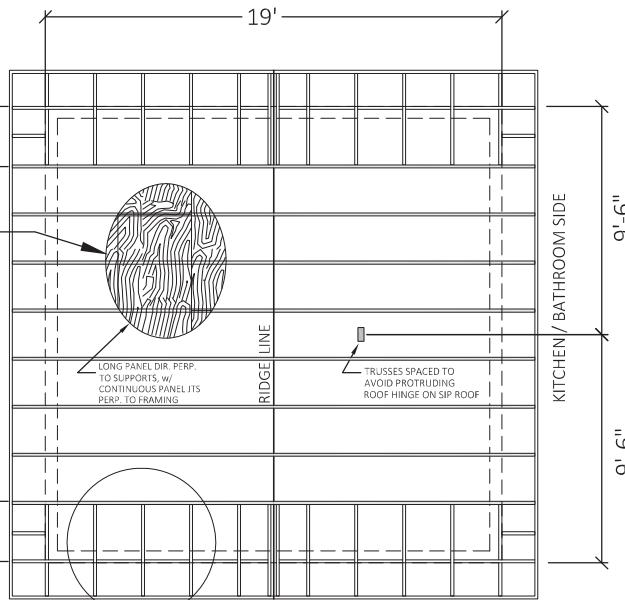
CLIENT: **BOXABL INC.**

5345 EAST NORTH BELT ROAD  
NORTH LAS VEGAS, NV 89115, USA

+1(702) 500-9000 HELLO@BOXABL.COM



TRUSSES MAY BE ROTATED 90 or 180 deg.



7 S16

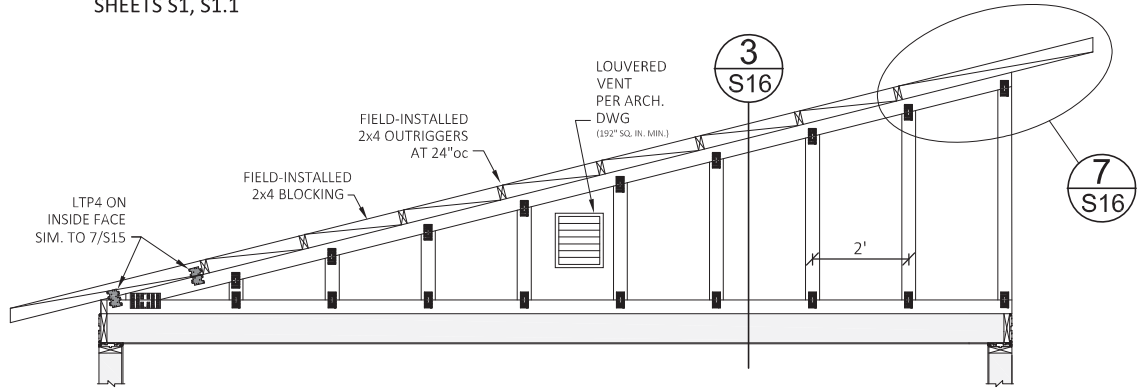
**SHED ROOF PLAN**

24" oc SPACING SHOWN. USE 16" oc AS REQ'D FOR HIGH SNOW LOADS

**DESIGN CRITERIA**

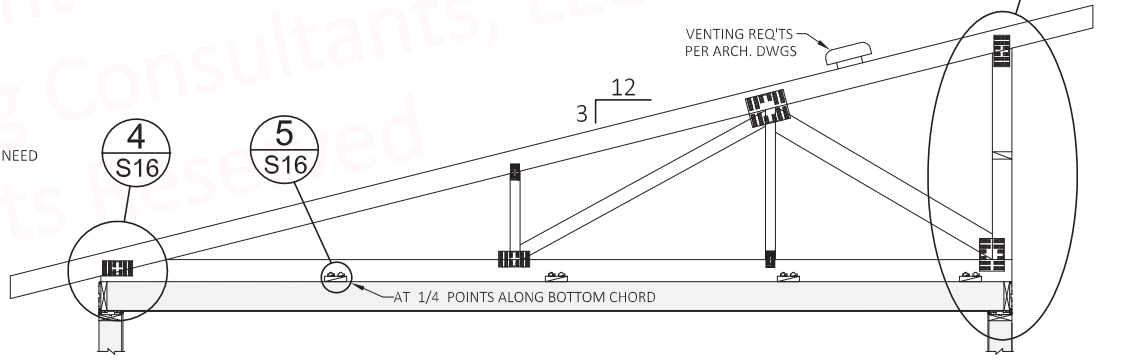
PER LOCAL CONDITIONS BUT NEED NOT EXCEED MAXIMUM DEAD LOAD, WIND SPEED/EXPOSURE, AND GROUND SNOW LOAD LIMITS FOUND ON SHEETS S1, S1.1

**3:12 MONOSLOPE**



1

**PRE-ENGINEERED WOOD END TRUSS**



2

**PRE-ENGINEERED WOOD TRUSS**

**ROOF TRUSSES DESIGNED, SUPPLIED, & SITE-INSTALLED BY OTHERS**

**NOTES:**

- 1) ASSUME VERTICAL TRUSS SUPPORT ONLY AT THE WALLS.
- 2) ASSUME BOTTOM CHORD OF EACH TRUSS WILL BE RESTRAINED AGAINST LATERAL MOVEMENT IN BOTH HORIZONTAL DIRECTIONS BY THE A34 CLIPS INDATED ON THE TRUSS PROFILES. DESIGN EACH TRUSS TO TRANSMIT LATERAL WIND FROM THE TOP CHORD TO THE BOTTOM CHORD. TRUSS WEB COMPRESSION MEMBERS TO BE DESIGNED TO AVOID THE NEED FOR LATERAL BRACING AGAINST BUCKLING.
- 3) INSTALL SIMPSON STRONG-TIE HARDWARE PER SIMPSON SPECIFICATIONS, U.N.O.
- 4) STABILITY DURING ERECTION TO BE DESIGNED & SUPPLIED BY OTHERS.
- 5) TRUSSES TO BE FABRICATED BY A CERTIFIED MEMBER OF THE TRUSS PLATE INSTITUTE AND SHALL COMPLY WITH THEIR STANDARDS.
- 6) CONNECTION PLATES SHALL BE IBC/ICBO APPROVED.
- 7) ALL TRUSSES MEMBERS SHALL HAVE LUMBER GRADE STAMPS.
- 8) THE TRUSS DESIGN AND ERECTION DRAWINGS SHALL BE MADE BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE IN QUESTION.
- 9) ERECTION PLANS SHALL SHOW THE TRUSS SPACING, TRUSS MARK (CALCULATION) NUMBERS, CONCENTRATED LOADS, & PERMANENT BRACING/BLOCKING AS REQUIRED BY THE TRUSS DESIGN.
- 10) SHOP DRAWINGS SHALL INCLUDE DIMENSIONS, CONFIGURATIONS, NOMINAL LUMBER SIZE AND GRADE, SPECIFICATIONS FOR CONNECTOR PLATES, THEIR SIZE AND LOCATIONS.
- 11) PROVIDE TEMPORARY ERECTION BRACING PER BCSI-B1 SUMMARY SHEET GUIDE FOR HANDLING, INSTALLING & BRACING OF METAL PLATED CONNECTED TRUSSES.

**STAMP OF APPROVAL**

Approved For State of California  
Factory Built Housing

By  
MA Consulting & Engineering MACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: 20170423

These plans have been approved pursuant to the provisions of The State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 9, Subchapter 1. Approval herein does not constitute or approve any condition or deviation from State laws or valid local ordinances nor is it applicable to movement of plans over boundaries, except made on site plans.

Generic Foundation Design Approved  
Occupancy: Res/LL, Wind: Exp, Seismic: Ctr  
RS: 30 psf, IIR: E  
Plan Approval No.: MAC-FBH 10153  
By: *Yashwanth*

Approval Date: 5/26/2025  
Expiration Date: 1/11/2028

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EXPIRES 6-30-26

DATE:	REV:	DESCRIPTION:

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**SIP ENGINEERING CONSULTANTS, LLC**

14845 SW MURRAY SCHOLLS DR., SUITE 110 PMB 306 BEAVERTON, OR 97007

PHONE : 503-664-4178  
Mike@SIPconsultants.com

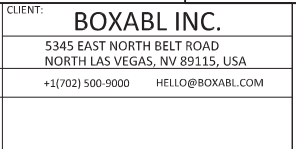
UNITS:	FT-IN
SHEET FORMAT:	ARCH C
SHEET SCALE:	NONE
CREATED BY:	MN
RELEASE DATE:	12/13/2024
SHEET:	<b>S15</b>

MODEL: 2 DOOR CASITA

MODEL #: BXB-000012

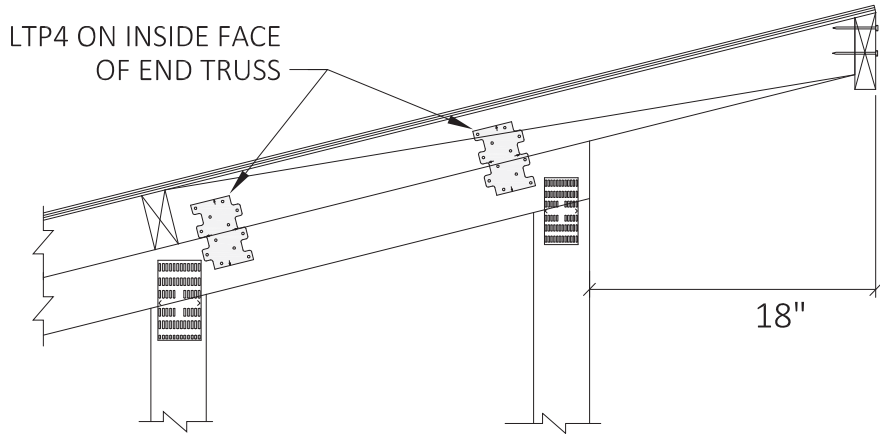
**CALIFORNIA**

CLIENT:	<b>BOXABL INC.</b>
	5345 EAST NORTH BELT ROAD NORTH LAS VEGAS, NV 89115, USA
	+1(702) 500-9000 HELLO@BOXABL.COM

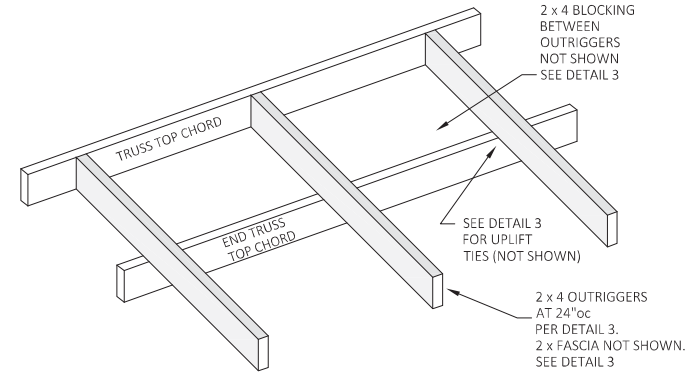


# 3:12 MONO

ROOF TRUSSES DESIGNED, SUPPLIED, & SITE-INSTALLED BY OTHERS

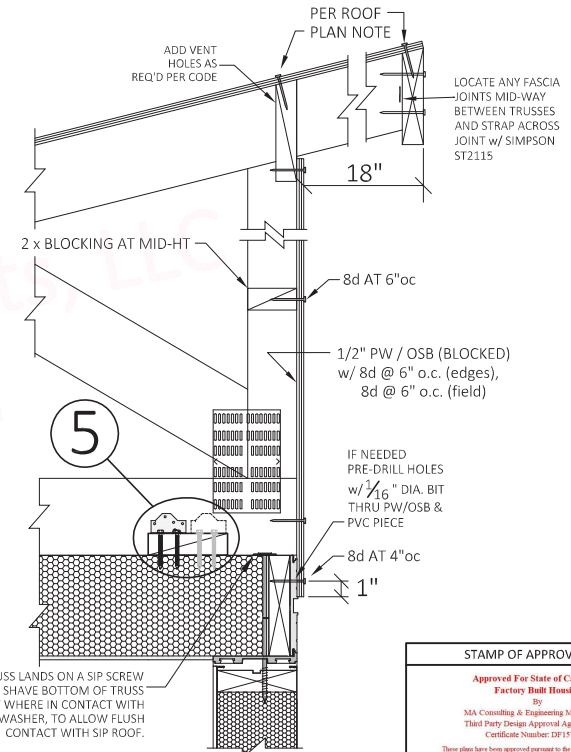


**7** BLOCKING EXTENSION AT HIGH END CORNER

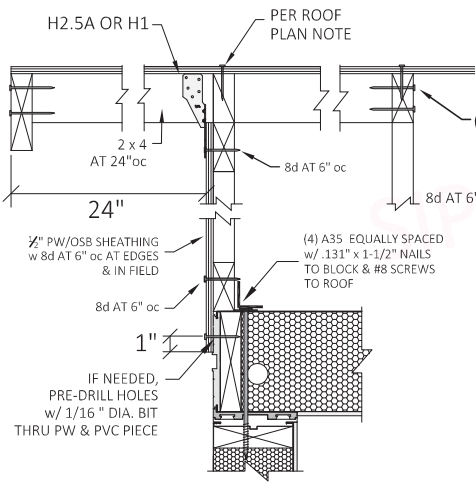


**8** RAKE AT ENDWALLS

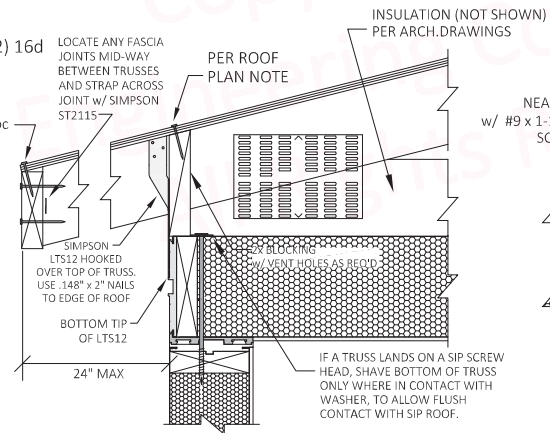
IF WITHIN 4,000 FT OF A COASTLINE USE STAINLESS STEEL VERSIONS OF HARDWARE, NAILS AND SCREWS SPECIFIED



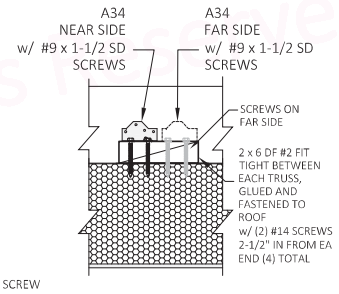
**6** RIGHT EDGE CONN.



**3** GABLE END TRUSS TO ROOF EDGE



**4** LEFT EDGE CONN.



**5** TRUSS BOT. CHORD BRACING AGAINST UPLIFT BUCKLING

**STAMP OF APPROVAL**

Approved For State of California  
**Factory Built Housing**  
 by  
 MA Consulting & Engineering MAACE, LLC.  
 Third Party Design Approval Agency (DAA)  
 Certificate Number: 20170623

These plans have been approved pursuant to the provisions of The State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 15, Subchapter 1.  
 Approval herein does not constitute an approval or certification or derivation from State laws or valid local ordinances nor is it applicable to movement of plans over boundaries, except made on site plans.

Generic Foundation Design Approved  
 Occupancy: Res/LL, Wind: Exp, Seismic: C-  
 RS 30 pdf 11F E E  
 Plan Approval No: **MAC-FBH 10153**  
 by: **939shane@maace.com**  
 Approval Date: 5/26/2025  
 Expiration Date: 1/11/2028

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EXPIRES 6-30-26

DATE:	REV:	DESCRIPTION:	* CONFIDENTIAL
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**SIP ENGINEERING CONSULTANTS, LLC**

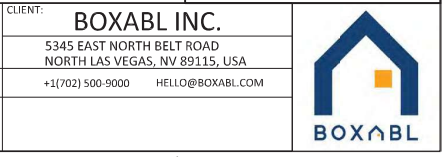
14845 SW MURRAY SCHOLLS DR., SUITE 110 PMB 306 BEAVERTON, OR 97007

PHONE : 503-664-4178  
 Mike@SIPconsultants.com

UNITS:	FT-IN
SHEET FORMAT:	ARCH C
SHEET SCALE:	NONE
CREATED BY:	MN
RELEASE DATE:	12/13/2024
SHEET:	<b>S16</b>

MODEL:	2 DOOR CASITA
MODEL #:	BXB-000012
<b>CALIFORNIA</b>	

CIENT:	<b>BOXABL INC.</b>
5345 EAST NORTH BELT ROAD NORTH LAS VEGAS, NV 89115, USA	
+1(702) 500-9000 HELLO@BOXABL.COM	

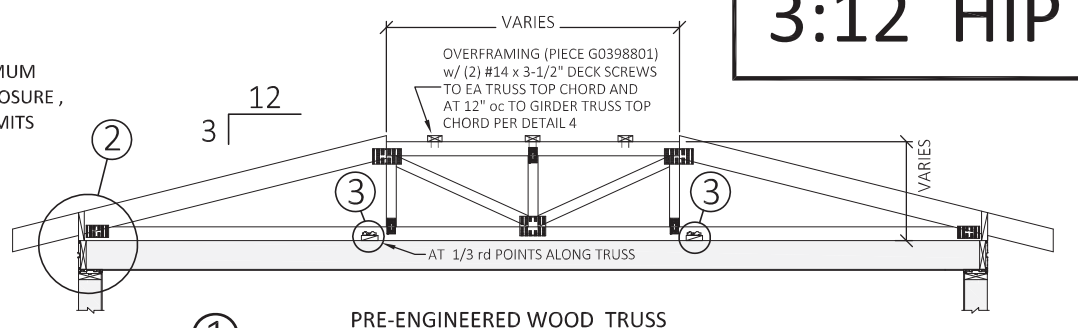


# 3:12 HIP

## DESIGN CRITERIA

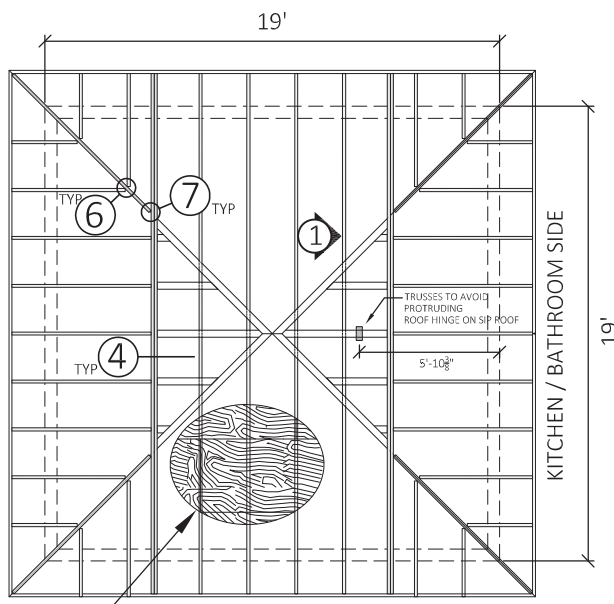
PER LOCAL CONDITIONS  
BUT NEED NOT EXCEED MAXIMUM  
DEAD LOAD, WIND SPEED/EXPOSURE,  
AND GROUND SNOW LOAD LIMITS  
FOUND ON SHEETS S1, S1.1

**ROOF TRUSSES  
DESIGNED, SUPPLIED,  
& SITE-INSTALLED BY  
OTHERS**



PRE-ENGINEERED WOOD TRUSS

IF WITHIN 4,000 FT OF A COASTLINE  
USE STAINLESS STEEL VERSIONS OF  
HARDWARE, NAILS AND SCREWS SPECIFIED



## HIP ROOF PLAN

LONG PANEL DIR. PERP. TO SUPPORTS, W/ CONTINUOUS PANEL JOINTS PERP. TO FRAMING

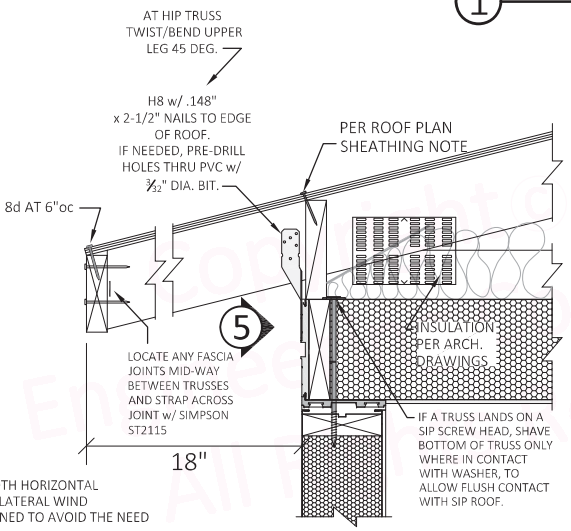
1/2" APA RATED (32/16) SHEATHING w/ 8d @ 6" o.c. (edges), (USE 3/4" APA RATED 4% FOR TOTAL ROOF LOAD > 70 psf) 8d @ 6" o.c. (field) TRUSSES TO AVOID PROTRUDING ROOF HINGE ON SIP ROOF

5'-10"

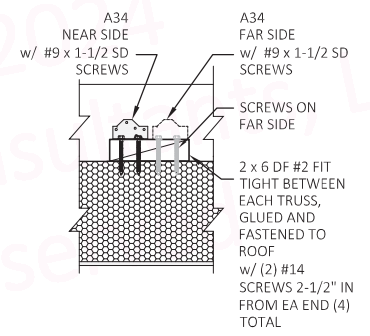
24" oc SPACING SHOWN. USE 16" oc AS REQ'D FOR HIGH SNOW LOADS

### NOTES:

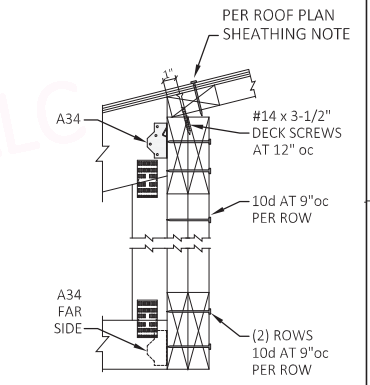
- 1) ASSUME VERTICAL TRUSS SUPPORT ONLY AT THE WALLS.
- 2) ASSUME BOTTOM CHORD OF EACH TRUSS WILL BE RESTRAINED AGAINST LATERAL MOVEMENT IN BOTH HORIZONTAL DIRECTIONS BY THE A34 CLIPS INDATED ON THE TRUSS PROFILES. DESIGN EACH TRUSS TO TRANSMIT LATERAL WIND FROM THE TOP CHORD TO THE BOTTOM CHORD. TRUSS WEB COMPRESSION MEMBERS TO BE DESIGNED TO AVOID THE NEED FOR LATERAL BRACING AGAINST BUCKLING.
- 3) INSTALL SIMPSON STRONG-TIE HARDWARE PER SIMPSON SPECIFICATIONS, U.N.O.
- 4) STABILITY DURING ERECTION TO BE DESIGNED & SUPPLIED BY OTHERS.
- 5) TRUSSES TO BE FABRICATED BY A CERTIFIED MEMBER OF THE TRUSS PLATE INSTITUTE AND SHALL COMPLY WITH THEIR STANDARDS.
- 6) CONNECTION PLATES SHALL BE IBC/ICBO APPROVED.
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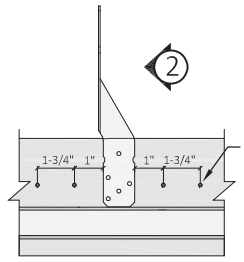
2 TRUSS-TO-SIP ROOF AT EAVE



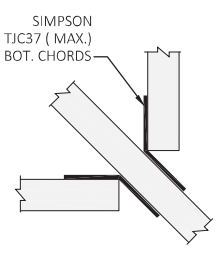
3 TRUSS BOT. CHORD BRACING AGAINST UPLIFT BUCKLING



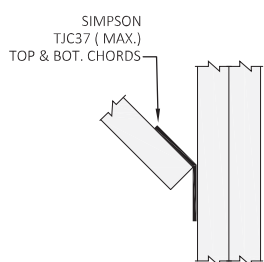
4 MONOTRUSS - TO - GIRDER TRUSS CONNECTIONS



5 MONOTRUSS - TO - HIP TRUSS CONNECTION



6 MONOTRUSS - TO - HIP TRUSS CONNECTION



7 MONOTRUSS - TO - HIP TRUSS CONNECTION

**STAMP OF APPROVAL**

Approved For State of California  
Factory Built Housing

By  
MA Consulting & Engineering MACE, LLC  
Third Party Design Approval Agency (DAA)  
Certificate Number: DP170623

These plans have been approved pursuant to the provisions of the State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 1, Subchapter 1. Approval herein does not constitute or approve any condition or deviation from State laws or valid local ordinances nor is it applicable to movement of plans over boundaries, except made on site plans.

Generic Foundation Design Approved

Occupancy Rev./LL Wind Exp Seismic Ctr  
RS 30 psf 11F E E

Plan Approval No: **MAC-FBH 10153**  
By: **9256886**

Approval Date: 5/26/2025  
Expiration Date: 1/11/2028

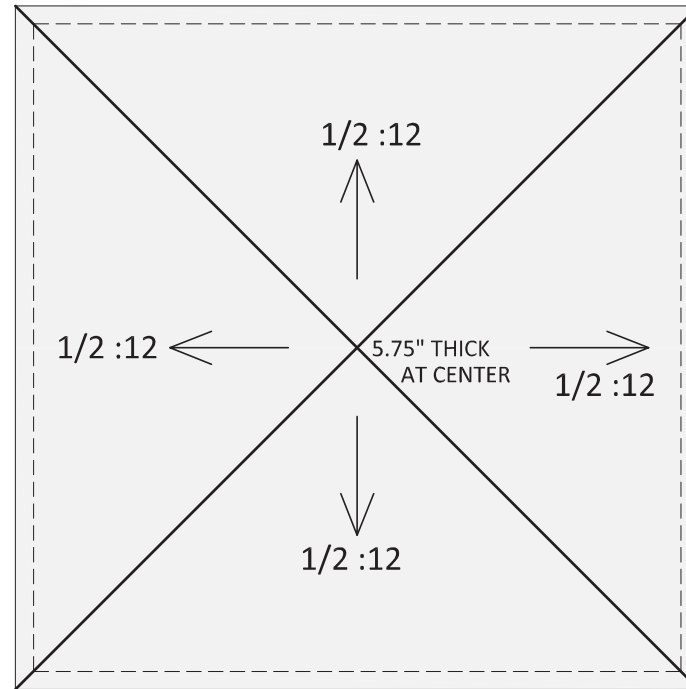
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EXPIRES 6-30-26

DATE:	REV:	DESCRIPTION:	* CONFIDENTIAL			14845 SW MURRAY SCHOLLS DR. SUITE 110 PMB 306 BEAVERTON, OR 97007  PHONE : 503-664-4178 Mike@SIPconsultants.com	UNITS: FT-IN SHEET FORMAT: ARCH C SHEET SCALE: NONE CREATED BY: MN RELEASE DATE: 12/13/2024 SHEET: <b>S17</b>	MODEL: 2 DOOR CASITA  MODEL #: BXB-000012  <b>CALIFORNIA</b>	CLIENT: <b>BOXABL INC.</b> 5345 EAST NORTH BELT ROAD NORTH LAS VEGAS, NV 89115, USA +1(702) 500-9000 HELLO@BOXABL.COM	
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# TAPERED INSUL. / EPDM

DESIGNED, SUPPLIED, & SITE-INSTALLED BY OTHERS



MAXIMUM TAPERED ROOFING WEIGHT:  
 2 psf + 0.7 psf x (MAX. ALLOW. GROUND SNOW LOAD - ACTUAL GROUND SNOW LOAD )

EPDM ROOFING OVER  
 TAPERED INSULATION GLUED TO ROOF.  
 DESIGNED, SUPPLIED & INSTALLED BY OTHERS

**STAMP OF APPROVAL**

Approved For State of California  
 Factory Built Housing

By  
 MA Consulting & Engineering MACE, LLC.  
 Third Party Design Approval Agency (DAA)  
 Certificate Number: DP170623

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**Generic Foundation Design Approved**

Occupancy	Res/LL	Wind	Exp	Seismic Ctr
RS	30 psf	11F	C	E

Plan Approval No: **MAC-FBH 10153**  
 By: **925888**  
 Approval Date: 5/26/2025  
 Expiration Date: 1/11/2028

EXPIRES 6-30-26

DATE:	REV:	DESCRIPTION:

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14845 SW MURRAY SCHOLLS DR.,  
 SUITE 110 PMB 306  
 BEAVERTON, OR 97007  
 PHONE : 503-664-4178  
 Mike@SIPconsultants.com

UNITS:	FT-IN
SHEET FORMAT:	ARCH C
SHEET SCALE:	NONE
CREATED BY:	MN
RELEASE DATE:	12/13/2024
SHEET:	<b>S18</b>

MODEL: 2 DOOR CASITA  
 MODEL #: BXB-000012  
**CALIFORNIA**

CLIENT: **BOXABL INC.**  
 5345 EAST NORTH BELT ROAD  
 NORTH LAS VEGAS, NV 89115, USA  
 +1(702) 500-9000 HELLO@BOXABL.COM



JOB	TRUSS	TRUSS TYPE	QTY	CUSTOMER
117774	L0313401	Truss Placement Plan	1	Boxabl 233 Gable 3/12 - 46.7 ground snow

UFP Industries Inc., Grand Rapids, MI 49525, Regan Craig  
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**19 NOT USED**

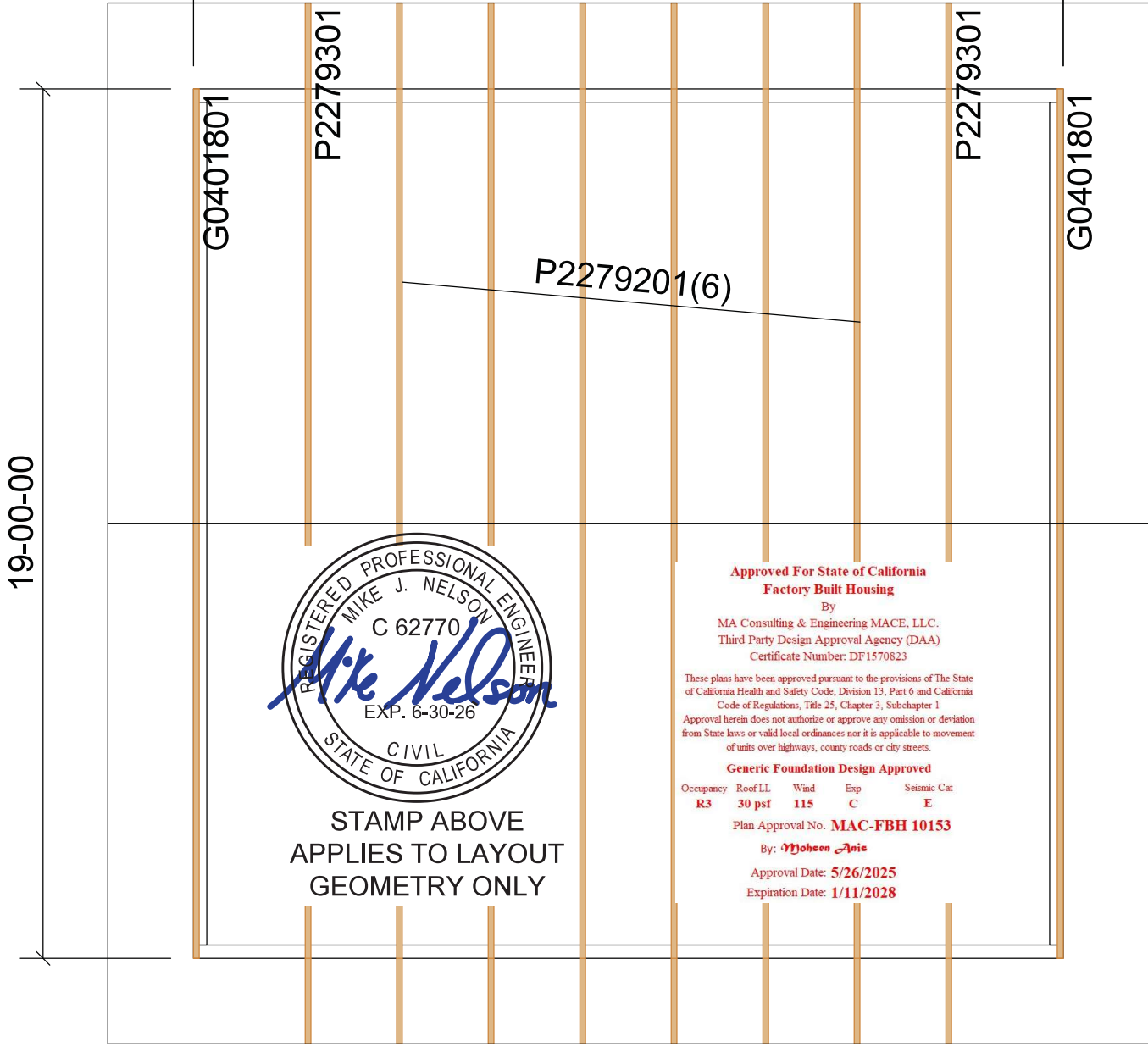
Truss List	
Truss	Qty
G0401801	2
P2279201	6
P2279301	2

19-00-00

**20**

2-00-00

2-06-00



**Warning - Verify design parameters and READ NOTES**

UFP Industries, Inc. 2801 East Beltline Rd, NE  
 PHONE (616)-364-6161 Grand Rapids, MI 49525

This is a TRUSS PLACEMENT PLAN to accurately locate pre-fabricated trusses in a building. This is not a structural framing plan and should not be construed as such. The Owner/Builder shall contract with a licensed design professional to prepare complete structural framing plans for the building. This layout is used to ensure accurate truss placement in accordance with the dimensional requirements of the building. This document does not consider building structural bracing requirements, shear walls, beams, columns or other structural elements that can be critical to the performance of the structure. Any reference to structural elements other than pre-fabricated trusses is purely incidental and is incorporated for clarity only. Refer to the structural framing plans prepared by the Building Engineer of Record for complete framing information. These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on this placement drawing. The building designer must incorporate the truss manufacturer's note on type and location of permanent web member reinforcement requirements in the truss design with full analysis of the overall structural design. For guidance regarding bracing, consult BCS1 1-03, "Guide to Good Practice for Handling, Installing and Bracing of Metal Plate Connected Wood Trusses" available from the WTCA/TPI, 583 D'Onofrio Drive, Madison, WI 53179. It is the responsibility of the General Contractor/Superintendent to verify that the provided truss layout matches final intended construction plans, loading conditions and use. If they do not, it is the responsibility of the General Contractor/Superintendent to provide prints/plans containing the latest specifications and designs. UFP Industries (UFP) will not be responsible for print/plan changes by others after final approval of shop drawings, nor is UFP responsible for errors or modifications made on-site during construction. DO NOT CUT, NOTCH, DRILL, OR OTHERWISE "REPAIR" MANUFACTURED TRUSSES IN ANY WAY WITHOUT PRIOR WRITTEN AUTHORIZATION BY A LICENSED DESIGN PROFESSIONAL DESIGNATED BY UFP. UFP WILL NOT BE HELD RESPONSIBLE FOR ANY MODIFICATIONS OR "CHARGE BACKS" DONE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM UFP.

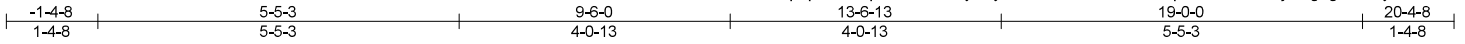


®

Job 117774	Truss P2279301	Truss Type QUEENPOST	Qty 1	Ply 1	Boxabl 233	169115225
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UFP Industries Inc., Grand Rapids, MI 49525

8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:44:45 2024 Page 1  
ID: Xz3qLqaXulJuq6xSPTA9xDyvRys-6?kOWk4TfhUK96Mip74FDtek0WPJfTog?gmWfR8yQBWW



Scale = 1:34.6

21

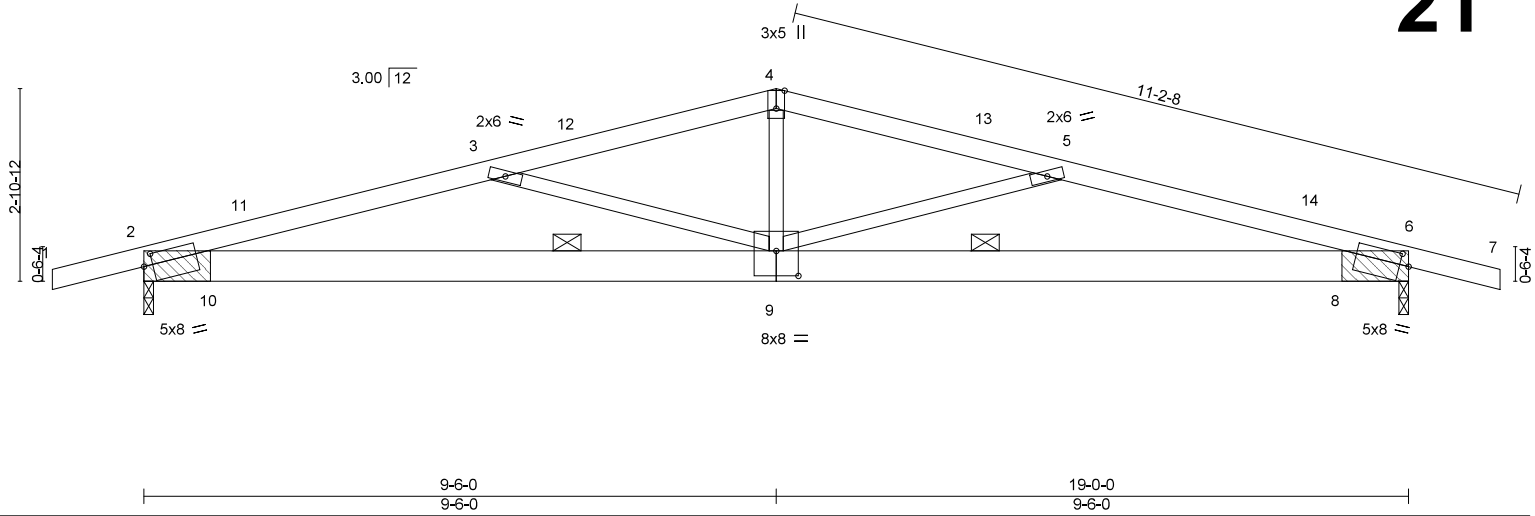


Plate Offsets (X,Y)-- [2:0-1-10,0-2-0], [4:0-3-4,Edge], [6:0-1-10,0-2-0], [9:0-4-0,0-4-8]					
<b>SPACING--</b> 2-3-0 <b>LOADING</b> (psf) TCLL 38.1 (Ground Snow=54.5) TCDL 14.0 BCLL 0.0 * BCDL 5.0	<b>SPACING--</b> 1-9-0 <b>LOADING</b> (psf) TCLL 49.0 (Ground Snow=70.0) TCDL 18.0 BCLL 0.0 * BCDL 6.4	<b>SPACING--</b> 2-3-0 Plate Grip DOL 1.00 Lumber DOL 1.00 Rep Stress Incr NO Code IBC2021/TPI2014	<b>CSI.</b> TC 0.89 BC 0.38 WB 0.74 Matrix-P	<b>DEFL.</b> in (loc) l/defl L/d Vert(LL) -0.16 9 >999 240 Vert(CT) -0.24 9 >932 180 Horz(CT) 0.05 6 n/a n/a	<b>PLATES GRIP</b> MT20 185/144  Weight: 72 lb FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SPF 1650F 1.5E  
BOT CHORD 2x6 SPF 2100F 1.8E  
WEBS 2x3 HF No.2 or 2x3 SPF No.2 \*Except\*  
4-9: 2x3 SPF Stud

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 2-5-8 oc purlins.  
BOT CHORD 6-4-0 oc bracing.

**REACTIONS.** (size) 2=(0-1-12 + bearing block) (req. 0-1-15), 6=(0-1-12 + bearing block) (req. 0-1-15)  
Max Horz 2=-78(LC 13)  
Max Uplift 2=-568(LC 8), 6=-568(LC 9)  
Max Grav 2=1546(LC 19), 6=1546(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-3623/1576, 3-4=-2342/1135, 4-5=-2342/1135, 5-6=-3623/1576  
BOT CHORD 2-9=-1427/3392, 6-9=-1427/3392  
WEBS 3-9=-1399/560, 4-9=-270/703, 5-9=-1399/560

- NOTES-** (10-12)
- 2x6 SPF 2100F 1.8E bearing block 12" long at jt. 2 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be SPF 2100F 1.8E.
  - 2x6 SPF 2100F 1.8E bearing block 12" long at jt. 6 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be SPF 2100F 1.8E.
  - Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph @27in o.c.; TCDL=3.8psf; BCDL=1.9psf; (Alt. 154mph @21in o.c.; TCCL=4.9psf; BCDL=2.4psf); h=30ft; Cat. II; Exp C; Enclosed; MVFRS (envelope) gable end zone and C-C Exterior(2E) -1-4-8 to 1-7-8, Interior(1) 1-7-8 to 6-6-0, Exterior(2R) 6-6-0 to 12-6-0, Interior(1) 12-6-0 to 17-4-8, Exterior(2E) 17-4-8 to 20-4-8 zone; C-C for members and forces & MVFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pg= 54.5 psf; Pf=38.1 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 38.1 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=568, 6=568.
  - This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - This truss complies with CBC 2022 Section 2303.4.

**LOAD CASE(S)** Standard

**Approved For State of California  
Factory Built Housing**

By  
MA Consulting & Engineering MACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: DF1570823

These plans have been approved pursuant to the provisions of The State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 3, Subchapter 1  
Approval herein does not authorize or approve any omission or deviation from State laws or valid local ordinances nor it is applicable to movement of units over highways, county roads or city streets.

**Generic Foundation Design Approved**

Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. **MAC-FBH 10153**

By: **Mohsen Anis**

Approval Date: **5/26/2025**

Expiration Date: **1/11/2028**



October 29, 2024

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MIH-7473 rev. 1/2/2023 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

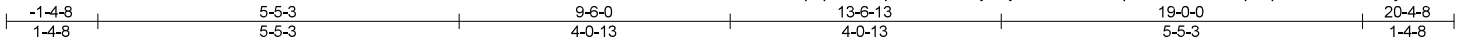
**MiTek®**

16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job 117774	Truss P2279201	Truss Type QUEENPOST	Qty 1	Ply 1	Boxabl 233	169115224
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UFP Industries Inc., Grand Rapids, MI 49525

8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:44:40 2024 Page 1  
ID:Xz3qLqaXulJuq6xSPTA9xDyvRys-m2wVT00Kq8s12KTl0aU4VpxupVifaewxrO3lAwyQBb



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22

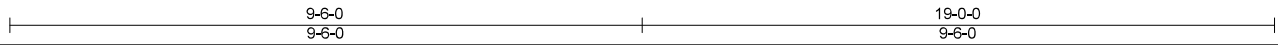
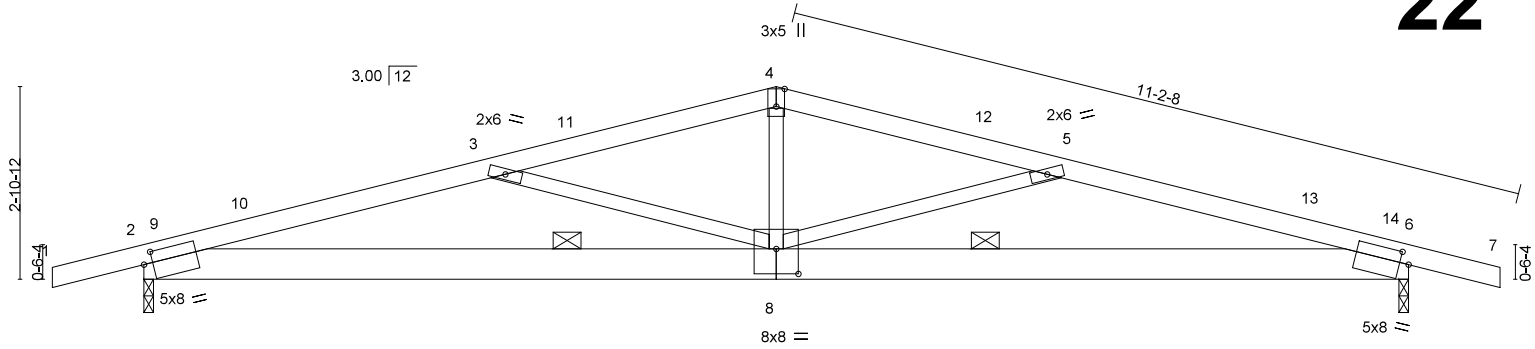


Plate Offsets (X,Y)-- [2:0-1-10,0-2-0], [4:0-3-3,Edge], [6:0-1-10,0-2-0], [8:0-4-0,0-4-8]

SPACING--	LOADING (psf)	SPACING--	LOADING (psf)	SPACING--	LOADING (psf)	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP	
2-0-0	32.7	1-4-0	49.0	2-0-0	46.7	TC 0.80	Vert(LL)	-0.14	8	>999	240	MT20	185/144
(Ground Snow=46.7)		(Ground Snow=70.1)		Plate Grip DOL	1.00	BC 0.31	Vert(CT)	-0.21	8	>999	180		
TCDL 14.0		TCDL 21.0		Lumber DOL	1.00	WB 0.59	Horz(CT)	0.04	6	n/a	n/a		
BCLL 0.0 *		BCLL 0.0 *		Rep Stress Incr	YES	Matrix-P							
BCDL 5.0		BCDL 7.5		Code IBC2021/TPI2014									

Weight: 69 lb  
FT = 20%

**LUMBER-**  
TOP CHORD 2x4 HF No.2 or 2x4 SPF No.2  
BOT CHORD 2x6 SPF 2100F 1.8E  
WEBS 2x3 HF No.2 or 2x3 SPF No.2 \*Except\*  
4-8: 2x3 SPF Stud

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.  
BOT CHORD 6-4-0 oc bracing.

**REACTIONS.** (size) 2=0-1-12, 6=0-1-12  
Max Horz 2=-70(LC 17)  
Max Uplift 2=-498(LC 8), 6=-498(LC 9)  
Max Grav 2=1234(LC 19), 6=1234(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-2918/1385, 3-4=-1883/995, 4-5=-1883/995, 5-6=-2918/1385  
BOT CHORD 2-8=-1253/2736, 6-8=-1253/2736  
WEBS 3-8=-1115/496, 4-8=-235/570, 5-8=-1115/497

- NOTES-** (9-11)
- 1) Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph @24in o.c.; TCDL=4.0psf; BCDL=2.0psf; (Alt. 167mph @16in o.c.; TCDL=6.0psf; BCDL=3.0psf); h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-4-8 to 1-7-8, Interior(1) 1-7-8 to 6-6-0, Exterior(2R) 6-6-0 to 12-6-0, Interior(1) 12-6-0 to 17-4-8, Exterior(2E) 17-4-8 to 20-4-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TLL: ASCE 7-16; Pg= 46.7 psf; Pf=32.7 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 32.7 psf on overhangs non-concurrent with other live loads.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 7) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 2, 6.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=498, 6=498.
  - 9) This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 10) This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 11) This truss complies with CBC 2022 Section 2303.4.

**LOAD CASE(S)** Standard

Approved For State of California  
Factory Built Housing

By  
MA Consulting & Engineering MACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: DF1570823

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Approval herein does not authorize or approve any omission or deviation from State laws or valid local ordinances nor it is applicable to movement of units over highways, county roads or city streets.

Generic Foundation Design Approved

Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. MAC-FBH 10153

By: *Mohsen Anis*

Approval Date: 5/26/2025

Expiration Date: 1/11/2028



October 29, 2024

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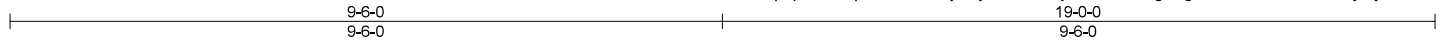
**MiTek®**

16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job 117774	Truss G0401801	Truss Type GABLE	Qty 1	Ply 1	Boxabl 233	169115223
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UFP Industries Inc., Grand Rapids, MI 49525

8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:44:34 2024 Page 1  
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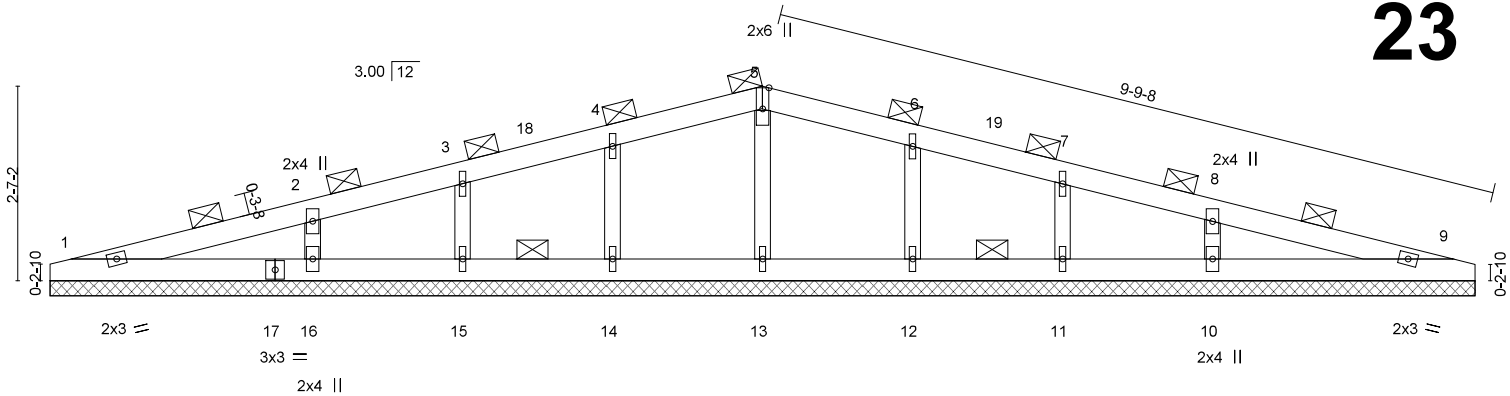


Plate Offsets (X,Y)-- [5:0-3-6,Edge]	19-0-0	19-0-0
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SPACING--	LOADING (psf)	SPACING--	LOADING (psf)	SPACING--	LOADING (psf)	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP
3-3-0		3-1-0		3-3-0		TC 0.63	Vert(LL)	n/a	-	n/a	MT20	185/144
46.5		49.0		Plate Grip DOL 1.00		BC 0.10	Vert(CT)	n/a	-	n/a		
(Ground Snow=66.4)		(Ground Snow=70.0)		Lumber DOL 1.00		WB 0.30	Horz(CT)	0.00	9	n/a		
11.0		11.6		Rep Stress Incr NO		Matrix-P						
0.0 *		0.0 *		Code IBC2021/TPI2014								
5.0		5.3										

Weight: 51 lb  
FT = 20%

**LUMBER-**  
TOP CHORD 2x4 HF No.2 or 2x4 SPF No.2  
BOT CHORD 2x4 HF No.2 or 2x4 SPF No.2  
OTHERS 2x3 SPF Stud

**BRACING-**  
TOP CHORD 2-0-0 oc purlins (6-0-0 max.)  
(Switched from sheeted: Spacing > 2-8-0).  
BOT CHORD 6-4-0 oc bracing.

**REACTIONS.** All bearings 19-0-0.  
(lb) - Max Horz 1=-96(LC 13)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 9, 13 except 14=-184(LC 8), 15=-115(LC 12), 16=-254(LC 8), 12=-184(LC 9), 11=-115(LC 13), 10=-254(LC 9)  
Max Grav All reactions 250 lb or less at joint(s) except 1=361(LC 18), 9=361(LC 19), 13=315(LC 1), 14=644(LC 18), 15=407(LC 18), 16=901(LC 18), 12=645(LC 19), 11=407(LC 19), 10=899(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
WEBS 5-13=-284/111, 4-14=-609/335, 3-15=-382/177, 2-16=-847/384, 6-12=-610/336, 7-11=-382/177, 8-10=-846/383

- NOTES-** (12-14)
- 1) Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph @39in o.c.; TCDL=5.1psf; BCDL=2.5psf; (Alt. 140mph @37in o.c.; TCDL=5.4psf; BCDL=2.6psf); h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) 0-3-10 to 3-6-0, Exterior(2N) 3-6-0 to 6-5-15, Corner(3R) 6-5-15 to 12-5-15, Exterior(2N) 12-5-15 to 15-6-0, Corner(3E) 15-6-0 to 18-8-5 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 3) TCDL: ASCE 7-16; Pg= 66.4 psf; Pf=46.5 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
  - 4) Unbalanced snow loads have been considered for this design.
  - 5) All plates are 1x4 MT20 unless otherwise indicated.
  - 6) Gable requires continuous bottom chord bearing.
  - 7) Gable studs spaced at 2-0-0 oc.
  - 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 9, 13 except (jt=lb) 14=184, 15=115, 16=254, 12=184, 11=115, 10=254.
  - 11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 12) This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 13) This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 14) This truss complies with CBC 2022 Section 2303.4.

**LOAD CASE(S)** Standard

**Approved For State of California  
Factory Built Housing**  
By  
MA Consulting & Engineering MACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: DF1570823

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**Generic Foundation Design Approved**  
Occupancy R3 Roof LL 30 psf Wind 115 Exp C Seismic Cat E  
Plan Approval No. **MAC-FBH 10153**  
By: **Mohsen Anis**  
Approval Date: **5/26/2025**  
Expiration Date: **1/11/2028**



October 29, 2024

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MIH-7473 rev. 1/2/2023 BEFORE USE.**

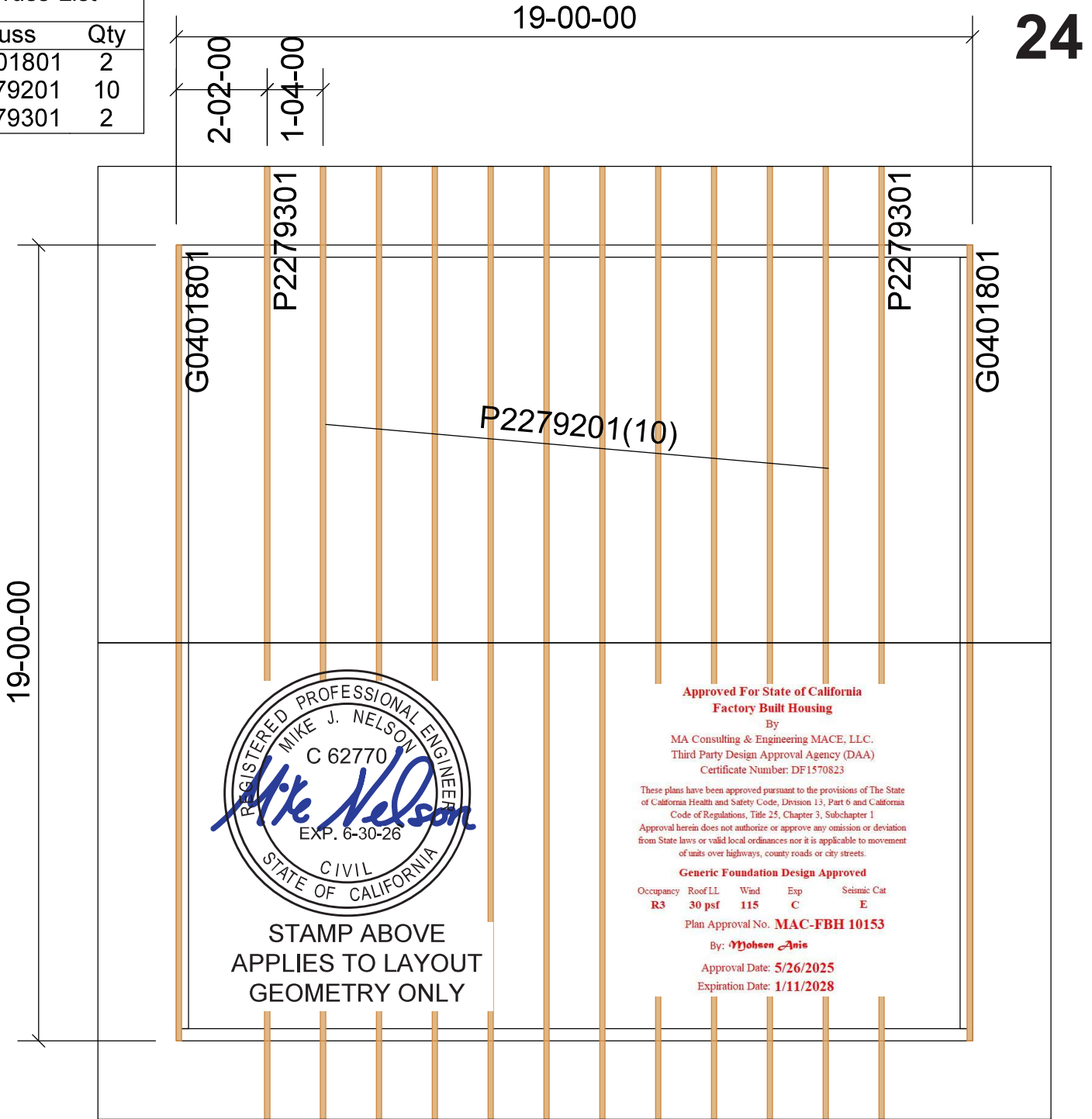
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**MiTek®**  
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

JOB	TRUSS	TRUSS TYPE	QTY	CUSTOMER
117774	L0313402	Truss Placement Plan	1	Boxabl 233 Gable 3/12 - 70 ground snow

UFP Industries Inc., Grand Rapids, MI 49525, Regan Craig  
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Truss List	
Truss	Qty
G0401801	2
P2279201	10
P2279301	2



**Warning - Verify design parameters and READ NOTES**

This is a TRUSS PLACEMENT PLAN to accurately locate pre-fabricated trusses in a building. This is not a structural framing plan and should not be construed as such. The Owner/Builder shall contract with a licensed design professional to prepare complete structural framing plans for the building. This layout is used to ensure accurate truss placement in accordance with the dimensional requirements of the building. This document does not consider building structural bracing requirements, shear walls, beams, columns or other structural elements that can be critical to the performance of the structure. Any reference to structural elements other than pre-fabricated trusses is purely incidental and is incorporated for clarity only. Refer to the structural framing plans prepared by the Building Engineer of Record for complete framing information. These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on this placement drawing. The building designer must incorporate the truss manufacturer's note on type and location of permanent web member reinforcement requirements in the truss design with full analysis of the overall structural design. For guidance regarding bracing, consult BCS1 1-03, "Guide to Good Practice for Handling, Installing and Bracing of Metal Plate Connected Wood Trusses" available from the WTCA/TPI, 583 D'Onofrio Drive, Madison, WI 53179. It is the responsibility of the General Contractor/Superintendent to verify that the provided truss layout matches final intended construction plans, loading conditions and use. If they do not, it is the responsibility of the General Contractor/Superintendent to provide prints/plans containing the latest specifications and designs. UFP Industries (UFP) will not be responsible for print/plan changes by others after final approval of shop drawings, nor is UFP responsible for errors or modifications made on-site during construction. DO NOT CUT, NOTCH, DRILL, OR OTHERWISE "REPAIR" MANUFACTURED TRUSSES IN ANY WAY WITHOUT PRIOR WRITTEN AUTHORIZATION BY A LICENSED DESIGN PROFESSIONAL DESIGNATED BY UFP. UFP WILL NOT BE HELD RESPONSIBLE FOR ANY MODIFICATIONS OR "CHARGE BACKS" DONE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM UFP.

UFP Industries, Inc. 2801 East Beltline Rd, NE  
 PHONE (616)-364-6161 Grand Rapids, MI 49525

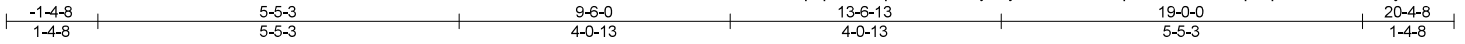


®

Job 117774	Truss P2279201	Truss Type QUEENPOST	Qty 1	Ply 1	Boxabl 233	169115224
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UFP Industries Inc., Grand Rapids, MI 49525

8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:44:40 2024 Page 1  
ID:Xz3qLqaXulJuq6xSPTA9xDyvRys-m2wVT00Kq8s12KT10aU4VpxupVifaewxrO3lAwyQBb



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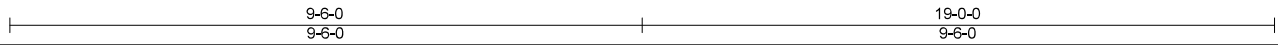
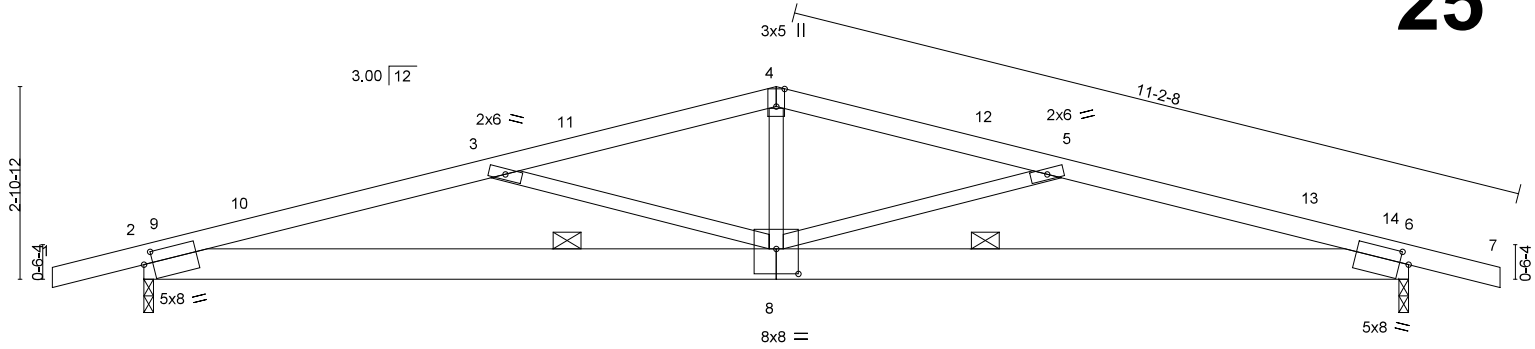


Plate Offsets (X,Y)-- [2:0-1-10,0-2-0], [4:0-3-3,Edge], [6:0-1-10,0-2-0], [8:0-4-0,0-4-8]

SPACING--	LOADING (psf)	SPACING--	LOADING (psf)	SPACING--	LOADING (psf)	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP	
2-0-0		1-4-0		2-0-0		TC 0.80	Vert(LL)	-0.14	8	>999	240	MT20	185/144
32.7		49.0		Plate Grip DOL	1.00	BC 0.31	Vert(CT)	-0.21	8	>999	180		
(Ground Snow=46.7)		(Ground Snow=70.1)		Lumber DOL	1.00	WB 0.59	Horz(CT)	0.04	6	n/a	n/a		
TCDL 14.0		TCDL 21.0		Rep Stress Incr	YES	Matrix-P							
BCLL 0.0 *		BCLL 0.0 *		Code IBC2021/TPI2014									
BCDL 5.0		BCDL 7.5											

Weight: 69 lb  
FT = 20%

**LUMBER-**  
TOP CHORD 2x4 HF No.2 or 2x4 SPF No.2  
BOT CHORD 2x6 SPF 2100F 1.8E  
WEBS 2x3 HF No.2 or 2x3 SPF No.2 \*Except\*  
4-8: 2x3 SPF Stud

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins.  
BOT CHORD 6-4-0 oc bracing.

**REACTIONS.** (size) 2=0-1-12, 6=0-1-12  
Max Horz 2=-70(LC 17)  
Max Uplift 2=-498(LC 8), 6=-498(LC 9)  
Max Grav 2=1234(LC 19), 6=1234(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-2918/1385, 3-4=-1883/995, 4-5=-1883/995, 5-6=-2918/1385  
BOT CHORD 2-8=-1253/2736, 6-8=-1253/2736  
WEBS 3-8=-1115/496, 4-8=-235/570, 5-8=-1115/497

- NOTES-** (9-11)
- 1) Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph @24in o.c.; TCDL=4.0psf; BCDL=2.0psf; (Alt. 167mph @16in o.c.; TCDL=6.0psf; BCDL=3.0psf); h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-4-8 to 1-7-8, Interior(1) 1-7-8 to 6-6-0, Exterior(2R) 6-6-0 to 12-6-0, Interior(1) 12-6-0 to 17-4-8, Exterior(2E) 17-4-8 to 20-4-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TLL: ASCE 7-16; Pg= 46.7 psf; Pf=32.7 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 32.7 psf on overhangs non-concurrent with other live loads.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 7) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 2, 6.
  - 8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=498, 6=498.
  - 9) This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 10) This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 11) This truss complies with CBC 2022 Section 2303.4.

**LOAD CASE(S)** Standard

Approved For State of California  
Factory Built Housing

By  
MA Consulting & Engineering MACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: DF1570823

These plans have been approved pursuant to the provisions of The State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 3, Subchapter 1  
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Generic Foundation Design Approved

Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. MAC-FBH 10153

By: *Mohsen Anis*

Approval Date: 5/26/2025

Expiration Date: 1/11/2028



October 29, 2024

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MIH-7473 rev. 1/2/2023 BEFORE USE.**

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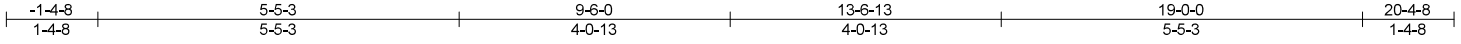
**MiTek®**

16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job 117774	Truss P2279301	Truss Type QUEENPOST	Qty 1	Ply 1	Boxabl 233	169115225
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UFP Industries Inc., Grand Rapids, MI 49525

8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:44:45 2024 Page 1  
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Scale = 1:34.6

26

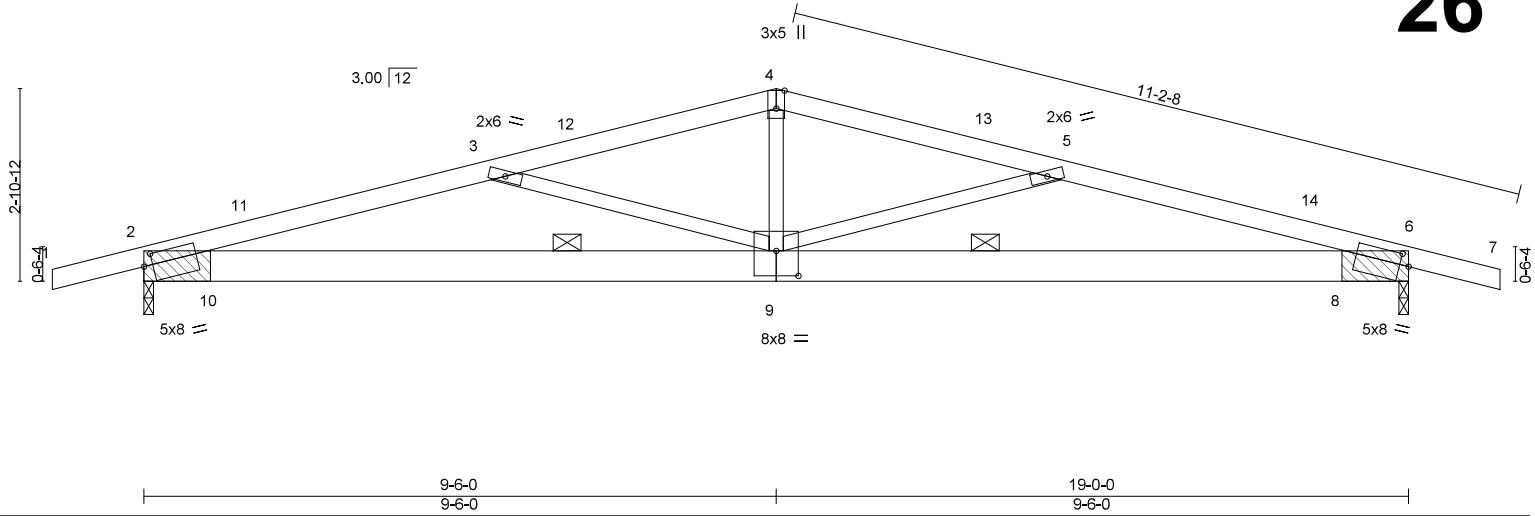


Plate Offsets (X,Y)-- [2:0-1-10,0-2-0], [4:0-3-4,Edge], [6:0-1-10,0-2-0], [9:0-4-0,0-4-8]	
<b>SPACING--</b> 2-3-0 <b>LOADING</b> (psf) TCLL 38.1 (Ground Snow=54.5) TCDL 14.0 BCLL 0.0 * BCDL 5.0	<b>SPACING--</b> 1-9-0 <b>LOADING</b> (psf) TCLL 49.0 (Ground Snow=70.0) TCDL 18.0 BCLL 0.0 * BCDL 6.4
<b>SPACING--</b> 2-3-0 Plate Grip DOL 1.00 Lumber DOL 1.00 Rep Stress Incr NO Code IBC2021/TPI2014	<b>CSI.</b> TC 0.89 BC 0.38 WB 0.74 Matrix-P
<b>DEFL.</b> in (loc) l/defl L/d Vert(LL) -0.16 9 >999 240 Vert(CT) -0.24 9 >932 180 Horz(CT) 0.05 6 n/a n/a	<b>PLATES GRIP</b> MT20 185/144  Weight: 72 lb FT = 20%

**LUMBER-**  
TOP CHORD 2x4 SPF 1650F 1.5E  
BOT CHORD 2x6 SPF 2100F 1.8E  
WEBS 2x3 HF No.2 or 2x3 SPF No.2 \*Except\*  
4-9: 2x3 SPF Stud

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 2-5-8 oc purlins.  
BOT CHORD 6-4-0 oc bracing.

**REACTIONS.** (size) 2=(0-1-12 + bearing block) (req. 0-1-15), 6=(0-1-12 + bearing block) (req. 0-1-15)  
Max Horz 2=-78(LC 13)  
Max Uplift 2=-568(LC 8), 6=-568(LC 9)  
Max Grav 2=1546(LC 19), 6=1546(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-3623/1576, 3-4=-2342/1135, 4-5=-2342/1135, 5-6=-3623/1576  
BOT CHORD 2-9=-1427/3392, 6-9=-1427/3392  
WEBS 3-9=-1399/560, 4-9=-270/703, 5-9=-1399/560

- NOTES-** (10-12)
- 2x6 SPF 2100F 1.8E bearing block 12" long at jt. 2 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be SPF 2100F 1.8E.
  - 2x6 SPF 2100F 1.8E bearing block 12" long at jt. 6 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be SPF 2100F 1.8E.
  - Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph @27in o.c.; TCDL=3.8psf; BCDL=1.9psf; (Alt. 154mph @21in o.c.; TCDL=4.9psf; BCDL=2.4psf); h=30ft; Cat. II; Exp C; Enclosed; MVFRS (envelope) gable end zone and C-C Exterior(2E) -1-4-8 to 1-7-8, Interior(1) 1-7-8 to 6-6-0, Exterior(2R) 6-6-0 to 12-6-0, Interior(1) 12-6-0 to 17-4-8, Exterior(2E) 17-4-8 to 20-4-8 zone; C-C for members and forces & MVFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pg= 54.5 psf; Pf=38.1 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 38.1 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=568, 6=568.
  - This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - This truss complies with CBC 2022 Section 2303.4.

**LOAD CASE(S)** Standard

**Approved For State of California  
Factory Built Housing**  
By  
MA Consulting & Engineering MACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: DF1570823

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**Generic Foundation Design Approved**

Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. **MAC-FBH 10153**  
By: **Mohsen Anis**  
Approval Date: **5/26/2025**  
Expiration Date: **1/11/2028**



October 29, 2024

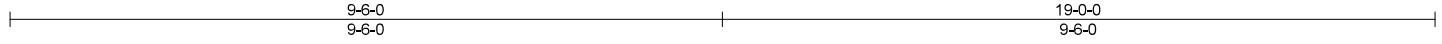
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MIH-7473 rev. 1/2/2023 BEFORE USE.**  
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**MiTek®**  
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job 117774	Truss G0401801	Truss Type GABLE	Qty 1	Ply 1	Boxabl 233	169115223
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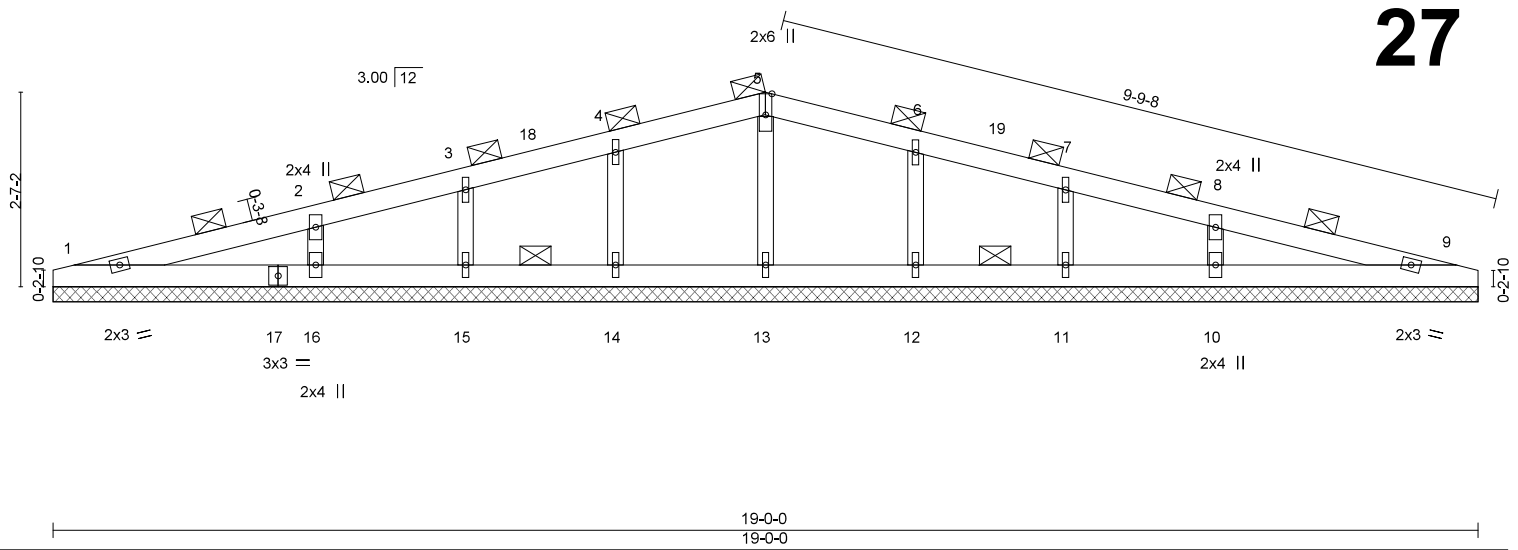
UFP Industries Inc., Grand Rapids, MI 49525

8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:44:34 2024 Page 1  
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Scale = 1:30.7

27



SPACING--		SPACING--		SPACING--		CSI.		DEFL.		PLATES		GRIP	
3-3-0		3-1-0		3-3-0				in (loc) l/defl L/d		MT20		185/144	
LOADING (psf)		LOADING (psf)		Plate Grip DOL		TC 0.63		Vert(LL) n/a - n/a 9/9					
TCLL	46.5	TCLL	49.0	Lumber DOL	1.00	BC	0.10	Vert(CT)	n/a - n/a 9/9				
(Ground Snow=66.4)		(Ground Snow=70.0)		Rep Stress Incr	NO	WB	0.30	Horz(CT)	0.00 9 n/a n/a			Weight: 51 lb	
TCDL	11.0	TCDL	11.6	Code IBC2021/TPI2014		Matrix-P						FT = 20%	
BCLL	0.0 *	BCLL	0.0 *										
BCDL	5.0	BCDL	5.3										

LUMBER-		BRACING-	
TOP CHORD	2x4 HF No.2 or 2x4 SPF No.2	TOP CHORD	2-0-0 oc purlins (6-0-0 max.)
BOT CHORD	2x4 HF No.2 or 2x4 SPF No.2		(Switched from sheeted: Spacing > 2-8-0).
OTHERS	2x3 SPF Stud	BOT CHORD	6-4-0 oc bracing.

REACTIONS.	
All bearings 19-0-0.	
(lb) - Max Horz 1=-96(LC 13)	
Max Uplift All uplift 100 lb or less at joint(s) 1, 9, 13 except 14=-184(LC 8), 15=-115(LC 12), 16=-254(LC 8), 12=-184(LC 9), 11=-115(LC 13), 10=-254(LC 9)	
Max Grav All reactions 250 lb or less at joint(s) except 1=361(LC 18), 9=361(LC 19), 13=315(LC 1), 14=644(LC 18), 15=407(LC 18), 16=901(LC 18), 12=645(LC 19), 11=407(LC 19), 10=899(LC 19)	

FORCES.	
(lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.	
WEBS 5-13=-284/111, 4-14=-609/335, 3-15=-382/177, 2-16=-847/384, 6-12=-610/336, 7-11=-382/177, 8-10=-846/383	

- NOTES-** (12-14)
- Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph @39in o.c.; TCDL=5.1psf; BCDL=2.5psf; (Alt. 140mph @37in o.c.; TCDL=5.4psf; BCDL=2.6psf); h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) 0-3-10 to 3-6-0, Exterior(2N) 3-6-0 to 6-5-15, Corner(3R) 6-5-15 to 12-5-15, Exterior(2N) 12-5-15 to 15-6-0, Corner(3E) 15-6-0 to 18-8-5 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - TCLL: ASCE 7-16; Pg= 66.4 psf; Pf=46.5 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
  - Unbalanced snow loads have been considered for this design.
  - All plates are 1x4 MT20 unless otherwise indicated.
  - Gable requires continuous bottom chord bearing.
  - Gable studs spaced at 2-0-0 oc.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 9, 13 except (jt=lb) 14=184, 15=115, 16=254, 12=184, 11=115, 10=254.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - This truss complies with CBC 2022 Section 2303.4.

**LOAD CASE(S)** Standard

October 29, 2024

**Approved For State of California  
Factory Built Housing**

By  
MA Consulting & Engineering MACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: DF1570823

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**Generic Foundation Design Approved**

Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. **MAC-FBH 10153**

By: **Mohsen Anis**

Approval Date: **5/26/2025**

Expiration Date: **1/11/2028**



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16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

JOB	TRUSS	TRUSS TYPE	QTY	CUSTOMER
117380	L0311401	Truss Placement Plan	1	Boxabl 233 Hip - 46.7 ground snow

UFP Industries Inc., Grand Rapids, MI 49525, Regan Craig  
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Truss List	
Truss	Qty
G0398801	2
HP596301	4
HP596302	2
HP596303	2
M1285101	4
M1285102	10
M1285103	8
M1285104	8



STAMP ABOVE APPLIES TO LAYOUT GEOMETRY ONLY

Approved For State of California  
 Factory Built Housing  
 By  
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 Certificate Number: DF1570823

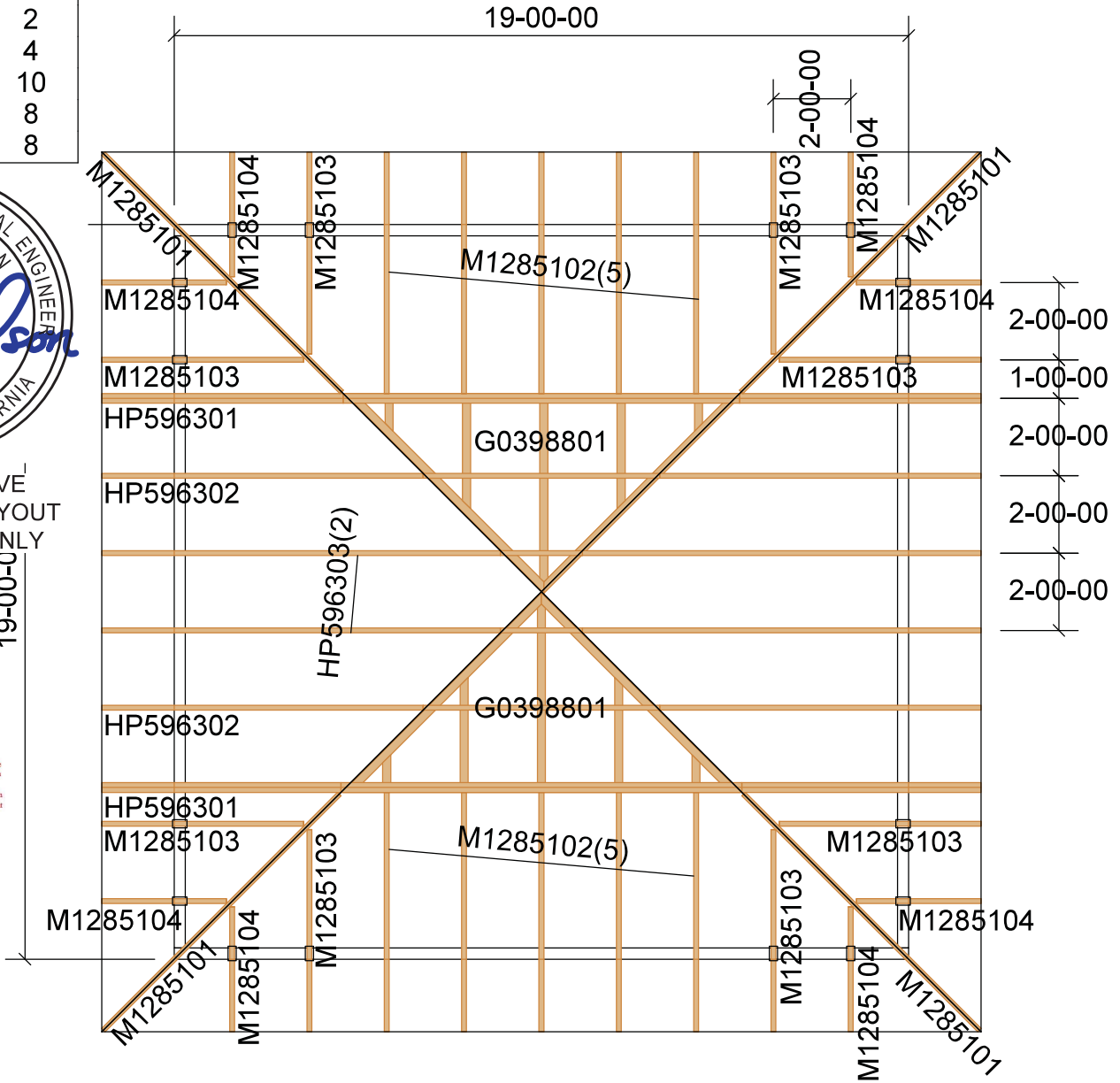
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Generic Foundation Design Approved

Occupancy	Roof LL	Wind	Exp	Seismic Cat
RS	30 psf	115	C	E

Plan Approval No. MAC-FBH 10153  
 By: *J. Johnson*  
 Approval Date: 5/26/2025  
 Expiration Date: 1/11/2028



**Warning - Verify design parameters and READ NOTES**

UFP Industries, Inc. 2801 East Beltline Rd. NE  
 PHONE (616)-364-6161 Grand Rapids, MI 49525

This is a TRUSS PLACEMENT PLAN to accurately locate pre-fabricated trusses in a building. This is not a structural framing plan and should not be construed as such. The Owner/Builder shall contract with a licensed design professional to prepare complete structural framing plans for the building. This layout is used to ensure accurate truss placement in accordance with the dimensional requirements of the building. This document does not consider building structural bracing requirements, shear walls, beams, columns or other structural elements that can be critical to the performance of the structure. Any reference to structural elements other than pre-fabricated trusses is purely incidental and is incorporated for clarity only. Refer to the structural framing plans prepared by the Building Engineer of Record for complete framing information. These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on this placement drawing. The building designer must incorporate the truss manufacturer's note on type and location of permanent web member reinforcement requirements in the truss design with full analysis of the overall structural design. For guidance regarding bracing, consult BCS1 1-03, "Guide to Good Practice for Handling, Installing and Bracing of Metal Plate Connected Wood Trusses" available from the WTCA/TPI, 583 D'Onofrio Drive, Madison, WI 53179. It is the responsibility of the General Contractor/Superintendent to verify that the provided truss layout matches final intended construction plans, loading conditions and use. If they do not, it is the responsibility of the General Contractor/Superintendent to provide prints/plans containing the latest specifications and designs. UFP Industries (UFP) will not be responsible for print/plan changes by others after final approval of shop drawings, nor is UFP responsible for errors or modifications made on-site during construction. DO NOT CUT, NOTCH, DRILL, OR OTHERWISE "REPAIR" MANUFACTURED TRUSSES IN ANY WAY WITHOUT PRIOR WRITTEN AUTHORIZATION BY A LICENSED DESIGN PROFESSIONAL DESIGNATED BY UFP. UFP WILL NOT BE HELD RESPONSIBLE FOR ANY MODIFICATIONS OR "CHARGE BACKS" DONE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM UFP.

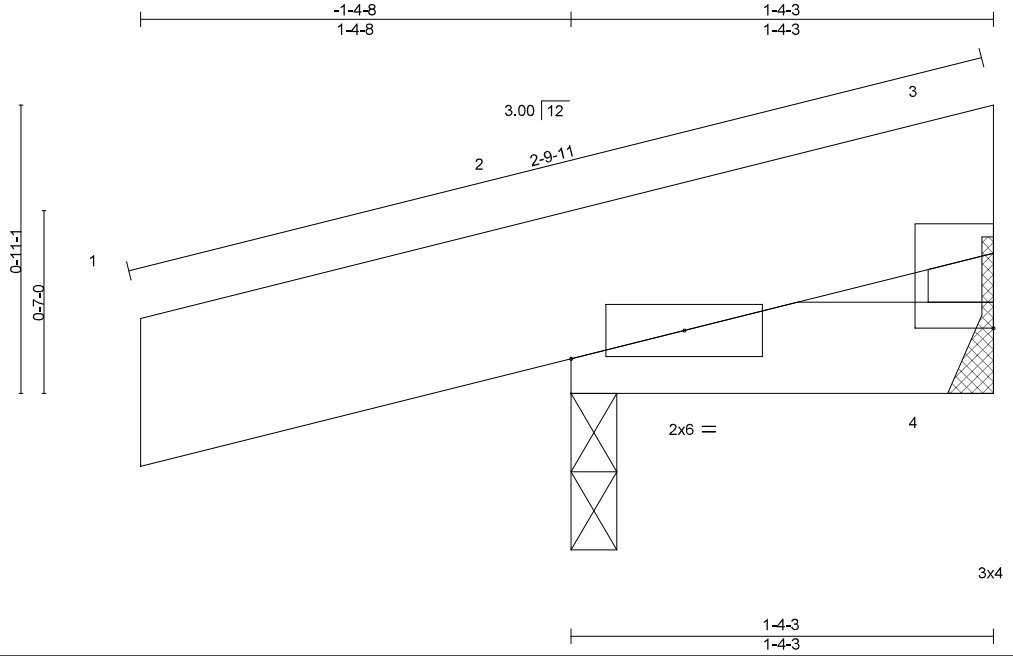


®

Job 117380	Truss M1285104	Truss Type MONO TRUSS	Qty 1	Ply 1	Boxabl 233	169115003
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UFP Industries Inc., Grand Rapids, MI 49525

8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:29:22 2024 Page 1  
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Scale = 1:7.4

29

Plate Offsets (X,Y)-- [4:Edge,1-4-3]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	l/def	L/d	PLATES	GRIP
TCLL 32.7 (Ground Snow=46.7)	2-0-0 Plate Grip DOL 1.00 Lumber DOL 1.00	TC 0.15 BC 0.01 WB 0.00 Matrix-P	Vert(LL) -0.00 Vert(CT) -0.00 Horz(CT) 0.00	2 2 0.00	>999 >999 n/a	240 180 n/a	MT20	185/144
TCDL 14.0	Rep Stress Incr YES							
BCLL 0.0 *	Code IBC2021/TPI2014							
BCDL 5.0							Weight: 7 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x6 HF No.2 or 2x6 SPF No.2  
BOT CHORD 2x4 HF No.2 or 2x4 SPF No.2  
WEBS 2x3 SPF Stud

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 1-4-3 oc purlins, except end verticals.  
BOT CHORD 6-4-0 oc bracing.

**REACTIONS.** (size) 2=0-1-12, 4=Mechanical  
Max Horz 2=42(LC 8)  
Max Uplift 2=-165(LC 8), 4=-101(LC 18)  
Max Grav 2=369(LC 18), 4=21(LC 8)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

**NOTES-** (10-12)

- 1) Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph; TCDL=6.0psf; BCDL=3.0psf; h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
- 2) TCLL: ASCE 7-16; Pg= 46.7 psf; Pf=32.7 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
- 3) Unbalanced snow loads have been considered for this design.
- 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 32.7 psf on overhangs non-concurrent with other live loads.
- 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
- 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
- 7) Refer to girder(s) for truss to truss connections.
- 8) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 2.
- 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=165, 4=101.
- 10) This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
- 11) This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
- 12) This truss complies with CBC 2022 Section 2303.4.

**LOAD CASE(S)** Standard

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Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. MAC-FBH 10153

By: *Mohsen Anis*

Approval Date: 5/26/2025

Expiration Date: 1/11/2028



October 29, 2024

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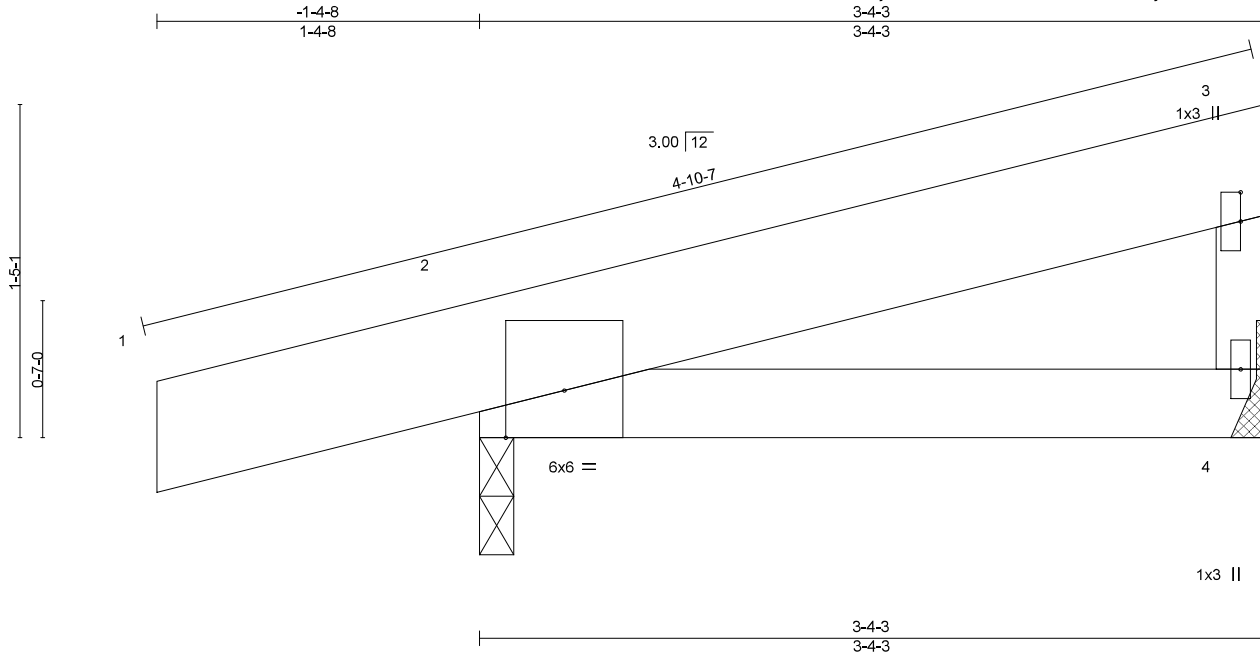
**MiTek®**

16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job 117380	Truss M1285103	Truss Type MONO TRUSS	Qty 1	Ply 1	Boxabl 233	169115002
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UFP Industries Inc., Grand Rapids, MI 49525

8,730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:29:21 2024 Page 1  
 ID:XizNu5bc0WGIjYGOHnZCHEz2Mf?-AEu4bnvFn3RI6j7h3Vam0N?T266l9ffVvxcPhyQBPy



Scale = 1:9.8

30

Plate Offsets (X,Y)-- [3:0-1-8,0-0-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	in (loc)	I/defl	L/d	PLATES	GRIP
TCLL 32.7 (Ground Snow=46.7)	2-0-0 Plate Grip DOL 1.00 Lumber DOL 1.00 Rep Stress Incr YES Code IBC2021/TPI2014	TC 0.17 BC 0.09 WB 0.00 Matrix-P	Vert(LL) -0.01 Vert(CT) -0.01 Horz(CT) 0.00	2-4 2-4 n/a	>999 >999 n/a	240 180 n/a	MT20	185/144
TCDL 14.0							Weight: 14 lb	FT = 20%
BCLL 0.0 *								
BCDL 5.0								

LUMBER-	BRACING-
TOP CHORD 2x6 HF No.2 or 2x6 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 3-4-3 oc purlins, except end verticals.
BOT CHORD 2x4 HF No.2 or 2x4 SPF No.2	BOT CHORD 6-4-0 oc bracing.
WEBS 2x3 SPF Stud	

**REACTIONS.** (size) 2=0-1-12, 4=Mechanical  
 Max Horz 2=71(LC 8)  
 Max Uplift 2=-175(LC 8), 4=-62(LC 12)  
 Max Grav 2=441(LC 19), 4=174(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-** (10-12)
- 1) Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph; TCDL=6.0psf; BCDL=3.0psf; h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-16; Pg= 46.7 psf; Pf=32.7 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 32.7 psf on overhangs non-concurrent with other live loads.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 7) Refer to girder(s) for truss to truss connections.
  - 8) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 2.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (jt=lb) 2=175.
  - 10) This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 11) This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 12) This truss complies with CBC 2022 Section 2303.4.

**LOAD CASE(S)** Standard

Approved For State of California  
 Factory Built Housing

By  
 MA Consulting & Engineering MACE, LLC.  
 Third Party Design Approval Agency (DAA)  
 Certificate Number: DF1570823

These plans have been approved pursuant to the provisions of The State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 3, Subchapter 1  
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Generic Foundation Design Approved

Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. MAC-FBH 10153

By: *Mohsen Anis*

Approval Date: 5/26/2025

Expiration Date: 1/11/2028



October 29, 2024

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITTEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, and DSB-22 available from Truss Plate Institute (www.tpinst.org) and BCSI Building Component Safety Information available from the Structural Building Component Association (www.sbcsccomponents.com)

**MiTek®**

16023 Swingley Ridge Rd.  
 Chesterfield, MO 63017  
 314.434.1200 / MiTek-US.com

Job 117380	Truss M1285102	Truss Type MONO TRUSS	Qty 1	Ply 1	Boxabl 233	169115001
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UFP Industries Inc., Grand Rapids, MI 49525

8:730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:29:21 2024 Page 1  
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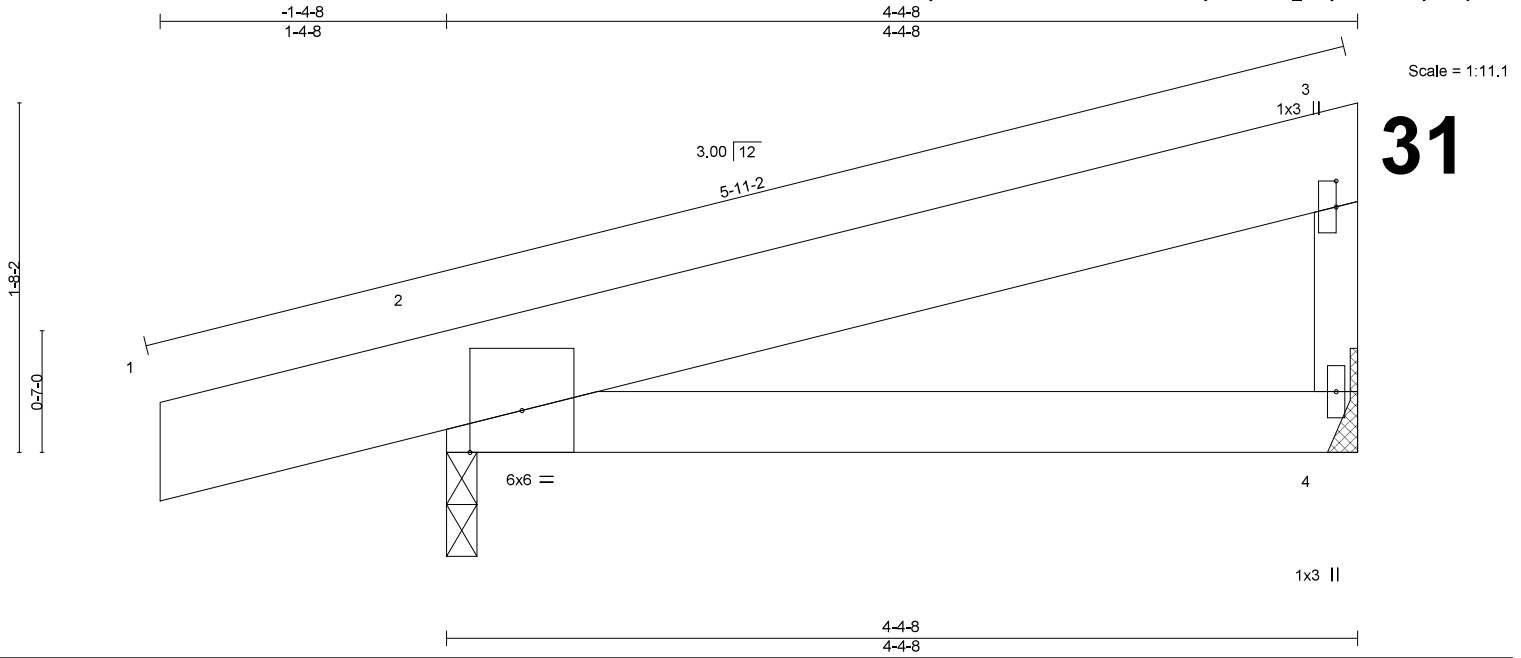


Plate Offsets (X,Y)-- [3:0-1-8,0-0-0]									
<b>LOADING</b> (psf)		<b>SPACING-</b>		<b>CSI.</b>		<b>DEFL.</b>		<b>PLATES</b>	<b>GRIP</b>
TCLL	32.7	Plate Grip DOL	2-0-0	TC	0.23	Vert(LL)	-0.02 2-4 >999 240	MT20	185/144
(Ground Snow=46.7)		Lumber DOL	1.00	BC	0.16	Vert(CT)	-0.03 2-4 >999 180		
TCDL	11.0	Rep Stress Incr	YES	WB	0.00	Horz(CT)	0.00 n/a n/a		
BCLL	0.0 *	Code	IBC2021/TPI2014	Matrix-P				Weight: 17 lb	FT = 20%
BCDL	5.0								

<b>LUMBER-</b>		<b>BRACING-</b>	
TOP CHORD	2x6 HF No.2 or 2x6 SPF No.2	TOP CHORD	Structural wood sheathing directly applied or 4-4-8 oc purlins, except end verticals.
BOT CHORD	2x4 HF No.2 or 2x4 SPF No.2	BOT CHORD	6-4-0 oc bracing.
WEBS	2x3 SPF Stud		

**REACTIONS.** (size) 2=0-1-12, 4=Mechanical  
 Max Horz 2=87(LC 8)  
 Max Uplift 2=189(LC 8), 4=88(LC 12)  
 Max Grav 2=482(LC 19), 4=246(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

- NOTES-** (10-12)
- 1) Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph; TCDL=6.0psf; BCDL=3.0psf; h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-16; Pg= 46.7 psf; Pf=32.7 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 32.7 psf on overhangs non-concurrent with other live loads.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 7) Refer to girder(s) for truss to truss connections.
  - 8) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 2.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 4 except (jt=lb) 2=189.
  - 10) This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 11) This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 12) This truss complies with CBC 2022 Section 2303.4.

**LOAD CASE(S)** Standard

**Approved For State of California  
Factory Built Housing**

By  
MA Consulting & Engineering MACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: DF1570823

These plans have been approved pursuant to the provisions of The State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 3, Subchapter 1  
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**Generic Foundation Design Approved**

Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. **MAC-FBH 10153**

By: **Mohsen Anis**

Approval Date: **5/26/2025**

Expiration Date: **1/11/2028**



October 29, 2024

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

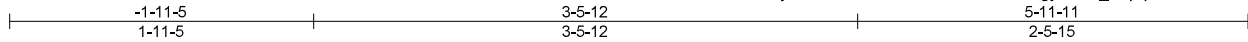
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**MiTek®**  
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job 117380	Truss M1285101	Truss Type MONO TRUSS	Qty 1	Ply 1	Boxabl 233	169115000
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UFP Industries Inc., Grand Rapids, MI 49525

8,730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:29:20 2024 Page 1  
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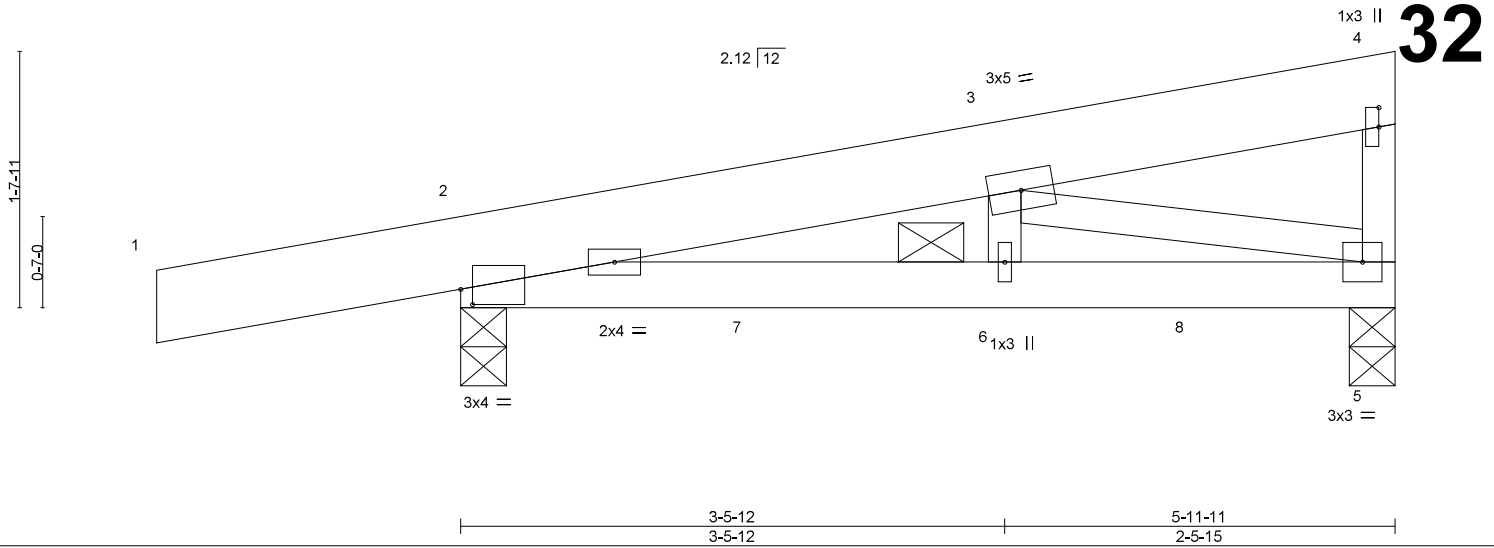


Plate Offsets (X,Y)-- [2:0-0-14,0-1-3], [4:0-1-8,0-0-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 32.7 (Ground Snow=46.7)	2-0-0 Plate Grip DOL 1.00 Lumber DOL 1.00 Rep Stress Incr NO Code IBC2021/TPI2014	TC 0.42 BC 0.68 WB 0.29 Matrix-P	Vert(LL) -0.03 Vert(CT) -0.04 Horz(CT) 0.01	5-6	>999	240	180	MT20	185/144
TCDL 14.0				5-6	>999	180			
BCLL 0.0 *				n/a	n/a	n/a			
BCDL 5.0								Weight: 25 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x6 HF No.2 or 2x6 SPF No.2  
BOT CHORD 2x4 HF No.2 or 2x4 SPF No.2  
WEBS 2x3 SPF Stud

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 5-11-11 oc purlins, except end verticals.  
BOT CHORD 3-0-0 oc bracing.

**REACTIONS.** (size) 2=0-3-8, 5=0-3-8  
Max Horz 2=85(LC 6)  
Max Uplift 2=310(LC 6), 5=226(LC 10)  
Max Grav 2=744(LC 17), 5=591(LC 17)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-793/244  
BOT CHORD 2-6=-275/698, 5-6=-275/698  
WEBS 3-5=-738/291

- NOTES-** (10-12)
- 1) Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph; TCDL=6.0psf; BCDL=3.0psf; h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-16; Pg= 46.7 psf; Pf=32.7 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 32.7 psf on overhangs non-concurrent with other live loads.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=310, 5=226.
  - 8) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 32 lb down and 15 lb up at 1-10-14, 32 lb down and 15 lb up at 1-10-14, and 162 lb down and 75 lb up at 4-8-13, and 162 lb down and 75 lb up at 4-8-13 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
  - 9) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
  - 10) This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 11) This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 12) This truss complies with CBC 2022 Section 2303.4.

**LOAD CASE(S)** Standard  
1) Dead + Snow (balanced): Lumber Increase=1.00, Plate Increase=1.00  
Uniform Loads (plf)  
Vert: 2-5=-10, 1-4=-93

**Approved For State of California  
Factory Built Housing**

By  
MA Consulting & Engineering MACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: DF1570823

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**Generic Foundation Design Approved**

Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. **MAC-FBH 10153**

By: **Mohsen Anis**

Approval Date: **5/26/2025**

Expiration Date: **1/11/2028**



October 29, 2024

Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITTEK REFERENCE PAGE MIH-7473 rev. 1/2/2023 BEFORE USE.**

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**MiTek®**

16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job 117380	Truss M1285101	Truss Type MONO TRUSS	Qty 1	Ply 1	Boxabl 233 I69115000
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UFP Industries Inc., Grand Rapids, MI 49525

8,730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:29:21 2024 Page 2  
 ID:XizNu5bc0WGljyG0hIZCHEz2Mf?-AEu4bnvFfN3R16j7h3Vam0Nxc2zql58fVvxcPhyQBPy

**LOAD CASE(S)** Standard  
 Concentrated Loads (lb)  
 Vert: 8--323(F--162, B--162)

# 33

**⚠ WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

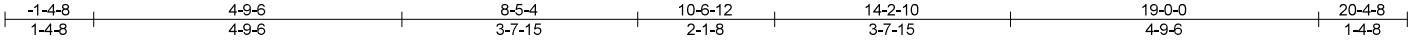
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 Chesterfield, MO 63017  
 314.434.1200 / MiTek-US.com

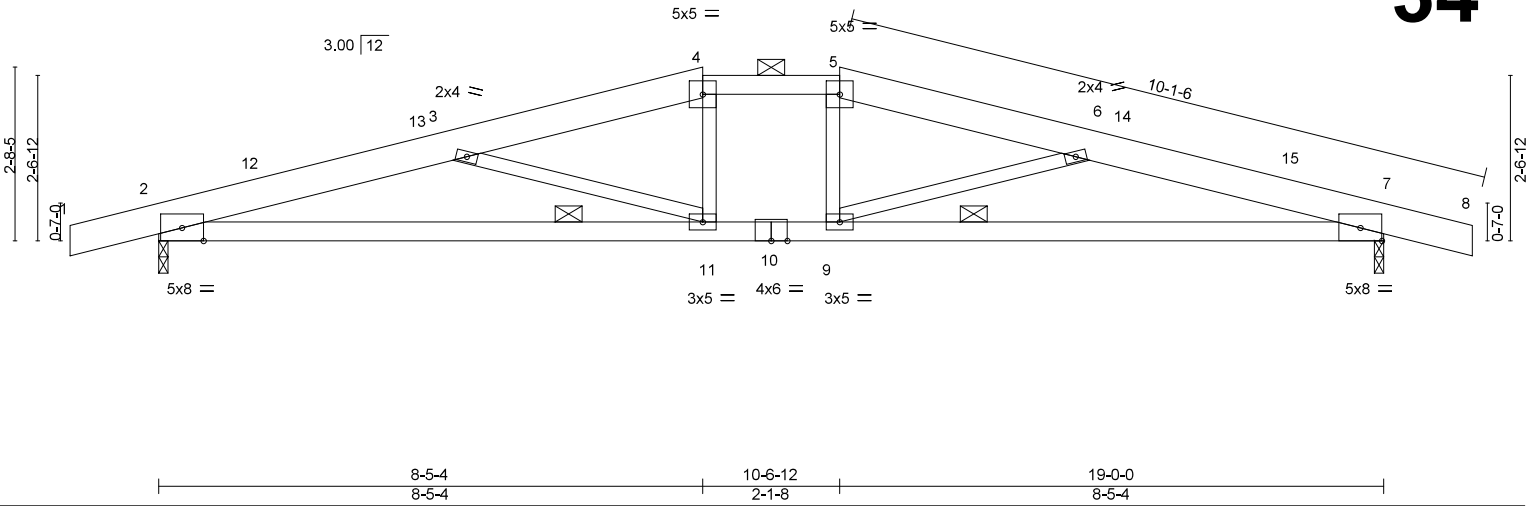
Job	Truss	Truss Type	Qty	Ply	Boxabl	233	169114997
117380	HP596303	HIP	1	1			
UFP Industries Inc., Grand Rapids, MI 49525						Job Reference (optional)	

8:730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 14:43:10 2024 Page 1  
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Scale = 1:35.7

34



LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 32.7 (Ground Snow=46.7)	2-0-0 Plate Grip DOL 1.00 Lumber DOL 1.00 Rep Stress Incr YES Code IBC2021/TPI2014	TC 0.37 BC 0.64 WB 0.39 Matrix-P	in (loc) l/defl L/d Vert(LL) -0.22 2-11 >999 240 Vert(CT) -0.33 2-11 >692 180 Horz(CT) 0.07 7 n/a n/a	MT20	185/144
TCDL 14.0				Weight: 71 lb	FT = 20%
BCLL 0.0 *					
BCDL 5.0					

**LUMBER-**  
 TOP CHORD 2x6 HF No.2 or 2x6 SPF No.2 \*Except\*  
 4-5: 2x4 HF No.2 or 2x4 SPF No.2  
 BOT CHORD 2x4 SPF 2100F 1.8E  
 WEBS 2x3 SPF Stud

**BRACING-**  
 TOP CHORD Structural wood sheathing directly applied or 3-6-12 oc purlins, except 2-0-0 oc purlins (3-6-14 max.); 4-5.  
 BOT CHORD 6-4-0 oc bracing.

**REACTIONS.** (size) 2=0-1-12 (req. 0-1-14), 7=0-1-12 (req. 0-1-14)  
 Max Horz 2=-62(LC 17)  
 Max Uplift 2=-447(LC 8), 7=-447(LC 9)  
 Max Grav 2=1458(LC 34), 7=1458(LC 34)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-3236/1358, 3-4=-2479/1103, 4-5=-2370/1107, 5-6=-2479/1103, 6-7=-3236/1358  
 BOT CHORD 2-11=-1222/3011, 9-11=-925/2370, 7-9=-1222/3011  
 WEBS 3-11=-688/336, 4-11=-61/271, 5-9=-61/271, 6-9=-688/338

- NOTES-** (11-13)
- 1) Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph; TCDL=6.0psf; BCDL=3.0psf; h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-4-8 to 1-7-8, Interior(1) 1-7-8 to 4-2-5, Exterior(2R) 4-2-5 to 14-9-11, Interior(1) 14-9-11 to 17-4-8, Exterior(2E) 17-4-8 to 20-4-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-16; Pg= 46.7 psf; Pf=32.7 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 32.7 psf on overhangs non-concurrent with other live loads.
  - 5) Provide adequate drainage to prevent water ponding.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 8) WARNING: Required bearing size at joint(s) 2, 7 greater than input bearing size.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 447 lb uplift at joint 2 and 447 lb uplift at joint 7.
  - 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 11) This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 12) This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 13) This truss complies with CBC 2022 Section 2303.4.

**LOAD CASE(S)** Standard

Approved For State of California  
 Factory Built Housing

By  
 MA Consulting & Engineering MACE, LLC.  
 Third Party Design Approval Agency (DAA)  
 Certificate Number: DF1570823

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**Generic Foundation Design Approved**

Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. **MAC-FBH 10153**

By: **Mohsen Anis**

Approval Date: **5/26/2025**  
 Expiration Date: **1/11/2028**



October 29, 2024

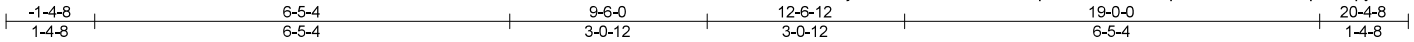
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MIH-7473 rev. 1/2/2023 BEFORE USE.**  
 Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, and DSB-22 available from Truss Plate Institute (www.tpinst.org) and BCSI Building Component Safety Information available from the Structural Building Component Association (www.sbcsccomponents.com)

**MiTek®**  
 16023 Swingley Ridge Rd.  
 Chesterfield, MO 63017  
 314.434.1200 / MiTek-US.com

Job 117380	Truss HP596302	Truss Type HIP	Qty 1	Ply 1	Boxabl 233	169114996
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UFP Industries Inc., Grand Rapids, MI 49525

8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 14:41:38 2024 Page 1  
ID: XizNu5bc0WGIjYG0hIZCHEz2Mf?-hcSeqIOKuKU36cmfPpc2cV36JBOQYz1p91c8pyQAMB



Scale = 1:35.7

35

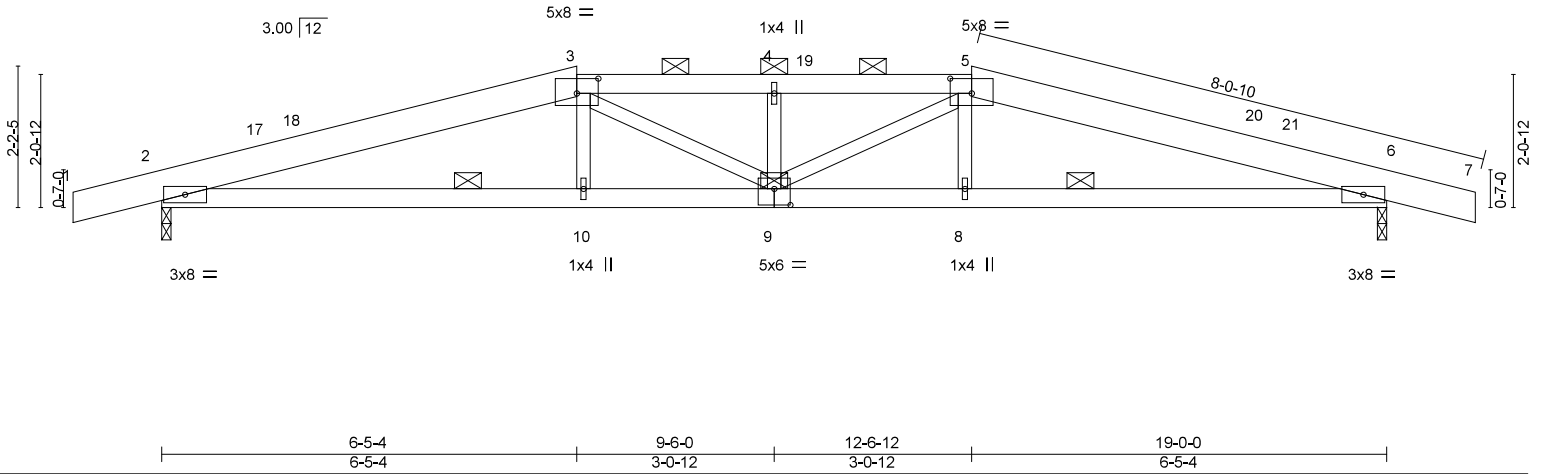


Plate Offsets (X,Y)--	[3:0-4-0,0-2-12], [5:0-4-0,0-2-12], [9:0-3-0,0-3-0]
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<b>LOADING (psf)</b>	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 32.7 (Ground Snow=46.7) TCDL 14.0 BCLL 0.0 * BCDL 5.0	2-0-0 Plate Grip DOL 1.00 Lumber DOL 1.00 Rep Stress Incr YES Code IBC2021/TPI2014	TC 0.55 BC 0.62 WB 0.41 Matrix-MP	in (loc) l/def L/d Vert(LL) -0.17 9 >999 240 Vert(CT) -0.25 9 >900 180 Horz(CT) 0.05 6 n/a n/a	MT20	185/144
					Weight: 67 lb FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 HF No.2 or 2x6 SPF No.2 *Except* 3-5: 2x4 HF No.2 or 2x4 SPF No.2 BOT CHORD 2x4 SPF 2100F 1.8E WEBS 2x3 SPF Stud	TOP CHORD Structural wood sheathing directly applied or 3-7-7 oc purlins, except 2-0-0 oc purlins (2-11-12 max.); 3-5. BOT CHORD 6-4-0 oc bracing.

**REACTIONS.** (size) 2=0-1-12, 6=0-1-12  
Max Horz 2=50(LC 8)  
Max Uplift 2=-462(LC 8), 6=-462(LC 9)  
Max Grav 2=1286(LC 34), 6=1286(LC 34)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-2758/1382, 3-4=-2828/1570, 4-5=-2828/1570, 5-6=-2758/1382  
BOT CHORD 2-10=-1218/2591, 9-10=-1216/2594, 8-9=-1216/2594, 6-8=-1218/2591  
WEBS 4-9=-481/240, 3-9=-219/588, 5-9=-219/588

- NOTES-** (11-13)
- 1) Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph; TCDL=6.0psf; BCDL=3.0psf; h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-4-8 to 1-7-8, Interior(1) 1-7-8 to 2-2-5, Exterior(2R) 2-2-5 to 16-9-11, Interior(1) 16-9-11 to 17-4-8, Exterior(2E) 17-4-8 to 20-4-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-16; Pg= 46.7 psf; Pf=32.7 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 32.7 psf on overhangs non-concurrent with other live loads.
  - 5) Provide adequate drainage to prevent water ponding.
  - 6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 7) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 8) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 2, 6.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 462 lb uplift at joint 2 and 462 lb uplift at joint 6.
  - 10) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 11) This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 12) This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 13) This truss complies with CBC 2022 Section 2303.4.

**LOAD CASE(S)** Standard

Approved For State of California  
Factory Built Housing

By  
MA Consulting & Engineering MACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: DF1570823

These plans have been approved pursuant to the provisions of The State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 3, Subchapter 1  
Approval herein does not authorize or approve any omission or deviation from State laws or valid local ordinances nor it is applicable to movement of units over highways, county roads or city streets.

Generic Foundation Design Approved

Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. MAC-FBH 10153

By: *Mohsen Anis*

Approval Date: 5/26/2025

Expiration Date: 1/11/2028



October 29, 2024

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MIH-7473 rev. 1/2/2023 BEFORE USE.**

Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, and DSB-22 available from Truss Plate Institute (www.tpinst.org) and BCSI Building Component Safety Information available from the Structural Building Component Association (www.sbcsccomponents.com)

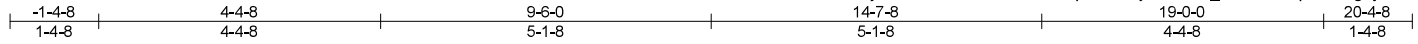
**MiTek®**

16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job 117380	Truss HP596301	Truss Type HIP GIRDER	Qty 1	Ply 2	Boxabl 233	I69114995
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UFP Industries Inc., Grand Rapids, MI 49525

8:730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:29:14 2024 Page 1  
ID:XizNu5bc0WGljYG0hIZCHEz2MF?-tuzR7OpUvdBQy1hnn5tw\_Yai2DaWcpodvKllgbyQBQ3



Scale = 1:35.7

36

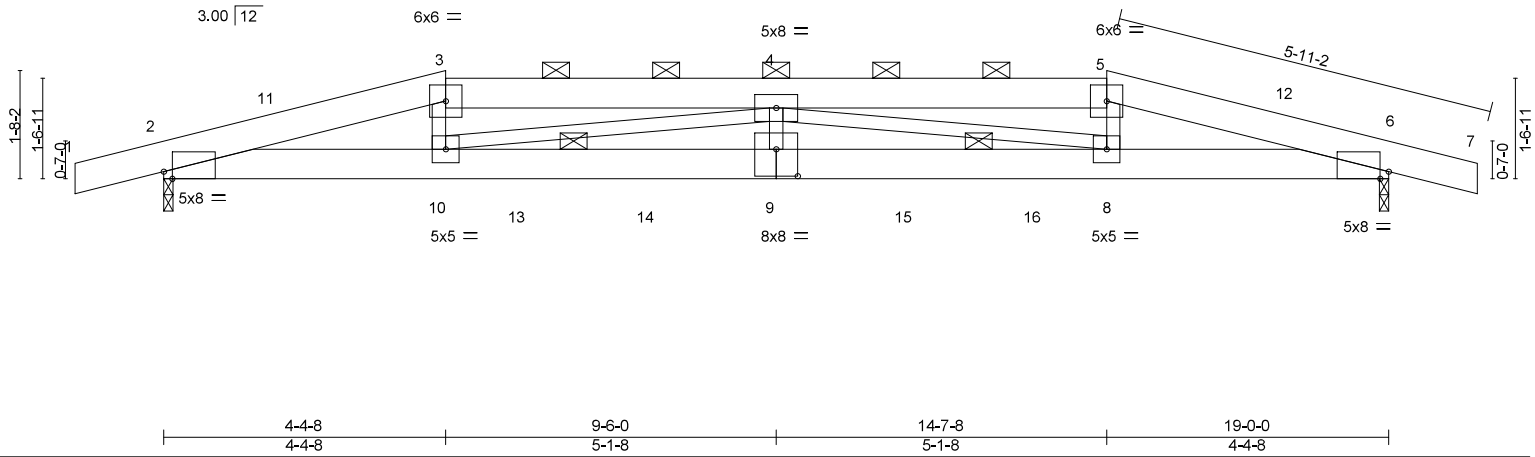


Plate Offsets (X,Y)--	[2:0-1-9,Edge], [6:0-1-9,Edge], [9:0-4-0,0-5-0]				
<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 32.7 (Ground Snow=46.7)	2-0-0 Plate Grip DOL 1.00 Lumber DOL 1.00 Rep Stress Incr NO Code IBC2021/TPI2014	TC 0.57 BC 0.66 WB 0.71 Matrix-P	in (loc) l/def L/d Vert(LL) -0.36 9 >621 240 Vert(CT) -0.49 9 >459 180 Horz(CT) 0.07 6 n/a n/a	MT20	185/144
TCDL 14.0 BCLL 0.0 * BCDL 5.0				Weight: 170 lb	FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x6 HF No.2 or 2x6 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 5-2-1 oc purlins, except 2-0-0 oc purlins (4-8-15 max.); 3-5.
BOT CHORD 2x6 SPF 2100F 1.8E	BOT CHORD 6-4-0 oc bracing.
WEBS 2x3 SPF Stud	

**REACTIONS.** (size) 2=0-1-12, 6=0-1-12  
Max Horz 2=35(LC 49)  
Max Uplift 2=948(LC 6), 6=948(LC 7)  
Max Grav 2=2432(LC 17), 6=2432(LC 18)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-7869/2856, 3-4=-7404/2733, 4-5=-7404/2733, 5-6=-7869/2857  
BOT CHORD 2-10=-2732/7539, 9-10=-3646/10235, 8-9=-3646/10235, 6-8=-2697/7539  
WEBS 3-10=-564/1614, 4-10=-2934/1052, 4-9=-252/598, 4-8=-2934/1051, 5-8=-563/1614

- NOTES-** (14-16)
- 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:  
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.  
Webs connected as follows: 2x3 - 1 row at 0-9-0 oc.
  - All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
  - Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph; TCDL=6.0psf; BCDL=3.0psf; h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pg= 46.7 psf; Pf=32.7 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00, Lu=50-0-0
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 32.7 psf on overhangs non-concurrent with other live loads.
  - Provide adequate drainage to prevent water ponding.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate at joint(s) 2, 6.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=948, 6=948.
  - Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 577 lb down and 240 lb up at 4-3-7, 236 lb down and 98 lb up at 5-6-0, 236 lb down and 98 lb up at 7-6-0, 236 lb down and 98 lb up at 9-6-0, 236 lb down and 98 lb up at 11-6-0, and 236 lb down and 98 lb up at 13-6-0, and 577 lb down and 240 lb up at 14-8-9 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

Approved For State of California  
Factory Built Housing

By  
MA Consulting & Engineering MACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: DF1570823

These plans have been approved pursuant to the provisions of The State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 3, Subchapter 1  
Approval herein does not authorize or approve any omission or deviation from State laws or valid local ordinances nor it is applicable to movement of units over highways, county roads or city streets.

Generic Foundation Design Approved

Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. MAC-FBH 10153

By: *Mohsen Anis*

Approval Date: 5/26/2025

Expiration Date: 1/11/2028



October 29, 2024

Continued on page 2

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MIH-7473 rev. 1/2/2023 BEFORE USE.**

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**MiTek®**

16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job 117380	Truss HP596301	Truss Type HIP GIRDER	Qty 1	Ply <b>2</b>	Boxabl 233	I69114995
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UFP Industries Inc., Grand Rapids, MI 49525

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8:730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:29:14 2024 Page 2

- 14) This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
- 15) This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
- 16) This truss complies with CBC 2022 Section 2303.4.

**LOAD CASE(S)** Standard

1) Dead + Snow (balanced): Lumber Increase=1.00, Plate Increase=1.00

Uniform Loads (plf)

Vert: 1-3=-93, 3-5=-93, 5-7=-93, 2-6=-10

Concentrated Loads (lb)

Vert: 10=-577 9=-236(F) 8=-577 13=-236(F) 14=-236(F) 15=-236(F) 16=-236(F)

# 37

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 1/2/2023 BEFORE USE.**

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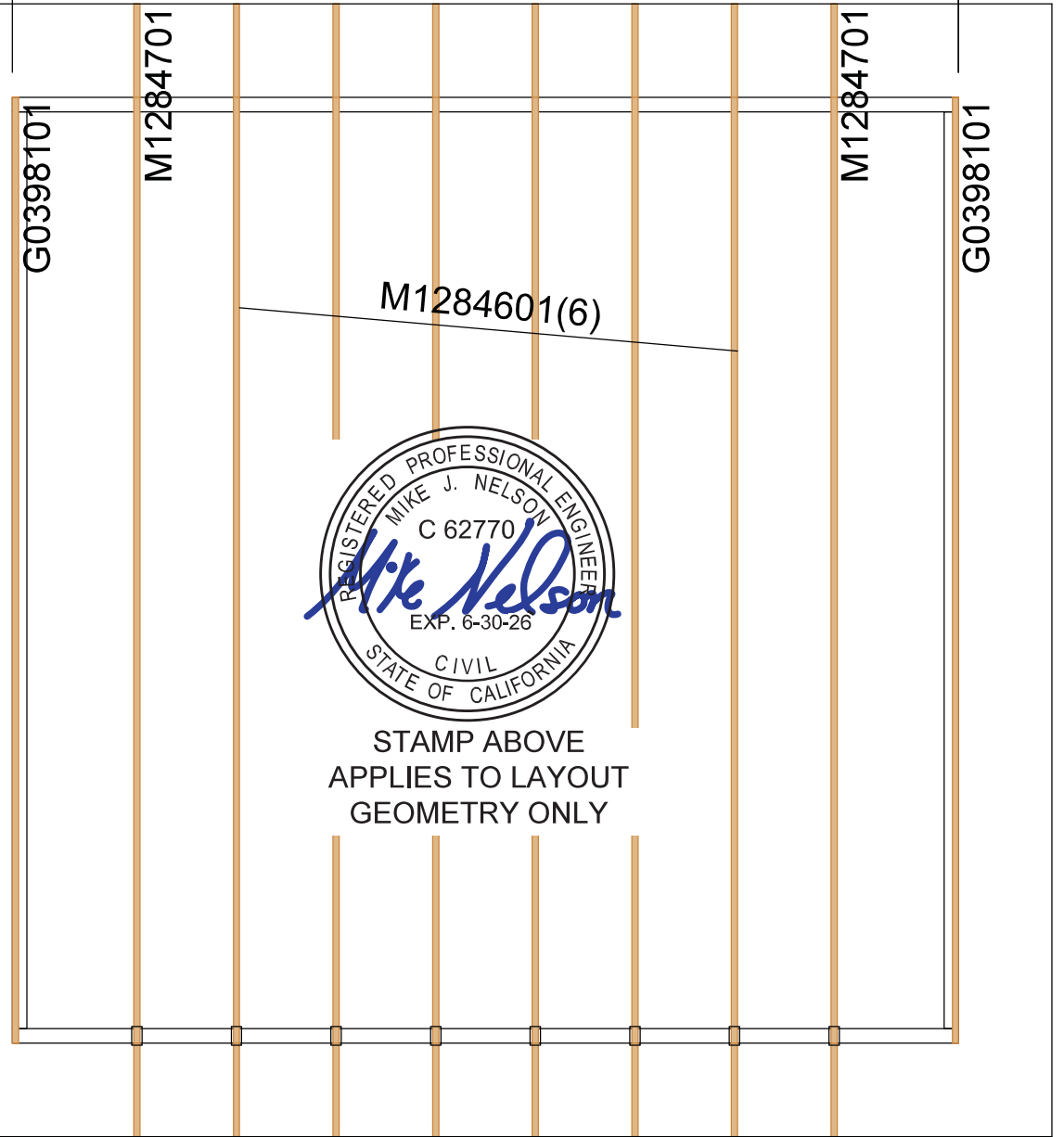
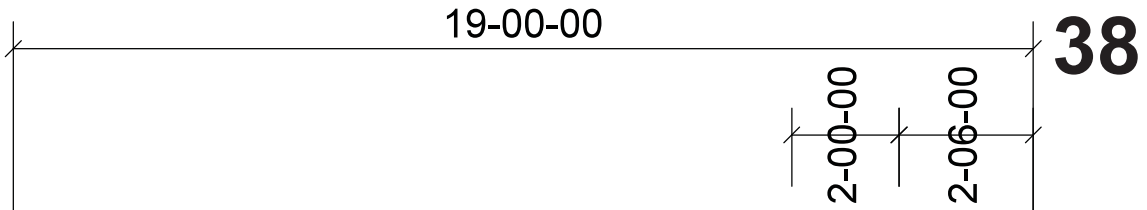
**MiTek®**

16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

JOB	TRUSS	TRUSS TYPE	QTY	CUSTOMER
117380	L0310901	Truss Placement Plan	1	Boxabl 233 Mono - 46.7 ground snow

UFP Industries Inc., Grand Rapids, MI 49525, Regan Craig  
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Truss List	
Truss	Qty
G0398101	2
M1284601	6
M1284701	2



STAMP ABOVE  
 APPLIES TO LAYOUT  
 GEOMETRY ONLY

19-00-00

Approved For State of California  
 Factory Built Housing  
 By  
 MA Consulting & Engineering MACE, LLC.  
 Third Party Design Approval Agency (DAA)  
 Certificate Number: DF1570823

These plans have been approved pursuant to the provisions of The State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 3, Subchapter 1. Approval herein does not authorize or approve any omission or deviation from State laws or valid local ordinances nor it is applicable to movement of units over highways, county roads or city streets.

Generic Foundation Design Approved

Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. **MAC-FBH 10153**

By: *Y. Johnson Anis*

Approval Date: **5/26/2025**

Expiration Date: **1/11/2028**

**Warning - Verify design parameters and READ NOTES**

UFP Industries, Inc. 2801 East Beltline Rd. NE  
 PHONE (616)-364-6161 Grand Rapids, MI 49525

This is a TRUSS PLACEMENT PLAN to accurately locate pre-fabricated trusses in a building. This is not a structural framing plan and should not be construed as such. The Owner/Builder shall contract with a licensed design professional to prepare complete structural framing plans for the building. This layout is used to ensure accurate truss placement in accordance with the dimensional requirements of the building. This document does not consider building structural bracing requirements, shear walls, beams, columns or other structural elements that can be critical to the performance of the structure. Any reference to structural elements other than pre-fabricated trusses is purely incidental and is incorporated for clarity only. Refer to the structural framing plans prepared by the Building Engineer of Record for complete framing information. These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on this placement drawing. The building designer must incorporate the truss manufacturer's note on type and location of permanent web member reinforcement requirements in the truss design with full analysis of the overall structural design. For guidance regarding bracing, consult BCS1 1-03, "Guide to Good Practice for Handling, Installing and Bracing of Metal Plate Connected Wood Trusses" available from the WTCA/TPI, 583 D'Onifrio Drive; Madison, WI 53179. It is the responsibility of the General Contractor/Superintendent to verify that the provided truss layout matches final intended construction plans, loading conditions and use. If they do not, it is the responsibility of the General Contractor/Superintendent to provide prints/plans containing the latest specifications and designs. UFP Industries (UFP) will not be responsible for print/plan changes by others after final approval of shop drawings, nor is UFP responsible for errors or modifications made on-site during construction. DO NOT CUT, NOTCH, DRILL, OR OTHERWISE "REPAIR" MANUFACTURED TRUSSES IN ANY WAY WITHOUT PRIOR WRITTEN AUTHORIZATION BY A LICENSED DESIGN PROFESSIONAL DESIGNATED BY UFP. UFP WILL NOT BE HELD RESPONSIBLE FOR ANY MODIFICATIONS OR "CHARGE BACKS" DONE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM UFP.



®

Job 117380	Truss M1284701	Truss Type MONO TRUSS	Qty 1	Ply 1	Boxabl 233	169114999
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UFP Industries Inc., Grand Rapids, MI 49525

8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:29:18 2024 Page 1  
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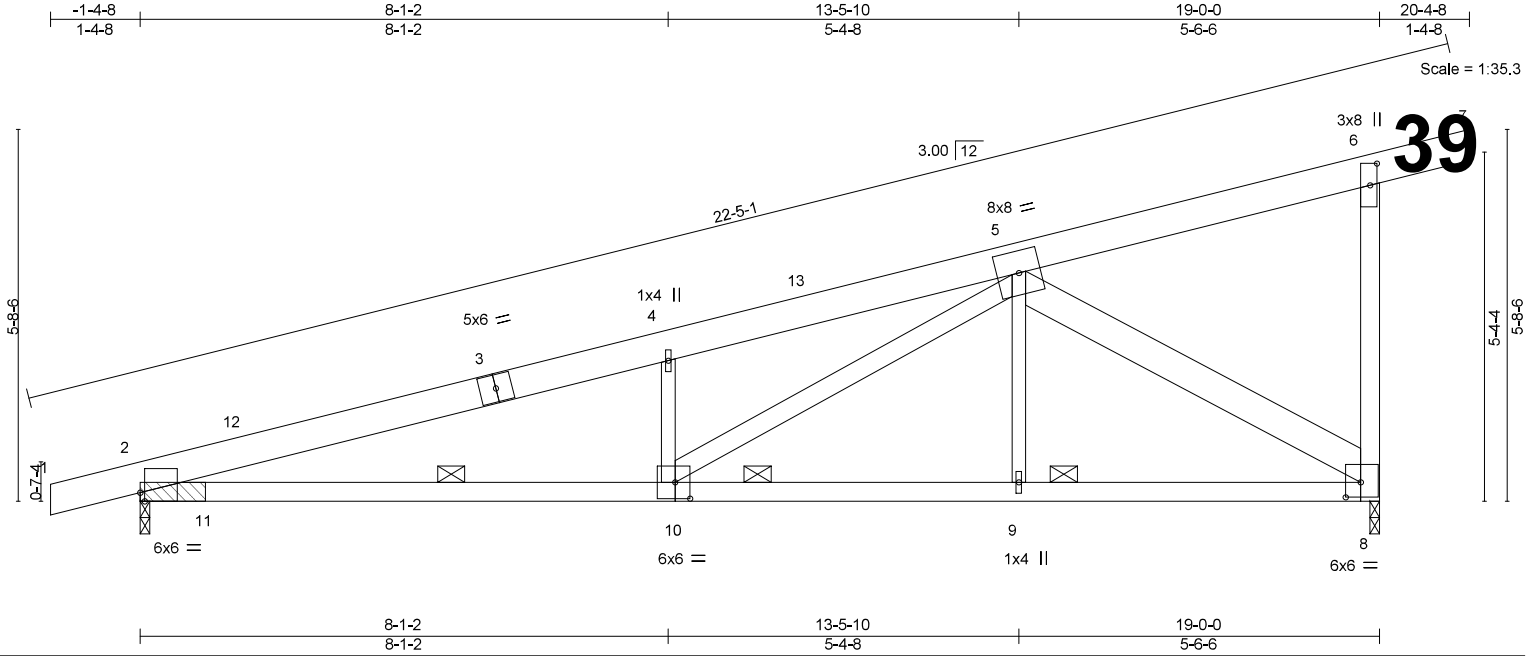


Plate Offsets (X,Y)--	[2:0-0-13,Edge], [6:0-4-0,0-1-4], [8:0-2-12,0-2-12], [10:0-2-12,0-3-0]								
<b>SPACING--</b>	2-3-0	<b>SPACING--</b>	1-9-0	<b>SPACING--</b>	2-3-0	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
<b>LOADING (psf)</b>		<b>LOADING (psf)</b>		<b>Plate Grip DOL</b>	1.00	TC	in (loc) l/defl L/d	MT20	185/144
TCLL	38.1	TCLL	49.0	Lumber DOL	1.00	Vert(LL)	-0.15 2-10 >999 240		
(Ground Snow=54.5)		(Ground Snow=70.0)		Rep Stress Incr	NO	Vert(CT)	-0.25 2-10 >901 180		
TCDL	14.0	TCDL	18.0	Code IBC2021/TPI2014		Horz(CT)	0.06 8 n/a n/a		
BCLL	0.0 *	BCLL	0.0 *						
BCDL	5.0	BCDL	6.4					Weight: 92 lb	
								FT = 20%	

<b>LUMBER--</b>	<b>BRACING--</b>
TOP CHORD 2x6 HF No.2 or 2x6 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 2-4-0 oc purlins, except end verticals.
BOT CHORD 2x4 SPF 2100F 1.8E *Except*	BOT CHORD 4-9-0 oc bracing.
8-10: 2x4 HF No.2 or 2x4 SPF No.2	
WEBS 2x4 HF No.2 or 2x4 SPF No.2 *Except*	
4-10,5-9: 2x3 SPF Stud, 5-8: 2x6 HF No.2 or 2x6 SPF No.2	

**REACTIONS.** (size) 2=(0-1-12 + bearing block) (req. 0-1-14), 8=0-1-12  
 Max Horz 2=376(LC 9)  
 Max Uplift 2=637(LC 8), 8=648(LC 12)  
 Max Grav 2=1462(LC 19), 8=1756(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-3140/1628, 4-5=-3040/1750, 6-8=-660/405  
 BOT CHORD 2-10=-1531/2902, 9-10=-685/1654, 8-9=-685/1656  
 WEBS 4-10=-745/577, 5-10=-996/1475, 5-8=-1959/1044

- NOTES--** (11-13)
- 2x4 SPF 2100F 1.8E bearing block 12" long at jt. 2 attached to front face with 2 rows of 10d (0.131"x3") nails spaced 3" o.c. 8 Total fasteners. Bearing is assumed to be SPF 2100F 1.8E.
  - Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph @27in o.c.; TCDL=2.7psf; BCDL=1.3psf; (Alt. 154mph @21in o.c.; TCDL=3.5psf; BCDL=1.7psf); h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -1-4-8 to 1-7-8, Exterior(2R) 1-7-8 to 20-4-8 zone; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pg= 54.5 psf, Pf=38.1 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 38.1 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Bearing at joint(s) 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - Provide mechanical connection (by others) of truss to bearing plate at joint(s) 8.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=637, 8=648.
  - This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - This truss complies with CBC 2022 Section 2303.4.

**Approved For State of California  
 Factory Built Housing**  
 By  
 MA Consulting & Engineering MACE, LLC.  
 Third Party Design Approval Agency (DAA)  
 Certificate Number: DF1570823

These plans have been approved pursuant to the provisions of The State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 3, Subchapter 1  
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**Generic Foundation Design Approved**

Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. **MAC-FBH 10153**  
 By: **Mohsen Anis**  
 Approval Date: **5/26/2025**  
 Expiration Date: **1/11/2028**



October 29, 2024

**LOAD CASE(S)** Standard

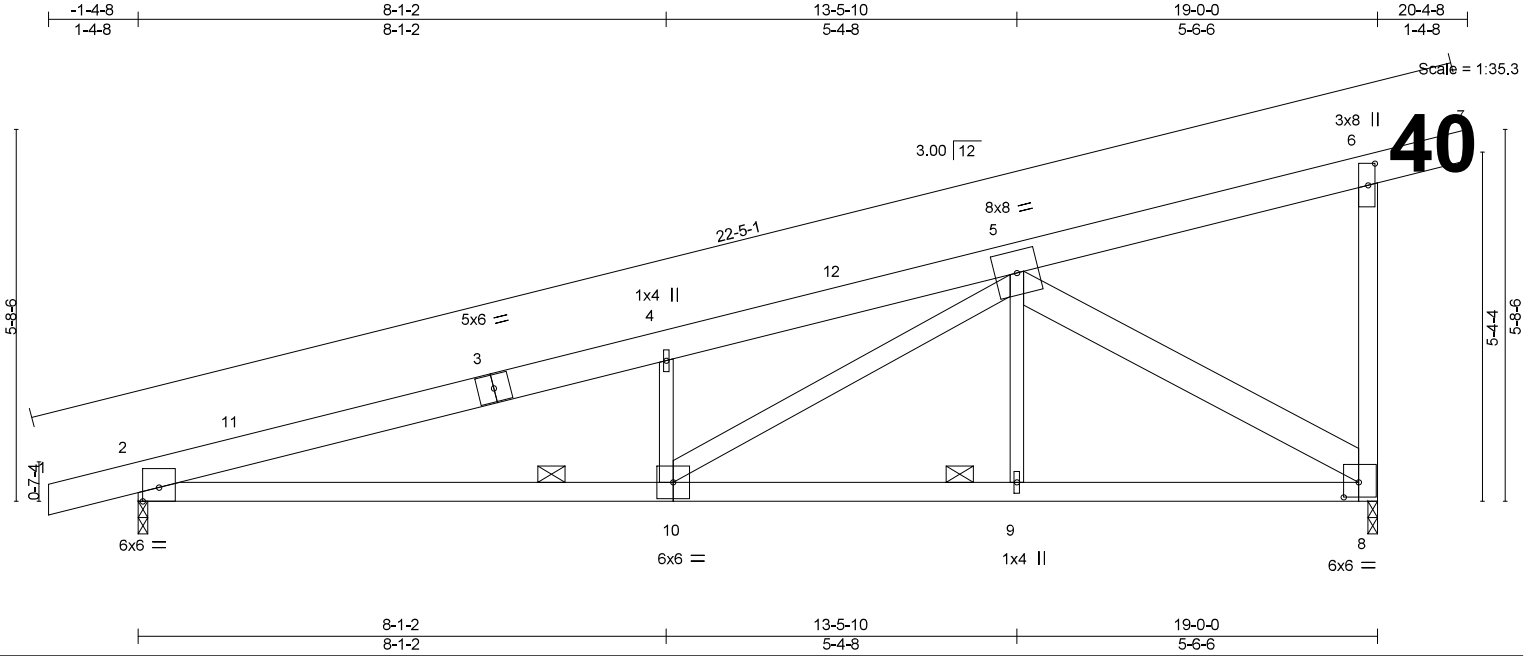
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MIH-7473 rev. 1/2/2023 BEFORE USE.**  
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**MiTek®**  
 16023 Swingley Ridge Rd.  
 Chesterfield, MO 63017  
 314.434.1200 / MiTek-US.com

Job 117380	Truss M1284601	Truss Type MONO TRUSS	Qty 1	Ply 1	Boxabl 233	169114998
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UFP Industries Inc., Grand Rapids, MI 49525

8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:29:17 2024 Page 1  
ID:7gv7HdJbc4vVf09EPQRVAyvRye-HTfZlQsNCYZ?pUPMSDQdcACCIRY2pAd4clzPHWYQBQ0



SPACING-	LOADING (psf)	SPACING-	LOADING (psf)	SPACING-	LOADING (psf)	CSI.	DEFL.	PLATES	GRIP
2-0-0	32.7	1-4-0	49.0	2-0-0	1.00	TC 0.60	in (loc) l/defl L/d	MT20	185/144
(Ground Snow=46.7)		(Ground Snow=70.1)		Plate Grip DOL	1.00	BC 0.86	Vert(LL) -0.11 2-10 >999 240		
TCDL 14.0		TCDL 21.0		Lumber DOL	1.00	WB 0.71	Vert(CT) -0.20 2-10 >999 180		
BCLL 0.0 *		BCLL 0.0 *		Rep Stress Incr	YES	Matrix-SH	Horz(CT) 0.05 8 n/a n/a		
BCDL 5.0		BCDL 7.5		Code IBC2021/TPI2014					Weight: 91 lb FT = 20%

LUMBER-	BRACING-
TOP CHORD 2x6 HF No.2 or 2x6 SPF No.2	TOP CHORD Structural wood sheathing directly applied or 3-5-8 oc purlins, except end verticals.
BOT CHORD 2x4 SPF 2100F 1.8E *Except*	BOT CHORD 6-4-0 oc bracing.
WEBS 2x4 HF No.2 or 2x4 SPF No.2 *Except*	
4-10,5-9: 2x3 SPF Stud, 5-8: 2x6 HF No.2 or 2x6 SPF No.2	

**REACTIONS.** (size) 2=0-1-12, 8=0-1-12  
 Max Horz 2=334(LC 9)  
 Max Uplift 2=566(LC 8), 8=576(LC 12)  
 Max Grav 2=1165(LC 19), 8=1398(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-2489/1449, 4-5=-2407/1557, 6-8=-528/360  
 BOT CHORD 2-10=-1359/2300, 9-10=-607/1309, 8-9=-607/1310  
 WEBS 4-10=-587/513, 5-10=-885/1179, 5-8=-1550/928

- NOTES-** (10-12)
- 1) Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph @24in o.c.; TC DL=2.7psf; BCDL=1.3psf; (Alt. 167mph @16in o.c.; TC DL=4.0psf; BCDL=1.9psf); h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -1-4-8 to 1-7-8, Exterior(2R) 1-7-8 to 20-4-8 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TLL: ASCE 7-16; Pg= 46.7 psf; Pf=32.7 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 32.7 psf on overhangs non-concurrent with other live loads.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 7) Bearing at joint(s) 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 8) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 2, 8.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=566, 8=576.
  - 10) This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 11) This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 12) This truss complies with CBC 2022 Section 2303.4.

**LOAD CASE(S)** Standard  
 Approved For State of California  
 Factory Built Housing  
 By  
 MA Consulting & Engineering MACE, LLC.  
 Third Party Design Approval Agency (DAA)  
 Certificate Number: DF1570823

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**Generic Foundation Design Approved**  
 Occupancy Roof LL Wind Exp Seismic Cat  
 R3 30 psf 115 C E  
 Plan Approval No. MAC-FBH 10153  
 By: *Mohsen Anis*  
 Approval Date: 5/26/2025  
 Expiration Date: 1/11/2028



October 29, 2024

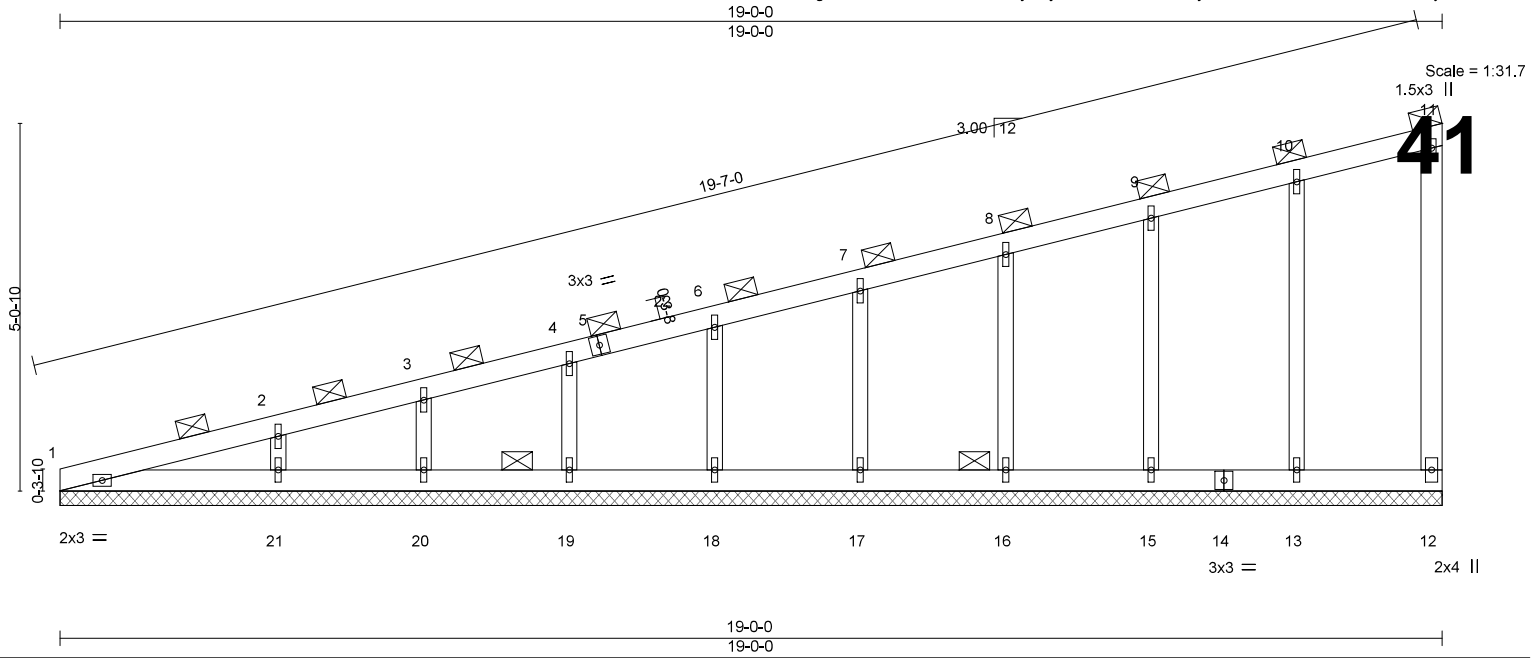
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**MiTek®**  
 16023 Swingley Ridge Rd.  
 Chesterfield, MO 63017  
 314.434.1200 / MiTek-US.com

Job 117380	Truss G0398101	Truss Type GABLE	Qty 1	Ply 1	Boxabl 233	169114991
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UFP Industries Inc., Grand Rapids, MI 49525

8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:29:07 2024 Page 1  
ID:7gv7HclJbc4vVF09EPQQRVAyRye-aY2nf?k5YUJQdyRfS7FHC3oVCPKuTKrbkYtwVYQBQA



SPACING-: 3-3-0 LOADING (psf)	SPACING-: 3-1-0 LOADING (psf)	SPACING-: 3-3-0 Plate Grip DOL 1.00 Lumber DOL 1.00 Rep Stress Incr NO Code IBC2021/TPI2014	CSI. TC 0.61 BC 0.08 WB 0.34 Matrix-P	DEFL. in (loc) l/defl L/d Vert(LL) n/a - n/a 999 Vert(CT) n/a - n/a 999 Horz(CT) 0.01 12 n/a n/a	PLATES GRIP MT20 185/144  Weight: 65 lb FT = 20%
TCLL 46.5 (Ground Snow=66.4) TCDL 14.0 BCLL 0.0 * BCDL 5.0	TCLL 49.0 (Ground Snow=70.0) TCDL 14.8 BCLL 0.0 * BCDL 5.3				

**LUMBER-**  
TOP CHORD 2x4 HF No.2 or 2x4 SPF No.2  
BOT CHORD 2x4 HF No.2 or 2x4 SPF No.2  
WEBS 2x4 HF No.2 or 2x4 SPF No.2  
OTHERS 2x3 SPF Stud

**BRACING-**  
TOP CHORD 2-0-0 oc purlins (6-0-0 max.), except end verticals  
(Switched from sheeted: Spacing > 2-8-0).  
BOT CHORD 6-4-0 oc bracing.

**REACTIONS.** All bearings 19-0-0.  
(lb) - Max Horz 1=479(LC 9)  
Max Uplift All uplift 100 lb or less at joint(s) 1, 12 except 13=164(LC 12), 15=155(LC 8), 16=155(LC 12), 17=156(LC 8), 18=154(LC 12), 19=163(LC 8), 20=126(LC 12), 21=240(LC 12)  
Max Grav All reactions 250 lb or less at joint(s) 12 except 1=261(LC 18), 13=604(LC 18), 15=567(LC 18), 16=568(LC 18), 17=576(LC 18), 18=529(LC 18), 19=446(LC 18), 20=344(LC 18), 21=657(LC 1)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-382/405, 2-3=-334/363, 3-4=-306/351, 4-6=-273/330, 6-7=-253/312, 7-8=-235/293, 8-9=-217/274, 9-10=-200/255, 10-11=-182/262  
BOT CHORD 1-21=-158/275, 20-21=-158/275, 19-20=-158/275, 18-19=-158/275, 17-18=-158/275, 16-17=-158/275, 15-16=-158/275, 13-15=-158/275, 12-13=-158/275  
WEBS 10-13=-568/247, 9-15=-535/235, 8-16=-535/234, 7-17=-544/235, 6-18=-497/232, 4-19=-412/246, 3-20=-318/189, 2-21=-606/362

- NOTES-** (12-14)
- 1) Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph @39in o.c.; TCCL=5.1psf; BCDL=2.5psf; (Alt. 140mph @37in o.c.; TCCL=5.4psf; BCDL=2.6psf); h=30ft; Cat. II; Exp C; Enclosed; MVFRS (envelope) gable end zone and C-C Corner(3E) 0-0-0 to 3-0-0, Exterior(2N) 3-0-0 to 15-10-4, Corner(3E) 15-10-4 to 18-10-4 zone; end vertical left and right exposed; C-C for members and forces & MVFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 3) TCLL: ASCE 7-16; Pg= 66.4 psf, Pf=46.5 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
  - 4) Unbalanced snow loads have been considered for this design.
  - 5) All plates are 1x4 MT20 unless otherwise indicated.
  - 6) Gable requires continuous bottom chord bearing.
  - 7) Gable studs spaced at 2-0-0 oc.
  - 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 12 except (jt=lb) 13=164, 15=155, 16=155, 17=156, 18=154, 19=163, 20=126, 21=240.
  - 11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 12) This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 13) This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1

**Approved For State of California  
Factory Built Housing**

By  
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**Generic Foundation Design Approved**

Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. **MAC-FBH 10153**

By: **Mohsen Anis**

Approval Date: **5/26/2025**

Expiration Date: **1/11/2028**



October 29, 2024

Obtained on page 1 with CBC 2022 Section 2303.4.

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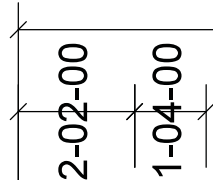
JOB	TRUSS	TRUSS TYPE	QTY	CUSTOMER
117380	L0310902	Truss Placement Plan	1	Boxabl 233 Mono - 70 ground snow

UFP Industries Inc., Grand Rapids, MI 49525, Regan Craig  
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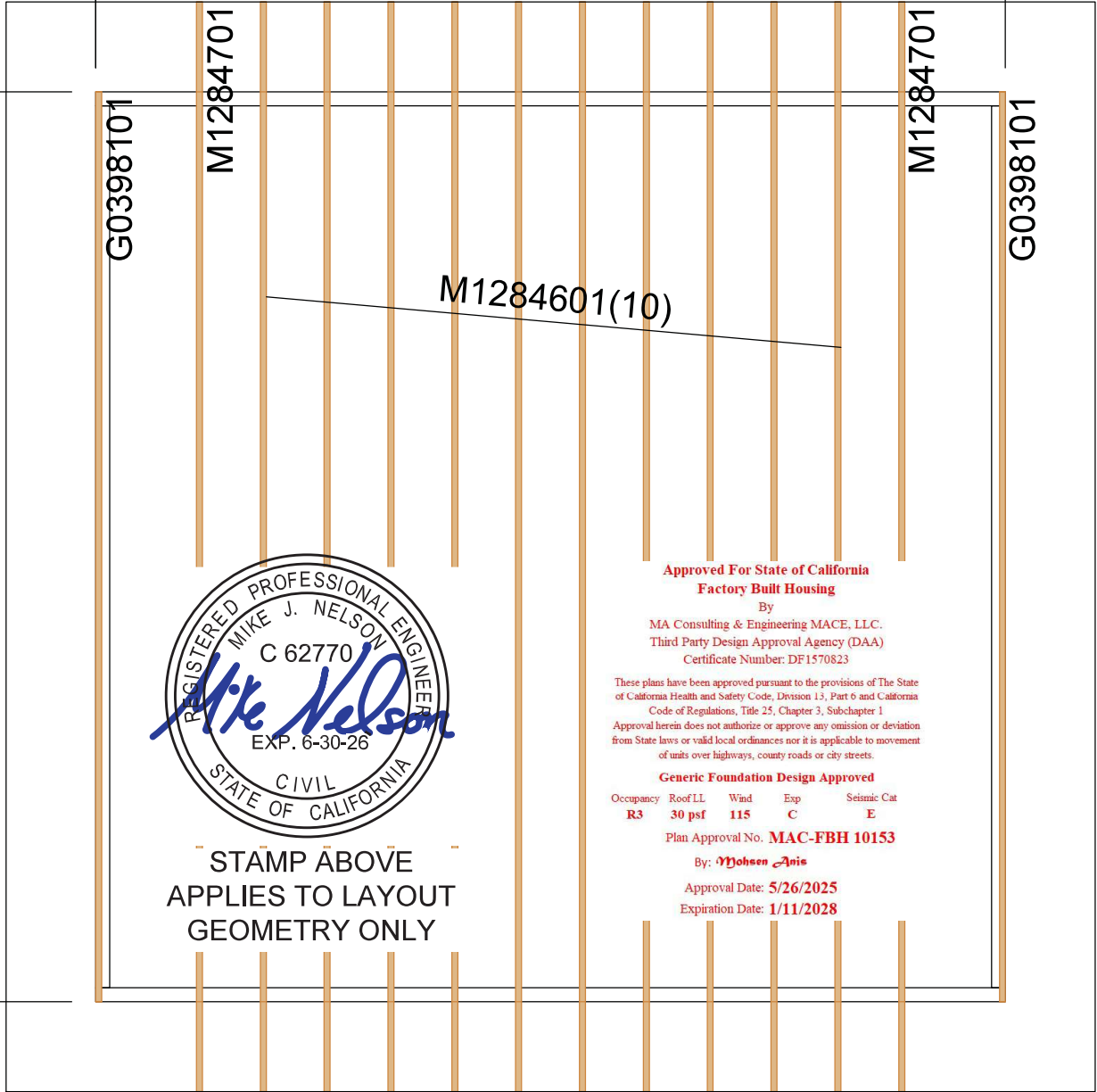
Truss List	
Truss	Qty
G0398101	2
M1284601	10
M1284701	2

19-00-00

42



19-00-00



STAMP ABOVE  
 APPLIES TO LAYOUT  
 GEOMETRY ONLY

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Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. **MAC-FBH 10153**

By: **Y. Johnson**

Approval Date: **5/26/2025**

Expiration Date: **1/11/2028**

**Warning - Verify design parameters and READ NOTES**

UFP Industries, Inc. 2801 East Beltline Rd. NE  
 PHONE (616)-364-6161 Grand Rapids, MI 49525

This is a TRUSS PLACEMENT PLAN to accurately locate pre-fabricated trusses in a building. This is not a structural framing plan and should not be construed as such. The Owner/Builder shall contract with a licensed design professional to prepare complete structural framing plans for the building. This layout is used to ensure accurate truss placement in accordance with the dimensional requirements of the building. This document does not consider building structural bracing requirements, shear walls, beams, columns or other structural elements that can be critical to the performance of the structure. Any reference to structural elements other than pre-fabricated trusses is purely incidental and is incorporated for clarity only. Refer to the structural framing plans prepared by the Building Engineer of Record for complete framing information. These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on this placement drawing. The building designer must incorporate the truss manufacturer's note on type and location of permanent web member reinforcement requirements in the truss design with full analysis of the overall structural design. For guidance regarding bracing, consult BCS1 1-03, "Guide to Good Practice for Handling, Installing and Bracing of Metal Plate Connected Wood Trusses" available from the WTCA/TPI, 583 D'Onifrio Drive; Madison, WI 53179. It is the responsibility of the General Contractor/Superintendent to verify that the provided truss layout matches final intended construction plans, loading conditions and use. If they do not, it is the responsibility of the General Contractor/Superintendent to provide prints containing the latest specifications and designs. UFP Industries (UFP) will not be responsible for print/plan changes by others after final approval of shop drawings, nor is UFP responsible for errors or modifications made on-site during construction. DO NOT CUT, NOTCH, DRILL, OR OTHERWISE "REPAIR" MANUFACTURED TRUSSES IN ANY WAY WITHOUT PRIOR WRITTEN AUTHORIZATION BY A LICENSED DESIGN PROFESSIONAL DESIGNATED BY UFP. UFP WILL NOT BE HELD RESPONSIBLE FOR ANY MODIFICATIONS OR "CHARGE BACKS" DONE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM UFP.



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Job 117380	Truss M1284701	Truss Type MONO TRUSS	Qty 1	Ply 1	Boxabl 233	169114999
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UFP Industries Inc., Grand Rapids, MI 49525 8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:29:18 2024 Page 1

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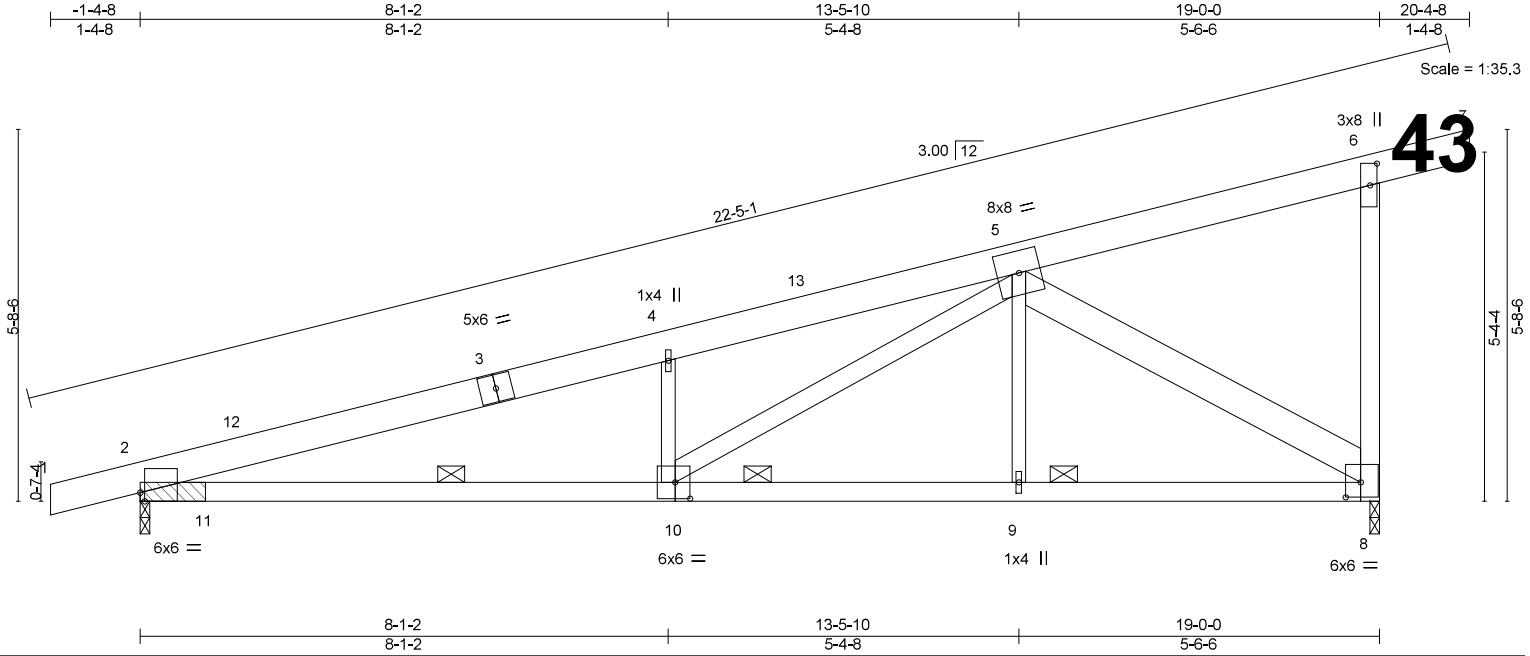


Plate Offsets (X,Y)-- [2:0-0-13,Edge], [6:0-4-0,0-1-4], [8:0-2-12,0-2-12], [10:0-2-12,0-3-0]

SPACING-	LOADING (psf)	SPACING-	LOADING (psf)	SPACING-	LOADING (psf)	CSI.	DEFL.	in (loc)	l/defl	L/d	PLATES	GRIP	
TCLL	38.1	TCLL	49.0	Plate Grip DOL	1.00	TC	Vert(LL)	-0.15	2-10	>999	240	MT20	185/144
(Ground Snow=54.5)		(Ground Snow=70.0)		Lumber DOL	1.00	BC	Vert(CT)	-0.25	2-10	>901	180		
TCDL	14.0	TCDL	18.0	Rep Stress Incr	NO	WB	Horz(CT)	0.06	8	n/a	n/a		
BCLL	0.0 *	BCLL	0.0 *	Code IBC2021/TPI2014		Matrix-SH							
BCDL	5.0	BCDL	6.4										

LUMBER-	BRACING-
TOP CHORD	TOP CHORD
BOT CHORD	BOT CHORD
WEBS	

**REACTIONS.** (size) 2=(0-1-12 + bearing block) (req. 0-1-14), 8=0-1-12  
 Max Horz 2=376(LC 9)  
 Max Uplift 2=637(LC 8), 8=648(LC 12)  
 Max Grav 2=1462(LC 19), 8=1756(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-4=-3140/1628, 4-5=-3040/1750, 6-8=-660/405  
 BOT CHORD 2-10=-1531/2902, 9-10=-685/1654, 8-9=-685/1656  
 WEBS 4-10=-745/577, 5-10=-996/1475, 5-8=-1959/1044

- NOTES-** (11-13)
- 2x4 SPF 2100F 1.8E bearing block 12" long at jt. 2 attached to front face with 2 rows of 10d (0.131"x3") nails spaced 3" o.c. 8 Total fasteners. Bearing is assumed to be SPF 2100F 1.8E.
  - Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph @27in o.c.; TC DL=2.7psf; BCDL=1.3psf; (Alt. 154mph @21in o.c.; TC DL=3.5psf; BCDL=1.7psf); h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -1-4-8 to 1-7-8, Exterior(2R) 1-7-8 to 20-4-8 zone; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pg= 54.5 psf, Pf=38.1 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 38.1 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Bearing at joint(s) 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - Provide mechanical connection (by others) of truss to bearing plate at joint(s) 8.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=637, 8=648.
  - This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - This truss complies with CBC 2022 Section 2303.4.

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**LOAD CASE(S)** Standard

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8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:29:17 2024 Page 1  
ID:7gv7HdJbc4vVf09EPQRVAyvRye-HTfZlQsNCYZ?pUPMSDQdcACCIRY2pAd4clzPHWYQBQ0

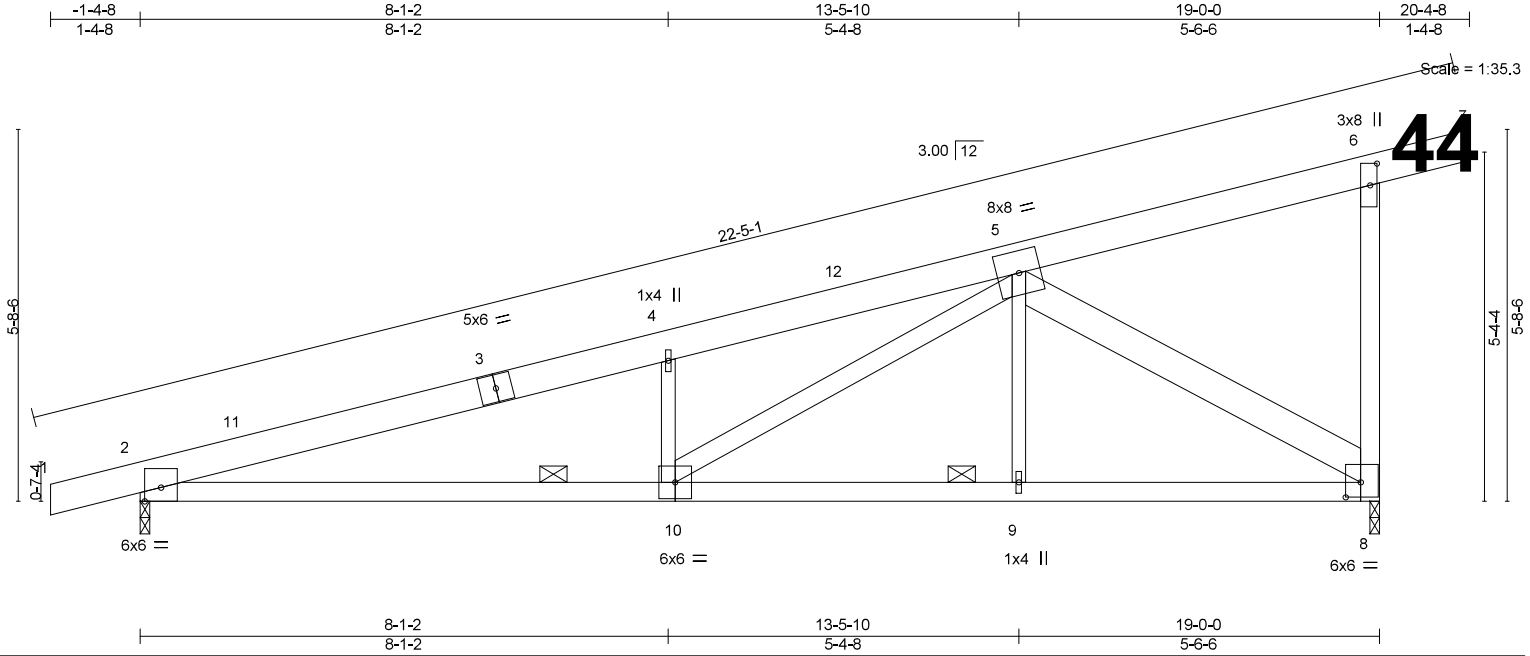


Plate Offsets (X,Y)-- [6:0-4-0,0-1-4], [8:0-2-12,0-2-12]	
<b>SPACING--</b> 2-0-0 <b>LOADING</b> (psf) TCLL 32.7 (Ground Snow=46.7) TCDL 14.0 BCLL 0.0 * BCDL 5.0	<b>SPACING--</b> 1-4-0 <b>LOADING</b> (psf) TCLL 49.0 (Ground Snow=70.1) TCDL 21.0 BCLL 0.0 * BCDL 7.5
<b>SPACING--</b> 2-0-0 Plate Grip DOL 1.00 Lumber DOL 1.00 Rep Stress Incr YES Code IBC2021/TPI2014	<b>CSI.</b> TC 0.60 BC 0.86 WB 0.71 Matrix-SH
<b>DEFL.</b> in (loc) l/defl L/d Vert(LL) -0.11 2-10 >999 240 Vert(CT) -0.20 2-10 >999 180 Horz(CT) 0.05 8 n/a n/a	<b>PLATES GRIP</b> MT20 185/144  Weight: 91 lb FT = 20%

<b>LUMBER--</b> TOP CHORD 2x6 HF No.2 or 2x6 SPF No.2 BOT CHORD 2x4 SPF 2100F 1.8E *Except* 8-10: 2x4 HF No.2 or 2x4 SPF No.2 WEBS 2x4 HF No.2 or 2x4 SPF No.2 *Except* 4-10,5-9: 2x3 SPF Stud, 5-8: 2x6 HF No.2 or 2x6 SPF No.2	<b>BRACING--</b> TOP CHORD Structural wood sheathing directly applied or 3-5-8 oc purlins, except end verticals. BOT CHORD 6-4-0 oc bracing.
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**REACTIONS.** (size) 2=0-1-12, 8=0-1-12  
Max Horz 2=334(LC 9)  
Max Uplift 2=566(LC 8), 8=576(LC 12)  
Max Grav 2=1165(LC 19), 8=1398(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-2489/1449, 4-5=-2407/1557, 6-8=-528/360  
BOT CHORD 2-10=-1359/2300, 9-10=-607/1309, 8-9=-607/1310  
WEBS 4-10=-587/513, 5-10=-885/1179, 5-8=-1550/928

- NOTES--** (10-12)
- 1) Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph @24in o.c.; TCDL=2.7psf; BCDL=1.3psf; (Alt. 167mph @16in o.c.; TCDL=4.0psf; BCDL=1.9psf); h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3) -1-4-8 to 1-7-8, Exterior(2R) 1-7-8 to 20-4-8 zone; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) TCLL: ASCE 7-16; Pg= 46.7 psf; Pf=32.7 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
  - 3) Unbalanced snow loads have been considered for this design.
  - 4) This truss has been designed for greater of min roof live load of 20.0 psf or 2.00 times flat roof load of 32.7 psf on overhangs non-concurrent with other live loads.
  - 5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 6) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 7) Bearing at joint(s) 8 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
  - 8) Provide mechanical connection (by others) of truss to bearing plate at joint(s) 2, 8.
  - 9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=566, 8=576.
  - 10) This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 11) This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 12) This truss complies with CBC 2022 Section 2303.4.

**LOAD CASE(S)** Standard

**Approved For State of California  
Factory Built Housing**  
By  
MA Consulting & Engineering MACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: DF1570823

These plans have been approved pursuant to the provisions of The State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 3, Subchapter 1  
Approval herein does not authorize or approve any omission or deviation from State laws or valid local ordinances nor it is applicable to movement of units over highways, county roads or city streets.

**Generic Foundation Design Approved**  
Occupancy Roof LL Wind Exp Seismic Cat  
R3 30 psf 115 C E  
Plan Approval No. **MAC-FBH 10153**  
By: **Mohsen Anis**  
Approval Date: **5/26/2025**  
Expiration Date: **1/11/2028**



October 29, 2024

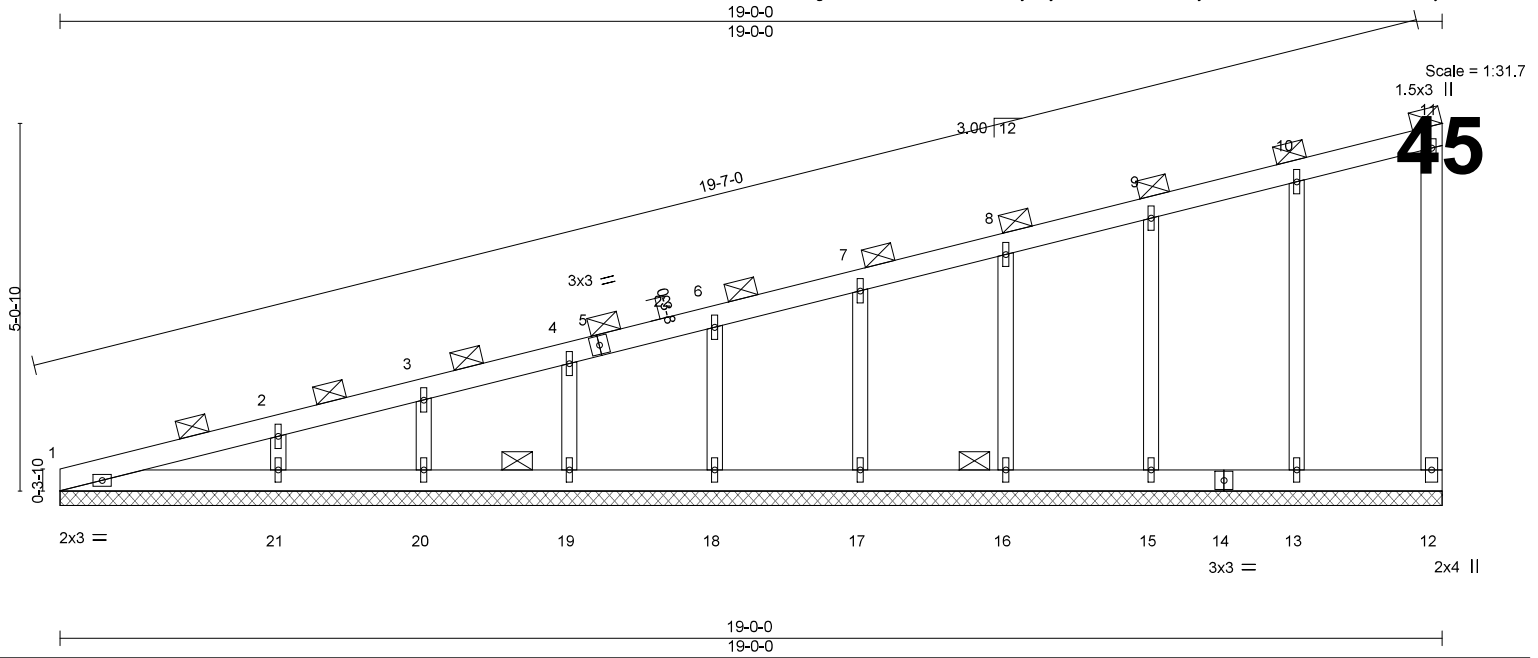
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MIH-7473 rev. 1/2/2023 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

**MiTek®**  
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job 117380	Truss G0398101	Truss Type GABLE	Qty 1	Ply 1	Boxabl 233	169114991
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UFP Industries Inc., Grand Rapids, MI 49525

8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:29:07 2024 Page 1  
ID:7gv7HclJbc4vVF09EPQRVAyVrye-aY2nf?k5YUJQdyfRs7FHC3oVCPKuTkrblkYtwVvYQBQA



<b>SPACING-</b> 3-3-0 <b>LOADING (psf)</b> TCLL 46.5 (Ground Snow=66.4) TCDL 14.0 BCLL 0.0 * BCDL 5.0	<b>SPACING-</b> 3-1-0 <b>LOADING (psf)</b> TCLL 49.0 (Ground Snow=70.0) TCDL 14.8 BCLL 0.0 * BCDL 5.3	<b>SPACING-</b> 3-3-0 Plate Grip DOL 1.00 Lumber DOL 1.00 Rep Stress Incr NO Code IBC2021/TPI2014	<b>CSI.</b> TC 0.61 BC 0.08 WB 0.34 Matrix-P	<b>DEFL.</b> Vert(LL) n/a - n/a 999 Vert(CT) n/a - n/a 999 Horz(CT) 0.01 12 n/a n/a	<b>PLATES GRIP</b> MT20 185/144  Weight: 65 lb FT = 20%
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<b>LUMBER-</b> TOP CHORD 2x4 HF No.2 or 2x4 SPF No.2 BOT CHORD 2x4 HF No.2 or 2x4 SPF No.2 WEBS 2x4 HF No.2 or 2x4 SPF No.2 OTHERS 2x3 SPF Stud	<b>BRACING-</b> TOP CHORD 2-0-0 oc purlins (6-0-0 max.), except end verticals (Switched from sheeted: Spacing > 2-8-0). BOT CHORD 6-4-0 oc bracing.
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<b>REACTIONS.</b> All bearings 19-0-0. (lb) - Max Horz 1=479(LC 9) Max Uplift All uplift 100 lb or less at joint(s) 1, 12 except 13=164(LC 12), 15=155(LC 8), 16=155(LC 12), 17=156(LC 8), 18=154(LC 12), 19=163(LC 8), 20=126(LC 12), 21=240(LC 12) Max Grav All reactions 250 lb or less at joint(s) 12 except 1=261(LC 18), 13=604(LC 18), 15=567(LC 18), 16=568(LC 18), 17=576(LC 18), 18=529(LC 18), 19=446(LC 18), 20=344(LC 18), 21=657(LC 1)	<b>Approved For State of California Factory Built Housing</b> By MA Consulting & Engineering MACE, LLC. Third Party Design Approval Agency (DAA) Certificate Number: DF1570823
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<b>FORCES.</b> (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 1-2=-382/405, 2-3=-334/363, 3-4=-306/351, 4-6=-273/330, 6-7=-253/312, 7-8=-235/293, 8-9=-217/274, 9-10=-200/255, 10-11=-182/262 BOT CHORD 1-21=-158/275, 20-21=-158/275, 19-20=-158/275, 18-19=-158/275, 17-18=-158/275, 16-17=-158/275, 15-16=-158/275, 13-15=-158/275, 12-13=-158/275 WEBS 10-13=-568/247, 9-15=-535/235, 8-16=-535/234, 7-17=-544/235, 6-18=-497/232, 4-19=-412/246, 3-20=-318/189, 2-21=-606/362	<b>Generic Foundation Design Approved</b> Occupancy R3 Roof LL 30 psf Wind 115 Exp C Seismic Cat E Plan Approval No. MAC-FBH 10153 By: <i>Mohsen Anis</i> Approval Date: 5/26/2025 Expiration Date: 1/11/2028
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<b>NOTES-</b> (12-14) 1) Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph @39in o.c.; TCDL=5.1psf; BCDL=2.5psf; (Alt. 140mph @37in o.c.; TCDL=5.4psf; BCDL=2.6psf); h=30ft; Cat. II; Exp C; Enclosed; MVFERS (envelope) gable end zone and C-C Corner(3E) 0-0-0 to 3-0-0, Exterior(2N) 3-0-0 to 15-10-4, Corner(3E) 15-10-4 to 18-10-4 zone; end vertical left and right exposed; C-C for members and forces & MVFERS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1. 3) TCLL: ASCE 7-16; Pg= 66.4 psf; Pf=46.5 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00 4) Unbalanced snow loads have been considered for this design. 5) All plates are 1x4 MT20 unless otherwise indicated. 6) Gable requires continuous bottom chord bearing. 7) Gable studs spaced at 2-0-0 oc. 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads. 9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members. 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1, 12 except (jt=lb) 13=164, 15=155, 16=155, 17=156, 18=154, 19=163, 20=126, 21=240. 11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord. 12) This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1 13) This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1	<b>REGISTERED PROFESSIONAL ENGINEER</b> DAVID MERRILL BAXTER S6332 EXP. 06/30/2026 STRUCTURAL STATE OF CALIFORNIA October 29, 2024
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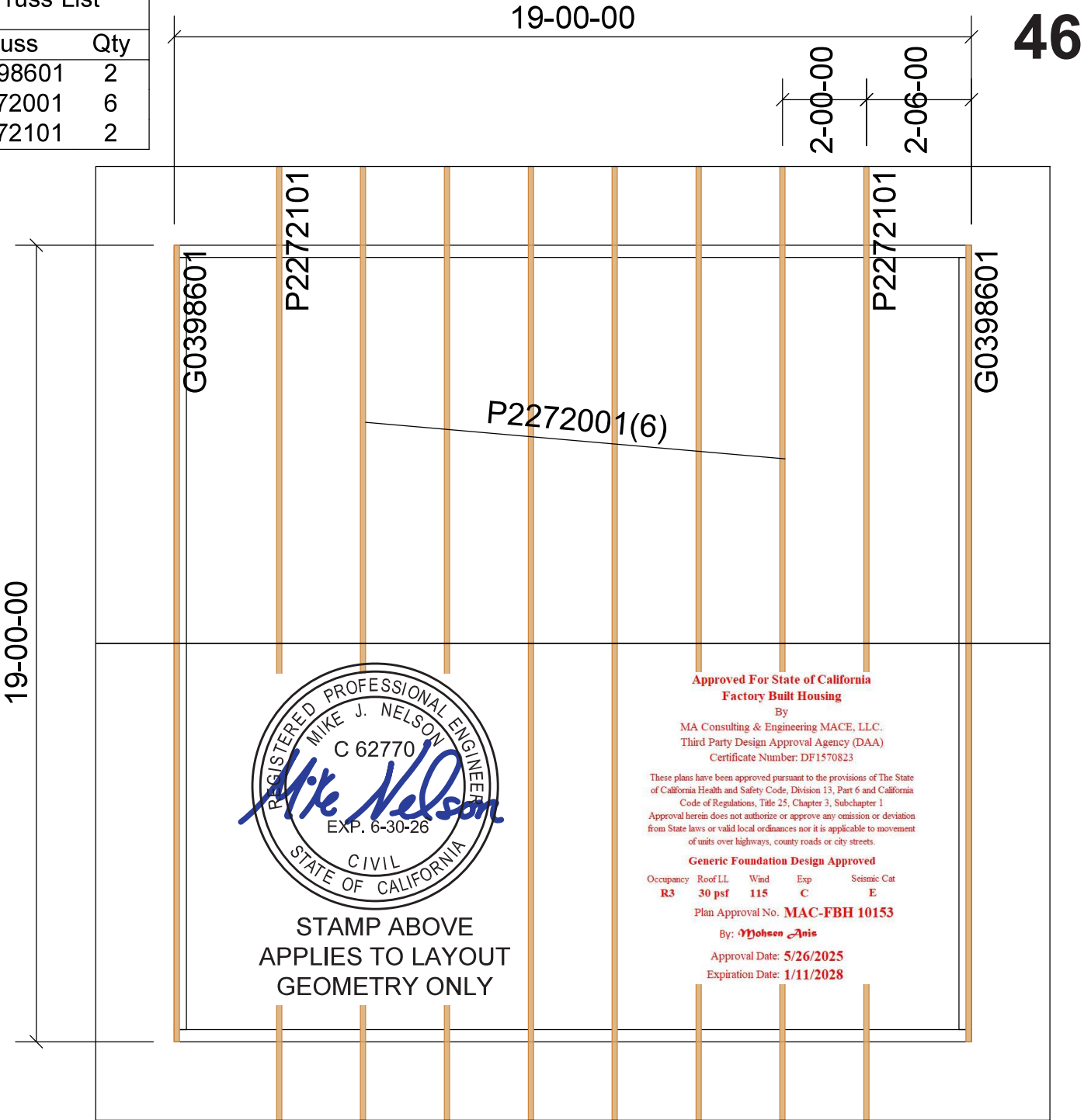
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITTEK REFERENCE PAGE MIH-7473 rev. 1/2/2023 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, and DSB-22 available from Truss Plate Institute (www.tpinst.org) and BCSI Building Component Safety Information available from the Structural Building Component Association (www.sbcsccomponents.com)

**MiTek®**  
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

JOB	TRUSS	TRUSS TYPE	QTY	CUSTOMER
117380	L0311201	Truss Placement Plan	1	Boxabl 233 Gable - 46.7 ground snow

UFP Industries Inc., Grand Rapids, MI 49525, Regan Craig  
 Copyright © 2024 UFP Industries, Inc. All Rights Reserved

Truss List	
Truss	Qty
G0398601	2
P2272001	6
P2272101	2



STAMP ABOVE  
 APPLIES TO LAYOUT  
 GEOMETRY ONLY

**Approved For State of California  
 Factory Built Housing**

By  
 MA Consulting & Engineering MACE, LLC.  
 Third Party Design Approval Agency (DAA)  
 Certificate Number: DF1570823

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 Approval herein does not authorize or approve any omission or deviation from State laws or valid local ordinances nor is it applicable to movement of units over highways, county roads or city streets.

**Generic Foundation Design Approved**

Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. **MAC-FBH 10153**

By: **Mohsen Anis**

Approval Date: **5/26/2025**

Expiration Date: **1/11/2028**

**Warning - Verify design parameters and READ NOTES**

UFP Industries, Inc. 2801 East Beltline Rd. NE  
 PHONE (616)-364-6161 Grand Rapids, MI 49525

This is a TRUSS PLACEMENT PLAN to accurately locate pre-fabricated trusses in a building. This is not a structural framing plan and should not be construed as such. The Owner/Builder shall contract with a licensed design professional to prepare complete structural framing plans for the building. This layout is used to ensure accurate truss placement in accordance with the dimensional requirements of the building. This document does not consider building structural bracing requirements, shear walls, beams, columns or other structural elements that can be critical to the performance of the structure. Any reference to structural elements other than pre-fabricated trusses is purely incidental and is incorporated for clarity only. Refer to the structural framing plans prepared by the Building Engineer of Record for complete framing information. These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on this placement drawing. The building designer must incorporate the truss manufacturer's note on type and location of permanent web member reinforcement requirements in the truss design with full analysis of the overall structural design. For guidance regarding bracing, consult BCS1 1-03, "Guide to Good Practice for Handling, Installing and Bracing of Metal Plate Connected Wood Trusses" available from the WTCA/TPI, 583 D'Onofrio Drive; Madison, WI 53179. It is the responsibility of the General Contractor/Superintendent to verify that the provided truss layout matches final intended construction plans, loading conditions and use. If they do not, it is the responsibility of the General Contractor/Superintendent to provide prints/plans containing the latest specifications and designs. UFP Industries (UFP) will not be responsible for print/plan changes by others after final approval of shop drawings, nor is UFP responsible for errors or modifications made on-site during construction. DO NOT CUT, NOTCH, DRILL, OR OTHERWISE "REPAIR" MANUFACTURED TRUSSES IN ANY WAY WITHOUT PRIOR WRITTEN AUTHORIZATION BY A LICENSED DESIGN PROFESSIONAL DESIGNATED BY UFP. UFP WILL NOT BE HELD RESPONSIBLE FOR ANY MODIFICATIONS OR "CHARGE BACKS" DONE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM UFP.



®

Job 117380	Truss P2272101	Truss Type QUEENPOST	Qty 1	Ply 1	Boxabl 233	169115005
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UFP Industries Inc., Grand Rapids, MI 49525

ID:Xz3qLqaXulJuq6xSPTA9xDyvRys-6d0r0Tw7nOK9XPtVoUX2rRS88rQDt9y\_DQJTayQBpw  
8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:29:23 2024 Page 1

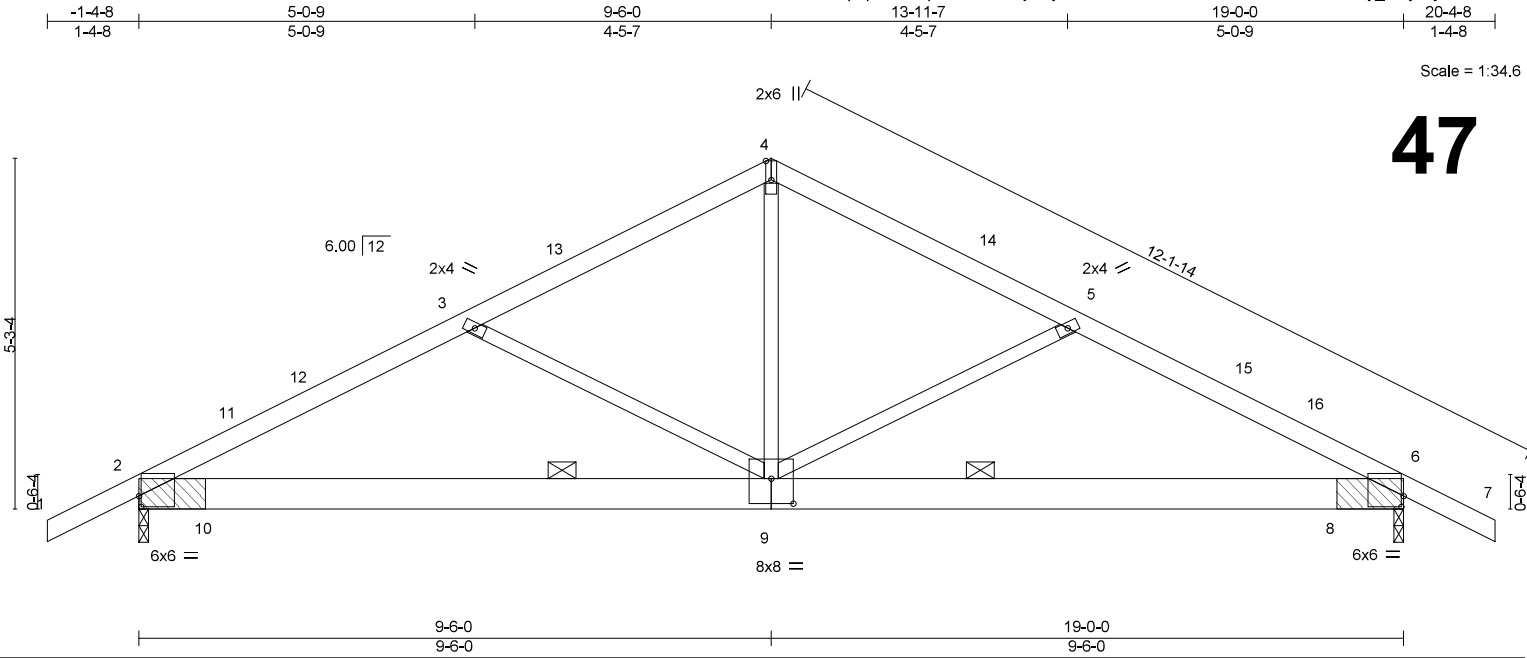


Plate Offsets (X,Y)-- [2:0-0-7,0-1-15], [4:0-3-7,Edge], [6:0-0-7,0-1-15], [9:0-4-0,0-4-8]					
<b>SPACING--</b> 2-3-0 <b>LOADING (psf)</b> TCLL 38.1 (Ground Snow=54.5) TCDL 14.0 BCLL 0.0 * BCDL 5.0	<b>SPACING--</b> 1-9-0 <b>LOADING (psf)</b> TCLL 49.0 (Ground Snow=70.0) TCDL 18.0 BCLL 0.0 * BCDL 6.4	<b>SPACING--</b> 2-3-0 Plate Grip DOL 1.00 Lumber DOL 1.00 Rep Stress Incr NO Code IBC2021/TPI2014	<b>CSI.</b> TC 0.99 BC 0.23 WB 0.77 Matrix-P	<b>DEFL.</b> in (loc) l/defl L/d Vert(LL) -0.07 9 >999 240 Vert(CT) -0.10 2-9 >999 180 Horz(CT) 0.03 6 n/a n/a	<b>PLATES GRIP</b> MT20 185/144 Weight: 78 lb FT = 20%

<b>LUMBER-</b>	<b>BRACING-</b>
TOP CHORD 2x4 HF No.2	TOP CHORD Structural wood sheathing directly applied or 1-7-8 oc purlins.
BOT CHORD 2x6 SPF 2100F 1.8E	BOT CHORD 6-4-0 oc bracing.
WEBS 2x3 SPF Stud	

**REACTIONS.** (size) 2=(0-1-12 + bearing block) (req. 0-1-15), 6=(0-1-12 + bearing block) (req. 0-1-15)  
Max Horz 2=-157(LC 13)  
Max Uplift 2=-494(LC 12), 6=-494(LC 13)  
Max Grav 2=1524(LC 19), 6=1524(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-2351/903, 3-4=-1501/686, 4-5=-1501/686, 5-6=-2351/903  
BOT CHORD 2-9=-643/1967, 6-9=-642/1967  
WEBS 3-9=-941/435, 4-9=-352/733, 5-9=-941/435

- NOTES-** (10-12)
- 2x6 SPF 2100F 1.8E bearing block 12" long at jt. 2 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be SPF 2100F 1.8E.
  - 2x6 SPF 2100F 1.8E bearing block 12" long at jt. 6 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be SPF 2100F 1.8E.
  - Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph @27in o.c.; TCDL=3.8psf; BCDL=1.9psf; (Alt. 154mph @21in o.c.; TCDL=4.9psf; BCDL=2.4psf); h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-4-8 to 1-7-8, Interior(1) 1-7-8 to 6-6-0, Exterior(2R) 6-6-0 to 12-6-0, Interior(1) 12-6-0 to 17-4-8, Exterior(2E) 17-4-8 to 20-4-8 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pg= 54.5 psf, Pf=38.1 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 18.0 psf or 2.00 times flat roof load of 38.1 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=494, 6=494.
  - This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - This truss complies with CBC 2022 Section 2303.4.

**LOAD CASE(S)** Standard

Approved For State of California  
Factory Built Housing

By  
MA Consulting & Engineering MACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: DF1570823

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Approval herein does not authorize or approve any omission or deviation from State laws or valid local ordinances nor it is applicable to movement of units over highways, county roads or city streets.

Generic Foundation Design Approved

Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. MAC-FBH 10153

By: *Mohsen Anis*

Approval Date: 5/26/2025


Expiration Date: 1/11/2028



October 29, 2024

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16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job 117380	Truss P2272001	Truss Type QUEENPOST	Qty 1	Ply 1	Boxabl 233	169115004
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UFP Industries Inc., Grand Rapids, MI 49525  
 ID: Xz3qLqaXulJug6xSPTA9xDyvRys-6d0r0Tw7nOK9XPTVoUX2rRSD4rm3Dwny\_DQjTayQBPw  
 8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:29:23 2024 Page 1

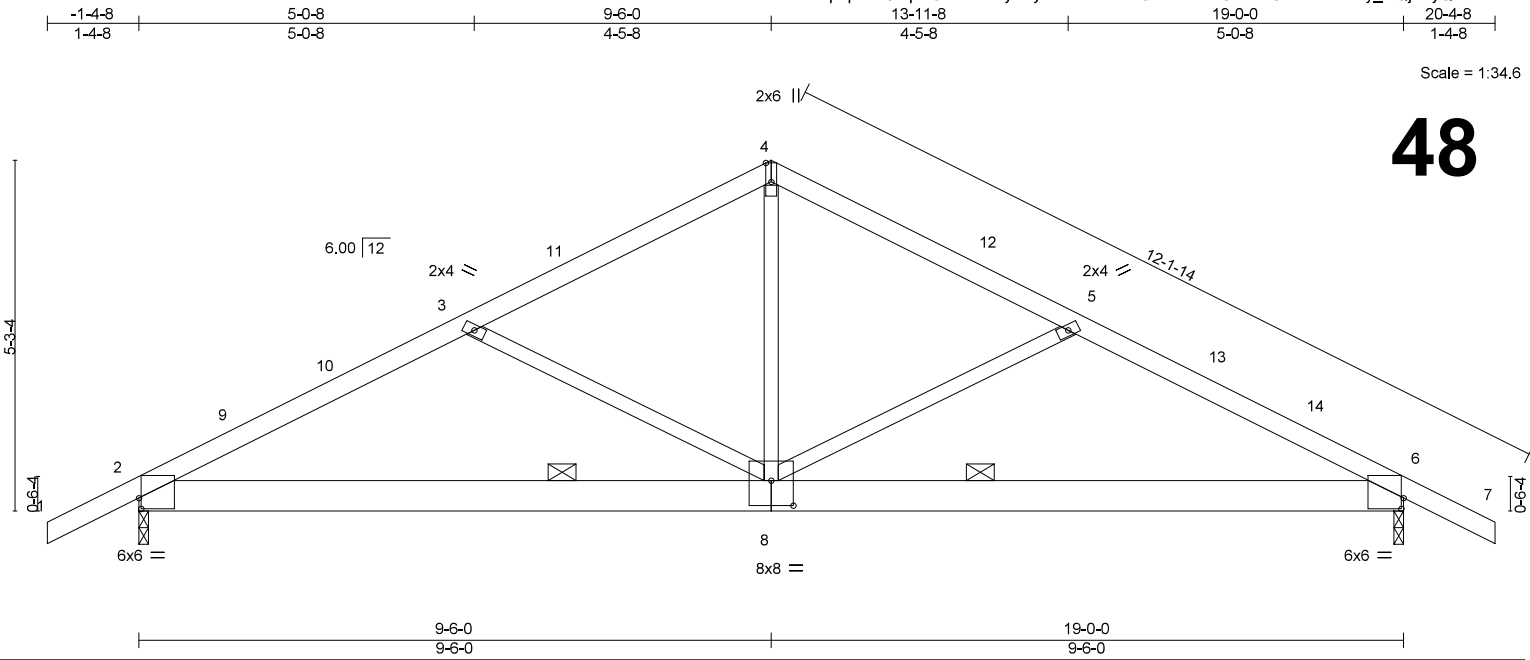


Plate Offsets (X,Y)-- [2:0-0-7,0-1-15], [4:0-3-7,Edge], [6:0-0-7,0-1-15], [8:0-4-0,0-4-8]					
<b>SPACING--</b> 2-0-0 <b>LOADING (psf)</b> TCLL 32.7 (Ground Snow=46.7) TCDL 14.0 BCLL 0.0 * BCDL 5.0	<b>SPACING--</b> 1-4-0 <b>LOADING (psf)</b> TCLL 49.0 (Ground Snow=70.1) TCDL 21.0 BCLL 0.0 * BCDL 7.5	<b>SPACING--</b> 2-0-0 Plate Grip DOL 1.00 Lumber DOL 1.00 Rep Stress Incr YES Code IBC2021/TPI2014	<b>CSI.</b> TC 0.68 BC 0.18 WB 0.60 Matrix-P	<b>DEFL.</b> in (loc) l/defl L/d Vert(LL) -0.05 8 >999 240 Vert(CT) -0.09 2-8 >999 180 Horz(CT) 0.02 6 n/a n/a	<b>PLATES GRIP</b> MT20 185/144  Weight: 74 lb FT = 20%

<b>LUMBER-</b> TOP CHORD 2x4 HF No.2 or 2x4 SPF No.2 BOT CHORD 2x6 SPF 2100F 1.8E WEBS 2x3 SPF Stud	<b>BRACING-</b> TOP CHORD Structural wood sheathing directly applied or 3-9-3 oc purlins. BOT CHORD 6-4-0 oc bracing.
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**REACTIONS.** (size) 2=0-1-12, 6=0-1-12  
 Max Horz 2=-139(LC 17)  
 Max Uplift 2=-433(LC 12), 6=-433(LC 13)  
 Max Grav 2=1213(LC 19), 6=1213(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
 TOP CHORD 2-3=-1872/795, 3-4=-1212/604, 4-5=-1212/604, 5-6=-1872/795  
 BOT CHORD 2-8=-565/1569, 6-8=-564/1569  
 WEBS 3-8=-734/385, 4-8=-308/595, 5-8=-734/385

- NOTES-** (9-11)
- Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph @24in o.c.; TCDL=4.0psf; BCDL=2.0psf; (Alt. 167mph @16in o.c.; TCDL=6.0psf; BCDL=3.0psf); h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-4-8 to 1-7-8, Interior(1) 1-7-8 to 6-6-0, Exterior(2R) 6-6-0 to 12-6-0, Interior(1) 12-6-0 to 17-4-8, Exterior(2E) 17-4-8 to 20-4-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pg= 46.7 psf; Pf=32.7 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 18.0 psf or 2.00 times flat roof load of 32.7 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate at joint(s) 2, 6.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=433, 6=433.
  - This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - This truss complies with CBC 2022 Section 2303.4.

**LOAD CASE(S)** Standard

**Approved For State of California  
 Factory Built Housing**  
 By  
 MA Consulting & Engineering MACE, LLC.  
 Third Party Design Approval Agency (DAA)  
 Certificate Number: DF1570823

These plans have been approved pursuant to the provisions of The State of California Health and Safety Code, Division 13, Part 6 and California Code of Regulations, Title 25, Chapter 3, Subchapter 1  
Approval herein does not authorize or approve any omission or deviation from State laws or valid local ordinances nor it is applicable to movement of units over highways, county roads or city streets.

**Generic Foundation Design Approved**

Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. **MAC-FBH 10153**  
 By: **Mohsen Anis**  
 Approval Date: **5/26/2025**  
 Expiration Date: **1/11/2028**



October 29, 2024

Job 117380	Truss G0398601	Truss Type GABLE	Qty 1	Ply 1	Boxabl 233	169114992
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UFP Industries Inc., Grand Rapids, MI 49525

8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:29:08 2024 Page 1  
ID:Xz3qLqaxuJju6xSPTA9xDyVrYs-2kcAsLjJnRHE6DdQqmWlHKICphnCCSIXOIQSxyQBQ9

Scale = 1:32.9

49

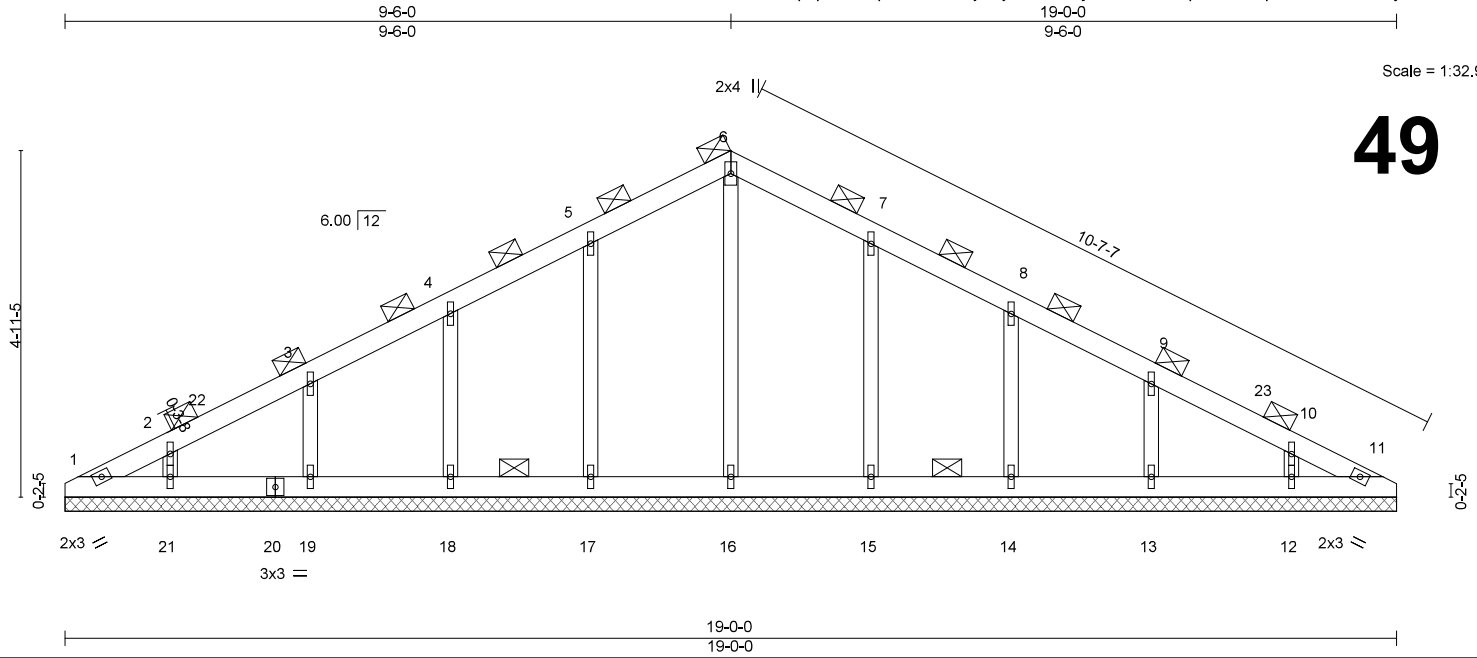


Plate Offsets (X,Y)-- [7:0-0-0,0-0-0], [8:0-0-0,0-0-0], [9:0-0-0,0-0-0], [10:0-0-0,0-0-0]	
<b>SPACING-</b> 3-3-0 <b>LOADING</b> (psf) TCLL 46.5 (Ground Snow=66.4) TCDL 11.0 BCLL 0.0 * BCDL 5.0	<b>SPACING-</b> 3-1-0 <b>LOADING</b> (psf) TCLL 49.0 (Ground Snow=70.0) TCDL 11.6 BCLL 0.0 * BCDL 5.3
<b>SPACING-</b> 3-3-0 Plate Grip DOL 1.00 Lumber DOL 1.00 Rep Stress Incr NO Code IBC2021/TPI2014	<b>CSI.</b> TC 0.27 BC 0.04 WB 0.32 Matrix-P
<b>DEFL.</b> Vert(LL) n/a Vert(CT) n/a Horz(CT) 0.01	<b>in (loc)</b> - <b>l/defl</b> n/a <b>L/d</b> 999 <b>L/d</b> 999 <b>n/a</b>
<b>PLATES</b> MT20 <b>GRIP</b> 185/144  Weight: 62 lb FT = 20%	

<b>LUMBER-</b> TOP CHORD 2x4 HF No.2 or 2x4 SPF No.2 BOT CHORD 2x4 HF No.2 or 2x4 SPF No.2 OTHERS 2x3 SPF Stud	<b>BRACING-</b> TOP CHORD 2-0-0 oc purlins (6-0-0 max.) (Switched from sheeted: Spacing > 2-8-0). BOT CHORD 6-4-0 oc bracing.
-------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------

**REACTIONS.** All bearings 19-0-0.  
(lb) - Max Horz 1=193(LC 13)  
Max Uplift All uplift 100 lb or less at joint(s) 1 except 17=213(LC 12), 18=188(LC 12), 19=196(LC 12), 21=174(LC 12), 15=212(LC 13), 14=189(LC 13), 13=196(LC 13), 12=174(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 1, 11 except 16=302(LC 24), 17=677(LC 18), 18=595(LC 18), 19=620(LC 18), 21=416(LC 18), 15=677(LC 19), 14=594(LC 19), 13=620(LC 19), 12=415(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=259/85, 5-6=199/378, 6-7=199/378  
WEBS 6-16=-269/6, 5-17=-644/278, 4-18=-562/244, 3-19=-587/307, 2-21=-386/324, 7-15=-644/279, 8-14=-562/244, 9-13=-587/308, 10-12=-386/324

- NOTES-** (12-14)
- 1) Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph @39in o.c.; TCDL=5.1psf; BCDL=2.5psf; (Alt. 140mph @37in o.c.; TCDL=5.4psf; BCDL=2.6psf); h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) 0-2-12 to 3-6-0, Exterior(2N) 3-6-0 to 6-6-0, Corner(3R) 6-6-0 to 12-6-0, Exterior(2N) 12-6-0 to 15-6-0, Corner(3E) 15-6-0 to 18-9-3 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 3) TCLL: ASCE 7-16; Pg= 66.4 psf, Pf=46.5 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
  - 4) Unbalanced snow loads have been considered for this design.
  - 5) All plates are 1x4 MT20 unless otherwise indicated.
  - 6) Gable requires continuous bottom chord bearing.
  - 7) Gable studs spaced at 2-0-0 oc.
  - 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 17=213, 18=188, 19=196, 21=174, 15=212, 14=189, 13=196, 12=174.
  - 11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 12) This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 13) This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 14) This truss complies with CBC 2022 Section 2303.4.

**LOAD CASE(S)** Standard

**Approved For State of California  
Factory Built Housing**  
By  
MA Consulting & Engineering MACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: DF1570823

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**Generic Foundation Design Approved**  
Occupancy R3 Roof LL 30 psf Wind 115 Exp C Seismic Cat E  
Plan Approval No. **MAC-FBH 10153**  
By: **Mohsen Anis**  
Approval Date: **5/26/2025**  
Expiration Date: **1/11/2028**



October 29, 2024

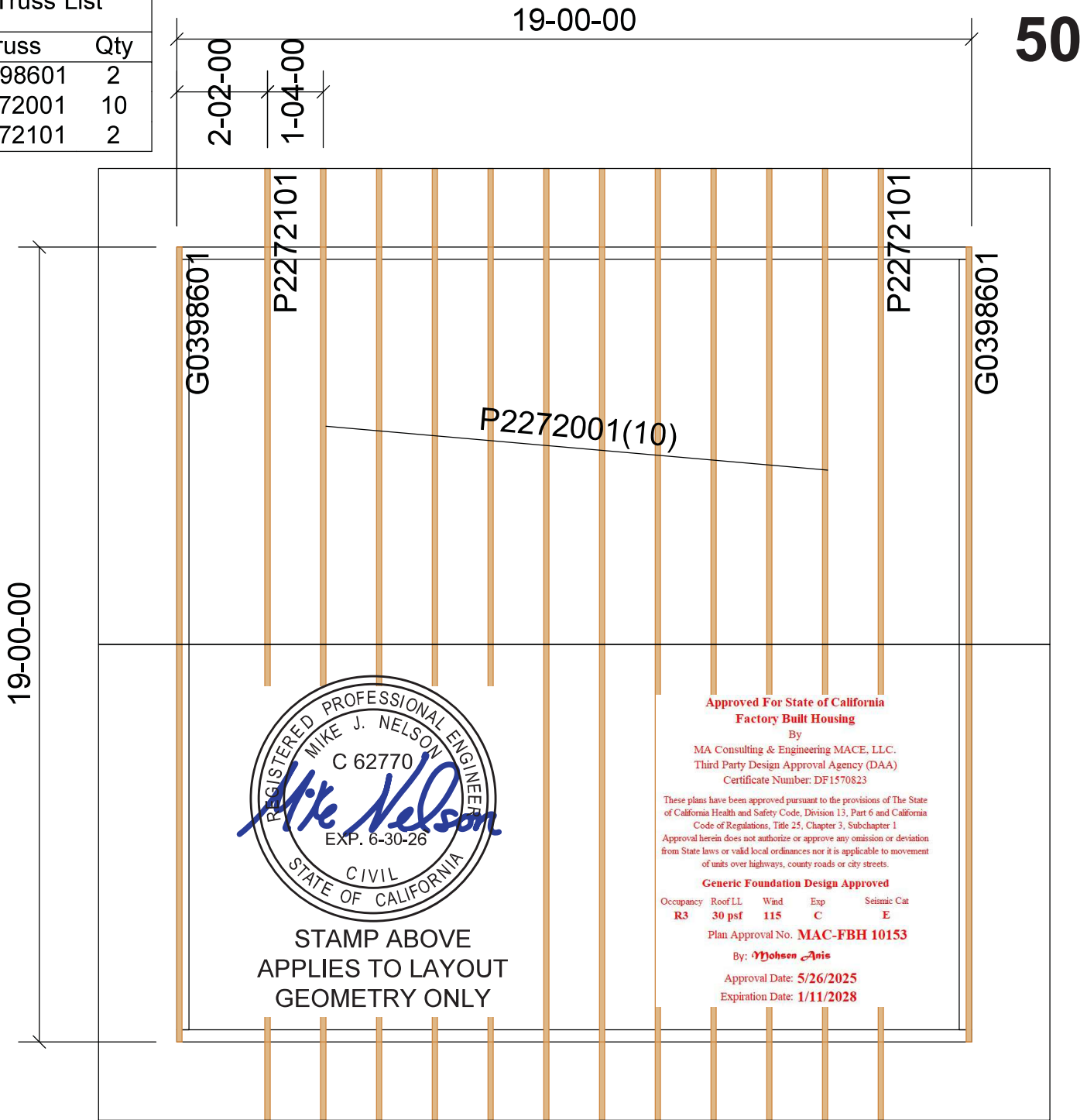
**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MIH-7473 rev. 1/2/2023 BEFORE USE.**  
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see **ANSI/TPI1 Quality Criteria, and DSB-22** available from Truss Plate Institute (www.tpinst.org) and **BCSI Building Component Safety Information** available from the Structural Building Component Association (www.sbcsccomponents.com)

**MiTek®**  
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

JOB	TRUSS	TRUSS TYPE	QTY	CUSTOMER
117380	L0311202	Truss Placement Plan	1	Boxabl 233 Gable - 70 ground snow

UFP Industries Inc., Grand Rapids, MI 49525, Regan Craig  
 Copyright © 2024 UFP Industries, Inc. All Rights Reserved

Truss List	
Truss	Qty
G0398601	2
P2272001	10
P2272101	2



STAMP ABOVE  
 APPLIES TO LAYOUT  
 GEOMETRY ONLY

**Approved For State of California  
 Factory Built Housing**  
 By  
 MA Consulting & Engineering MACE, LLC.  
 Third Party Design Approval Agency (DAA)  
 Certificate Number: DF1570823

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**Generic Foundation Design Approved**

Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. **MAC-FBH 10153**  
 By: *Johnson Anie*  
 Approval Date: **5/26/2025**  
 Expiration Date: **1/11/2028**

**Warning - Verify design parameters and READ NOTES**

UFP Industries, Inc. 2801 East Beltline Rd, NE  
 PHONE (616)-364-6161 Grand Rapids, MI 49525

This is a TRUSS PLACEMENT PLAN to accurately locate pre-fabricated trusses in a building. This is not a structural framing plan and should not be construed as such. The Owner/Builder shall contract with a licensed design professional to prepare complete structural framing plans for the building. This layout is used to ensure accurate truss placement in accordance with the dimensional requirements of the building. This document does not consider building structural bracing requirements, shear walls, beams, columns or other structural elements that can be critical to the performance of the structure. Any reference to structural elements other than pre-fabricated trusses is purely incidental and is incorporated for clarity only. Refer to the structural framing plans prepared by the Building Engineer of Record for complete framing information. These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on this placement drawing. The building designer must incorporate the truss manufacturer's note on type and location of permanent web member reinforcement requirements in the truss design with full analysis of the overall structural design. For guidance regarding bracing, consult BCS1 1-03, "Guide to Good Practice for Handling, Installing and Bracing of Metal Plate Connected Wood Trusses" available from the WTCA/TPI, 583 D'Onofrio Drive, Madison, WI 53179. It is the responsibility of the General Contractor/Superintendent to verify that the provided truss layout matches final intended construction plans, loading conditions and use. If they do not, it is the responsibility of the General Contractor/Superintendent to provide prints/plans containing the latest specifications and designs. UFP Industries (UFP) will not be responsible for print/plan changes by others after final approval of shop drawings, nor is UFP responsible for errors or modifications made on-site during construction. DO NOT CUT, NOTCH, DRILL, OR OTHERWISE "REPAIR" MANUFACTURED TRUSSES IN ANY WAY WITHOUT PRIOR WRITTEN AUTHORIZATION BY A LICENSED DESIGN PROFESSIONAL DESIGNATED BY UFP. UFP WILL NOT BE HELD RESPONSIBLE FOR ANY MODIFICATIONS OR "CHARGE BACKS" DONE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM UFP.



®

Job 117380	Truss P2272101	Truss Type QUEENPOST	Qty 1	Ply 1	Boxabl 233	169115005
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UFP Industries Inc., Grand Rapids, MI 49525

8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:29:23 2024 Page 1  
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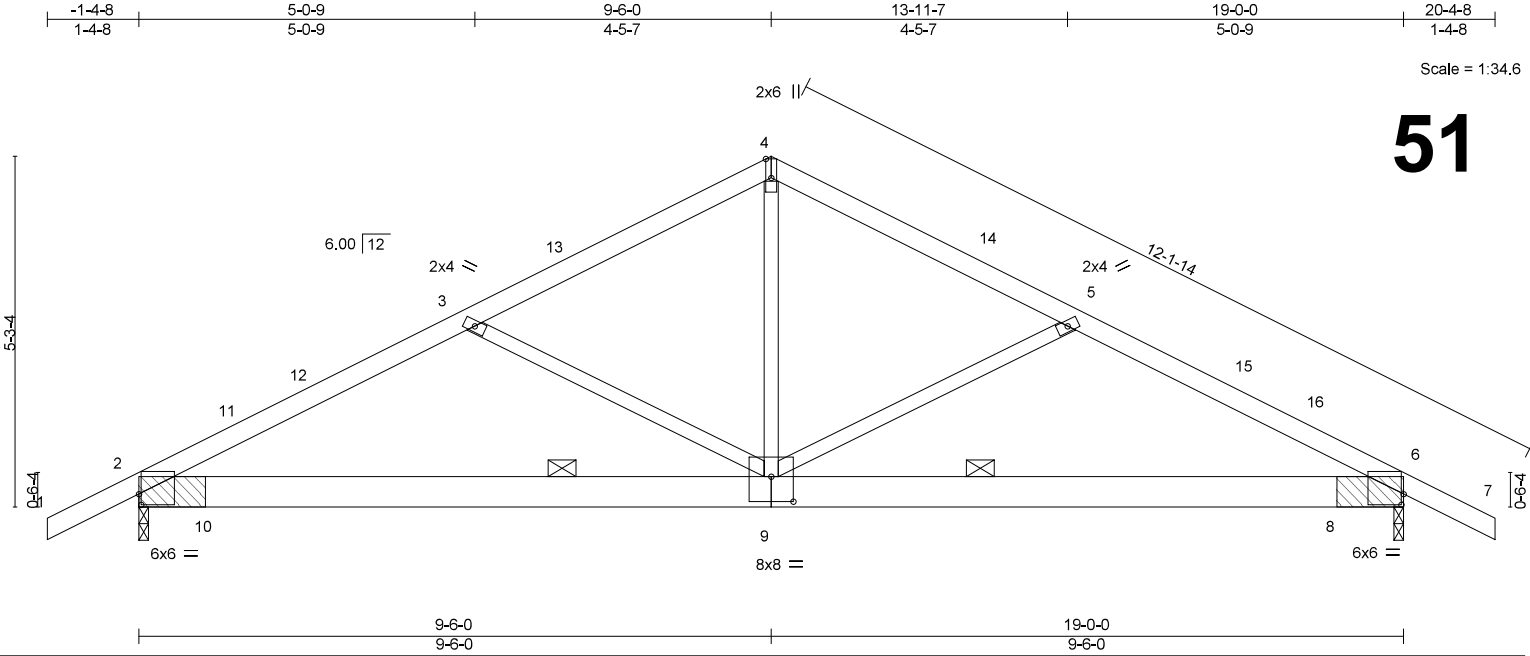


Plate Offsets (X,Y)-- [2:0-0-7,0-1-15], [4:0-3-7,Edge], [6:0-0-7,0-1-15], [9:0-4-0,0-4-8]					
<b>SPACING--</b> 2-3-0 <b>LOADING (psf)</b> TCLL 38.1 (Ground Snow=54.5) TCDL 14.0 BCLL 0.0 * BCDL 5.0	<b>SPACING--</b> 1-9-0 <b>LOADING (psf)</b> TCLL 49.0 (Ground Snow=70.0) TCDL 18.0 BCLL 0.0 * BCDL 6.4	<b>SPACING--</b> 2-3-0 Plate Grip DOL 1.00 Lumber DOL 1.00 Rep Stress Incr NO Code IBC2021/TPI2014	<b>CSI.</b> TC 0.99 BC 0.23 WB 0.77 Matrix-P	<b>DEFL.</b> in (loc) l/defl L/d Vert(LL) -0.07 9 >999 240 Vert(CT) -0.10 2-9 >999 180 Horz(CT) 0.03 6 n/a n/a	<b>PLATES GRIP</b> MT20 185/144  Weight: 78 lb FT = 20%

<b>LUMBER--</b> TOP CHORD 2x4 HF No.2 BOT CHORD 2x6 SPF 2100F 1.8E WEBS 2x3 SPF Stud	<b>BRACING--</b> TOP CHORD Structural wood sheathing directly applied or 1-7-8 oc purlins. BOT CHORD 6-4-0 oc bracing.
-----------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------

**REACTIONS.** (size) 2=(0-1-12 + bearing block) (req. 0-1-15), 6=(0-1-12 + bearing block) (req. 0-1-15)  
Max Horz 2=-157(LC 13)  
Max Uplift 2=-494(LC 12), 6=-494(LC 13)  
Max Grav 2=1524(LC 19), 6=1524(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-2351/903, 3-4=-1501/686, 4-5=-1501/686, 5-6=-2351/903  
BOT CHORD 2-9=-643/1967, 6-9=-642/1967  
WEBS 3-9=-941/435, 4-9=-352/733, 5-9=-941/435

- NOTES--** (10-12)
- 2x6 SPF 2100F 1.8E bearing block 12" long at jt. 2 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be SPF 2100F 1.8E.
  - 2x6 SPF 2100F 1.8E bearing block 12" long at jt. 6 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be SPF 2100F 1.8E.
  - Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph @27in o.c.; TCDL=3.8psf; BCDL=1.9psf; (Alt. 154mph @21in o.c.; TCDL=4.9psf; BCDL=2.4psf); h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-4-8 to 1-7-8, Interior(1) 1-7-8 to 6-6-0, Exterior(2R) 6-6-0 to 12-6-0, Interior(1) 12-6-0 to 17-4-8, Exterior(2E) 17-4-8 to 20-4-8 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pg= 54.5 psf, Pf=38.1 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 18.0 psf or 2.00 times flat roof load of 38.1 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=494, 6=494.
  - This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - This truss complies with CBC 2022 Section 2303.4.

**LOAD CASE(S)** Standard

**Approved For State of California  
Factory Built Housing**

By  
MA Consulting & Engineering MACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: DF1570823

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**Generic Foundation Design Approved**

Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. **MAC-FBH 10153**

By: **Mohsen Anis**

Approval Date: **5/26/2025**

Expiration Date: **1/11/2028**



October 29, 2024

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MIH-7473 rev. 1/2/2023 BEFORE USE.**

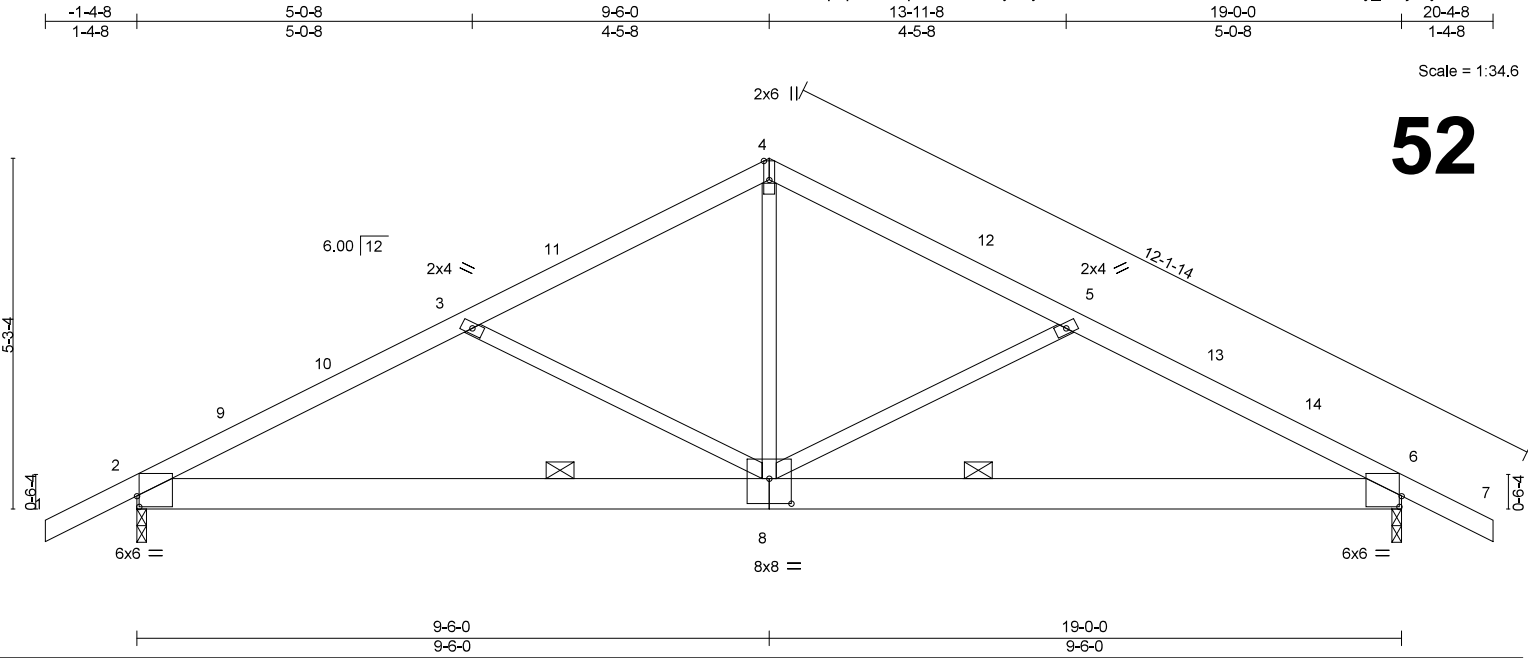
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**MiTek®**  
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job 117380	Truss P2272001	Truss Type QUEENPOST	Qty 1	Ply 1	Boxabl 233	169115004
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UFP Industries Inc., Grand Rapids, MI 49525

ID:Xz3qLqaXulJug6xSPTA9xDyvRys-6d0r0Tw7nOK9XPTVoUX2rRSD4rm3Dwny\_DQjTayQBPw  
8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:29:23 2024 Page 1



Scale = 1:34.6

52

Plate Offsets (X,Y)-- [2:0-0-7,0-1-15], [4:0-3-7,Edge], [6:0-0-7,0-1-15], [8:0-4-0,0-4-8]					
<b>SPACING--</b> 2-0-0 <b>LOADING</b> (psf) TCLL 32.7 (Ground Snow=46.7) TCDL 14.0 BCLL 0.0 * BCDL 5.0	<b>SPACING--</b> 1-4-0 <b>LOADING</b> (psf) TCLL 49.0 (Ground Snow=70.1) TCDL 21.0 BCLL 0.0 * BCDL 7.5	<b>SPACING--</b> 2-0-0 Plate Grip DOL 1.00 Lumber DOL 1.00 Rep Stress Incr YES Code IBC2021/TPI2014	<b>CSI.</b> TC 0.68 BC 0.18 WB 0.60 Matrix-P	<b>DEFL.</b> in (loc) l/defl L/d Vert(LL) -0.05 8 >999 240 Vert(CT) -0.09 2-8 >999 180 Horz(CT) 0.02 6 n/a n/a	<b>PLATES</b> MT20 <b>GRIP</b> 185/144  Weight: 74 lb FT = 20%

<b>LUMBER-</b> TOP CHORD 2x4 HF No.2 or 2x4 SPF No.2 BOT CHORD 2x6 SPF 2100F 1.8E WEBS 2x3 SPF Stud	<b>BRACING-</b> TOP CHORD Structural wood sheathing directly applied or 3-9-3 oc purlins. BOT CHORD 6-4-0 oc bracing.
--------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------

**REACTIONS.** (size) 2=0-1-12, 6=0-1-12  
Max Horz 2=-139(LC 17)  
Max Uplift 2=-433(LC 12), 6=-433(LC 13)  
Max Grav 2=1213(LC 19), 6=1213(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-3=-1872/795, 3-4=-1212/604, 4-5=-1212/604, 5-6=-1872/795  
BOT CHORD 2-8=-565/1569, 6-8=-564/1569  
WEBS 3-8=-734/385, 4-8=-308/595, 5-8=-734/385

- NOTES-** (9-11)
- Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph @24in o.c.; TCDL=4.0psf; BCDL=2.0psf; (Alt. 167mph @16in o.c.; TCDL=6.0psf; BCDL=3.0psf); h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2E) -1-4-8 to 1-7-8, Interior(1) 1-7-8 to 6-6-0, Exterior(2R) 6-6-0 to 12-6-0, Interior(1) 12-6-0 to 17-4-8, Exterior(2E) 17-4-8 to 20-4-8 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pg= 46.7 psf; Pf=32.7 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 18.0 psf or 2.00 times flat roof load of 32.7 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate at joint(s) 2, 6.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=433, 6=433.
  - This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - This truss complies with CBC 2022 Section 2303.4.

**LOAD CASE(S)** Standard

**Approved For State of California  
Factory Built Housing**

By  
MA Consulting & Engineering MACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: DF1570823

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**Generic Foundation Design Approved**

Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. **MAC-FBH 10153**

By: **Mohsen Anis**

Approval Date: **5/26/2025**  
Expiration Date: **1/11/2028**



October 29, 2024

**WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MIH-7473 rev. 1/2/2023 BEFORE USE.**

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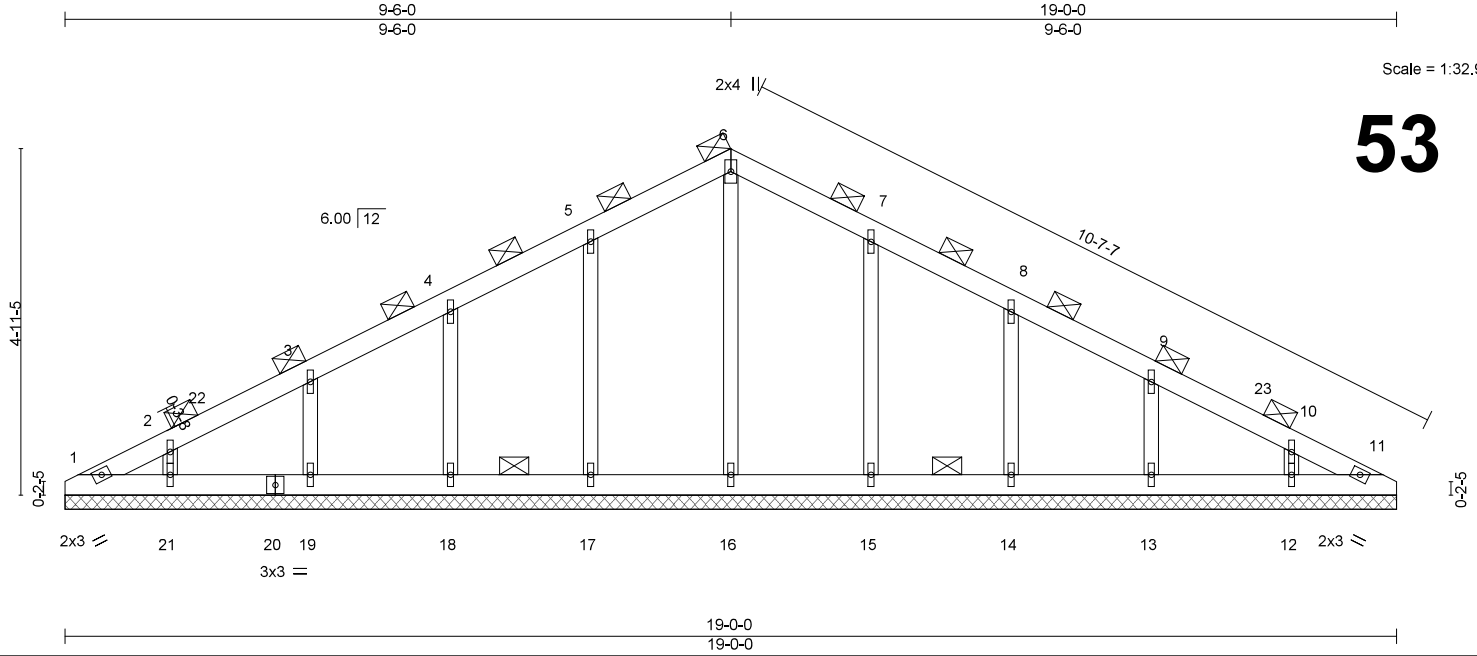
**MiTek®**  
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job 117380	Truss G0398601	Truss Type GABLE	Qty 1	Ply 1	Boxabl 233	169114992
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UFP Industries Inc., Grand Rapids, MI 49525

8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:29:08 2024 Page 1  
ID:Xz3qLqaxUJqu6xSPTA9xDyVRys-2kcAsLjJnRHE6DdQqmWlHKICphnCCSIXOIQSxyQBQ9

Scale = 1:32.9



53

Plate Offsets (X,Y)-- [7:0-0-0,0-0-0], [8:0-0-0,0-0-0], [9:0-0-0,0-0-0], [10:0-0-0,0-0-0]	
<b>SPACING-</b> 3-3-0 <b>LOADING</b> (psf) TCLL 46.5 (Ground Snow=66.4) TCDL 11.0 BCLL 0.0 * BCDL 5.0	<b>SPACING-</b> 3-1-0 <b>LOADING</b> (psf) TCLL 49.0 (Ground Snow=70.0) TCDL 11.6 BCLL 0.0 * BCDL 5.3
<b>SPACING-</b> 3-3-0 Plate Grip DOL 1.00 Lumber DOL 1.00 Rep Stress Incr NO Code IBC2021/TPI2014	<b>CSI.</b> TC 0.27 BC 0.04 WB 0.32 Matrix-P
<b>DEFL.</b> Vert(LL) n/a Vert(CT) n/a Horz(CT) 0.01	<b>in (loc)</b> - <b>l/defl</b> n/a <b>L/d</b> 999 <b>L/d</b> 999 <b>n/a</b>
<b>PLATES</b> MT20 <b>GRIP</b> 185/144  Weight: 62 lb FT = 20%	

<b>LUMBER-</b> TOP CHORD 2x4 HF No.2 or 2x4 SPF No.2 BOT CHORD 2x4 HF No.2 or 2x4 SPF No.2 OTHERS 2x3 SPF Stud	<b>BRACING-</b> TOP CHORD 2-0-0 oc purlins (6-0-0 max.) (Switched from sheeted: Spacing > 2-8-0). BOT CHORD 6-4-0 oc bracing.
-------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------

**REACTIONS.** All bearings 19-0-0.  
(lb) - Max Horz 1=193(LC 13)  
Max Uplift All uplift 100 lb or less at joint(s) 1 except 17=213(LC 12), 18=188(LC 12), 19=196(LC 12), 21=174(LC 12), 15=212(LC 13), 14=189(LC 13), 13=196(LC 13), 12=174(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 1, 11 except 16=302(LC 24), 17=677(LC 18), 18=595(LC 18), 19=620(LC 18), 21=416(LC 18), 15=677(LC 19), 14=594(LC 19), 13=620(LC 19), 12=415(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=259/85, 5-6=199/378, 6-7=199/378  
WEBS 6-16=-269/6, 5-17=-644/278, 4-18=-562/244, 3-19=-587/307, 2-21=-386/324, 7-15=-644/279, 8-14=-562/244, 9-13=-587/308, 10-12=-386/324

- NOTES-** (12-14)
- 1) Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph @39in o.c.; TCDL=5.1psf; BCDL=2.5psf; (Alt. 140mph @37in o.c.; TCDL=5.4psf; BCDL=2.6psf); h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) 0-2-12 to 3-6-0, Exterior(2N) 3-6-0 to 6-6-0, Corner(3R) 6-6-0 to 12-6-0, Exterior(2N) 12-6-0 to 15-6-0, Corner(3E) 15-6-0 to 18-9-3 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 3) TCLL: ASCE 7-16; Pg= 66.4 psf, Pf=46.5 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=1.00; Ct=1.00
  - 4) Unbalanced snow loads have been considered for this design.
  - 5) All plates are 1x4 MT20 unless otherwise indicated.
  - 6) Gable requires continuous bottom chord bearing.
  - 7) Gable studs spaced at 2-0-0 oc.
  - 8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 9) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 1 except (jt=lb) 17=213, 18=188, 19=196, 21=174, 15=212, 14=189, 13=196, 12=174.
  - 11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
  - 12) This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 13) This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - 14) This truss complies with CBC 2022 Section 2303.4.

**LOAD CASE(S)** Standard

**Approved For State of California  
Factory Built Housing**  
By  
MA Consulting & Engineering MACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: DF1570823

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**Generic Foundation Design Approved**  
Occupancy R3 Roof LL 30 psf Wind 115 Exp C Seismic Cat E  
Plan Approval No. **MAC-FBH 10153**  
By: **Mohsen Anis**  
Approval Date: **5/26/2025**  
Expiration Date: **1/11/2028**



October 29, 2024

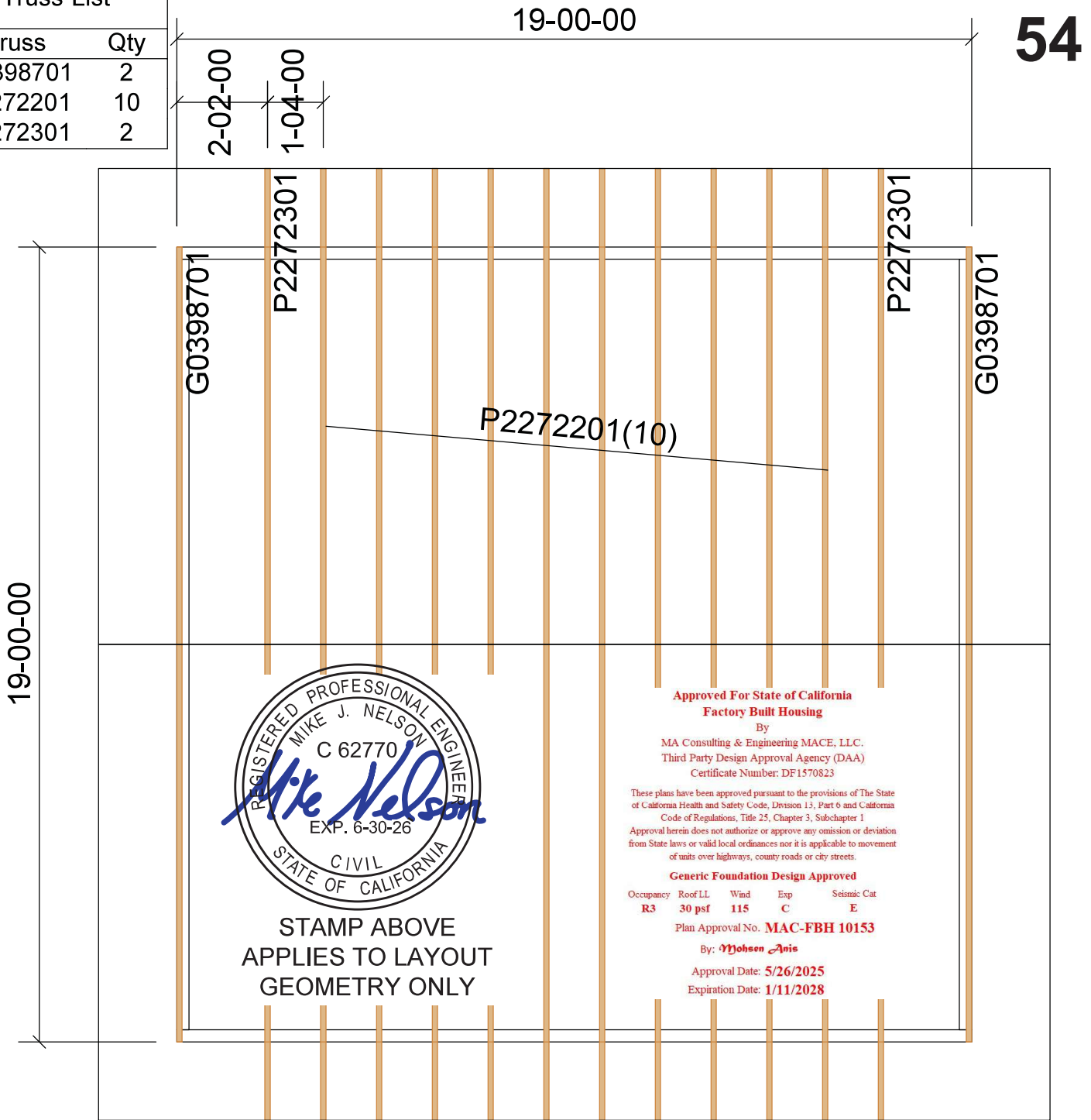
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**MiTek®**  
16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

JOB	TRUSS	TRUSS TYPE	QTY	CUSTOMER
117380	L0311301	Truss Placement Plan	1	Boxabl 233 Gable - 151.5 ground snow

UFP Industries Inc., Grand Rapids, MI 49525, Regan Craig  
 Copyright © 2024 UFP Industries, Inc. All Rights Reserved

Truss List	
Truss	Qty
G0398701	2
P2272201	10
P2272301	2



STAMP ABOVE  
 APPLIES TO LAYOUT  
 GEOMETRY ONLY

**Approved For State of California  
 Factory Built Housing**  
 By  
 MA Consulting & Engineering MACE, LLC.  
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**Generic Foundation Design Approved**  
 Occupancy Roof LL Wind Exp Seismic Cat  
**R3 30 psf 115 C E**

Plan Approval No. **MAC-FBH 10153**

By: *Johnson Anis*

Approval Date: **5/26/2025**

Expiration Date: **1/11/2028**

**Warning - Verify design parameters and READ NOTES**

UFP Industries, Inc. 2801 East Beltline Rd. NE  
 PHONE (616)-364-6161 Grand Rapids, MI 49525

This is a TRUSS PLACEMENT PLAN to accurately locate pre-fabricated trusses in a building. This is not a structural framing plan and should not be construed as such. The Owner/Builder shall contract with a licensed design professional to prepare complete structural framing plans for the building. This layout is used to ensure accurate truss placement in accordance with the dimensional requirements of the building. This document does not consider building structural bracing requirements, shear walls, beams, columns or other structural elements that can be critical to the performance of the structure. Any reference to structural elements other than pre-fabricated trusses is purely incidental and is incorporated for clarity only. Refer to the structural framing plans prepared by the Building Engineer of Record for complete framing information. These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on this placement drawing. The building designer must incorporate the truss manufacturer's note on type and location of permanent web member reinforcement requirements in the truss design with full analysis of the overall structural design. For guidance regarding bracing, consult BCS1 1-03, "Guide to Good Practice for Handling, Installing and Bracing of Metal Plate Connected Wood Trusses" available from the WTCA/TPI, 583 D'Onofrio Drive, Madison, WI 53179. It is the responsibility of the General Contractor/Superintendent to verify that the provided truss layout matches final intended construction plans, loading conditions and use. If they do not, it is the responsibility of the General Contractor/Superintendent to provide prints/plans containing the latest specifications and designs. UFP Industries (UFP) will not be responsible for print/plan changes by others after final approval of shop drawings, nor is UFP responsible for errors or modifications made on-site during construction. DO NOT CUT, NOTCH, DRILL, OR OTHERWISE "REPAIR" MANUFACTURED TRUSSES IN ANY WAY WITHOUT PRIOR WRITTEN AUTHORIZATION BY A LICENSED DESIGN PROFESSIONAL DESIGNATED BY UFP. UFP WILL NOT BE HELD RESPONSIBLE FOR ANY MODIFICATIONS OR "CHARGE BACKS" DONE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM UFP.

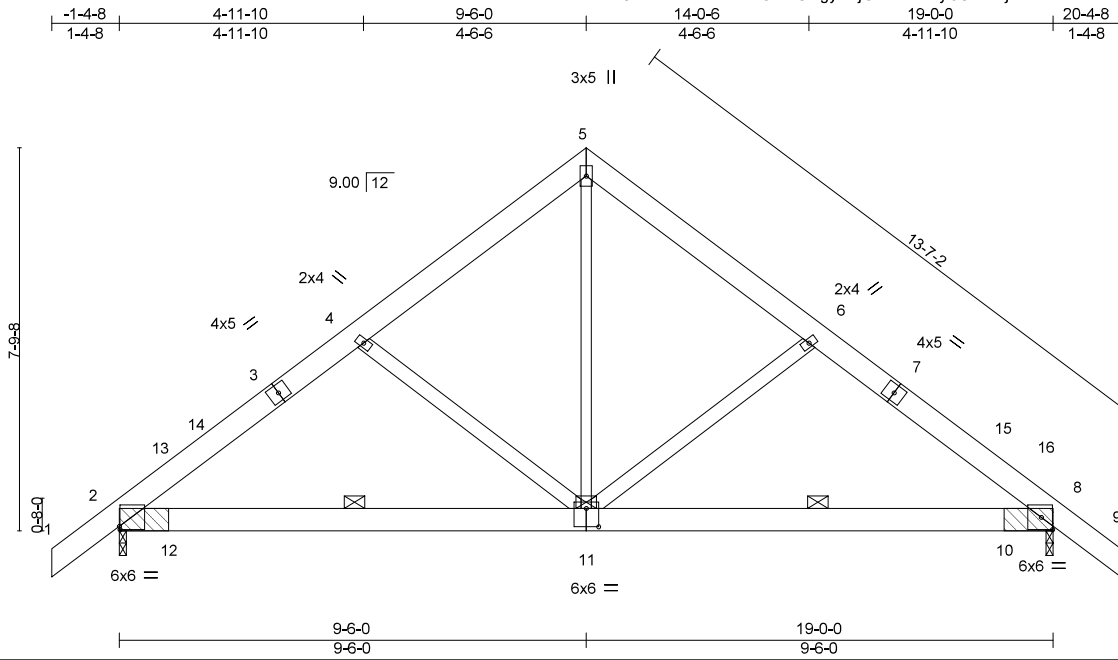


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Job 117380	Truss P2272301	Truss Type QUEENPOST	Qty 1	Ply 1	Boxabl 233	169115007
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UFP Industries Inc., Grand Rapids, MI 49525

8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:29:25 2024 Page 1  
ID:JzM6o4fXsx2lZTEGt34CNgvRjG-208bR9yOJ0asnj1uwvZWxsXckfSchpgFRXvqYSyQBpu



Scale = 1:46.9

55

Plate Offsets (X,Y)-- [2:0-0-3,0-0-13], [8:0-2-12,0-3-0], [11:0-3-0,0-4-8]

LOADING (psf)	SPACING-	CSI.	DEFL.	PLATES	GRIP
TCLL 54.0 (Ground Snow=151.5)	Plate Grip DOL 1.00	TC 0.50	in (loc) l/defl L/d	MT20	185/144
TCDL 8.0	Lumber DOL 1.00	BC 0.18	Vert(LL) -0.05 11 >999 240		
BCLL 0.0 *	Rep Stress Incr YES	WB 0.64	Vert(CT) -0.06 2-11 >999 180		
BCDL 5.0	Code IBC2021/TPI2014	Matrix-P	Horz(CT) 0.02 8 n/a n/a		
				Weight: 107 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x6 HF No.2 or 2x6 SPF No.2  
BOT CHORD 2x6 SPF 2100F 1.8E  
WEBS 2x4 HF No.2 or 2x4 SPF No.2 \*Except\*  
5-11: 2x3 SPF Stud

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 4-5-1 oc purlins.  
BOT CHORD 4-9-0 oc bracing.

**REACTIONS.** (size) 2=(0-1-12 + bearing block) (req. 0-2-5), 8=(0-1-12 + bearing block) (req. 0-2-5)  
Max Horz 2=-271(LC 10)  
Max Uplift 2=-330(LC 12), 8=-330(LC 13)  
Max Grav 2=1822(LC 19), 8=1822(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=0/290, 2-4=-2297/521, 4-5=-1480/455, 5-6=-1480/455, 6-8=-2297/521, 8-9=0/290  
BOT CHORD 2-11=-321/1636, 8-11=-205/1636  
WEBS 4-11=-971/340, 5-11=-357/783, 6-11=-971/340

- NOTES-** (11-13)
- 2x6 SPF 2100F 1.8E bearing block 12" long at jt. 2 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be SPF 2100F 1.8E.
  - 2x6 SPF 2100F 1.8E bearing block 12" long at jt. 8 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be SPF 2100F 1.8E.
  - Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph; TCDL=4.8psf; BCDL=3.0psf; h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-4-8 to 1-7-8, Exterior(2N) 1-7-8 to 6-6-0, Corner(3R) 6-6-0 to 12-6-0, Exterior(2N) 12-6-0 to 17-4-8, Corner(3E) 17-4-8 to 20-4-8 zone; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pg=151.5 psf; Ps=54.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=0.51; Ct=1.00; Unobstructed slippery surface
  - Roof design snow load has been reduced to account for slope.
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 15.0 psf or 2.00 times flat roof load of 106.1 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=330, 8=330.
  - This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - This truss complies with CBC 2022 Section 2303.4.

**LOAD CASE(S)** Standard

Approved For State of California  
Factory Built Housing

By  
MA Consulting & Engineering MACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: DF1570823

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**Generic Foundation Design Approved**  
Occupancy Roof LL Wind Exp Seismic Cat  
R3 30 psf 115 C E

Plan Approval No. **MAC-FBH 10153**

By: **Mohsen Anis**  
Approval Date: **5/26/2025**  
Expiration Date: **1/11/2028**



October 29, 2024

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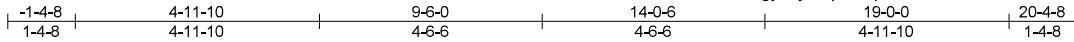
**MiTek®**

16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job 117380	Truss P2272201	Truss Type QUEENPOST	Qty 1	Ply 1	Boxabl 233	169115006
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UFP Industries Inc., Grand Rapids, MI 49525

ID:JzM6o4fXsx2lZTEGt34CNgyvRjG-apaDDpxmYis?9ZSiMC2HO?TWF62yOo6DiAG00yQBpV  
8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:29:24 2024 Page 1



Scale = 1:46.9

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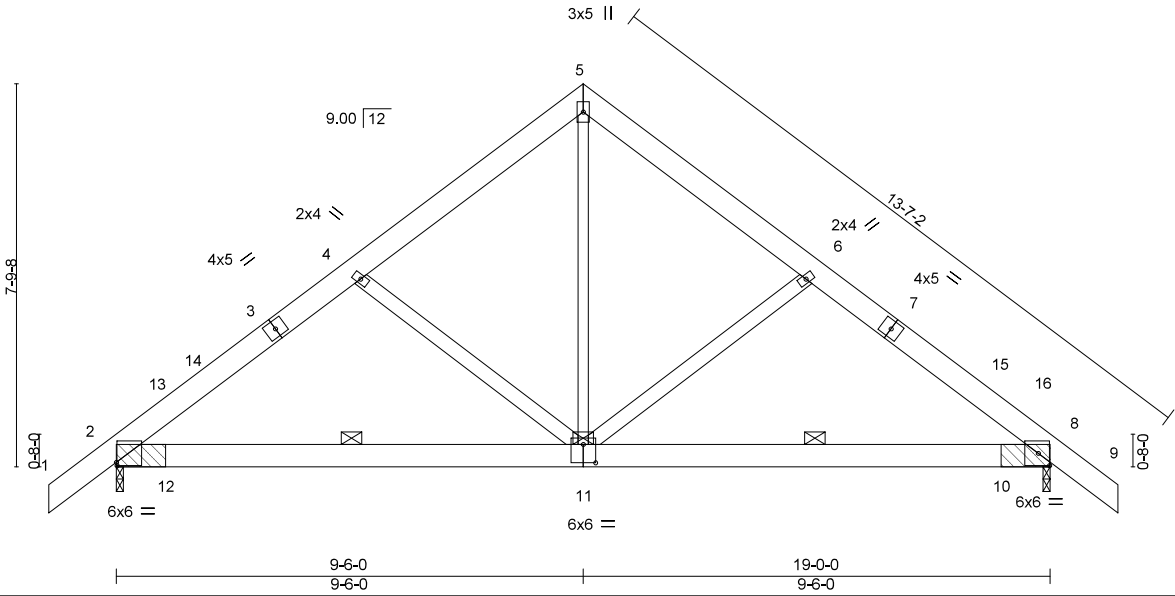


Plate Offsets (X,Y)-- [2:0-0-3,0-0-13], [8:0-2-12,0-3-0], [11:0-3-0,0-4-8]

<b>LOADING (psf)</b>		<b>SPACING-</b>	1-4-0	<b>CSI.</b>		<b>DEFL.</b>	in (loc) l/defl L/d	<b>PLATES</b>	<b>GRIP</b>
TCLL	54.0	Plate Grip DOL	1.00	TC	0.38	Vert(LL)	-0.04 11 >999 240	MT20	185/144
(Ground Snow=151.5)		Lumber DOL	1.00	BC	0.14	Vert(CT)	-0.05 2-11 >999 180		
TCDL	8.0	Rep Stress Incr	YES	WB	0.49	Horz(CT)	0.02 8 n/a n/a		
BCLL	0.0 *	Code IBC2021/TPI2014		Matrix-P				Weight: 107 lb	FT = 20%
BCDL	5.0								

**LUMBER-**  
TOP CHORD 2x6 HF No.2 or 2x6 SPF No.2  
BOT CHORD 2x6 SPF 2100F 1.8E  
WEBS 2x4 HF No.2 or 2x4 SPF No.2 \*Except\*  
5-11: 2x3 SPF Stud

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 5-2-0 oc purlins.  
BOT CHORD 4-9-0 oc bracing.

**REACTIONS.** (size) 2=0-1-12, 8=0-1-12  
Max Horz 2=-206(LC 10)  
Max Uplift 2=-251(LC 12), 8=-251(LC 13)  
Max Grav 2=1388(LC 19), 8=1388(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-1750/397, 4-5=-1128/347, 5-6=-1128/347, 6-8=-1750/397  
BOT CHORD 2-11=-245/1246, 8-11=-156/1246  
WEBS 4-11=-740/259, 5-11=-272/596, 6-11=-740/259

- NOTES-** (11-13)
- 2x6 SPF 2100F 1.8E bearing block 12" long at jt. 2 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be SPF 2100F 1.8E.
  - 2x6 SPF 2100F 1.8E bearing block 12" long at jt. 8 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be SPF 2100F 1.8E.
  - Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph; TCDL=4.8psf; BCDL=3.0psf; h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-4-8 to 1-7-8, Exterior(2N) 1-7-8 to 6-6-0, Corner(3R) 6-6-0 to 12-6-0, Exterior(2N) 12-6-0 to 17-4-8, Corner(3E) 17-4-8 to 20-4-8 zone; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pg=151.5 psf; Ps=54.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=0.51; Ct=1.00; Unobstructed slippery surface
  - Roof design snow load has been reduced to account for slope.
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 15.0 psf or 2.00 times flat roof load of 106.1 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=251, 8=251.
  - This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - This truss complies with CBC 2022 Section 2303.4.

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By  
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Generic Foundation Design Approved

Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. MAC-FBH 10153

By: **Mohsen Anis**

Approval Date: **5/26/2025**

Expiration Date: **1/11/2028**



October 29, 2024

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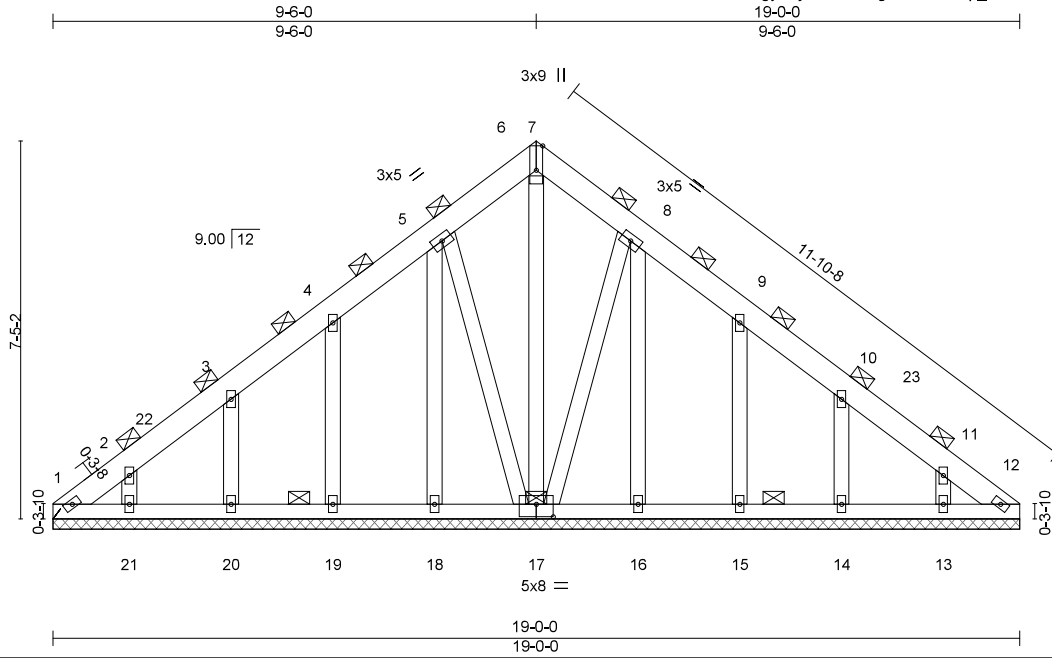
**MiTek®**

16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job 117380	Truss G0398701	Truss Type GABLE	Qty 1	Ply 1	Boxabl 233	169114993
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UFP Industries Inc., Grand Rapids, MI 49525

8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:29:09 2024 Page 1  
ID:JzM6o4fXsx2lZTEGt34CNgyvRjG-WxAY4gLL45Z8sGop\_YHlHutxYC?exdHum21\_?OyQBQ8



Scale = 1:45.3

57

Plate Offsets (X,Y)-- [7:0-5-12,Edge], [17:0-4-0,0-3-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 54.0 (Ground Snow=151.5)	Plate Grip DOL 3-1-0 Lumber DOL 1.00 Rep Stress Incr NO Code IBC2021/TPI2014	TC 0.23 BC 0.07 WB 0.41 Matrix-P	Vert(LL) -0.00 Vert(CT) -0.00 Horz(CT) 0.01	6-7 6-7 12	n/r n/r n/a	120 90 n/a		MT20	185/144
TCDL 8.0								Weight: 113 lb	FT = 20%
BCLL 0.0 *									
BCDL 5.0									

**LUMBER-**  
TOP CHORD 2x6 HF No.2 or 2x6 SPF No.2  
BOT CHORD 2x4 HF No.2 or 2x4 SPF No.2  
WEBS 2x4 HF Stud or 2x4 SPF Stud  
OTHERS 2x4 HF Stud or 2x4 SPF Stud

**BRACING-**  
TOP CHORD 2-0-0 oc purlins (6-0-0 max.)  
(Switched from sheeted: Spacing > 2-8-0).  
BOT CHORD 4-9-0 oc bracing.

**REACTIONS.** All bearings 19-0-0.  
(lb) - Max Horz 1=406(LC 9)  
Max Uplift All uplift 100 lb or less at joint(s) 12, 17, 18, 16 except 1=-141(LC 10), 19=-213(LC 12), 20=250(LC 12), 21=-218(LC 12), 15=-205(LC 13), 14=-252(LC 13), 13=-218(LC 13)  
Max Grav All reactions 250 lb or less at joint(s) 12 except 1=255(LC 19), 17=875(LC 19), 18=495(LC 18), 19=756(LC 18), 20=883(LC 18), 21=615(LC 18), 16=545(LC 19), 15=727(LC 19), 14=886(LC 19), 13=615(LC 19)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 1-2=-402/304, 2-3=-451/249, 3-4=-477/212, 4-5=-427/297, 5-6=-334/397, 6-8=-332/386, 8-9=-422/298, 9-10=-490/136, 10-11=-462/75, 11-12=-282/129  
BOT CHORD 1-21=-155/282, 20-21=-155/282, 19-20=-155/282, 18-19=-155/282, 17-18=-155/282, 16-17=-107/264, 15-16=-105/263, 14-15=-105/263, 13-14=-105/263, 12-13=-105/263  
WEBS 6-17=-427/81, 5-18=-464/72, 4-19=-726/253, 3-20=-852/311, 2-21=-587/307, 8-16=-514/58, 9-15=-697/242, 10-14=-855/313, 11-13=-587/307, 5-17=-342/191, 8-17=-390/185

- NOTES-** (13-15)
- 1) Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph; TCDL=4.8psf; BCDL=3.0psf; h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) 0-2-1 to 3-2-1, Exterior(2N) 3-2-1 to 6-6-0, Corner(3R) 6-6-0 to 12-3-12, Exterior(2N) 12-3-12 to 15-9-15, Corner(3E) 15-9-15 to 18-9-15 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 3) TCLL: ASCE 7-16; Pg=151.5 psf; Ps=54.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=0.51; Ct=1.00; Unobstructed slippery surface
  - 4) Roof design snow load has been reduced to account for slope.
  - 5) Unbalanced snow loads have been considered for this design.
  - 6) All plates are 2x4 MT20 unless otherwise indicated.
  - 7) Gable requires continuous bottom chord bearing.
  - 8) Gable studs spaced at 2-0-0 oc.
  - 9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 10) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - 11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 12, 17, 18, 16 except (j=lb)=141, 19=213, 20=250, 21=218, 15=205, 14=252, 13=218.
  - 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

Approved For State of California  
Factory Built Housing

By  
MA Consulting & Engineering MACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: DF1570823

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Approval herein does not authorize or approve any omission or deviation from State laws or valid local ordinances nor it is applicable to movement of units over highways, county roads or city streets.

Generic Foundation Design Approved

Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. MAC-FBH 10153

By: *Mohsen Anis*

Approval Date: 5/26/2025

Expiration Date: 1/11/2028



October 29, 2024

Continued on page 2

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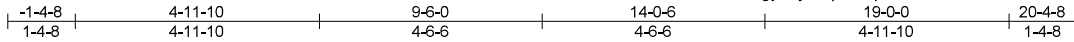
**MiTek®**

16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job 117380	Truss P2272201	Truss Type QUEENPOST	Qty 1	Ply 1	Boxabl 233	169115006
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UFP Industries Inc., Grand Rapids, MI 49525

ID:JzM6o4fXsx2lZTEGt34CNgyvRjG-apaDDpxmYis?9ZSiMC2HO?TWF62yOo6DiAG00yQBpV  
8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:29:24 2024 Page 1



Scale = 1:46.9

56

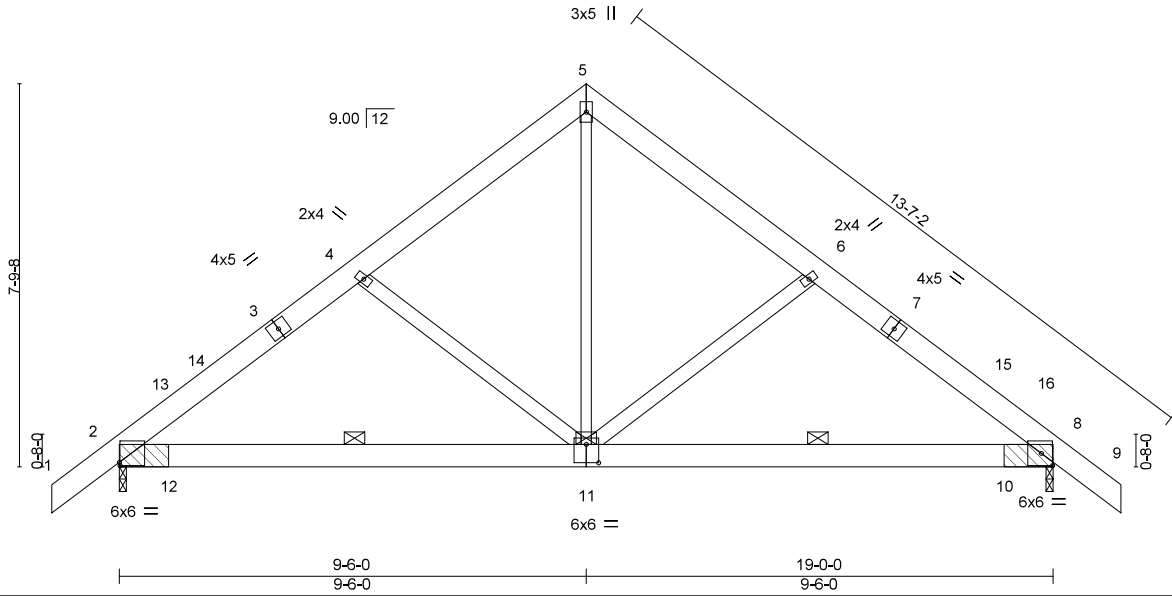


Plate Offsets (X,Y)-- [2:0-0-3,0-0-13], [8:0-2-12,0-3-0], [11:0-3-0,0-4-8]

<b>LOADING</b> (psf)	<b>SPACING-</b>	<b>CSI.</b>	<b>DEFL.</b>	<b>PLATES</b>	<b>GRIP</b>
TCLL 54.0 (Ground Snow=151.5)	Plate Grip DOL 1-4-0 Lumber DOL 1.00 Rep Stress Incr YES Code IBC2021/TPI2014	TC 0.38 BC 0.14 WB 0.49 Matrix-P	in (loc) l/defl L/d Vert(LL) -0.04 11 >999 240 Vert(CT) -0.05 2-11 >999 180 Horz(CT) 0.02 8 n/a n/a	MT20	185/144
TCDL 8.0 BCLL 0.0 * BCDL 5.0				Weight: 107 lb	FT = 20%

**LUMBER-**  
TOP CHORD 2x6 HF No.2 or 2x6 SPF No.2  
BOT CHORD 2x6 SPF 2100F 1.8E  
WEBS 2x4 HF No.2 or 2x4 SPF No.2 \*Except\*  
5-11: 2x3 SPF Stud

**BRACING-**  
TOP CHORD Structural wood sheathing directly applied or 5-2-0 oc purlins.  
BOT CHORD 4-9-0 oc bracing.

**REACTIONS.** (size) 2=0-1-12, 8=0-1-12  
Max Horz 2=-206(LC 10)  
Max Uplift 2=-251(LC 12), 8=-251(LC 13)  
Max Grav 2=1388(LC 19), 8=1388(LC 20)

**FORCES.** (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.  
TOP CHORD 2-4=-1750/397, 4-5=-1128/347, 5-6=-1128/347, 6-8=-1750/397  
BOT CHORD 2-11=-245/1246, 8-11=-156/1246  
WEBS 4-11=-740/259, 5-11=-272/596, 6-11=-740/259

- NOTES-** (11-13)
- 2x6 SPF 2100F 1.8E bearing block 12" long at jt. 2 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be SPF 2100F 1.8E.
  - 2x6 SPF 2100F 1.8E bearing block 12" long at jt. 8 attached to front face with 3 rows of 10d (0.131"x3") nails spaced 3" o.c. 12 Total fasteners. Bearing is assumed to be SPF 2100F 1.8E.
  - Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph; TCDL=4.8psf; BCDL=3.0psf; h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) -1-4-8 to 1-7-8, Exterior(2N) 1-7-8 to 6-6-0, Corner(3R) 6-6-0 to 12-6-0, Exterior(2N) 12-6-0 to 17-4-8, Corner(3E) 17-4-8 to 20-4-8 zone; end vertical left and right exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - TCLL: ASCE 7-16; Pg=151.5 psf; Ps=54.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=0.51; Ct=1.00; Unobstructed slippery surface
  - Roof design snow load has been reduced to account for slope.
  - Unbalanced snow loads have been considered for this design.
  - This truss has been designed for greater of min roof live load of 15.0 psf or 2.00 times flat roof load of 106.1 psf on overhangs non-concurrent with other live loads.
  - This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
  - Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 2=251, 8=251.
  - This truss is designed in accordance with the 2021 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - This truss is designed in accordance with the 2018 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
  - This truss complies with CBC 2022 Section 2303.4.

**LOAD CASE(S)** Standard

Approved For State of California  
Factory Built Housing

By  
MA Consulting & Engineering MACE, LLC.  
Third Party Design Approval Agency (DAA)  
Certificate Number: DF1570823

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**Generic Foundation Design Approved**  
Occupancy R3 Roof LL 30 psf Wind 115 Exp C Seismic Cat E

Plan Approval No. **MAC-FBH 10153**

By: **Mohsen Anis**  
Approval Date: **5/26/2025**  
Expiration Date: **1/11/2028**



October 29, 2024

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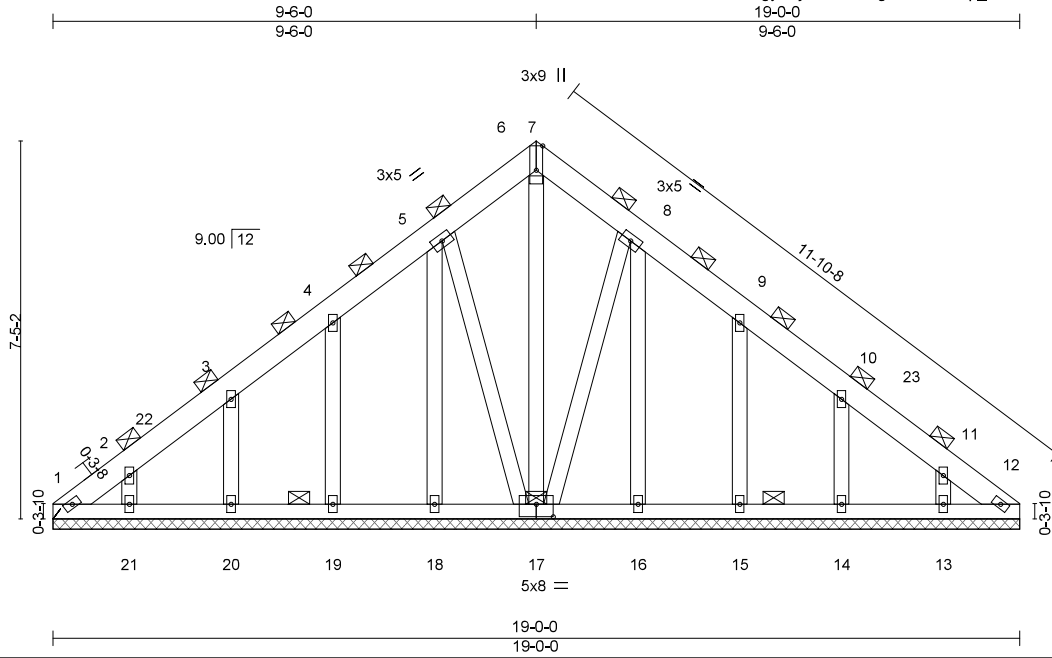
**MiTek®**

16023 Swingley Ridge Rd.  
Chesterfield, MO 63017  
314.434.1200 / MiTek-US.com

Job 117380	Truss G0398701	Truss Type GABLE	Qty 1	Ply 1	Boxabl 233	169114993
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UFP Industries Inc., Grand Rapids, MI 49525

8.730 s Apr 25 2024 MiTek Industries, Inc. Thu Oct 24 13:29:09 2024 Page 1  
ID:JzM6o4fXsx2lZTEGt34CNgyvRjG-WxAY4glL45Z8sGop\_YHlHutxYC?exdHum21\_?OyQBQ8



Scale = 1:45.3

57

Plate Offsets (X,Y)-- [7:0-5-12,Edge], [17:0-4-0,0-3-0]

LOADING (psf)	SPACING-	CSI.	DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL 54.0 (Ground Snow=151.5)	Plate Grip DOL 1.00 Lumber DOL 1.00 Rep Stress Incr NO Code IBC2021/TPI2014	TC 0.23 BC 0.07 WB 0.41 Matrix-P	Vert(LL) -0.00 Vert(CT) -0.00 Horz(CT) 0.01	6-7 6-7 12	n/r n/r n/a	120 90 n/a		MT20	185/144
TCDL 8.0								Weight: 113 lb	FT = 20%
BCLL 0.0 *									
BCDL 5.0									

**LUMBER-**  
 TOP CHORD 2x6 HF No.2 or 2x6 SPF No.2  
 BOT CHORD 2x4 HF No.2 or 2x4 SPF No.2  
 WEBS 2x4 HF Stud or 2x4 SPF Stud  
 OTHERS 2x4 HF Stud or 2x4 SPF Stud

**BRACING-**  
 TOP CHORD 2-0-0 oc purlins (6-0-0 max.)  
 (Switched from sheeted: Spacing > 2-8-0).  
 BOT CHORD 4-9-0 oc bracing.

**REACTIONS.** All bearings 19-0-0.  
 (lb) - Max Horz 1=406(LC 9)  
 Max Uplift All uplift 100 lb or less at joint(s) 12, 17, 18, 16 except 1=-141(LC 10), 19=-213(LC 12), 20=250(LC 12), 21=-218(LC 12), 15=-205(LC 13), 14=-252(LC 13), 13=-218(LC 13)  
 Max Grav All reactions 250 lb or less at joint(s) 12 except 1=255(LC 19), 17=875(LC 19), 18=495(LC 18), 19=756(LC 18), 20=883(LC 18), 21=615(LC 18), 16=545(LC 19), 15=727(LC 19), 14=886(LC 19), 13=615(LC 19)

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- NOTES-** (13-15)
- 1) Wind: ASCE 7-16; Vult=136mph (3-second gust) Vasd=108mph; TCDL=4.8psf; BCDL=3.0psf; h=30ft; Cat. II; Exp C; Enclosed; MWFRS (envelope) gable end zone and C-C Corner(3E) 0-2-1 to 3-2-1, Exterior(2N) 3-2-1 to 6-6-0, Corner(3R) 6-6-0 to 12-3-12, Exterior(2N) 12-3-12 to 15-9-15, Corner(3E) 15-9-15 to 18-9-15 zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
  - 2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
  - 3) TCLL: ASCE 7-16; Pg=151.5 psf; Ps=54.0 psf (Lum DOL=1.00 Plate DOL=1.00); Is=1.0; Rough Cat C; Partially Exp.; Ce=1.0; Cs=0.51; Ct=1.00; Unobstructed slippery surface
  - 4) Roof design snow load has been reduced to account for slope.
  - 5) Unbalanced snow loads have been considered for this design.
  - 6) All plates are 2x4 MT20 unless otherwise indicated.
  - 7) Gable requires continuous bottom chord bearing.
  - 8) Gable studs spaced at 2-0-0 oc.
  - 9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
  - 10) \* This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
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  - 12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

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 Factory Built Housing

By  
 MA Consulting & Engineering MACE, LLC.  
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Generic Foundation Design Approved

Occupancy	Roof LL	Wind	Exp	Seismic Cat
R3	30 psf	115	C	E

Plan Approval No. MAC-FBH 10153

By: *Mohsen Anis*

Approval Date: 5/26/2025

Expiration Date: 1/11/2028



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