



ISABELLA COUNTY
APPLICATION FOR BUILDING PERMIT
Isabella County Community Development Department
Inspection Division
200 N. Main St., Mt. Pleasant, MI 48858
(989) 317-4061

BUILDING PERMIT APPLICATIONS WILL **NOT** BE ACCEPTED UNLESS THE FOLLOWING ARE PROVIDED AT THE TIME OF APPLICATION:

1. CORRECT PROPERTY TAX ID#, CORRECT ADDRESS OF PROPERTY, ASSIGNED BY THIS DEPARTMENT.
2. ISSUED ZONING PERMIT (if applicable).
3. SOIL EROSION EVALUATION OR PERMIT (if applicable). Soil erosion is needed if:
 - a. You are conducting and earth change within 500 feet of any body of water (i.e. lake, creek, stream, river, pond, county drain).
 - b. You are disturbing more than one acre of ground.
4. SEPTIC APPROVAL (if applicable). Contact Central Michigan District Health Dept. (989) 773-5921. Septic is needed if:
 - a. New dwelling.
 - b. When the dwelling is being replaced by a different dwelling (mobile home, modular home, etc.)
 - c. Any addition or remodeling that encroaches the required setbacks to the home.
 - d. Any remodeling that alters bedrooms.
5. APPLICATION FOR NEW HOME OR ADDITIONS TO HOME MUST INCLUDE:
 - a. One copy of the house plans including the floor plan, typical wall section (Appendix A), location of smoke detectors, and location of egress windows.
 - b. Energy code compliance spec sheet.
 - c. Plan review fee.
6. APPLICATION FOR MODULAR OR DOUBLE WIDE MOBILE HOME MUST INCLUDE:
 - a. Copy of the foundation plan (including size of piers if applicable).
 - b. Energy code compliance spec sheet. (If home will be set on basement or crawlspace.)
 - c. Plan review fee.
7. APPLICATION FOR POLE BUILDING OR GARAGE MUST INCLUDE:
 - a. Garage - residential garages & accessory structures wall section (Appendix B).
 - b. Pole Building - residential pole barn wall section (Appendix C).
 - c. Plan review fee.
8. APPLICATION FOR DECKS MUST INCLUDE:
 - a. Residential Deck Specifications (Appendix D)
 - b. Plan review fee.
9. APPLICATION FOR WINDOW AND/OR DOOR REPLACEMENT MUST INCLUDE:
 - a. Energy code compliance spec sheet.
10. SIGNATURE ON APPLICATION. (If a contractor is doing the work, contractor's signature is required. If owner is doing the work owner's signature is required.)
11. PERMIT FEE. (Fee varies and will be figured at the time of application, if you are mailing your application, please **call for fee, permits cannot be processed without payment.**)
12. DISPLAY BOARD - A 2x2 display board mounted 4 feet high must be placed at the entrance of the property for displaying your permit. Building permits are printed on weather proof paper, so please do not laminate or put in plastic bag. Building permit must be properly displayed before calling for an inspection.

NOTE: Permits for siding and reroof please fill out the form on the following page and submit with payment. No Appendix is required.



BUILDING PERMIT APPLICATION

Isabella County Community Development/Inspections
200 N Main St
Mt. Pleasant MI 48858
(989) 317-4061

OFFICE USE ONLY

Permit No.: _____

Date: _____

Check No.: _____

Receipt No.: _____

PROPERTY OWNER / JOB LOCATION

Property Owner Name	Phone Number	Property Tax ID:	
Job Street Address	City	Township	Section
Owner Mailing Address	City	State	Zip Code
Owner Email Address			

CONTRACTOR INFORMATION (May be left blank if the Property Owner is completing the work.)

Contractor Name	Contractor License Number	Expiration Date	
Contractor Address	City	State	Zip Code
Phone Number	Federal Employer ID Number (or reason for exemption)		
Workers Compensation Insurance Carrier (or reason for exemption)	MESC Employer Number (or reason for exemption)		
Contractor Email Address			

PURPOSE OF PROJECT

☐ New Building/Structure	☐ Alteration	☐ Demolition	☐ Foundation Only	☐ Manufactured Home
☐ Addition	☐ Repair	☐ Special Inspection	☐ Relocation	☐ Mobile Home
Description of Work (including dimensions):			Total Construction Value (REQUIRED):	

PLAN REVIEW REQUIRED

Construction documents are required with each application for a permit. Replacement of windows, doors, siding, and roofs do not require construction documents.

Construction documents must be sealed and signed by an architect or professional engineer in accordance with 1980, PA 299 as amended. The seal and signature is not required for one- and two-family dwellings less than 3,500 square feet of calculated floor area or buildings and structures accessory to one or two- family dwellings (i.e. pole barn, detached garage, deck, etc.).

Additional documentation may be required by the Building Official.

Are construction documents required?	☐	YES	☐	NO (If you answered NO, construction documents are not required.)
If you have answered YES above:				
Is the construction a one- or two-family dwelling or is the construction accessory to a one or two- family dwelling (i.e. pole barn, detached garage, deck)?	☐	YES	☐	NO (If you answered NO, a Commercial Plan Review is required. A separate application for plan examination and fee are required. See the Community Development office for more information.)
Are construction documents required to be sealed and signed by an architect or professional engineer?	☐	YES	☐	NO
If you have answered YES to both questions above, construction documents sealed and signed by an architect or professional engineer are required.				

**TOTAL PERMIT FEES MAY BE DOUBLED IF WORK IS
STARTED BEFORE THE PERMIT IS ISSUED**

If you have answered **YES** and **NO** above, construction documents sealed and signed by an architect or professional engineer are **not required** unless the Building Official determines additional information is required.

APPLICANT SIGNATURE

Section 23a of the State Construction Code Act of 1972, 1972 PA 230, MCL 125.1523a, prohibits a person from conspiring to circumvent the licensing requirements of this state relating to persons who are to perform work on a residential building or a residential structure. Violators of Section 23a are subjected to civil fines. The applicant's signature acknowledges compliance with Section 13 of the State Construction Code Act regarding Certificates of Occupancy. When applicable the Certificate of Occupancy will be automatically sent to the applicant upon completion of the work covered by the permit.

Signature of Contractor	Date:	
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Signature of Property Owner (if property owner is the applicant)	Date:	
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Property Owner Driver's License Number: (required if property owner is the applicant)	
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Homeowner Affidavit: **I hereby certify that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his/her authorized agent, and we agree to conform to all applicable laws of the State of Michigan. All information submitted on this application is accurate to the best of my knowledge.**

Work shall not be started until the building permit has been issued. All installations shall be in conformance with the State Construction Code. No work shall be concealed until the work has passed an inspection. You are required to call the inspection line at (989) 317-4220 and provide the required details a minimum of 24 hours in advance of an inspection.

EXPIRATION OF PERMIT: A permit remains valid as long as work is progressing, and inspections are requested and conducted. A valid permit shall expire if the authorized work is not commenced within 180 days after issuance of the permit or if the authorized work is suspended or abandoned for a period of 180 days after the time of commencing the work. **Expired permits may be extended upon submission of a written request and payment of a \$50.00 fee within 30 days of expiration.** Otherwise, the permit shall be closed. A closed permit requires a new permit application.

FOR OFFICE USE ONLY

CONSTRUCTION VALUE CALCULATION			FEES			
Living Area	Dimensions		Re-Open Expired Permit	☐ \$75.00	Administration Fee (required for all)	☐ \$75.00
Finished Basement			Single Wide Mobile	☐ \$73.00	Residential Plan Review	☐ \$50.00
Unfinished Basement			Piers (Single/Double Wide Only)	☐ \$33.00	*Certificate of Occupancy (required for all)	☐ \$25.00
Garage/Pole Building			Double Wide Mobile/Manufactured	☐ \$88.00	Additional Inspection	☐ \$70.00
Deck			Crawl Space (Mobile/Manufactured Only)	☐ \$44.00	Work not Involving ft ² (siding, window/door, demolition, re-roof)	☐ \$70.00 ea
Other			Construction Value Fee			
Total Construction Value			TOTAL PERMIT FEE			

*Certificate of Occupancy is not required for decks, siding, window and door replacements, demolition, and re-roof permits.

REQUIRED INSPECTIONS		CONSTRUCTION INFORMATION				
Footings	☐	Use Group				
Foundation/Backfill	☐	Type of Construction				
Rough	☐	Zoning District				
Final	☐	Occupant Load				
Other	☐					
<table border="1"> <tr> <td>Received by:</td> <td>Plan Reviewed by:</td> <td>Approved for issuance by:</td> </tr> </table>				Received by:	Plan Reviewed by:	Approved for issuance by:
Received by:	Plan Reviewed by:	Approved for issuance by:				

SUBMISSION REQUIREMENTS			
	Required	Received	Not Required
Energy Code			
Flood Plain			
Plans			
Soil Erosion			
Well & Septic			
Zoning			

MICHIGAN UNIFORM ENERGY CODE COMPLIANCE FORM

TOTAL PERMIT FEES MAY BE DOUBLED IF WORK IS STARTED BEFORE THE PERMIT IS ISSUED

(MUST BE COMPLETED FOR ALL NEW HOMES, ADDITIONS AND RESIDENTIAL ALTERATIONS)

There are two ways to comply with the **ENERGY CODE**. Indicate what method has been used to provide documentation of code compliance.

Prescriptive method (See table 402.1.1).

System Analysis method (See table 2).

TABLE N1102.1.1 (R402.1.1)
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^a
***Isabella County is in Climate Zone 6A**

CLIMATE ZONE	FENESTRATION U-FACTOR ^b	SKYLIGHT ^b U-FACTOR	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE ^g	FLOOR R-VALUE	BASEMENT ^c WALL R-VALUE	SLAB ^d R-VALUE & DEPTH	CRAWL SPACE ^e WALL R-VALUE
5A	0.32	0.55	38	20 OR 13+5 ^f	13/17	30 ^e	10/13	10, 2 ft	15/19
*6A	0.32	0.55	49	20 OR 13+5 ^f	15/20	30 ^e	15/19	10, 4 ft	15/19
7	0.32	0.55	49	20 OR 13+5 ^f	19/21	38 ^e	15/19	10, 4 ft	15/19

- R-values are minimums. U-factors are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the installed R-value of the insulation shall not be less than the R-values specified in the table.
 - The fenestration U-factor column excludes skylights.
 - "15/19" means R-15 continuous insulation on the interior or exterior of the home or R-19 cavity insulation at the interior of the basement wall. "15/19" may be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the home. "10/13" means R-10 continuous insulation on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement wall.
 - R-5 shall be added to the required slab edge R-values for heated slabs.
 - Or insulation sufficient to fill the framing cavity, R-19 minimum.
 - First value is cavity insulation, second is continuous insulation or insulated siding, so "13+5" means R-13 cavity insulation plus R-5 continuous insulation or insulated siding. If structural sheathing covers 40% or less of the exterior, continuous insulation R-value may be reduced by no more than R-3 in the locations where structural sheathing is used to maintain a consistent total sheathing thickness.
 - The second R-value applies when more than half the insulation is on the interior of the mass wall.
- R 408.30547d

TABLE 2 (System Analysis)

Compliance with the Michigan Energy Code can be accomplished with the use of the following programs:

- Michigan Uniform Energy Code – 2009 (Detached 1 and 2 family dwellings).
- Meeting the design, construction, and certification requirements under the United States EPA **ENERGY STAR PROGRAM**.
- Meeting the design and construction guidelines of the **HOME ENERGY RATING SYSTEM (HERS)** with a minimum test score of 85.
- Achieving an approval using the insulation requirements in **RES check** using software version 4.4.1.

401.3 Certificate. A permanent certificate shall be posted on or in the electrical distribution panel, and shall meet all the following:

- Be affixed or attached so it does not cover or obstruct the visibility of the circuit directory label, service disconnect label, or other required labels.
- Be completed by the builder or registered design professional.
- List the predominant R-values of insulation installed in or on ceiling/roof, walls, foundation (slab, basement wall, crawlspace wall and/or floor) and ducts outside conditioned spaces and U-factors for fenestration. If there is more than 1 value for each component, then the certificate shall list the value covering the largest area.
- List the types and efficiencies of heating, cooling and service water heating equipment.
- If a gas fired unvented room heater, electric furnace, or baseboard electric heater is installed in the residence, then the certificate shall list "gas-fired unvented room heater," as appropriate. An efficiency shall not be listed for gas-fired unvented room heaters, electric furnaces, or baseboard heaters.

R408.31061

Date:

Signature:

**TOTAL PERMIT FEES MAY BE DOUBLED IF WORK IS
 STARTED BEFORE THE PERMIT IS ISSUED**

Residential Frame Built (Roof, Walls, Floor, and Foundation)

Roof

Pitch: _____
 Shingles: _____
 Felt: _____
 Ice Barrier: _____
 Roof Sheathing: _____
 Truss: YES: ☐ NO: ☐

If No Fill in the Following

Rafter Size: _____
 Rafter Spacing: _____
 Rafter Clear Span: _____
 Rafter Species: _____
 Ridge: _____
 Ceiling Joist Size: _____
 Ceiling Joist Spacing: _____
 Ceiling Joist Species: _____
 Insulation: _____
 Roof Ventilation: _____

Walls

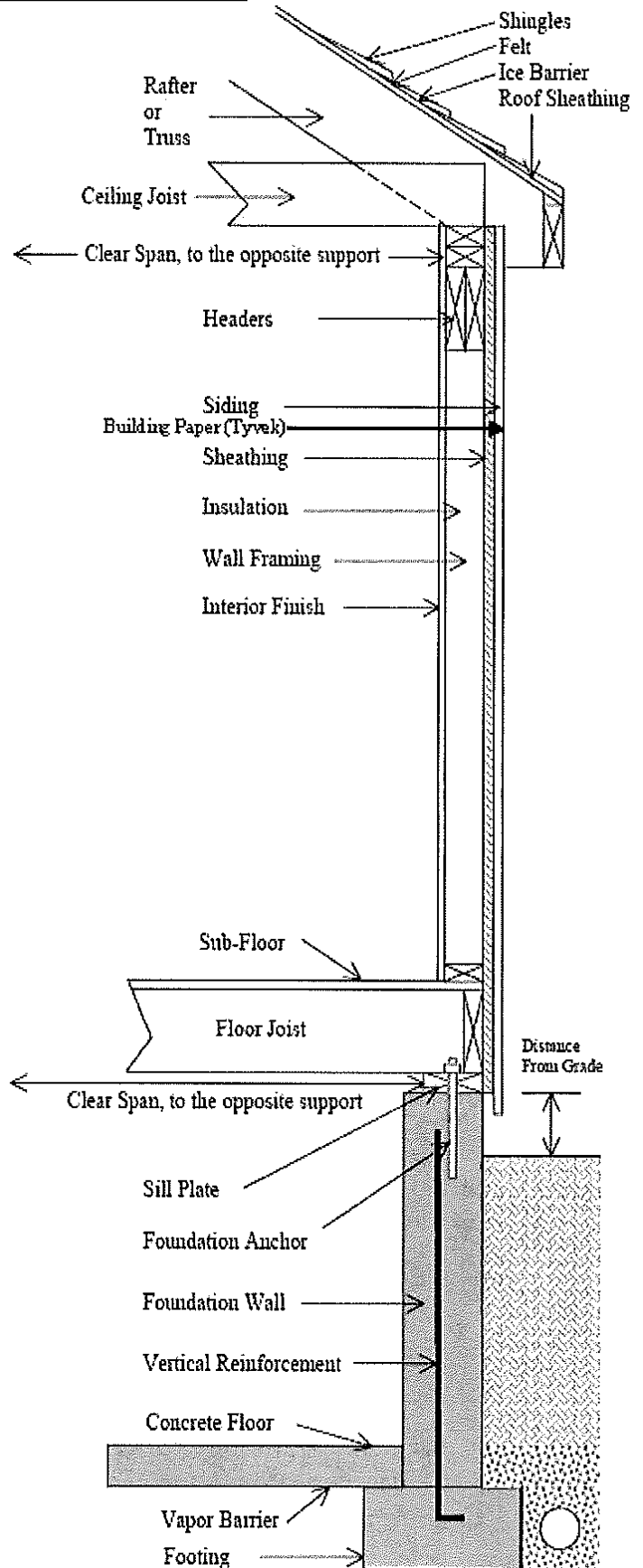
Siding: _____
 Sheathing: _____
 Building Paper (Tyvek): _____
 Insulation Type: _____
 Walls Framing: _____
 Headers: _____
 Interior Finish: _____
 Ceiling Height: _____

Floor

Sub-Floor: _____
 Floor Joist Size: _____
 Floor Joist Spacing: _____
 Floor Joist Clear Span: _____
 Floor Joist Species: _____
 Beam Type & Size: _____
 Distance from Grade: _____

Foundation

Anchor Type: _____
 Anchor Spacing: _____
 Sill Plate: _____
 Poured Wall Size: _____
 Block Wall Size: _____
 Vertical Reinforcement: # - O.C.
 Concrete Floor Thickness: _____
 Vapor Barrier: _____
 Column Pad Size: X X
 Column Spacing: _____
 Footing Width: _____
 Footing Height: _____
 Footing Depth Below Grade: _____



Residential Garages & Accessory Structures

Roof Pitch: _____
 Roof Covering: _____
 Underlayment: _____
 Roof Deck: _____

Truss: Yes: ☐ No: ☐

If NO, Fill in the Following

Size of Ridge: _____
 Size of Rafters: _____
 Rafter Species: _____
 Rafter Spacing: _____
 Ceiling Joist: _____

Wall Materials

Size of Studs: _____
 Top Plates: _____
 Bottom Plates: _____
 Stud Spacing: _____

Garage Door Header: _____

Garage Door Header Span: _____

Service Door: _____

Service Door Header Span: _____

Window Header: _____

Window Header Span: _____

Insulation Type: _____

Interior Finish: _____

Sheathing: _____

Siding: _____

Building Paper (Tyvek): _____

Foundation

Anchor Type: Bolt Strap

Anchor Spacing: _____

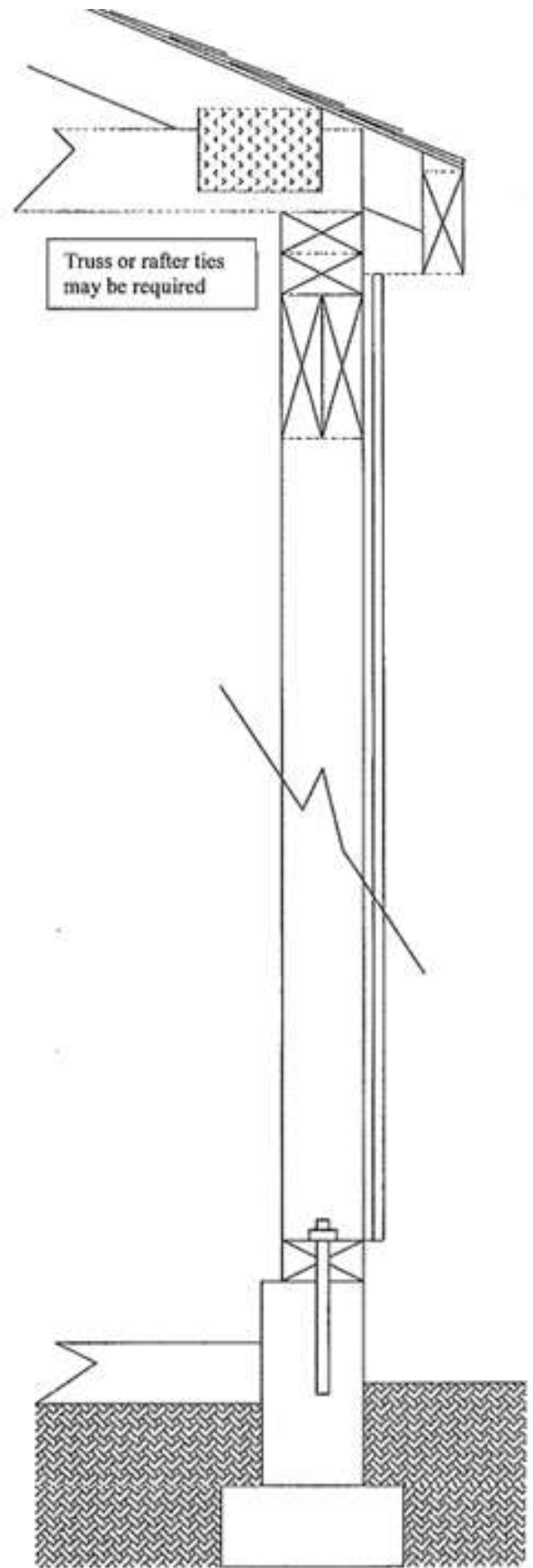
Foundation Size: _____

Footing Width: _____

Footing Depth: _____

Concrete slab-on-ground floors shall be a minimum of 3 ½ inches thick.

Attached garages and other attached accessory structures shall have exterior footings and foundation systems that extend 42 inches below actual grade. Detached garages and other accessory structures that exceed 400 ft² shall have exterior footings and foundation systems that extend 42 inches below actual grade.



Residential Pole Barn

Roof Covering: _____

Roof Deck: _____

Trusses: YES: ☐ NO: ☐**If NO, Fill in the Following**

Rafter Block Size: _____

Rafter Size: _____

Rafter Spacing: _____

Ridge Size: _____

Ceiling Joist Size: _____

Pole Size: _____

Pole Spacing: _____

Ceiling Height: _____

Roof Peak Height: _____

Insulation Materials: _____

Finish Materials: _____

Carrier Size: _____

Wall Purlins: _____

Type of Siding: _____

Building Paper (Tyvek): _____

Skirt Board Size: _____

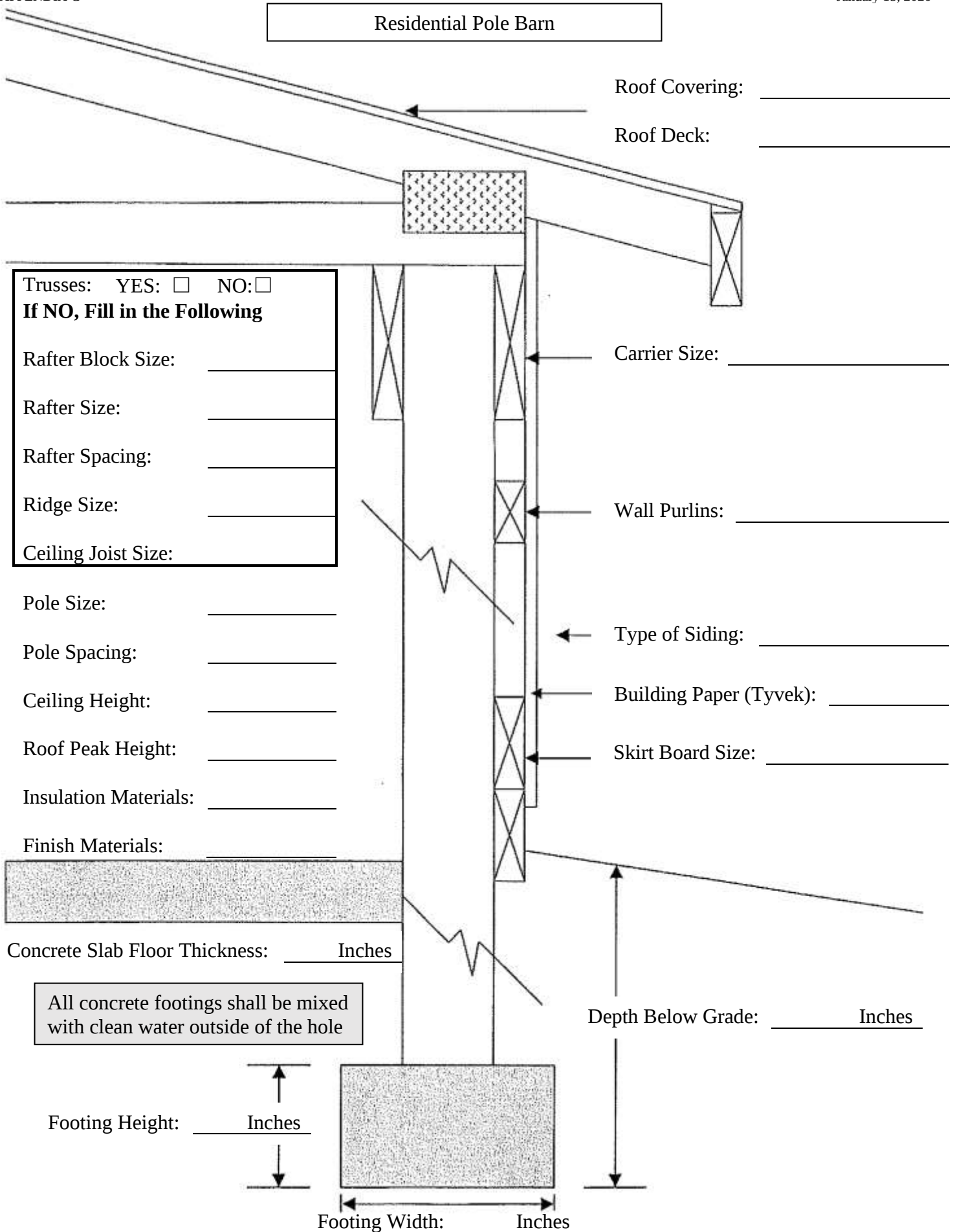
Concrete Slab Floor Thickness: _____ Inches

All concrete footings shall be mixed
with clean water outside of the hole

Depth Below Grade: _____ Inches

Footing Height: _____ Inches

Footing Width: _____ Inches



Residential Deck Specifications

Deck Guards

Guards are required if the floor is 30 inches or more off the ground. Required guards shall not be constructed with horizontal rails or other ornamental pattern that results in a ladder effect. Openings shall be sized so a 4-inch sphere will not pass through.

Floor Joist Clear Span _____

Floor Joist Size _____

Floor Joist Species of Lumber – Ponderosa Pine _____

Southern Yellow Pine _____

Other _____

Floor Joist Spacing _____

Deck Floor Material _____

Carrier/Beam Species of Lumber - Ponderosa Pine _____

Southern Yellow Pine _____

Other _____

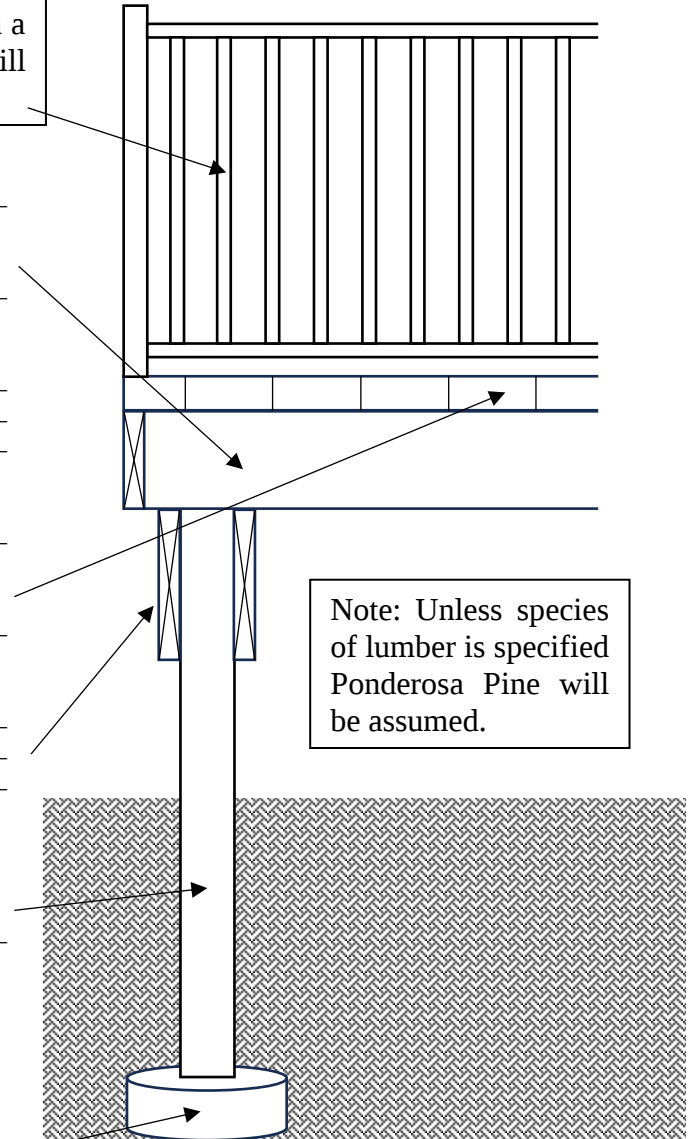
Is the Deck Attached to the House – YES ☐ NO ☐

Post Size _____

Post Spacing _____ Feet _____ Inches

Footing Depth Below Grade _____ Inches

Footings - Width _____ Height _____



Deck Stairways

Stairways shall not be less than 36 inches in clear width. The maximum riser height shall be 8 ¼ inches and the minimum tread depth shall be 9 inches.

Deck Stairway Handrails

All required handrails shall be continuous the full length of stairways with 3 or more risers on at least 1 side of stairways. Handrails shall be placed not less than 34 inches or more than 38 inches above the nosing of the treads. The handgrip portion of handrails shall have a circular cross section of 1 ¼ inches minimum to 2 5/8 inches maximum. Other handrail shapes that provide an equivalent grasping surface are permissible. Edges shall have a minimum radius of 1/8 inch. Open sides of stairs with a total rise of more than 30 inches above the floor or grade below shall have guards not less than 34 inches in height measured vertically from the nosing of the treads.

FOOTING SIZES FOR POLE BUILDINGS

VALID FOR 3000# PER SQUARE FOOT SOIL CAPACITY

WIDTH OF BUILDING	POLE SPACING FOR ONE STORY BUILDINGS						
	4 FEET	6 FEET	8 FEET	10 FEET	12 FEET	14 FEET	16 FEET
16 FEET	6"X12"	6"X12"	6"X14"	6"X14"	8"X16"	8"X18"	8"X18"
20 FEET	6"X12"	6"X12"	6"X14"	8"X16"	8"X18"	10"X20"	10"X20"
24 FEET	6"X12"	8"X16"	8"X16"	8"X18"	10"X20"	10"X22"	10"X22"
28 FEET	6"X12"	8"X16"	8"X18"	10"X20"	10"X22"	10"X22"	12"X26"
32 FEET	6"X12"	8"X16"	8"X18"	10"X20"	10"X22"	12"X24"	12"X28"
36 FEET	6"X12"	8"X18"	10"X20"	10"X22"	12"X24"	12"X26"	12"X28"
40 FEET	6"X14"	8"X18"	10"X20"	12"X24"	12"X26"	12"X28"	14"X30"
44 FEET	8"X16"	8"X18"	10"X22"	12"X24"	12"X26"	12"X28"	14"X32"
48 FEET	8"X16"	10"X20"	10"X22"	12"X26"	12"X28"	14"X30"	14"X32"
52 FEET	8"X16"	10"X20"	10"X24"	12"X26"	12"X28"	14"X30"	16"X34"
56 FEET	8"X18"	10"X22"	10"X24"	12"X28"	14"X30"	14"X32"	16"X36"
60 FEET	8"X18"	10"X22"	10"X26"	12"X28"	14"X30"	16"X34"	16"X36"
64 FEET	8"X18"	10"X22"	10"X26"	12"X28"	14"X32"	16"X34"	16"X36"

FOOTING CONCRETE

FOOTING SIZE	APPROXIMATE NUMBER OF REDI-MIX BAGS OF CONCRETE*		FOOTING SIZE	APPROXIMATE NUMBER OF REDI-MIX BAGS OF CONCRETE*	
	80# BAGS	50# BAGS		80# BAGS	50# BAGS
6”X12”	¾ BAG	1 BAG	12”X26”	5 ¾ BAGS	9 BAGS
6”X14”	1 BAG	1 ¼ BAGS	12”X28”	6 ½ BAGS	10 ½ BAGS
8”X16”	1 ½ BAGS	2 ¼ BAGS	14”X30”	8 ¾ BAGS	14 BAGS
8”X18”	2 BAGS	3 BAGS	14”X32”	10 BAGS	15 ¾ BAGS
10”X20”	2 ¾ BAGS	4 ½ BAGS	16”X34”	12 ¾ BAGS	20 ½ BAGS
10”X22”	3 ½ BAGS	5 ½ BAGS	16”X36”	14 ¼ BAGS	23 BAGS
10”X24”	4 ¾ BAGS	7 ¾ BAGS	NOT USED		
*Above numbers are rounded to the nearest ¼ bag. 1 ½ - 80# bags or 2 ½ - 50# bags equal approximately 1 cubic foot of mixed concrete based on information provided by OUIKRETE Concrete Supply Company.					

CARRIER SIZES FOR POLE BUILDINGS

VALID FOR SPRUCE-PINE-FIR #1 OR BETTER, DRESSED LUMBER

WIDTH OF BUILDING	POLE SPACING FOR ONE STORY BUILDINGS						
	4 FEET	6 FEET	8 FEET	10 FEET	12 FEET	14 FEET	16 FEET
16 FEET	2-2"X4"	2-2"X8"	2-2"X8"	2-2"X10"	A* 2-2"X12"	C* 3-2"X12"	C* 3-2"X12"
20 FEET	2-2"X6"	2-2"X8"	2-2"X8"	2-2"X10"	A* 2-2"X12"	C* 3-2"X12"	4-2"X12"
24 FEET	2-2"X6"	2-2"X8"	2-2"X10"	2-2"X10"	A* 2-2"X12"	C* 3-2"X12"	4-2"X12"
28 FEET	2-2"X8"	2-2"X10"	A* 2-2"X12"	C* 3-2"X12"	4-2"X12"	MUST BE ENGINEERED	
32 FEET	2-2"X8"	A* 2-2"X12"	A* 2-2"X12"	C* 3-2"X12"	4-2"X12"		
36 FEET	2-2"X8"	A* 2-2"X12"	C* 3-2"X12"	4-2"X12"	4-2"X12"		
40 FEET	2-2"X10"	B* 3-2"X10"	C* 3-2"X12"	4-2"X12"			
44 FEET	2-2"X10"	B* 3-2"X10"	4-2"X10"	4-2"X12"			
48 FEET	A* 2-2"X12"	C* 3-2"X12"	4-2"X12"				
52 FEET	A* 2-2"X12"	C* 3-2"X12"	4-2"X12"				
56 FEET	A* 2-2"X12"	C* 3-2"X12"	4-2"X12"				
60 FEET	B* 3-2"X10"	4-2"X10"					
64 FEET	B* 3-2"X10"	4-2"X10"					

A*	3-2"X10" MAY BE USED INSTEAD OF 2-2"X12"	SPECIAL NOTE BUILDINGS WITH POSTS SPACED 8 FT ON CENTER AND A WALL HEIGHT BETWEEN 11' AND 14' MUST USE 6"X6" POSTS.
B*	4-2"X8" MAY BE USED INSTEAD OF 3-2"X10"	
C*	4-2"X10" MAY BE USED INSTEAD OF 3-2"X12"	

2015 MICHIGAN RESIDENTIAL CODE
N1102.4.1.2 (R402.4.1.2) TESTING (BLOWER DOOR)

N1102.4.1.2 (R402.4.1.2) Testing (prescriptive). The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding 4 air changes per hour. Testing shall be conducted with a blower door at a pressure of 0.2 inches w.g. (50 pascals). Where required by the code official, testing shall be conducted by a certified independent third party. Certification programs shall be approved by the state construction code commission. A written report of the results of the test shall be signed by the party conducting the test and provided to the code official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope.

During testing:

1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures;
2. Dampers including exhaust, intake, makeup air, backdraft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures;
3. Interior doors, if installed at time of test, shall be open;
4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed;
5. Heating and cooling systems, if installed at the time of the test, shall be turned off; and
6. Supply and return registers, if installed at the time of the test, shall be fully open.

TABLE N1102.4.1.1 (402.4.1.1)
AIR BARRIER AND INSULATION INSTALLATION

COMPONENT	AIR BARRIER CRITERIA
Air barrier and thermal barrier	A Continuous air barrier shall be installed in the building envelope. The exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier shall be sealed. Air-permeable insulation shall not be used as a sealing material.
Ceiling/attic	The air barrier in any dropped ceiling/soffit shall be aligned with the insulation and any gaps in the air barrier sealed. Access openings, drop down stairs or knee wall doors to unconditioned attic spaces shall be sealed.
Walls	Corners and headers shall be insulated and the junction of the foundation and sill plate shall be sealed. The junction of the foundation and sill plate shall be sealed. The junction of the top plate and the top of exterior walls shall be sealed. Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier. Knee walls shall be sealed.
Windows, skylights and doors	The space between window/door jambs and framing, and skylights and framing shall be sealed.
Rim joists	Rim joists shall be insulated and include the air barrier.
Floors (including above garage and cantilevered floors)	Insulation shall be installed to maintain permanent contact with the underside of subfloor decking. The air barrier shall be installed at any exposed edge of insulation.
Crawl space walls	Where provided in lieu of floor insulation, insulation shall be permanently attached to the crawl space walls. Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.
Shafts, penetrations	Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space shall be sealed.
Narrow cavities	Batts in narrow cavities shall be cut to fit, or narrow cavities shall be filled by insulation that on installation readily conforms to the available cavity space.
Garage Separation	Air sealing shall be provided between the garage and conditioned spaces.
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be air tight, IC rated and sealed to the drywall.
Plumbing and wiring	Batt insulation shall be cut neatly to fit around wiring and plumbing in exterior walls, or insulation that on installation readily conforms to available space shall extend behind piping and wiring.
Shower/tub on exterior wall	Exterior walls adjacent to showers and tubs shall be insulated and the air barrier installed separating them from the showers and tubs.
Electrical/phone box on exterior walls	The air barrier shall be installed behind electrical or communication boxes or air-sealed boxes shall be installed.
HVAC register boots	HVAC register boots that penetrate building thermal envelope shall be sealed to the subfloor or drywall.
Fireplace	An air barrier shall be installed on fireplace walls.

a. In addition, inspection of log walls shall be in accordance with the provisions of ICC 400

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