MNSPECT LLC
HELPING YOU COMPLY WITH THE CODE

Phone: 952-442-7520
Fax: 952-442-7521
Email: info@mnspect.com

DETACHED GARAGES

- This handout is intended only as a guide. It shall not be considered a complete set of requirements.
- Materials and installation must comply with the Minnesota State Building Code and the manufacturers' installation specifications for each product.
- A building permit is required to construct a detached garage. **(Note: There are separate handouts for Post Frame Construction and Sheds/Accessory Structures.) Additional permits are required if any electrical, mechanical, plumbing, or gas piping work is being performed.**
- **Most municipalities require a zoning review. Please check with your municipality regarding requirements.**

BUILDING Permit Submittal shall include:

- **SUPPLEMENTAL WORKSHEET FOR DETACHED GARAGES** (included in this handout).
- **Certificate of Survey** drawn to scale, indicating the lot dimensions, the location and ground coverage area of existing structure(s), and the location and area of the proposed structure. Indicate the setbacks from property lines. **Check with your municipality to determine setback requirements of your specific property.** (A Survey may be on file at the municipality office.)
- **One set of plans** drawn to scale showing the proposed design and materials, and including:
  - A floor plan indicating the proposed garage size, size of headers over openings, size and spacing of roof rafters/trusses.
  - A cross-section view indicating the depth of concrete slab and perimeter bearing, size and spacing of anchor bolts, pitch of roof, size and spacing of roof rafters/trusses, type(s) of sheathing and siding material, size and spacing of studs, ceiling height.
  - Elevations indicating the height of structure from established grade, type of roof covering materials, type of exterior wall covering.
  - One set of plans indicating braced wall line(s) and braced wall panel type(s) and length(s).

  Note: Attached are examples of drawings which are intended as a GUIDE. If your garage is similar in design, you may use the attached plans by filling in the blanks. Lumberyard standard garage plans may also be submitted.

PERMIT CARD AND APPROVED PLANS (throughout the project) shall be:

POSTED prior to start of work - **VISIBLE** from street or driveway - **ACCESSIBLE** to the inspector

INSPECTION REQUIREMENTS:

Inspections **MUST** be scheduled during office hours **AT LEAST** one business day prior to inspection. If a specific date and time is required, additional notice may be needed. Failure to cancel a scheduled inspection may result in a reinspection fee.

- **Office Hours:** Monday - Friday • 8:00 a.m. - 4:30 p.m.
- **Phone:** (952) 442-7520 or (888) 446-1801

Inspections: (Refer to your permit card regarding project-specific inspections)

- **Footings/slab:** After forms and reinforcing bars are in place, but PRIOR TO POURING CONCRETE. Locate survey stakes to allow inspector to verify setbacks.
- **Framing/wall bracing:** After all wall and roof framing is complete, bracing is in place, and sheathing is applied; but prior to the application of insulation or interior and exterior wall coverings. Rough-in electrical, plumbing and mechanical work (if any) must be inspected and approved prior to the framing inspection. The signed manufactured roof truss package must be on site at the time of this inspection.
- **Energy Efficiency (insulation and vapor barrier):** All insulation, chutes, and poly (interior vapor retarder) must be installed, and poly taped and sealed, for this inspection. The wall and roof sheathing must be protected on the exterior with a water-resistive barrier, and the roof must be shingled.
- **Final:** After the building and final grading has been completed, and electrical, plumbing and

mechanical work has been inspected and approved.

Warning: The inspector may issue an order to remove materials to verify compliance with the MN State Building Code and manufacturer's installation requirements.
If a reinspection is required, a reinspection fee will apply. The permit holder (the signing applicant) or the permit holder's representative must meet the inspector at the site to provide access. The reinspection will not be conducted if the reinspection fee is not paid.

Note: The State of Minnesota requires that all residential building contractors, remodelers, roofers, plumbers, and electricians obtain a state license unless they qualify for a specific exemption from the licensing requirements. Any person claiming an exemption must provide a copy of a Certificate of Exemption from the Department of Labor & Industry to the Municipality before a permit can be issued. (MN Statute 326B.805)

Note: To determine whether a particular contractor is required to be licensed or to check on the licensing status of individual contractors, please call the Minnesota Department of Labor & Industry at 651-284-5034.

Note: For specific code requirements, please contact the Building Inspection Department at 952-442-7520 or 888-446-1801 or e-mail: info@mnspect.com.

PROJECT CHECKLIST:

The following is a guideline to assist in compliance with the requirements of the MN State Building Code.

- ☐ The home address must be visible from the street.
- ☐ BEFORE YOU DIG, contact Gopher State One Call to locate buried utilities: (651) 454-0002 or (800) 252-1166. www.gopherstateonecall.org.
- ☐ The use of a floating slab is permissible if the slab fully complies with the exception found in MN Rule 1303.1600 subpart 2.
- ☐ All stumps, roots, and black dirt shall be removed from the soil to a depth of at least 12" below the surface of the ground if concrete slab is used.
- ☐ The minimum thickness of concrete floor slabs supported directly on the ground shall not be less than 3½".
- ☐ For buildings less than 1000 SF, all exterior footings shall be placed at least 12" below the undisturbed ground surface. A frost footing is required for structures over 1,000 SF.
- ☐ Floor surfaces shall be of noncombustible materials: concrete, asphalt, sand, gravel, crushed rock, or earth.
- ☐ There shall be a minimum 6" clearance between ground and non-treated wood.
- ☐ Wood exposed to ground, exposed to weather, located on concrete, or within 6" of grade, shall be a naturally durable wood (redwood, cedars, etc.) or approved treated lumber.
- ☐ Foundation sill plates shall be a naturally durable wood (redwood, cedars, and black locust) or approved treated lumber.
- ☐ Anchor bolts shall be a maximum of 6' on center, with a minimum of two bolts per plate section, located a maximum of 12" from plate ends and splices. The bolts shall be at least ½" diameter and shall be embedded a minimum of 7" into masonry or concrete. (If curb blocks are used, they must be a minimum of 6" wide.) Anchor bolts shall be located within 8" of any vertical reinforcement.
- ☐ Approved corrosion-resistant fasteners must be used on treated lumber.
- ☐ Must provide unobstructed headroom of 7 feet.
- ☐ Each header shall have a length of bearing not less than 1½" for full width header. Additional bearing may be required for longer spans or if using engineered wood products.
- ☐ Wall bracing must comply with MRC R602.10. The wall bracing inspection must be completed **prior** to installing.
- ☐ A water resistive barrier compliant with MRC R703.2 is required on exterior walls of all detached accessory structures.
- ☐ Fireblocking must be in place.
- ☐ Roof must be designed to handle snow load of 35 lbs per ft^2.
- ☐ If a ceiling is installed, ventilation for enclosed attic space must be provided.
- ☐ If a ceiling is installed and there is 30" clear space above trusses, a 22 x 30" attic access must be provided.
- ☐ All doors, including overhead doors must be 115 mph wind-rated.
- ☐ Siding shall be attached in accordance with Tables R703.3.(1), R703.3.3, R703.6.3(1), R703.6.3(2) and the manufacturer's installation instructions.
- ☐ Exterior walls of detached garages within 5' of the property line shall be protected with a minimum fire resistance rating of one hour with exposure from both sides. Eaves within 5' of the property line shall be protected on the underside with a minimum 5/8" type X gypsum without openings for ventilation. In lieu of the gypsum, fireblocking extending from the wall top plate to the underside of the roof decking may be used.
- ☐ Caulk and flash all exterior openings.
- ☐ If a unit heater is installed, the shut-off valve must be within 6 feet of the unit and a separate mechanical permit is

SUPPLEMENTAL WORKSHEET FOR DETACHED GARAGES

(MUST be included when applying for permit)

1. Size (width and thickness) of footings: _____
2. Size and spacing of studs: _____
3. Type of lumber: _____
4. Size of beams: _____
5. Size and spacing of rafters or trusses: _____
6. Size of structure: _____

7. Distance from property lines:

    Side 1: _____

    Side 2: _____

    Rear: _____

    Other: _____

8. Distance from house:

    Side 1: _____

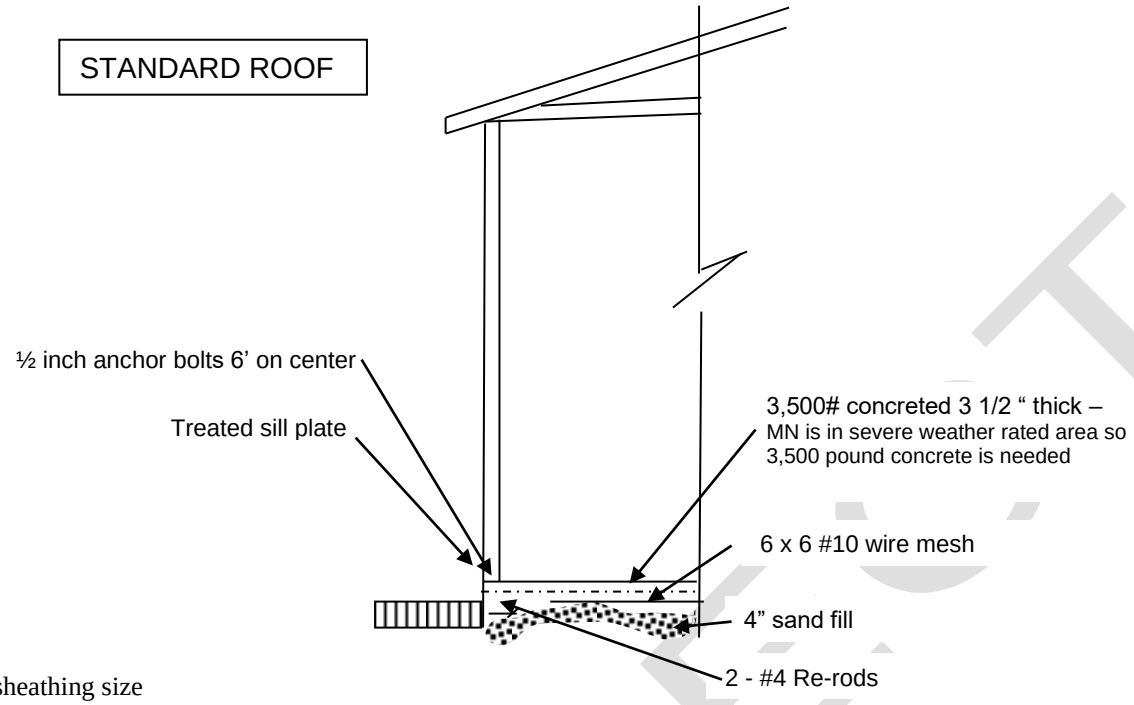
    Side 2: _____

    Rear: _____

    Other: _____

9. Total height: _____

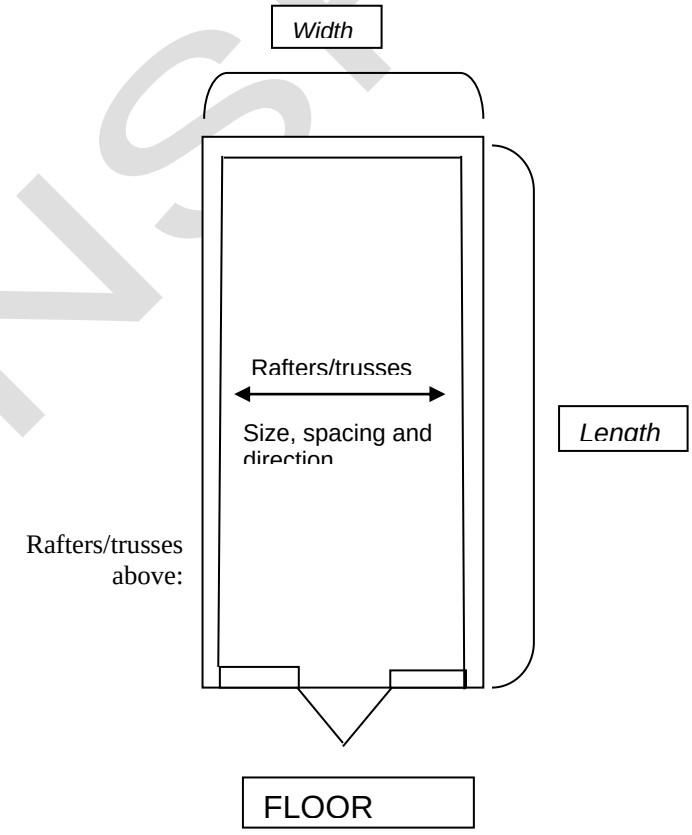
STANDARD ROOF



Treated floor sheathing size

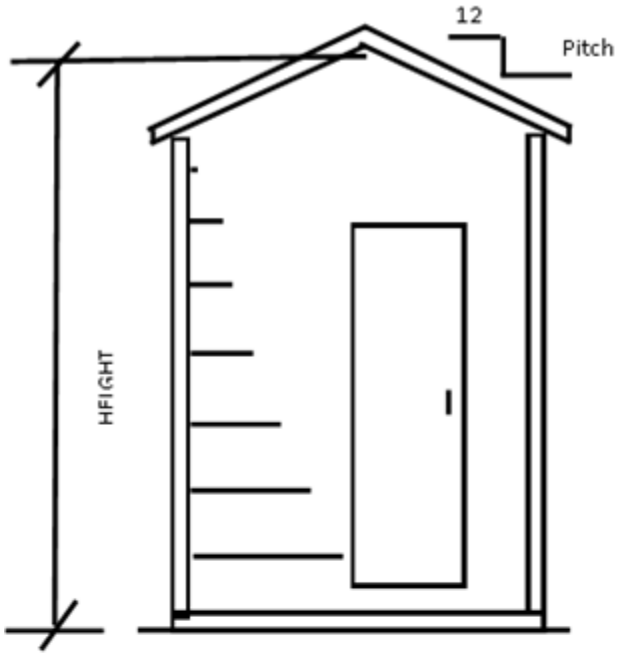
Treated joist size and spacing

CROSS SECTION

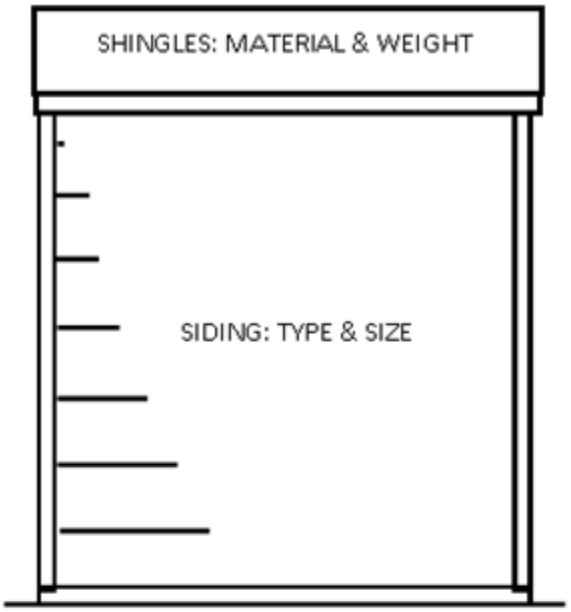


FLOOR

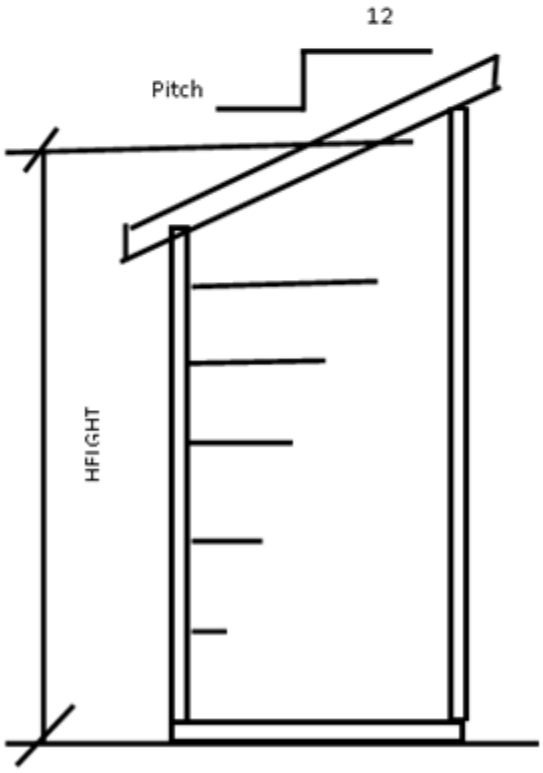
STANDARD ROOF



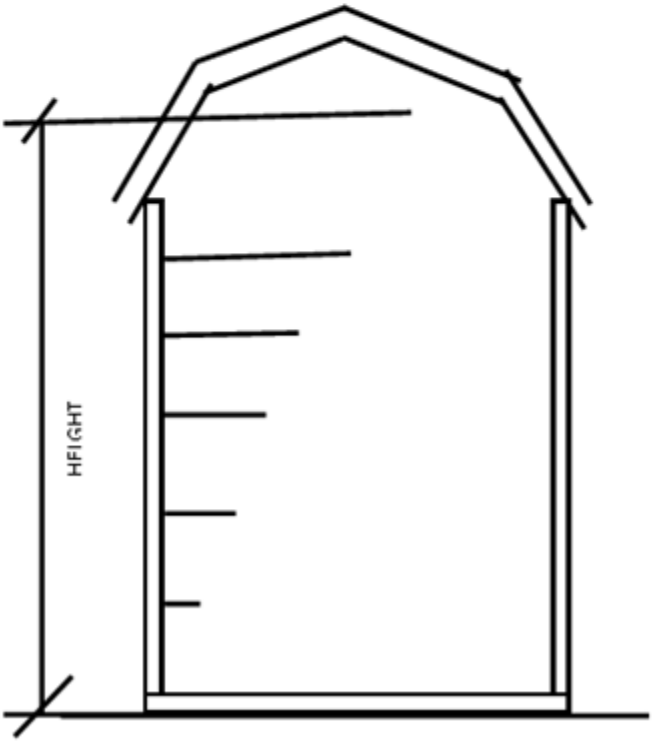
FRONT ELEVATION



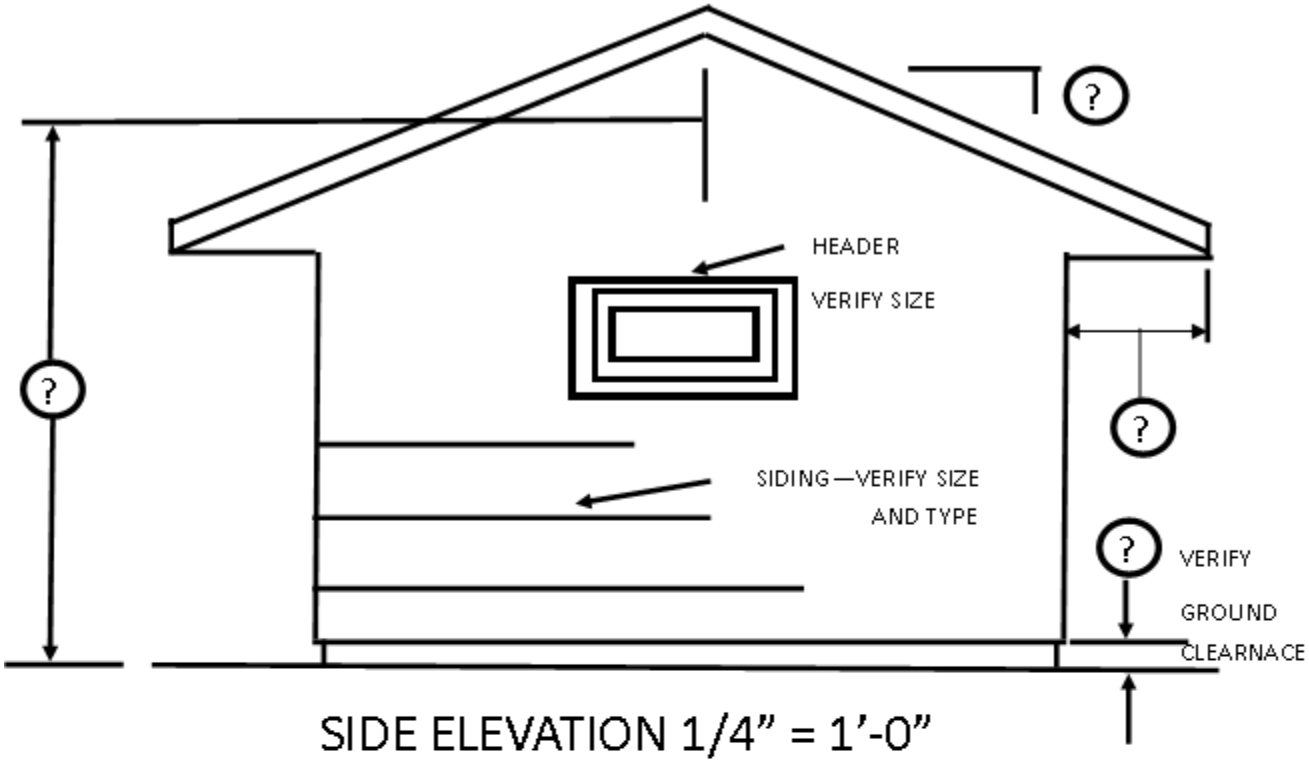
SIDE ELEVATION



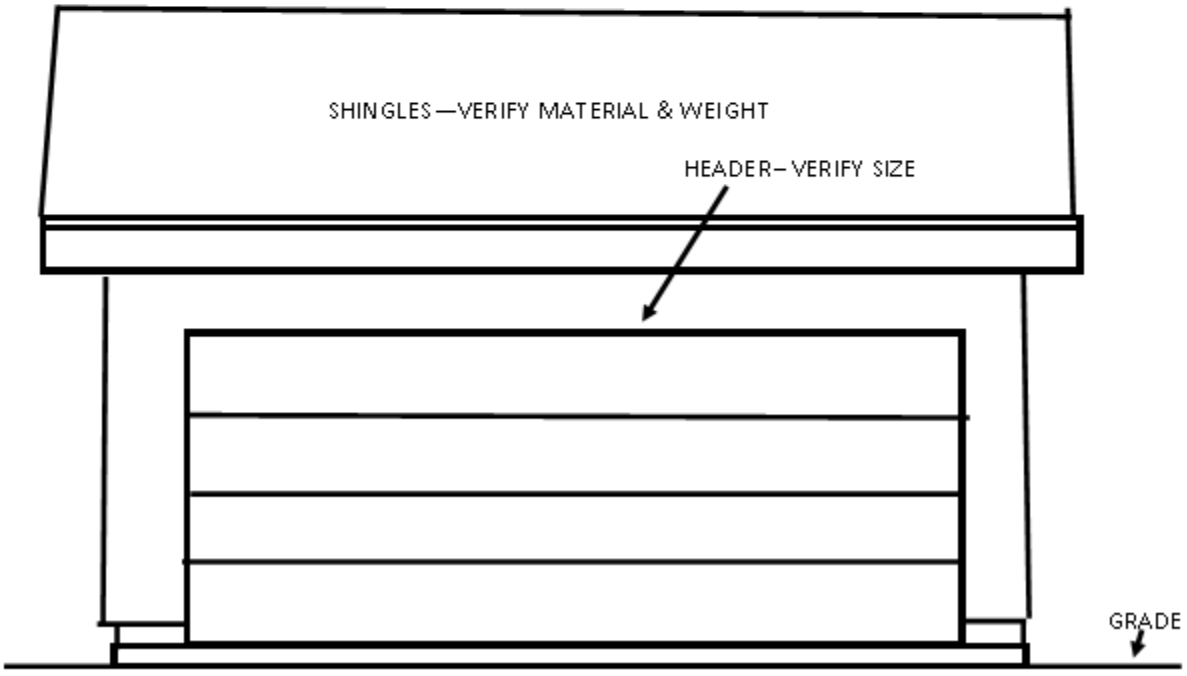
SIDE ELEVATION



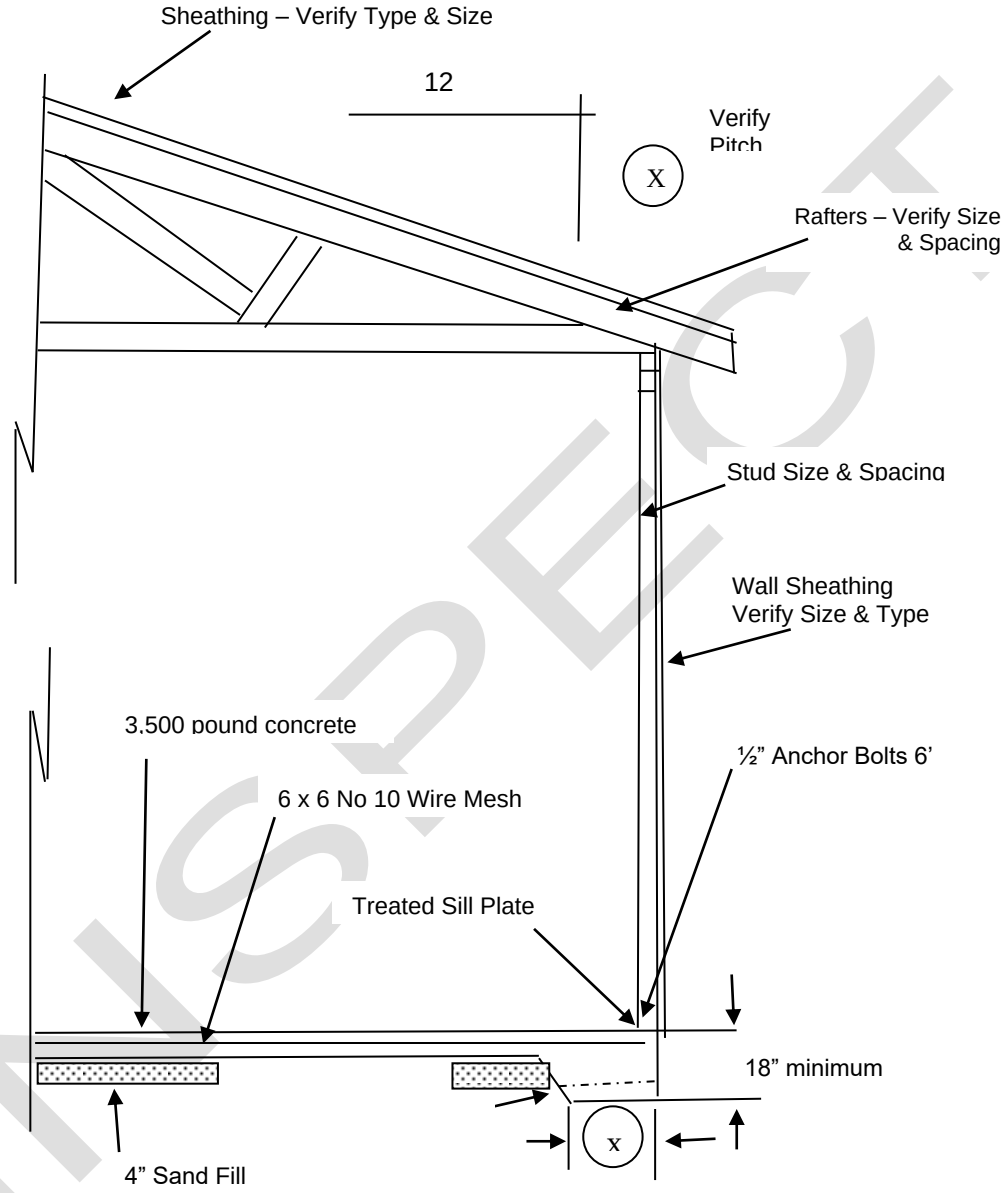
REAR ELEVATION



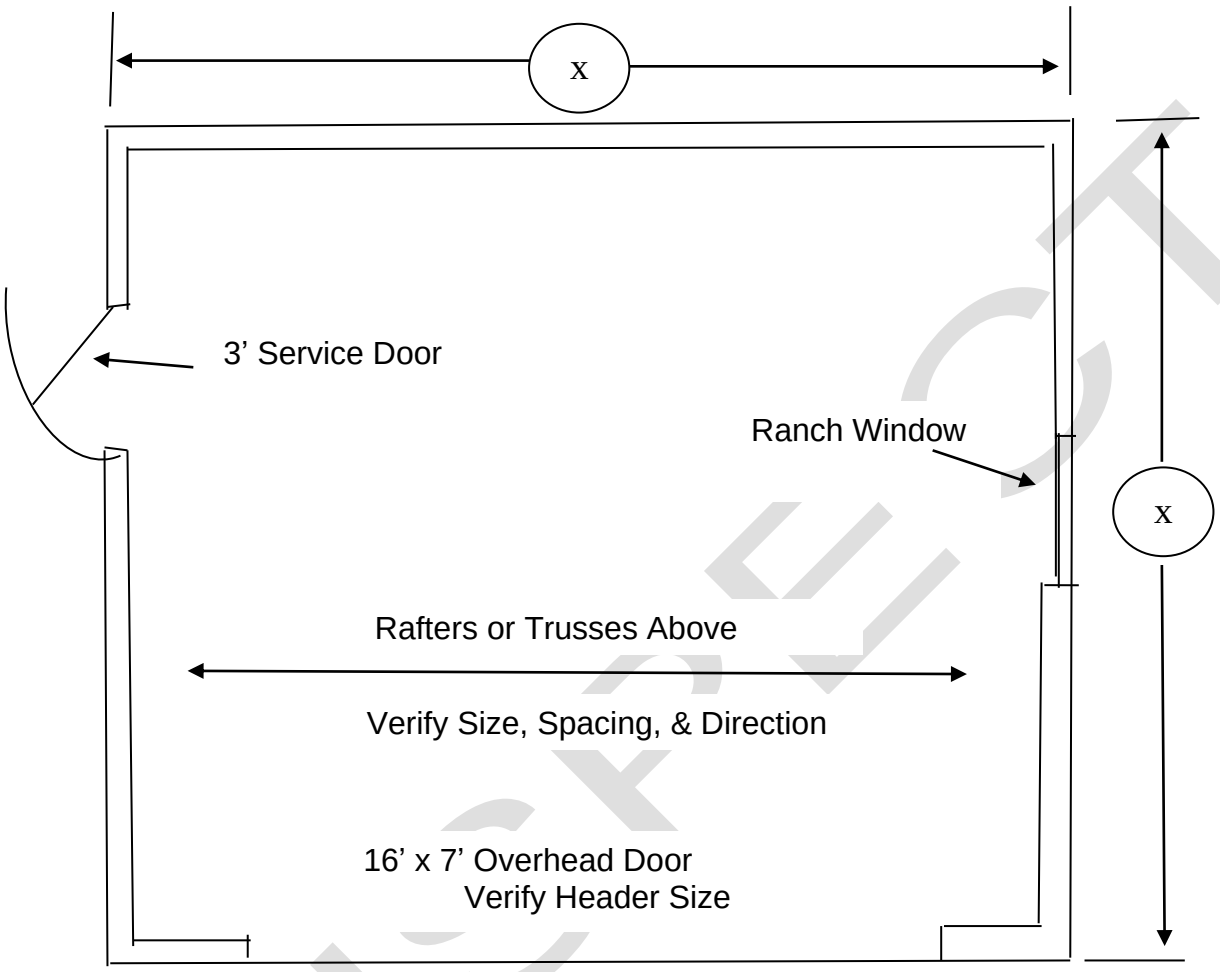
SIDE ELEVATION 1/4” = 1’-0”



FRONT ELEVATION 1/4” = 1’-0”



CROSS SECTION ¼" – 1' – 0"



BUILDING HEIGHT CALCULATION
HOW-TO FORM

Job Address _____

Per Mound City Code, Section 129-2, building height and building line are defined as follows:

Building Height The vertical distance to be measured from the average grade of a building line to the top, to the cornice of a flat roof, to the deck line of a mansard roof, to a point on the roof directly above the highest wall of a shed roof, to the uppermost point on a round or other arch type roof, to the mean distance of the highest gable on a pitched roof.

Building Line A line parallel to the street right-of-way or the ordinary high water level at any story level of a building and representing the minimum distance which all or nay part of the building is set back from said right-of-way line or ordinary high water level.

COMPLETE THE FOLLOWING

1. Describe the type of roof style proposed (i.e., pitched, flat, shed roof, etc.)

   _____

2. Provide the average grade elevation of the building line facing the street:

   _____ based on proposed grades referenced on submitted survey.

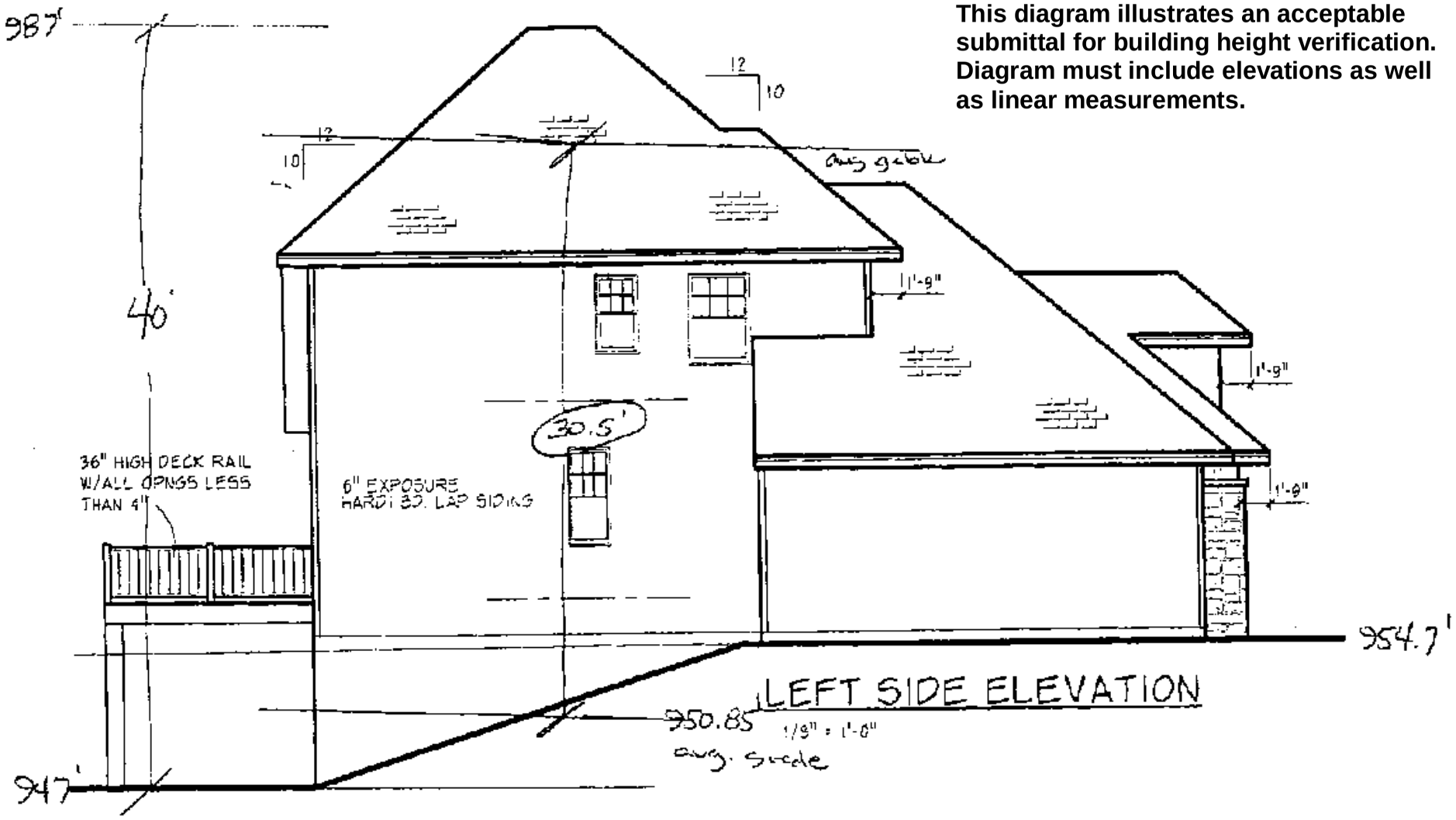
3. Provide the average grade elevation of the building line facing the rear of the lot or lake:

   _____ based on proposed grades referenced on submitted survey.

4. Provide the average grade elevation of the building line(s): _____
5. Provide the height of the proposed structure as measured from the lowest grade elevation to highest point of structure: _____.
6. Provide the proposed height of the structure based on the definition of building height referenced above: _____
7. **Attach diagram** - Graphic documentation, usually an elevation drawing, must be provided to confirm that the proposed height of the new structure, based on the Zoning Ordinance definition, meets the height regulations of the applicable zoning district. Graphics document must be scaled to allow for checking by staff.

Measuring Building Height

A building height verification must be submitted with the building permit application on any new home construction or addition.



This diagram illustrates an acceptable submittal for building height verification. Diagram must include elevations as well as linear measurements.

SUMMARY OF HARDCOVER RULES

Excerpts from the Mound Zoning Ordinance

Section 129-2 Definitions

Impervious cover means any surface impervious or resistant to the free flow of water or surface moisture. The term "impervious cover" shall include, but not be limited to, all driveways and parking areas whether paved or not, tennis courts, sidewalks, patios and swimming pools. Open decks (one-quarter-inch minimum opening between boards) shall not be counted in impervious cover calculations.

Lot area, minimum, means the area of a lot in a horizontal plane bounded by the lot lines, but not including any area below the ordinary high-water level as determined by the city or department of natural resources. (The ordinary high-water level for major lakes in the city: Lake Minnetonka = 929.4; Dutch Lake = 939.2; Lake Langdon = 932.1.)

Section 129-196 Requirements applicable to all residential districts

(a) Lot coverage. Impervious surface coverage of lots in residential zones shall not exceed 30 percent of the lot area. On existing lots of record, impervious coverage may be permitted to up to a maximum of 40 percent consistent with the provisions identified in section 129-385(g)(2)a.

Section 129-385 Zoning - Shoreland Management

(2) Specific standards.

a. Impervious surface coverage of lots in residential zones shall not exceed 30 percent of the lot area. On existing lots of record, impervious coverage may be permitted by a maximum of 40 percent providing that the following techniques are utilized as applicable:

1. Impervious areas should be drained to vegetated areas or grass filter strips through the use of crowns on driveways, direction of downspouts on gutters collecting water from roof areas, etc.
2. Dividing or separating impervious areas into smaller areas through the use of grass or vegetated filter strips such as the use of paving blocks separated by grass or sand allowing infiltration.
3. Use grading and construction techniques which encourage rapid infiltration such as the installation of sand or gravel sump areas to collect and percolate stormwater.
4. Install berms to temporarily detain stormwater thereby increasing soil absorption.

b. Impervious surface coverage in lots in the business and industrial zones shall not exceed 30 percent of the lot area. In business and industrial zones that are included within areas covered by an approved stormwater management plan, impervious surface coverage shall not exceed 75 percent of the total lot area.

HARDCOVER CALCULATIONS

(IMPERVIOUS SURFACE COVERAGE)

PROPERTY ADDESS:
OWNER'S NAME:

LOT AREA _____ SQ. FT. X **30%** = (for all lots) ……..... | |

LOT AREA _____ SQ. FT. X **40%** = (for Lots of Record) …….. | |

* Existing Lots of Record may have 40 percent coverage provided that techniques are utilized, as outlined in Zoning Ordinance Section 129-385 (see back). A plan must be submitted and approved by the Building Official.

	LENGTH		WIDTH		SQ FT	
HOUSE	_____	X	_____	=	_____	
	_____	X	_____	=	_____	
	TOTAL HOUSE …….					_____
DETACHED BUILDINGS (GARAGE/SHED)	_____	X	_____	=	_____	
	_____	X	_____	=	_____	
	TOTAL DETACHED BUILDINGS……..……..					_____
DRIVEWAY, PARKING AREAS, SIDEWALKS, ETC.	_____	X	_____	=	_____	
	_____	X	_____	=	_____	
	_____	X	_____	=	_____	
	TOTAL DRIVEWAY, ETC …….					_____
DECKS Open decks (1/4" min. Opening between boards) with a pervious surface under are not counted as hardcover.	_____	X	_____	=	_____	
	_____	X	_____	=	_____	
	_____	X	_____	=	_____	
	TOTAL DECK …….					_____
	_____	X	_____	=	_____	
	_____	X	_____	=	_____	
	TOTAL OTHER …….					_____

TOTAL HARDCOVER / IMPERVIOUS SURFACE…… | |

UNDER / OVER (indicate difference) …….. | |

PREPARED BY _____ DATE _____

Revised 1/10

Supplemental Information for Building Permits
Indigenous Mounds and Earthwork Sites

Indigenous burial mounds and/or earthwork sites have been discovered in and around the City of Mound. While many of the sites have been severely impacted by development over the years, they do receive protection under state law. ***Penalties will be imposed for the unauthorized disturbance of indigenous sites****. Additional information may be obtained through the Minnesota State Archeologist.*

Any formal investigation of a site, including a determination of whether a mound or burial area exists on a subject site, is the responsibility of the property owner or developer. The issuance of permits by the City of Mound to do work on a site does not relieve the owner or developer of that responsibility.