

Frenchtown Charter Township
Construction Requirements
Detached Accessory structures

This information is provided in a "User-friendly" format as a general guide to help you apply the standard Building Code requirements to your project. It covers the most common types of projects. The actual Building Code language may contain additional requirements that may apply if your project is beyond the scope of this Guidebook.

Your Accessory Structure will be reviewed and inspected in accordance with the requirements of the State of Michigan Residential Code (MRC) and Frenchtown Charter Township Zoning Ordinance No. 200 Section 4.45.

1. Foundation (See "Sample Drawings", pages 4-9)

-Footings for Accessory Structures shall be at least 12 inches wide and 12 inches below grade when the structure is built of light-frame construction, less than 600 SF and has an eave height less than 10 feet. Footings for other than light-framed construction or structures greater than 600 SF shall be a minimum 42 inches deep.

-Alternate foundation systems may be used when approved by the Building Department.

-Footings shall rest on undisturbed soil.

2. Concrete Floor (See "Sample Drawings", pages 4-9)

-All vegetation, topsoil and foreign material shall be removed from the proposed floor area.

-Fill material shall be free of vegetation and foreign materials.

-Fill shall be compacted and shall not exceed 24 inches in depth for sand or gravel and 8 inches for earth.

-Concrete slabs shall be at least 3 ½ inches thick with a compressive strength at 28 days of not less than 3,500 pounds per square inch.

-1/2-inch anchor bolts or equivalent shall be installed in concrete before it has hardened. See "Framing" below for requirements.

-See "Wall Section" (page 6)

-Garage floors shall slope toward main vehicle entry door.

3. Wall Framing (See "Sample Drawings", pages 4-9)

-Sill plates resting on concrete or masonry shall be pressure-treated.

-Wood siding, sheathing and wall framing that are less than 6 inches above grade or less than 2" above concrete steps, porch slabs, or patio slabs, are required to be pressure-treated material.

-The sill plate shall be anchored to the foundation with ½-inch diameter anchor bolts or equivalent which are 6 feet on center and not more than 12 inches from each end of the plate. Bolts shall extend at least 7 inches into concrete or masonry.

-Walls are typically framed using 2 x 4 studs at 16 inches on center with a double top plate.

-Cutting or notching of 2 x 4 studs shall not exceed 7/8-inch.

-Holes drilled and boring in 2 x 4 studs shall not exceed 1-7/16 inch and shall be at least 5/8-inch from the edge of the stud.

-Proper sized headers shall be installed over all window and door openings. A pre-engineered header (Example: Gluelam, Microlam, or LVL) is typically required for 16-foot wide door openings that are supporting roof construction. Additional engineering may be required.

-Headers above man-doors and windows up to 3-foot in width, within bearing walls shall be 2-2 x 4's. Headers above man-doors and windows from 3 ft. to 6 ft. wide in bearing walls shall be 2-2 x 8's.

-Walls shall be braced at the ends with 1-inch by 4-inch let-in bracing, approved metal strap devices or structural sheathing. Continuous Sheathing (CS-G) Braced Wall Panel method for 16'-0" wide overhead door opening. See "Sample Drawings", pages 4-9.

-Portal frame opening framing shall be installed for each overhead door opening. See the Michigan Residential Code for details.

-Exterior wall covering/siding shall be installed to provide a barrier against weather and insects (building wrap).

Garage Doors

-Garage doors shall be solid or honeycomb core steel or solid core wood not less than 1 3/8" thick or 20-minute fire rated door or equivalent between the house and garage. Required exit doors shall be side hinged, a minimum of 32" clear width opening between the face of door and the door stop (when the door is in a 90 degree open position) and 78" in height.

Safety Glazing

-Safety Glazing is required in all fixed or operable panels within a 24" arc of a door, in fixed panels over 9 sq. ft. and nearer than 18" to the floor or walking surface and with a top edge greater than 36" above the floor and within 36" horizontal of walking surface.

-All Safety Glazing shall be clearly labeled.

Roof

-Roofs shall be designed to support a minimum. 20 lb. snow load.

-Roof trusses (if used) shall be installed and spaced as required by the truss manufacturer. Manufacturer's truss drawings shall be on site at the frame inspection.

-Rafters (if used) shall have the proper size and spacing – (see examples in table below.)

Maximum Allowable Span for Rafters (Spruce-Pine-Fir #2 or Better)	
Ground Snow Load = 30psf, Ceiling Not Attached to Rafters	
Rafter Size & Spacing	Maximum Span
2 x 6 - 12 inches on center	13'9"
2 x 6 - 16 inches on center	11'11"
2 x 8 - 12 inches on center	17'5"
2 x 8 - 16 inches on center	15'1"
2 x 10 - 12 inches on center	21'4"
2 x 10 - 16 inches on center	18'5"

Ceiling joists (if used) shall have the proper size and spacing to provide a 20 pound per square foot live load when the roof slope is steeper than 3 in 12. (See examples in table below)

Maximum Allowable Span for Ceiling Joists (Spruce-Pine-Fir #2 or Better)	
Uninhabitable Attics with Limited Storage, Live Load = 20psf	
Ceiling Joist Size & Spacing	Maximum Span
2 x 6 - 12 inches on center	14'9"
2 x 6 - 16 inches on center	12'10"
2 x 8 - 12 inches on center	18'9"
2 x 8 - 16 inches on center	16'3"
2 x 10 - 12 inches on center	22'11"
2 x 10 - 16 inches on center	19'10"

-Rafter/collar ties are required 4 feet on center when ceiling joists are not installed or ceiling joists are not parallel with rafters.

-Cut ends of rafters shall be fully supported at the ridge board and at all walls.

-The ends of rafters and ceiling joists (if used) shall have at least 1-1/2 inches bearing on the top plate of the wall.

-Notches at the end of rafters and ceiling joists shall not exceed ¼ the depth. Notches in the top and bottom shall not exceed 1/6 the depth and shall not be located in the middle 1/3 of the span. The tension side of the rafter shall not be notched except for at the ends.

-Cutting, notching or alterations to manufactured roof trusses are not allowed.

-7/16 inch OSB or ½ inch plywood roof sheathing, rated to span the distances between the rafter or roof trusses are typically used for roof sheathing.

-Asphalt shingles are typically installed when the roof slope is 4 units vertical in 12 units horizontal or greater. One layer of Type 15 felt (tar paper) is required over the entire roof and may require one layer of No. 40 coated roofing (ice and water shield) from the eaves to a line 24 inches inside the exterior wall if structure is going to be heated.

-Trusses and rafters shall be connected to the wall plates with approved connectors (typically referred to as "hurricane" clips.)

PLOT PLAN REQUIREMENTS

Accessory Structures

Two sets of plot plans containing all the information and details noted below shall be submitted with the Building Permit Application. See "Sample Plot Plan" (page 4). The Plot Plan may be drawn by the Homeowner, Contractor, Land Surveyor, Engineer or Architect. Special circumstances may require the Plot Plan to be drawn by a licensed Engineer, Architect or Land Surveyor. This will be determined during the Plan Review process. The Plot Plan shall contain the following information:

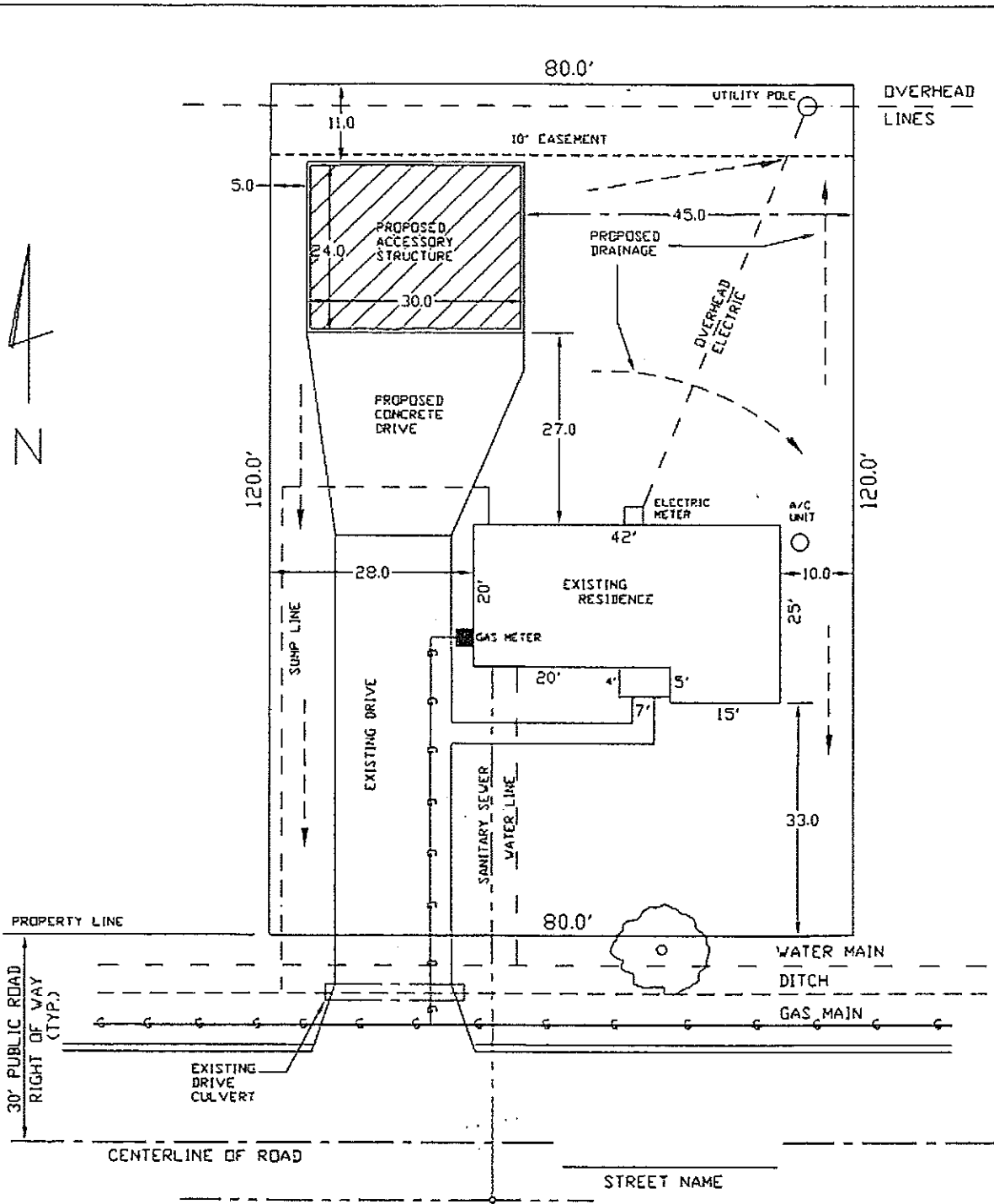
General

- Builder's name, address, and telephone number.
- The North arrow, street right-of-way and street name.
- Plot Plan scale shall be between 1" = 20' and 1" = 50'.
- The preferred Plot Plan size is 8 ½" x 14". If it is necessary to go to a larger size, please do not exceed 18" x 24".
- Temporary soil erosion control measures may be required based on a field inspection.
- Permanent soil erosion control measures may be required for Final Grade approval.

Zoning

- The location and dimensions of all structures on the lot, including proposed structures and distances from lot lines and/or existing structures shall be indicated.
- Plot Plans shall have all lot dimensions indicated.
- The Plot Plan footprint and the construction drawings shall be consistent with each other.
- Detached Accessory Structures setbacks shall comply with Section 4.45.2(k) (iii) Frenchtown Charter Township Zoning Ordinance No. 200.

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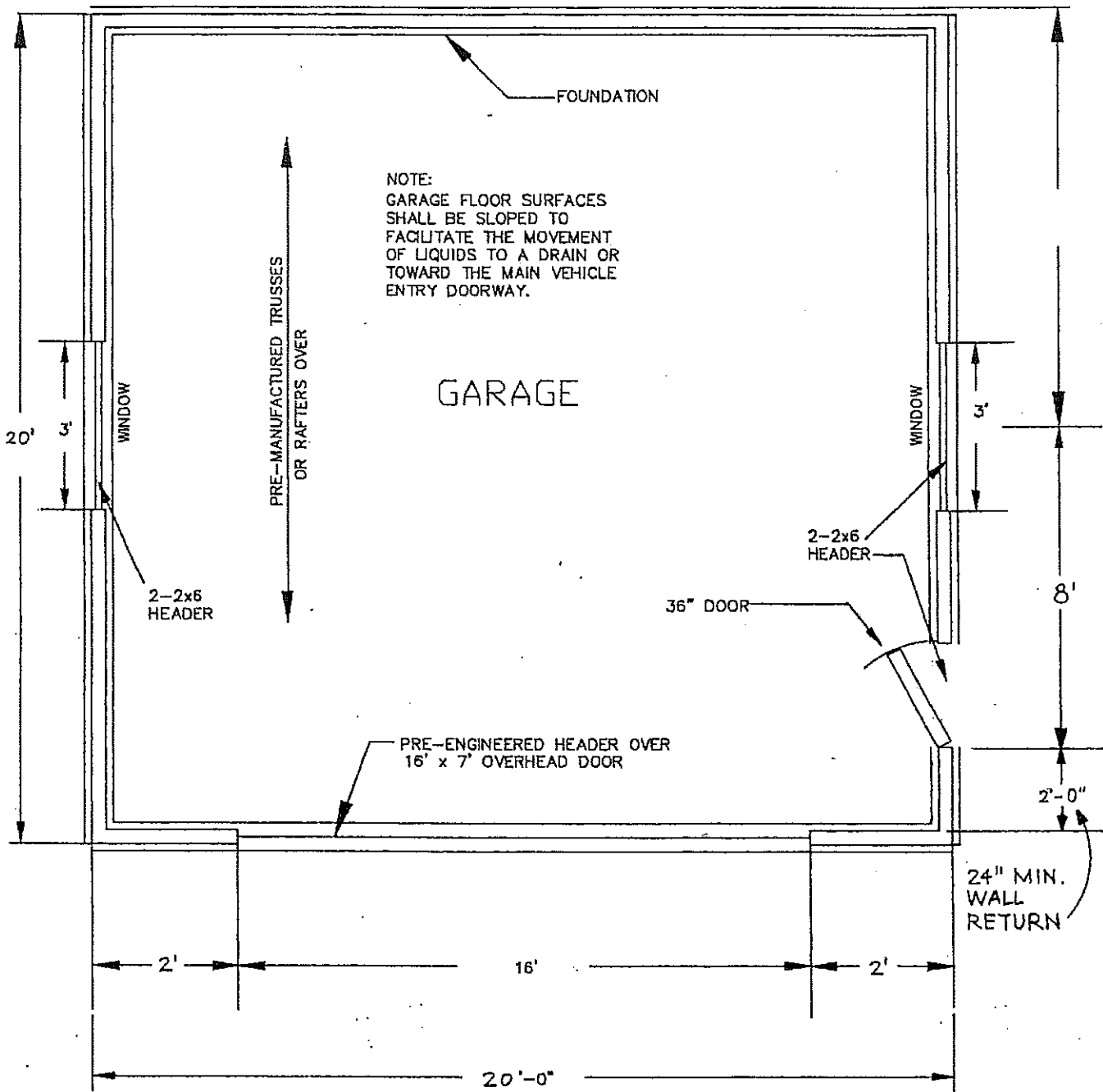


SAMPLE PLOT PLAN

SCALE: 1"=20'

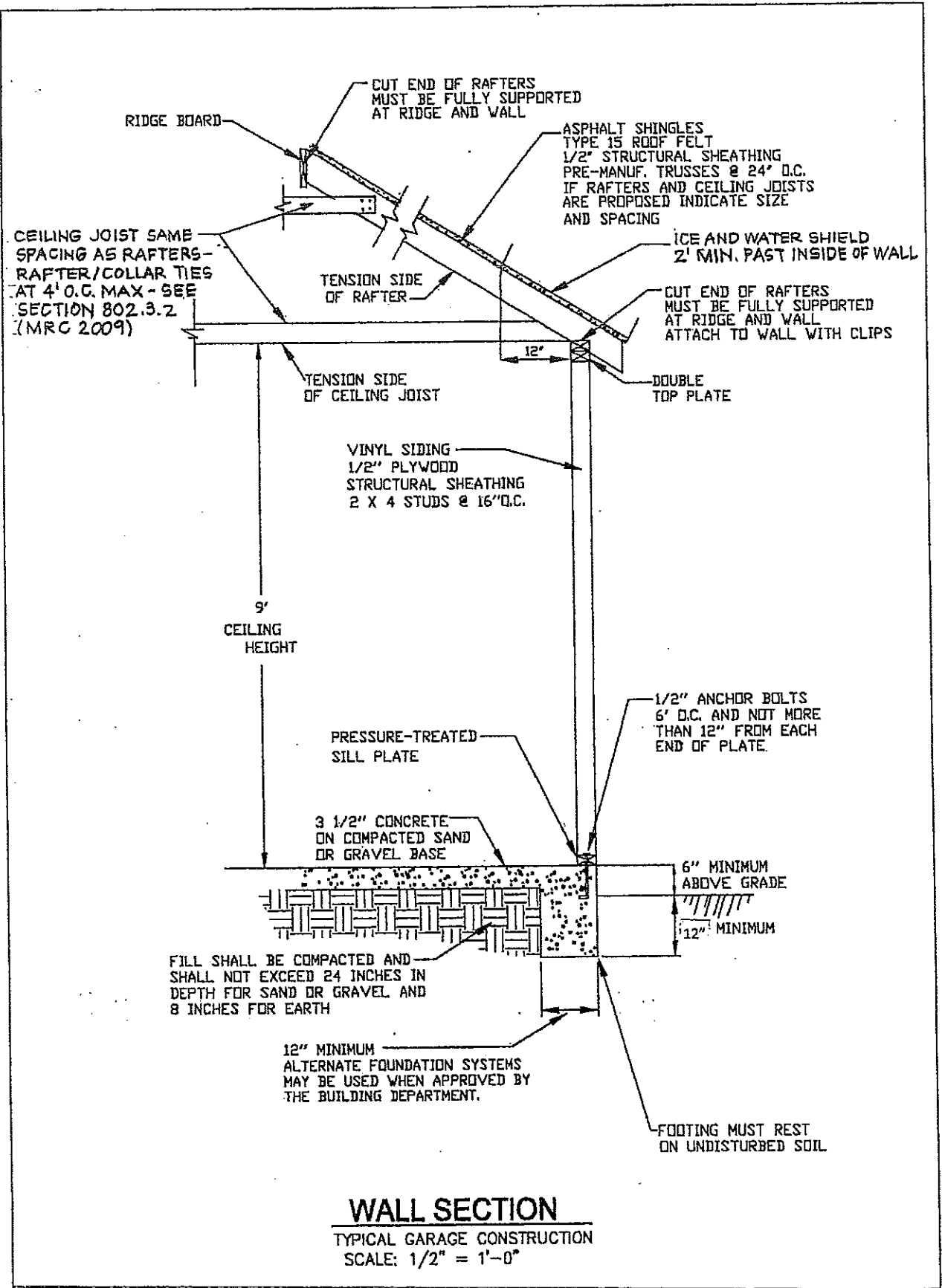
SHOW THE UTILITY LOCATIONS BOTH ABOVE AND BELOW GROUND.
 SHOW THE LOCATION OF THE ELECTRIC METER, GAS METER AND A/C UNIT.
 SHOW THE LOCATION OF THE WATER, SANITARY, AND SUMP LINES
 IF A NEW DRIVE OR ALTERATIONS TO AN EXISTING DRIVE ARE PROPOSED,
 ALL CONSTRUCTION MUST CONFORM TO CURRENT STANDARDS.

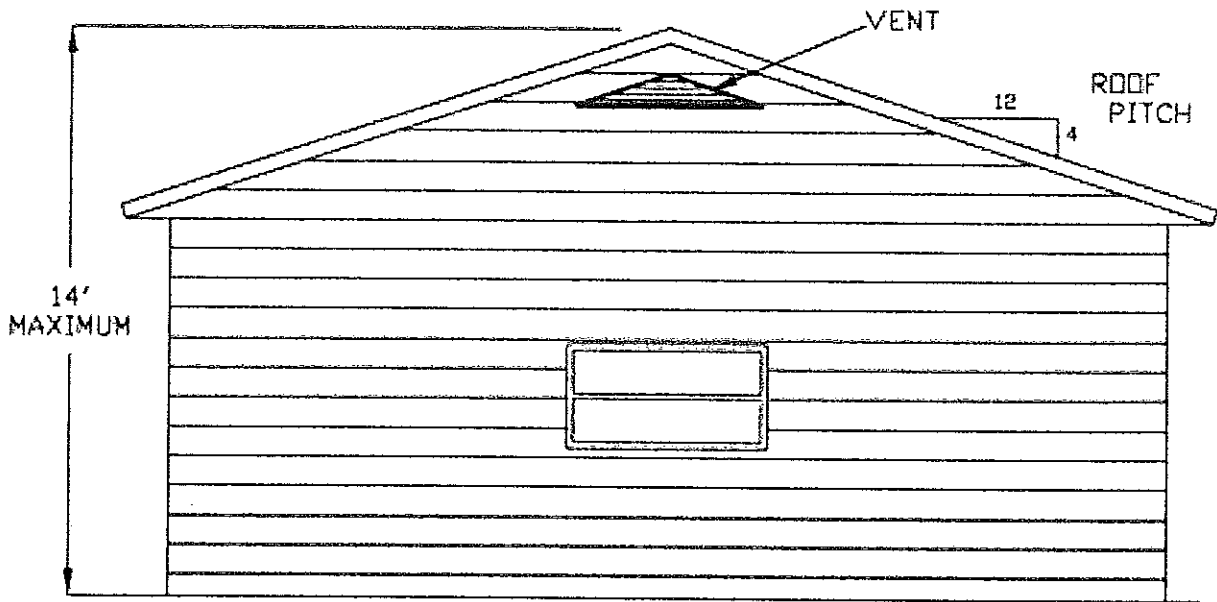
BUILDER: XYZ CONST.	
ADDRESS XXX	PHONE XXX
OWNER: RESIDENT	
ADDRESS XXX	PHONE XXX



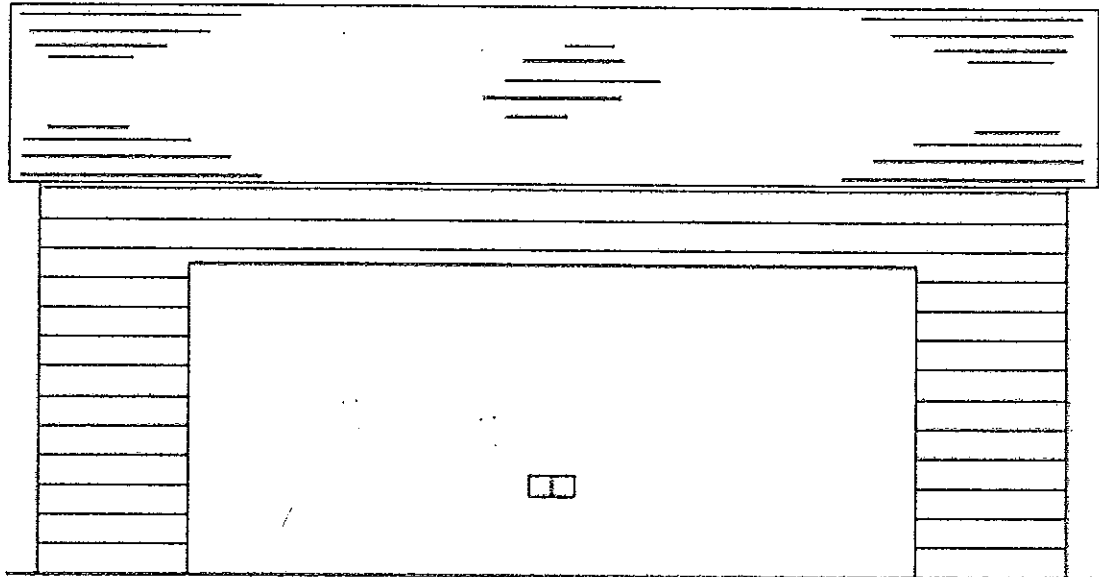
SAMPLE FLOOR PLAN

SCALE:





SIDE ELEVATION



FRONT ELEVATION

SAMPLE ELEVATIONS

SCALE: 1/4" = 1'

WOOD RAFTERS
OR TRUSSES

PRE-ENGINEERED
HEADER - SUCH AS:
- GLUE-LAM
- MICROLAM
- LVL
OR EQUIVALENT

NAILING PATTERN:
6" O.C. AT PERIMETER
AND 12" O.C. AT ALL
OTHER STUDS - TYP.

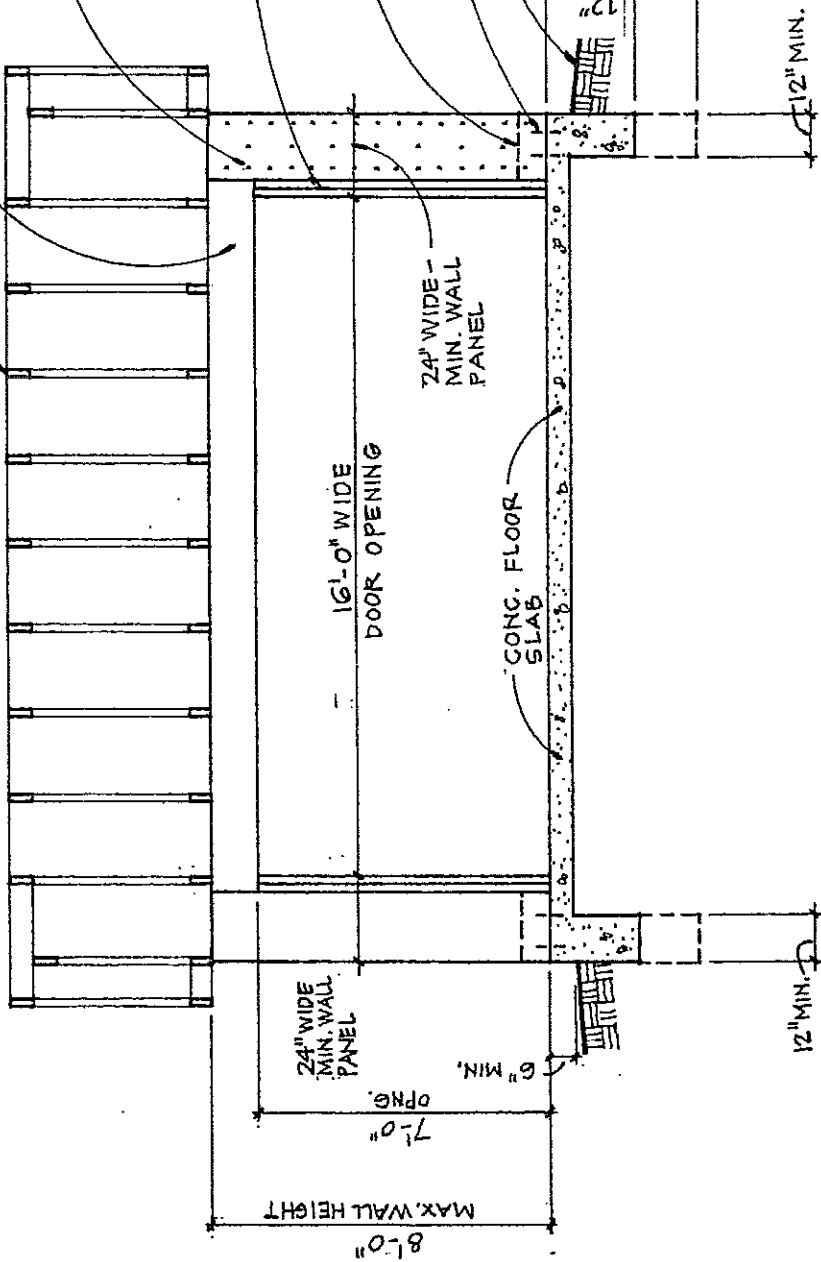
DOUBLE STUD
UNDER HEADER

42" DEEP FOOTING
REQ'D IF BLOCK
INSTALLED UNDER WALL

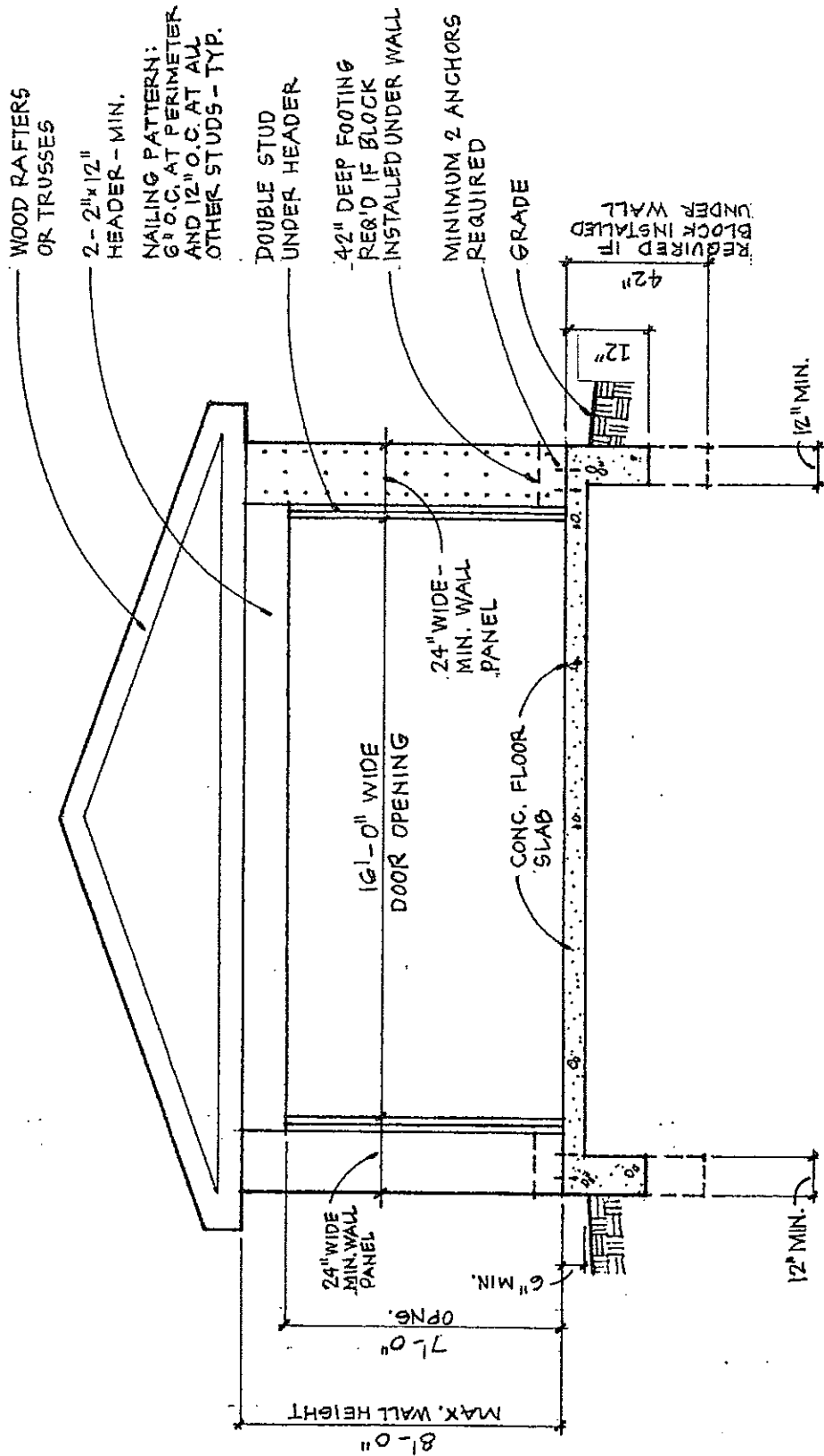
MINIMUM 2 ANCHORS
REQUIRED

GRADE

REQUIRED IF
BLOCK INSTALLED
UNDER WALL



**CONTINUOUS SHEATHED (CS-G)
BRACED WALL PANEL REQUIREMENTS
LOAD BEARING WALL**



**CONTINUOUS SHEATHED (CS-6)
BRACED WALL PANEL REQUIREMENTS
NON-LOAD BEARING WALL**

