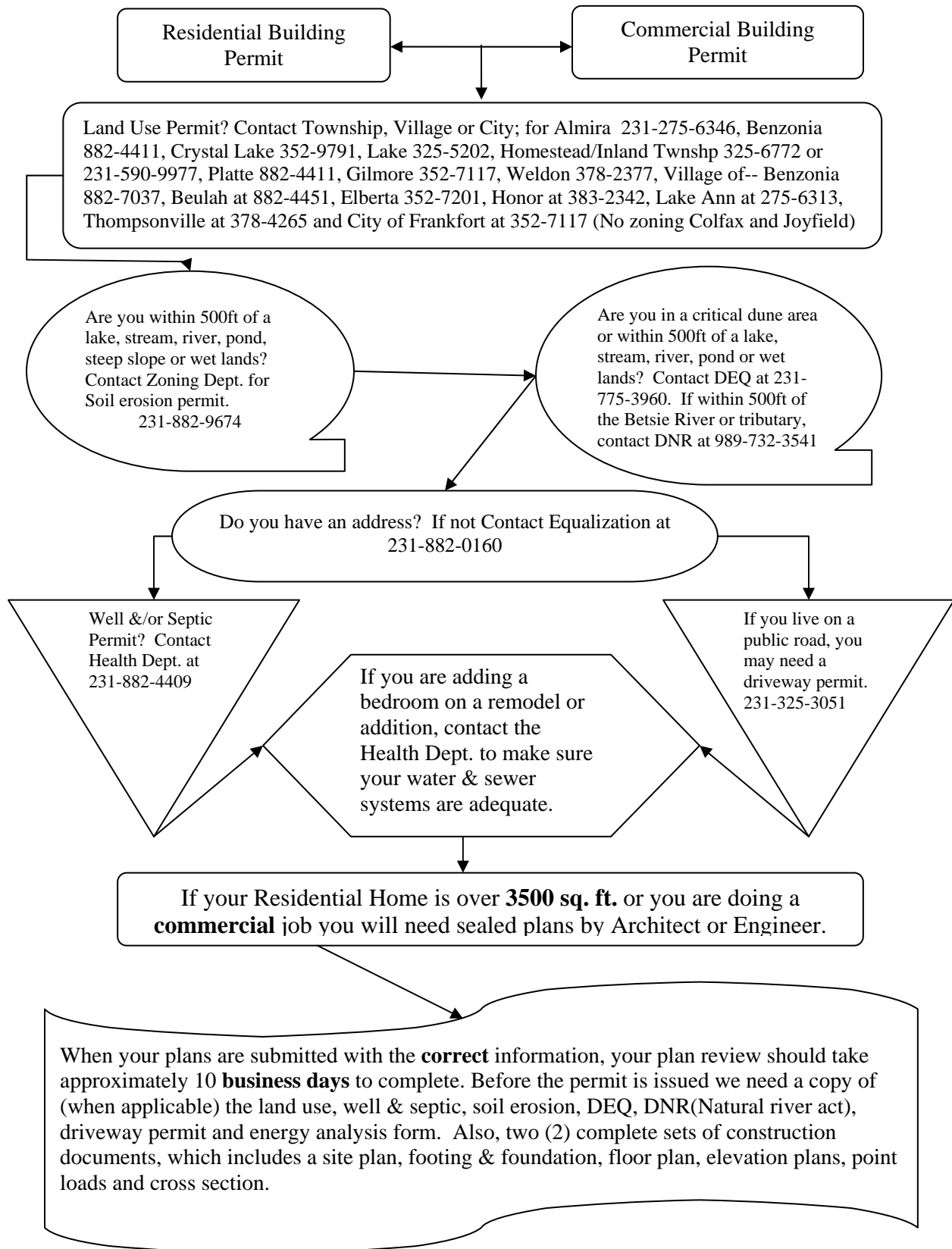


Benzie County Building Safety and Code Enforcement Department
STEPS TO OBTAINING A BUILDING PERMIT



BENZIE COUNTY BUILDING SAFETY and CODE ENFORCEMENT DEPARTMENT

448 Court Place,
Ph. 231-882-9673

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A GUIDE TO HELP BUILD A SINGLE OR TWO FAMILY DWELLING

(PLEASE NOTE: This is just a guide to help you in building your home, it does not contain all of the building codes!!!!)

R105 RESIDENTIAL CODE 2009 PERMIT

R105.1, Required. Any owner or authorized agent who intends to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building or structure, or to erect, in-stall, enlarge, alter, repair, remove, convert or replace any electrical, gas, mechanical or plumbing system, the installation of which is regulated by this code, or to cause any such work to be done, shall first make application to the building official and obtain the required permit.

R105.3, Application for Building Permits. To obtain a permit, the applicant shall first file an application therefore in writing on a form furnished by the **BENZIE COUNTY BUILDING SAFETY AND CODE ENFORCEMENT DEPT** for that purpose. Such application shall:

1. Identify and describe the work to be covered by the permit for which application is made.
2. Describe the land on which the proposed work is to be done by legal description, street address or similar description that will readily identify and definitely locate the proposed building or work.
3. Indicate the use and occupancy for which the proposed work is intended.
4. Be accompanied by construction documents and other information as required in Section R106.1 and 106.3.
5. State the valuation of proposed work.
6. Be signed by the applicant, or the applicant's authorized agent.
7. Give such other data and information as required by the building official.

R105.3.2, Time limitation of application. An application for a permit for any proposed work shall be deemed to have been abandoned 180 days after the date of filing, unless such application has been pursued in good faith or a permit has been issued; except that the building is authorized to grant one or more extensions of time for additional periods not to exceed 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.

R105.5, Expiration. Every **permit** issued shall become invalid unless the work authorized by such **permit** is commenced within 180 days after its issuance, or if the work authorized by such **permit** is suspended or abandoned for a period of 180 days after the time the work is commenced.

R105.6, Suspension or revocation. The building official is authorized to suspend or revoke a **permit** issued under the provisions of this code wherever the **permit** is issued in error or on the basis of **incorrect, inaccurate or incomplete information**, or in violation of any **ordinance or regulation** or any of the provisions of this code.

SECTION R106, CONSTRUCTION DOCUMENTS, Residential

R106.1 Submittal documents. Two (2) sets of construction documents shall be submitted with application.

R106.1.1 Information on construction documents. Construction documents shall be drawn upon suitable material. Electronic media documents are permitted to be submitted when approved by the building official. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this code and relevant laws, ordinances, rules and regulations, as determined by the building official.

R106.1.2 Manufacturer's installation instructions.

R106.1.3 Information for construction in areas prone to flooding.

R106.1.4 Truss design data.

R106.2 Site plan. The construction documents submitted with the application for permit shall be accompanied by a site plan showing the size and location of new construction and existing structures on the site and distances from lot lines. In the case of demolition, the site plan shall show construction to be demolished and the location and size of existing structures and construction that are to remain on the site or plot.

R106.4 Amended construction documents. Work shall be installed in accordance with the approved construction documents, and any changes made during construction that are not in compliance with the approved construction documents shall be resubmitted for approval as an amended set of construction documents.

MICHIGAN REHABILITATION CODE for EXISTING BUILDINGS

ALL permits issued for existing buildings will be covered by the provisions of this code. Which may include all or parts of the 2009 MICHIGAN RESIDENTIAL CODE. **ALL** documents listed in **R106** shall be provided, (when they apply) for existing buildings also.

This and the following information will help you better expedite your application for permits. The following documents are the proper way to do site, foundation, house, elevation and cross sections plans. You should consider adding general construction notes to your plans, such as follows to take care of some of the code issues that are required in the submittal documents.

General Construction Notes (Residential)

1. Minimum compressive strength of concrete will be, Basement Walls/Footings/Basement Slabs: 2500psi at 28 days. Basement/Foundation Walls: 3000psi at 28 days if exposed to weather.* Garage Floors/Exterior Concrete: 3500psi at 28 days.*
* Air-entrain if subject to freeze/thaw during construction.
2. All foundation walls will be Damp or Water proofed to grade as required per code.
3. Window wells required for emergency escape shall have a horizontal dimensions that allow the door or window to be fully opened. Horizontal dimension of window well shall provide a minimum net clear area of 9 sq. ft. with a minimum horizontal projection and with of 36 inches. Window wells with a vertical depth greater than 44" below adjacent ground level shall be equipped with a permanently affixed ladder or steps usable with the window in the fully open position. (R310.2)(R310.2.1)
4. All sills will be pressure treated lumber, installed with ½" Anchor bolts no greater than 6ft.apart and within 12 inches of the end of each sill.
5. Surface drainage shall fall a minimum of 6 inches within the first 10 feet away from foundation. **Exception:** Where lot lines, walls, slopes or other physical barriers prohibit 6 inches of fall within 10 feet, drains or swales shall be provided to ensure drainage away from the structure.
6. Design live loads have been figured (at a minimum) for this structure with Ground Snow loads of 60 psf, Wind Speed of 90 MPH, Seismic Design Category A, Weathering Severe, Floor load in non-sleeping areas at 40 psf, in sleeping areas at 30 psf, Deck loads at 40 psf and garage floors at 50 psf. Dead loads will be added with live loads to safely design and construct all building loads.
7. All stairways will be a minimum of 36 inches in width, landings a minimum of 36 inches in width and depth, riser height a maximum of 8 ¼ inches, tread run a minimum of 9 inches nose to nose, nosing's not less than ¾ inch or greater than 1 ¼ inches shall be provided on stairs with solid risers. Solid risers are not required if openings between treads do not exceed 4 inches section R311.7.
8. All parts of the stairway will have head room with a minimum of 6 feet 8 inches R311.7.2.
9. All handrails will be graspable and installed between 34 and 38 inches with returns R311.7.7 thru R311.7.7.3.
10. All guardrails will be a minimum 36 inches in height section R312.
11. Enclosed accessible space under stairways shall be protected with ½ inch drywall or if a mechanical device is installed under stairway R302.7.
12. Attic access will be provided with a minimum opening of 22 x 30 inches.
13. Access to under floor spaces shall be a minimum of 18 x 24 through the floor or a minimum of 16 x 24 through the perimeter.
14. Smoke alarms shall be provided throughout structure as required by the code section R314.
15. Where loose fill insulation is used depth markers will be installed and a signed insulation certificate furnished.
16. Openings between the garage and residence shall be equipped with solid wood doors not less than 1 3/8 inches in thickness, solid or honeycomb core steel doors not less than 1 3/8 inches thick, or 20 minute fire-rated doors. (R302.5.1)
The garage shall be separated from the residence and its attic area by not less than ½-inch gypsum board applied to the garage side. Garages beneath habitable rooms shall be separated from all habitable rooms above by not less than 5/8-inch type X gypsum board or equivalent. (R302.6)
17. Moisture Vapor Retarders shall be installed on the warm-in-winter side of the insulation, in all framed walls, floors and roof/ceilings comprising elements of the building thermal envelope.(R601.3)
18. Flashings shall be provided to meet section R703.8.
19. Beam pockets that enter exterior masonry or concrete shall have at least a 1/2" air space, top, sides and end unless durable or pressure treated wood is used. R317.1(4)

1. Footings and/or Foundations:

(A) Minimum compressive strength of concrete required: (Table R402.2)

Basement Walls/Footings/Basement slabs: 2500psi at 28 days.

Basement/Foundation walls: 3000psi at 28 days if exposed to weather.*

Garage Floors/Exterior Conc: 3500psi at 28 days.*

(B) Minimum Size:

Spread footings shall at least be 6” in thickness. Footing projections shall be at least 2” and shall not exceed the thickness of the footing. Minimum width shall be in accordance with Table R403.1 based on load-bearing capacity of soil. (R403.1.1) Fill soils shall be designed, installed and tested in accordance with accepted engineering practice. (R401.2)

TABLE R403.1
MINIMUM WIDTH OF CONCRETE OR MASONRY FOOTINGS (inches)

	LOAD-BEARING VALUE OF SOIL (psf)			
	1,500	2,000	3,000	4,000
Conventional light-frame construction				
1-story	12	12	12	12
2-story	15	12	12	12
3-story	23	17	12	12
4-inch brick veneer over light frame or 8-inch hollow concrete masonry				
1-story	12	12	12	12
2-story	21	16	12	12
3-story	32	24	16	12
8-inch solid or fully grouted masonry				
1-story	16	12	12	12
2-story	29	21	14	12
3-story	42	32	21	16

For SI: 1 inch = 25.4 mm, 1 pound per square foot = 0.0479 kN/m2.

Note: Foundation construction shall be capable of accommodating all loads according to Section R301 in lieu of a complete geotechnical evaluation, the load-bearing values in Table R401.4.1 shall be assumed.

SOIL CLASSIFICATIONS for use with tables R404.1.1(1) through R404.1.2(6)

Description of Soil/Backfill Material		Class	Description of Soil/Backfill Material			Class
GROUP I	Well-graded, clean gravels; gravel-sand mixes	GW	GROUP II	Clayey sands, poorly graded sand-clay mixes		SC
	Poorly graded clean gravels; gravel-sand mixes	GP		Inorganic clays of low to medium plasticity		ML
	Silty gravels, poorly graded gravel-sand mixes	GM		Mixture of inorganic silt and clay		ML-CL
	Silty sands, poorly graded sand-silt mixes	SM		Inorganic clays of low to medium plasticity		CL
	Well-graded, clean sands; gravelly-sand mixes	SW	GROUP III	Inorganic clays of high plasticity		CH
	Poorly graded clean sands; sand-gravel mixes	SP		Inorganic clayey silts, elastic silts		MH
GROUP II	Clayey gravels, poorly graded gravel-and-clay mixes	GM	GROUP IV	Organic silts and silt-clays, low plasticity		OL
	Sand-silt clay mix with plastic fines	SM-SC		Peat/highly org	Pt	Organic clays and silty clays

(A) Design Loads: Building and structures shall be designed and constructed to support safely all loads, including dead loads, without exceeding allowable stresses. Some minimum live loads;

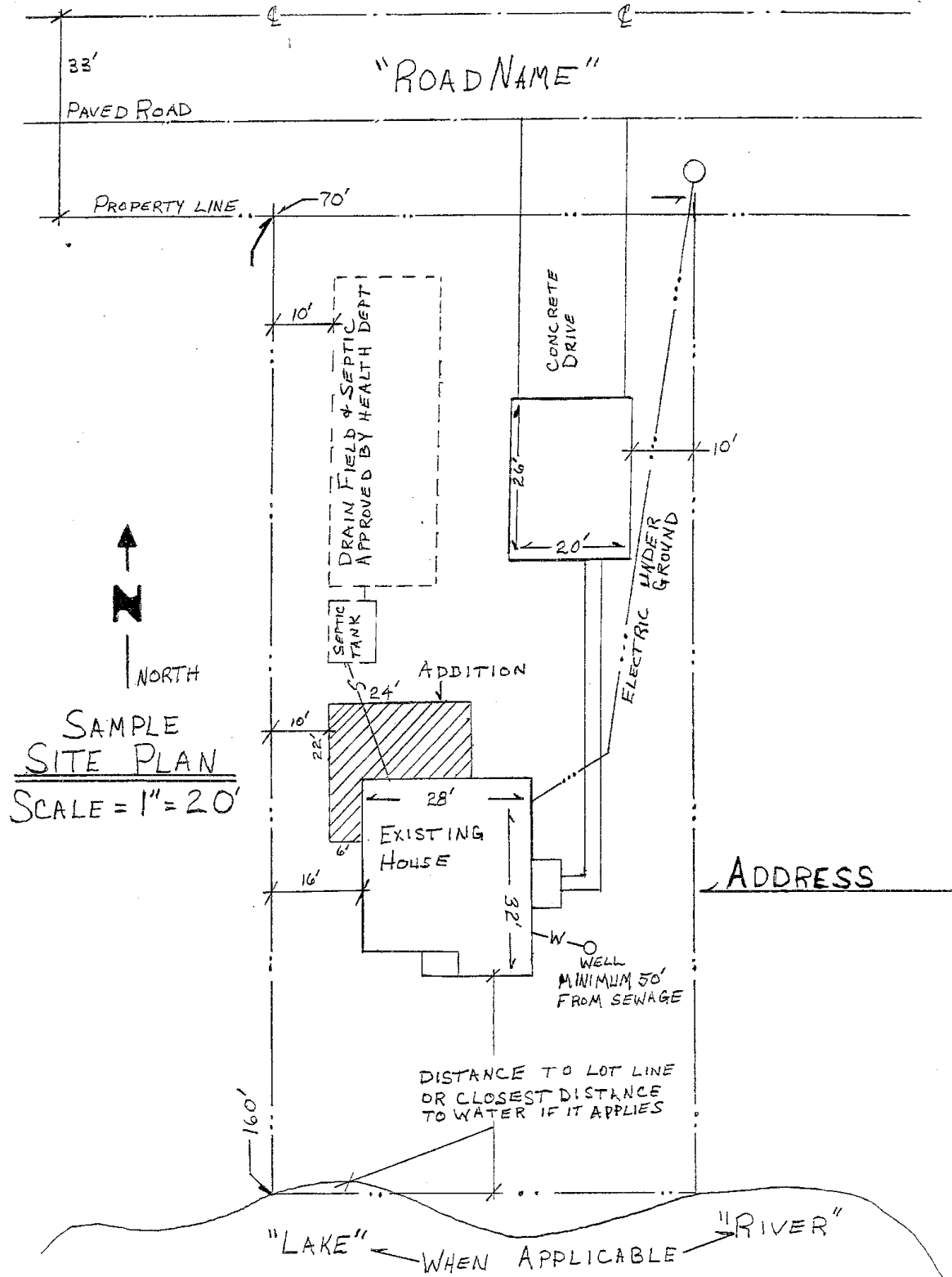
1. Snow loads: 60 psf ground(R301.5, Figure R301.2(5))
2. Wind Speed: 90 MPH (R301.2.1.4)
3. Seismic prov: Category A
4. Floor load 40 lbs. ft² for non sleeping areas.(R301.5)
30 lbs. ft² for sleeping areas (R301.5)
40 lbs. ft² for decks (R301.5)
50 lbs. ft² for garage floors, elevated garage floors shall be capable of supporting 2,000-pound load applied over a 20-square-inch area. (R301.5)
200 lbs. ft² Guardrails and handrails, a single concentrated load applied in any direction at any point along the top. (R301.5)
60 lbs. ft² Exterior balconies (R301.5)
20 lbs. ft² Attics with storage, no storage with roof slopes not over 3/12
10 lbs. ft² Attics without storage

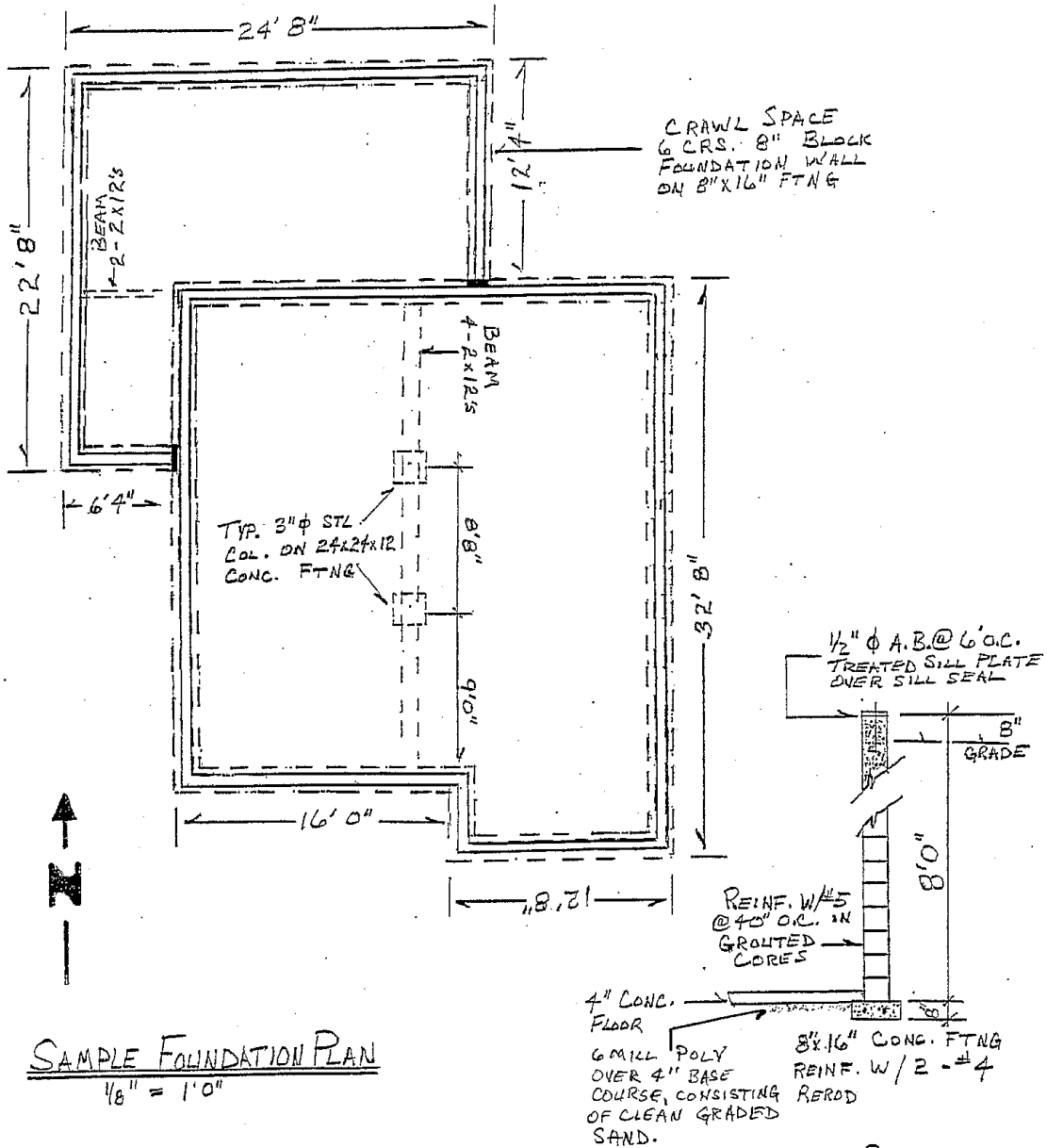
Roof snow live load: The live load resulting from roof snow may be determined by assuming a uniform roof snow load of 60 PSF, without adjustments (R301.5) or by an alternative evaluation under ASCE-7-05 which reflects adjustments for roof slope, sliding and drifting snow.

Provide Full sets of scaled drawings of all required information on minimum paper size of 18 x 24 unless approved by department prior to submission.

Drawings shall include a site plan, foundation drawings, floor plans, elevations from all sides, and cross sections with all load points shown. Truss details or alternative, energy information (Res Check or Alternative) and all other required permits from other agencies.

The next pages are just a sample of how plans should be submitted, depending on each individual project.

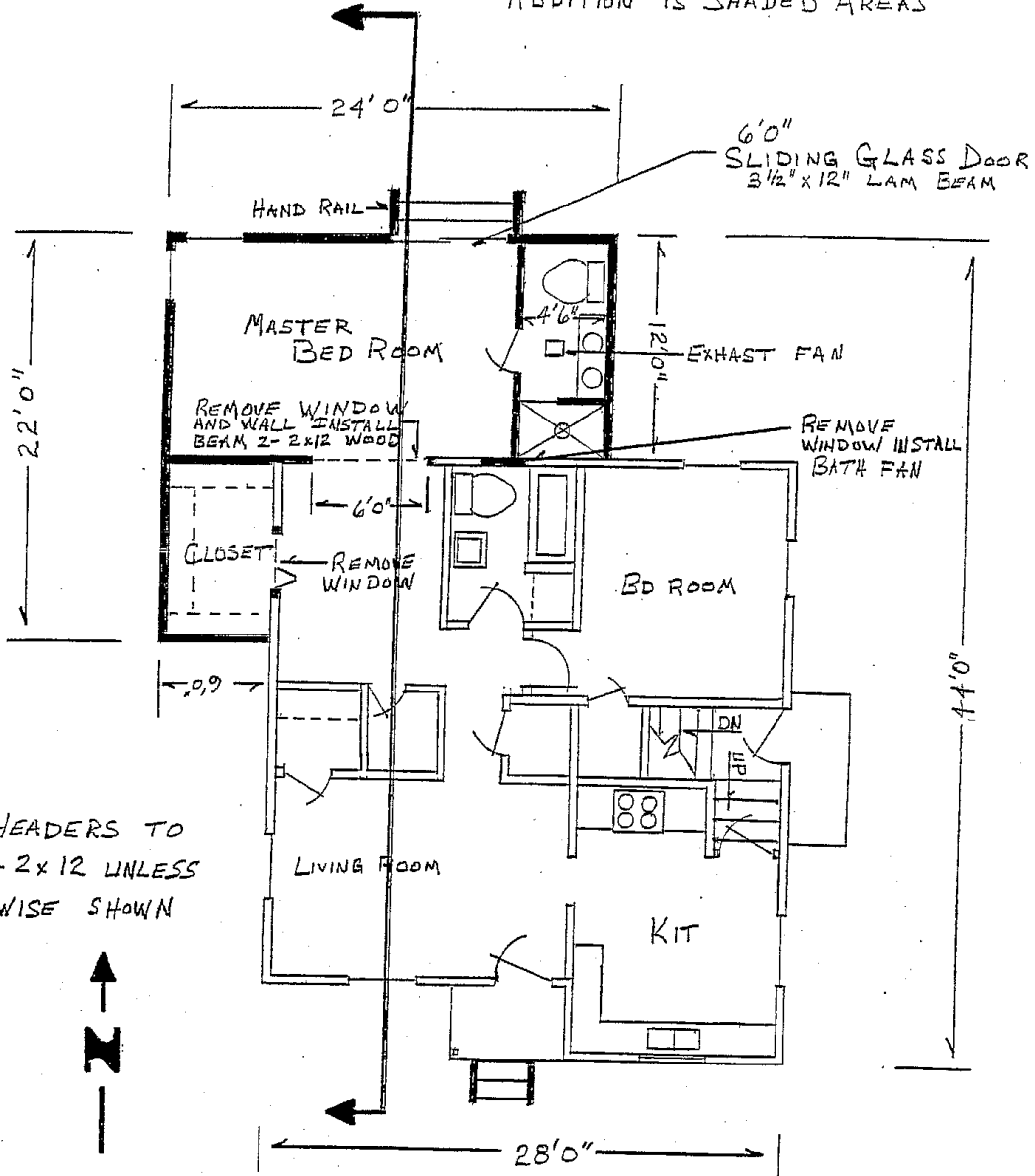




SAMPLE FOUNDATION PLAN
1/8" = 1' 0"

TYPICAL SECTION
1/4" = 1' 0"

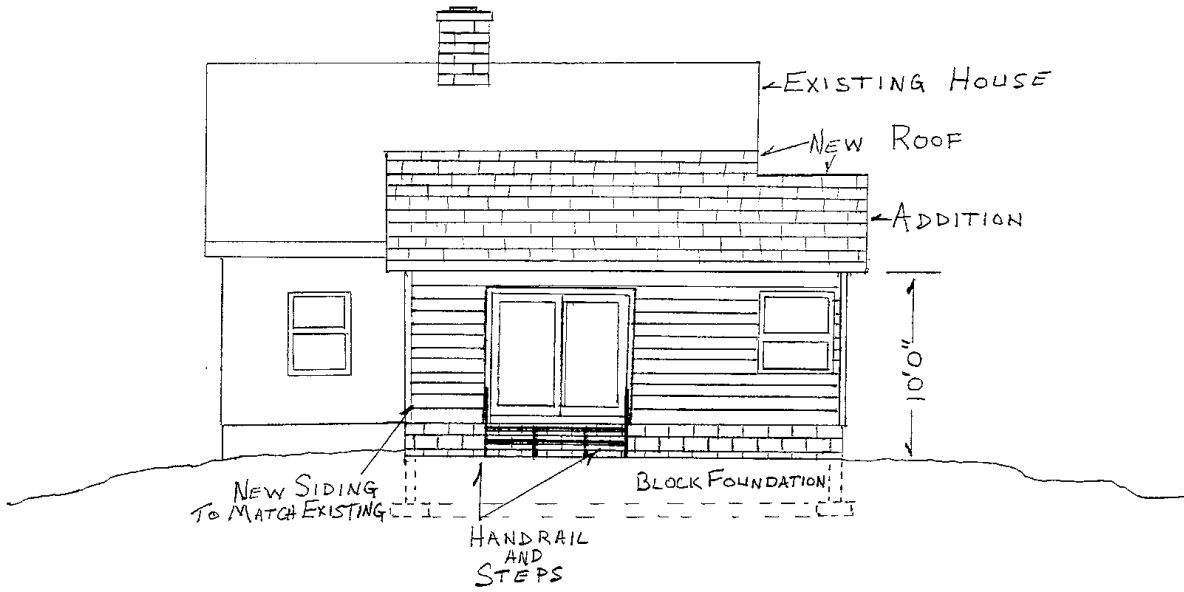
ADDITION IS SHADED AREAS



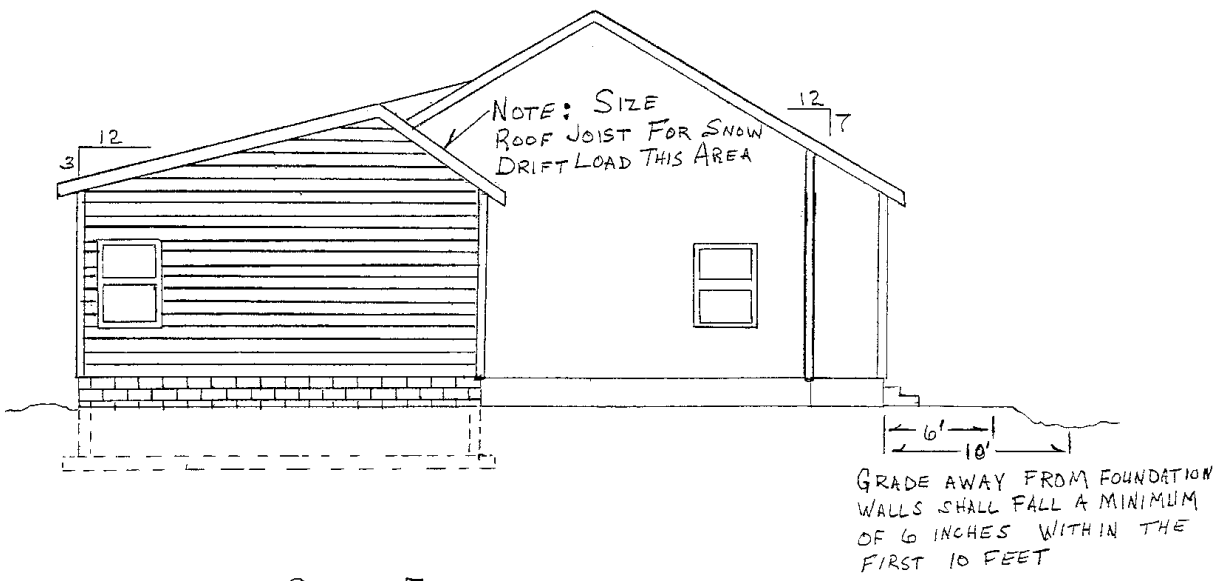
ALL HEADERS TO
BE 2-2x12 UNLESS
OTHERWISE SHOWN

SAMPLE HOUSE PLAN

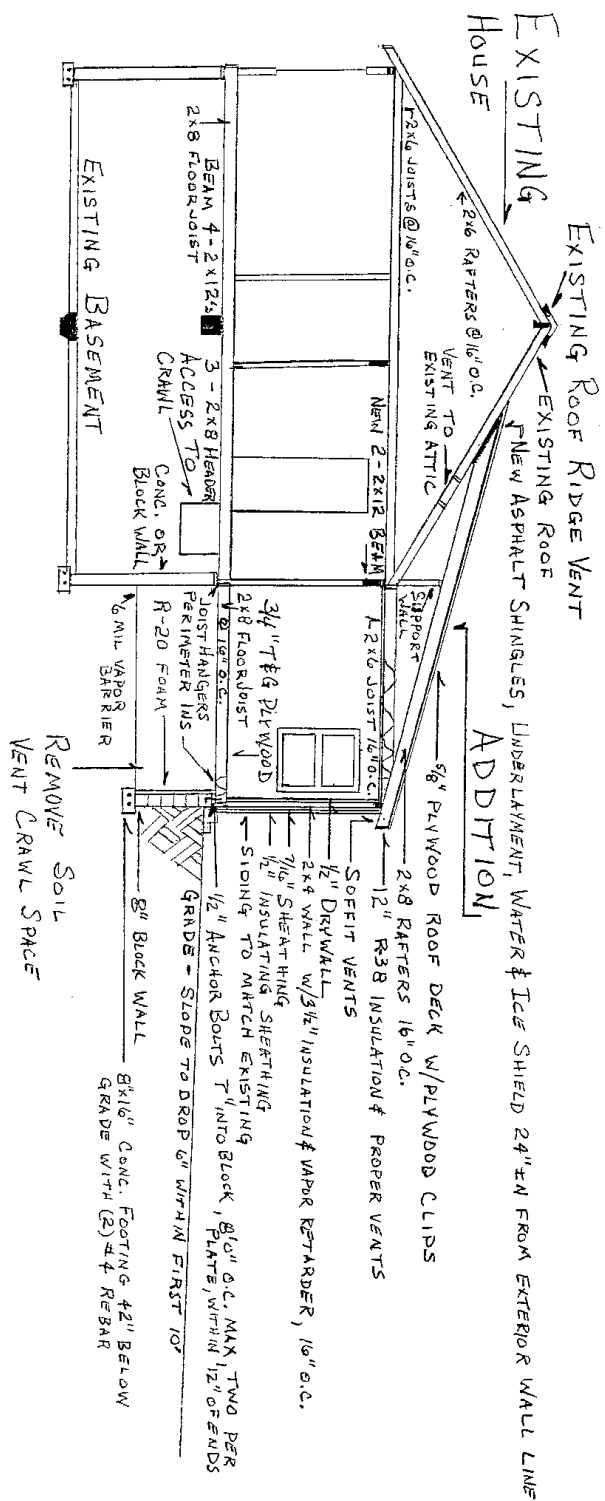
SCALE: 1/8" = 1'0"



REAR ELEVATION
SCALE 1/8" = 1'0"



SIDE ELEVATION
SCALE 1/8" = 1'0"



SAMPLE CROSS SECTION

1/8" = 1'0"