- Inbound/Outbound window placement
- Window buck & air sealing
- Weep holes

IN THE WOODS

DETAILS - WINDOW SILL

RIVER VIEW

PRE-EXISTING SITE

Program:

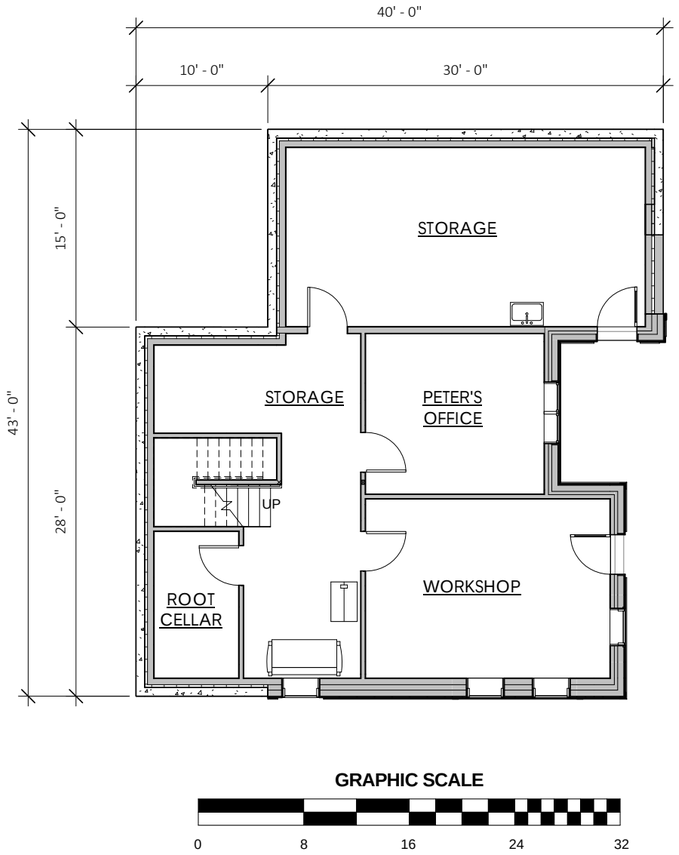
- Traditional farmhouse
- Single level living potential
- Garage connection
- River views
- Walk-out basement to accommodate slope

RIVER VIEW

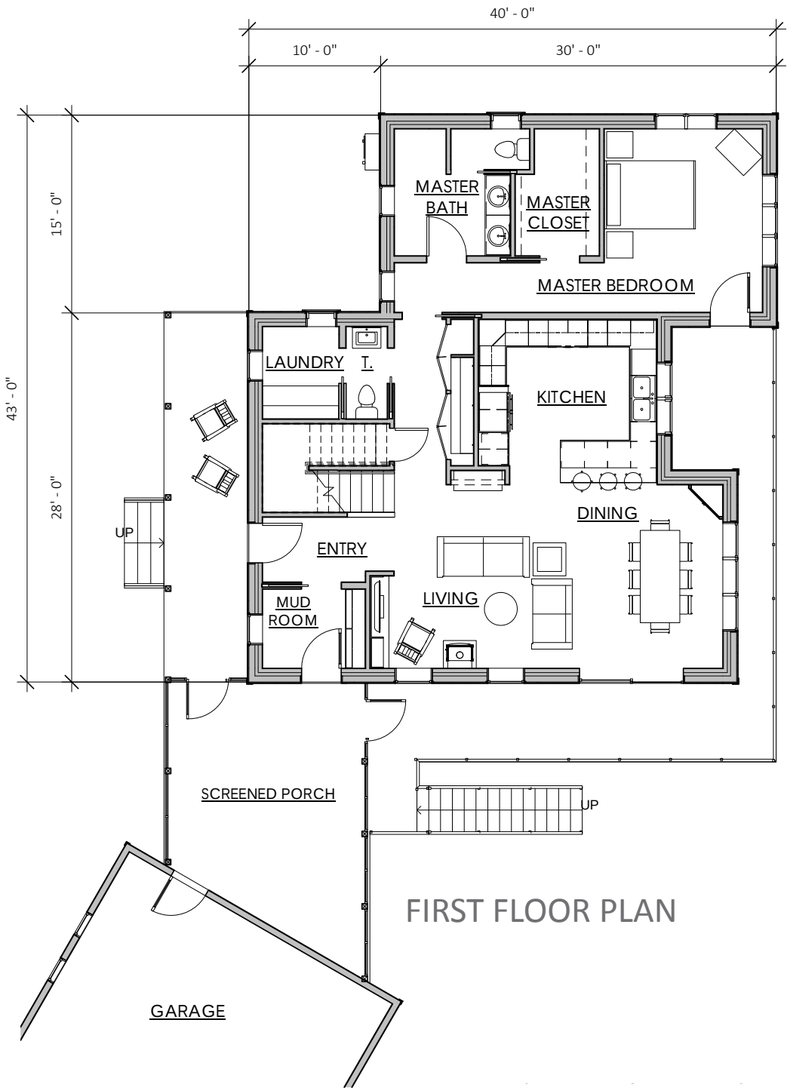
GOALS, INSPIRATION & CONSTRAINTS

RIVER VIEW

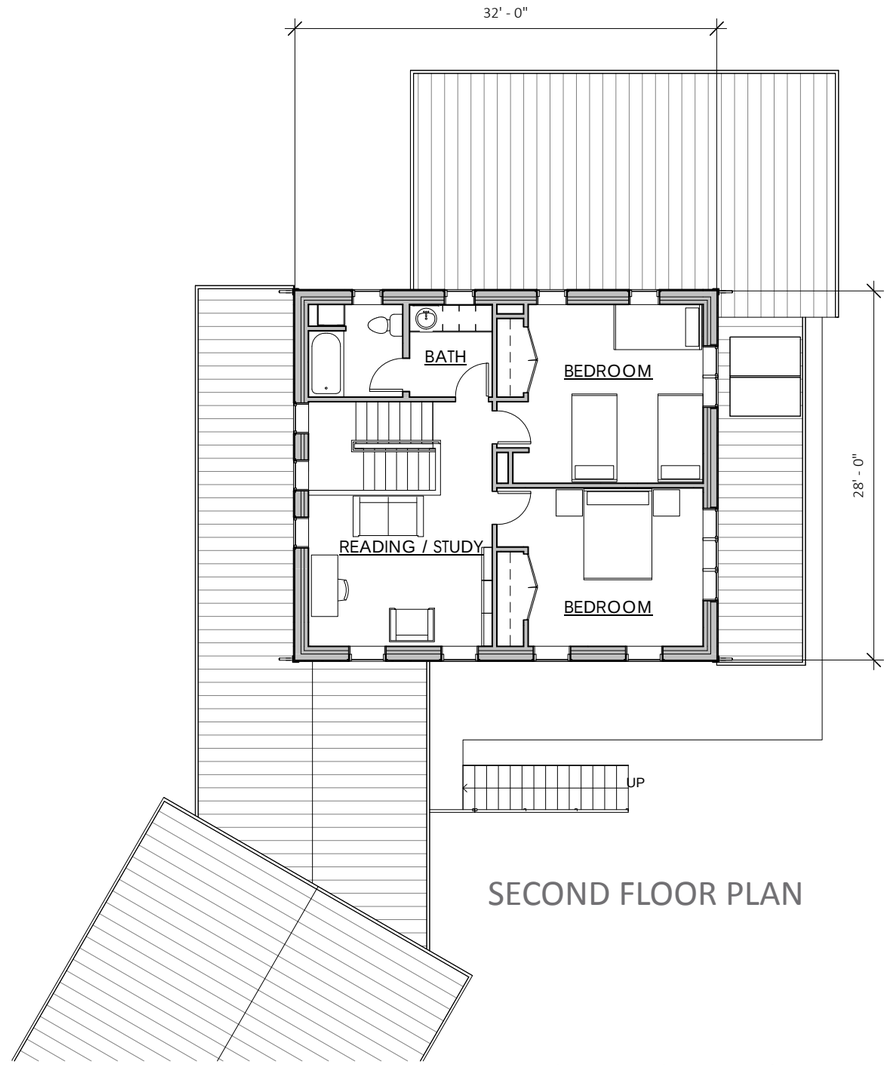
SITE PLAN



BASEMENT FLOOR PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN

RIVER VIEW

FLOOR PLANS

ENVELOPE SYSTEMS:

Foundation:

- 8” (R-30) EPS under 4” concrete slab
- Concrete footing/ foundation wall with 2” XPS

Wall:

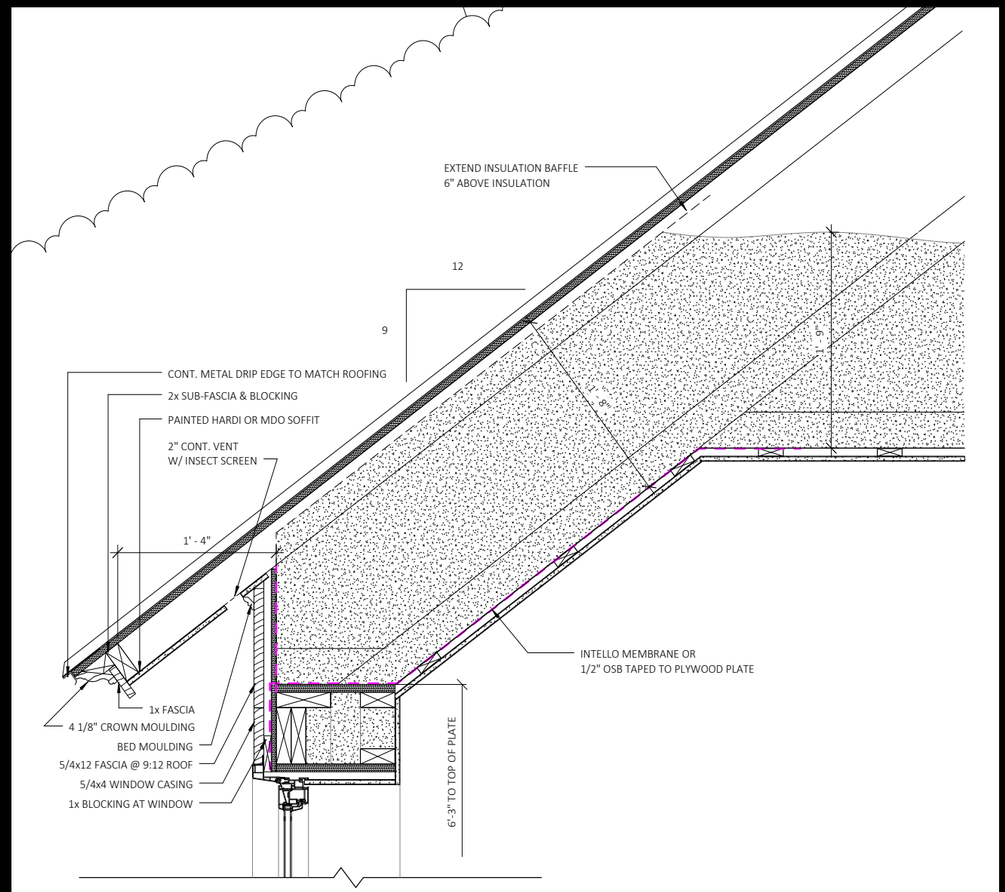
- 2x4 stud with R-20 batt insulation
- Double stud wall with airtight drywall
- Dense pack cellulose
- Rigid insulation w/ spray foam at rim joists
- Taped plywood sheathing with Mento membrane WRB
- Strapping
- Hardi prefinished clapboard siding

Roof:

- Raised heel truss with 6’ or 9’ plate height
- Intello vapor/air control layer
- Loose blown cellulose
- Stick framed screen porch

HVAC:

- Venmar HRV (156 cfm) with 6” metal duct
- 5 heat pump heads w/ 1 outdoor compressor
- Woodstove
- Heat pump hot water heater
- Bathroom electric radiant floors under tile



2 Typical Eave Detail
1 1/2" = 1'-0"

RIVER VIEW

WALL SECTION - DOUBLE STUD

HERS: 33, 12 with PV

(Home Energy Rating System)

Net-Zero operation with mostly wood heat.

Square Feet: 3756 sf w/basement, Volume: 31,021 cu ft
Blower Door: 203 cfm50, .4 ACH50

Predicted energy use:

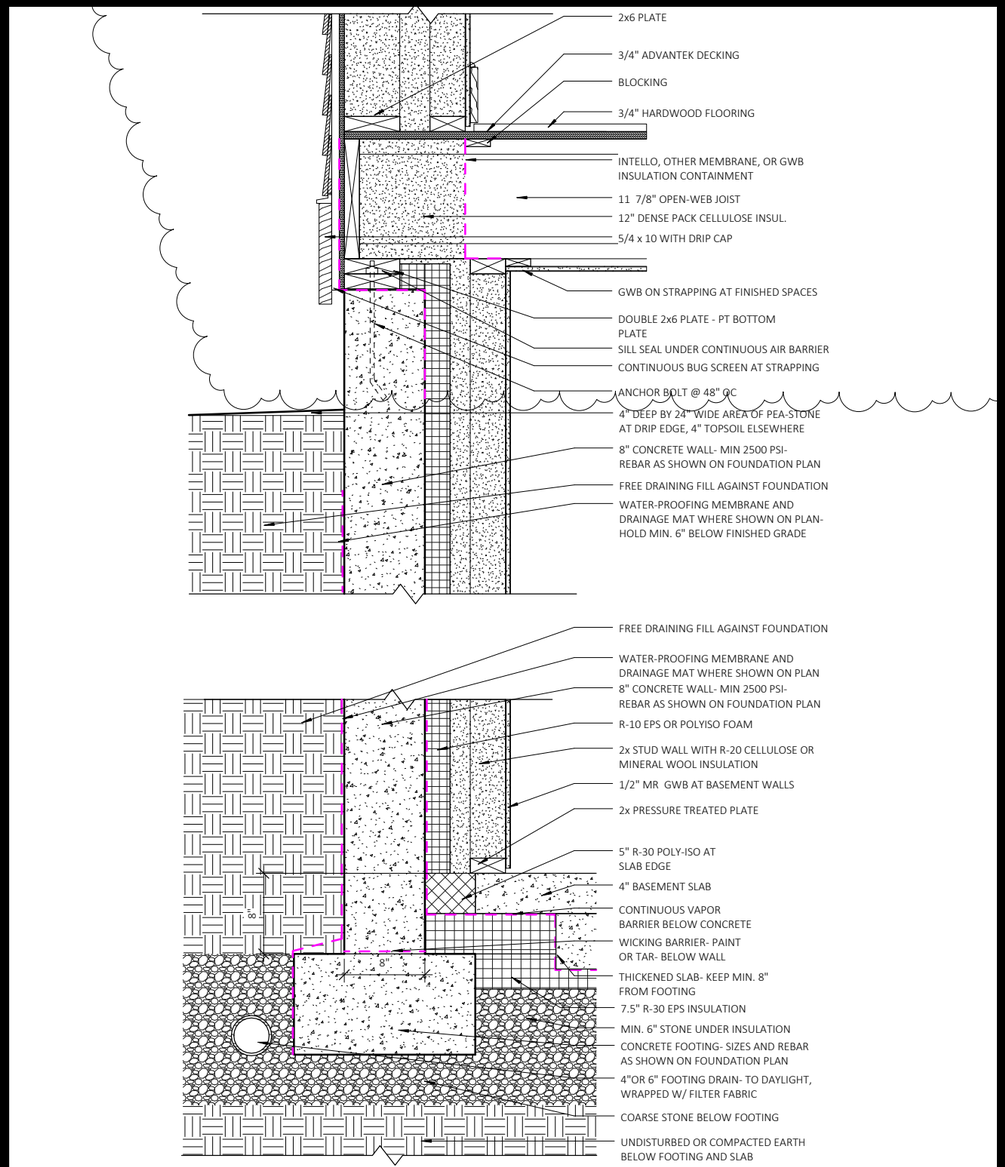
48.8MMBtu/yr w/o PV production ($2237),
20.2 MMBtu ($1000) with 6.6kw PV panels

Actual Energy Use:

51 MMBtu/yr, 15 kbtu/sf/yr,
Electric: 5303 kwh, $1200
1.5+/- cord wood (22 MMBtu/cord),

PV Production:

7227kwh



1 Typical Footing At Full Height Concrete Wall
1 1/2" = 1'-0"

RIVER VIEW

PROJECT SPECS

Keep poly flat to ensure tape adherence

Find the easiest method

RIVER VIEW

UNDER SLAB POLY STRATEGIES

Keep poly down until roof is on

Cut poly as close to sheathing as possible

RIVER VIEW

AIR SEALING AT FOUNDATION

Try to create flat surfaces for ease of taping

RIVER VIEW

AIR SEALING AT ROOF TO WALL CONNECTIONS

Go over install procedures thoroughly

RIVER VIEW
WINDOWS

Air tight drywall method can work well

Caulking

Can spray foam

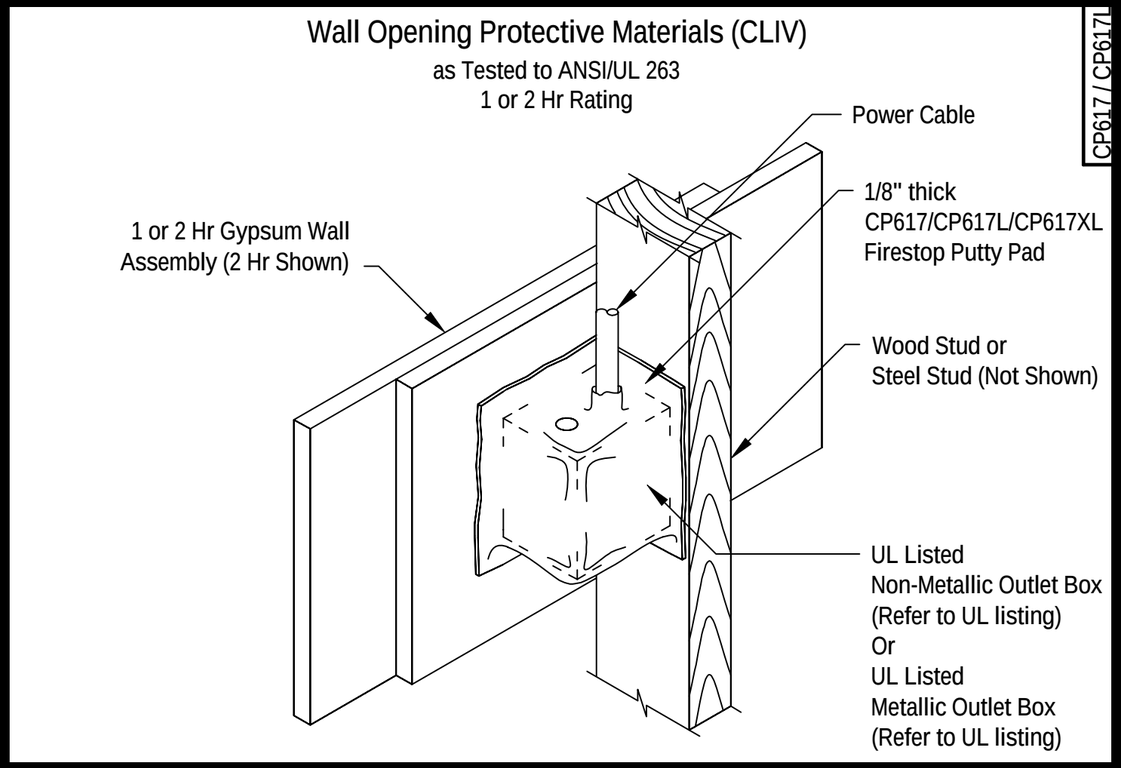


Figure out roof panel layout with pv layout/roof penetrations in advance

RIVER VIEW

ROOF & SOLAR LAYOUT

Help out mechanical/plumbing contractors

Options on duct work