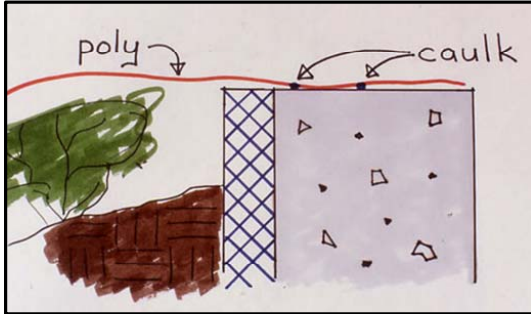
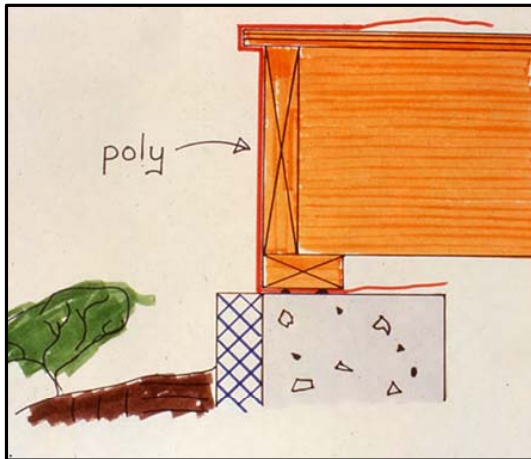


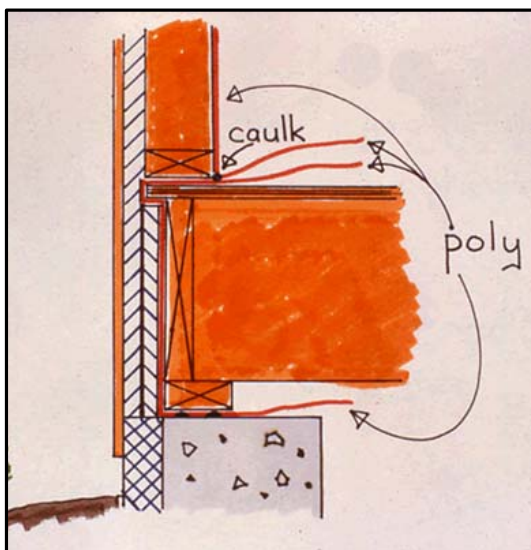
# Rim poly connection to wall poly



Place large bead of butyl caulk on top of foundation wall. Place poly into caulk.



Install plate, rim joist, and plywood deck. Deck is overlapped 1 inch to receive extra inch of rigid insulation. Wrap poly around rim and lay on deck.

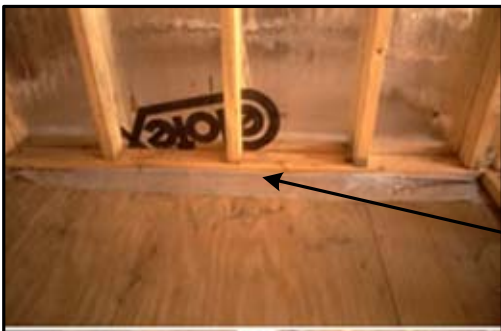


Repair and damage to poly just prior to installing rigid insulation against rim. Raise wall into place from deck. When timing appropriate, install wall insulation and poly, caulking wall poly to rim poly.



## 2x2/2x4 Wall System Details

While other systems may be used, the principles of the wall system can be replicated.



Wall prior to insulation.  
Rim poly is visible and will be caulked to wall poly when installed.



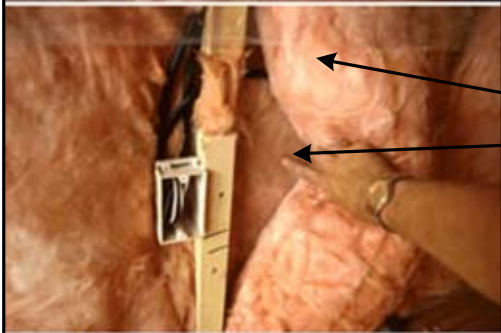
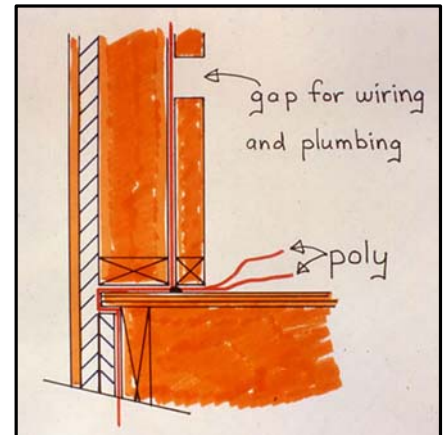
Wall insulated and polyed.  
Wall poly caulked to rim poly.



2x2's installed over 2x4's.  
A gap is left in 2x2 wall as a chase for wiring and plumbing.  
Wide electrical boxes are used.



Closeup of 2x2's and chase left for wiring.

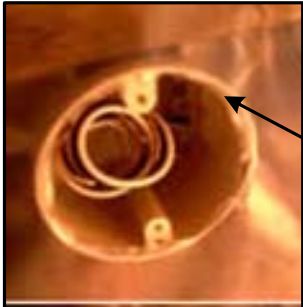


2x2 cavity insulation installed.  
Pointer finger is touching poly between 2x2 and 2x4.

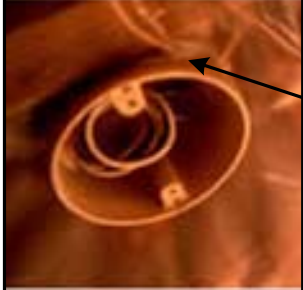


6 inch strips of poly are used as "belts" to hold 2x2 insulation in place until sheetrock.

# Ceiling Details for Penetrations and Ceiling Poly.



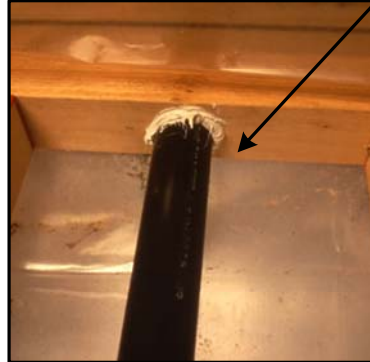
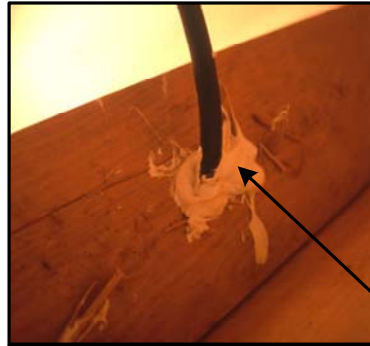
Cut poly diameter slightly less than perimeter of penetration.



Stretch poly tight around perimeter of penetration.



Caulk poly to penetration, including wire penetrations inside box.



Before ceiling insulation is blown, caulk wire and plumbing penetrations to framing member on the attic side and below



Note wall poly which will be caulked to ceiling poly.

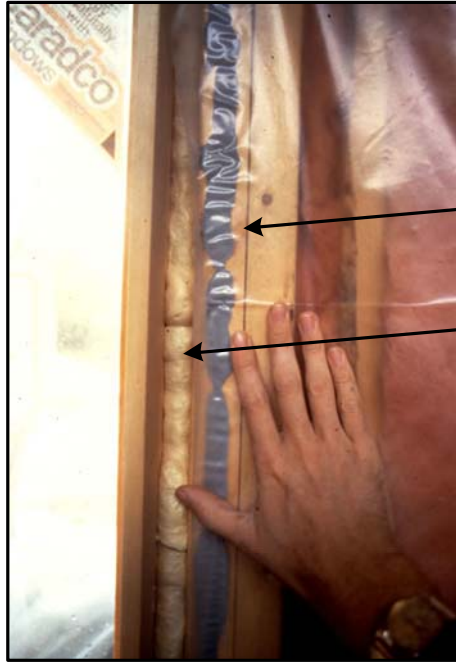


Run ceiling poly with joints parallel to ceiling framing in vault or flat ceilings. Caulk joints with butyl caulk directly under framing so that sheetrock will compress caulk. Caulk ceiling poly to wall poly.

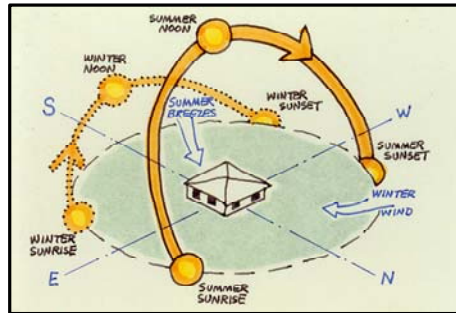
# Window Details / Sun Strategy



Whatever your window framing/window jamb configuration is, it is critical to complete a “seamless” seal between the air infiltration barrier and the window component.

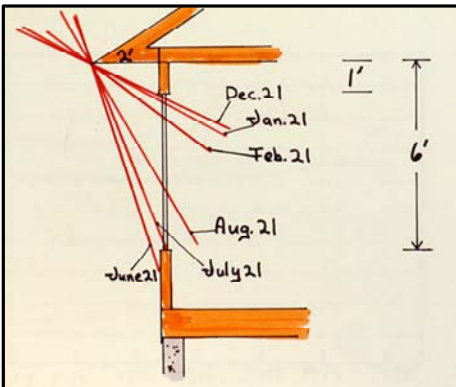


In this configuration, the poly is caulked with a butyl caulk to the stud creating the rough opening for the window.  
The gap or space between the window and stud is filled with a low expansion foam.



Window configuration dramatically impacts the overall performance of a residential structure. The motto is, “Place windows where they help you. Don’t place windows where they hurt you.” From the summer sun’s path, we can see that the east and west will be impacted by the morning and afternoon sun. However, the south windows, based upon the sun’s angle, will generally provide a glancing blow, which can be controlled by effective overhangs.

Since the western sun is in the heat of the day, the west window is enemy number one. The east window is enemy number two. By controlling the summer sun’s access to the south window, we can minimize its impact on cooling, and use it to our advantage for winter heating.



At our latitude, a 1:3 ratio of overhang to soffit-to-bottom-of-glazing ratio can control summer sun effectively.

Exterior tree plantings are critical to the west-southwest of western glass to control the afternoon sun’s impact. This location allow the sun to be low enough in the sky for a tree to impact the sun’s “line of sight” in the heat of the day. The east-southeast tree planting is also important. Just as many BTUs from the sun enter the structure through the east glass as the west glass.

