

Sunroom and Skylight Details

The Drawings:

These drawings allow you to use insulated glass panels for sunrooms, skylights, glass roofs and window walls. Often the least expensive and most durable glazing you can find for large glass panels will be the tempered glass panels sized as replacement units for sliding glass patio doors. These usually come in standard sizes such as 28" x 76" (5' slider), 34" x 76" (6' slider), and 46" x 76" (8' slider). Panels can also be made taller (for 8' high doors). These details allow you to adjust the framing for the size of glazing you require.

Before finalizing the size and type of glass you will use, check with your local building official. Tempered glass is very strong and when it does fail it breaks into many small "popcorn" type pieces so it is much safer for overhead glass. However, there may be local limits on the span or specifications on the thickness of the glass panels. Some areas require wire glass for certain installations. Much of this depends on the local snow, wind and earthquake loads. This is for overhead glass — vertical walls will not usually have these issues.

This glazing system is based on a very tough waterproof tape which adheres to almost anything forming a highly flexible flashing. This allows for the tolerances required for site built wood framing. If installed under damp conditions, the tape will re-adhere when conditions are again dry and warm. Adhesion improves

with age. The 2 mil aluminum face, if left exposed, has a 20 year life and the butyl rubber itself will not quickly degrade or harden in sunlight. This tape was originally designed for use in the North Slope Alaskan oil fields. It was used to seal and tape sections of prefabricated housing modules together.

The non-standard parts of this glazing system include the butyl rubber flashing tape, neoprene (hard rubber) setting blocks, and double stick glazing tape. These can be ordered from local glazing suppliers or from a mail order company such as Charley's Greenhouse Supply (1-800-322-4707, charliesgreenhouse). The butyl rubber flashing tape is manufactured by Kendall Tape Co. and is called "Foilastic". You can do a web search for a local supplier. Here is another supplier (Fleetco).

This may not be the ultimate material for site built glazing systems, and I'm sure there are people who will still be able to build skylights that leak, but it is far superior to other inexpensive systems such as caulks and flashings. Feel free to use these drawings to adapt the system to your specific situation.

Like all our drawings, you can add any specific notes or changes to these details and cut & paste them into your final plan set. Please let us know of any improvements you develop that you think would be of interest to others.

The PlanHelp staff

General Notes:

- Outside face of the foundation wall is 2" inside the exterior framing line @ all sunroom sides. Alert contractor.
- In high wind and seismic areas use metal ties between post & sill and rafter to post & ledger.
- Spacer block will vary with glass thickness, add thickness of glazing tape to glass for total thickness of block.
- Glass rests on 2 neoprene settings blocks @ 1/4 width of panel from each end. Insure that both panes of glass are supported by this block.
- Rough openings for glass panels: vertical (long) = glass + 1/2" (for setting Blks), width (sides) = glass + 1/4". Height of 4x4 post = glass - 1". Confirm that these cover internal spacer bar.
- Center to center spacing of posts & beams = glass + 1-3/4"

Reference Note Codes:

- TH-175-C = Rob Thallon, "Graphic Guide to Frame Construction", 2000, page 175, detail C.
- W-54 = John Wagner, "House Framing", 1998, p. 54.

Sunroom Details



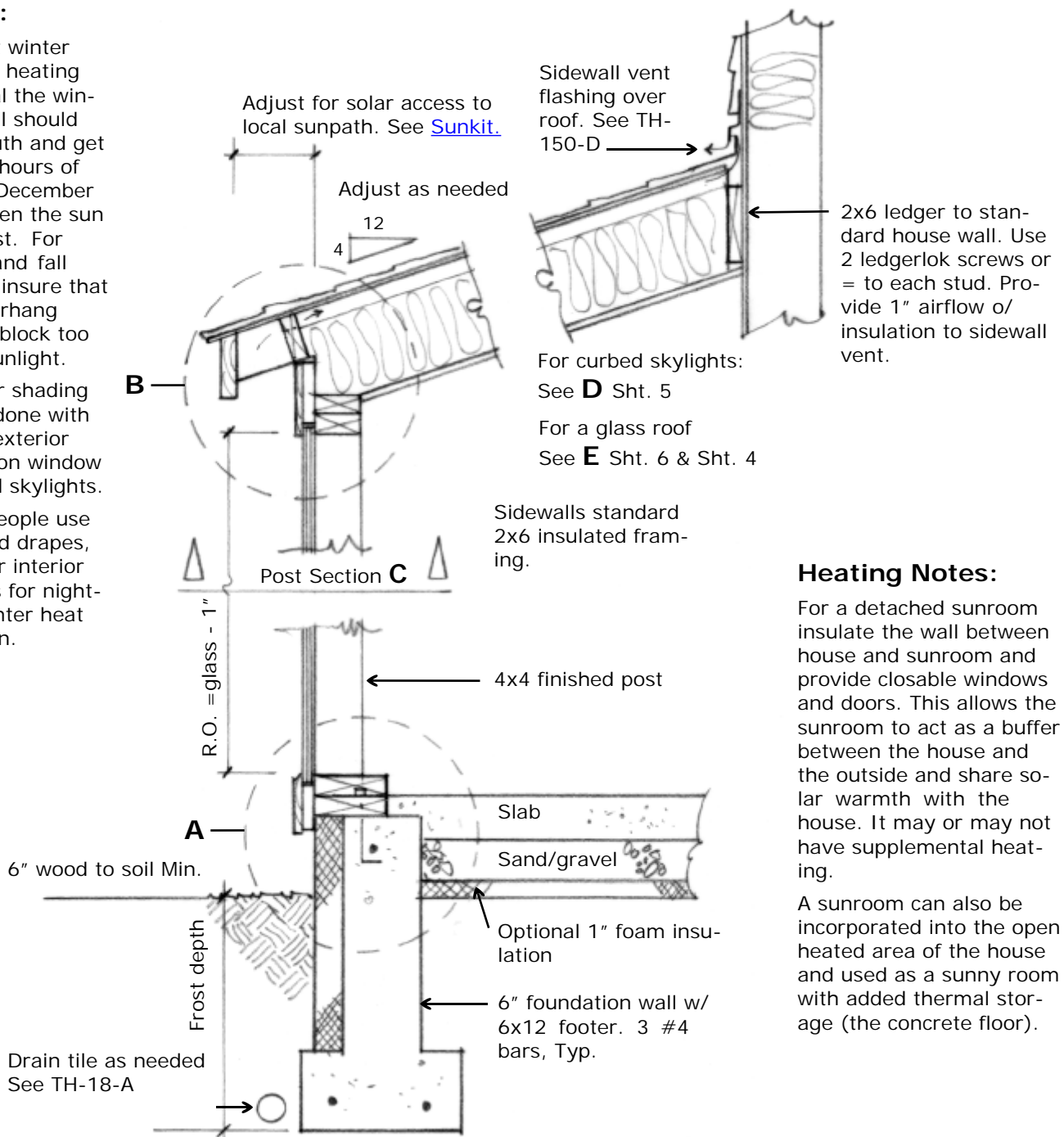
Solar Access

Notes:

For best winter sun and heating potential the window wall should face south and get several hours of sun on December 21st when the sun is lowest. For spring and fall heating insure that the overhang doesn't block too much sunlight.

Summer shading can be done with roll-up exterior shades on window wall and skylights.

Some people use insulated drapes, blinds or interior shutters for night-time winter heat retention.



Heating Notes:

For a detached sunroom insulate the wall between house and sunroom and provide closable windows and doors. This allows the sunroom to act as a buffer between the house and the outside and share solar warmth with the house. It may or may not have supplemental heating.

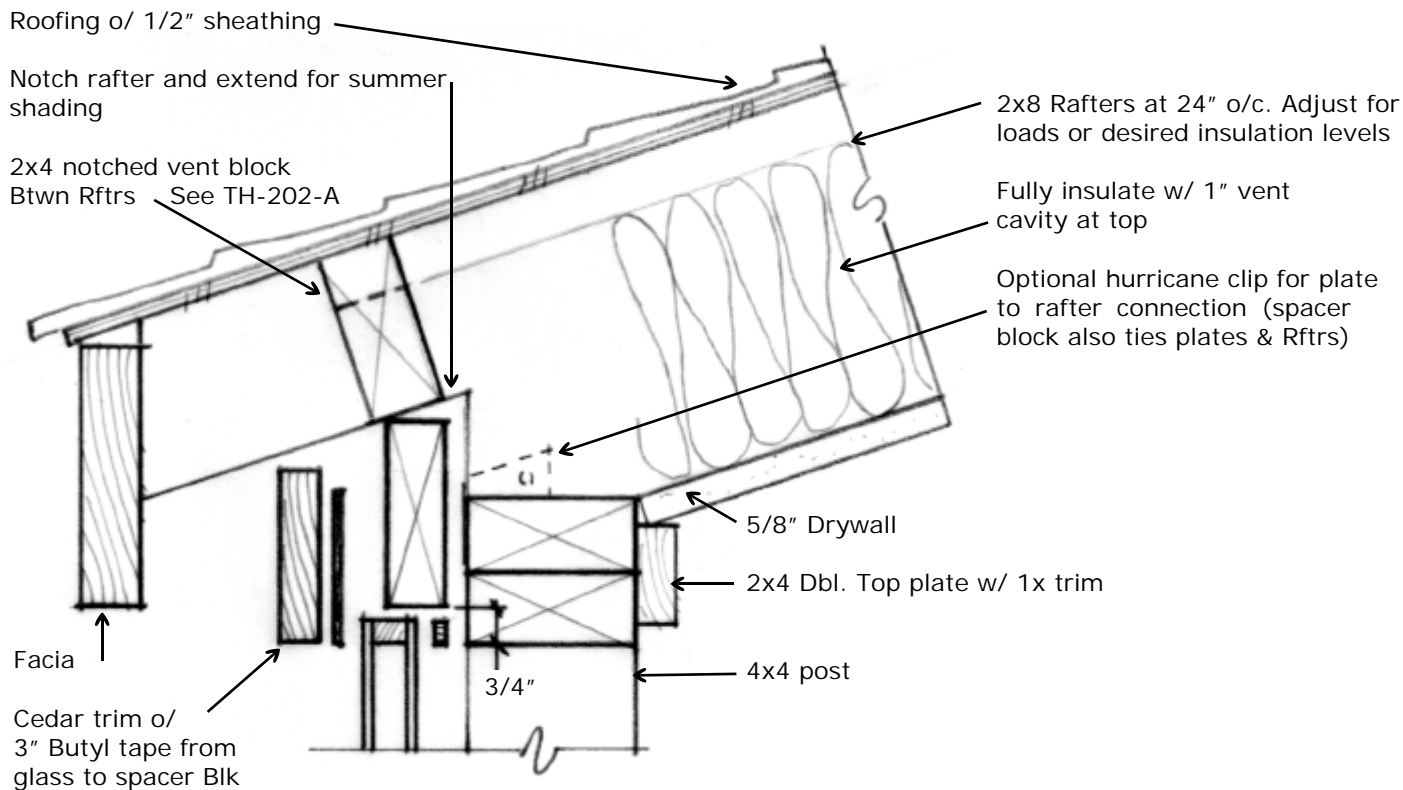
A sunroom can also be incorporated into the open heated area of the house and used as a sunny room with added thermal storage (the concrete floor).

Sunroom Cross Section

Scale 1" = 1'-0"

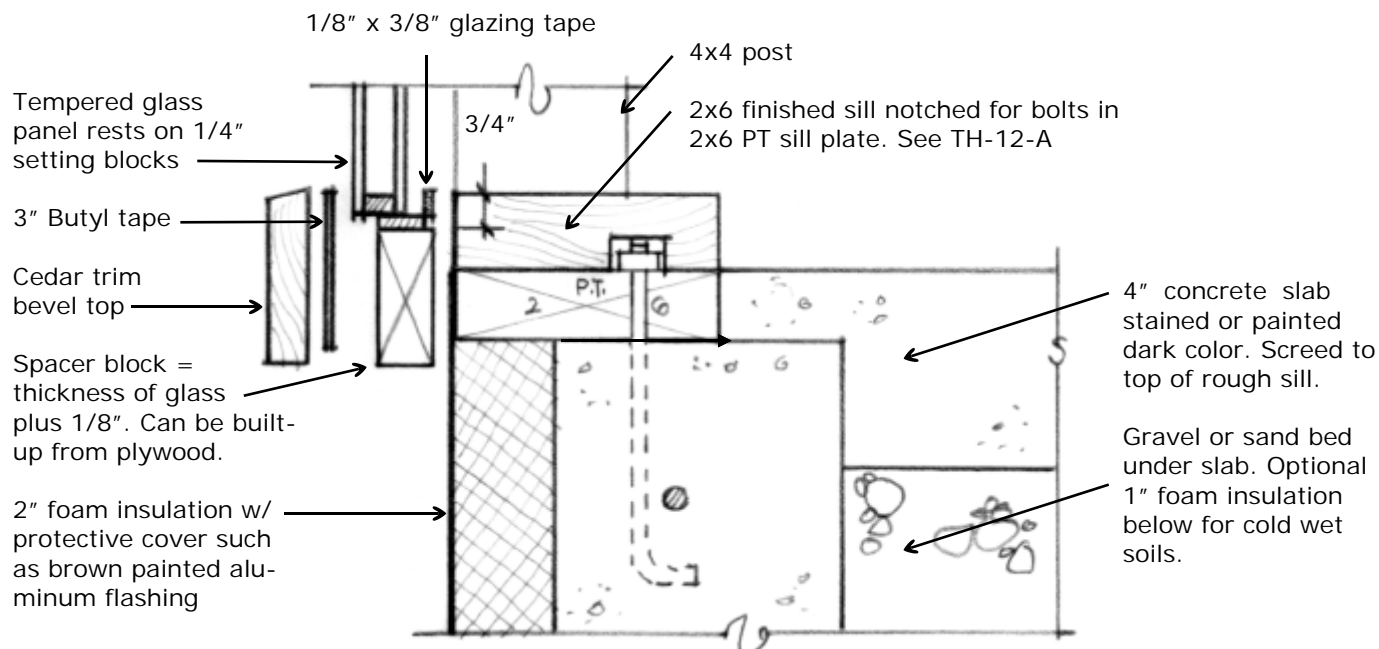
Sunroom Details





B - Head

Scale 3" = 1'-0

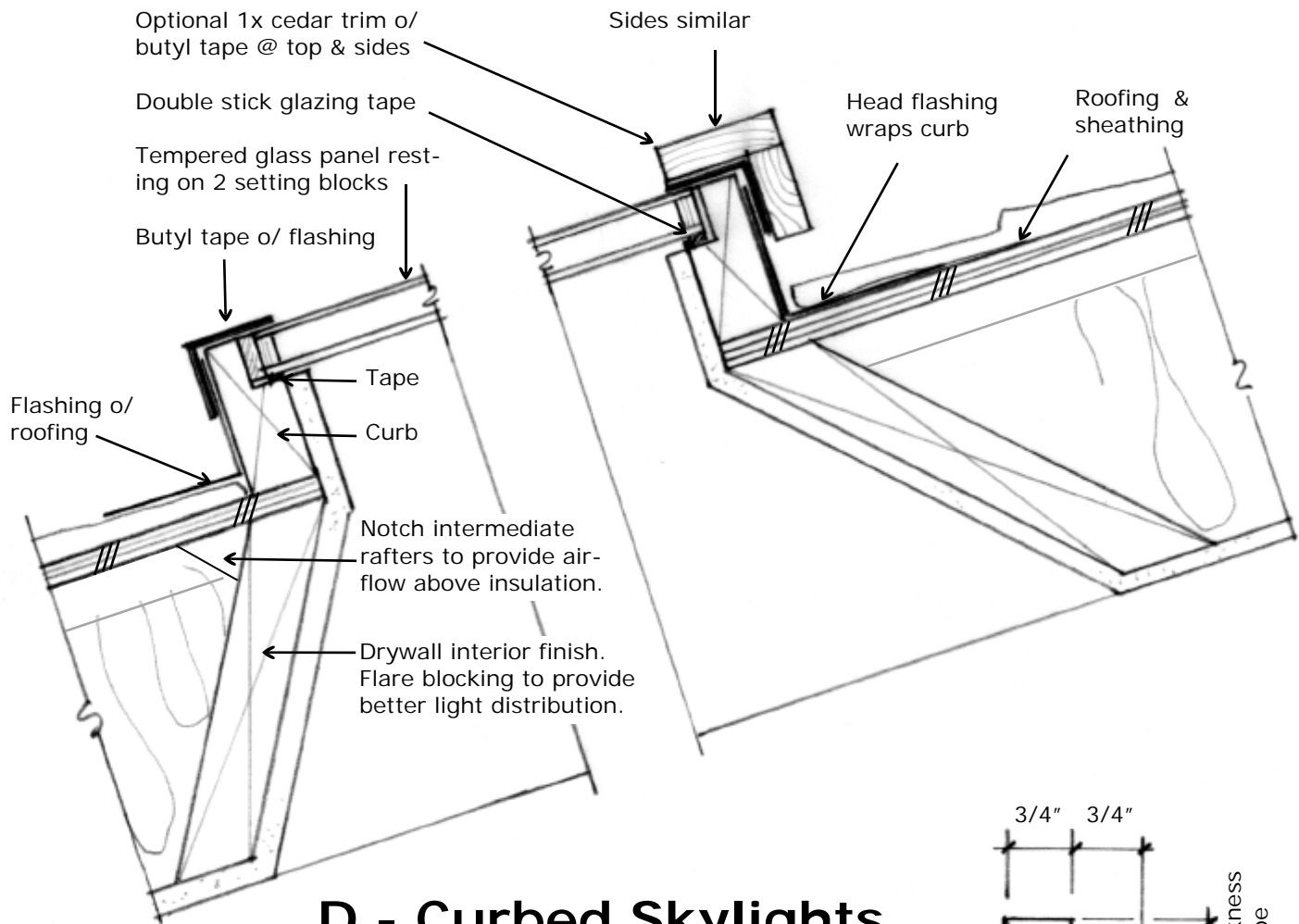


A - Sill

Scale 3" = 1'-0

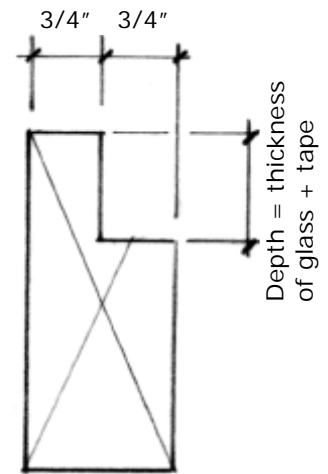
Sunroom Details





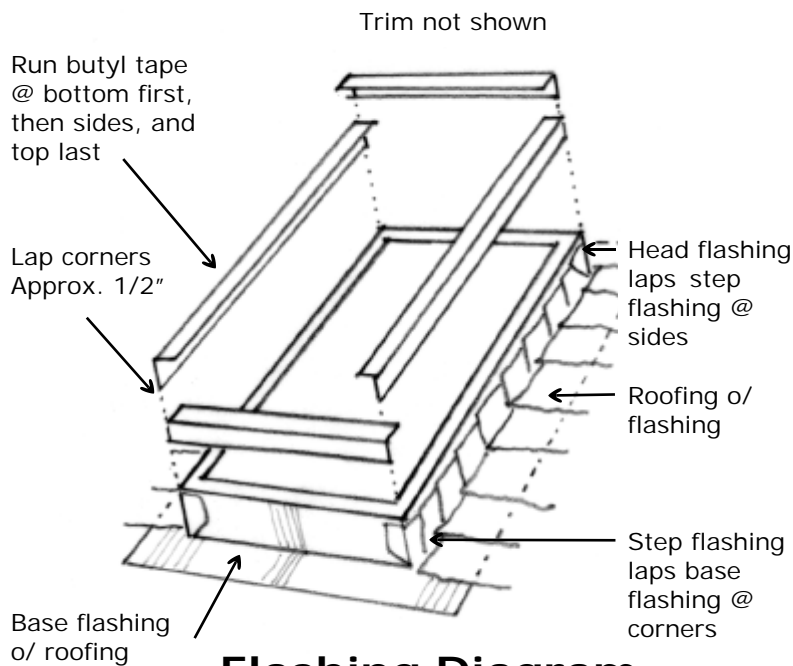
D - Curbed Skylights

Scale 3" = 1'-0



Use 2x4 curb for low profile roofing like asphalt & 2x6 for high profile like tile.

Curb Cut



Flashing Diagram

No scale

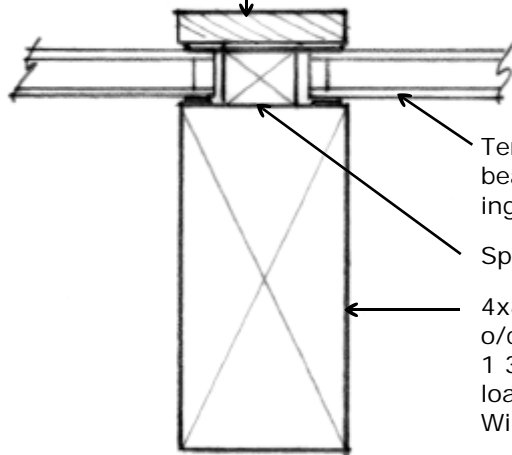
References:

- For additional information on flashing see TH-175-C
- For curbless skylights see TH-176-A.

Sunroom Details



1x4 cedar cap o/ butyl tape
glass to glass



Tempered glass panels to
beam w/ double stick glaz-
ing tape

Spacer block

4x8 #1 Doug Fir beam w/
o/c spacing = glass width +
1 3/4" (adjust for span and
load). Spans from head at
Window wall to house wall.

E4 - Overhead Beam

Scale 3" = 1'-0

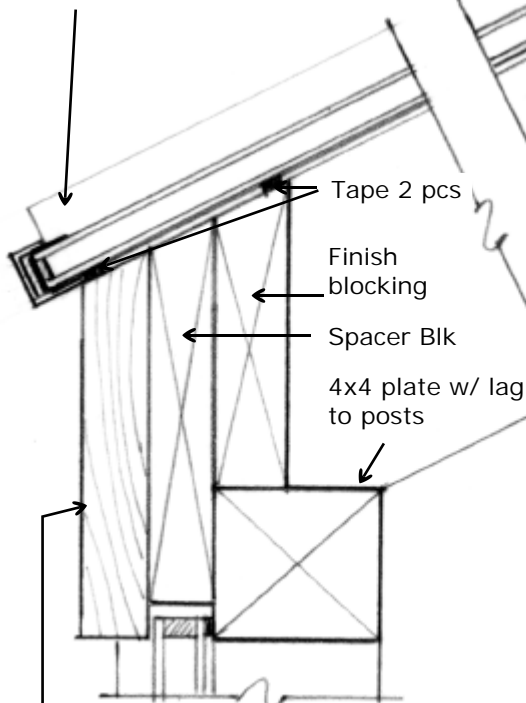
Butyl flashing tape

2 Setting blocks

Spacer block

Glazing tape

See clip detail &
notes sheet 4



E1 - Head

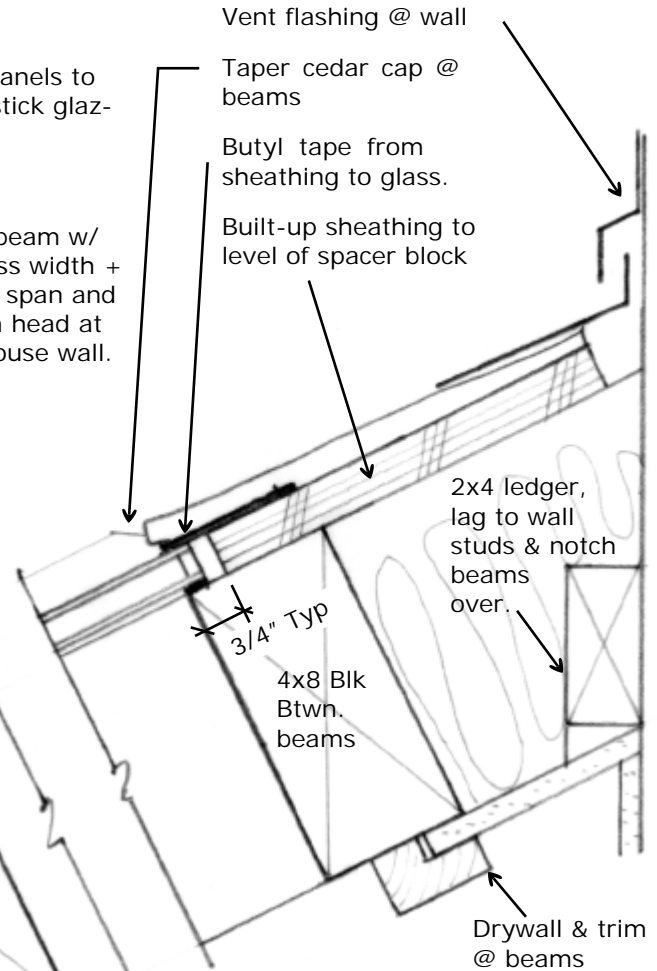
Cedar fascia w/ gutters as Req'd.

Vent flashing @ wall

Taper cedar cap @
beams

Butyl tape from
sheathing to glass.

Built-up sheathing to
level of spacer block



2x4 ledger,
lag to wall
studs & notch
beams
over.

3/4" Typ

4x8 Blk
Btwn.
beams

Drywall & trim
@ beams

E3 - Upper Cross Beam

E2 - Mid Cross Beam

E - Glass Roof Skylights

Scale 3" = 1'-0

Sunroom Details

