DANIEL O'WRIL, P.E.

STATE OF MAINE
DANIEL B. O'WRIL
No. 11998
LICENSED PROFESSIONAL ENGINEER
11/18/2011

Chad Thompson
93 Westland Ave.
Portland, ME

November 18, 2011

RE: 93 Westland Avenue Renovation project

On November 3, 2011 we met at your property located at 93 Westland Avenue in Portland, Maine. The residence was under construction at the time of my visit. The exterior walls were sheathed, the roof was sheathed, and the shingles were in place on the roof. From the interior of the building, the roof and wall framing were visible as no interior wall finishes were applied.

You instructed me that a building inspector from the City of Portland had reviewed the roof framing during a routine inspection and had specific concerns regarding the structural integrity of the roof framing. I reviewed two specific framing issues per your request.

The first item I reviewed was a ridge beam running from the southwest side of the house (labeled Ridge Beam 3 on Sketch SK-1). The ridge beam is a 1 ¾"x 11 7/8"LVL, and spans approximately 23'-0". This existing ridge beam was found to be overstressed according to current building code requirements. It is recommended that the contractor install a vertical support to reduce the span of the ridge beam to meet current building code requirements. The installation of this support is detailed on the attached sketches.

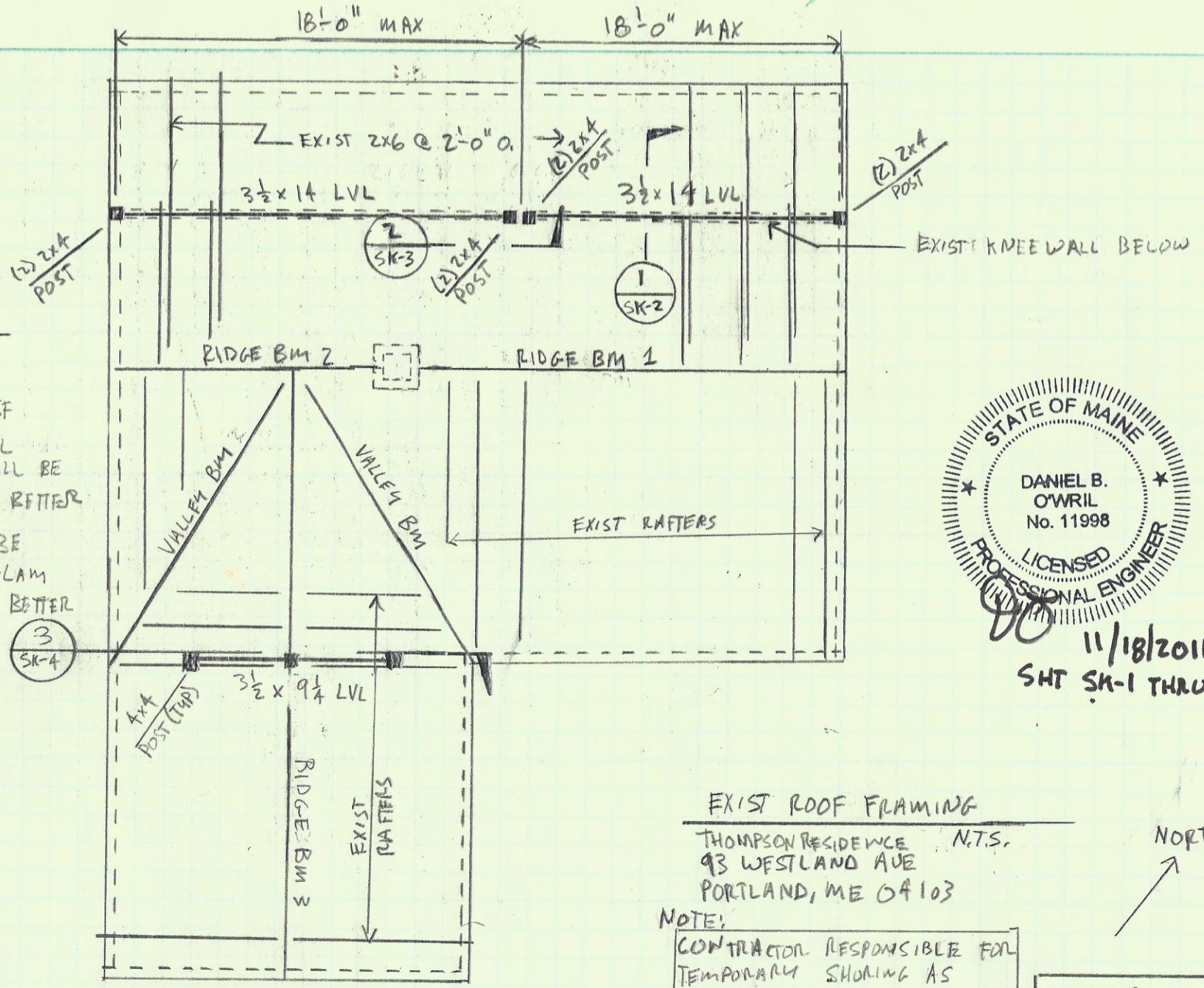
The second issue I reviewed was the roof rafters on the North side of the building. The original roof was reportedly lifted at the ridgeline to allow for more living space on the second floor. The rafters currently bear on the exterior wall at one end, a new knee wall at center span, and a new ridge beam at the other end. The new knee wall at center span is supported by the second floor framing. New rafters were sistered alongside the existing rafters to span from the knee wall to the center ridgeline. Upon review of this framing for code compliance, I found that the floor below the knee wall lacked the structural capacity to carry the roof loads from above. I recommend removing the existing knee wall and installing two LVL beams to remove the roof load from the existing floor framing. Details of this recommended repair are shown on the attached sketches.

I trust this letter will and the attached sketches will meet your current needs. Please don't hesitate to contact me if you or your contractor has any questions regarding the recommended repairs.

Daniel B. O'Wril, P.E.

Attached: Sketches SK-1 thru SK-5

phone: 207.749.4258 | 17 Victoria Street, Portland, Maine 04103 | dan.owril@gmail.com



NOTES:

1.) SNOW LOAD:
P_g = 60 PSF

2.) DIMENSIONAL LUMBER SHALL BE #2 SPF OR BETTER

3.) LVL SHALL BE BOISE VERSA-LAM 2.0 3100 OR BETTER

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SHT SK-1 THRU SK5

EXIST ROOF FRAMING

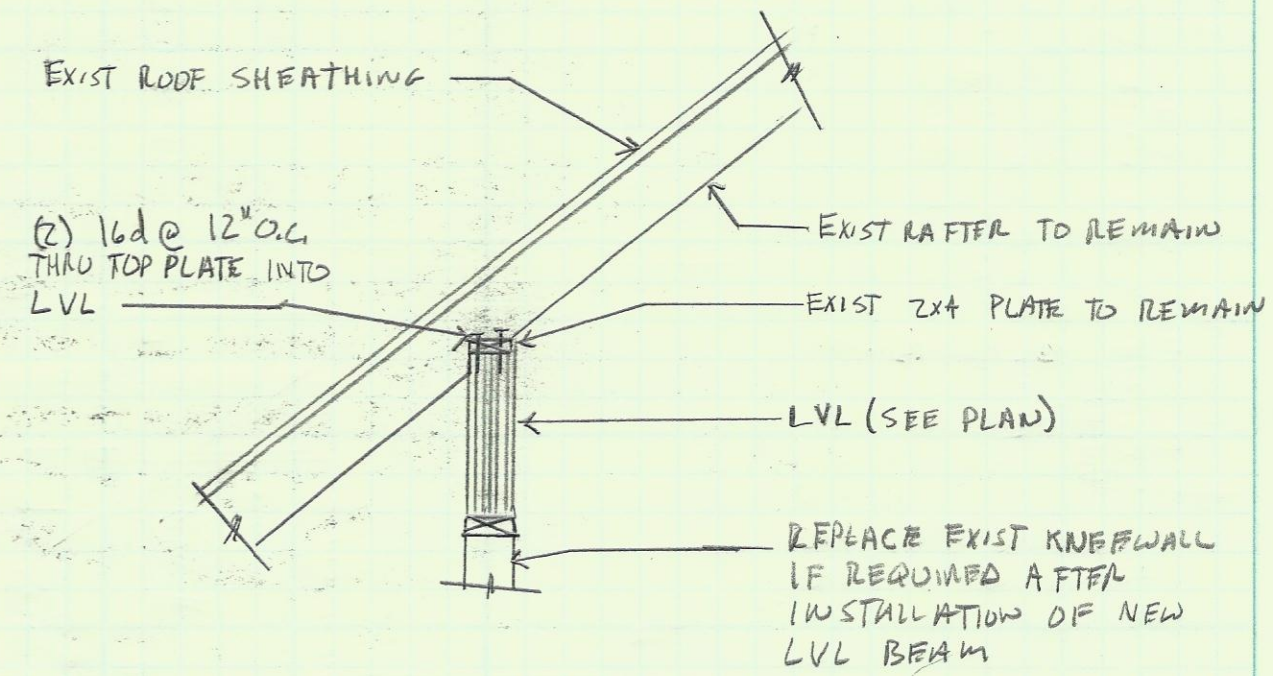
THOMPSON RESIDENCE
93 WESTLAND AVE
PORTLAND, ME 04103

N.T.S.

NORTH

NOTE:
CONTRACTOR RESPONSIBLE FOR TEMPORARY SHORING AS REQUIRED.

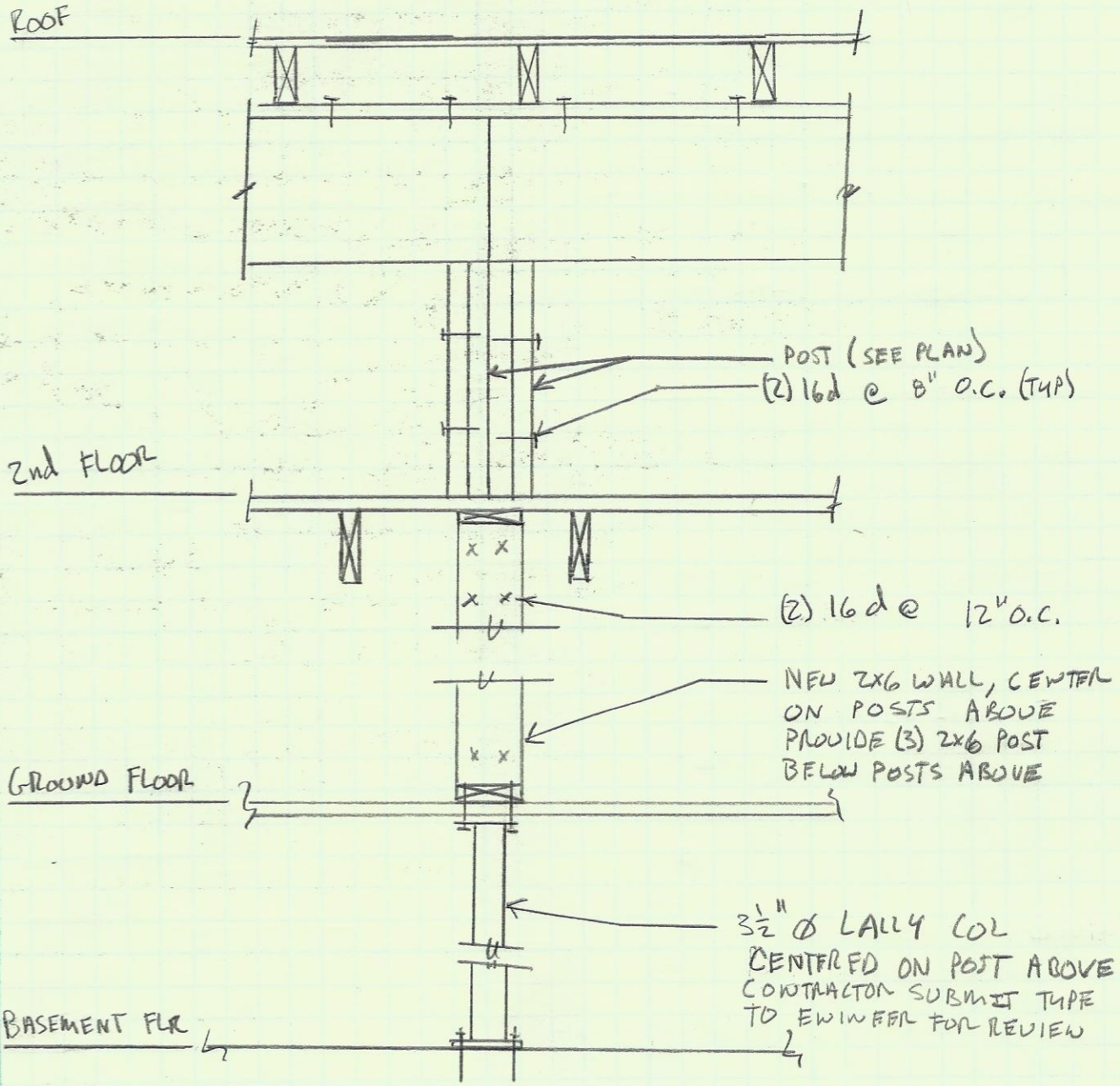
SK-1
1 OF 5



SECTION 1

REF SK-1 3/4" = 1'-0"

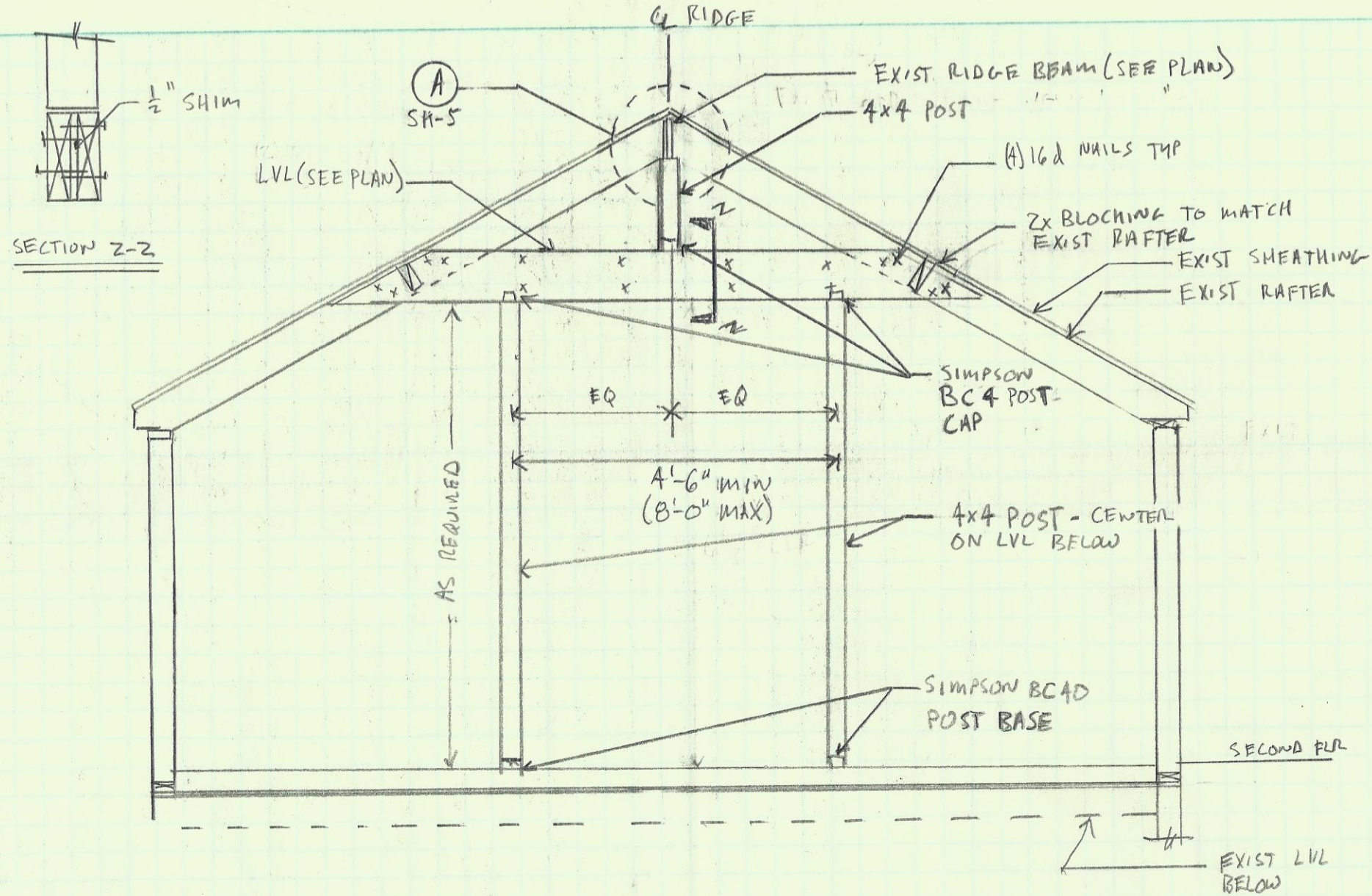
SK-2
2 OF 5



SECTION 2

3/4" = 1'-0"

S1-3
3 OF 5

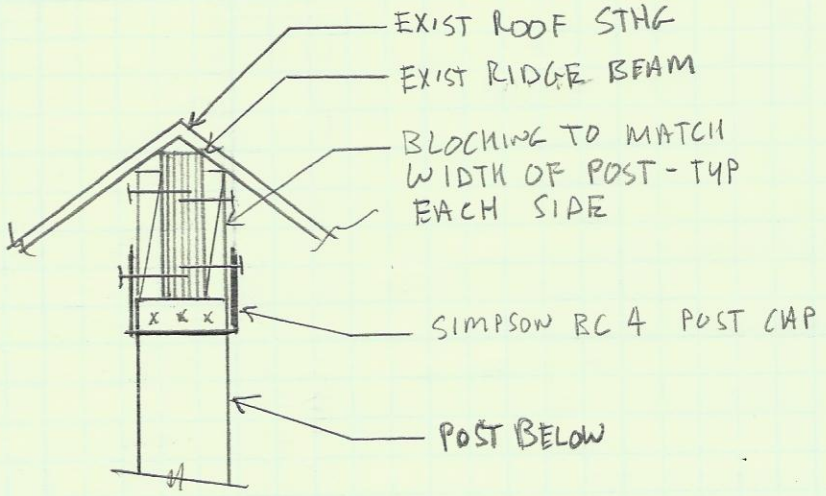


SECTION 2-2

SECTION 3

½" = 1'-0"

SK-4
4 OF 5



DETAIL A

1½" = 1'-0"

SK-5
5 OF 5