March 20. 2018

To: HPC

From: Ed Mroczka

RE: 107 Grove Avenue

1. ROOF REPLACEMENT: Roof on the old section of the house facing Grove Avenue will be replaced with architectural-grade roofing (CertainTeed Landmark Designer Sure Start Plus 4 Star Integrity Roof Systems), which will go on top of two layers of ½" plywood. The 1" of plywood plus the existing tongue & groove 7/8" substrate, which is visible from the inside and part of the cottage's original rustic look, will provide the necessary attachment for the 4" polyiso panels . This roofing system will be part of the insulating envelope for the living room. The insulated panels have a 1" air-venting space on top of which is 5/8" plywood substrate to which the shingles are applied. The total thickness of the panel unit is approximately 5.5". Previously, I believe in the 1970s, approximately 2.5" of insulating material had been added to the roof platform. This 2.5" will be removed. The net gain in the height of the roof will be approximately 3". The 1" ventilating air space will channel air from below between the foam area and the shingles out through a top vent at the ridge. This will help keep the interior cooler in summer. I believe this system is relatively new in residential use (The interior structure will be augmented to accommodate the additional weight.)

2. SKYLIGHTS: The two skylights facing Grove Avenue will be replaced with skylights of the same dimensions as the current ones. On the rear of the house, the one on the right side looking from Grove Road will be replaced with a skylight matching the front ones (slightly larger than the current one); the one on the left side will be of slightly larger dimension than the current one and will be an egress skylight to provide escape in the event of an emergency. (There currently is no means of escape from the second floor.)

3. FRONT DOOR: The existing front double doors will be replaced with double doors of exactly the same dimension. They are wood with glass panels in the upper half.

The goal of this project is to make the house liveable for us for (we hope) the next 20+ years as we age in place.

107 Grove Avenue

1. Existing view from avenue
2. Existing view from Gail's house
3. View from avenue with replacements
4. View from Gail's house with replacements
5. Interior
6. Memo to HPC
7. Cutaway view of roofing/insulation system
8. Cool-Vent polyiso panel (Hunter panel website)
9. Original/new cutaway view of interior rafters
10. 3-dimensional drawing of scissors truss

Existing view from Avenue

Ed & Judy Mroczka's House
107 Grove Ave.

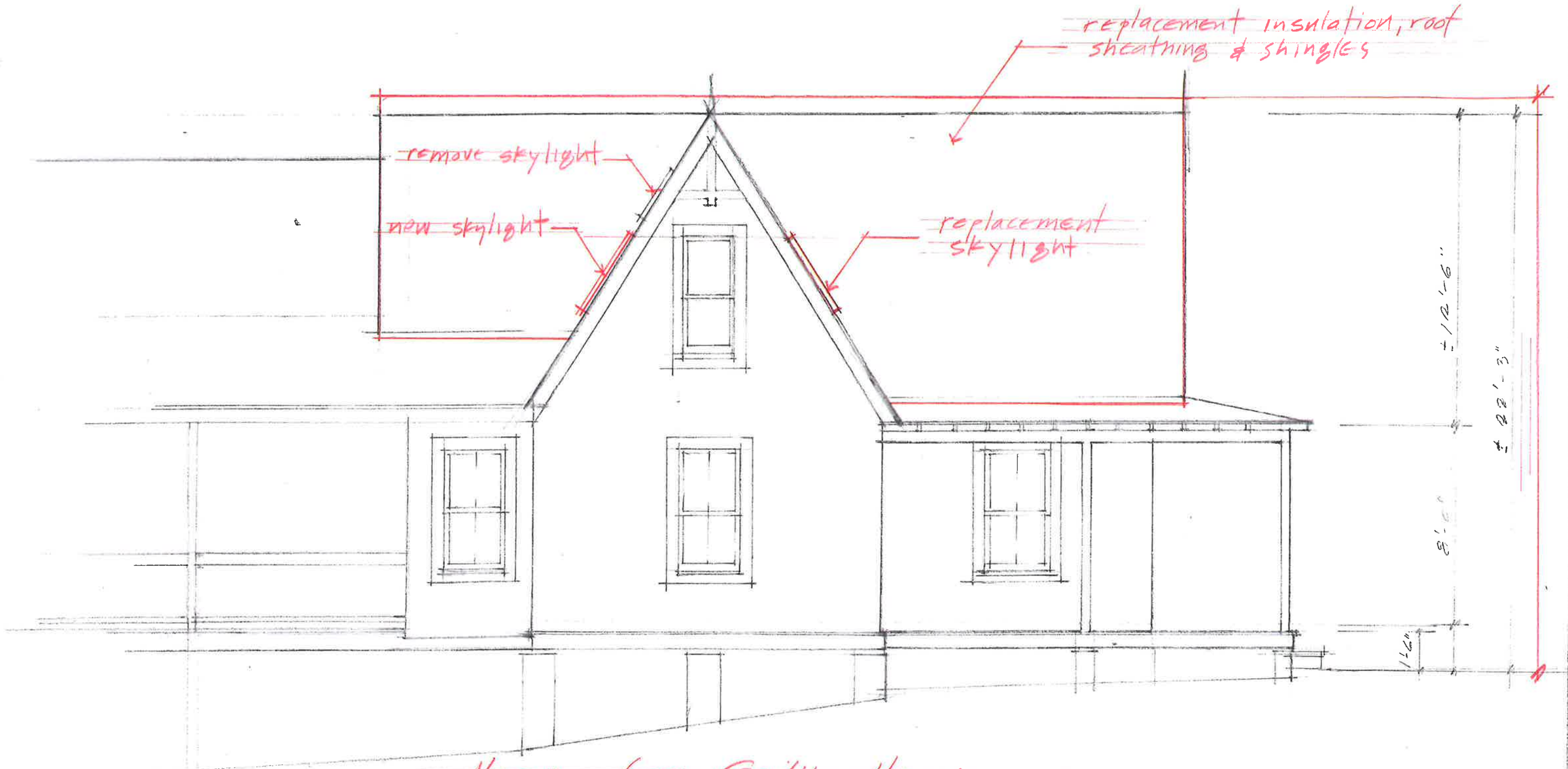
03-11-2018
scale 1/4"=1'-0"

(2)

Existing View from Gail's House

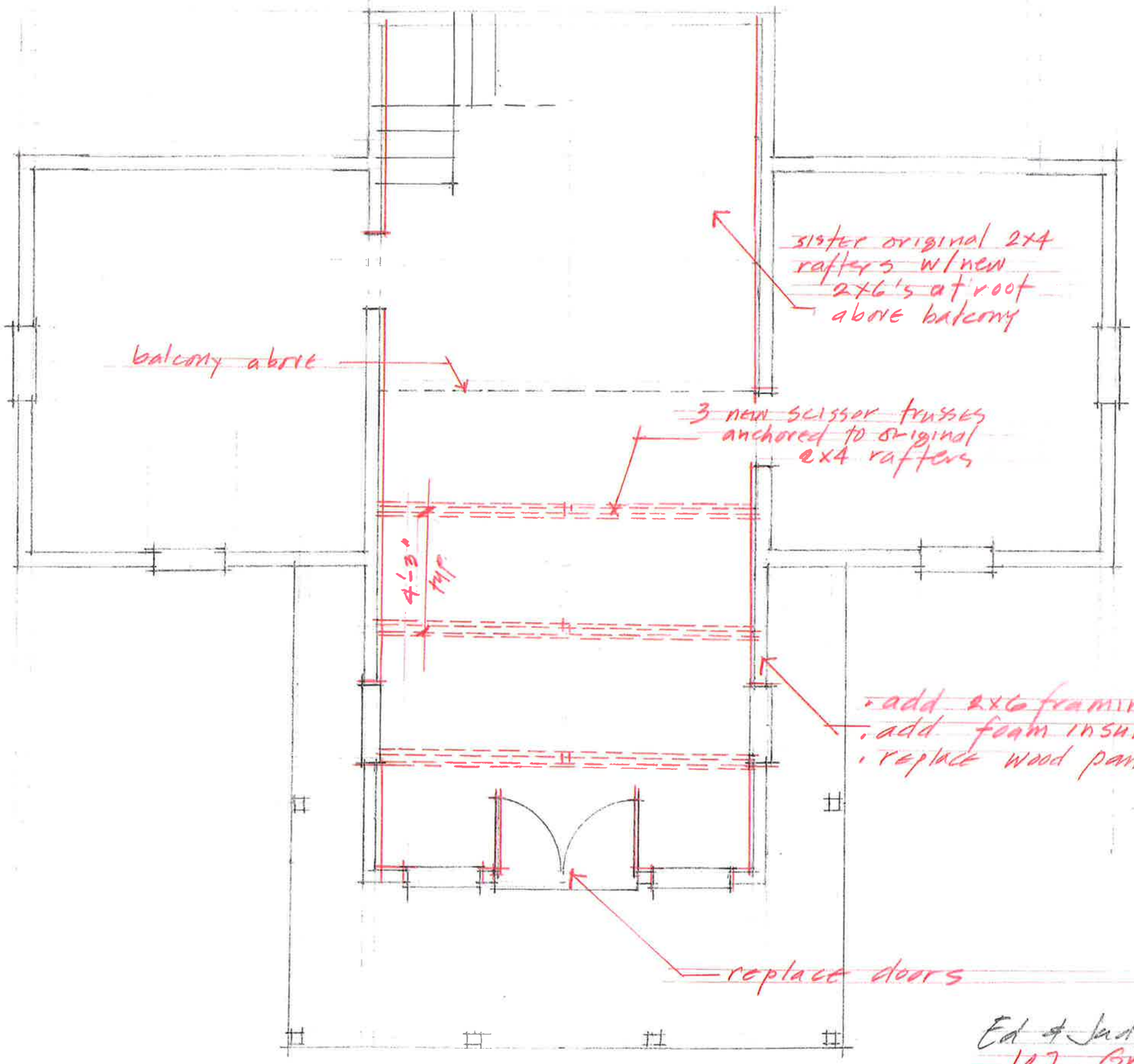
Ed & Judy Mroczka's House
107 Grove Ave
03.11.2018
Scale 1/4"=1'-0"

Ed + Judy Mroczka's House
107 Grove Ave
03-11-2018
scale 1/4"=1'-0"



View from Gail's House

Ed & Judy Mroczka's House
107 Grove Ave
03.11.2018
scale 1/4"=1'-0"



Ed & Judy Mroczek's House
107 Grove Ave
03.11.2018
scale 1/4"=1'-0"

(6)

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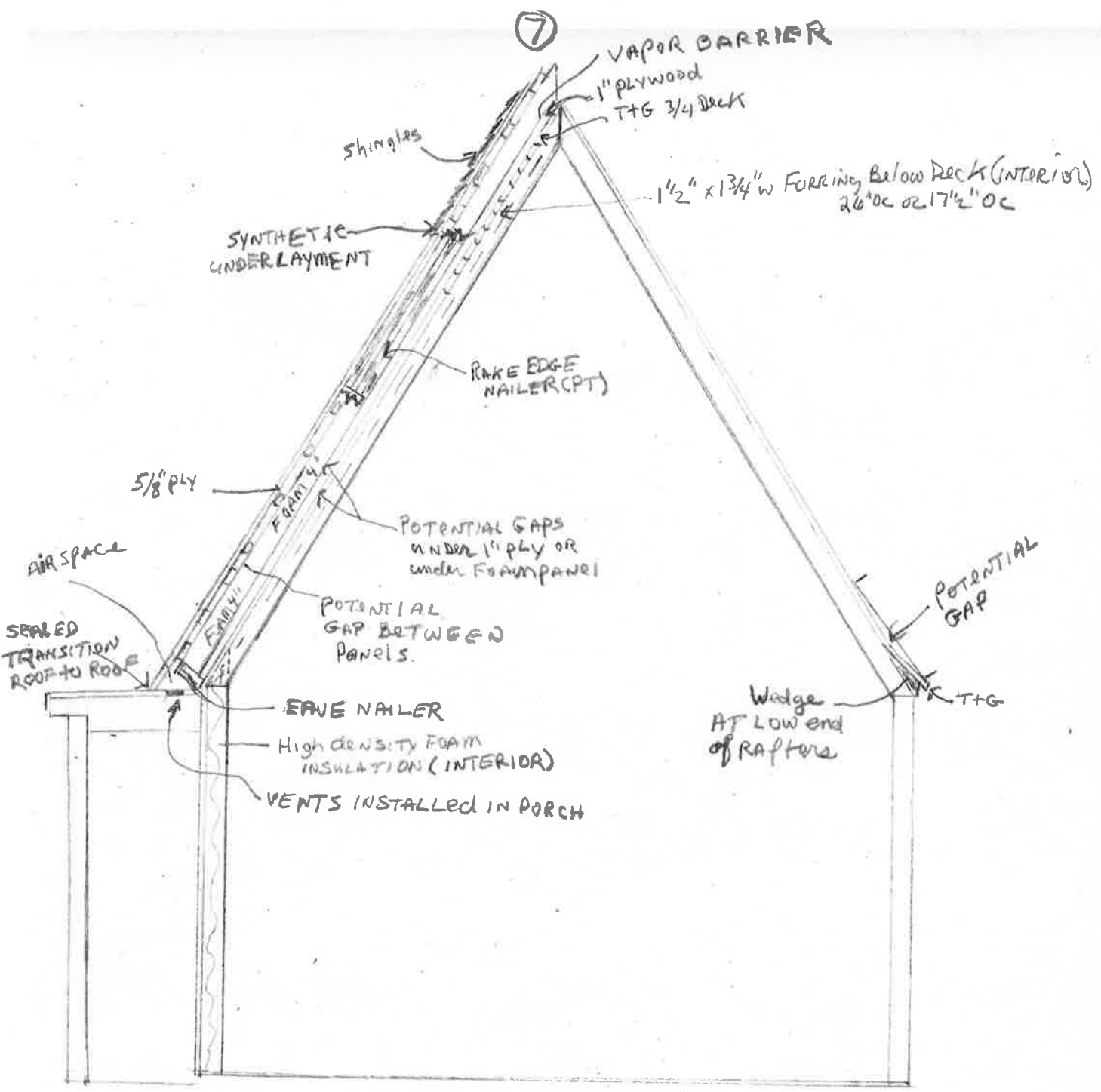
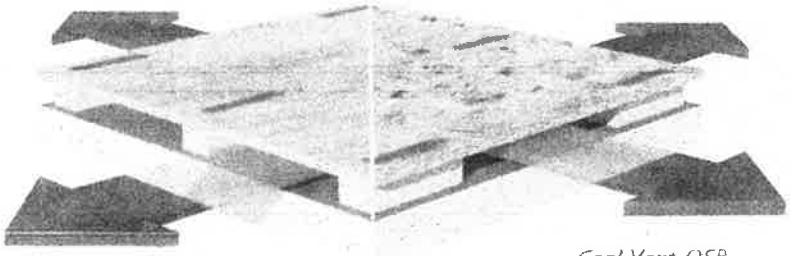

7
VAPOR BARRIER
1" PLYWOOD
T+G 3/4 DECK
Shingles
1½" x 1¾" W FURRING Below Deck (INTERIOR)
24"OC OR 17½" OC
SYNTHETIC UNDERLAYMENT
RAKE EDGE NAILER (PT)
5/8" PLY
FOAM
POTENTIAL GAPS UNDER 1" PLY OR under FOAMPANEL
AIR SPACE
POTENTIAL GAP BETWEEN Panels.
SEALED TRANSITION ROOF TO ROOF
EAVE NAILER
High DENSITY FOAM INSULATION (INTERIOR)
VENTS INSTALLED IN PORCH
POTENTIAL GAP
Wedge AT LOW end of RAFTERS
T+G

Cool-Vent *Ventilated Nailbase Polyiso Panel*



Cool-Vent Plywood *Cool-Vent OSB*

COOL-VENT THERMAL VALUES

THICKNESS[1] (INCHES)	(MM)	MINIMUM R-VALUE[2]	FLUTE SPANABILITY
2.5"	64	5.7	2 5/8"
3.0"	76	8.6	4 3/8"
3.5"	89	11.4	4 3/8"
4.0"	102	14.4	4 3/8"
4.1"	104	15.0	4 3/8"
4.5"	114	17.4	4 3/8"
5.0"	127	20.5	4 3/8"

[2]Long Term Thermal Resistance Values are based on ASTM C 1289.

[1]Thickness is calculated with 7/16" OSB and 1" airspace. For other dimensions contact Hunter Panels.

Cool-Vent is only manufactured in the sizes listed above and on our packaging and weight chart. R-values other than those listed can be achieved by installing a multi layer system consisting of an additional layer of flat polyiso under Cool-Vent.

PRODUCT DESCRIPTION

Cool-Vent is a venting composite insulation board that consists of a 4'x8' panel of rigid polyiso, a middle layer of solid wood spacers, creating a standard 1" air space and a top layer of APA/TECO rated OSB or plywood. Cool-Vent is the environmentally intelligent choice for steep slope roofing applications and is viable in green and sustainable building designs.

FEATURES AND BENEFITS

- Manufactured with NexGen Chemistry: Contains no CFCs, HCFCs, is Zero ODP, EPA Compliant and has virtually no GWP
- 75% lateral air movement
- Optimal cooling and ventilation through 92% open air space
- The edges of the wood panels are rabbeted to provide for expansion and contraction of the wood while allowing the foam edges to be installed tightly to achieve thermal integrity across the entire roof deck
- Wood spacers less than 12" apart; minimizes deflection
- Design flexibility: 1.5" and 2" wood spacers available for increased air flow (when eave ridge distance is over 20 feet)
- Exceeds requirements of ARMA Tech Bulletin 211-RR-24 regarding minimum depth of air space

PANEL CHARACTERISTICS

- Available in two grades of compressive strengths per ASTM C1289 Type V, Class 1 Grade 2 (20 psi) or Grade 3 (25 psi)
- Also available in ASTM C1289 Type V, Class 2 (H-Shield CG), Grade 2 (20 psi) or Grade 3 (25 psi)
- Available in 4' x 8' (1220mm x 2440mm) panels in overall thicknesses of 2.5" (64mm) to 5.0" (127mm)
- Multiple Substrate Types Available:

OSB: · 7/16" or 5/8"

Plywood: · 5/8" or 3/4" CDX · Fire-Treated

ROOFING APPLICATIONS

Cool-Vent is custom built to incorporate the individual specifications of the building designer. Cool-Vent is for use on slopes of 3:12 or greater (for lower slope considerations see H-Shield NB).

Applicable construction types include:

- Non-insulated Cathedral and Vaulted Ceilings
- Exposed ceiling designs beneath steel, plywood, tongue & groove deck types in commercial and residential constructions
- Log Home applications
- Post & Beam constructions

Acceptable Roof Coverings:

- Shingles
- Slate (Natural and Synthetic)
- Tile
- Standing Seam Metal Roof Systems

Codes and Compliances

- ASTM C 1289 Type V, Class 1 Grade 2 (20 psi) or Grade 3 (25 psi)
- International Building Code (IBC) Chapter 26
- State of Florida Product Approval Number FL 5968
- Miami Dade County Product Control Approved

Underwriters Laboratories Inc Classifications

- TGDY. R20624 Shingle Deck Accessory; Cool-Vent roof insulation is classified for use with any Class A, B, or C asphalt organic shingles, metal or tile roof coverings.
- UL 1256
- Insulated Steel Deck Construction Assemblies – No. 120, 123
- UL 790
- UL 263 Hourly Rated P Series Roof Assemblies

UL Classified for use in Canada

- Refer to UL Directory of Products Certified for Canada for more details

Factory Mutual Approvals

- FM 4450, FM 4470

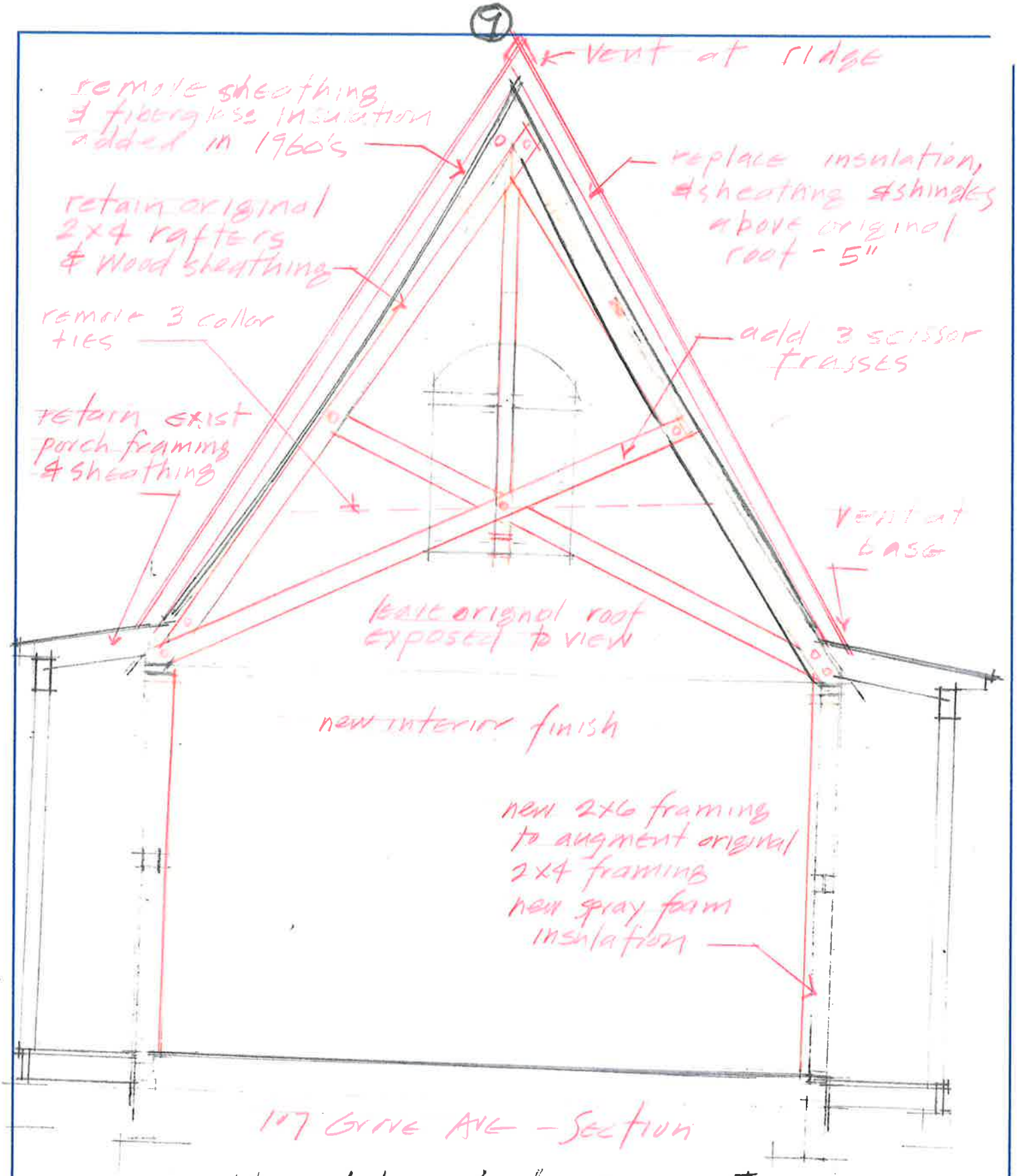
LEED Potential Credits for Polyiso Use

Energy and Atmosphere

- Optimize Energy Performance

Materials & Resources

- Building Life-Cycle Impact Reduction
- Environmental Product Declarations
- Materials Reuse
- Recycled Content
- Construction and Demolition Waste Management



107 Grove Ave - Section

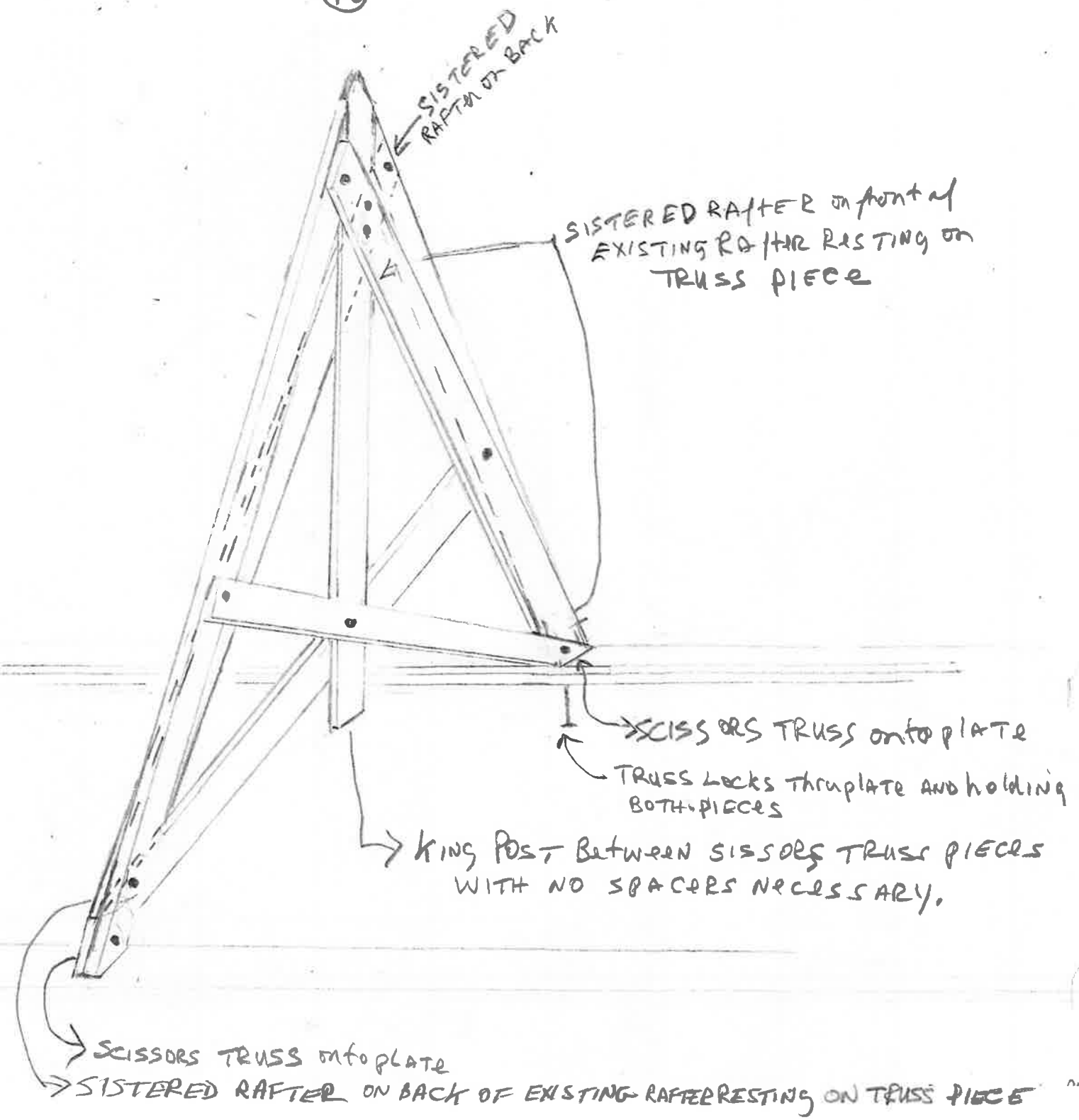
New Intermediate Scissor Truss w/ curve of existing roof

3/8" = 1'-0"

original

new

Ed & Jacky Mroczka's house 3/11/2018


SISTERED RAFTER ON BACK
SISTERED RAFTER in front of EXISTING RAFTER RESTING ON TRUSS PIECE
SCISSORS TRUSS onto plate
TRUSS LOCKS thruplate AND holding BOTH PIECES
KING POST Between SISSORS TRUSS PIECES WITH NO SPACERS NECESSARY.
SCISSORS TRUSS onto plate
SISTERED RAFTER ON BACK OF EXISTING RAFTER RESTING ON TRUSS PIECE

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