

APPENDIX-A

Fort Campbell, KY 42223

Roof Repairs Scope of Work

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1. Roof Area – All Roof Sections
2. Materials
 - a. Lap Repair – Field laps and Flashing laps
 - i. AlphaGuard BIO Base Coat or equal – 4-Gal kit (Part A- 3.2 gal: 5 gal can / Part B 0.8 gal: 1 gal can)
 - ii. AlphaGuard BIO Topcoat or equal – 3.1-Gal kit (Part A- 2.2 gal: 5 gal can / Part B 0.9 gal: 1 gal can)
 - iii. Permafab Fabric or equal– (4” x 300’ Roll)
 - iv. Primer / Reprime – Geogard Primer or equal (5 gal can)
 - b. Walkways – Kiss coat with Granules
 - i. Granules – PowerPly Granules White or equal – (50 LBS Can)
 - ii. AlphaGuard BIO Topcoat or equal – 3.1-Gal kit (Part A- 2.2 gal: 5 gal can / Part B 0.9 gal: 1 gal can)
 - c. Wet Insulation and existing pad removal
 - i. TPO Membrane Adhesive – TremPly TPO WB Bonding Adhesive or equal (5 gal can)
 - ii. TPO Membrane – TremPly TPO Single Ply or equal (1.5 SQ Roll)
 - iii. Insulation – Polyisocyanurate (to match replaced thickness)
 - d. Metal / Plastic Primer – AlphaGuard M-Prime or equal (1 gal bucket)
3. Preparation
 - a. Remove debris from roof then pressure wash at a minimum of 2000 psi.
 - b. Ensure all drains are free from debris and flowing.
 - c. Identify and mark all wet insulation areas indicated in the moisture assessment.
 - d. Identify and mark all membrane blisters, mole runs, and previously applied coating for repairs to these areas.
 - e. Remove all existing walk pads for installation of AlphaGuard BIO, or equal, walkways.
4. Repairs
 - a. Wet Insulation Areas:

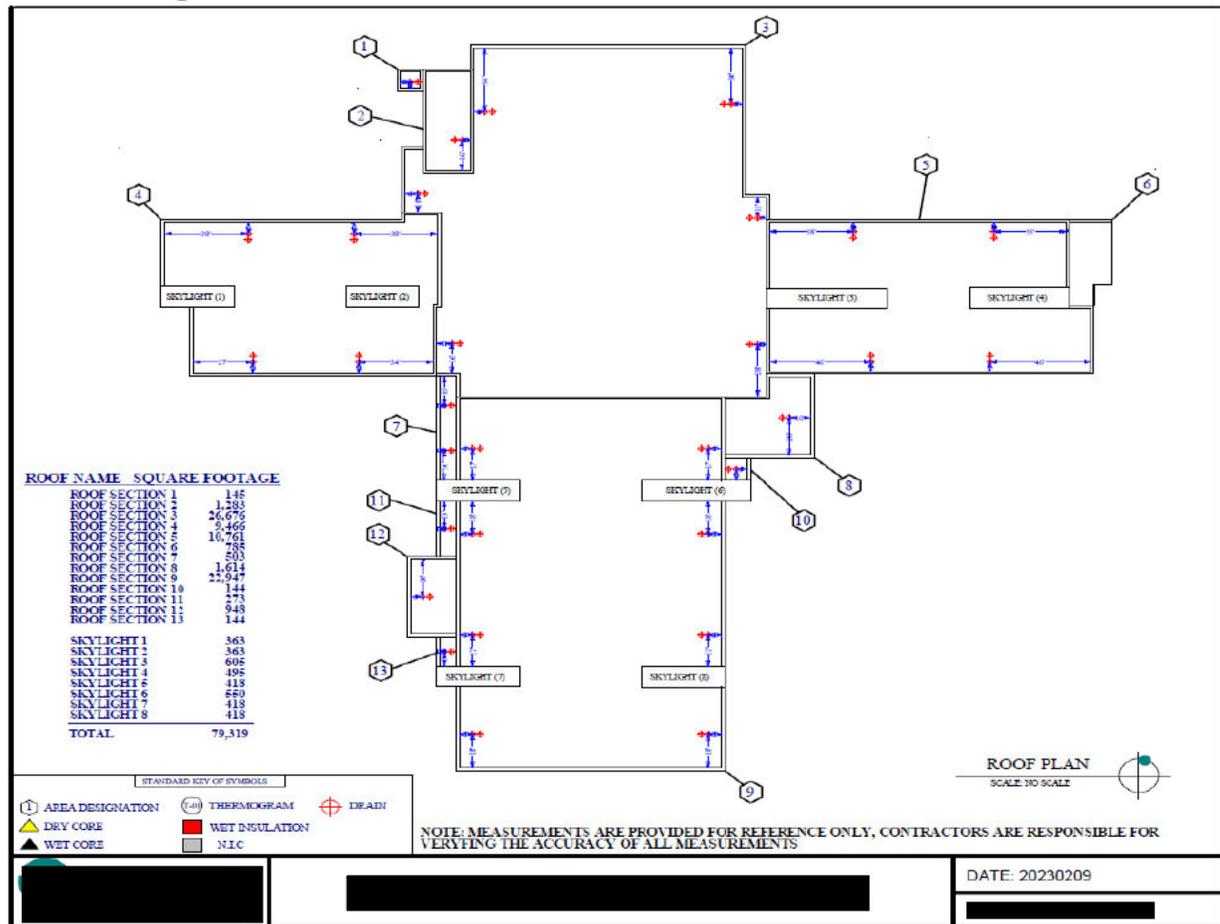
- i. Remove membrane and wet insulation, disposing of appropriately.
 - ii. Inspect the decking. Document condition of the deck, and if compromised, inform Owner of the condition.
 - iii. Install new insulation to match existing.
 - iv. Install new TremPly TPO membrane, or equal, in TremPly TPO WB Bonding Adhesive, or equal. Overlap existing membrane a minimum of 4 inches and heat weld overlap.
- b. Blister & Mole Run Repairs:
 - i. Cut the membrane blister or mole runs and allow moisture vapor to dry.
 - ii. Apply TPO membrane overlapping existing membrane a minimum of 4 inches and heat weld overlap.
- c. Buckled or damaged Insulation:
 - i. Remove all damaged or buckled insulation.
 - ii. Inspect decking and document condition of the deck, if compromised inform the Owner of the condition.
 - iii. Install new insulation to match existing.
 - iv. Install new TremPly TPO membrane, or equal, in TremPly TPO WB Bonding Adhesive, or equal. Overlap existing membrane a minimum of 4 inches and heat weld overlap.
- d. Previously applied coatings:
 - i. Remove all previously applied coating. If coating could not be scrapped off or removed during pressure washing, cut out the area and install new TPO membrane overlapping existing membrane a minimum of 4 inches. Heat welds on all overlaps.
- e. Field Laps and Flashing Lap Repairs:
 - i. Tape off all areas 6 inches wide then prime with Geogard Primer, or equal, at 4 wet mils.
 - ii. Allow primer to dry approximately 15-30 minutes (Primer must be tacky but not transfer to your finger) then apply a three-course application of AlphaGuard BIO Base Coat, or equal, at 32 wet mils and Permafab, or equal, reinforcement to all field laps, perimeter flashing laps, curb flashing laps and corner patches. Remove tape immediately before base coat cures. After curing the tape will be hard to remove.
 - iii. Once base coat has cured apply AlphaGuard BIO Topcoat, or equal, at 32 wet mils to all AlphaGuard BIO Base Coated areas.
- f. AlphaGuard BIO, or equal, walkways:
 - i. Tape off area three feet wide at existing walkways and around all HVAC units.

- ii. Prime with Geogard Primer, or equal, at 4 wet mils and allow to dry for approximately 15-30 minutes. Apply AlphaGuard BIO Base Coat, or equal, at 32 wet mils to all areas.
- iii. Once base coat has cured apply AlphaGuard BIO Topcoat, or equal, at 16 wet mils. Allow to cure then apply an additional layer of AlphaGuard BIO topcoat, or equal, at 16 wet mils then immediately broadcast PowerPly roof granules, or equal, at 10-15 lbs. per SQ, back rolling to disperse granules evenly.
- iv. Once cured, used a blower to remove any loose granules from the roofing surface.

5. Disposal

- a. All material brought to the roof and removed from the roof will be disposed of properly.
- b. Good housekeeping will be always maintained, and nothing will be dropped from the roof. All material brought to the roof or removed from the roof will be lowered with a rope or by mechanical means.

Roof Drawing:



Moisture Scan:

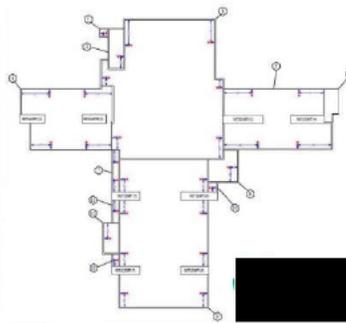
ROOF DIAGNOSTIC SURVEY FOR FORT CAMPBELL-

FORT CAMPBELL, KY

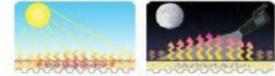
DRAWINGS

TITLE PAGE

- SHEET A MOISTURE SURVEY – COMPOSITE ROOF PLAN
- SHEET B MOISTURE SURVEY – ENLARGED ROOF SECTION 3
- SHEET C MOISTURE SURVEY – ENLARGED ROOF SECTION 9
- SHEET D THERMOGRAMS & PHOTOS
- SHEET E ROOF SECTION AND CONSTRUCTION DATA



How An Infrared Survey Works:



During the daytime, wet roof insulation absorbs more solar energy from the sun than dry roof insulation. During the nighttime, after the roof surface cools, the wet roof insulation will retain more solar energy than dry insulation, and these temperature differences are detected by the infrared camera.

The wet roof areas are marked on the roof surface with visible paint markings. The wet roof areas are verified through core cuts and/or a Roof Moisture Meter.

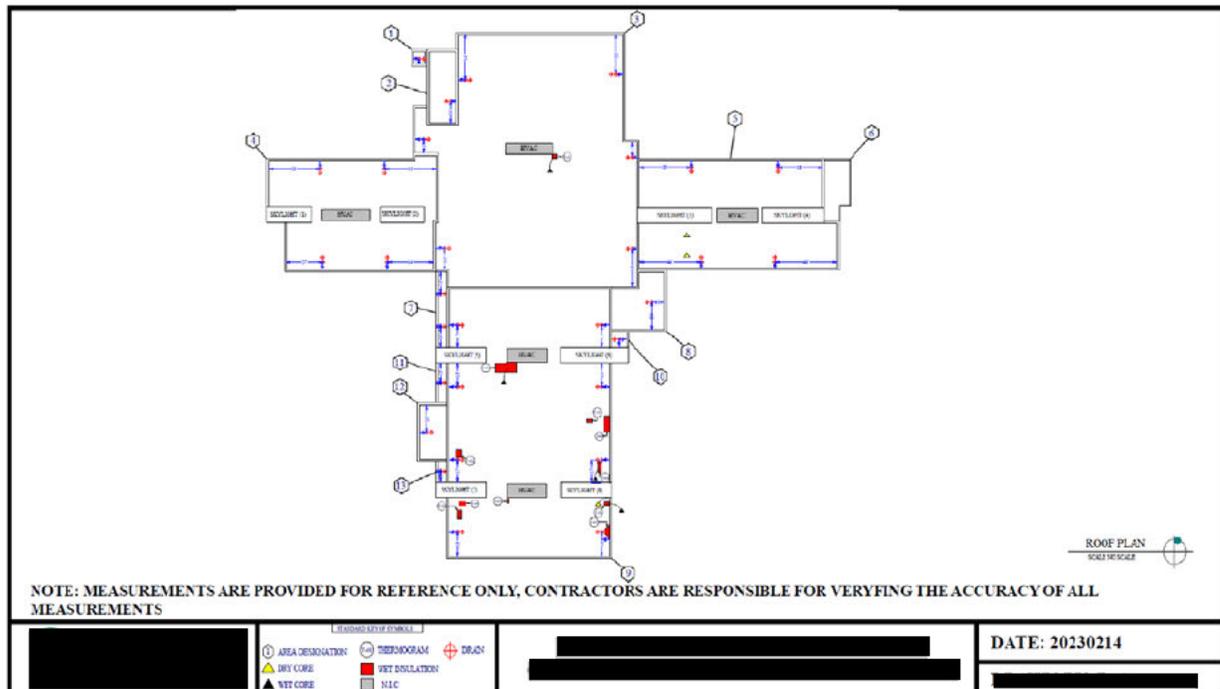
How A Moisture Meter Works:

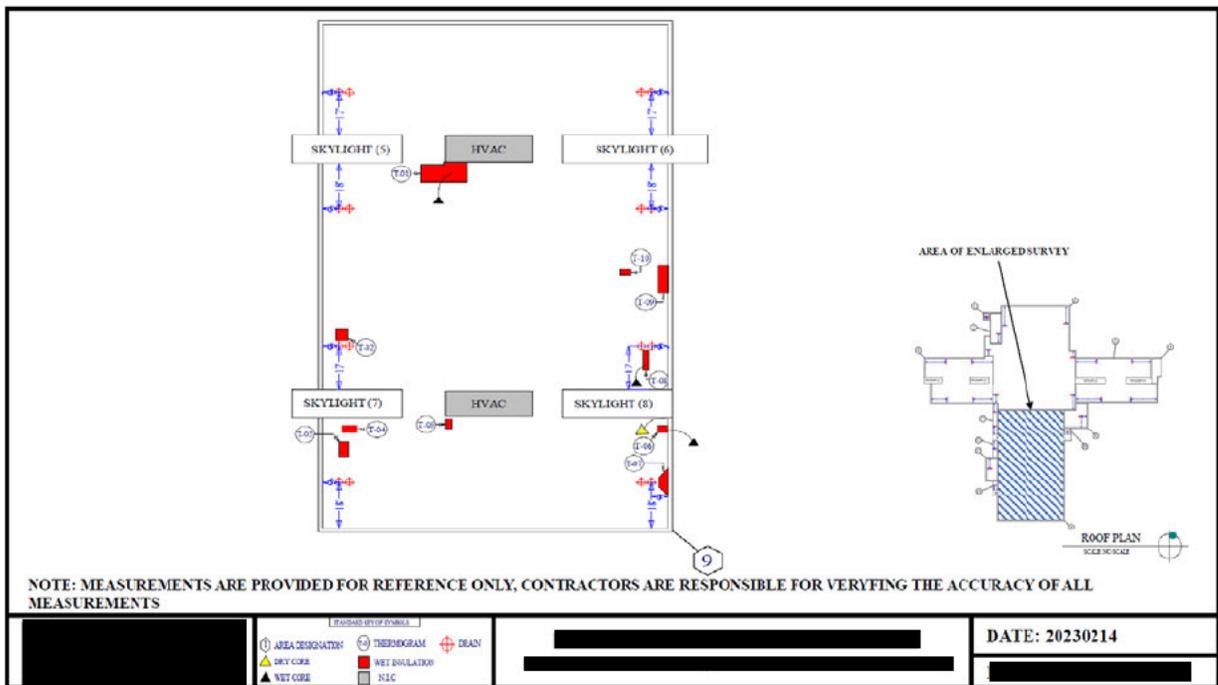
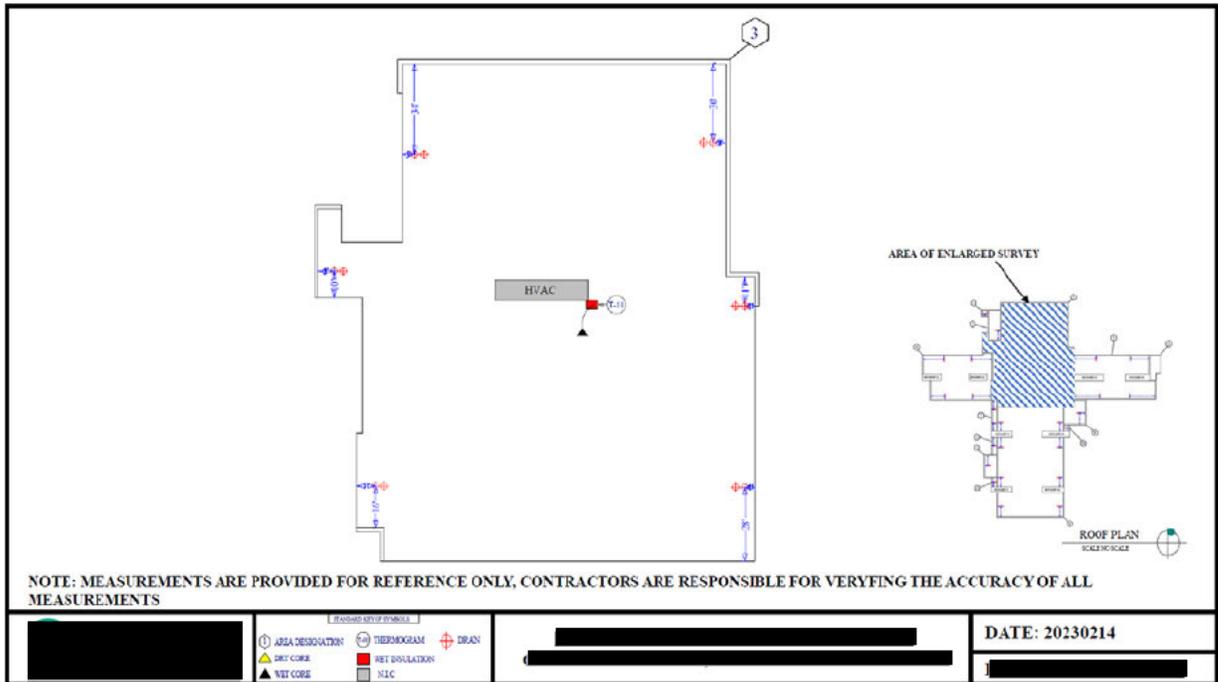
During the daytime, readings are taken and recorded in random locations and at wet areas found by the infrared camera.

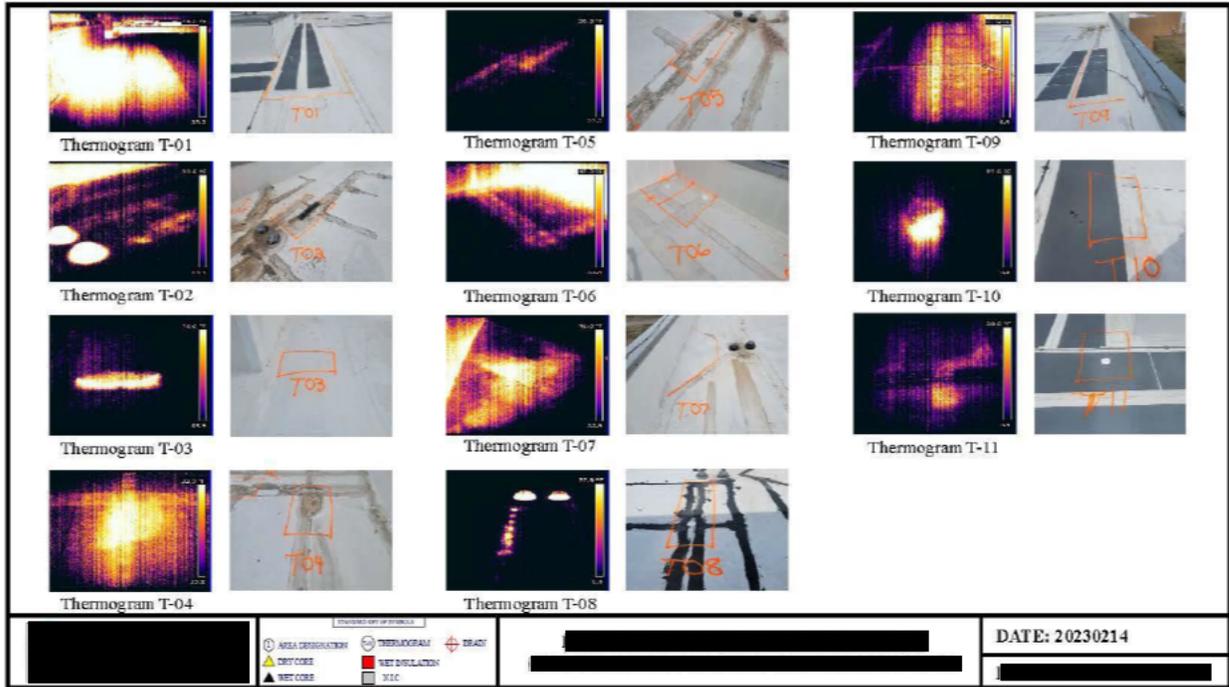
Fast neutrons are emitted from the source in the Roof Moisture Meter into the roof system. The presence of hydrogen in the roof system slows the neutrons. These slowed neutrons as well as the fast neutrons are detected by the Roof Moisture Meter. A reading is displayed in the digital readout and gets recorded.

Core cuts are taken to determine a baseline for dry roof materials. Then wet roof areas are marked on the roof surface with visible paint markings.

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| CONSTRUCTION DATA | | | | | CONSTRUCTION DATA | | | | | ROOF SECTION DATA | | | |
|-------------------|------------|------------------|---------------------|----------------------------------|-------------------|------------|------------------|---------------------|----------------------------------|--|-------------|------------|-------|
| ROOF SECTION | CORE CUT | MOISTURE READING | MOISTURE PERCENTAGE | ROOF CONSTRUCTION | ROOF SECTION | CORE CUT | MOISTURE READING | MOISTURE PERCENTAGE | ROOF CONSTRUCTION | ROOF SECTION | SIZE (S.F.) | WET (S.F.) | % WET |
| 3 | T-3L | N/A | N/A | WHITE SINGLE PLY | 3 | T-3010/01 | N/A | N/A | WHITE SINGLE PLY | 1 | 145 | 0 | N/A |
| | | | 100% | 0.5" EPS/IRIM | | | | 0% | 2" POLYISOCYANURATE INSULATION | 2 | 1,283 | 0 | N/A |
| | | | 100% | 2" POLYISOCYANURATE INSULATION | | | | 0% | 1.5" POLYISOCYANURATE INSULATION | 3 | 26,675 | 22 | 0.08% |
| | | | 10% | 1.5" POLYISOCYANURATE INSULATION | | | | 0% | 2" POLYISOCYANURATE INSULATION | 4 | 5,466 | 0 | N/A |
| | | | 0% | 0.5" EPS/IRIM | | | | 0% | 2" POLYISOCYANURATE INSULATION | 5 | 10,761 | 0 | N/A |
| | | | 0% | 0.5" FIBERGLASS | | | | 0% | 0.5" FIBERGLASS | 6 | 785 | 0 | N/A |
| N/A | METAL DECK | N/A | METAL DECK | N/A | METAL DECK | 7 | 503 | 0 | N/A | 8 | 1,324 | 0 | N/A |
| 5 | S-1 (R/F) | N/A | N/A | WHITE SINGLE PLY | 5 | T-501 | N/A | N/A | WHITE SINGLE PLY | 9 | 22,847 | 286 | 1.25% |
| | | | 0% | 1.5" POLYISOCYANURATE INSULATION | | | | 20% | 2" POLYISOCYANURATE INSULATION | 10 | 141 | 0 | N/A |
| | | | 0% | 1.5" POLYISOCYANURATE INSULATION | | | | 0% | 1.5" POLYISOCYANURATE INSULATION | 11 | 273 | 0 | N/A |
| | | | 0% | 0.5" EPS/IRIM | | | | 0% | 2" POLYISOCYANURATE INSULATION | 12 | 548 | 0 | N/A |
| | | | 0% | 0.5" FIBERGLASS | | | | 0% | 2" POLYISOCYANURATE INSULATION | 13 | 104 | 0 | N/A |
| | | | 0% | 0.5" FIBERGLASS | | | | 0% | 0.5" FIBERGLASS | SKYLIGHT 1 | 363 | 0 | N/A |
| N/A | METAL DECK | N/A | METAL DECK | N/A | METAL DECK | SKYLIGHT 2 | 363 | 0 | N/A | SKYLIGHT 3 | 505 | 0 | N/A |
| 6 | S-2 (R/F) | N/A | N/A | WHITE SINGLE PLY | 6 | T-601 | N/A | N/A | WHITE SINGLE PLY | SKYLIGHT 4 | 495 | 0 | N/A |
| | | | 0% | 1.5" POLYISOCYANURATE INSULATION | | | | 100% | POLYISOCYANURATE INSULATION | SKYLIGHT 5 | 518 | 0 | N/A |
| | | | 0% | 1.5" POLYISOCYANURATE INSULATION | | | | | | SKYLIGHT 6 | 550 | 0 | N/A |
| | | | 0% | 0.5" EPS/IRIM | | | | | | SKYLIGHT 7 | 518 | 0 | N/A |
| | | | 0% | 0.5" FIBERGLASS | | | | | | SKYLIGHT 8 | 518 | 0 | N/A |
| | | | 0% | 0.5" FIBERGLASS | | | | | | TOTAL | 73,312 | 296 | 0.39% |
| 9 | T-9L | N/A | N/A | WHITE SINGLE PLY | 9 | T-901 | N/A | N/A | WHITE SINGLE PLY | <div style="border: 2px solid red; padding: 5px; transform: rotate(-5deg); display: inline-block;"> WATER FLOWED OUT OF THE CORE SINCE THERE WAS THICK BENGOL T-9L AND ROOF CUT ANYWHERE </div> | | | |
| | | | 20% | 1.5" POLYISOCYANURATE INSULATION | | | | | | | | | |
| | | | 0% | 1.5" POLYISOCYANURATE INSULATION | | | | | | | | | |
| | | | 0% | 0.5" EPS/IRIM | | | | | | | | | |
| | | | 0% | 0.5" FIBERGLASS | | | | | | | | | |
| | | | 0% | 0.5" FIBERGLASS | | | | | | | | | |
| N/A | METAL DECK | | | | | | | | | | | | |