




Good energy,
together

Indigenous Energy Efficiency Working Group

Opaskwayak Energy Retrofit



EFFICIENCY MANITOBA: Who are we?



EFFICIENCY MANITOBA

- Dedicated organization whose sole mandate is to work with households, businesses, and communities to make energy efficiency upgrades, and adopt energy-saving habits to use less energy and lower their energy bills.
- We offer financial support and advice to help make saving energy easy for homes and businesses here in our province.

“Energy efficiency isn’t a side program — it’s infrastructure. It’s the first fuel in Manitoba’s energy future, and it shapes everything that comes next.”

EFFICIENCY MANITOBA: Reducing Load on the Grid

THE CHALLENGE

- Our province requires an additional 1,760 megawatts (MW) of capacity over 10 years
- Efficiency Manitoba will be expected to achieve 550 MW of capacity by 2035
- We support the energy transition by enabling energy-saving retrofits that reduce load on the grid and reduce greenhouse gas emissions.
- Strengthen what we already have before investing in new supply



“If we don’t deal with inefficiency first, we end up building bigger, more expensive systems that are harder to keep running when it matters most.”

EFFICIENCY MANITOBA: Energy Efficiency is Infrastructure



“Efficiency lets us design tomorrow’s infrastructure around what we actually need - not around what we’ve been wasting.”

BUILDING MANITOBA’S ENERGY EFFICIENCY POWER PLANT

- Internationally, there is a growing consensus around one powerful idea: Energy efficiency is infrastructure.
- Energy efficiency is the world’s “first fuel.”
- Energy efficiency delivers affordability, reliability, and emissions reductions faster and at lower cost than any other resource.
- At Efficiency Manitoba, we describe this as building an energy efficiency power plant.
- Not a single facility in one location — but thousands of individual upgrades across homes and buildings that collectively deliver system-scale value.



ENERGY RETROFIT: OPASKWAYAK CREE NATION Strengthening what we already have.





ENERGY RETROFIT: OPASKWAYAK CREE NATION Efficiency as a “first fuel.”



- Blower door test pre/post
- Review scope of work with local contractors



BUILDING SCIENCE: THE HOUSE AS A SYSTEM

- Identifying cause of mold and rot
- Close vents as part of encapsulation
- Improve insulation and air sealing





BUILDING SCIENCE: THE HOUSE AS A SYSTEM

- Excessive moisture in crawl
- Unsealed sump pit
- Radon mitigation
- Unsealed common wall



CRAWLSPACE ENCAPSULATION:

- High performance floor poly: Stego Wrap
- High performance seam sealing tape



FOUNDATION WORK: BULK WATER MANAGEMENT



- Heat
- Prime
- Roll

- Positive laps
 - 4" vertical
 - 2" horizontal

FOUNDATION WORK: INSULATION



- Pressure applied peel and stick
- Seal top edge with tape
- Custom bent flashing

- Seal the rim joist
- Install 2 layers halo subterra, tape & stagger joints
 - **R20 total**



SITE ACTIVITY



- Cutting plywood
- Hoarding and heating



- Prepping strapping
- Pull the windows to buck out and flash rough openings



SITE ACTIVITY



- Drain stone and backfill



- Site grading
- Upgrading the wall assembly

THE PERFECT WALL: A Vapour-Open Solution

- Durability ensures the long-term performance and sustainability of the building envelope
- Prioritizes the selection of **durable, weather-resistant materials** and **construction techniques**
- Proper installation techniques and detailing are also crucial

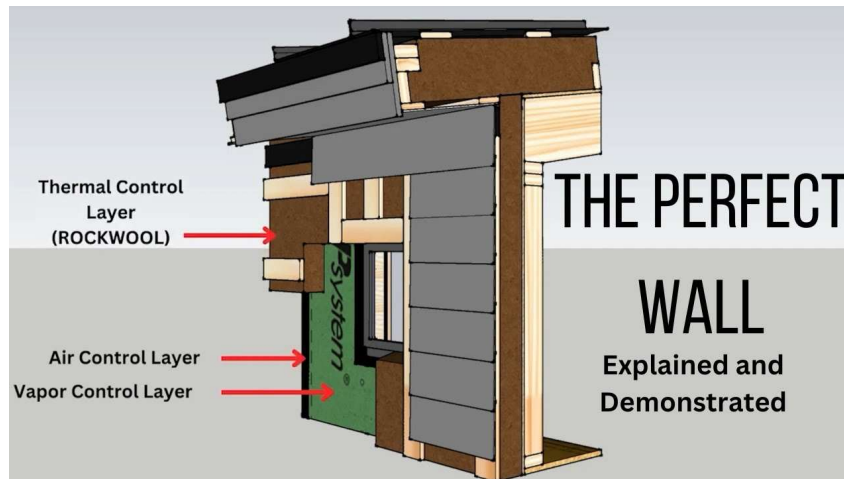
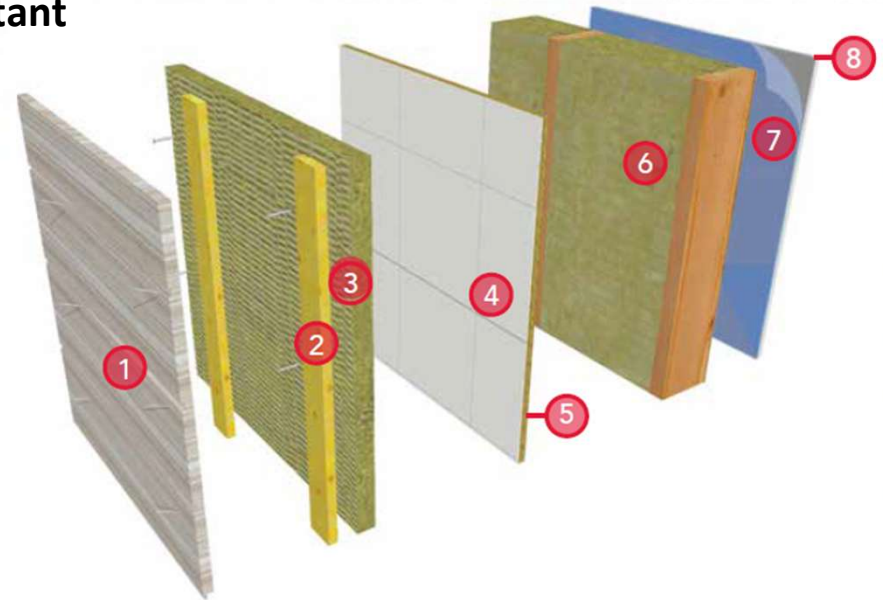


Photo: <https://www.rateitgreen.com/>



- Vapour open; does not reduce the ability of the wall to dry to the outside



THE PERFECT WALL: A Vapour-Open Solution

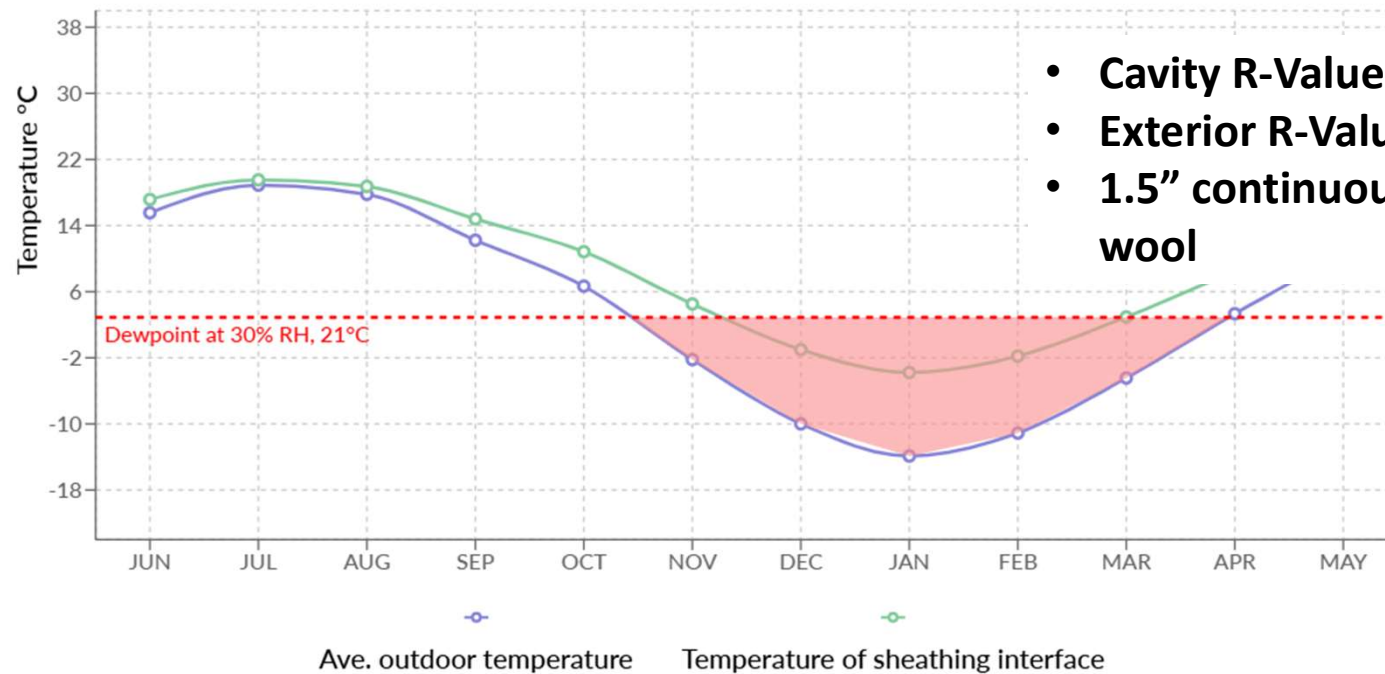


- Installing the strapping to studs
 - Minimum embedment 1.5”
- Bug screen top and bottom

- Crawlspace vent to be insulated and covered

CONDENSATION CONTROL WITH INSULATION

Increase the exterior insulation value, reduce the cavity insulation value or a combination of both to achieve an optimal condition.

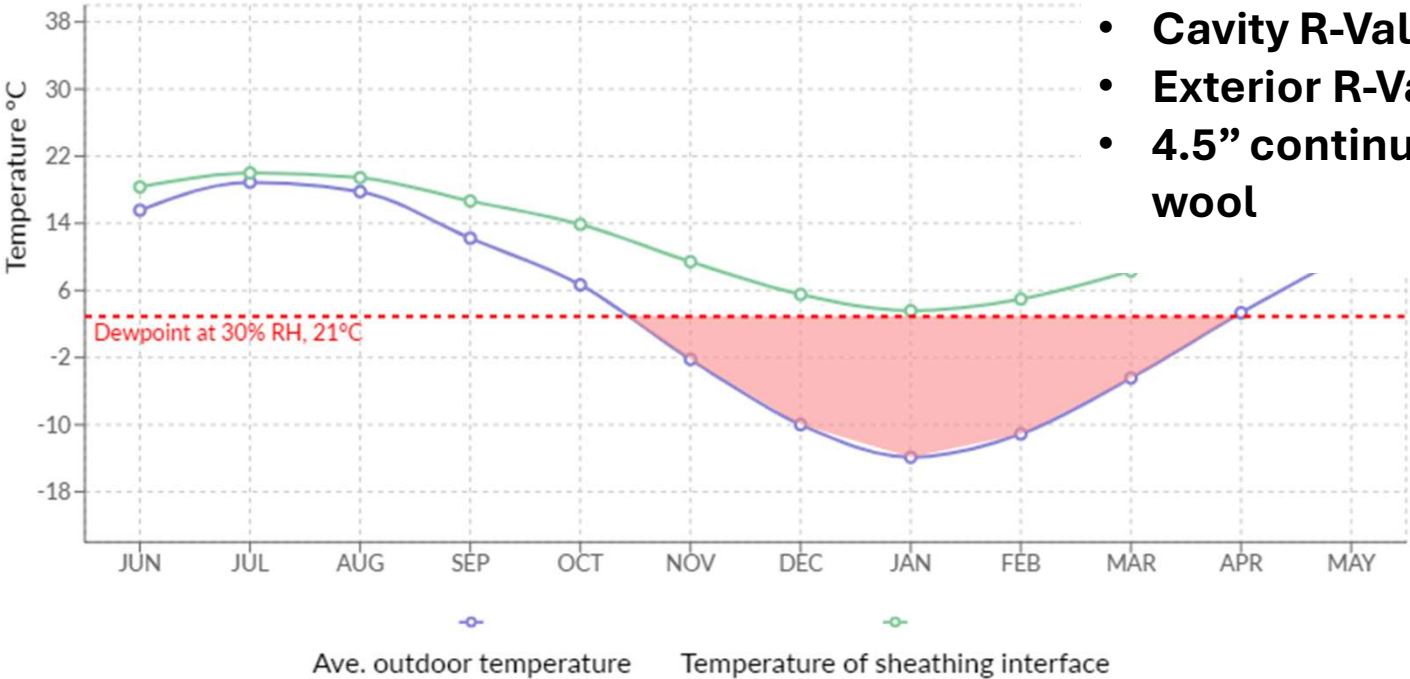


- Cavity R-Value: 20
- Exterior R-Value: 6.2
- 1.5" continuous mineral wool

[Condensation Calculator - Construction Instruction](#)

CONDENSATION CONTROL WITH INSULATION

Acceptable insulation approach.



- Cavity R-Value: 20
- Exterior R-Value: 18
- 4.5” continuous mineral wool



[Condensation Calculator - Construction Instruction](#)

WILDFIRE ACTIVITY: Rethinking the way we build



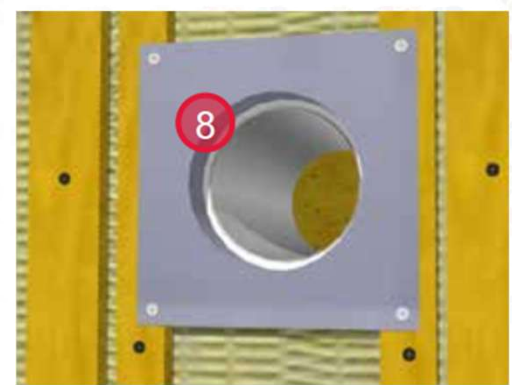
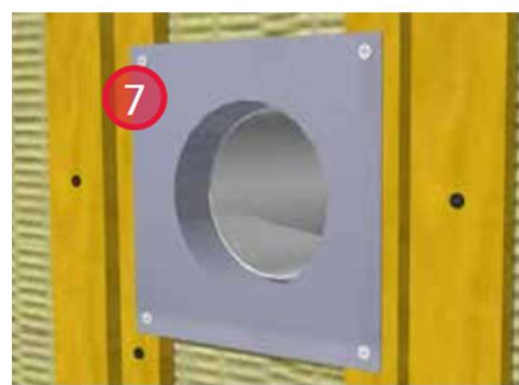
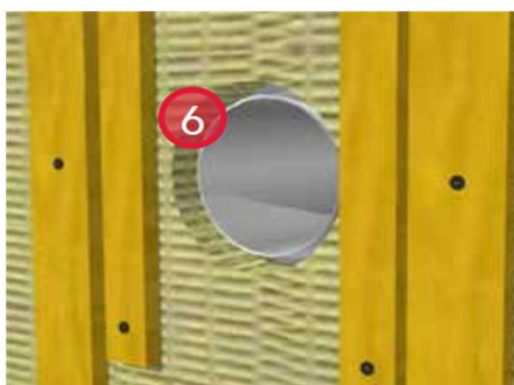
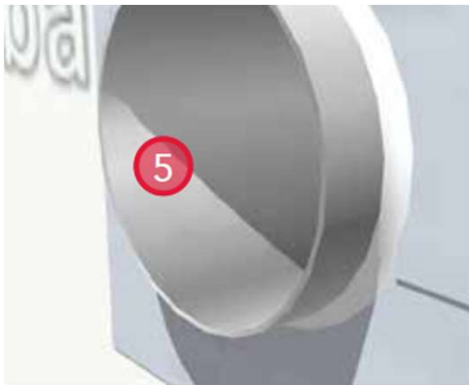
Photo: Government of Manitoba



Photo: Brandon Sun

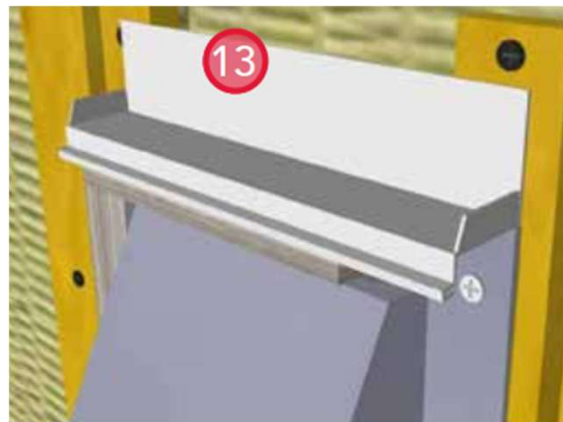
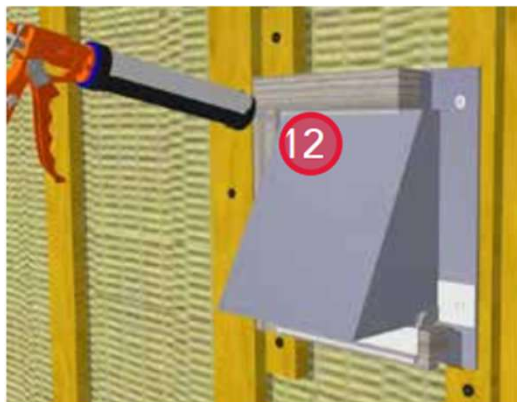
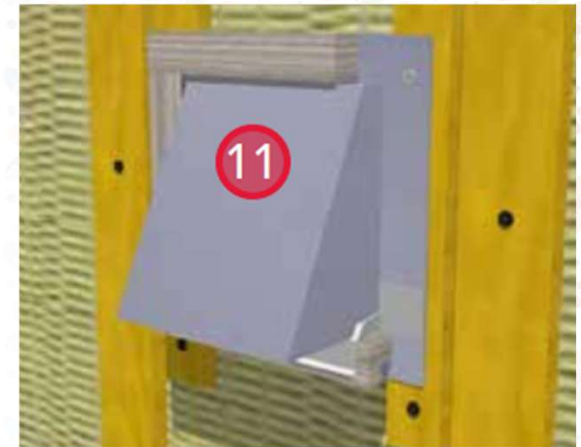
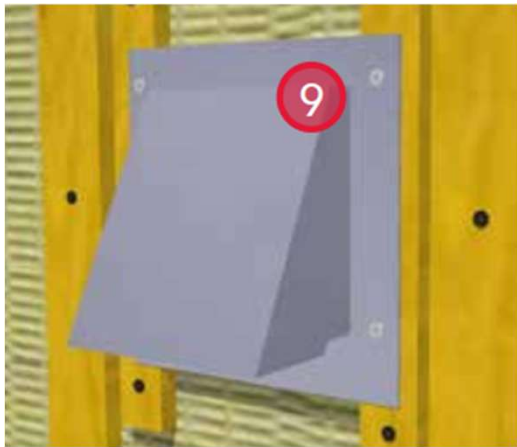


FLASHING DETAILS: Dryer Vent



COMFORTBOARD™ 80

FLASHING DETAILS: Dryer Vent





THE PERFECT WALL: A Vapour-Open Solution



- Scaffolding simplifies workflow



THE PERFECT WALL: A Vapour-Open Solution



- Rainscreen for bulk water management, ventilation
- Bug screen top and bottom



THE PERFECT WALL: A Vapour-Open Solution





THE PERFECT WALL: A Vapour-Open Solution

- Local trades keeps expertise and dollars in Community



CONCLUSION: The efficiency-first mindset



“Efficiency lets us design tomorrow’s infrastructure around what we actually need - not around what we’ve been wasting.”

