

NOVOFOIL®

Vapour-Barrier Insulation Panel

NOVOFOIL®

DESCRIPTION

High density expanded polystyrene reflective vapour-barrier insulation board

- 4 ft x 8 ft (1219mm x 2438mm) and 4 ft x 8 ft 4 in (1219mm x 2540mm)
- Laminated vapour-barrier membrane on 1 side
- Benchmarks at 8 in (203mm) intervals printed on the membrane
- Shiplapped on 2 sides for thickness of 2 in (51mm) or more

CCMC 14205-R, certified wall composition



Made in Canada



NOVOFOIL®

PRODUCT FEATURES

APPLICATIONS

Residential, commercial, industrial and institutional construction

Insulation for interior walls

Insulation for ceilings

Insulation for interior foundation walls

ADVANTAGES

Superior Performance

Higher thermal resistance when installed with wood strips

Two installation steps in one: Laminated vapour-barrier membrane on the board with benchmarks at 8 in (203mm) intervals

Easy to handle and quick to install

Permanent insulation value

Energy savings through the elimination of thermal bridges

Contains recycled material

Can be handled without health hazards and is non-irritating to skin

TECHNICAL DATA SHEET

EPS Physical Properties	ASTM Test Method	ULC S701 Type 1
Thermal resistance 1 in (25mm) hr·°F·pi²/BTU (m²·°C/W)	C-518	Min : 3,87 Min : (0,68)
Water vapour permeability US Perm. (ng/Pa·s·m²)	E-96	Max : 0,017 Max : (1)
Dimensional stability (%)	D-2126	Max : 1,5
Flexural strength lb/in² (kPa)	C-203	Min : 25 Min : (170)
Water absorption (%)	D-2842	Max : 6,0
Compressive properties lb/in² (kPa)	D-1621	Min : 10 Min : (70)
Limiting oxygen index (%)	D-2863	Min : 24
The maximum continuous service temperature °F (°C) is 167 (75). The maximum intermittent service temperature °F (°C) is 180 (82,2). The coefficient of thermal expansion in/in/°F (mm/mm/°C) is 3,5 x 10-5 (6 x 10-5c-1) as per ASTM D-696 method.		

AVAILABLES SIZES

4 ft x 8 ft (1219mm x 2438mm) in thickness of 1/2 in (13mm) up to 3 in (76mm).

4 ft x 8 ft 4 in (1219mm x 2540mm) in thickness of 1/2 in (13mm) up to 3 in (76mm).

The **3 in (76 mm)** thick NOVOFOIL® board meets the **new requirements of section 11** on energy efficiency of the Quebec Construction Code chapter for insulation of interior foundation wall and satisfies most of the new requirements set for Eastern Canada. Check with your local Construction Building Code.

ISO 9001:2015

Certified quality management system ISO 9001:2015.



The expanded polystyrene used to manufacture NOVOFOIL® is Intertek certified (ETL Listed) in accordance with **ULC S701**.

Warning

Flammable: interior applications require a protective barrier.

All installations must comply with the National Building Code. The information and suggestions contained in this brochure are provided solely for informational purposes and are offered in a spirit of collaboration. To our knowledge, we believe the information presented can be considered reliable. This brochure shall not constitute, in any case, a REPRESENTATION or a WARRANTY either EXPRESS or IMPLIED, either in terms of the information, data and suggestions included, or with respect to the absence or violation of any patent or other rights of third parties. Any proposed applications must be evaluated beforehand according to the application context and must, as a result, be adapted or modified to suit local conditions and materials if necessary.

TECHNICAL DATA SHEET - Novoclimat requirements

EPS Physical Properties	ASTM Test Method	ULC S701 Type 1
Thermal resistance 1 in (25mm) hr·°F·pi²/BTU (m²·°C/W)	C-518	Min : 3,87 Min : (0,68)
Water vapour permeability US Perm. (ng/Pa·s·m²)	E-96	Max : 0,017 Max : (1)
Dimensional stability (%)	D-2126	Max : 1,5
Flexural strength lb/in² (kPa)	C-203	Min : 25 Min : (170)
Water absorption (%)	D-2842	Max : 6,0
Compressive properties lb/in² (kPa)	D-1621	Min : 10 Min : (70)
Limiting oxygen index (%)	D-2863	Min : 24
The maximum continuous service temperature °F (°C) is 167 (75). The maximum intermittent service temperature °F (°C) is 180 (82,2). The coefficient of thermal expansion in/in/°F (mm/mm/°C) is 3,5 x 10-5 (6 x 10-5c-1) as per ASTM D-696 method.		

AVAILABLE SIZES

4 ft x 8 ft x 3 in (1219mm x 2438mm x 76mm).

4 ft x 8 ft 4 in x 3 in (1219mm x 2540mm x 76mm).

Certified wall compositions, # CCMC 14205-R.

Consult the NOVOFOIL installation guide to learn about the wall compositions.

ISO 9001:2015

Certified quality management system ISO 9001:2015.

Warning

Flammable: interior applications require a protective barrier.

All installations must comply with the National Building Code. The information and suggestions contained in this brochure are provided solely for informational purposes and are offered in a spirit of collaboration. To our knowledge, we believe the information presented can be considered reliable. This brochure shall not constitute, in any case, a REPRESENTATION or a WARRANTY either EXPRESS or IMPLIED, either in terms of the information, data and suggestions included, or with respect to the absence or violation of any patent or other rights of third parties. Any proposed applications must be evaluated beforehand according to the application context and must, as a result, be adapted or modified to suit local conditions and materials if necessary.



The expanded polystyrene used to manufacture NOVOFOIL® is Intertek certified (ETL Listed) in accordance with **ULC S701**.

NOVOFOIL[®] *graphite*

DESCRIPTION

NOVOFOIL Graphite is a graphite-enhanced expanded polystyrene (EPS) insulation panel designed to improve the energy performance of buildings. By incorporating graphite particles into the EPS, the board further reduces heat transfer compared to conventional EPS, providing a higher insulating value (R-value) at the same thickness. It is faced with the same reflective aluminum foil used on the standard product.

Enhanced thermal resistance

Thanks to the addition of graphite particles in the expanded polystyrene, NOVOFOIL Graphite delivers a thermal resistance of R-4.6 per inch (RSI 0.81), compared to R-3.87 per inch (RSI 0.68) for standard NOVOFOIL.



NOVOFOIL® *graphite*

TECHNICAL DATA SHEET

EPS Physical Properties	ASTM Test Method	ULC S701 Type 1
Thermal resistance 1 in (25mm) hr·°F·pi²/BTU (m²·°C/W)	C-518	Min : 4,6 Min : (0,81)
Water vapour permeability US Perm. (ng/Pa·s·m²)	E-96	Max : 0,017 Max : (1)
Dimensional stability (%)	D-2126	Max : 1,5
Flexural strength lb/in² (kPa)	C-203	Min : 25 Min : (170)
Water absorption (%)	D-2842	Max : 6,0
Compressive properties lb/in² (kPa)	D-1621	Min : 10 Min : (70)
Limiting oxygen index (%)	D-2863	Min : 24
The maximum continuous service temperature °F (°C) is 167 (75). The maximum intermittent service temperature °F (°C) is 180 (82,2). The coefficient of thermal expansion in/in/°F (mm/mm/°C) is 3,5 x 10-5 (6 x 10-5c-1) as per ASTM D-696 method.		

AVAILABLE SIZES

4 ft × 8 ft × 1/2 in. (1219 mm × 2438 mm × 13 mm)

4 ft × 8 ft × 3/4 in. (1219 mm × 2438 mm × 19 mm)

4 ft × 8 ft × 1 in. (1219 mm × 2438 mm × 25 mm)

Certified wall compositions, # CCMC 14205-R.

Consult the NOVOFOIL installation guide to learn about the wall compositions.

ISO 9001:2015

Certified quality management system ISO 9001:2015.

Warning

Flammable: interior applications require a protective barrier.

All installations must comply with the National Building Code. The information and suggestions contained in this brochure are provided solely for informational purposes and are offered in a spirit of collaboration. To our knowledge, we believe the information presented can be considered reliable. This brochure shall not constitute, in any case, a REPRESENTATION or a WARRANTY either EXPRESS or IMPLIED, either in terms of the information, data and suggestions included, or with respect to the absence or violation of any patent or other rights of third parties. Any proposed applications must be evaluated beforehand according to the application context and must, as a result, be adapted or modified to suit local conditions and materials if necessary.



The expanded polystyrene used to manufacture NOVOFOIL® is Intertek certified (ETL Listed) in accordance with **ULC S701**.

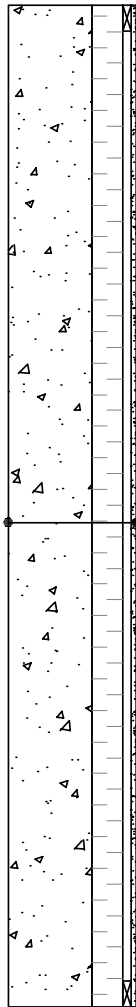
NOVOFOIL®

INSTALLATION TIPS

1. Apply NOVOFOIL® insulation boards to interior walls or ceilings with the vapour-barrier membrane facing the interior.
2. Seal joints with vapour-barrier adhesive tape.
3. Install 3/4 in (19mm) thick wood strips at 16 in (406mm) intervals between NOVOFOIL® boards and drywall panels to allow reflectivity.



NOVOFOIL®



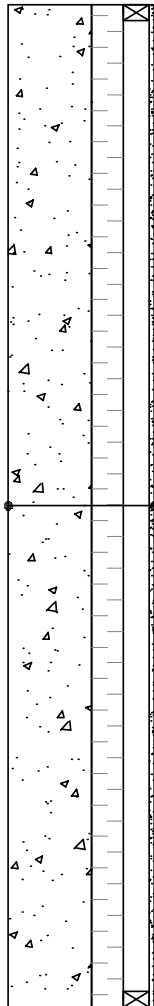
FOUNDATION WALL ASSEMBLY

EXT. AIR
8" FOUNDATION WALL
3" NOVOFOIL R-18.40 RIGID INSULATION
1X3 VERTICAL FURRING @ 24" c/c
1/2" DRYWALL
INT. AIR

▲ WALL 1



NOVOFOIL®



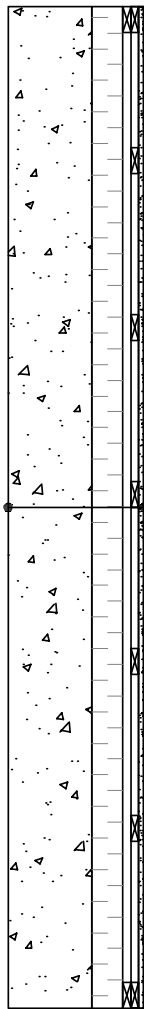
FOUNDATION WALL ASSEMBLY

EXT. AIR
8" FOUNDATION WALL
3" NOVOFOIL R-18.91 RIGID INSULATION
2X3 VERTICAL FURRING @ 24" c/c
1/2" DRYWALL
INT. AIR

▲ WALL 2



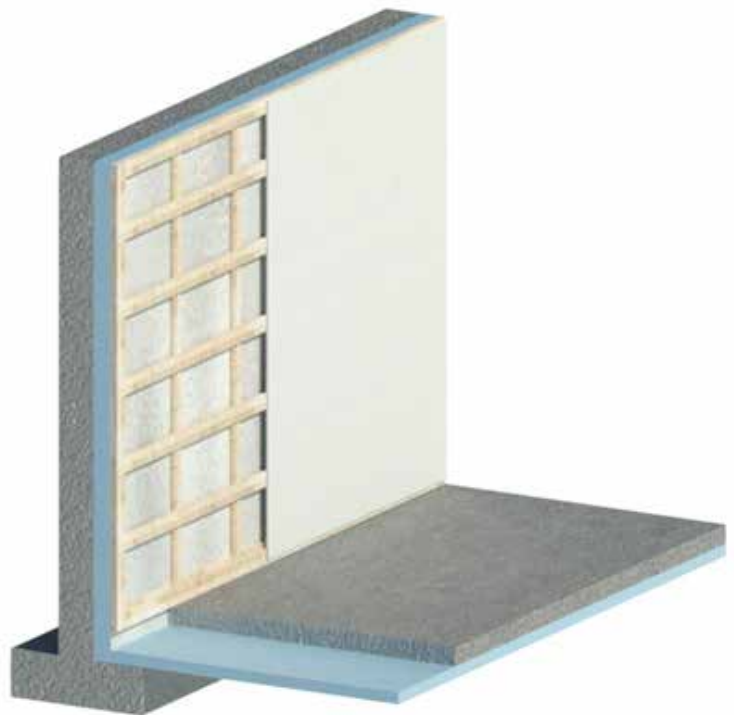
NOVOFOIL®



FOUNDATION WALL ASSEMBLY

EXT. AIR
8" FOUNDATION WALL
3" NOVOFOIL R-18.40 RIGID INSULATION
1X3 VERTICAL FURRING @ 24" c/c
1X3 HORIZONTAL FURRING @ 16" c/c
½" DRYWALL
INT. AIR

▲ WALL 3



NOVOFOIL®



NOVOFOIL®



Installation guide

LAMINATED INSULATION BOARD WITH
REFLECTIVE VAPOUR BARRIER

Product Description

NOVOFOIL® is a vapour barrier material consisting of an expanded polystyrene panel and an aluminium membrane that reduces the passage of water vapour. NOVOFOIL® must be installed on the warm side of the foundation walls and the reflective membrane must be visible from the inside of the insulated room.

Panel Dimensions

Thickness: 3 in (76 mm)

Width: 48 in (1220 mm)

Length: 96 in (2440 mm) and 100 in (2540 mm)

Resistances & Standards

Thermal resistance

According to C-518: 1 in (25 mm) R 3,87 (RSI 0,68)

According to C-1363: 3 in (76 mm) R 17,11 (RSI 3,013)

To consider the thermal contribution of the reflective effect, the product must be installed in accordance with the specified assembly and instructions based on a laboratory test that meets the ASTM-1363 standard. Please refer to the Technical Data Sheet – R-Value depending on the assembly.

Compressive strength

According to ASTM D-1621: 13 lb/in² (95 kPa)

Flexural strength

According to ASTM C-203: 61 psi (414 kPa)

Water vapour permeability

According to ASTM E-96: 3,67 perm (208 ng/Pa. s. m)

Water absorption

According to ASTM D-2842: 4.1%

Banks

Rebated along the length of the panel.

Work Execution

Foundation Inspection

Ensure that the foundation walls are watertight before starting the work.

Ensure that work to be done by other trades is completed before installing insulation.

Ensure that foundation walls are straight, smooth and dry, and that they are free of snow, ice, frost, dust and debris.

Do not begin work until the above deficiencies have been corrected.

Installation of the panels

Wall Assembly 1 (Installation with 1x3 Vertical Furring)

Step 1

Mechanically fasten 3 in (76 mm) NOVOFOIL® rigid insulation panels to the interior side of 8 in (200 mm) poured concrete foundation walls. The aluminum membrane must face the interior of the basement. Install ¾ in x 2½ in (19 x 64 mm) perimeter wood furring strips around the walls and openings. Furring strips must also be installed vertically at 24 in (610 mm) on center.

Step 2

Seal all panel joints and any cutouts made for electrical boxes or wires (if applicable) using 2 in (50 mm) wide vapor barrier tape to ensure airtightness. Also seal all perimeter joints at the floor and around openings such as doors and windows.

Step 3

Ensure air gaps are sealed around the entire perimeter—air leakage must be blocked. Install electrical wires between the NOVOFOIL® panels and the gypsum panels. For electrical installations, refer to the current Québec Master Electricians' Code.

Step 4

Install gypsum panels by screwing them into the wood furring strips.

Wall Assembly 2 (Installation with 2x3 Vertical Furring)

Step 1

Mechanically fasten 3 in (76 mm) NOVOFOIL® rigid insulation panels to the interior side of 8 in (200 mm) poured concrete foundation walls. The aluminum membrane must face the interior of the basement. Install 1½ in x 2½ in (38 x 64 mm) perimeter wood furring strips around the walls and openings. Furring strips must also be installed vertically at 24 in (610 mm) on center.

Step 2

Seal all panel joints and any cutouts made for electrical boxes or wires (if applicable) using 2 in (50 mm) wide vapor barrier tape to ensure vapor tightness. Also seal all perimeter joints at the floor and around openings such as doors and windows.

Step 3

Ensure that all air gaps are sealed around the entire perimeter—in other words, make sure to block any air leakage. Install electrical wires between the NOVOFOIL® panels and the drywall panels. For electrical installations, refer to the current Québec Master Electricians' Code.

Step 4

Install drywall panels by screwing them into the wood furring strips.

Wall Assembly 3 (Installation with Double 1x3 Furring)

Step 1

Mechanically fasten 3 in (76 mm) NOVOFOIL® rigid insulation panels to the interior side of 8 in (200 mm) poured concrete foundation walls. The aluminum membrane must face the interior of the basement. Install ¾ in x 2½ in (19 x 64 mm) perimeter wood furring strips around the walls and openings. Furring strips must also be installed vertically at 24 in (610 mm) on center and horizontally at 16 in (406 mm) on center.

Step 2

Seal all panel joints and any cutouts made for electrical boxes or wires (if applicable) using 2 in (50 mm) wide vapor barrier tape to ensure vapor tightness. Also seal all perimeter joints at the floor and around openings such as doors and windows.

Step 3

Ensure that all air gaps are sealed around the entire perimeter. In other words, make sure to block any air leaks. Install electrical wires between the NOVOFOIL® panels and the drywall panels. For electrical installations, please refer to the current Québec Master Electricians' Code.

Step 4

Install the drywall panels by screwing them into the wood furring strips.

Recommendations

Ensure that the rim joists are properly sealed against air infiltration and well insulated to prevent moisture issues.

Insulate the entire height of the foundation walls.

Provide a clearance of ¼ in (6 mm) to ½ in (12 mm) between the floor and the furring strips.

Warning

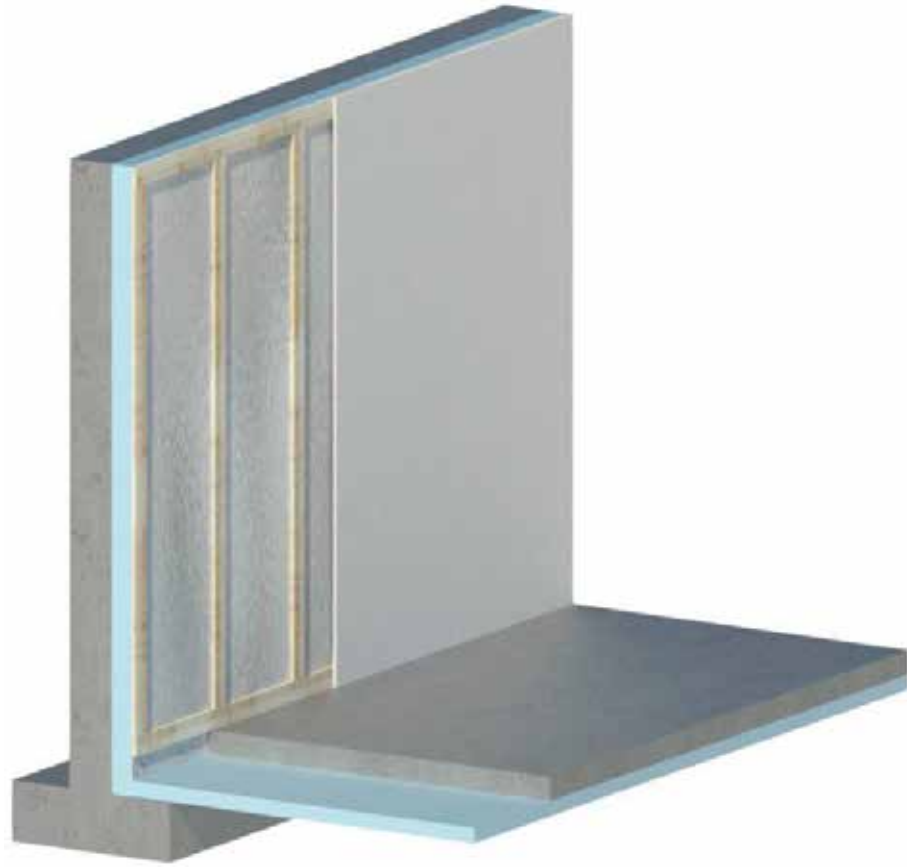
Ensure that the rim joists are properly sealed against air infiltration and well insulated to prevent moisture issues.

Insulate the entire height of the foundation walls.

Provide a clearance of ¼ in (6 mm) to ½ in (12 mm) between the floor and the furring strips.

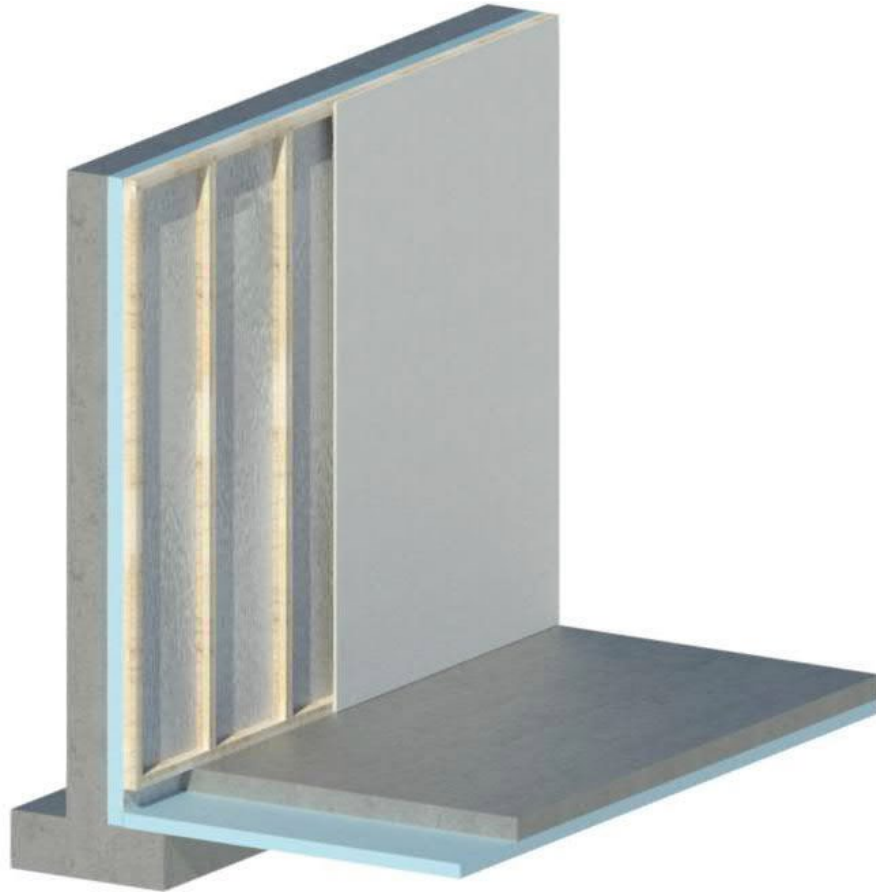
NOVOFOIL®

Wall Assembly 1 (R-18.40)



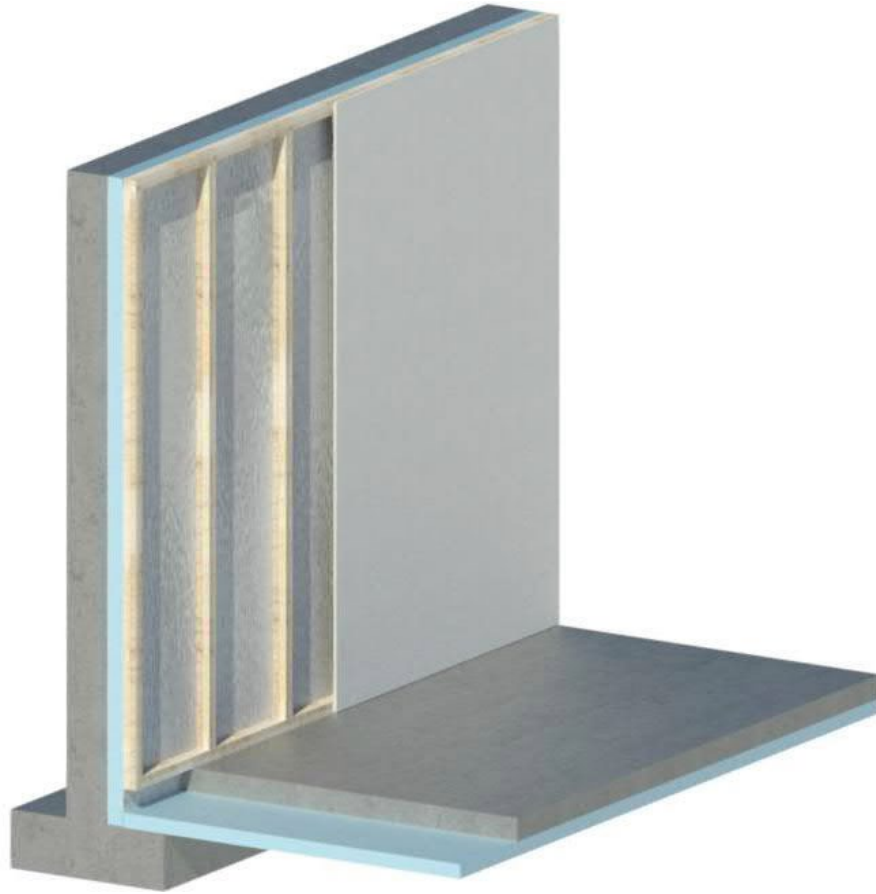
NOVOFOIL®

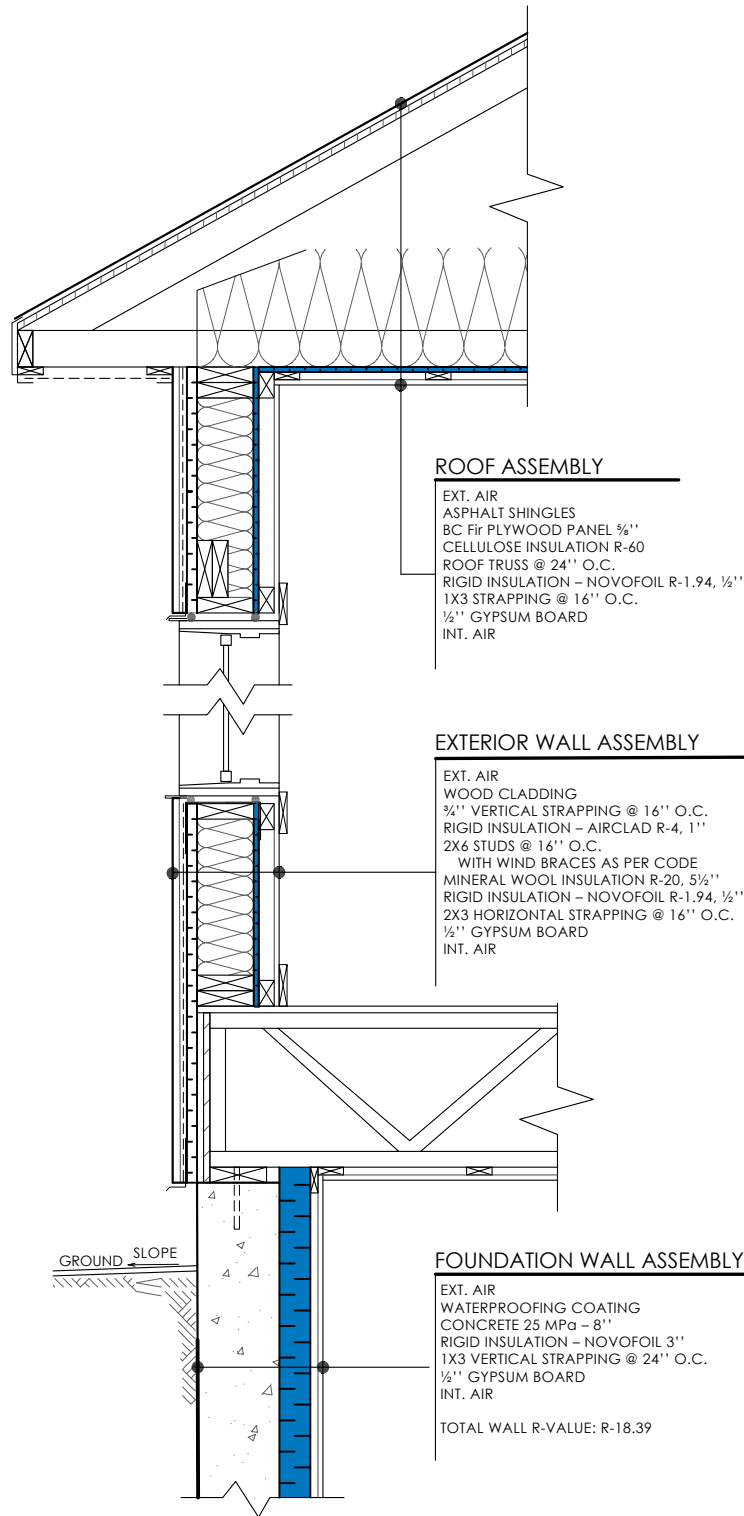
Wall Assembly 2 (R-18.91)



NOVOFOIL®

Wall Assembly 3 (R-18.40)





Polyform

855 Bd Industriel,
Granby, QC J2J 1A6

THE INFORMATION CONTAINED IN THIS DRAWING IS A PRESENTATION OF THE APPLICATION OF OUR PRODUCTS. IT REPRESENTS A STATE-OF-THE-ART CONSTRUCTION METHOD IN COMPLIANCE WITH THE NATIONAL BUILDING CODE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE SUITABILITY OF THIS APPLICATION FOR HIS PROJECT.

DESCRIPTION WALL SECTION – VAPOR BARRIER INSULATION PANEL APPLICATION

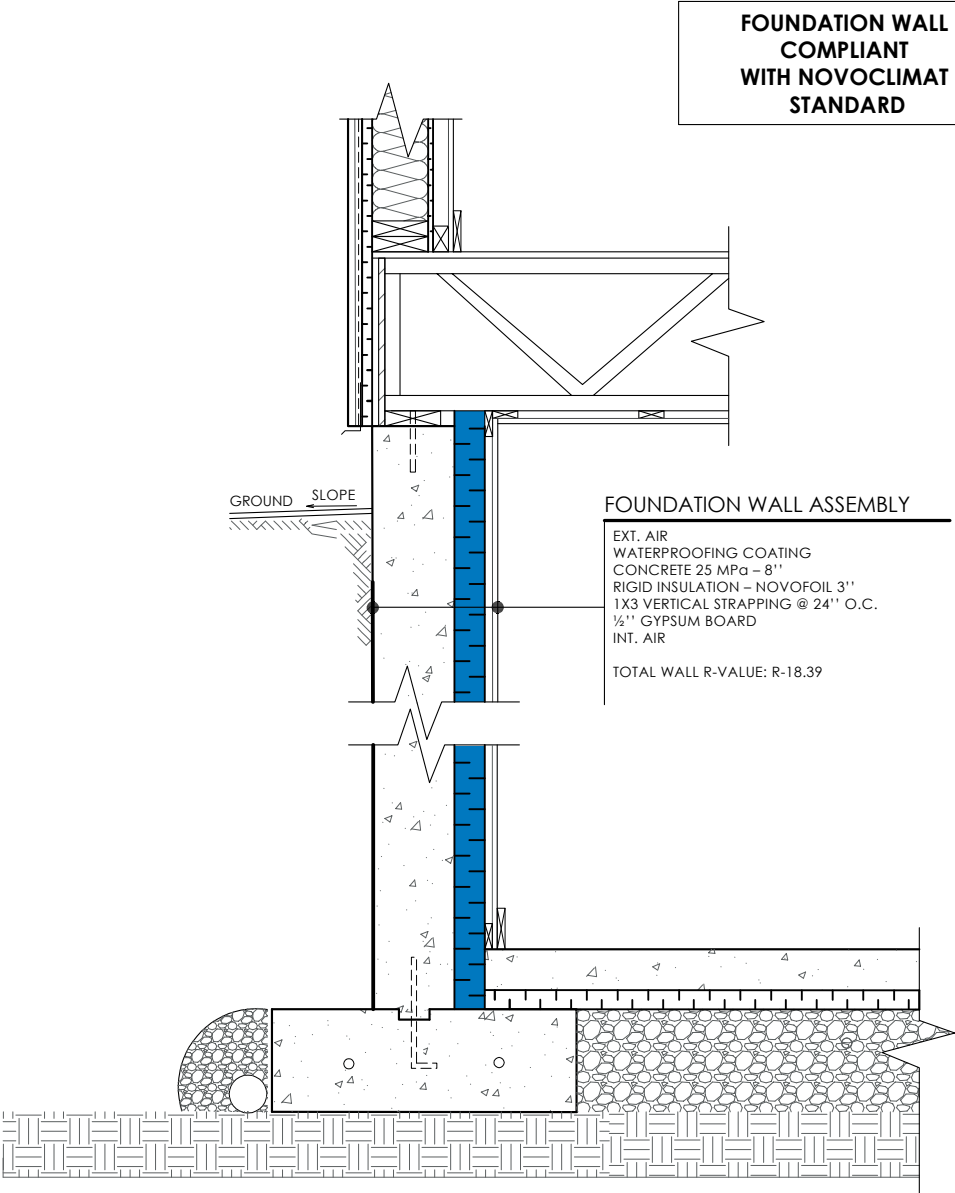
PRODUCT NOVOFOIL

SCALE 3/4"=1'-0"

DATE 25/01/2021

NO. 2.01





Polyform 855 Bd Industriel, Granby, QC J2J 1A6	THE INFORMATION CONTAINED IN THIS DRAWING IS A PRESENTATION OF THE APPLICATION OF OUR PRODUCTS. IT REPRESENTS A STATE-OF-THE-ART CONSTRUCTION METHOD IN COMPLIANCE WITH THE NATIONAL BUILDING CODE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE SUITABILITY OF THIS APPLICATION FOR HIS PROJECT.		DESCRIPTION FOUNDATION WALL SECTION – VAPOR BARRIER INSULATION PANEL APPLICATION	
			PRODUCT NOVOFOIL	
			SCALE 3/4"=1'-0"	
			DATE 02/09/2021	NO. 2.02

