MATERIAL CARBON
PROJECT RESULTS

BUILDERS FOR CLIMATE ACTION BEAM

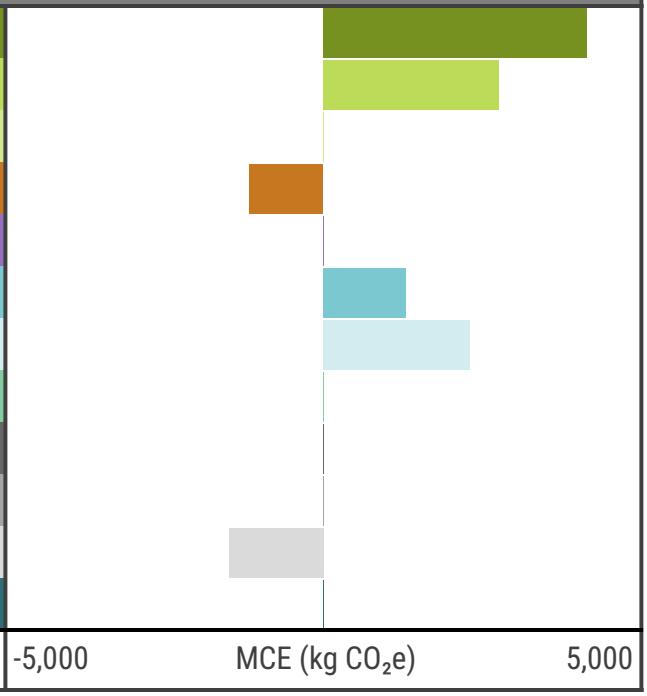
V1.1

PROJECT INFORMATION

Project Name	Montague Retrofit	**Construction Year**	1947
Scenario	Baseline	**Stories Above Grade**	1
Beam Version	V1.1	**Number of Bedrooms**	1
Design Firm(s)			
Engineering Firm(s)			
Builder / Developer	Sun Certified Builders Coop	**CONDITIONED AREA**	
Development Project		**Above Grade**	765 ft²
Street Address		**Below Grade**	704 ft²
City	Winnipeg	**Total**	1469 ft²
Country	Canada		
Province / State	Manitoba	**GROSS AREA**	
Building Type	Single Detached House	**Excluding Garage**	765 ft²
Construction Type	Energy Retrofit	**Garage**	0 ft²
Project Stage	Construction Complete	**Total**	765 ft²

MATERIAL CARBON EMISSIONS BY SECTION

Footings & Slabs	**4,248**	kg CO_2e
Foundation Walls	**2,828**	kg CO_2e
Structural Elements	**0**	kg CO_2e
Exterior Walls	**-1,192**	kg CO_2e
Party Walls	**0**	kg CO_2e
Cladding	**1,324**	kg CO_2e
Windows	**2,360**	kg CO_2e
Interior Walls	**0**	kg CO_2e
Floors	**0**	kg CO_2e
Ceilings	**0**	kg CO_2e
Roof	**-1,523**	kg CO_2e
Garage	**0**	kg CO_2e
NET TOTAL	**8,045**	kg CO_2e



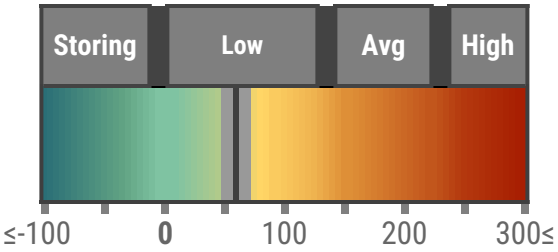
BEAM RESULTS

PROJECT EMISSIONS (MCE)

NET EMISSIONS kg CO_2e	GROSS EMISSIONS kg CO_2e	STORAGE SHORT CYCLE kg CO_2	STORAGE LONG CYCLE kg CO_2
8,045	17,338	9,293	0

PROJECT EMISSIONS INTENSITY (MCI)

	Metric kg CO_2e/m^2	Imperial lb CO_2e/ft^2
MCI Conditioned Floor Area	**59**	**12**
MCI Total Floor Area	113	23
MCI Per Bedroom	8,045	17,737



HIGHEST EMITTING MATERIALS

SECTION	kg CO_2e	MATERIAL
Foundation Walls	**2,705**	XPS foam board / DuPont / Styrofoam ST-100 / R
Windows	**2,360**	Window - triple pane / Fiberglass frame / BfCA Stı
Footings & Slabs	**2,152**	XPS foam board / DuPont / Styrofoam ST-100 / R
Footings & Slabs	**1,799**	Concrete – 25 MPa, GU / Concrete Manitoba [Indu
Cladding	**1,301**	Cement "Stucco" Plaster / 1:1:4 mix of Portland, n
Roof	**842**	Metal panels - steel / ArcelorMittal / XCarb RRP /
Exterior Walls	**674**	Ext. Wall & Roof Barrier, liquid applied / Carlisle / I
Roof	**526**	Wood roof truss / Gable Roof, Double Howe, 2x6 (
Roof	**391**	OSB sheathing / 1/2" / AWC & CWC [Industry Avg
Exterior Walls	**362**	Plywood / 1/2" / AWC & CWC [Industry Avg | US &

HIGHEST CARBON-STORING MATERIALS

SECTION	kg CO_2e	MATERIAL
Roof	**-3,319**	Cellulose / dense pack / CIMA / R 3.7-inch / [Indu
Exterior Walls	**-2,314**	Cellulose / dense pack / CIMA / R 3.7-inch / [Indu
Exterior Walls	**-236**	Wood fiber board / R 2.7-inch / NAFA [Industry Av

COMMENTS

Canada National Guidelines for Whole Building LCA

Results from BEAM have the intended use of *informing design* and/or *meeting requirements*, if the requirements clearly indicated BEAM as an acceptable tool. Results from BEAM are not intended to be a *performance declaration* as defined by ISO 14044 and is not intended to support comparative assertions by the definitions of IS0 14044.

Name of commisioner of the assessment:	
Name of assessor(s):	
Qualification(s) of assessor(s):	
Date of assessment:	
Verification:	**YES** ☐ **NO** ☐
Name and contact of verifier:	
Functional equivalent:	**Residential Buildings designed as permanent structure according to applicable building code** ☐ **Other** ☐
If other, please define:	

Reference units: See Project Information above

System boundary: LCA results include modules A1-A3 (cradle-to-gate analysis). All other modules not declared.

Reference study period: Pre-construction and/or completion of construction only

Scope of the building model: Material use only for product categories listed in BEAM

Data sources: Type III EPDs, or as noted in Column M

Delayed emissions: Climate effects of delayed emissions resulting from biogenic carbon do not include potential impacts of carbon released at end of product life.