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# University of Minnesota Duluth (UMD) Bagley Classroom



The University of Minnesota Duluth (UMD) was presented with the need for a new classroom facility and has taken the opportunity to design and develop a Net-Zero solution in the Bagley Nature area of its campus. They envisioned creating a home base for students in the form of a satellite classroom facility which takes full advantage of its natural environment and amenities. Working with David Salmela, FAIA, of Salmela Architects, and Carly Coulson, AIA LEED AP and certified Passive House consultant, the university fully embraced the concepts of Net-Zero and Platinum LEED certification. They accomplished their goal using proven materials such as structural insulated panels (SIPs), triple insulated glass and leading edge technology solutions for renewable energy. The Bagley Classroom opened in June of 2010 and has received LEED Platinum certification.

**Click here** to view a YouTube video highlighting more photos of this project

## **LEED Scores (NC Version 2 Platinum):**

- SITE (SS): 11 points awarded out of a possible 14
- WATER (WE): 5 points awarded out of a possible 5
- ENERGY (EA): 15 points awarded out of a possible 17
- MATERIALS (MR): 9 points awarded out of a possible 13
- INDOOR ENVIRONMENT (EQ): 15 points awarded out of a possible 15
- INNOVATION (ID): 5 points awarded out of a possible 5



**Owner** University of Minnesota Board of Regents

**Owner's representative** UMD Facilities Management Department

**Architect and interior designer** Salmela Architects

Engineers Gausman & Moore (MEP); Meyer Borgman and Johnson (structural): Salo Engineering (civil)

Passive House consultant Carly Coulson

**Envelope consultant** Conservation Technologies

**Commissioning agent** Hallberg Engineering

**General contractor and landscape** UMD Facilities Management Department

Structural system Enercept, Inc. SIPs

Metal Rheinzink Salvaged Flatlock Zinc Tiles

Fiber composite Richlite/Intectural rainscreen & trim

**Wood** Custom FSC IPE screens

Windows Innotech/Trocal InnoNova 70.MS frames

**Glass** Cardinal Triple Pane #179 Lo.E Argon with XLedge spacers

**Doors** Woodmax custom wood Insulated core door

Low-slope roofing Firestone EcoWhite

**Green roof** LiveRoof CareFree Extreme Plant Mix

Concrete floor sealer Vexcon Starseal PS Clear

Paints and stains Benjamin Moore ECOSpec

Particleboard paneling Roseburg Skyblend FSC

Interior lighting LSI Industries Abolite

Exterior Hadco LED wall mount; Luce Plan SKY LED PV bollard

**Photovoltaics** Sunny Boy Inverter; Sanyo HIT ZION PV panels

**Plumbing** Envirolet VF Vacuum Flush Composting Toilet System

## **Building automation system** Siemens

**Timber beams** Duluth Timber Company reclaimed Douglas Fir heavy timbers

**Insulation** Benchmark Foam recycled content EPS; Bonded Logic Ultratouch

Vapor barrier film TenoArm

Waterproofing Building Envelope Innovations Wet-Flash PM 7000

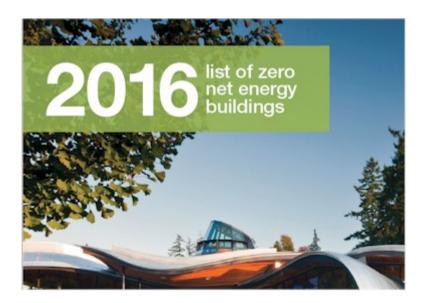
**Plumbing** Sloane SOLIS sensor & solar powered faucet

**Energy saving hand dryer** TOTO Clean Dry

**Energy monitoring system** Square DPowerLogic

Ventilation System Venmar700i HRV

For more information regarding current 2016 zero net energy buildings from the New Building Institute <u>Click here</u> to view or download the pdf from the New Building Institute. The UMD Bagley Classroom project is listed on page 13 of this document.



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