

MISSOULA BONE & JOINT AND MMW ARCHITECTS  
WITH THE UNIVERSITY OF MONTANA PRESENTS  
**SUSTAINABLE SHELTER**







# BUILDING ENVELOPE

- Super-Insulated
- Continuous Insulation
- Reflective Roof





# BUILDING ENVELOPE

- High-performance exterior windows
- Exceeds code by 15%





## WHY DOES IT MATTER?

- Uses less energy to maintain Comfort
- Allows for more Windows and Daylight opportunities
- More comfortable temperature





# LIGHTING SYSTEMS

- Energy Efficient Lighting
- Lighting Controls





## WHY DOES IT MATTER?

- Reduces Human Error
- Provides Hands-off control, sanitation
- Energy savings while providing adequate light for each space to function





# MECHANICAL SYSTEMS

- Geothermal
- 96% Efficient Boilers





# MECHANICAL SYSTEMS

- Each Mechanical Zone has its own VAV
- Air-Changes vs Efficiency





## WHY DOES IT MATTER?

- Reduced Energy Use
- Maintains Sanitation
- Keeps Everyone Comfortable





# PHOTO-VOLTAIC SYSTEMS

- 160 Solar Panels
- 65,063 kW  
produced  
annually





## WHY DOES IT MATTER?

- Removes 10 cars a year
- Equals powering 8 homes a year
- Solar generates ~14% of building power
- ~\$4.5k in savings annually





# ENERGY SAVINGS

- Building uses 24% less power than code
- ~\$20k in savings annually