Problems with the Building

- Not enough space
- The roof leaks
- Heating, ventilation, and air conditioning sucks
But.....
Problems with Science Education

• We teach science very differently than we do science.
• The generally educated public is not very scientifically literate.
• The population of scientists looks dramatically different than the population of the nation.
• The facilities that support science education do not facilitate effective teaching.
Parallel and Intersecting Processes

• Curriculum and Pedagogy
  – Introductory math and science courses
  – Building community
  – Research-like experiences in courses and more student-faculty research

• Working with planning consultants and then designers on facilities to support the goals
Aspects of Planning Process

• Data driven assessment of risks for poor student performance
• Visiting speakers and consultants
• Small scale trials
• Writing grant proposals
• Continuous assessment
• Tying facilities planning to program changes
Outcomes

• More active pedagogies in introductory STEM courses
• Dramatically improved performance in introductory math and science courses among groups traditionally under-represented in STEM
• Large increase in undergraduate research
• Science graduates are over half women and over 20% domestic students of color
Holabird and Root and Research Facilities Design helped us to create a wonderful addition/renovation in two phases, 10 years apart.
Changes in Classrooms
What next?

• The planning processes for improved student learning and for design and construction process are intensive.

• Moving into new and vastly improved space is exhilarating and should lead to self congratulations.

• How do you reinvigorate and sustain momentum in reflective planning and teaching?