

UNIVERSITY of NOTRE DAME
School of Architecture

BUILDING TECHNOLOGY I / ARCH 20411
September 26, 2013

PARTS TO WHOLE
Understanding Materials and Complexity

Each small group (2-3 students) will select a building material from the samples provided and generate a short, 4 slide Powerpoint presentation to include the following information about the selected material:

1. **A brief history of the building material**
 - a. Did any building materials or technologies precede and lead to the development of this specific material?
 - b. How has it evolved, over time, to its current form/ use?
2. **How it is primarily used in building construction** (and more specifically in wall assemblies)*
* Be sure to include any complimentary systems or materials that the selected material depends on for its performance
3. **Origins and Manufacturing**
 - a. Describe what the building material is made from
 - b. Briefly describe how the selected building material is produced (or manufactured) and prepared for installation in a wall assembly
 - c. Describe how the selected material would be sourced for a project on Notre Dame's campus:
 - i. Where does it come from?
 - ii. How far does it have to travel? (from its origin to a production facility to campus)
4. **List of all References** (use the Library; include image credits on all slides)

OBJECTIVES:

1. Understanding of common building materials and "simple" wall assemblies
2. Understanding of evolution of wall system technology
3. Encourage consideration of the origins and ecology of building materials
4. Enhance basic research and presentation skills

Materials:

- | | |
|----------------------------------|------------------------------------|
| 1. 2 x 4 wood stud | 10. Fine sand and coarse aggregate |
| 2. 3 5/8" Light gauge steel stud | 11. Gypsum wall board |
| 3. Fiberglass batt insulation | 12. Mortar break |
| 4. Rigid foam insulation | 13. Masonry tie |
| 5. OSB/ plywood sheathing | 14. Steel shelf angle |
| 6. Standard brick | 15. Expansion joint mastic |
| 7. Concrete masonry unit | 16. Thick cord or rope |
| 8. Copper flashing | 17. Weep hole mesh |
| 9. Portland cement | 18. Water/weather-proof membrane |

In order to receive a grade for this assignment, you are required to:

Save your presentation to ND Box: BY Tuesday, October 15 at 10:00 am

Present your Research in Class: Tuesday, October 15 at 12:35 pm

Participate in the in-class demonstration: Tuesday, October 15

Return your material sample: Tuesday, October 15 (end of class)