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4.500 Introduction to Design Computing
Fall 2008

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Assignment 3

September 23, 2008

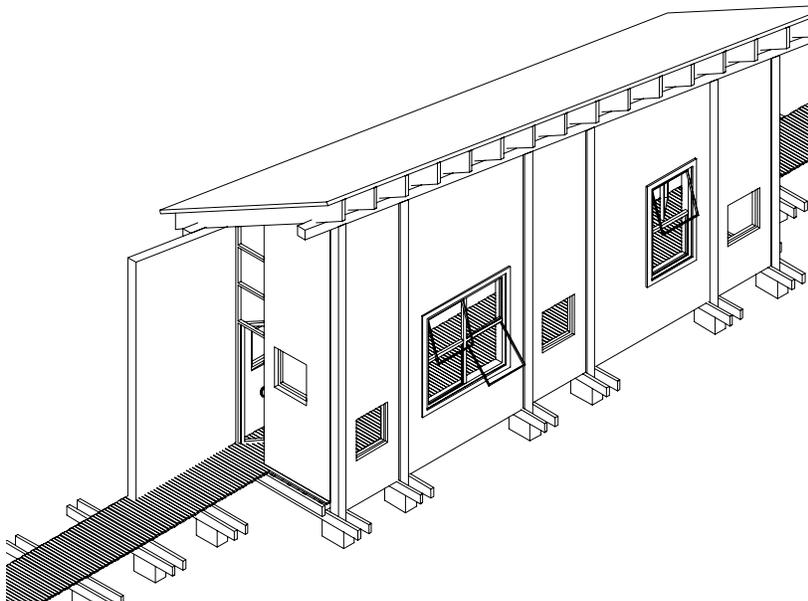
Design Detail with Solid Modeling

This assignment is due in lecture and on Stellar, Tuesday, September 30

Reference & Reading: Review D K, Chings Building Construction Illustrated (Rotch Library)

For this assignment you will consider architectural detail and construction. The model you completed last week was a volume with no elements of construction at a larger scale. Here your job will be to adjust the plan first then the form of the building around the adjustments made to the plan. From the adjustments your cottage should add up to a work of architecture and move beyond that of a shack.

Now that you understand the basic shape of your cottage and its physical makeup create a three dimensional representation in full detail. In your last model you created simple shapes representing five building components. Create a complex model from information used in the previous model to build new more informed detail. For the most part you will almost need to create a completely new model.



Define roof lines, wall and window openings in detail. Use the AIA Laying structure as a guide to sorting building layers and parts:

- 1) **Ground**
 - a. GRPL ground piles or foundation wall
 - b. GRSP ground wooden structure to support the floor

- 2) **Floor**
 - a. FLSF floor surface
 - b. FLST floor structure

- 3) **Walls**
 - a. WLEX wall – exterior
 - b. WLIN wall – interior

- 4) **Roof**
 - a. RFSH roof – surface
 - b. RFIN interior
 - c. RFST roof structure

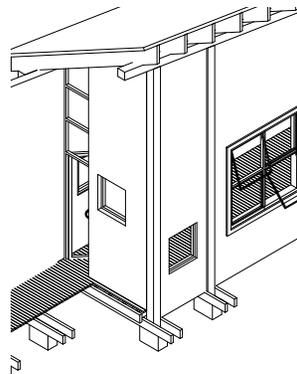
- 5) **Details**
 - a. DEWI window Detail
 - b. DEDO door detail

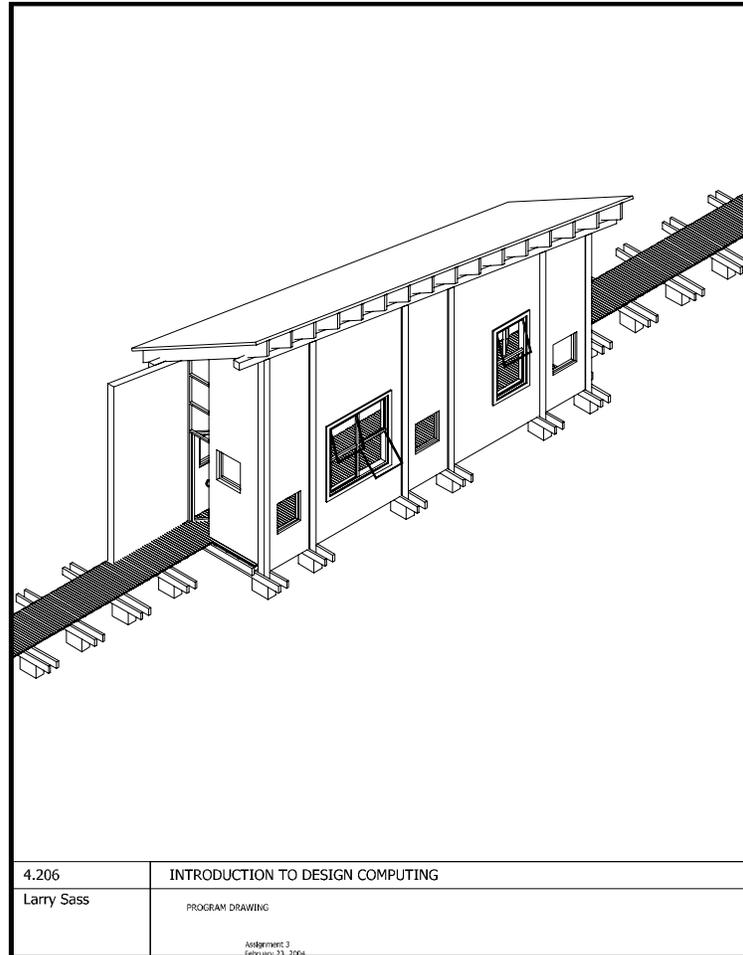
Quality of Space(s)

Challenge the internal spaces for light, room heights and size, if the is space too small find ways to make it seem bigger without adding a lot of square footage. The sleeping area does not need a lot of light so you may want to make small windows for privacy and light control. The opposite may be true at the desk or seating area where you may want a lot of light. Try not to insert very large windows everywhere you will loose points for randomly places windows. For this assignment a wall of glass will not due, the windows should demonstrate that you have some control of sun light as it enters a space.

**Quality of Construction**

Your cottage will be constructed of wood on a concrete foundation. Make sure to include window frames, doors and some internal structural members (studs). **Review D K, Chings Building Construction Illustrated for ballon frame construction methods.** You will be grade on the level of relativity and representation of construction





PAPER TURNIN

Page 1 & 2: Printout two axonometric views of your model from paper space (one view per page), include a title block with your name on each sheet. The first page should show the overall model. The second sheet should show one to four detailed close-ups of your model. Please make sure to include your title block and assignment # on the final sheet.

ONLINE TURNIN

The full .dwg model. Make sure to include the floor plan on its own layer.