

Arch 464  
ECS  
Spring 99

Name \_\_\_\_\_

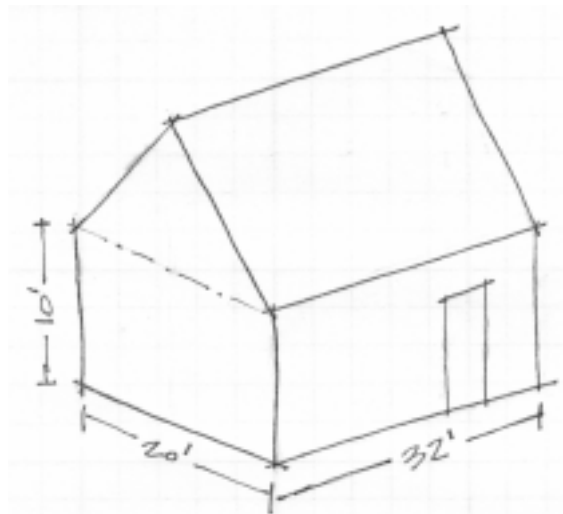
Quiz #2

## "Daylighting for Design Ink"

For this problem you are the daylighting consultant for the remodeling of a small outbuilding that your client, Design Ink, wants to transform into a three-person graphic design office. Your job is to select window locations and skylight configurations that provide appropriate daylighting levels, quality, and distribution for the three program areas—reception, desktop publishing, and meeting.

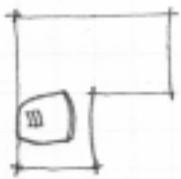
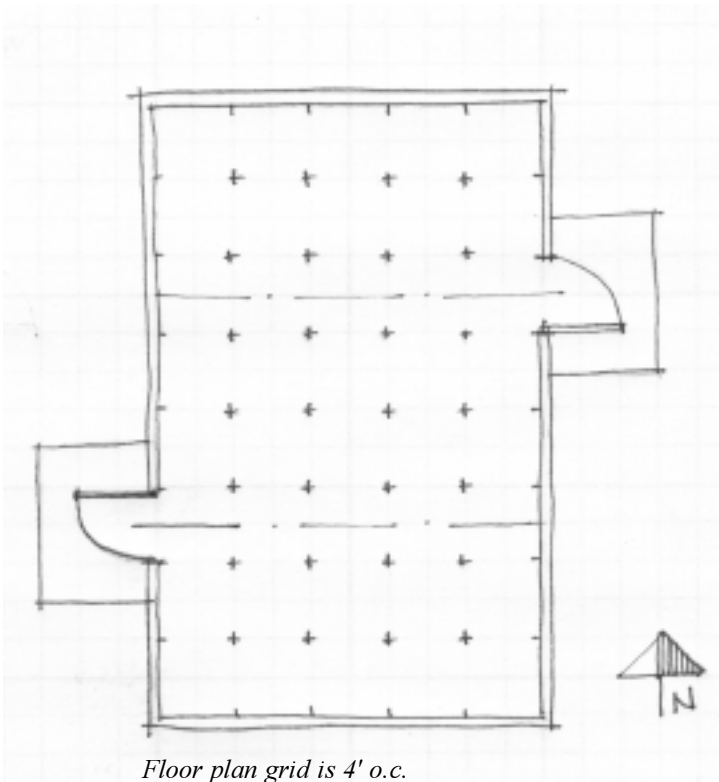
The outbuilding is located on an urban lot in Lewiston, Idaho. The client insists on having no windows on either the east or west facade, although there is a door in each of these facades. The building is 20' wide by 32' long and has a gable roof with gable ends on the north and south. Your kit-of-parts for the remodel consists of eight (8) 4' x 4' operable windows (they pivot vertically) and one (1) 4' x 4' operable skylight. The furnishings for the design office include: two (2) 8' x 8' L-shaped desks; a 6' x 12' conference table; a 4' x 6' reception desk; and two (2) 4' x 4' overstuffed chairs. This array of stuff can support two graphic designers, a receptionist, and a meeting of up to ten people.

READ THE ENTIRE QUIZ BEFORE YOU BEGIN!



*The ever-so-humble Design Ink Bldg.*

3 pts. 1. On the plan below indicate (draw it) the office layout. Explain how your proposed daylighting scheme will provide lighting that is appropriate in quantity and quality to each of the three task areas.



8' x 8' L-shaped desk



6' x 12' conference table

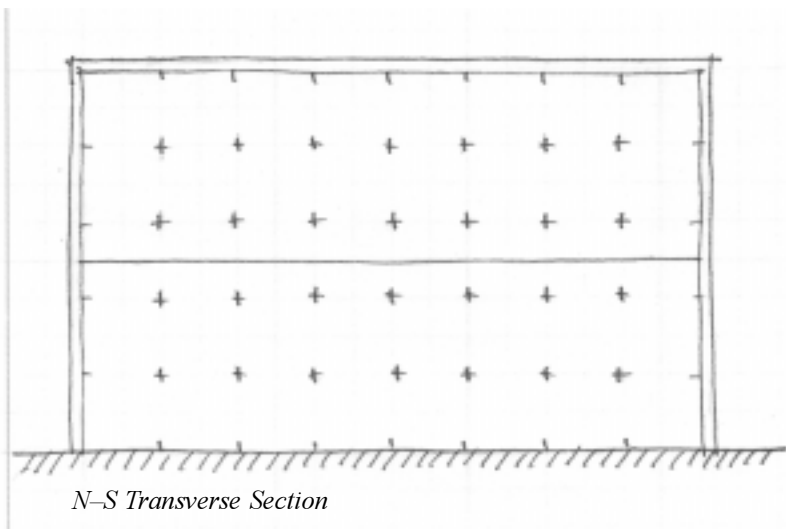
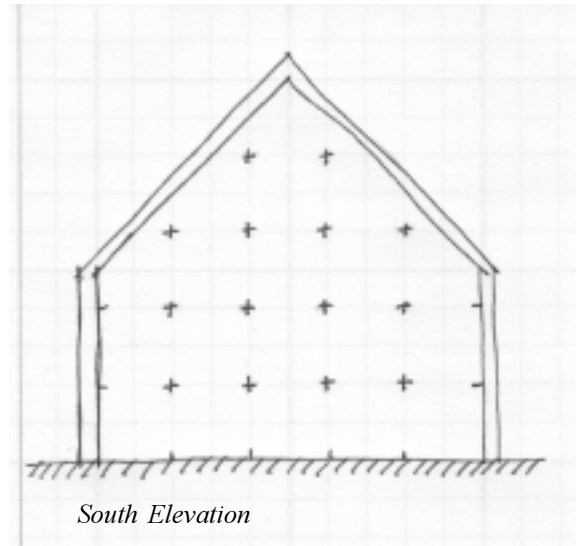
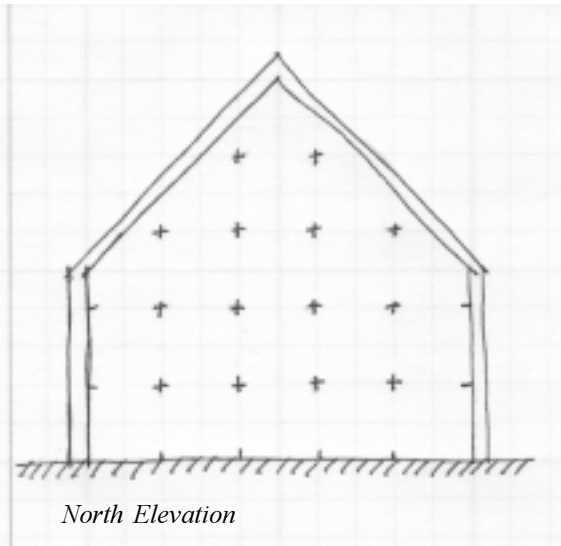


4' x 6' reception desk



4' x 4' overstuffed chair

- 3 pts. 2. Layout the eight windows on the north and south elevations and in the transverse section. Show any improvements in the facade or the section that are needed to support your daylighting scheme. Explain why these improvements are necessary. Illustrate the penetration of daylight in the transverse section. Explain the rationale for your design.



- 4 pts. 3. In the sections below illustrate the placement and configuration of the toplighting fixture. Show the distribution of light in the space. Make a detail drawing, if required, to help illustrate the toplighting fixture. Explain the rationale for your design.

