

Arch 464
ECS
Spring 98

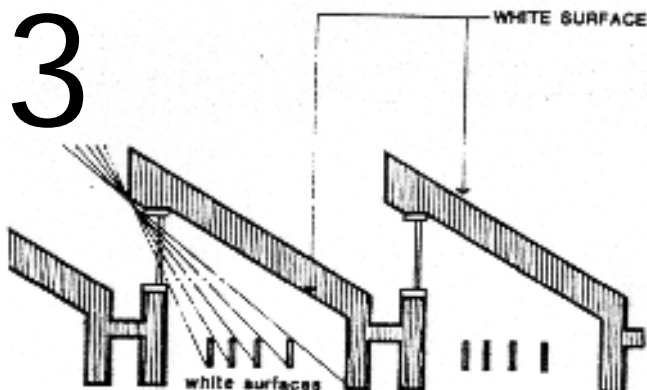
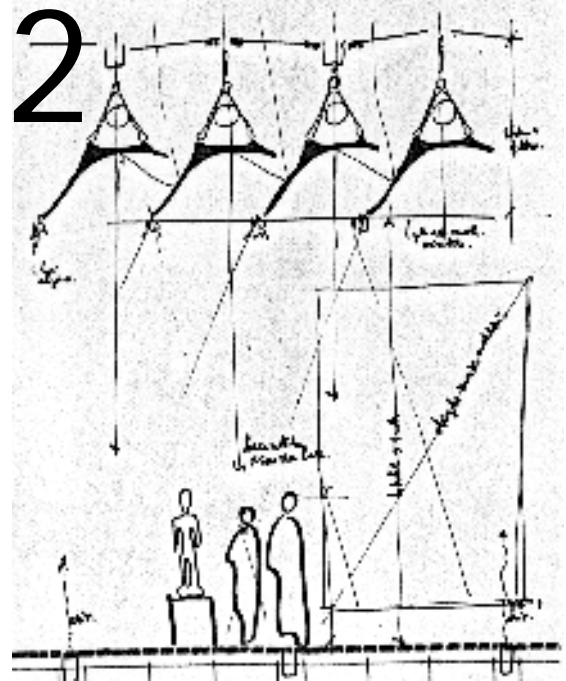
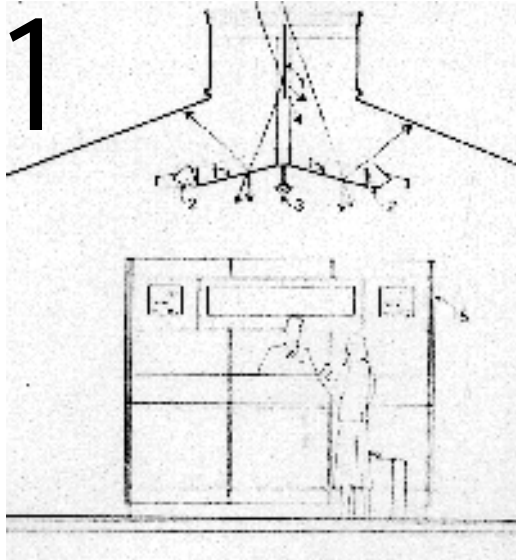
Name _____

Quiz #2

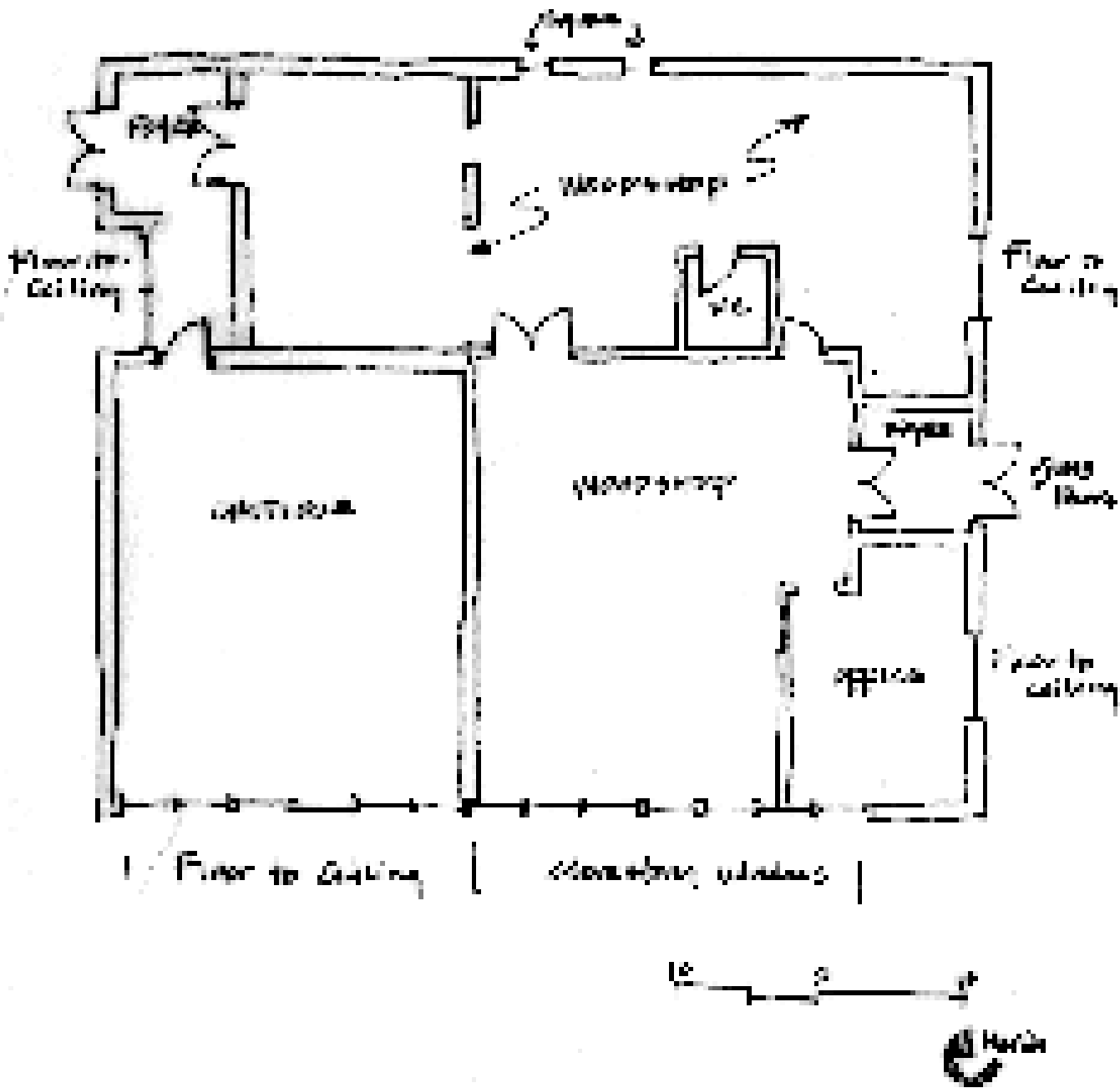
"Toplighting AAN Annex"

For this problem you are the daylighting consultant for the remodeling of AAN Annex into a shop and critique space. The existing roof has been deemed incompatible with the building's intended uses and will be replaced with a high-performance roof featuring daylighting apertures. Your job is to select roof configurations that provide appropriate daylighting levels and distribution for the two disparate areas—the critique space and the woodshop.

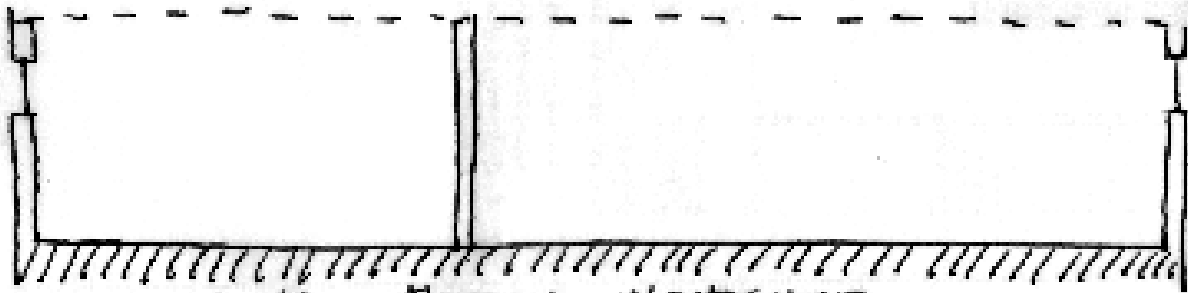
Three prototypes developed by leading architects are candidates for the new roof features—(1) Helmut Jahn for the United Airlines Chicago Terminal, an elongated horizontal aperture with a deep lightwell and a perforated metal daylight fixture suspended below it, (2) Renzo Piano for the Menil Collection, a glass ceiling supported by ferroconcrete beams that incorporate daylighting fixtures, and (3) Ed Mazria for Mt. Airy Public Library, a series of clerestory monitors with daylight baffles below (so the monitors can face any direction).



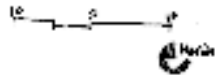
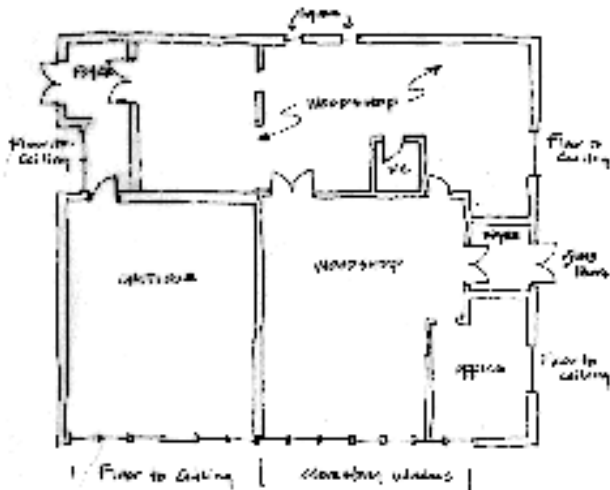
1. On the plan below indicate (draw it) the distribution of daylight through the existing apertures. Explain how and where toplighting should be added to the scheme to provide satisfactory lighting to meet the needs of each of the two spaces (shop and crit).



2. Draw your selection (one of the three prototypes) for the toplighting scheme for the woodshop on the section below. Also illustrate its placement on the small plan. Show how light is now distributed in the space in plan and section. Give the rationale for your selection.



S-N section through WOODSHOP



3. Draw your selection (one of the three prototypes) for the toplighting scheme for the crit space on the section below. Also illustrate its placement on the small plan. Show how light is now distributed in the space in plan and section. Give the rationale for your selection.

