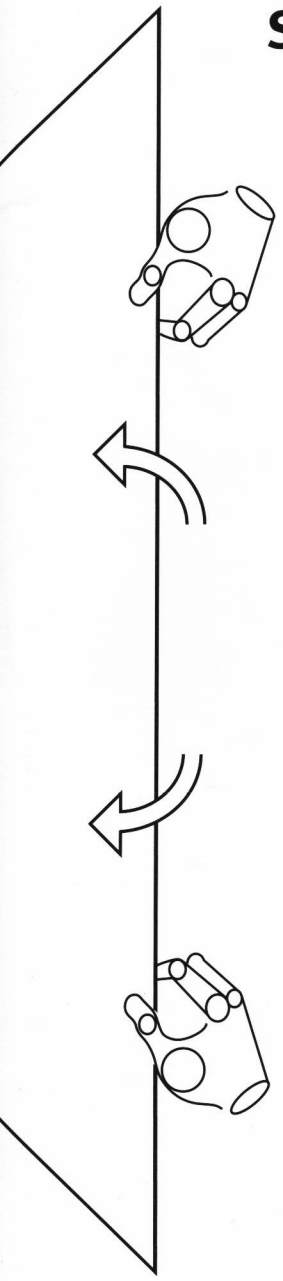
The Drawing Center's

# DRAWING PAPERS 30

## Sarah Oppenheimer

Hallway



**Sarah Oppenheimer**

Hallway

The Drawing Center's Drawing Room
40 Wooster Street, New York

May 3–June 8, 2002

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# DRAWING PAPERS *30a*

## Sarah Oppenheimer

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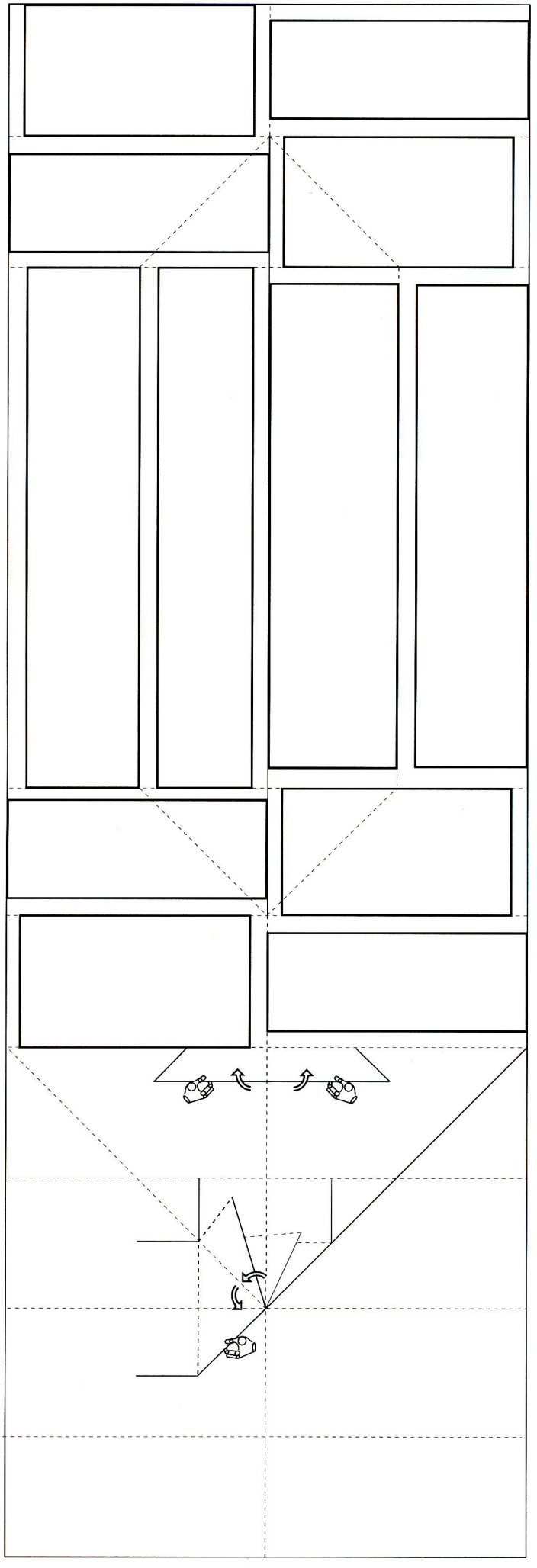


*Hallway* is a stage in an ongoing investigation into the relationship between walls and behavior.

General Principles:
1. Walls are standardized. Most interior walls are made of drywall—a page of paper stretched across plaster—allowing for mass production. Identical sheets of installed and finished drywall form a seamless surface.
2. Walls produce the conditions of living to the same extent that the conditions of living produce the forms of walls. The standardization of walls is a product of specific historical conditions. Mass production of the standard drywall panel allows the architect to rapidly amass a set of pre-determined units in the design of a structure. These structures produce conditions of living.
3. The architect designs structures based on the behavior of an imagined or existing user. When a building has more than a single occupant, the structure must be envisioned to suit the behaviors of multiple users. Since human behavior varies, the architect must consider the needs of multiple users.
4. Walls affect behavior.

## Hallway

*Hallway* modifies a space's drywall to allow it to be reconfigured without altering its frame construction. Then, in order to determine how variations in wall configuration affect behavior, a series of controlled tests are run. Results from these tests can then affect design decisions on the most fundamental and miniscule of levels, including the choice of material for the standard sheet and the configuration of the wall surface.

Materials: Drywall: Construction using standard drywall is based on a simple principle. A 4' x 8' sheet is laid over a metal or wooden scaffold. This standard sheet is the basic unit in many interior walls.

Panel: The Drawing Room's wall usually consists of standard fire-code drywall panels. For this project, these panels are removed and replaced by surrogate panels, 4' x 8' x 5/8". These surrogate panels, designed specifically for use in the *Hallway* project, are constructed out of inexpensive paper packaging material, allowing for ease of construction and delivery. Panels can be folded into self-containing envelopes and sent through the mail.

Two sheets of Tyvek paper wrap slices of cardboard, forming a folding core. Cardboard is then laminated to the core to create a rigid and repairable wall surface. The panel can thus be folded into a box structure for shipping, and then unfolded and reassembled according to instructions printed directly on the surface. The panels, once unfolded, can be assembled into three different positions: flat, compressed, and partitioned. As in origami, each of these positions has the effect of expanding or reducing the space, in this case by folding the single 4' x 8' sheet.

Test: Once built, panels are shipped, installed, and tested. Tests determine how changes in wall configuration affect human movement. *Hallway* is designed to answer the following two questions: What configurations of the panels encourage the subject to take the shortest route through the space? What configurations of the panels encourage the subject to step furthest from the wall surface?

Hypothesis: A. The subject will be most likely to take the shortest route through the hallway when all panels are folded into their most recessed positions. (See "North and South Walls, Test Group 4, Position 4.")
B. The subject will step furthest from the wall when the panels are in their most compressed positions. (See "North and South Walls, Test Group 1, Position 1.")

Test Preparation: Sixteen panels are installed in The Drawing Center's Drawing Room. Panels are installed in the north and south walls, temporarily converting the exhibition space into a hallway. The first position of the panels creates a corridor from the entrance to the rear of the space. (See "North and South Walls, Test Group 1, Position 1.") There is a table placed at the far end of the room that acts as a focus of interest and motivates circulation. On the table is a series of perforated 11" x 17" pages that display the results of each phase of the test sequence.

Test subjects are solicited through a classified advertisement in posted flyers and several local papers. Subjects are screened to insure that they have no prior knowledge of The Drawing Center.

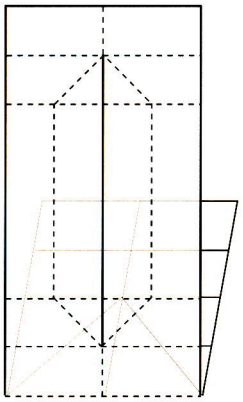
Test Sequence: The subject enters the Drawing Room. The subject is instructed to read and sign a consent form. The test administrator asks the subject to walk to the far end of the room, view the material on the table, and then complete a form asking for basic demographic information. A brief outline of the purpose of the experiment follows the demographic questionnaire, informing the subject that his or her movement is being studied in relation to wall structure. Then the subject returns to the front of the room. The walks to and from the table are recorded on concealed video cameras. This footage results in two different data sets. The two data sets are compared to determine the effect of the subject's awareness on the pattern of his or her movement. When the subject returns to the entrance, the test is complete.

After the first eight test subjects have completed the walk, data is computed. The mean path through the space is determined. The hallway structure is reconfigured as a result of pedestrian proximity to the walls. If a mean footstep falls within 1 foot of the panels, the walls will recede in order to create greater floor space. Partitions are folded into compressed panels and compressed panels into flat panels and vice versa. (See "Possible Permutations When Mean Footstep Within One Foot of North or South Wall.") The perforated 11" x 17" pages depict both the mean and the individual footsteps in the test configuration. A second test group walks through the space. Again, after eight subjects have performed the maneuver, the data is computed and the space altered. Tests are administered in four consecutive configurations and analyzed according to demographic information. Final results are displayed on the table and posted at www.foldingenterprises.com. Experiments will be run once a week.

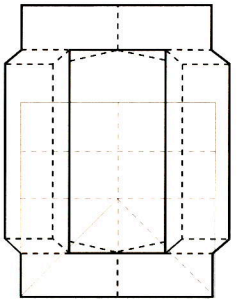
General Conclusions about the Relationship of Research Investigation to Exhibition:

The gallery visitor views this research project and, in so doing, walks through the space in much the same manner as the test subjects. However, the gallery visitor is not the object of study. Over multiple visits, visitors can observe changes in the configuration of the wall panels—without their own behavior being observed. This distinction between gallery viewer and test subject assigns the Drawing Room two distinct functions. The space functions as both a research site and as an exhibition site, supporting two distinct kinds of human activity.

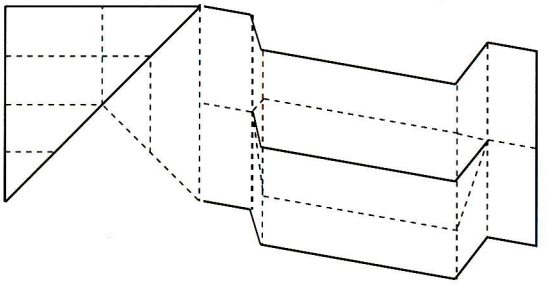
It is this distinction—the difference between a) human behavior under observation in controlled conditions and b) the casual navigation of the unobserved visitor—that emphasizes the importance of controlled study. It is the former kind of behavior—for the purpose of research under controlled conditions—that creates the mean subject. This subject becomes the standard unit of codified human behavior.



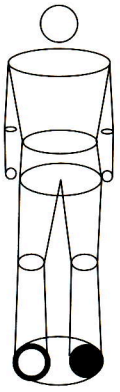
PANEL



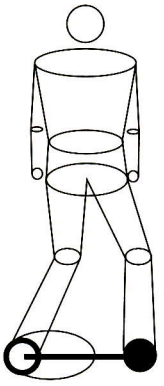
COMPRESSED PANEL



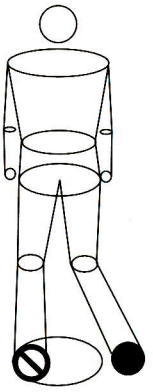
PARTITION



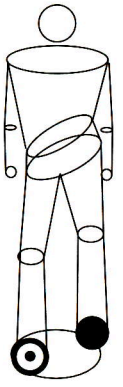
FOOTSTEP



PATH



PAUSE



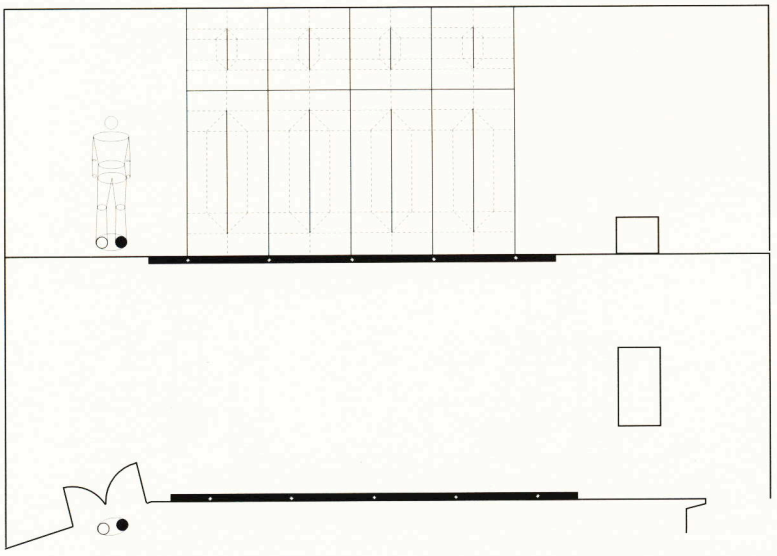
PIVOT

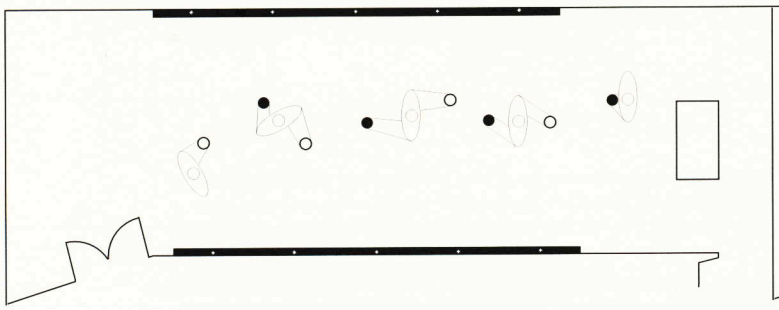
Like the mean test subject, the drywall panel is a standard unit within a larger structure. The hallway tests illustrate how alterations to a standard wall unit affect human movement and thus create standardized behavior. The controlled study allows for inferences to be drawn from the specific site of the Drawing Room to hallways in general, in the sense that they imply an architectural program.

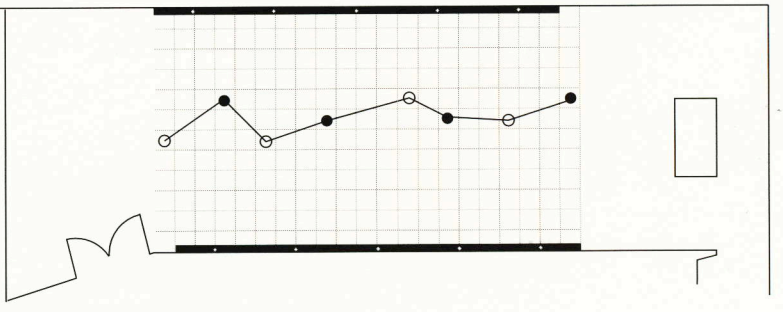
*Hallway* is as much a research investigation as an art project. The design of the panel allows for the implementation of the test anywhere. Prepackaged units can be shipped to any site and assembled in any configuration. The standardization of the panel allows identical tests to be conducted in multiple locations and communities. Test results are amassed and analyzed, and data is then posted at www.foldingenterprises.com. Results of completed tests include maps, video footage, and theoretical conclusions based on analysis of the data.

Designs derived from such analysis alter the relationship between the wall and the footstep, which is the articulation of human behavior most easily mapped as a representative mark. The accumulation of footsteps now becomes a primary drawing tool, a tool that continually sketches the possibilities of space. Thus walls can be designed and reconfigured to respond to the footstep. In fact, they become a final and usable drawing until a new circulation pattern forces a new change.

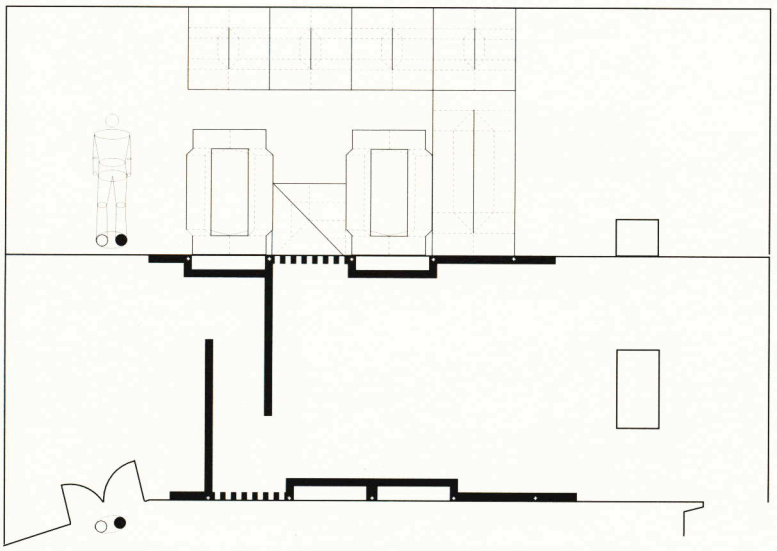
CONTROL GROUP

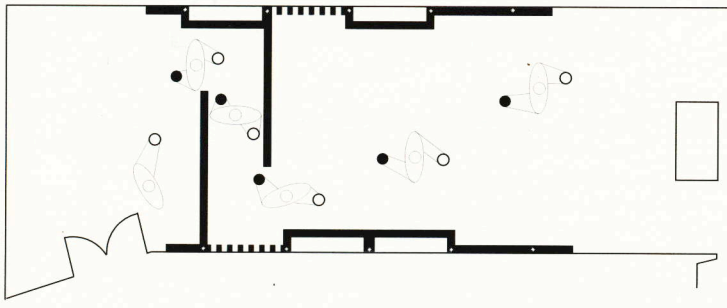


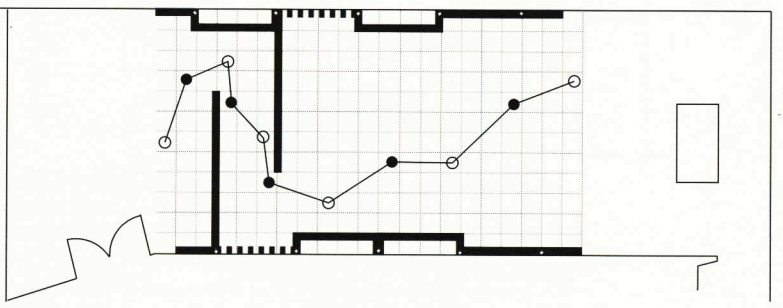




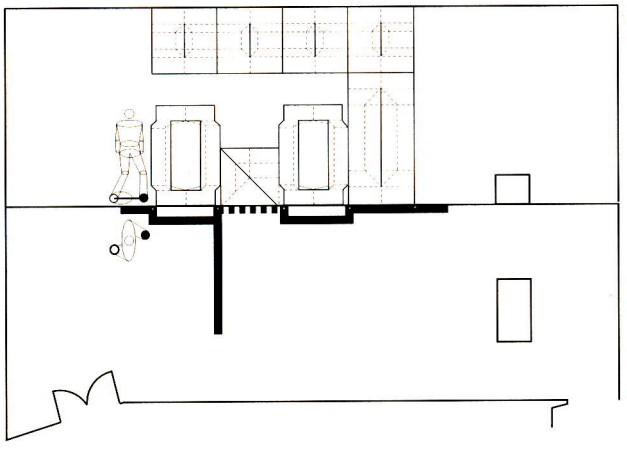
EXPERIMENTAL GROUP



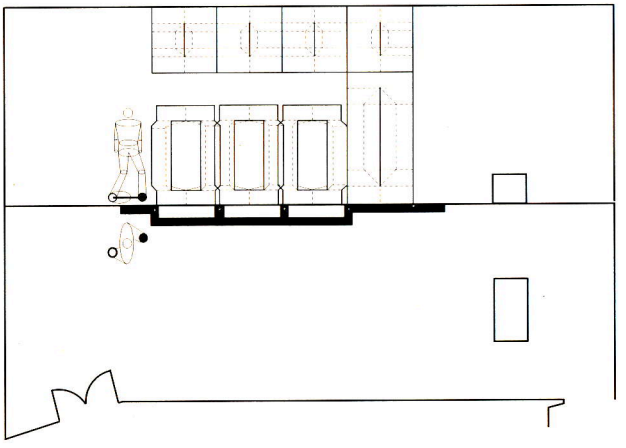




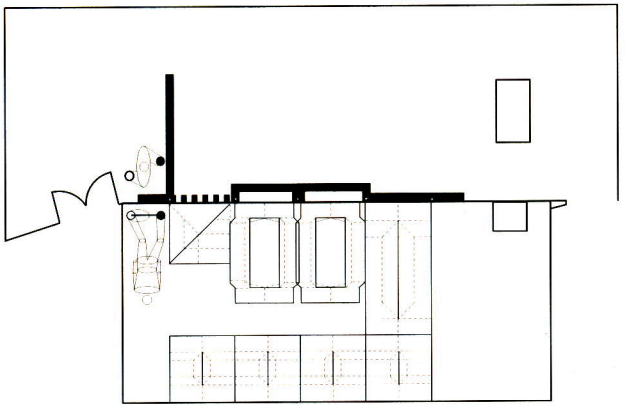
POSSIBLE PERMUTATIONS WHEN MEAN FOOTSTEP WITHIN ONE FOOT OF NORTH OR SOUTH WALL



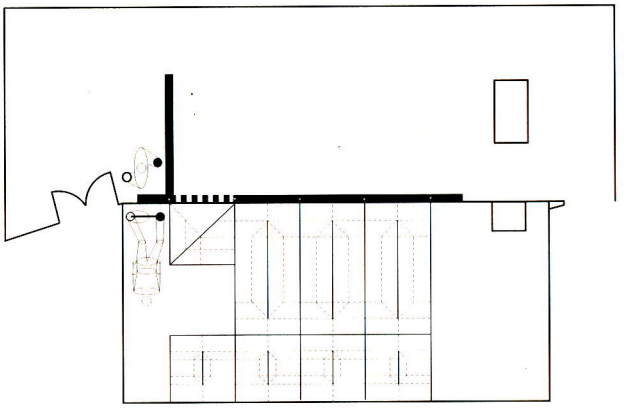
NORTH WALL
TEST GROUP 1
POSITION 1



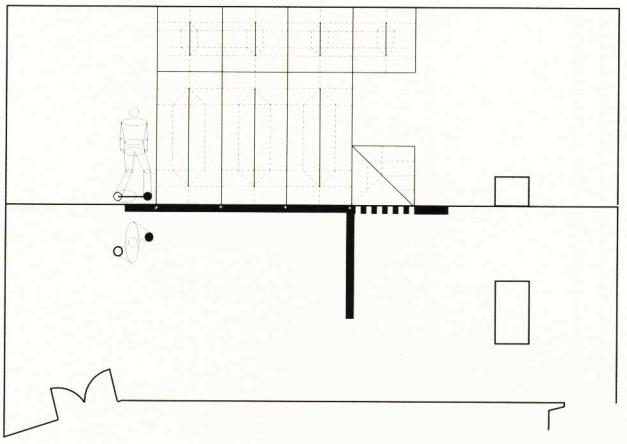
NORTH WALL
TEST GROUP 2
POSITION 2



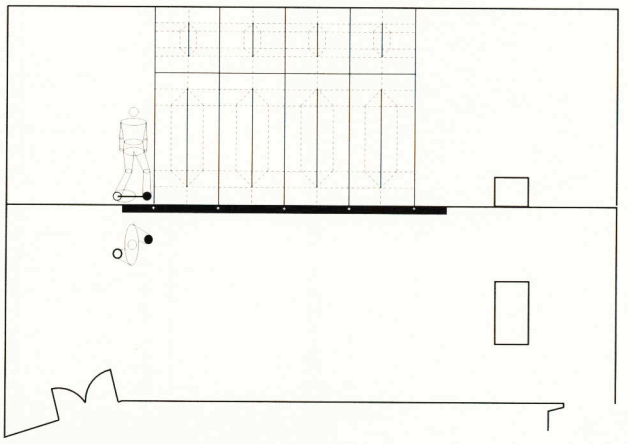
SOUTH WALL
TEST GROUP 1
POSITION 1



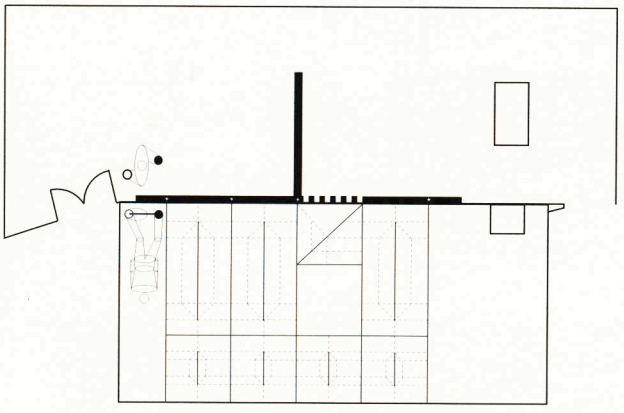
SOUTH WALL
TEST GROUP 2
POSITION 2



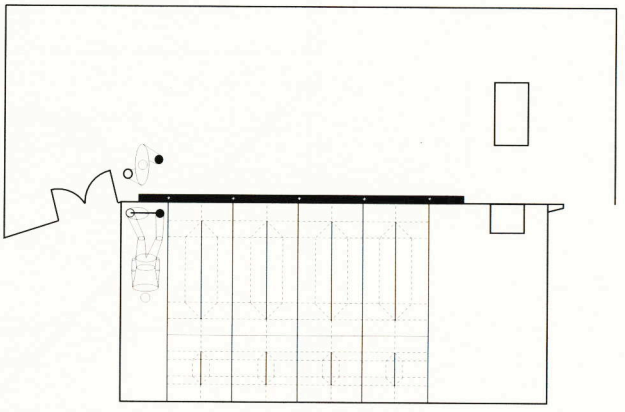
NORTH WALL
TEST GROUP 3
POSITION 3



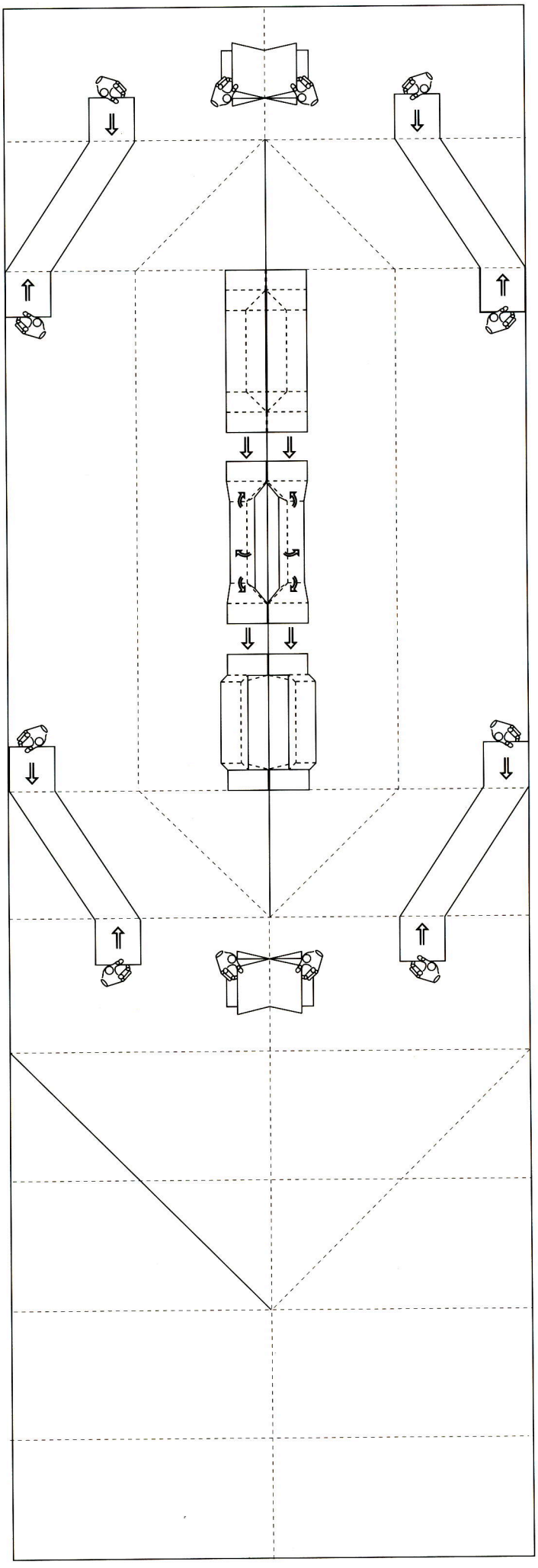
NORTH WALL
TEST GROUP 4
POSITION 4



SOUTH WALL
TEST GROUP 3
POSITION 3



SOUTH WALL
TEST GROUP 4
POSITION 4



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