

Connecting the Disconnected: Designing a Walkway in Arlington, Virginia

Deana Marie Brown

Thesis submitted to the faculty of the Virginia Polytechnic Institute
and State University in partial fulfillment of the requirements for the
degree of

Master of Architecture
in
Architecture

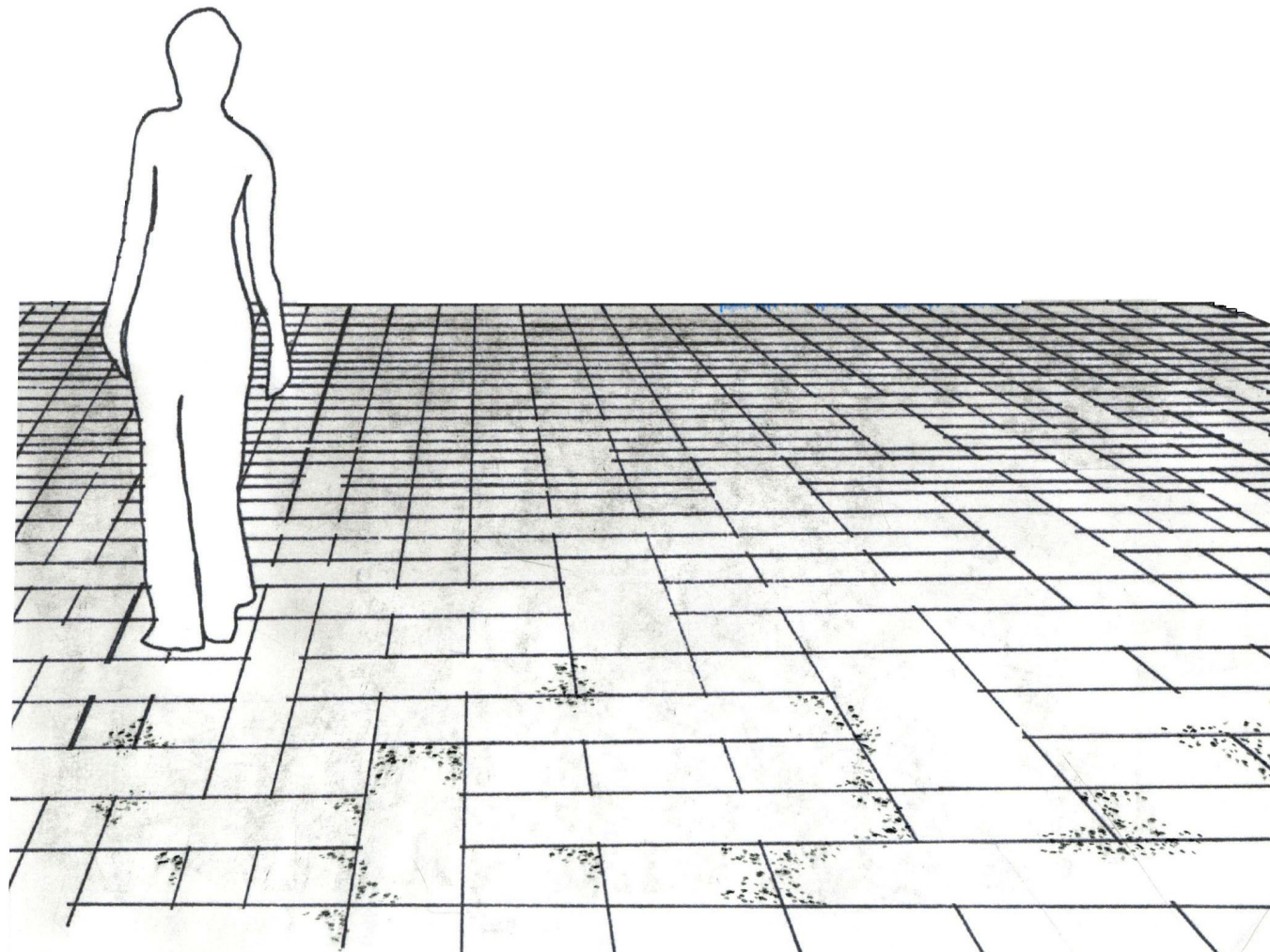
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William U Galloway

H Scott Gartner

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Blacksburg, Virginia

Keywords: rhythm, pattern, light, connection, walkway



Connecting the Disconnected: Designing a Walkway in Arlington, Virginia

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Abstract

This thesis is a study of rhythm, generated by a pattern, and how it can be used to address the urban disconnect of 12th Street in Arlington, Virginia. Rhythm is a tool that can be used to connect a space. The repetition and consistency of the pattern throughout the site structures and connects the four blocks. Light and material quality are additional tools that, used consistently, create and emphasize the rhythm that connects the walkway with points, or destinations, to pause. This book is organized as a series of perspectives that walks through the four blocks, from west to east, of 12th Street.

Sited in Arlington, Virginia, 12th Street extends four blocks from the Pentagon City Metro Station to Crystal Drive. Currently the four blocks are comprised of commercial, residential, and green space. The three types of use have been constructed, developed and even left abandoned at various points throughout their histories. As such, this has created a lack of a natural flow for area residents and visitors. The underlying goal of the walkway is to create a connection between the four disconnected blocks of 12th Street, from the Pentagon City Metro Station and Crystal Drive.

In cities the points of connection between systems should be places of special emphasis and design enrichment. (35)

Design of Cities, by Edmund Bacon

Streetscapes should enhance our daily experience of the built environment. (55)

New Public Spaces, Sarah Gaventa

Urban design is about the design of a place for the whole of the people who inhabit, traverse, and use it. (176)

Urban Design and People, Michael Dobbins

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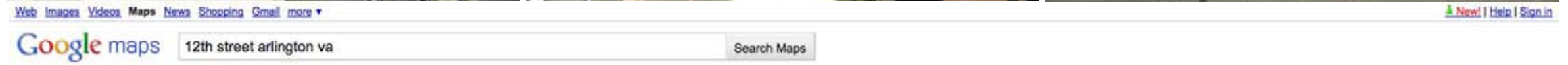
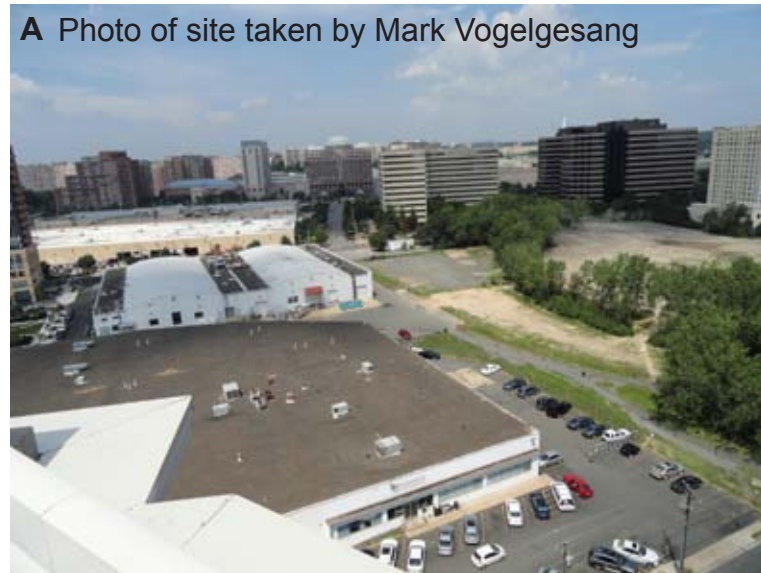
* All illustrations produced by author unless otherwise noted.

Thank you to my committee for their guidance.

Thank you to my family and friends for their encouragement and support.

Site

The walkway, located in Arlington, Virginia, is comprised of four blocks on 12th Street, from the Pentagon City Metro Station to Crystal Drive.



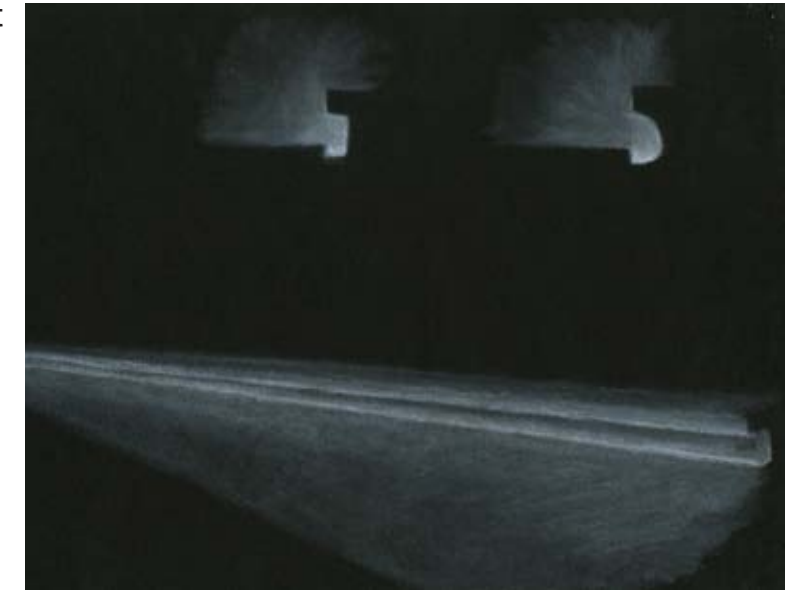


Concept

Studies, in charcoal, explored the effects of light based on the angles and location of the light feature.

A collage simplified the complex site and focused the requirements that the walkway needed to fulfill to connect the site.

Charcoal of light concept

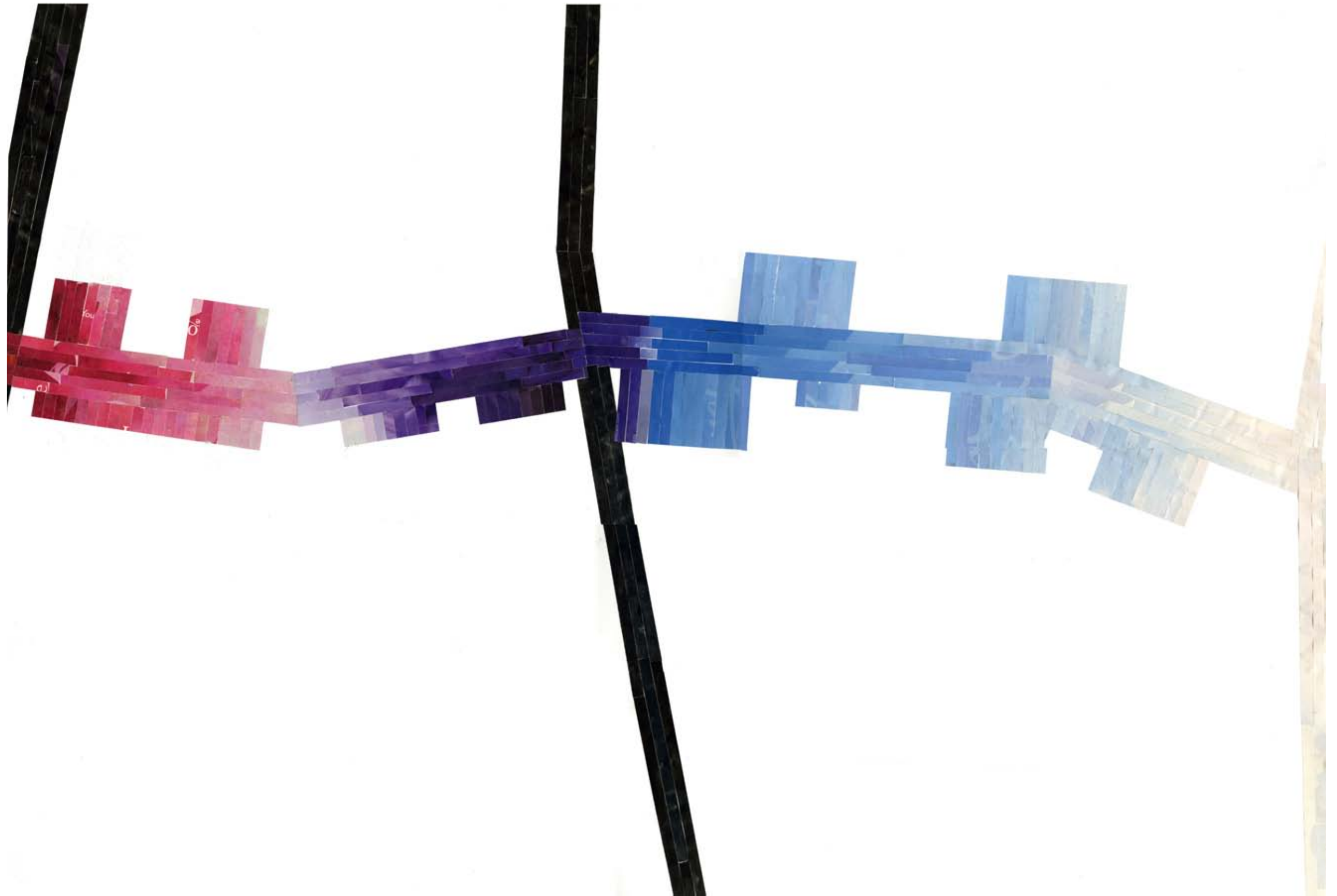


Charcoal of light concept



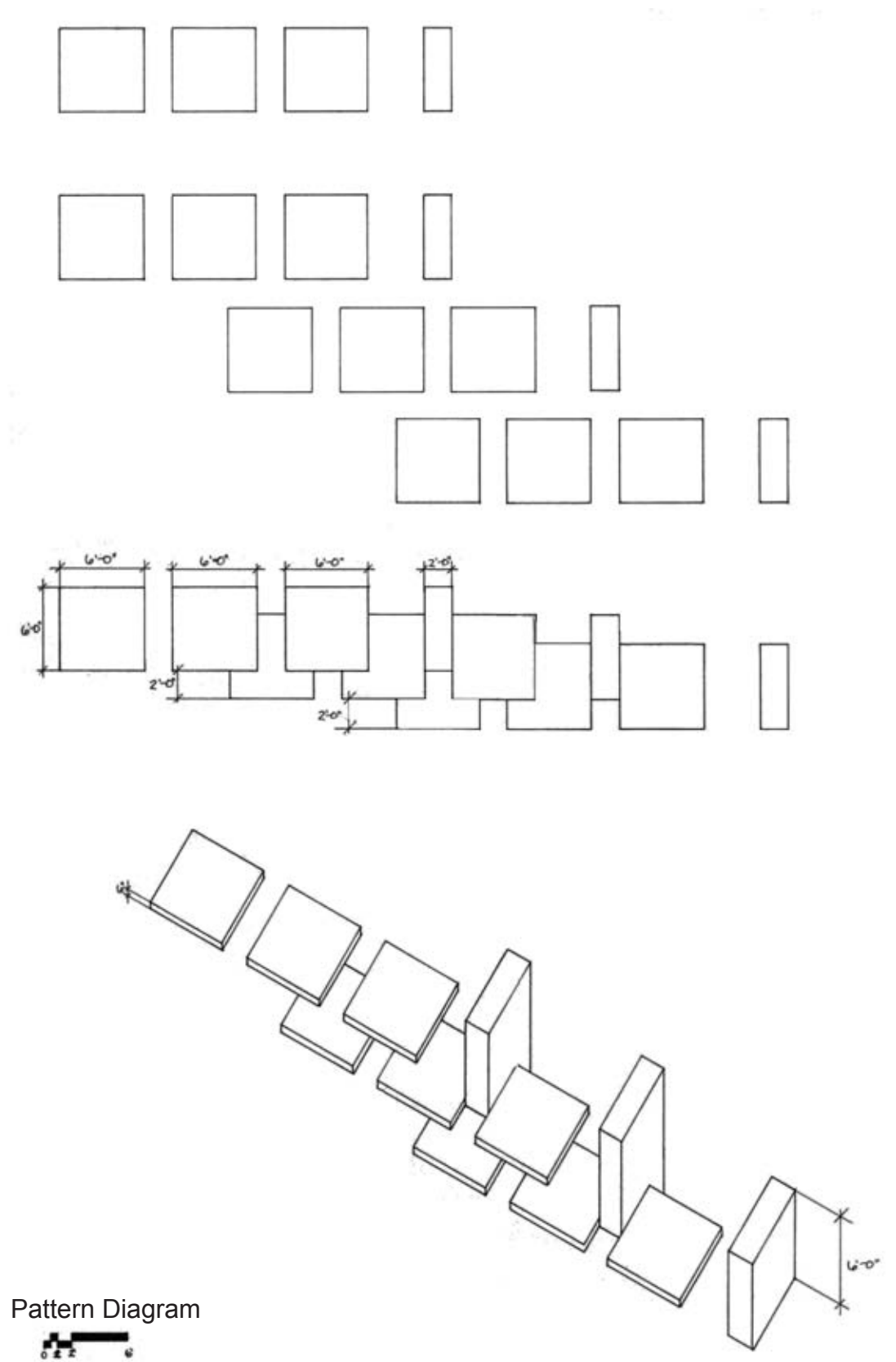
Charcoal of light concept

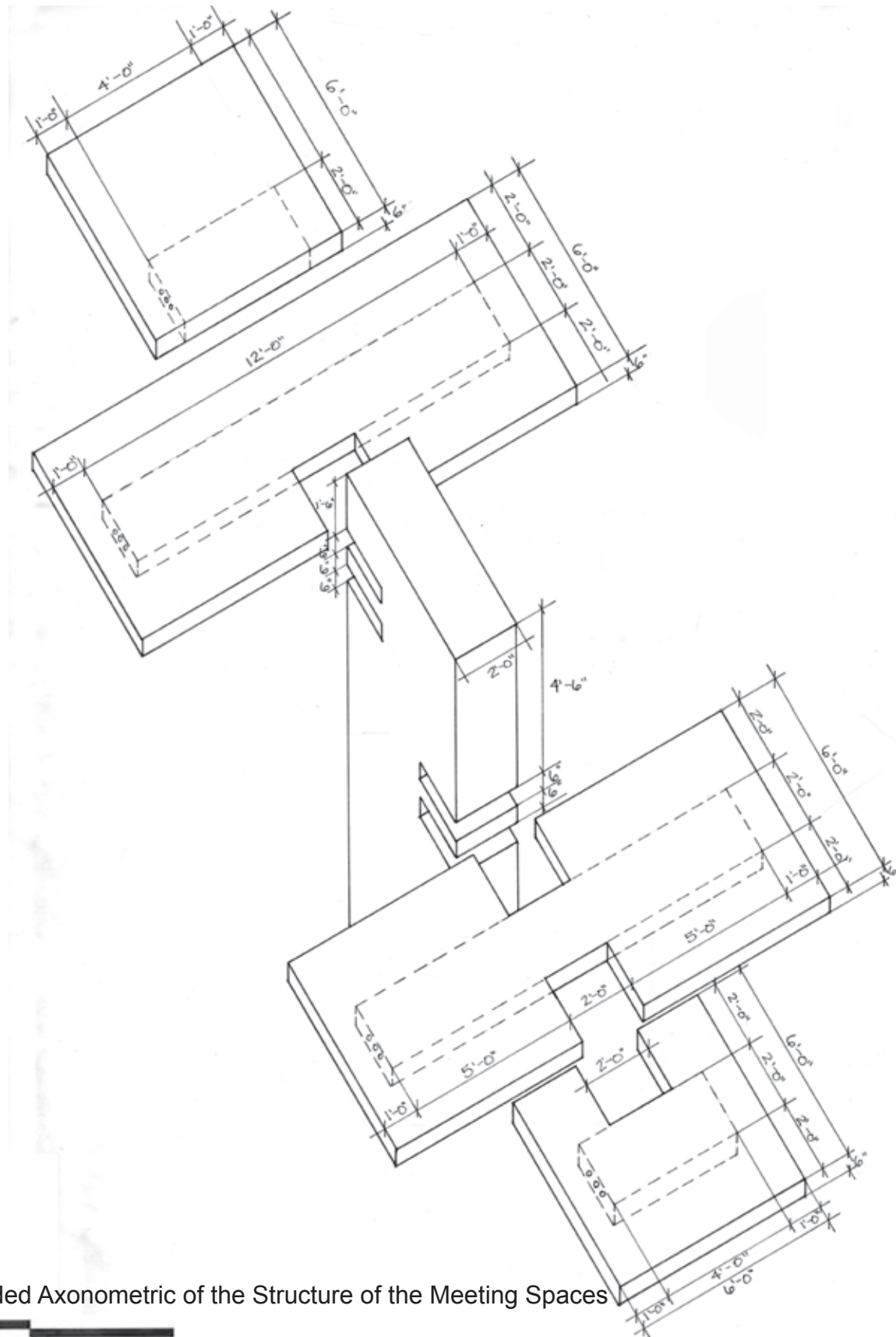




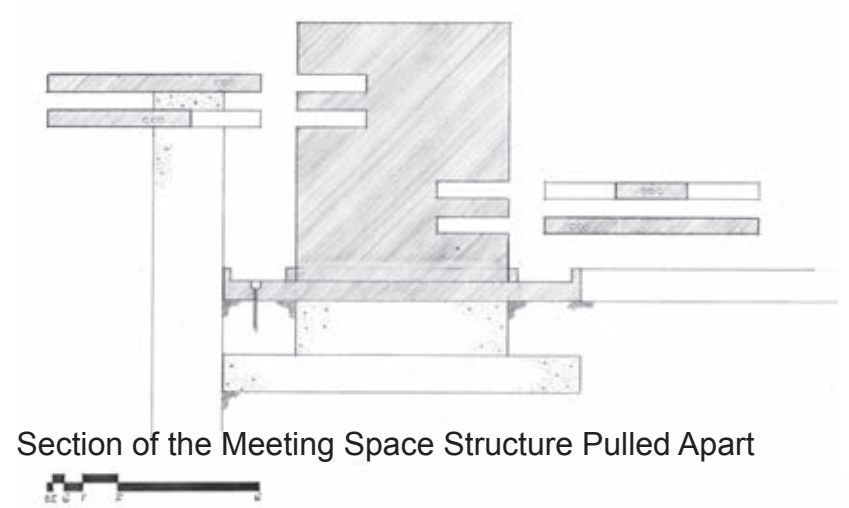
Design

The pattern, used in planar and volumetric form, is the generator of each feature of the walkway.

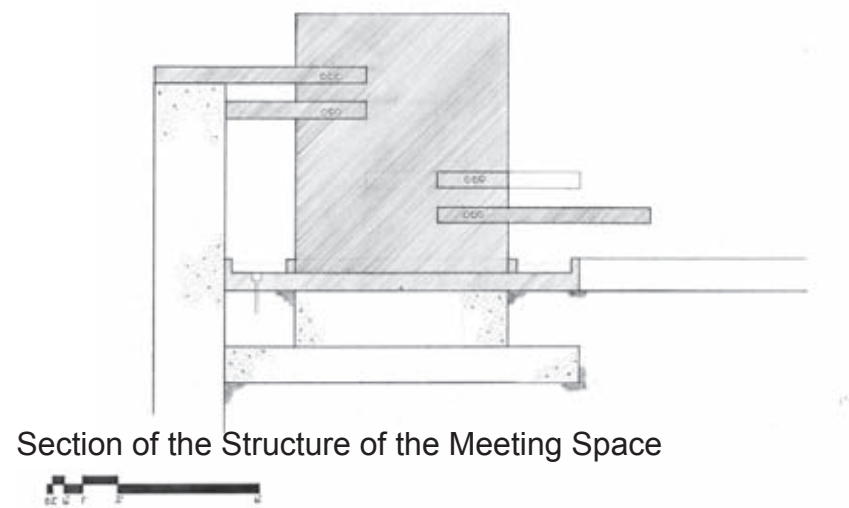




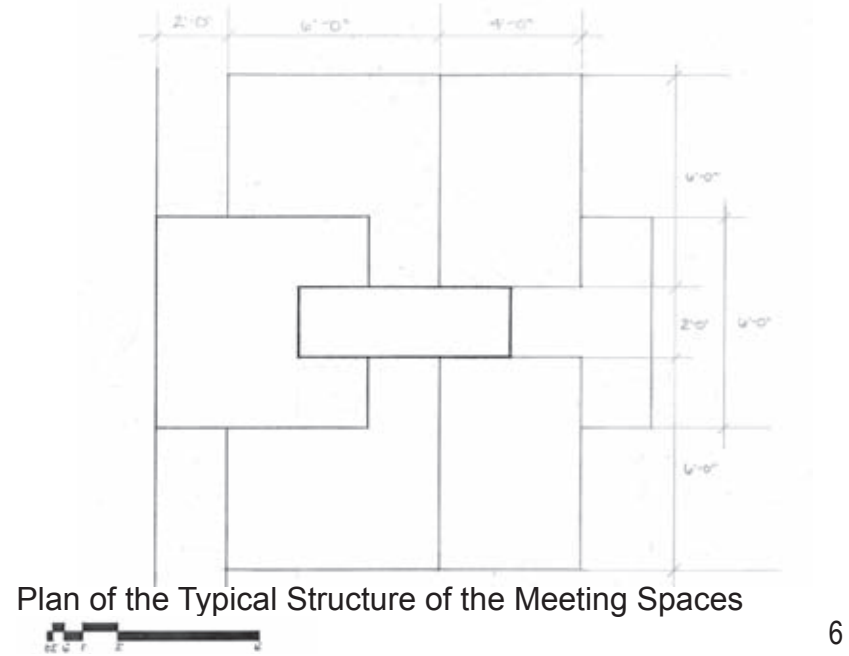
Exploded Axonometric of the Structure of the Meeting Spaces



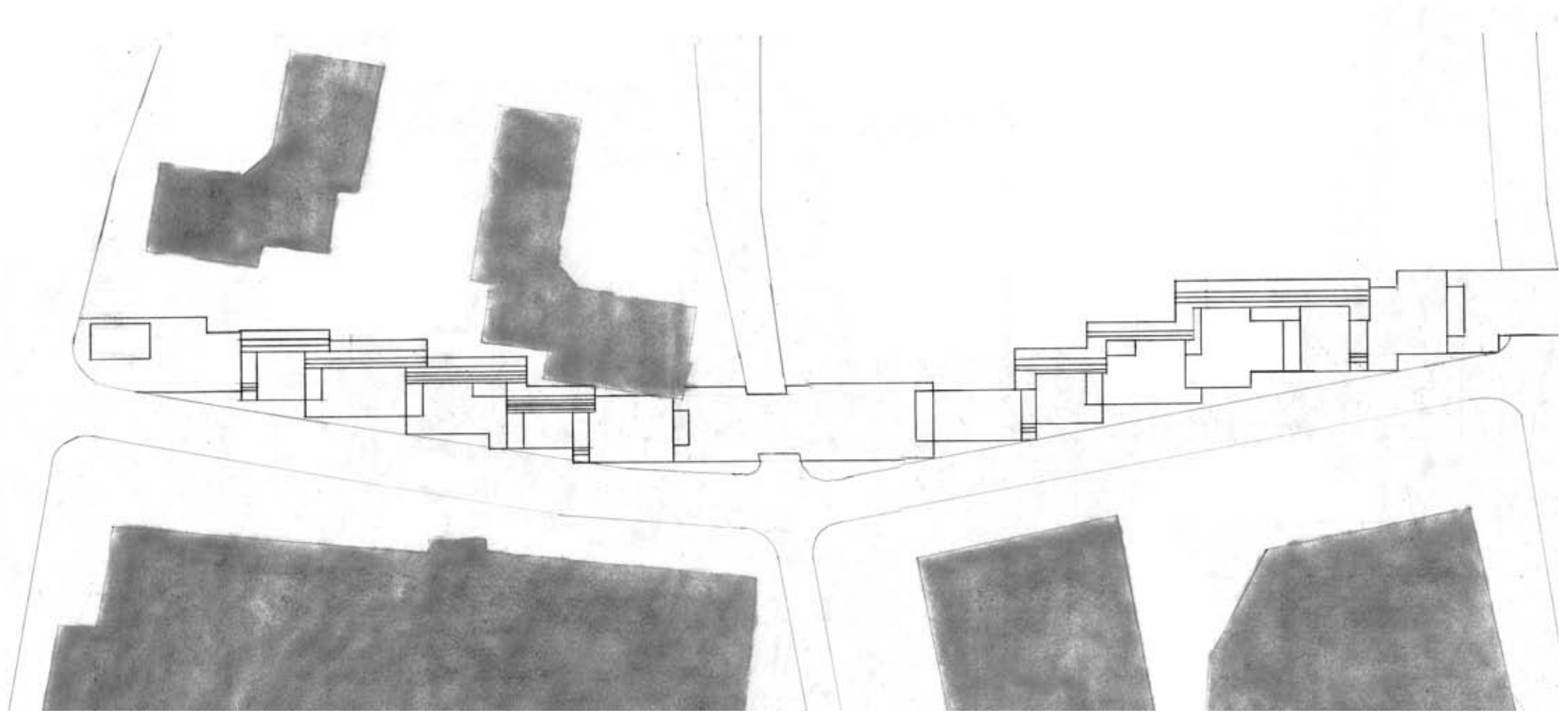
Section of the Meeting Space Structure Pulled Apart

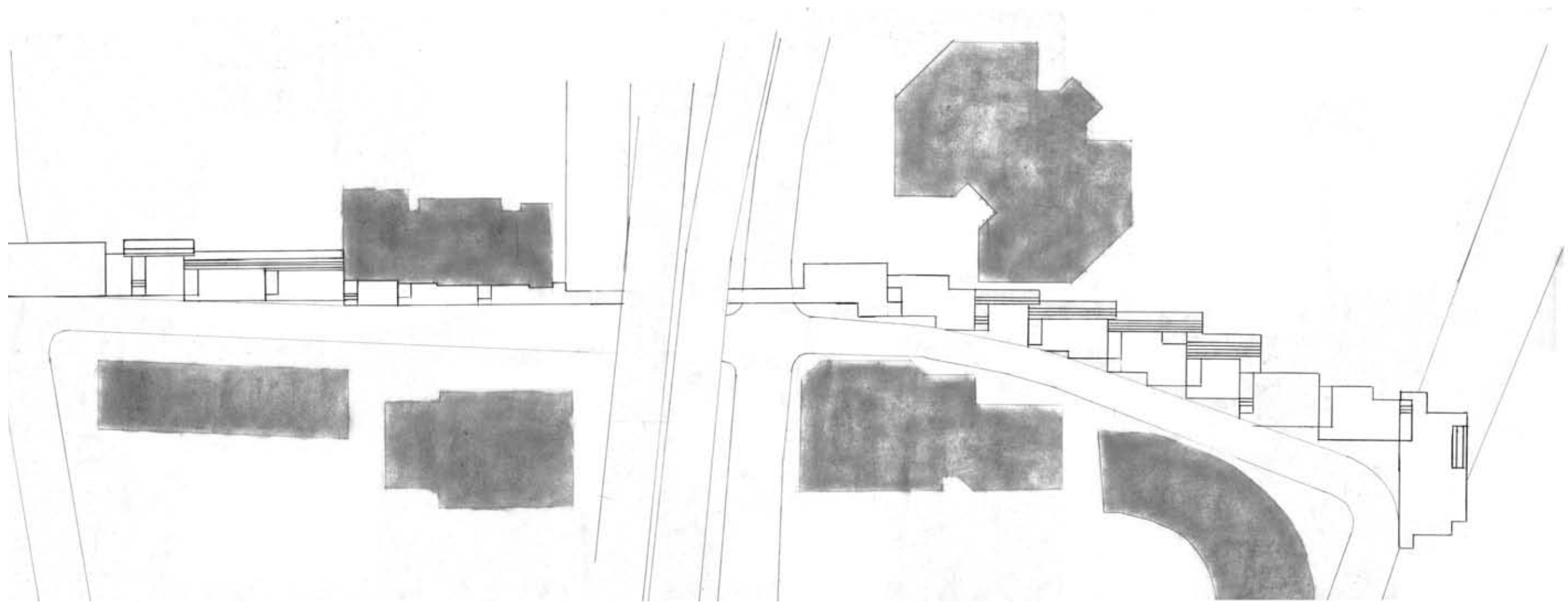


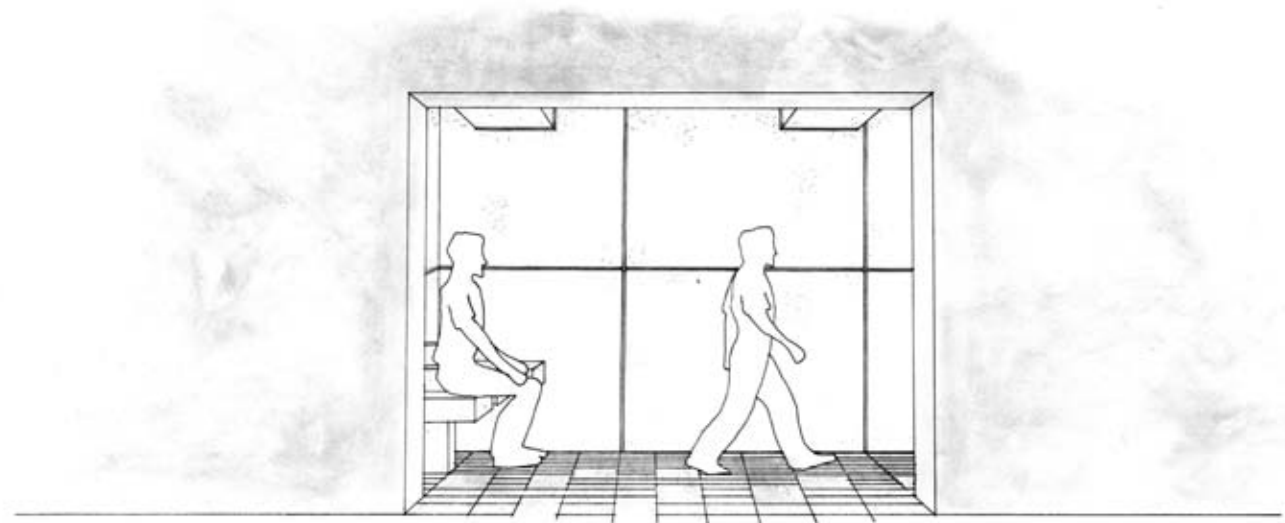
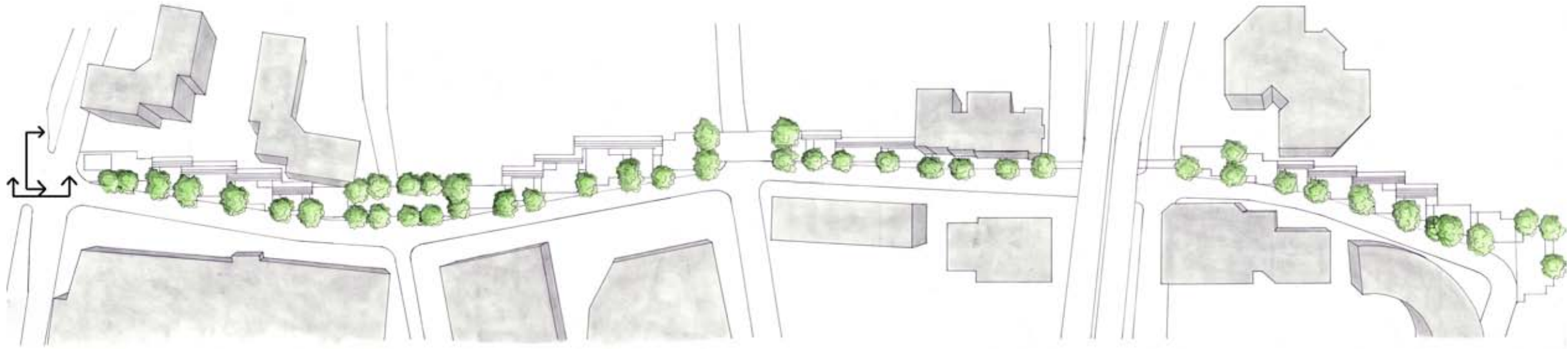
Section of the Structure of the Meeting Space



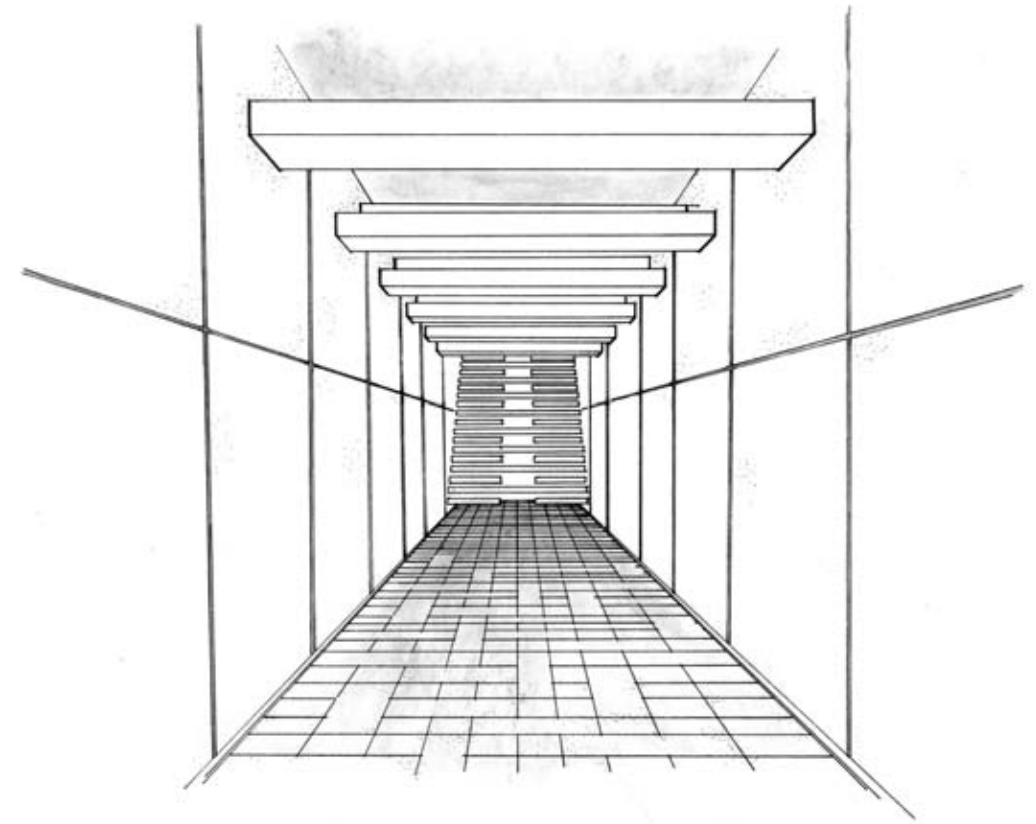
Plan of the Typical Structure of the Meeting Spaces



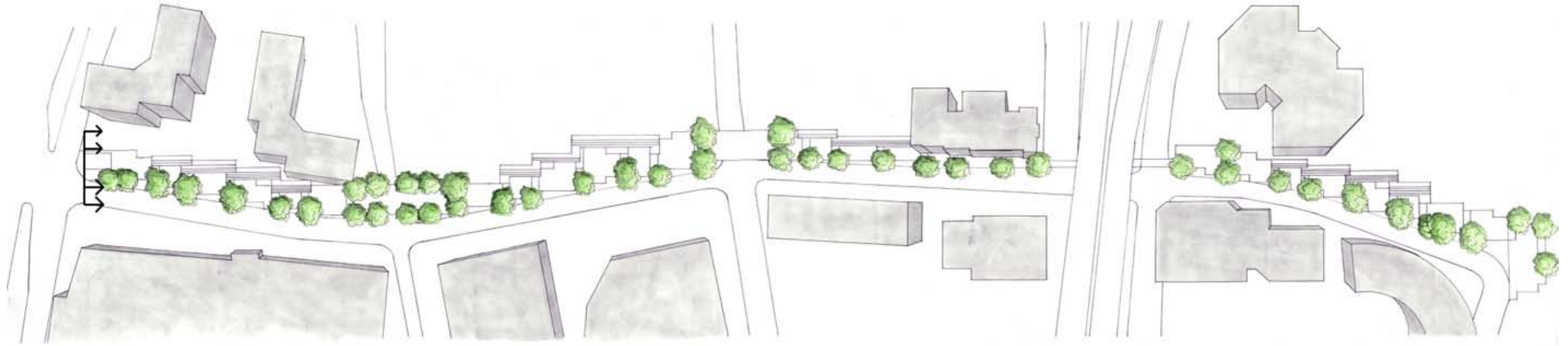




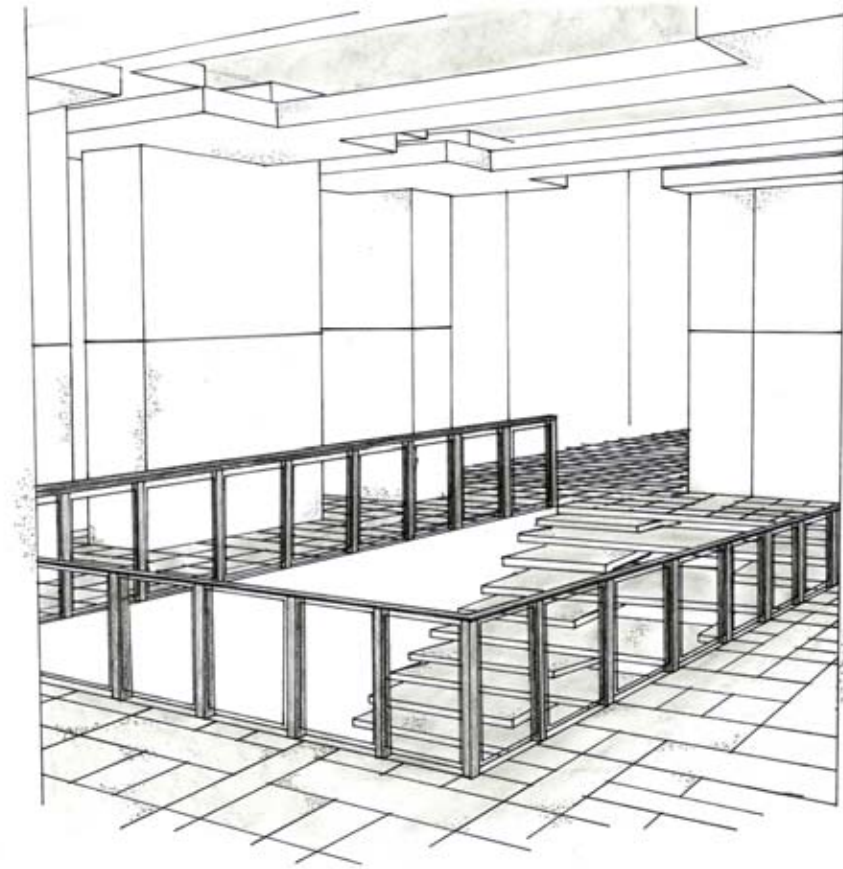
9 Perspective of corridor entrance



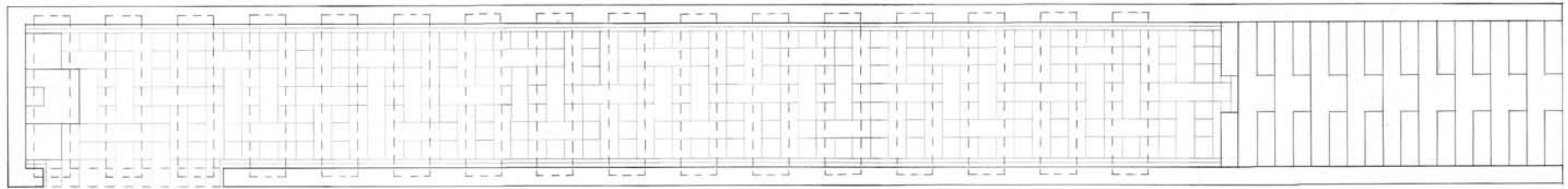
Perspective of metro station corridor



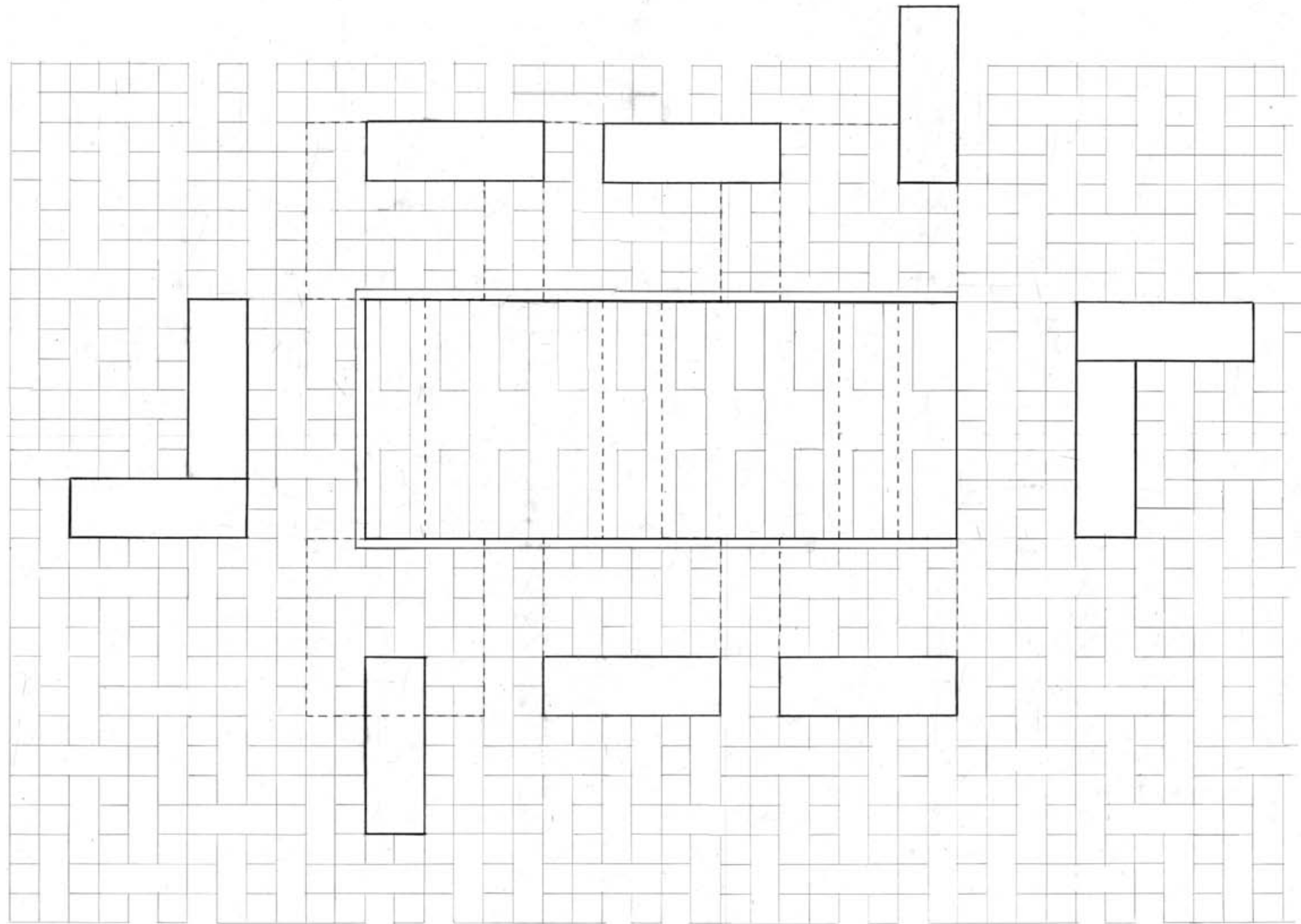
Perspective of the walkway from the corner of 12th Street



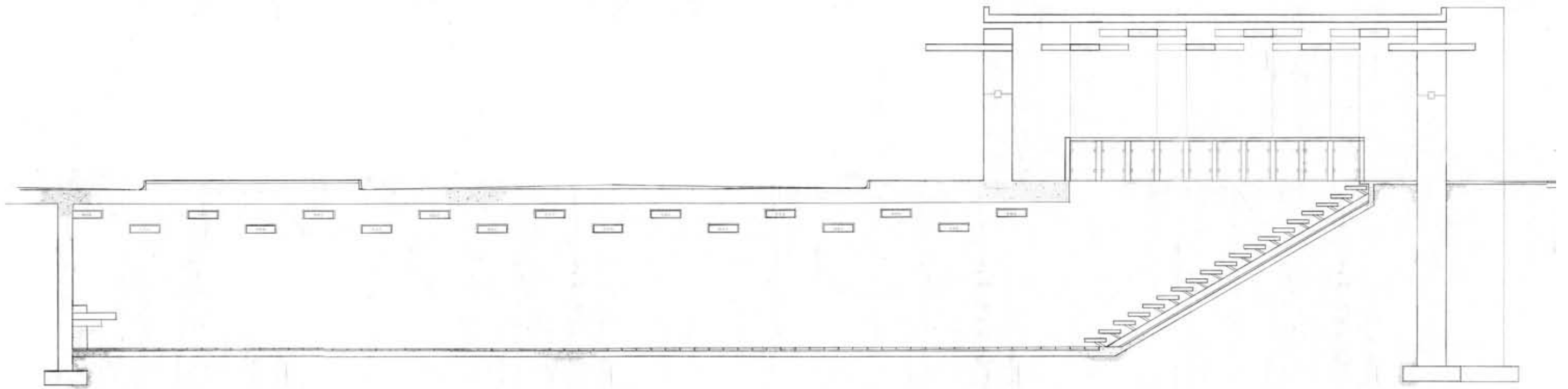
Perspective of the interior of the station from the corner



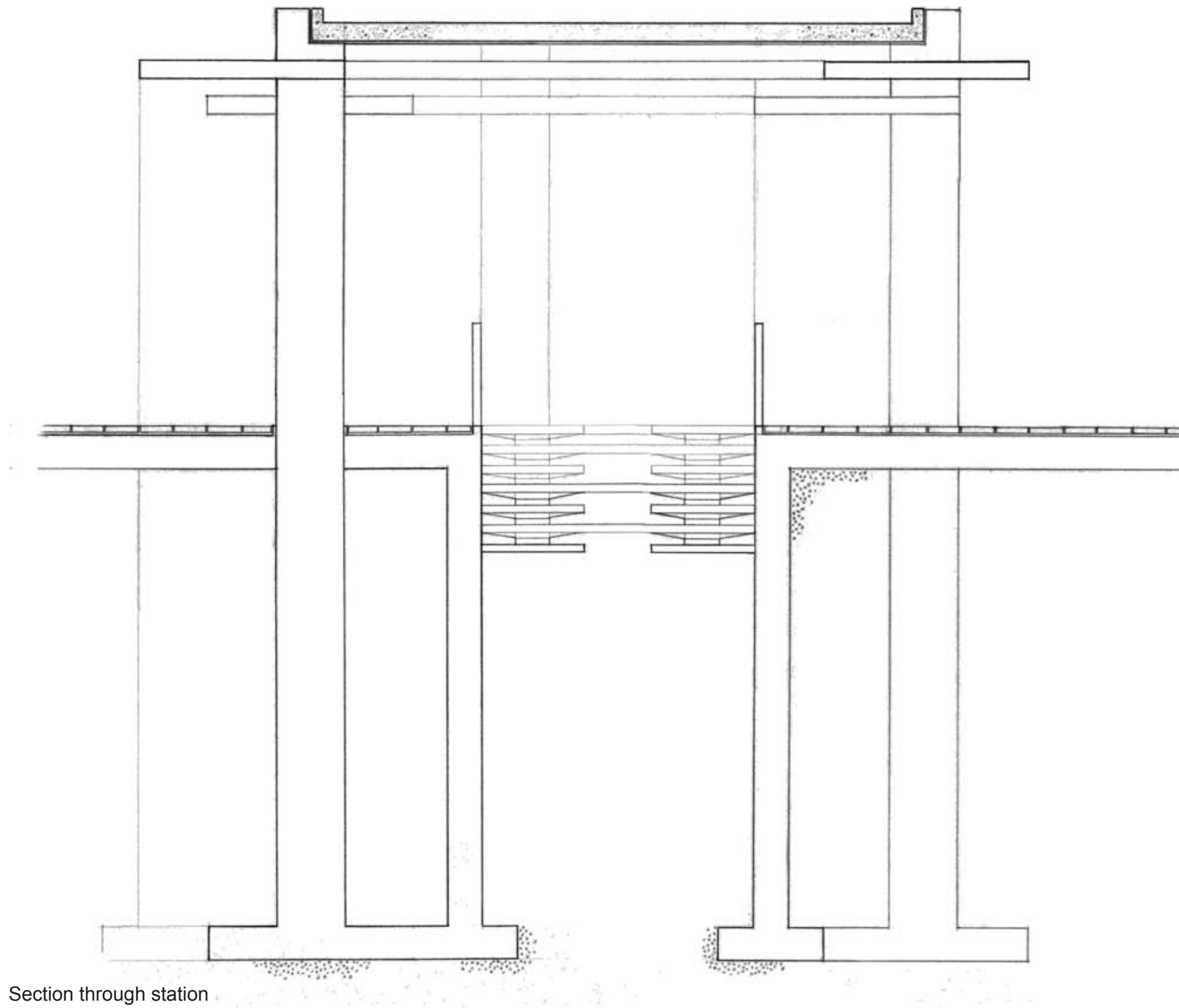
11 Plan of corridor connecting underground metro platform to station on the walkway



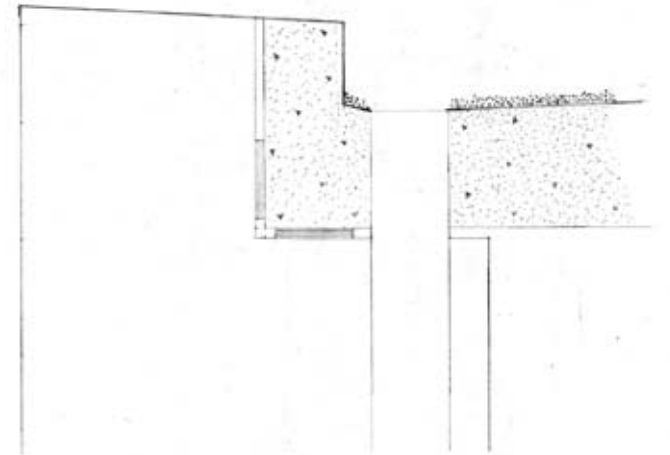
Plan of station on the walkway



13 Longitudinal section through corridor and station

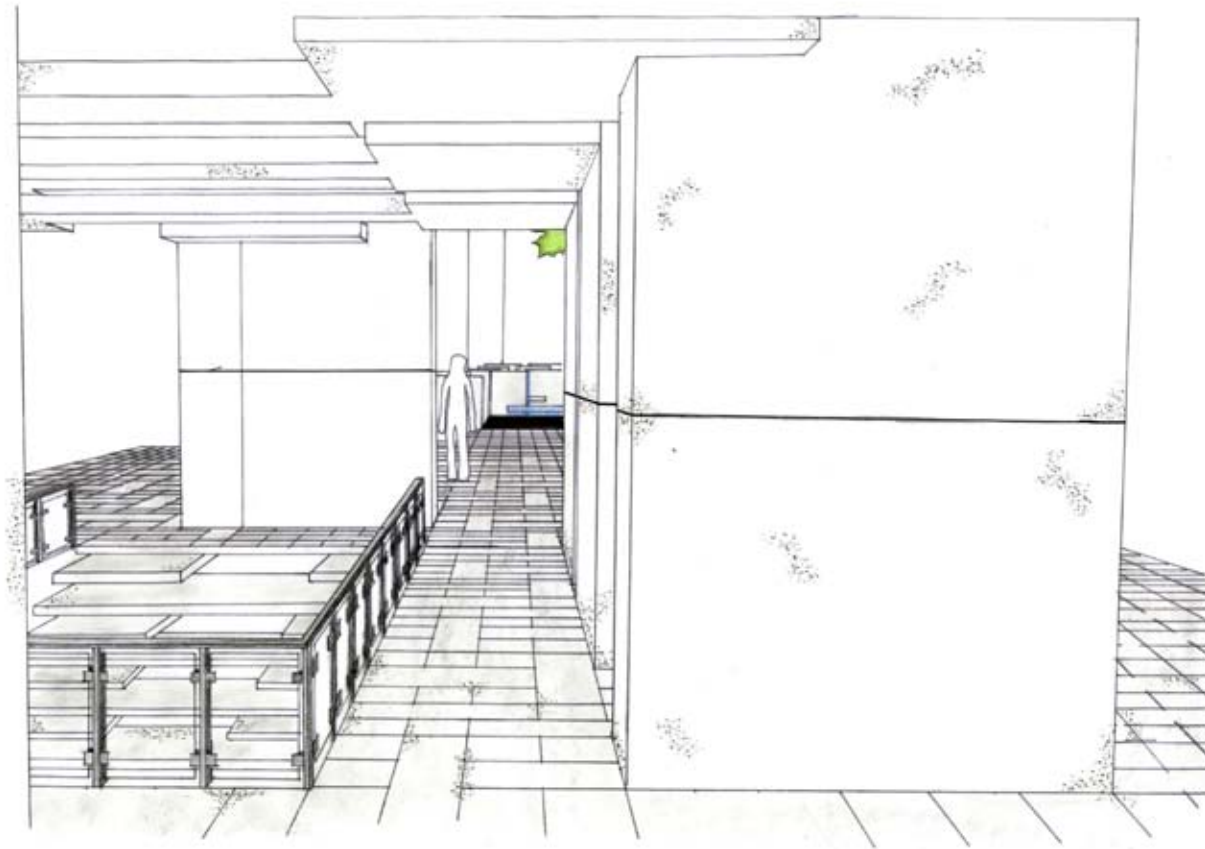
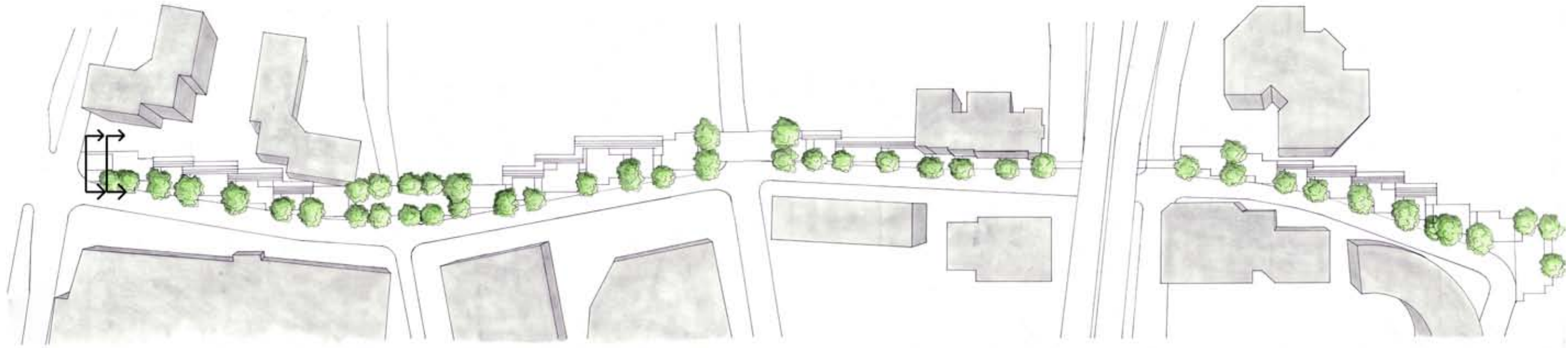


Section through station



Section of the Station Roof Drain

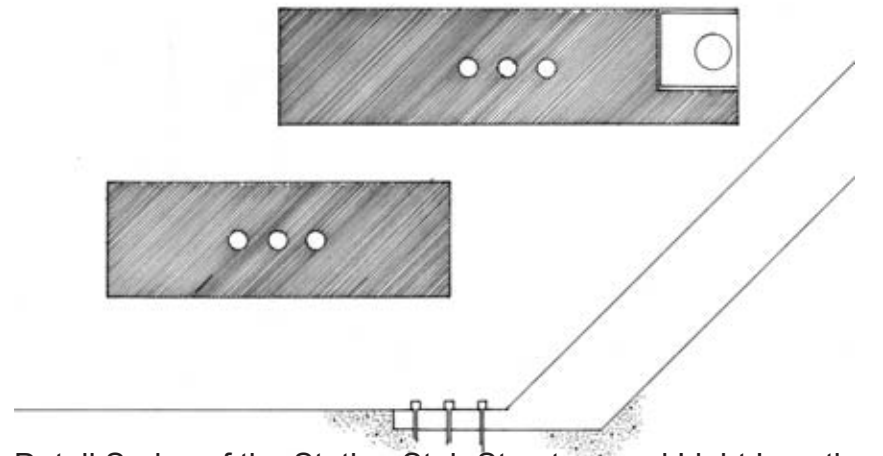
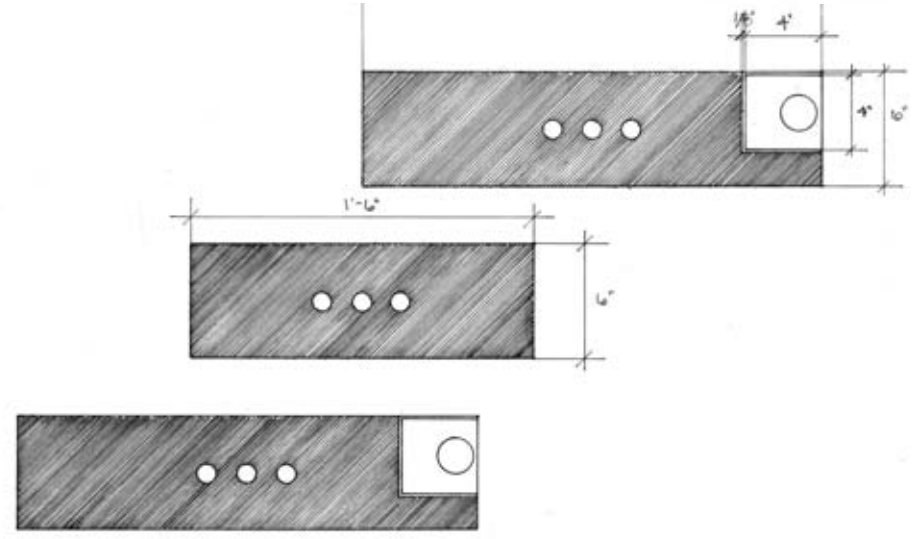
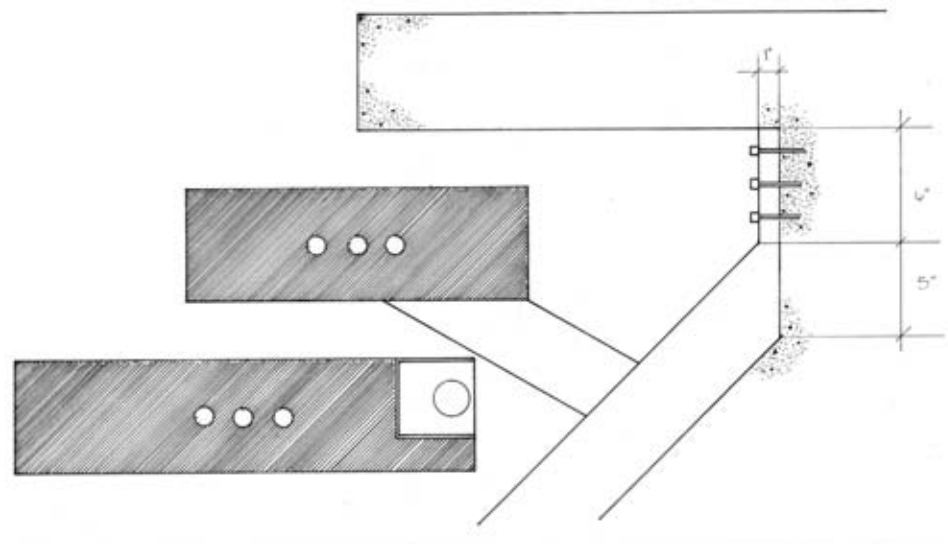




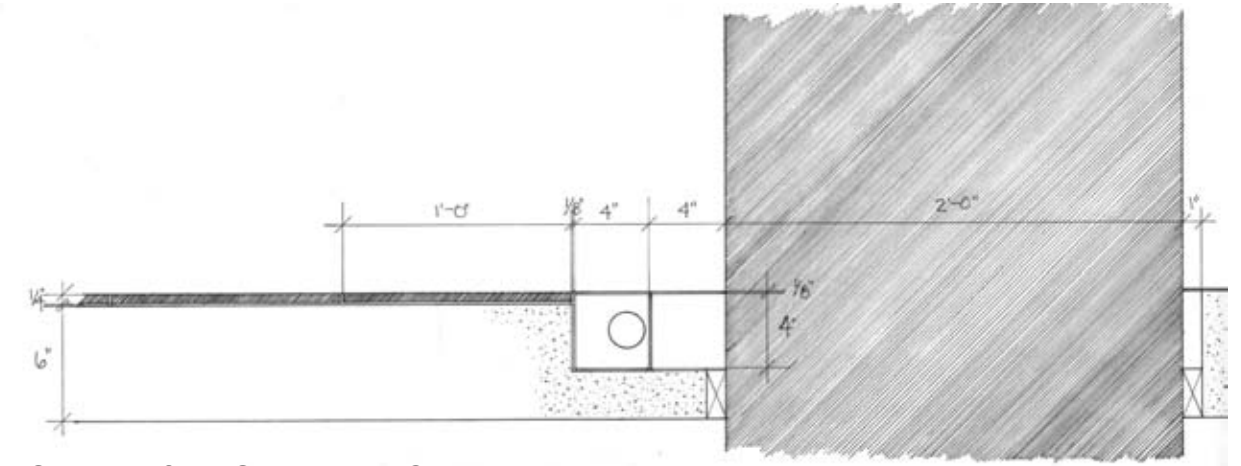
15 Perspective through the station



Perspective of walkway when exiting the station

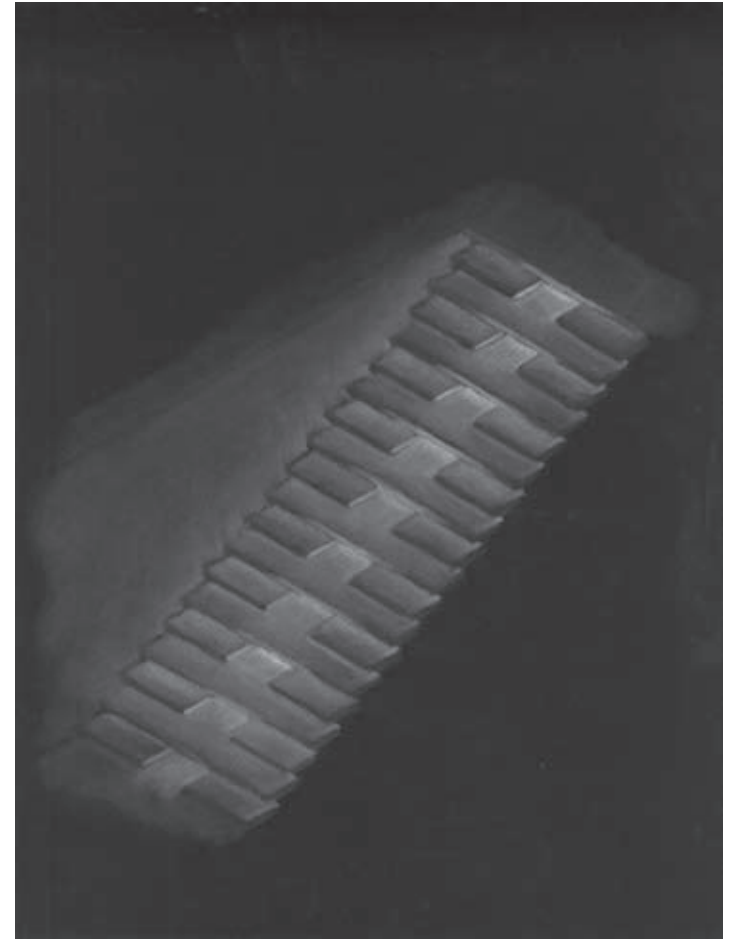


Detail Series of the Station Stair Structure and Light Location



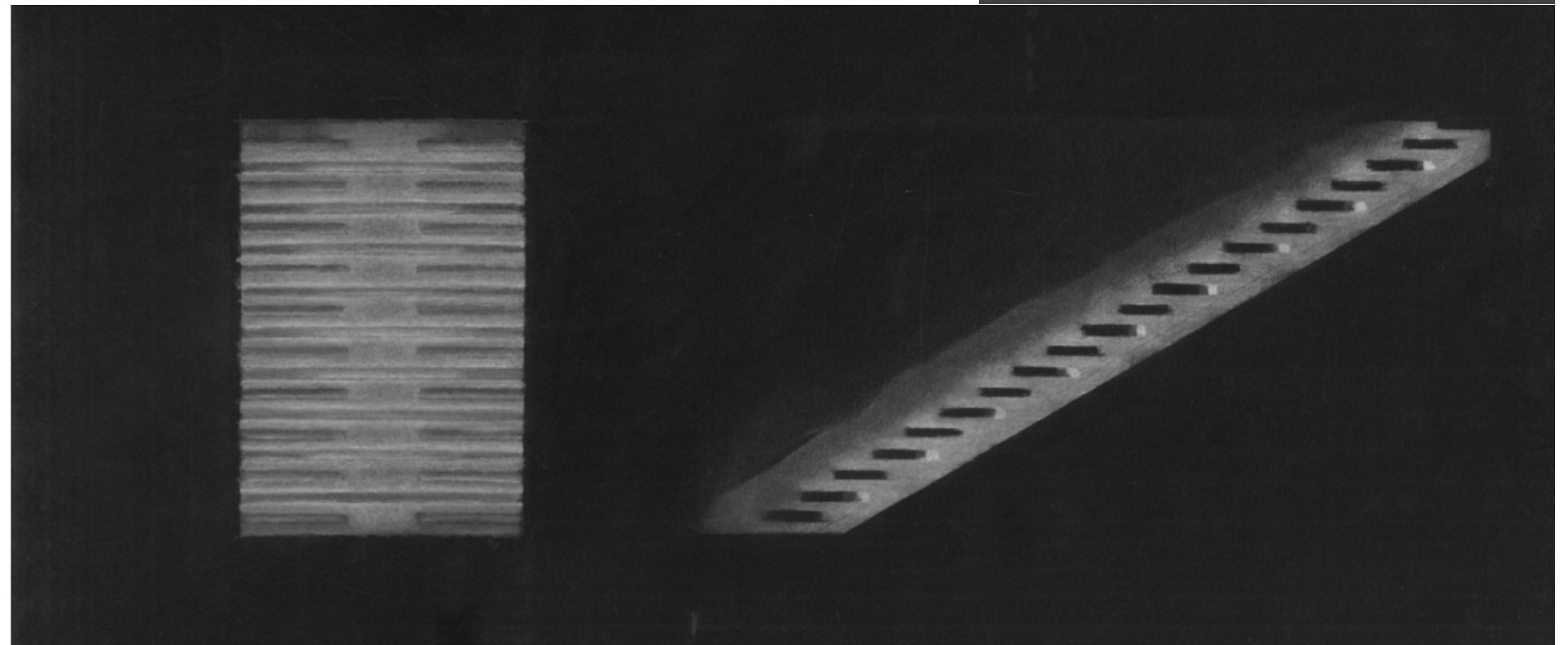
Section of the Station and Corridor Light Location

Axon of station stair night lighting in charcoal

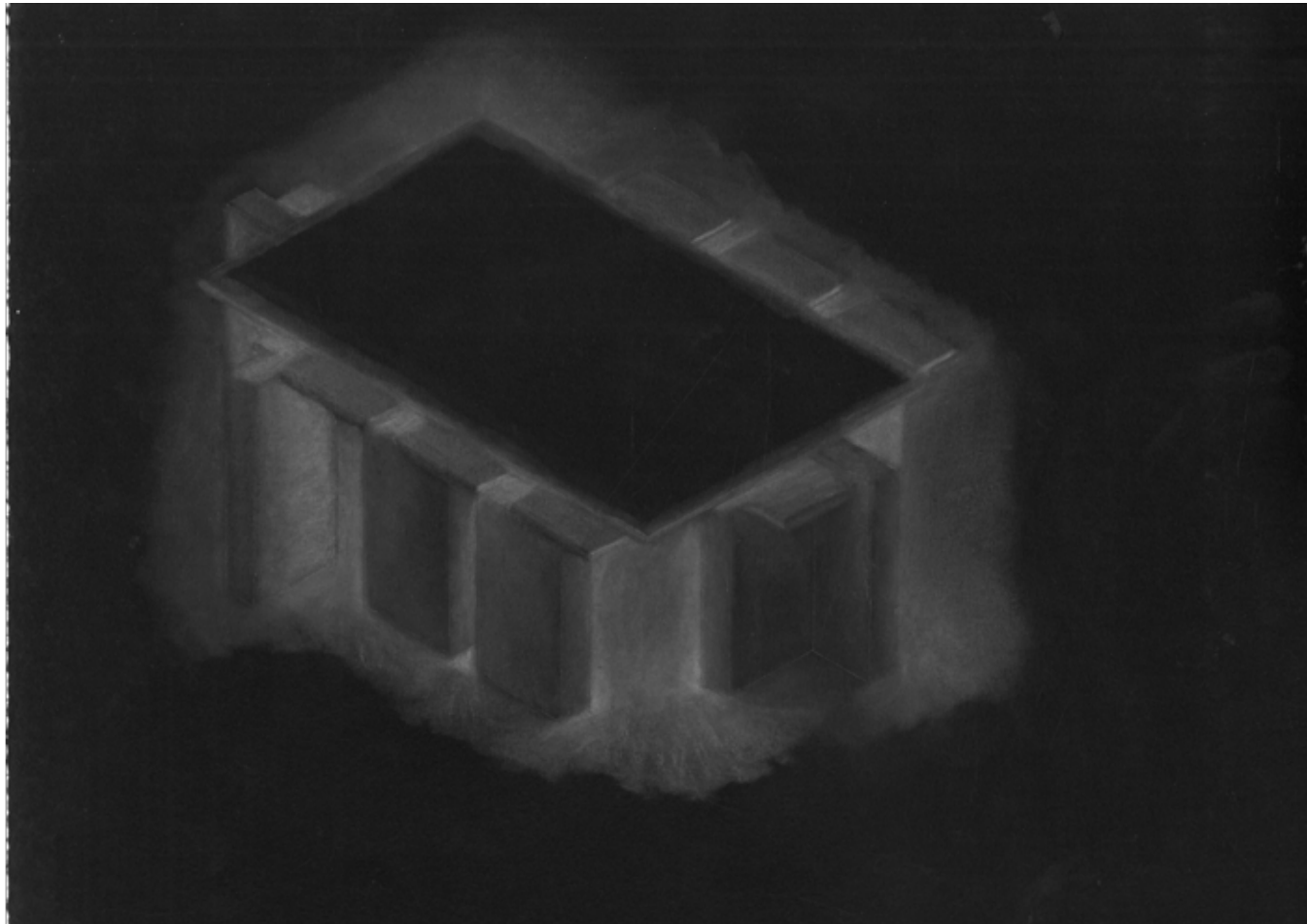


Plan of station stair night lighting in charcoal

Section of station stair night lighting in charcoal



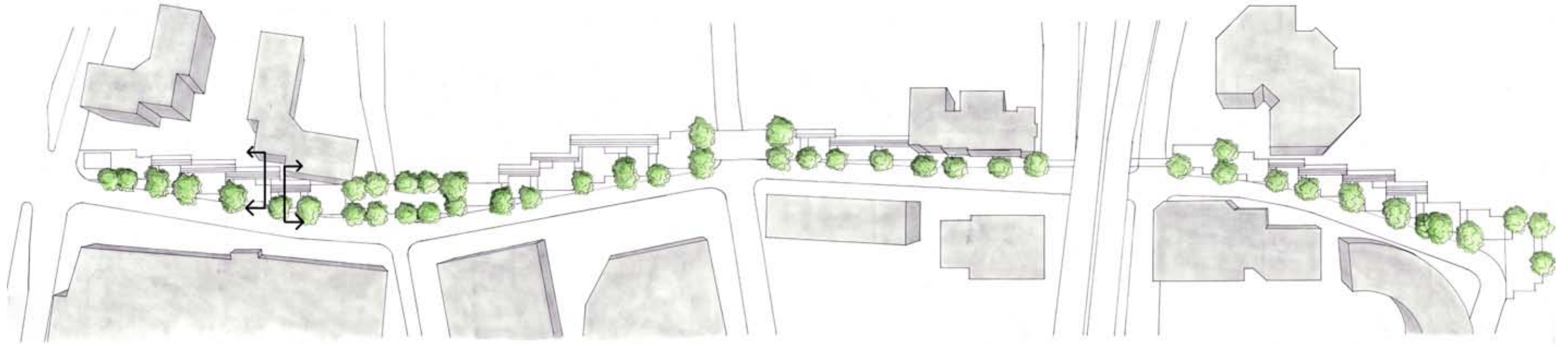
Axon of station night lighting in charcoal



Section of station night lighting in charcoal



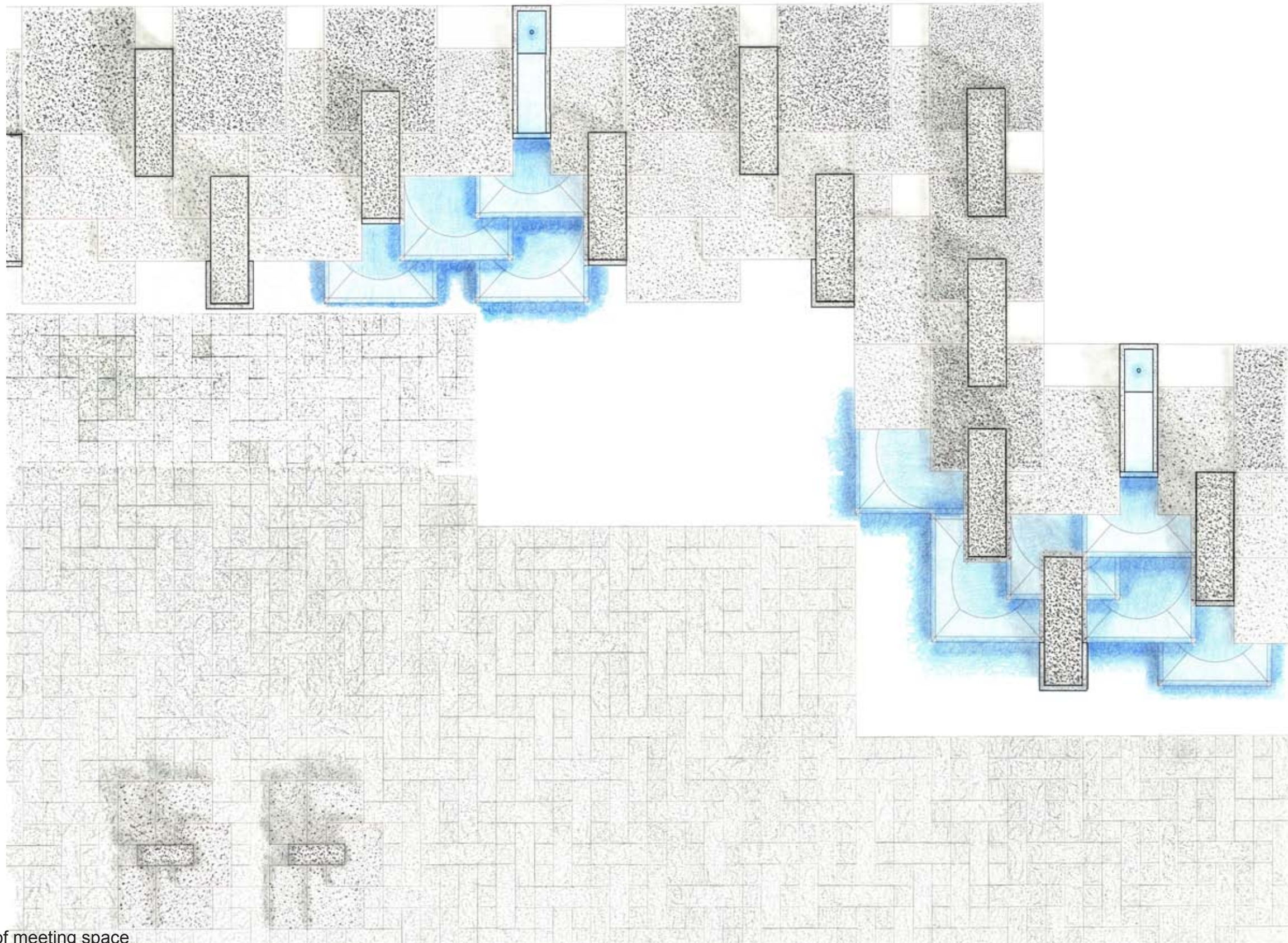
Plan of station night lighting in charcoal



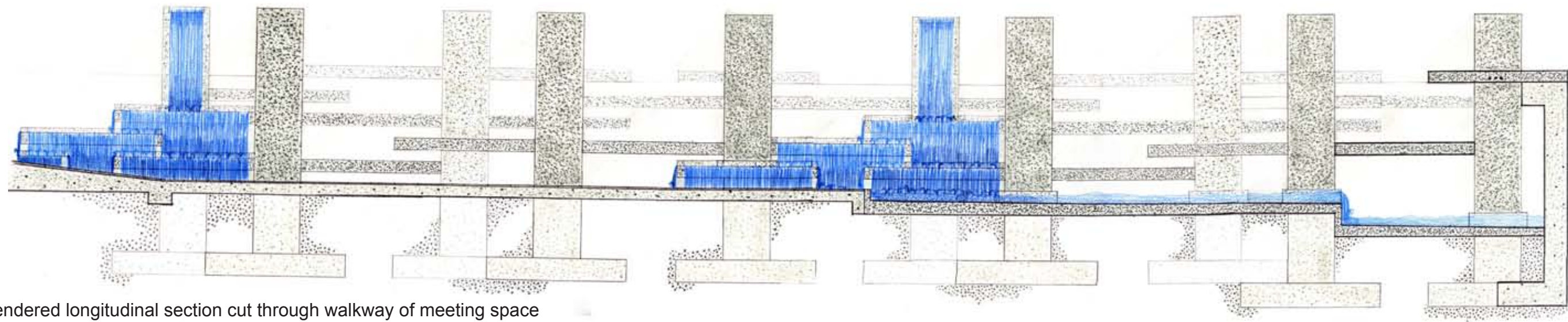
Perspective of the meeting space facing west



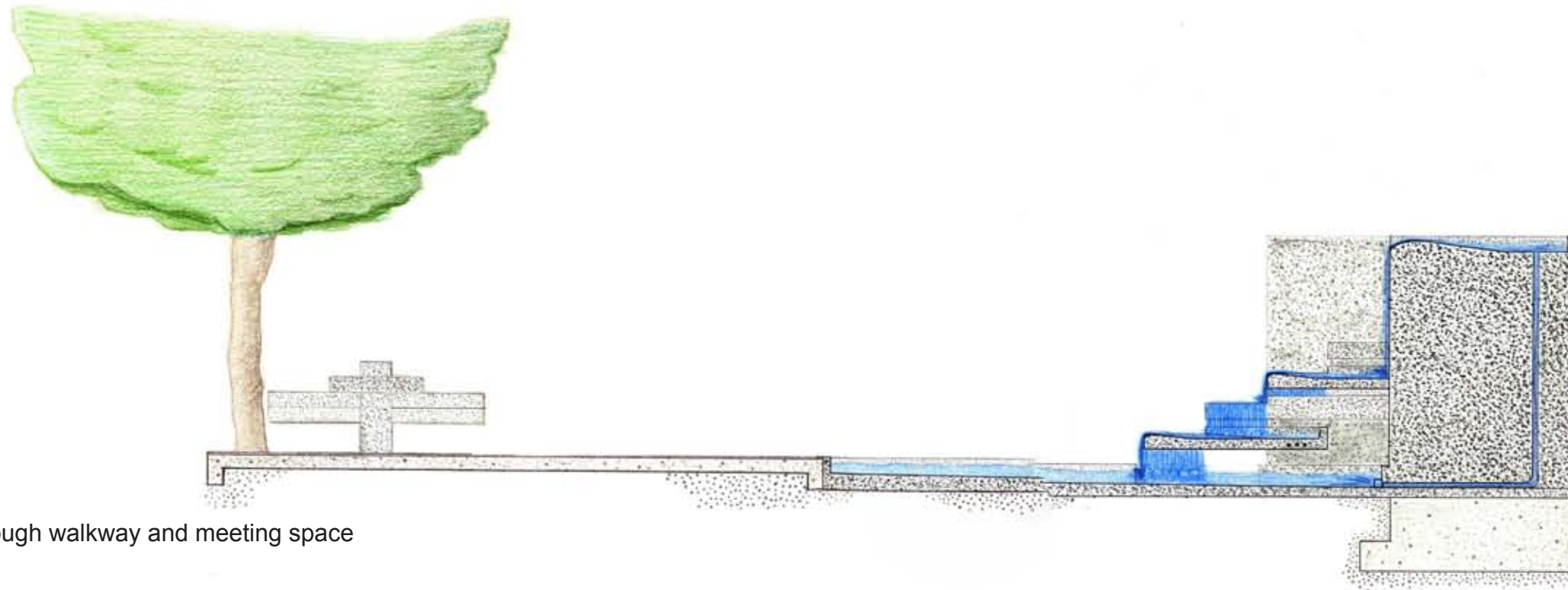
Perspective facing east at the end of the meeting space



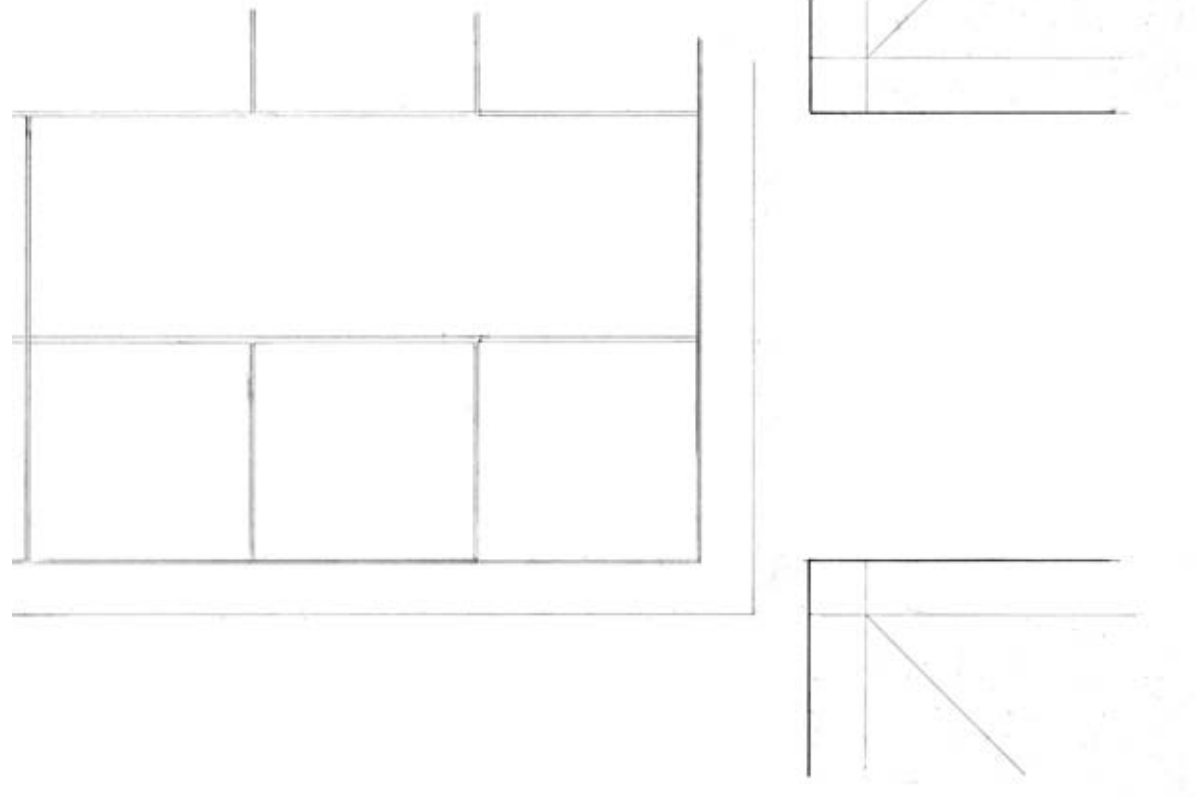
21 Rendered plan of meeting space



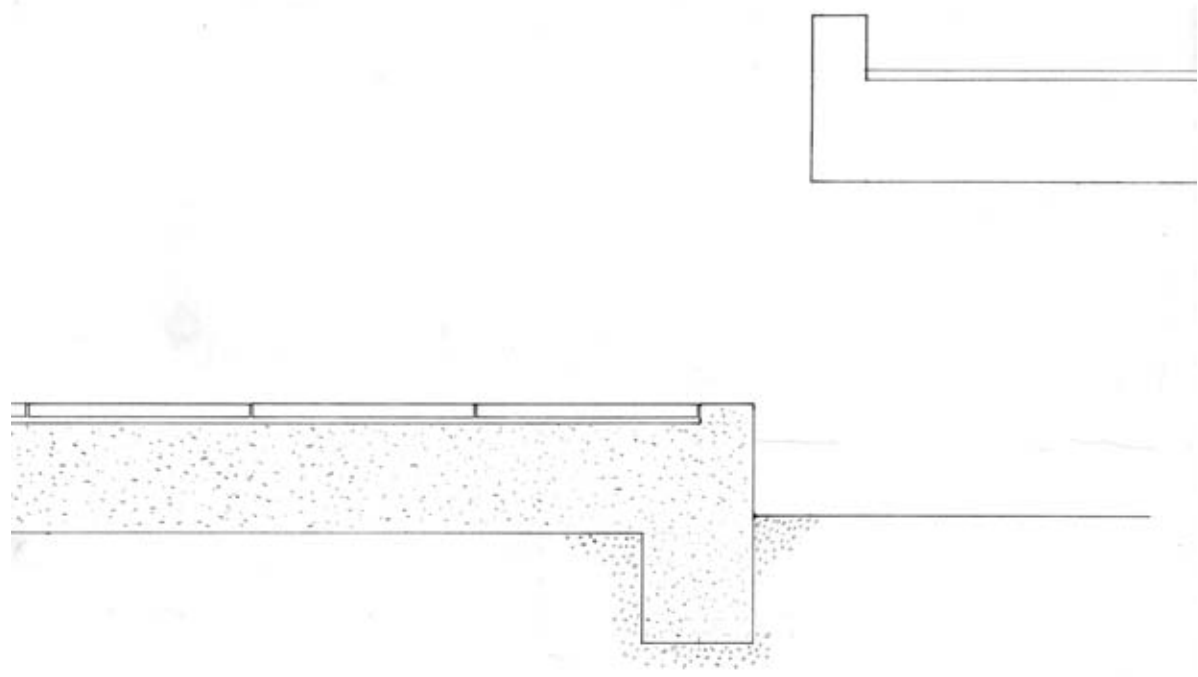
Rendered longitudinal section cut through walkway of meeting space



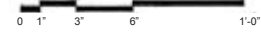
Rendered section through walkway and meeting space

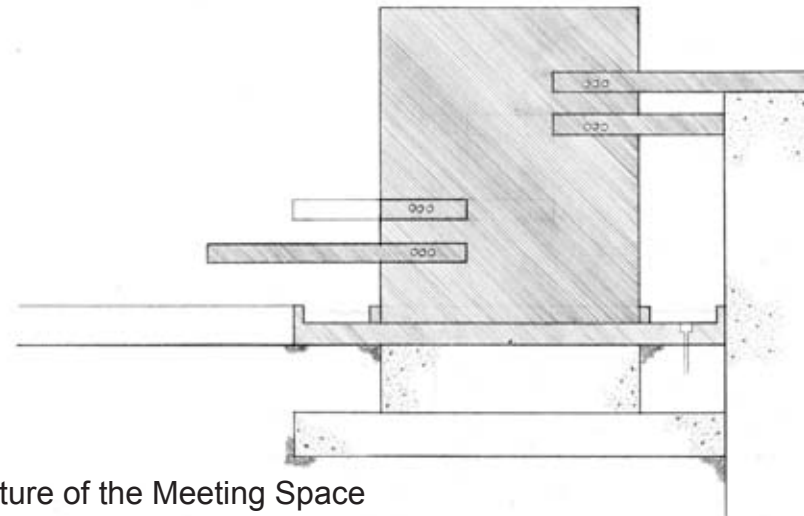


Detail of plan walkway and meeting space connection

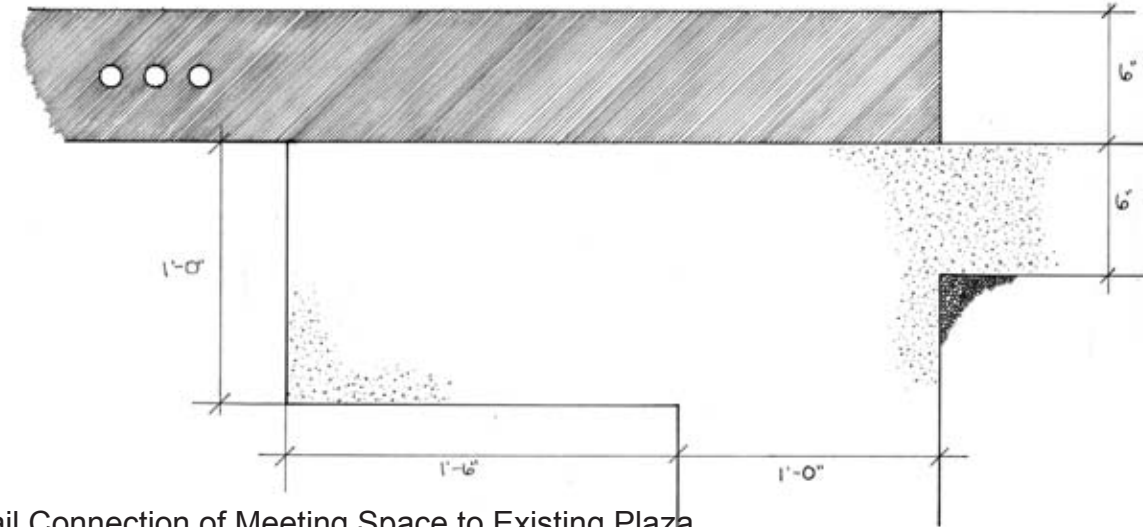


Detail of section walkway and meeting space connection

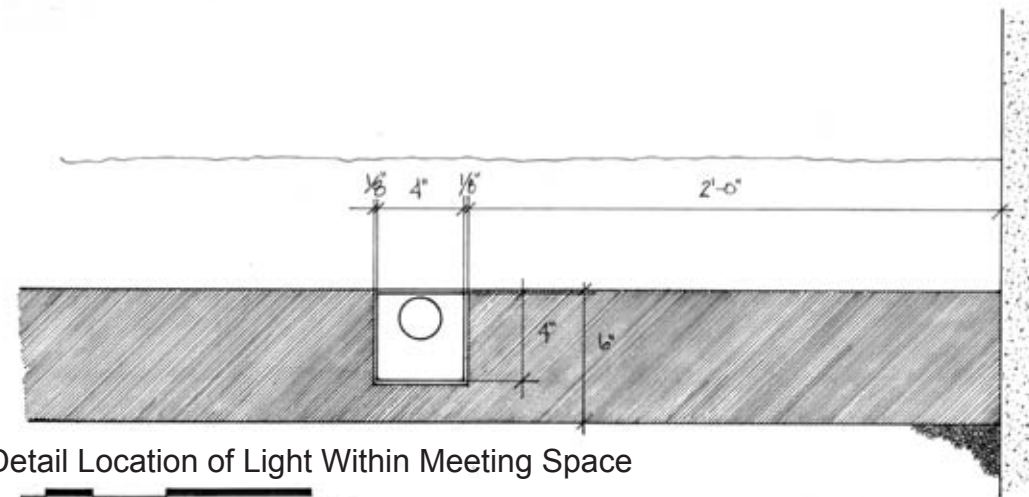




Section of the Structure of the Meeting Space



Detail Connection of Meeting Space to Existing Plaza

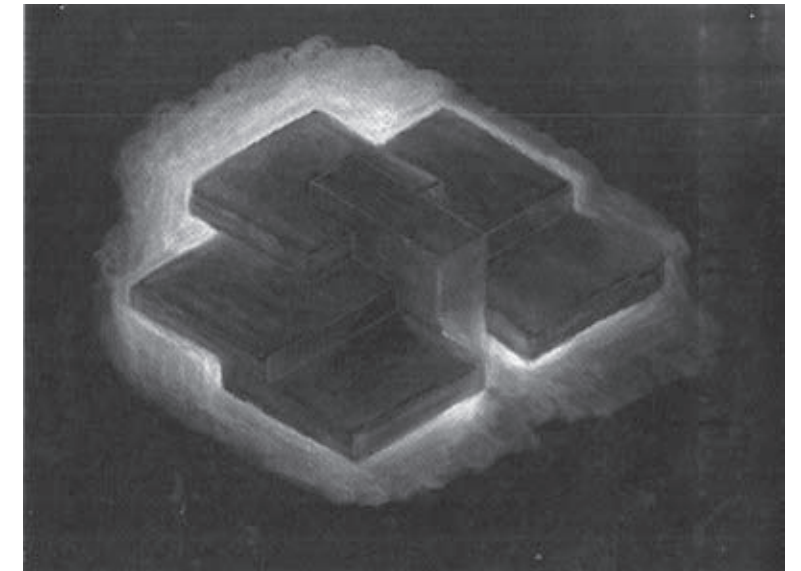


Detail Location of Light Within Meeting Space

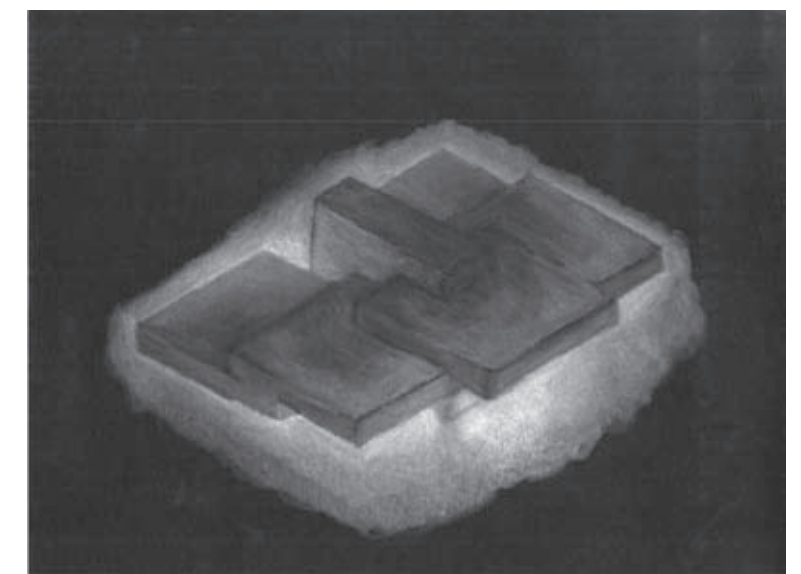




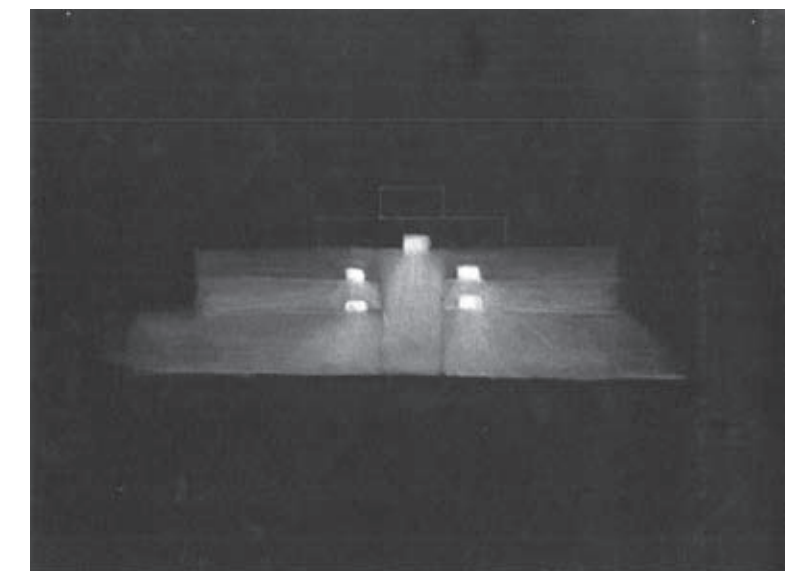
Axon of bench night lighting in charcoal



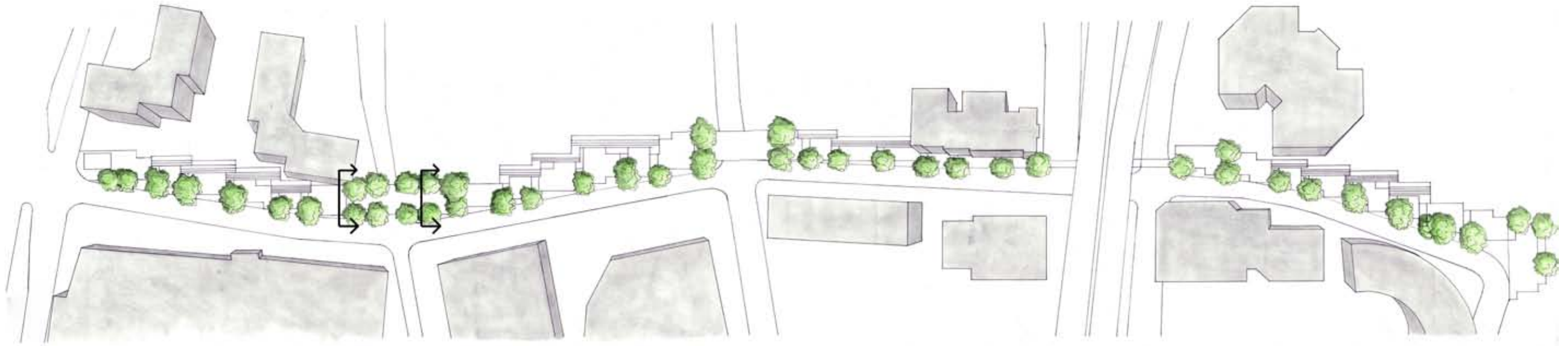
Axon of bench night lighting in charcoal



Section of bench night lighting in charcoal



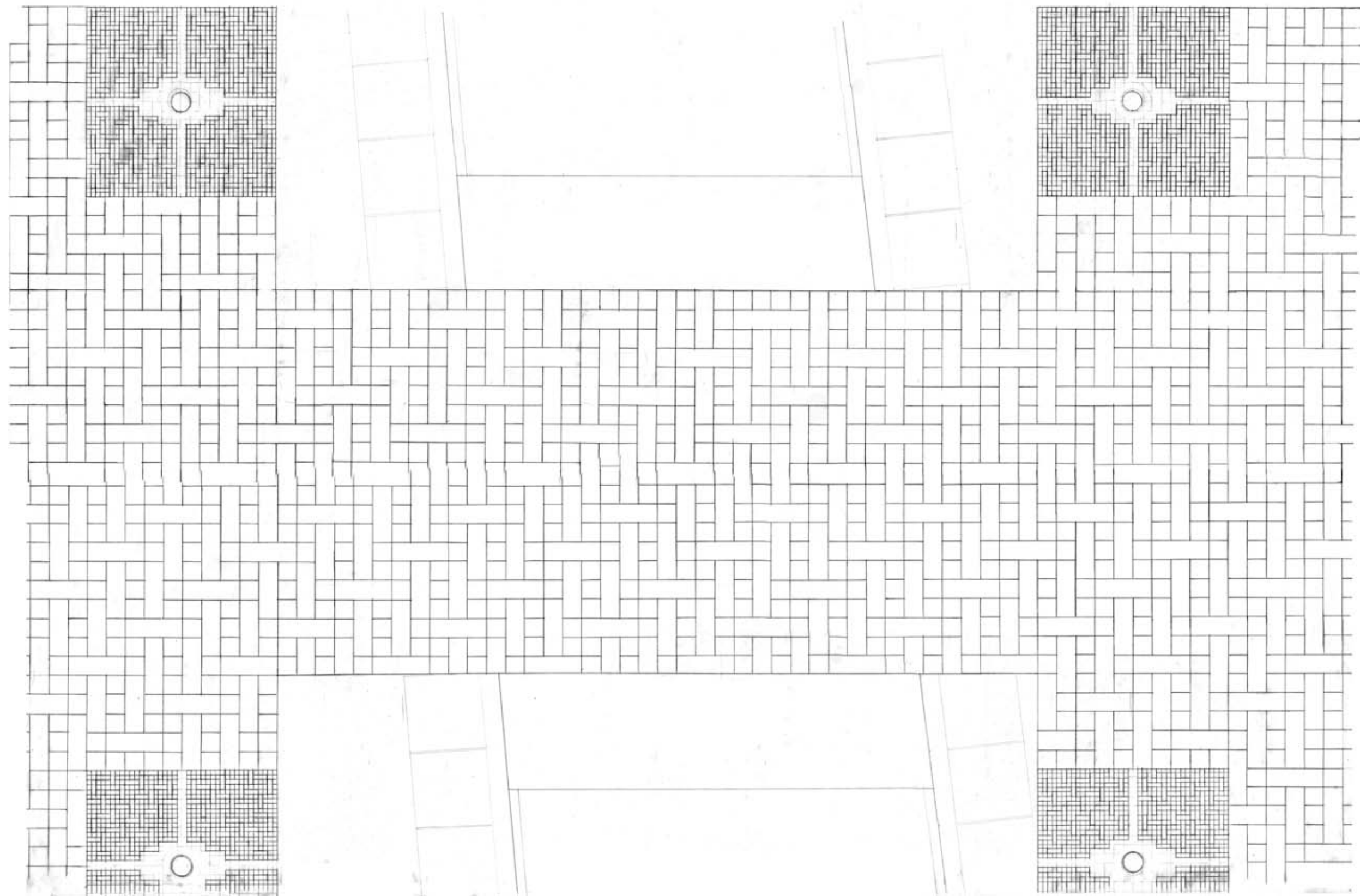
Far left
Plan of meeting space night lighting in charcoal
Top Left
Section of meeting space night lighting in charcoal
Middle Left
Section of meeting space night lighting in charcoal
Left
Axon of meeting space night lighting in charcoal



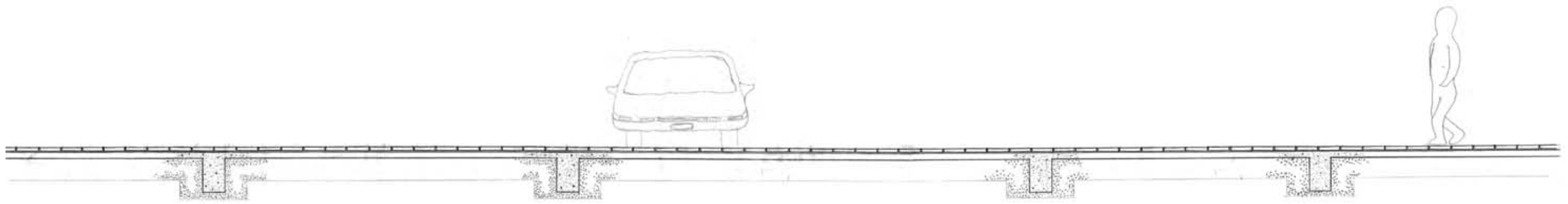
Perspective of walkway crossing Fern Street



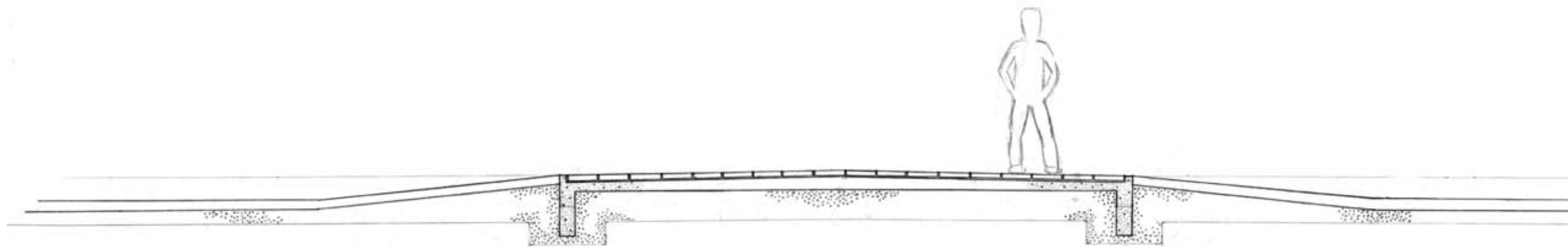
Perspective of walkway approaching the west end of the meeting space of the second block



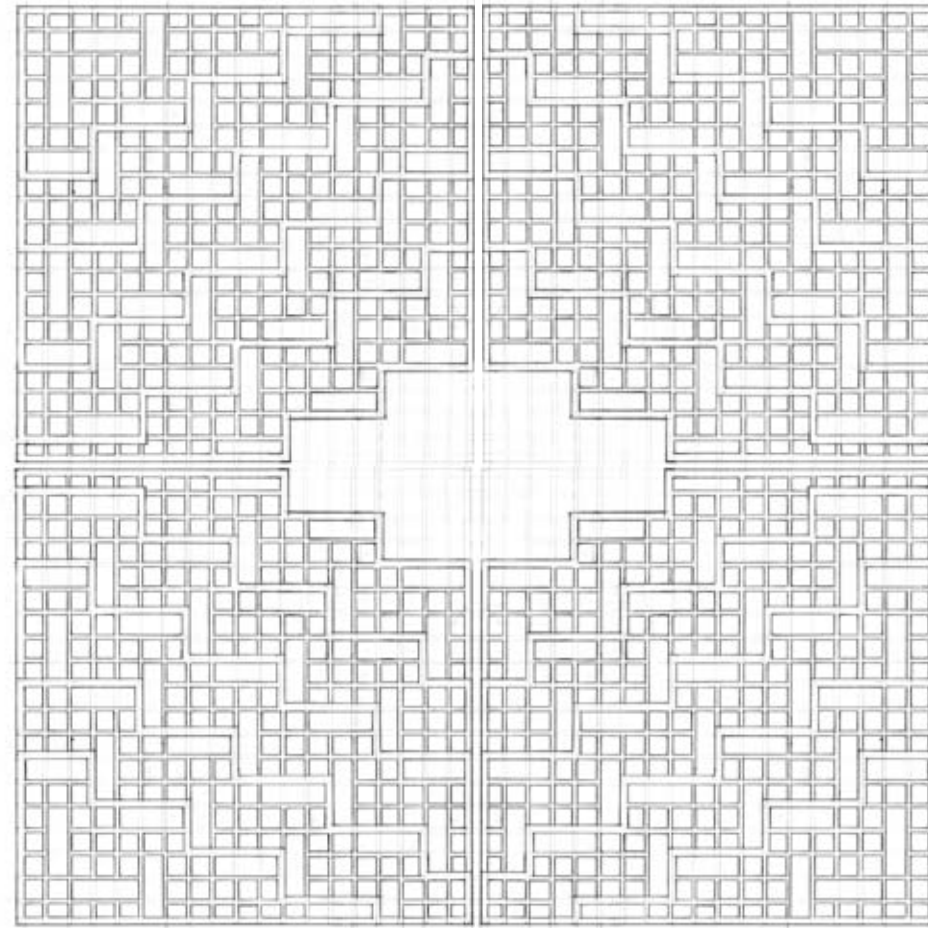
27 Plan of walkway crossing a street



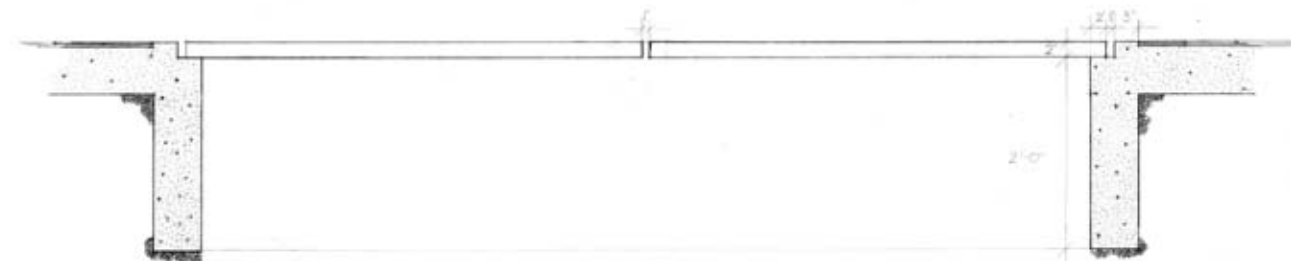
Longitudinal section through walkway of street intersection



Section through walkway of street intersection

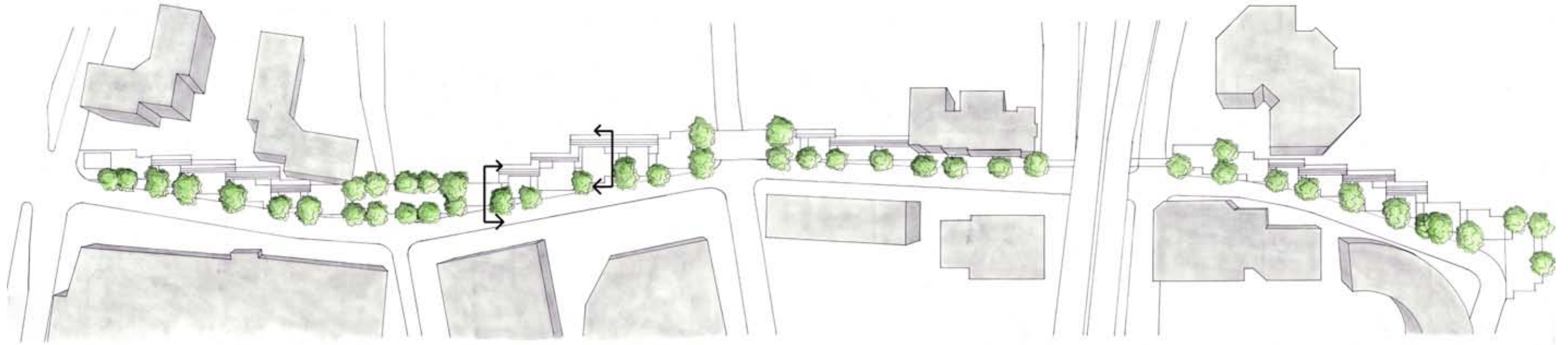


Plan of Walkway Tree Grate



Section of Structure of Walkway Tree Grate

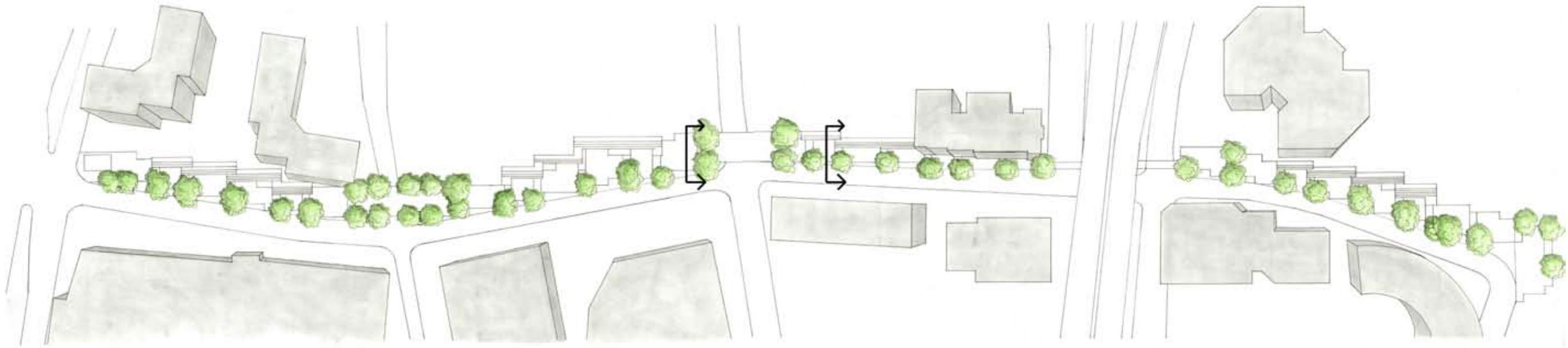




Perspective of walkway at west end of meeting space on block two



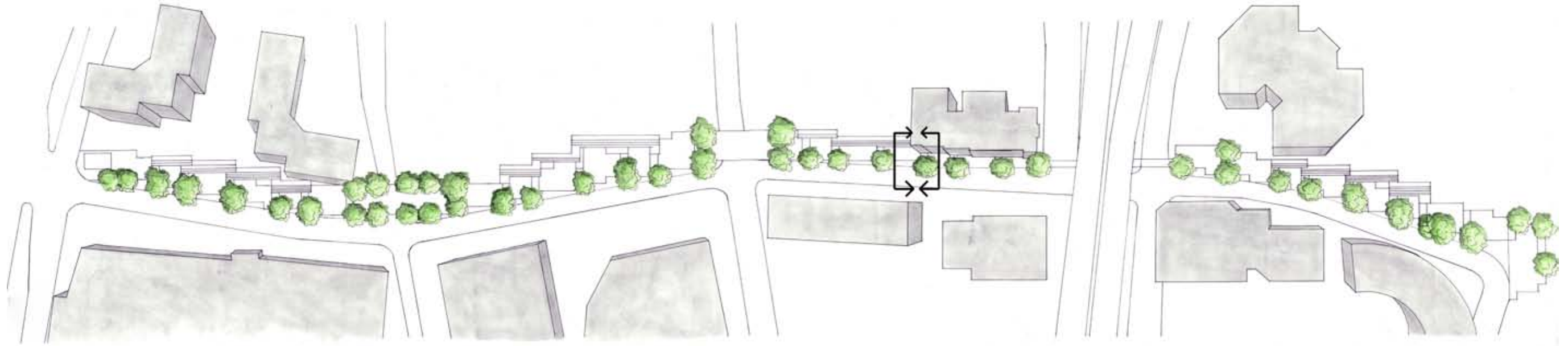
Perspective of meeting space on block two facing west



31 Perspective of walkway crossing S Eads Street



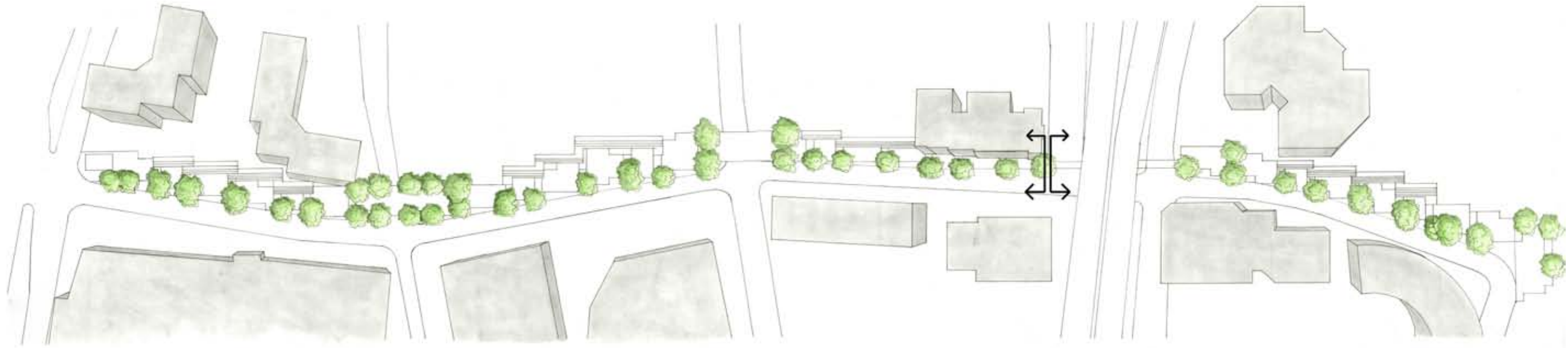
Perspective of walkway approaching block three meeting space



Perspective of walkway in the meeting space of block three



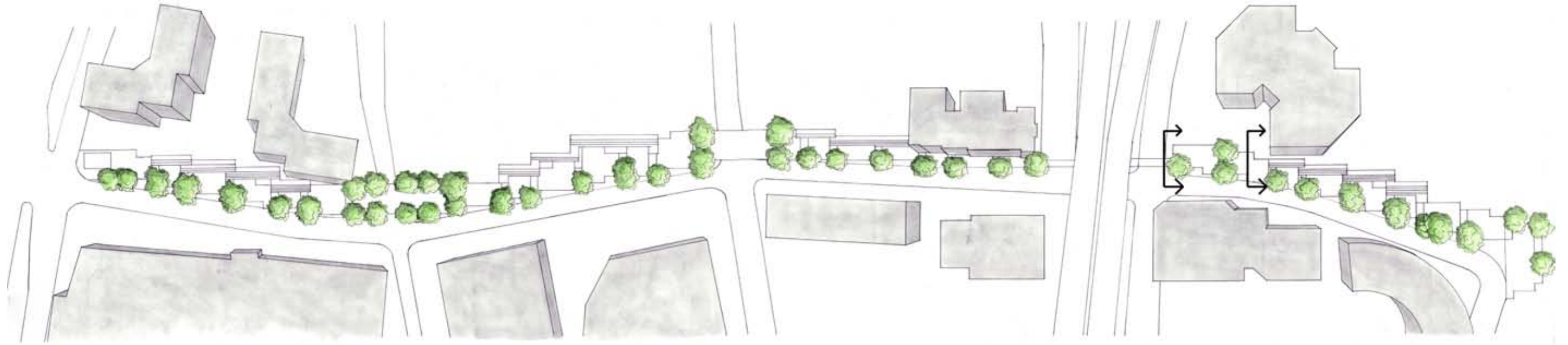
Perspective of walkway at east end of meeting space of block three facing west



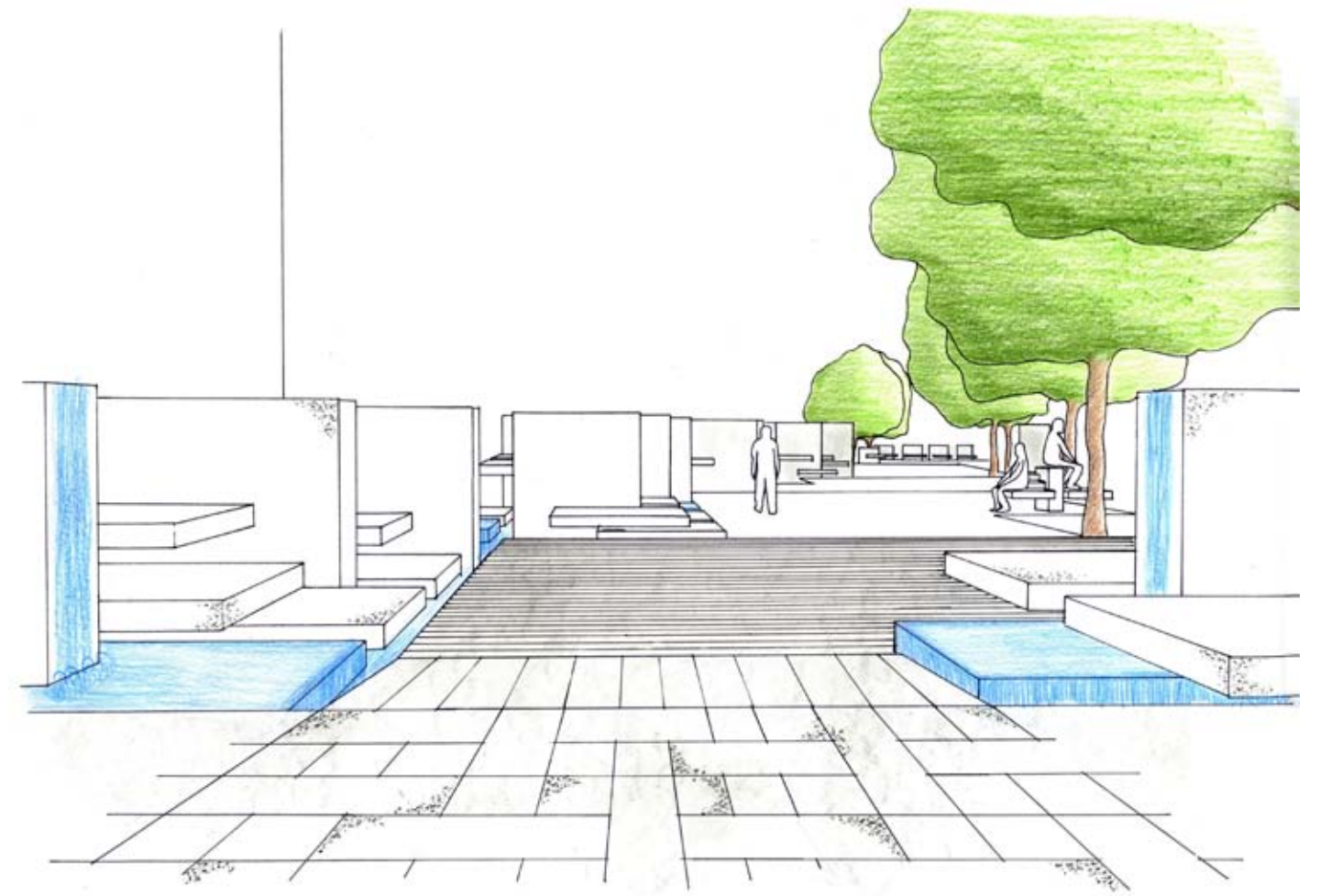
33 Perspective of walkway at the east end of block three facing west



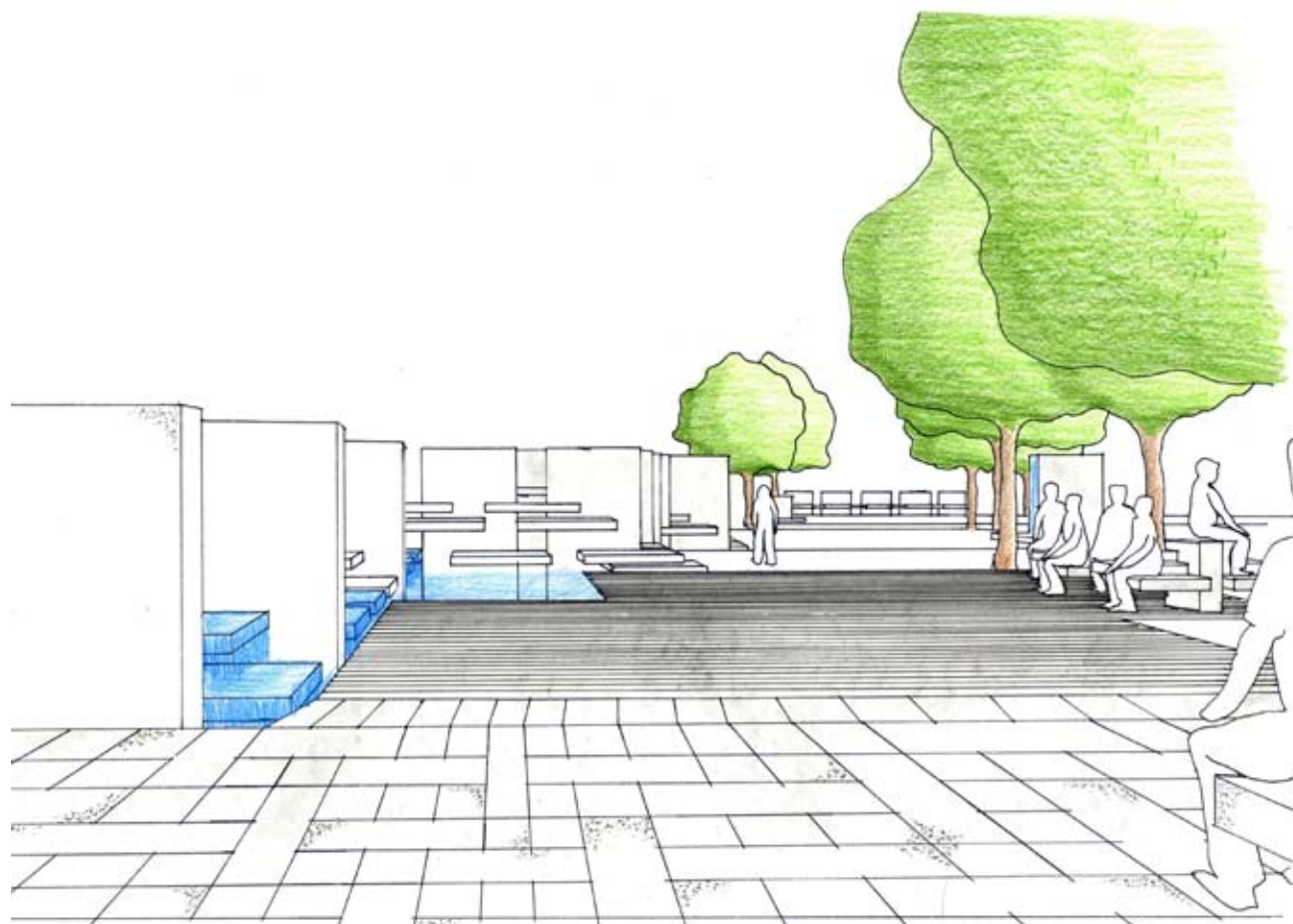
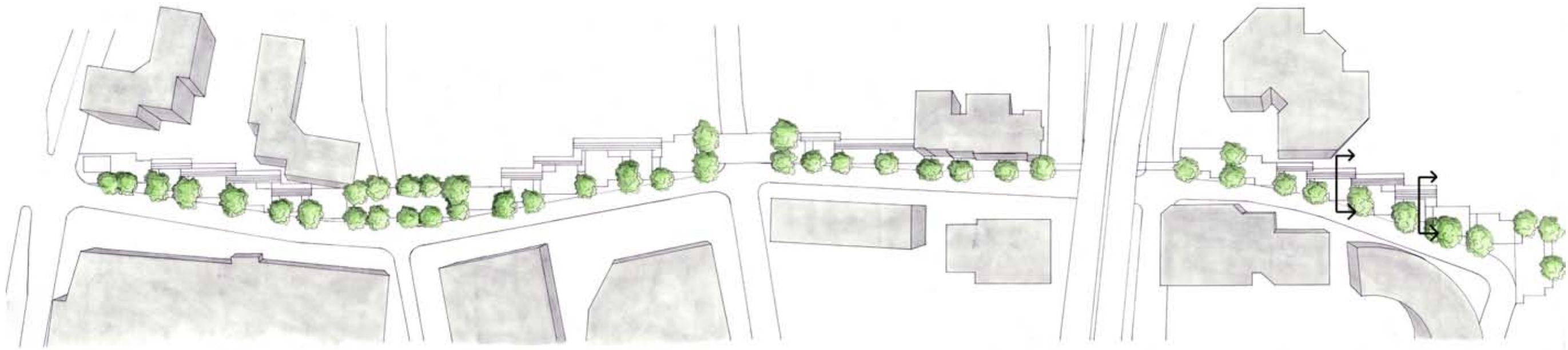
Perspective of walkway crossing Army Navy Drive



Perspective of walkway at west end of block four



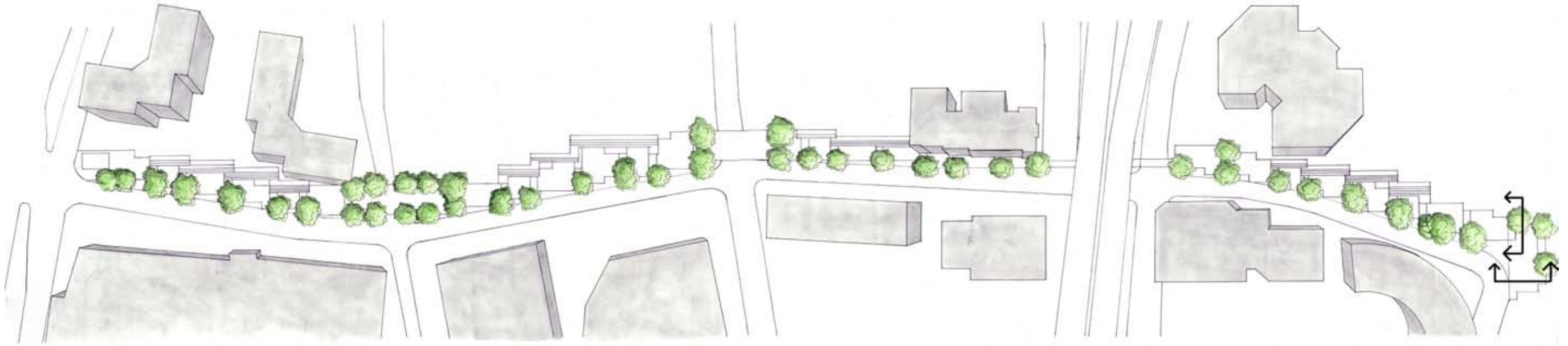
Perspective of walkway at west end of block four meeting space



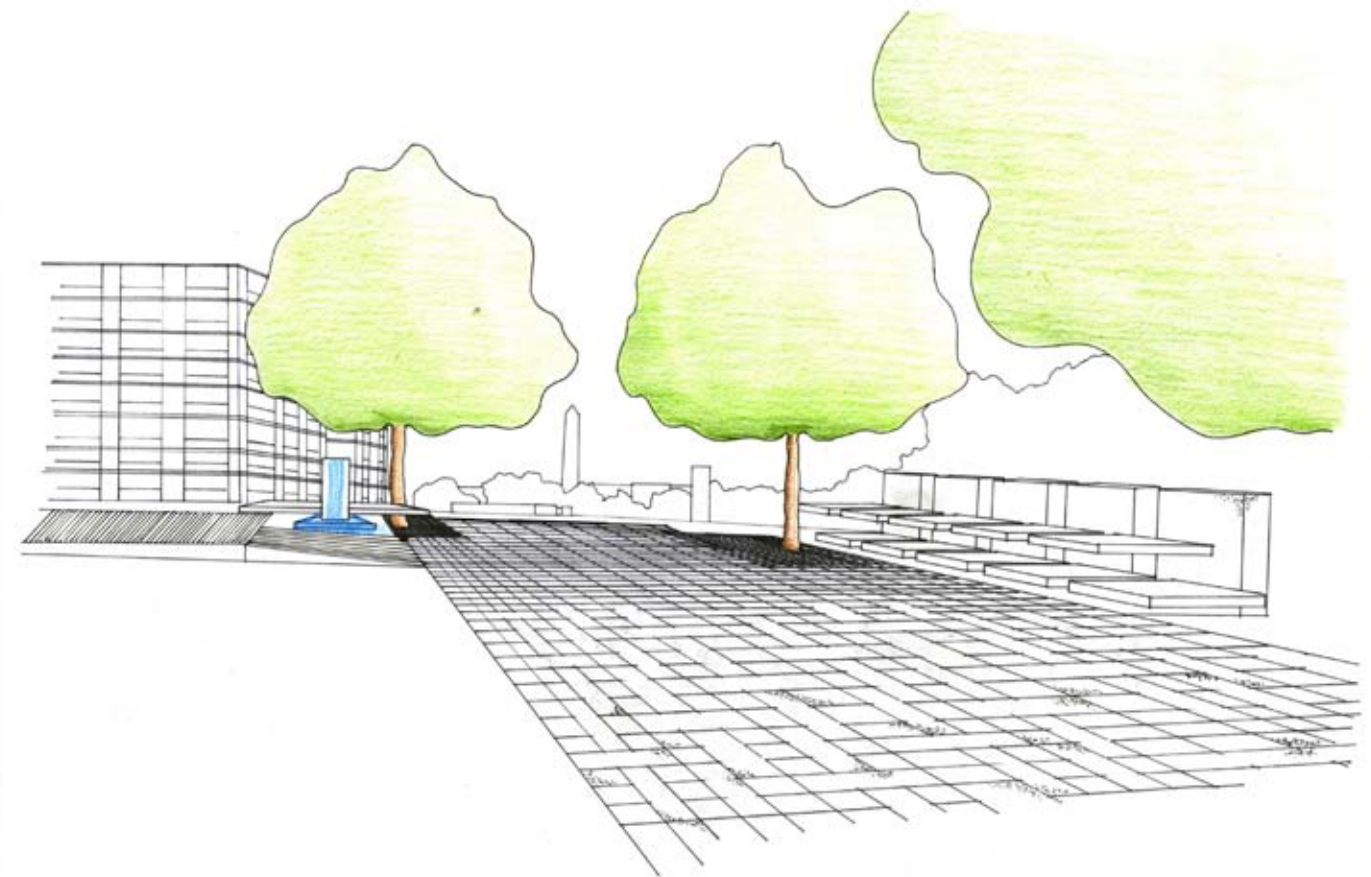
35 Perspective of walkway in middle of meeting space of block four



Perspective of walkway at east end of meeting space of block four



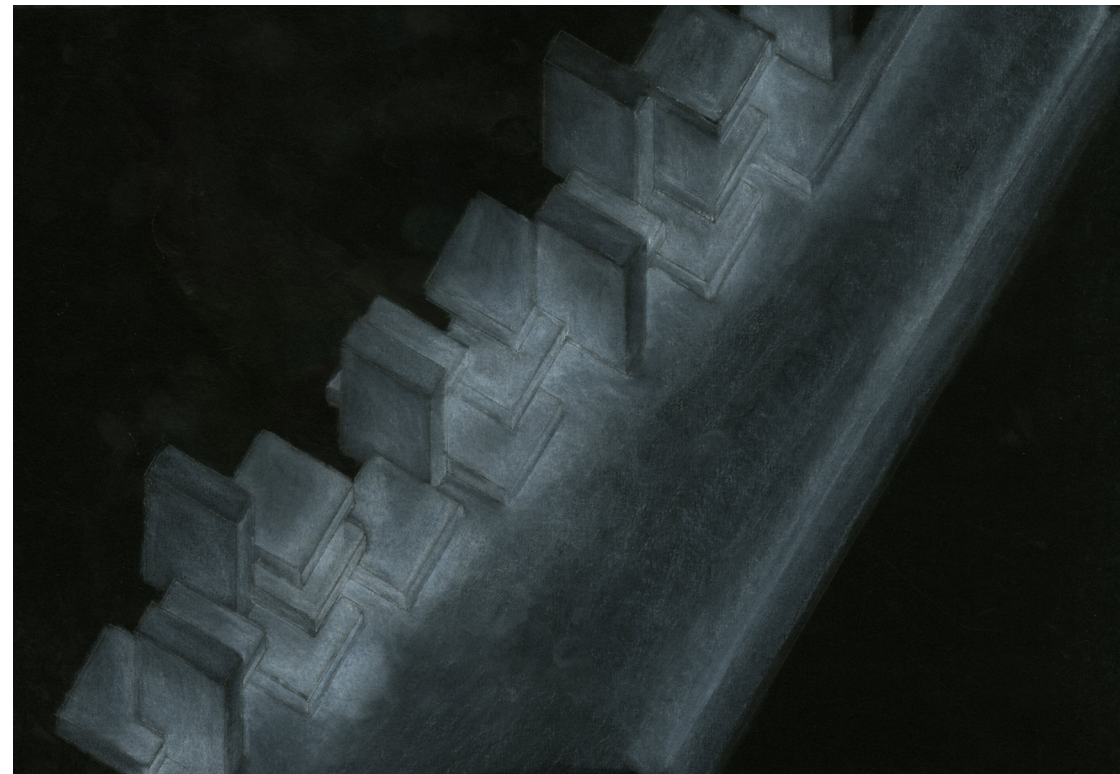
Perspective of walkway at east end of block four facing west



Perspective of walkway at east end of block four facing Washington Monument

In cities the points of connection between systems should be places of special emphasis and design enrichment. (35)

Design of Cities, by Edmund Bacon



Axon of meeting space night lighting in charcoal

Works Cited

Bacon, Edmund N. *Design of Cities*. New York: Penguin, 1976. Print.

Dobbins, Michael. *Urban Design and People*. Hoboken, NJ: Wiley, 2009. Print.

Gaventa, Sarah. *New Public Spaces*. London: Mitchell Beazley, 2006. Print.

Google Maps. 2011. Web. 23 May 2011. <<http://maps.google.com>>.