



07





01



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03

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Illustration 7.3 (1): Photograph of the aluminium exterior screen with diagram of aluminium fins on plan (Author, 2011)

Illustration 7.4 (2): Photograph of entrance staircase (Author, 2011)

Illustration 7.5 (3): Photograph of an interior exhibition space (Architeria, 2009. Edited by Author)

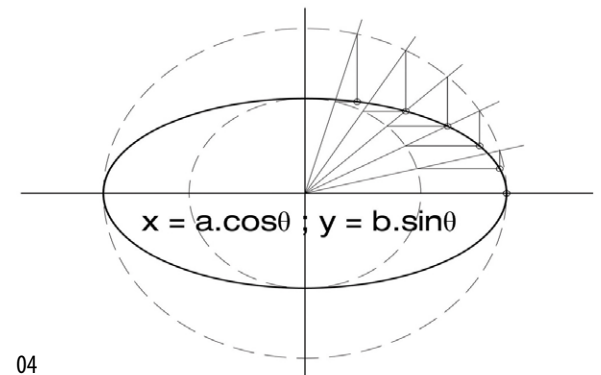
Figure 7.1 (4): Form generating geometry (Arch Dia, 2010)

Opposite |

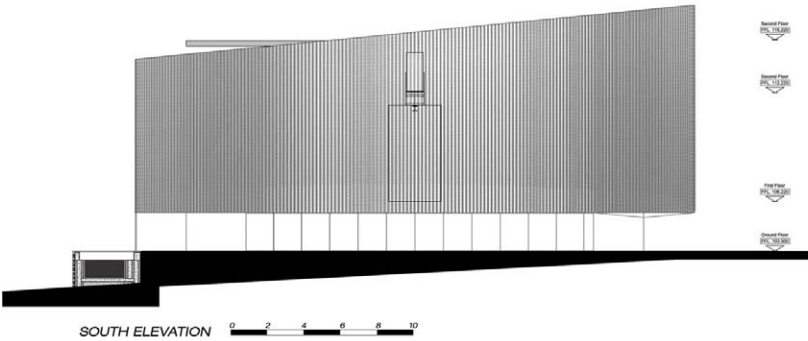
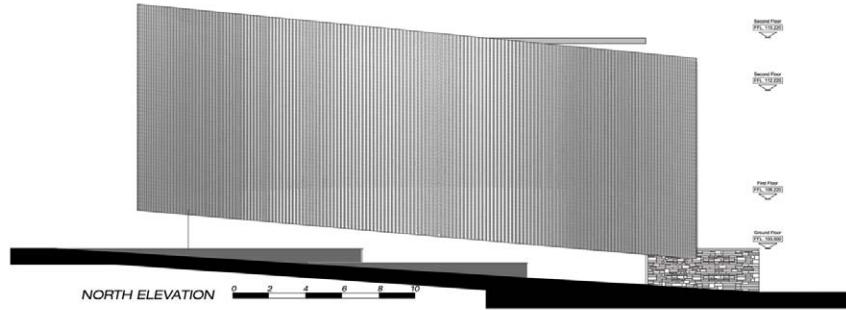
Figure 7.2 (5): North and South elevations of Circa Gallery (Arch Dia, 2010)

Figure 7.3 (6): Section through Circa Gallery (Arch Dia, 2010)

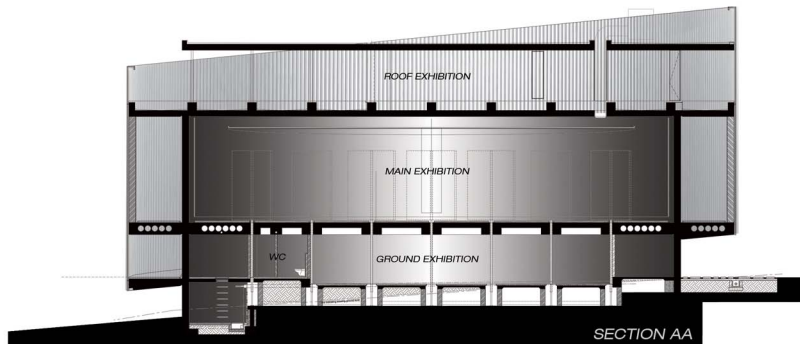
Figure 7.4 (7): Plans of Circa Gallery (Architeria, 2009)



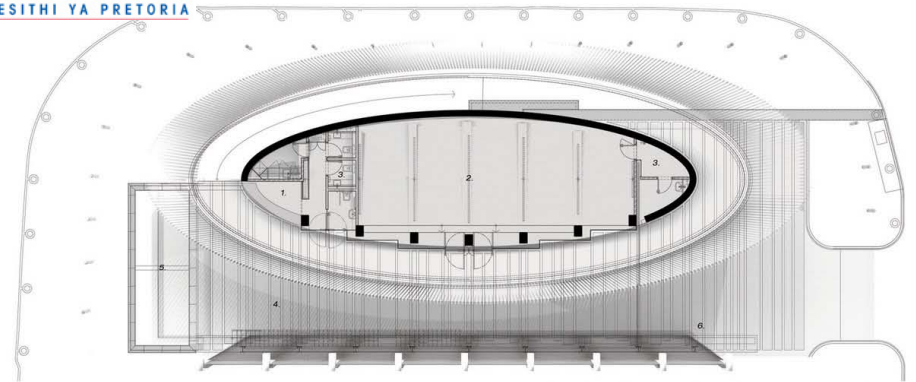
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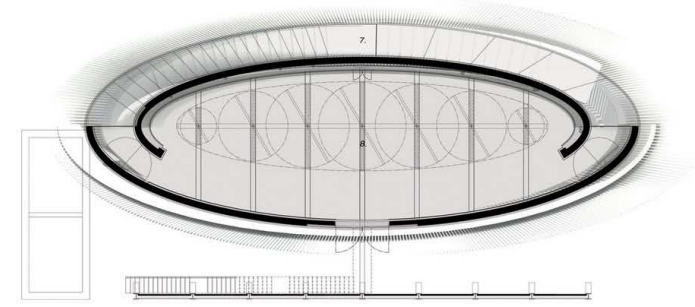
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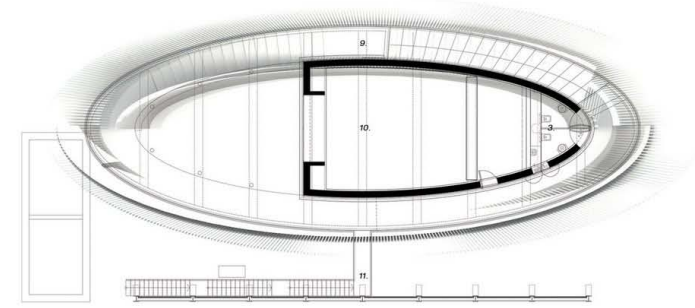
GROUND FLOOR PLAN



- 1 RECEPTION
- 2 EXHIBITION
- 3 WC
- 4 GATHERING SPACE
- 5 POOL
- 6 PLANTED SCREEN
- 7 ENTRANCE RAMP
- 8 MAIN EXHIBITION
- 9 CIRCULATION
- 10 OFFICE + DECK
- 11 FIRE ESCAPE



FIRST FLOOR PLAN



SECOND FLOOR PLAN



07

PRECEDENT TYPE
Tectonic

PROJECT NAME
Bloch Building at the
Nelson Atkins Museum

ARCHITECT
Steven Holl &
BNIM Architects

BUILDING TYPE
Museum

CONSTRUCTION TYPE
Extension &
Renovation

LOCATION
Kansas City, MO

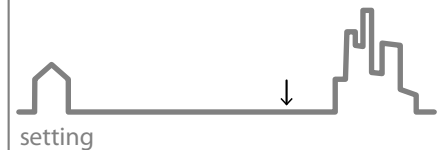
YEAR
2006

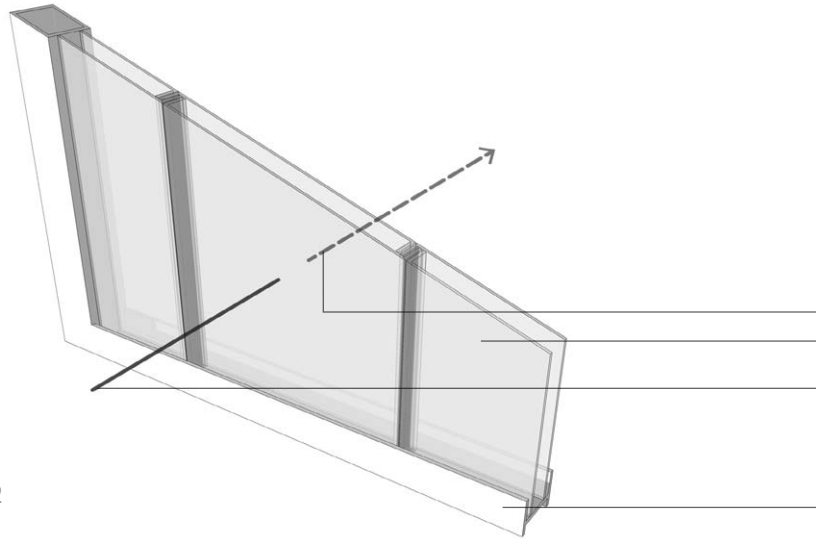


+ U-profile Glass

The Bloch building at the Nelson Atkins Museum of Art, is designed as a longitudinal space, submerged beneath the vast expanse of lush lawn, with five interconnected structures arranged around it. These structures emerge from below in order to allow light into the lower levels. Steven Holl uses the metaphor of *lenses* to describe the intent of these architectural elements. The building does not impose on or overshadow the existing *Beaux Arts* building, but enhances its character by the stark contrast.

The *showpiece* of the design, is undoubtedly, the luminous appearance of the glass façade system. This system is constructed of u-profile glass panels (arranged to form a cavity). The translucent (but not transparent) glass allows indirect daylight to be dispersed into the gallery spaces which create the desired luminosity. At night the opposite occurrence illuminates the facade, allowing light from the interior to emit an ethereal glow on the museum grounds.





Channel glass, traditionally used in industrial architecture, was at this stage a relatively new building material in the commercial sector, but many systems have since become available from various manufacturers. Systems include double glazing options which can act as a climate-wall to regulate indoor air temperature as well as humidity levels.

subtle indirect and dispersed light
 u-profile glass panels arranged to fit into one another
 direct light
 aluminium support frame

Opposite |

Illustration 7.6 (1):

Photograph of the Bloch building at the Nelson Atkins Museum, by Adam Ryan (Saieh, 2008)

This page |

Figure 7.5 (2):

Diagram analysing the u-profile double glazing facade system (Author, 2011)

Figure 7.6 (3):

Diagram of structure and facilities (Saieh, 2008)

Figure 7.7 (4):

Section through Nelson Atkins Museum and the Bloch building (Saieh, 2008)

Illustration 7.7 (5):

Photograph of the Bloch building illuminated at night, by Andy Ryan (Saieh, 2008)

Illustration 7.8 (6):

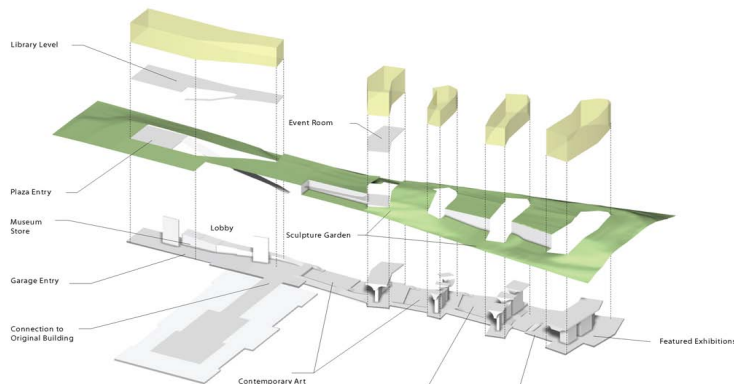
Photograph of the interior of Bloch building during daytime, by Andy Ryan (Saieh, 2008)

Illustration 7.9 (7):

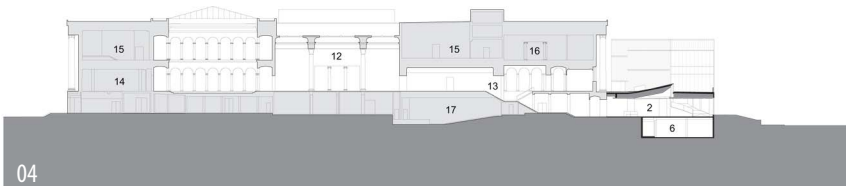
Photograph of the Bloch building at the Nelson Atkins Museum, by Andy Ryan (Saieh, 2008)



02



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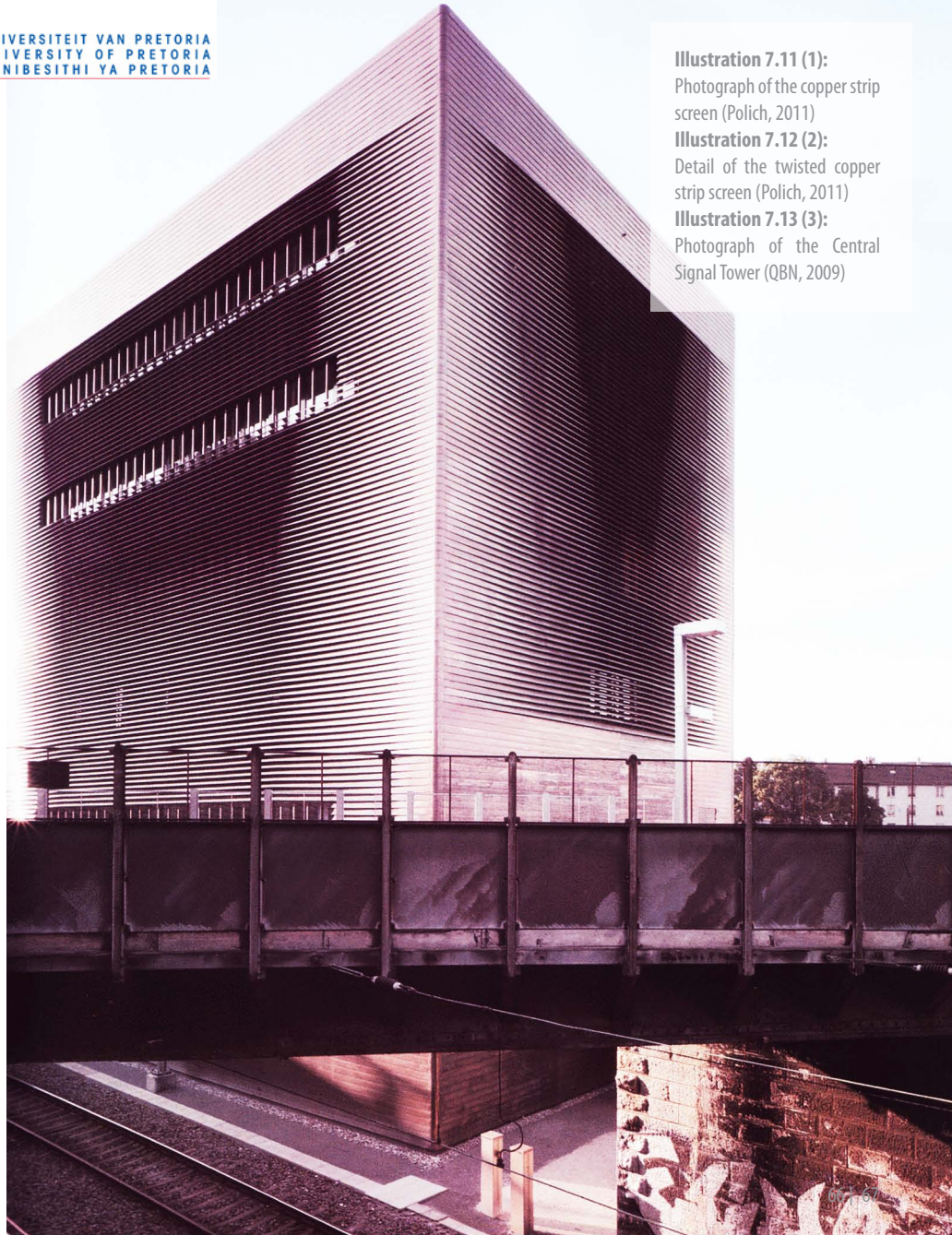
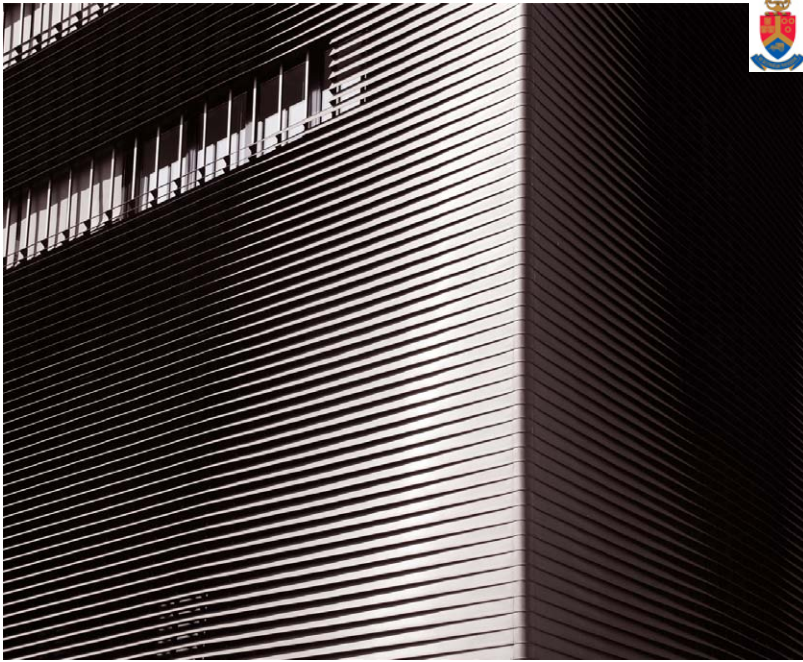


Illustration 7.11 (1):
Photograph of the copper strip screen (Polich, 2011)
Illustration 7.12 (2):
Detail of the twisted copper strip screen (Polich, 2011)
Illustration 7.13 (3):
Photograph of the Central Signal Tower (QBN, 2009)



PRECEDENT TYPE
Tectonic &
Mechanical

PROJECT NAME
Storefront for Art &
Architecture

ARCHITECT
Steven Holl &
Vito Acconci (artist)

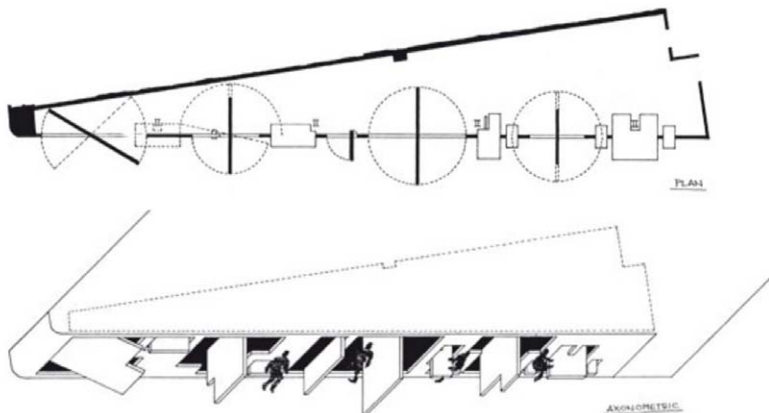


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Art Gallery

CONSTRUCTION TYPE
Renovation

LOCATION
Soho, NY

YEAR
1993



+ Dynamic Building Elements

The Storefront for Art and Architecture commissioned a collaborative team for the renovation of the gallery's decaying façade. The building is a slender wedge-shaped structure with an intimate triangular gallery space. Due to its distinct form, the building's most dominant element is its long street elevation.

According to Steven Holl (2008), the objective was to introduce improbability by contesting the "symbolic border which underlines the exclusivity of the art world", where the inside belongs to the elite alone. The two designers proposed a chain of swivelling façade panels¹ configured in a puzzle-like format. The façade seems to dissolve when the panels are secured in the open position, allowing the interior of the gallery to extend onto the sidewalk and into the urban context.

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Illustration 7.14:

Photograph of the facade when opened (Brake, 2008)

Figure 7.8 :

Plan of the gallery indicating the rotations of each panel (Anon, [2001])

Figure 7.9:

Axonometric diagram of the gallery (Anon, [2001])

01. A composite material, comprised of concrete and recycled fibres was employed as a lightweight infill material for the swivelling panels.



setting



scale

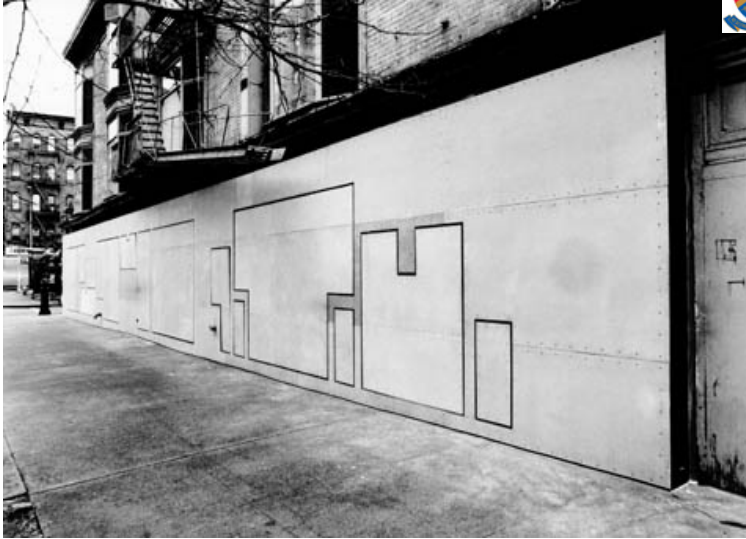


Illustration 7.15:
Photograph of the street elevation (Warchol, 2002)





The simple introduction of these design elements alter the dynamics of both the interior and exterior space tremendously when opened. By introducing dynamic elements, whether it be sliding, alternating or rotating, the character of a space can be manipulated sporadically in order to enhance the user's experience as well as the spatial quality.



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Illustration 7.16:

Photograph of the facade when closed, from exterior (AITC, 2001)

Illustration 7.17:

Photograph of the facade when open, from interior (AITC, 2001)

Opposite |

Illustration 7.18:

Photograph of the street elevation (Norsworthy, 2008)

PRECEDENT TYPE	PROJECT NAME	ARCHITECT	BUILDING TYPE	CONSTRUCTION TYPE	LOCATION	YEAR
Mechanical	Chicken Point Cabin	Olson Kundig Architects	Residential: Lakeside Cabin	New Building	Idaho, USA	2002



+ Mechanical System

Chicken Point Cabin is an all-year-round weekend retreat for a young family. The main notion influencing the design of Chicken Point Cabin was: “to open the architectural experience to a larger landscape” (Ngo, 2006: 51). The first concepts included counter weight systems that utilise sandbags and an electronically operated facade that functions similar to a garage door. Both these options proved to be lacking as the designer advocated that user interaction enhances the experience and value. The *gizmo*, a gear-and-chain rotating wheel system, eventually complied with all the requirements.

The *gizmo*, as Tom Kundig refers to it, is what gives Chicken Point Cabin’s facade its life; a large rotating window which links the interior to the surrounding natural landscape. The system utilises the simple principle of counter weights in order to keep the window balanced when in the opened position (Ngo, 2006: 79). This is achieved by both sides of the window’s cross axel being equal in weight.



setting



scale





The details of the *gizmo* serves as a good technical precedent for the intended dynamic elements in the Digital Pavilion as the scales and movement of the elements are similar (see Chapter 9).

Opposite |

Illustration 7.19:

Photograph of the rotating facade of Chicken Point Cabin (Benschneider, 2011. Edited by Author.)

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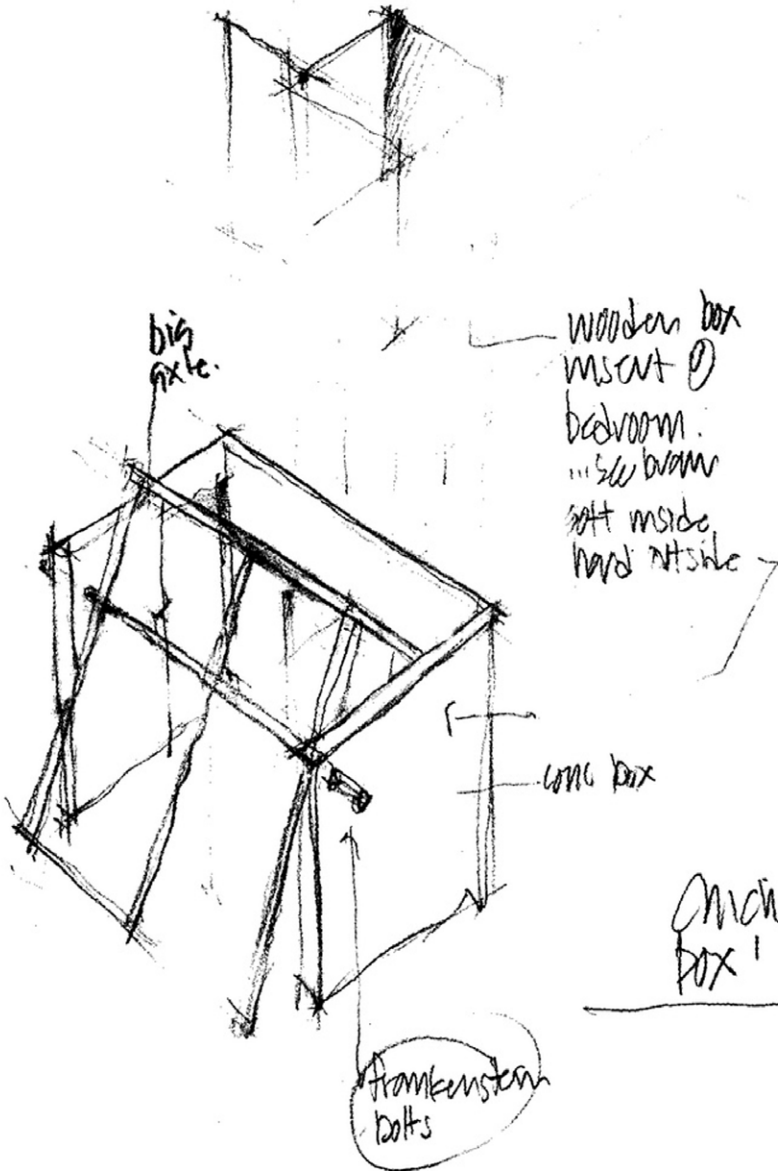
Illustration 7.20:

Photograph of the rotating facade of Chicken Point Cabin viewed from the first floor (Coleman, 2009. Edited by Author)

Illustration 7.21:

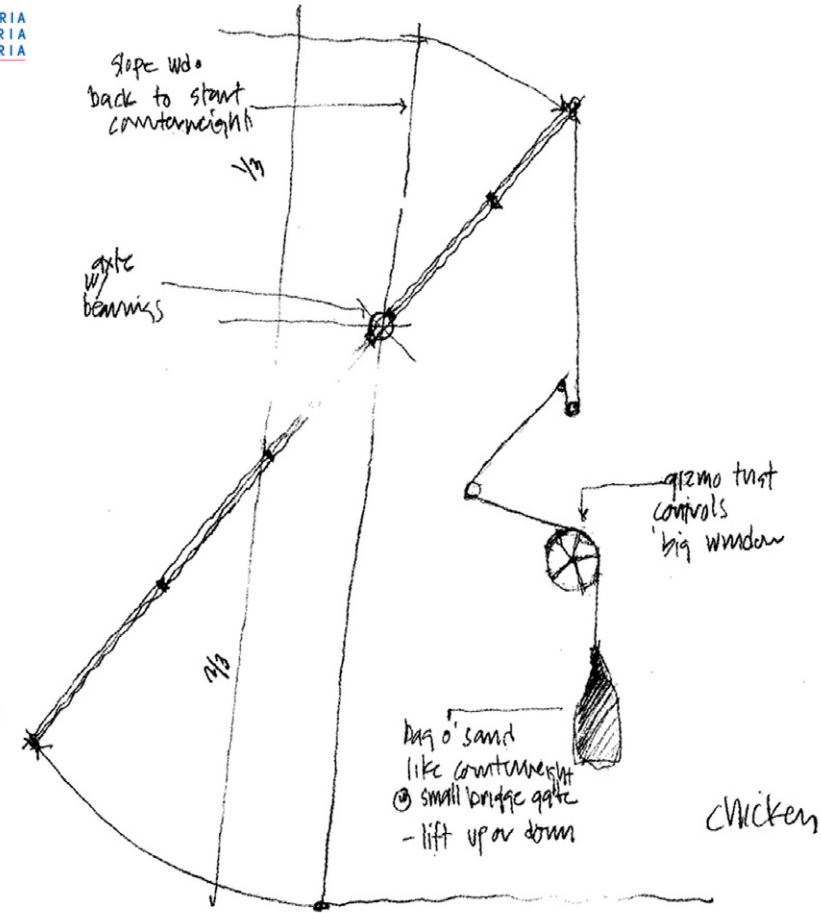
Photograph of the gear system of the rotating facade (Benschneider, 2011. Edited by Author)





Chicken Point
'big window' gr.

Chicken
box!



This page |
 Figure 7.10 (1):
 Concept sketch of the swivelling facade by Tom Kundig (Ngo, 2006.)
Figure 7.11 (2):
 Concept sketch of the counter weight mechanism by Tom Kundig (Ngo, 2006.)

Opposite |
Figure 7.12:
 Analytical drawing of the counter weight and gear system in Chicken Point Cabin (McLeón, 2007)
 01 | Manual turning wheel
 02 | Kinetic sculpture detail
 03 | Bevel gear and chain detail

