Wayfinding in Architecture

Jason Brandon Abrams

University of South Florida

Follow this and additional works at: https://digitalcommons.usf.edu/etd

Part of the American Studies Commons, Architecture Commons, and the Urban Studies and Planning Commons

Scholar Commons Citation


This Thesis is brought to you for free and open access by the Graduate School at Digital Commons @ University of South Florida. It has been accepted for inclusion in Graduate Theses and Dissertations by an authorized administrator of Digital Commons @ University of South Florida. For more information, please contact scholarcommons@usf.edu.
Wayfinding in Architecture

by

Jason Brandon Abrams

A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Architecture
School of Architecture and Community Design
College of the Arts
University of South Florida

Major Professor: Steven A Cooke, M. Arch
Vikas Mehta, Ph.D.
Chadiphan Hanwisai, M. Arch.

Date of Approval:
April 16, 2010

Keywords: Wayfinding, Path, Light, Institutional building, Amsterdam

© Copyright 2010, Jason Brandon Abrams
Dedication

I would like to dedicate this document to my Mom and Dad who have always been there for me mentally and financially and to my Grandmother for all of her love and support.
Acknowledgements

I would like to acknowledge my thesis chair Steve Cooke for his guidance and assistance from the beginning to the end of this process. I have learned a lot from him as a professor over the last few years and thank him for his diligence and answering of my questions and concerns as a student and TA. I would also like to thank Professor Vikas Mehta because I knew once I selected him as a committee member that he wouldn’t allow me to get away with mediocrity. He’s straightforward about what he thinks and is not afraid to call me out when he feels necessary. And I love that. Finally, I would like to thank Chaddy for she has been my closest supporter throughout this process and also one of my closest friends.

I am grateful to you all.
# Table of Contents

List of Figures .............................................................................. ii
Abstract ........................................................................................ vi
Introduction .................................................................................. 1
Problem .......................................................................................... 3
Proposal ........................................................................................... 6
Methodology .................................................................................... 12
  Orientation ................................................................................. 17
The Visual Field: Locating Information ............................................ 20
  Determining your path ................................................................. 20
  Sensory wayfinding .................................................................... 22
    Sound ....................................................................................... 22
    Light ......................................................................................... 23
Site Selection ................................................................................... 25
Site Analysis ..................................................................................... 28
Program ........................................................................................... 31
Preliminary Design Schemes ......................................................... 32
Schematics ....................................................................................... 37
Final Design ...................................................................................... 45
  Conclusion ................................................................................... 54
Works Cited ...................................................................................... 56
List of Figures
Figure 1 Northwest aerial from Sandberg Institute building ........................................ 1
Figure 2 Axonometric drawing of current campus layout ........................................... 2
Figure 3 Issues associated with Rietveld additions ................................................... 4
Figure 4 Lack of celebratory entrance ........... 5
Figure 5 Architectural Implications and possible wayfinding solutions indicated by paths, graphic elements and grand gestures ................................................................. 6
Figure 6 Breakdown of wayfinding elements for each section of the campus showing existing and proposed conditions ..... 7
Figure 7 Architectural implications of the redesigned addition and potential wayfinding scheme breakdown ...................... 8
Figure 8 Architectural implications of the redesigned addition and potential wayfinding scheme breakdown ...................... 9
Figure 9 Wayfinding designs illustrating the benefits of possible sensory and fundamental wayfinding solutions ................. 9
Figure 10 Site plan indicating bounds of the campus layout for reorganization ........ 11
Figure 11 Typical faculty path, second ........ 13
Figure 12 Typical faculty path, third ........... 13
Figure 13 Typical faculty path, second ........ 13
Figure 14 Typical faculty path, third ........... 13
Figure 15 Typical faculty path, third ........... 14
Figure 16 Typical faculty path, third ........... 14
Figure 17 Graphic wayfinding ...................... 15
Figure 18 Spatial and graphic wayfinding system used at the Barbican in London .......... 16
Figure 19 5 points of wayfinding ................. 17
Figure 20 Guggenheim by Frank Lloyd Wright, showcasing the clarity ................. 18
Figure 21 Circulatory traffic pattern containing graphic, spatial and orientating properties of wayfinding ..............19

Figure 22 Image showing the tactile and visual light qualities contributing to wayfinding .................................................21

Figure 23 Wayfinding through color and entrance conditions .........................................................23

Figure 24 3d aerial of the site within surrounding context .........................................................25

Figure 25 Site plan and existing campus location .................................................................25

Figure 26 Northeast view of Sandberg Institute building from the street (Fred Roeskstraat) .........................26

Figure 27 Existing ground floor plan .................27

Figure 28 Conceptual Diagram of adjacent spatial conditions .........................28

Figure 29 Pedestrian traffic movement ..........29

Figure 30 Vehicular traffic movement ...........29

Figure 31 Macro vegetated points of connection .................................................................30

Figure 32 Macro water and vehicular points of connection .........................................................30

Figure 33 Preliminary design concept 1 ............32

Figure 34 Preliminary design concept 2 ............32

Figure 35 Preliminary design concept 3 ............32

Figure 36 Wayfinding possibilities along the exterior and within the interior of the redesigned addition .........................33

Figure 37 Rietveld redesigned approach possibilities .................................................................34

Figure 38 Rietveld conceptual plan development .................................................................34

Figure 39 Rietveld conceptual design scheme 1 .................................................................35

Figure 40 Conceptual design scheme 2 ............35

Figure 41 Evolutionary model 1 ....................37

Figure 42 Evolutionary model 2 ....................37
Figure 66 Green corridor/jury room view (student path)..........................52

Figure 67 Fashion design view (student path) .......................................52

Figure 68 Third floor landing view faculty path).................................53

Figure 69 Faculty offices view (faculty path) .......................................53

Figure 70 Final model northwest aerial view........................................54

Figure 71 Final model view from Sandberg deck to courtyard..............54

Figure 72 Final model entrance view .............55
Wayfinding in Architecture
Jason Brandon Abrams

Abstract

In many of today’s modern educational institutions, architects have designed spaces that are disconnected and difficult for users to navigate. The underdevelopment of directional guides more accurately describes common issues of wayfinding. Wayfinding is a term used to describe user experience and orientation within an environmental context. When accomplished successfully, wayfinding contains order and simplicity achieved through five hierarchical components including; point of reference, location of information, determining a path to take, maintaining that path, and access or denial of the path chosen.

Currently, the Rietveld Academie in Amsterdam, a design institution of higher learning, lacks the components necessary to an effective wayfinding system. Once a school that was highly ordered through Bauhaus tradition, it is now spatially segmented and disconnected due to added structures, parking and poorly designed exterior spaces. Evidently, the school’s programmatic relationships are issues facilitating the need for a coherent solution. It is the goal of this thesis to identify these issues and propose a solution organized around a comprehensive wayfinding system for the school’s campus.

From 1967-2003 the institution gained a total of 4 buildings. Two structures are notably known for their wayfinding difficulties. One is the institutions primary addition and the other an off-campus facility, housing part-time students. Obtrusive paths of circulation, dysfunctional spaces and a lack of signage are
a few issues these buildings are experiencing, lending to the need of a redesign.

The best way to accomplish this wayfinding task is to incorporate a greater user experience through sensorial qualities, graphic indicators (signage) and spatial hierarchies. Wall textures, ambient light and the effects of sound in volumetric spaces serve as examples of these necessary components. Additionally, graphic indicators and spatial hierarchies will collectively define spatial characteristics choreographing a sequence of movements through the campus reestablishing order by bringing building forms together. Furthermore, the space acquired from removing unnecessary structures will contribute to a well defined communal space along the Rietveld’s exterior producing a link between it and the remaining facilities on site.
Introduction

The Rietveld Academie is located in the Netherlands, within the city of Amsterdam. The institution, at this moment, has undergone a number of additions since its original design by modern architect Gerrit Rietveld in the 1960’s. Rietveld’s design was done in classical Bauhaus tradition, incorporating expansive glass wall facades and straight line architectural details.

At the time of the school’s completion, the student body population was less than half of its current’s. The campus, once opened to the public, was made up of one building and a simple courtyard space that elegantly served as a ceremonial meeting space for students prior to entering the structure. As years passed however, the student body grew rapidly. And the increase in students required more space.

In 2003, Benthem Crowel Architects designed a building on the Rietveld campus. This 85,000sqft building, named the Sandberg Institute, currently sits 8-stories in height and was designed to house the students studying fine arts and graphic media.

Figure 1 Northwest aerial from Sandberg Institute building
In May of 2009, the Rietveld Academie acquired another building. This addition was an off-site facility approximately 12,000sqft in size housing part-time and first year students of the university. Ultimately, the school’s desire was to house the students on-campus; however, due to spatial constraints and budgeting issues they could not. Unfortunately, while the institution added these needed facilities, the once simple design scheme was now deteriorated.

Figure 2 Axonometric drawing of current campus layout
Problem

Over the course of four decades, the institution became increasingly troublesome spatially. An additional structure was added, on-site parking was incorporated and poorly articulated exterior spaces were presented. All of which caused habitation issues and user orientation difficulties. While these structures fit the programmatic elements needed, they contributed to a fragmented campus of isolated bodies causing a break in the site’s continuity.

The difficulties mentioned are some of the leading contributors to poor wayfinding. Wayfinding is a term used to describe user experience and their perception within an environmental context and when mishandled lead to disorientation and confusion. And at the Rietveld Academie, wayfinding stands-out as one of the core issues of universities layout.

The wayfinding complexities at the institution were primarily caused by one major addition made to the school approximately ten years after its conception. An 8,000sqft glass structure was the first addition made to the Rietveld campus in 1976 that housed students studying woodwork, metalwork, and glasswork. Along with this architectural proposal, the hired architect designed a small exhibition house approximately 400sqft for displaying student work. This addition, while it wasn’t the last, was problematic due to misleading circulatory systems, lack of signage and uninhabitable exteriors spaces. While the Rietveld design utilizes a double-loaded corridor for circulation, the latter proposals, unconventionally, utilize three. The first path connected into the Rietveld design’s circulation made sense, while the other two paths, for no apparent reason, situated themselves within the space that was intended for student work.
These same paths disguised themselves as they abruptly terminated at spaces that most users did not utilize or they took people to a bay of unmarked doors with no clear indicators stating their use. Figure 3 diagrammatically, shows how this condition comes together.

Figure 3 Issues associated with Rietveld additions

While the interior of the school proves disconcerting, the primary addition’s exteriors are equally troublesome. The second architectural proposal, a small exhibition house mentioned earlier, contains an eastern entrance (rear) yet is approached from the west side of the structure (front). This problematic configuration becomes increasingly
irritating for visitors due to a lack of signage. Furthermore, the deficiency of visual aids and the inept use of circulatory space creates a series of dead zones where storage items are kept and potential on-lookers to the exhibition house refrain from viewing. The irony of this spatial absurdity is that before the exhibition house was added the space was once a large portion of the original courtyard design serving as a hierarchical meeting space of the campus. Clearly, these troublesome additions lack clarity and are in need of a practical scheme that successfully contributes to a concise solution.

It is the goal of this thesis to strengthen the lack of wayfinding within the school by redesigning the early additions made to the Rietveld building while incorporating it with a large enough net square footage to house its current student body at its remote location with the student body on-campus. Unifying these major programmatic components into a succinct organizational layout for the campus will greatly improve the institutions wayfinding difficulties.
Proposal

The redesign of the institution’s first building will require a minimum of 8,000sqft for the existing space being occupied in addition to 12,000sqft for the students currently located at the off-campus facility bringing the net square footage needed to approximately 20,000. The execution of this wayfinding design scheme will incorporate the primary components of any successful system which include sensorial qualities, graphic indicators and changes in spatial characteristics. These elements are shown in a wayfinding scheme in Figure 5.

Figure 5 Architectural Implications and possible wayfinding solutions indicated by paths, graphic elements and grand gestures
The goal for this design is to rejuvenate the interconnectedness of the campus through its communal spaces and circulatory systems. In order to accomplish this task, the wayfinding system will need to be broken down. First, from the moment someone enters the campus to the time they approach the Amstel Canal, all need to be composed to maintain order in the wayfinding. The entrance conditions need to communicate to a visitor that they are crossing the threshold of the institution. This primary threshold is key to a visitor’s initial perception of the wayfinding system established.

The second system integration for a concise wayfinding solution will be reestablishing a communal courtyard. The communal courtyard will need to be defined as it originally was using vegetated features and tactile surfaces. Once executed, this portion of the site will aid in reuniting the space between the Rietveld design and the Sandberg Institute.

The tertiary system needed to reestablish the current lack of order is through a proposed redesigned. This redesign will serve
as the most important aspect of the wayfinding scheme. This portion of the design will need to incorporate a simplified circulatory path that effectively uses graphic indicators (signage) to aid in the movement of its users.

Additionally, the methods used for accomplishing the interior’s wayfinding will be to use light qualities that guide users through the building intuitively as it takes them from one space to the next. Subsequently, tactile wall qualities will help users understand where they are.

Figure 7 Architectural implications of the redesigned addition and potential wayfinding scheme breakdown
Figure 8 Architectural implications of the redesigned addition and potential wayfinding scheme breakdown

Figure 9 Wayfinding designs illustrating the benefits of possible sensory and fundamental wayfinding solutions
The final element in a concise wayfinding scheme will be the transition from the interior of the project to the Amstel Canal. This part of the scheme will serve as a secondary exterior space in order to maintain the hierarchical importance of the communal court being established. The goal of this portion of the design is to maintain its natural qualities as designing a “space” could prove to be an overabundance of exterior areas of habitation.

Due to its unique condition near the canal, a programmatic spatial element will however, need to be generated. This could possibly be articulating trees to denote a procession to the waterway or a path in the landscape containing pockets of habitable spaces.

The completion and execution of this wayfinding system would do a lot for this institution on many levels. On a broader scheme, it would mean simplifying its current organizational layout, giving a strong order back to its master plan. Secondly, this would mean one concise movement of how users should traverse through spaces as they were intended. And third, this condensed school plan would unite the students at its current off-site location with its existing student body on-campus.

On a smaller scale, a concise wayfinding scheme would mean reworking a poorly constructed series of additions to the school creating strong spatial layouts while eliminating multiple paths of circulation, abrupt dead ends and impractical placement of doors and openings. It would also mean creating graphic information that clearly denotes where users are going and how to find specific information regarding their destination. And finally, a clear system would bring back the communal courtyard that will serve as the hierarchical meeting space it once was.
Figure 10 Site plan indicating bounds of the campus layout for reorganization
Methodology

In establishing the needed wayfinding system mentioned, the primary goal is to use Light as the hierarchical element to guide people. Through the use of light, users would be guided by its varying degrees of luminosity. Paths that end with brighter light would represent the more necessary spaces a large collection of visitors would need to encounter. And for spaces along the path with moderate levels of illumination, they would indicate that such a path is for a limited number of users.

Through an implementation of 5 key wayfinding elements, mentioned later, that would correspond to one another in order to inform the characteristic of the spaces an inhabitant would experience. It is important to note that one component alone cannot develop the experience for all. Each entity needs their own system that clearly establishes directionality on the way to their destination.

In order to accomplish this task, we shall consider the users that will be here at the institution. These users consist of faulty, students and visitors. By acknowledging these groups and designing schemes around them, we can be sure to optimally use wayfinding to its highest potential.

Before looking into the users in more detail, we will first get a better understanding of what wayfinding is and how it can attribute to well designed space for these entities.
Figure 11 Typical faculty path, second floor

Figure 12 Typical faculty path, third floor

Figure 13 Typical faculty path, second floor

Figure 14 Typical faculty path, third floor
Figure 15 Typical faculty path, third floor

Figure 16 Typical faculty path, third floor
Wayfinding

In order to more effectively understand what wayfinding we shall take a closer look at its purpose and what it takes for it to be used effectively.

Wayfinding is commonly used in architecture referring to user orientation and the selection of a path to travel. Modern additions to the term now encompass a series of architectural design elements that aid in orientation. Coined in the early sixties by Kevin Lynch, he defined wayfinding as, “a consistent use and organization of definite sensory cues from the external environment”. Later to be expounded upon by environmental psychologist Romedi Passini, wayfinding began to include graphic communication that affects its spatial relationships, tactile elements and provision for users with special-needs.

For many of us wayfinding is something we use everyday yet rarely realize it. Humans, by nature, are creatures of habit. And in our habits perform routine tasks that aid in our daily needs while simplifying our lives.
For instance, have you ever parked in a location that was either well shaded or near an element (such as a palm tree or street lamp) in order to help you locate your car on your way out? Well, whether you realized it or not, you just utilized wayfinding. And the element that you parked under or next aided in your sense of awareness and orientation: the primary rule of wayfinding. Here is another example, have you ever entered a building in search of directional information to help you locate your destination? Yet again, you were an advocate of wayfinding because you were seeking information that would aid in your spatial orientation.

Wayfinding and its benefits can be summed up into 5 points: simple points:

1. Orientation
2. Locating Information
3. Determining your Path
4. Keeping the Path
5. Access or Denial
Orientation

Orientation is a term used involving directional awareness. When we think of orientation we typically think of ourselves in relation to other bodies or objects, and rightfully so. Architecturally, when we describe orientation we illustrate it from the experience of the user and how they orient themselves in relation to others. More clearly, orientation can be understood as a point of reference. For instance, the Guggenheim by architect Frank Lloyd Wright is a key example of both orientation and point of reference. Its spherical shape emphasizing the circulatory path of the building with its large open volume through the center is a means by which visitors to the museum can orient themselves.

Wayfinding orientation is ultimately a spatial condition intimately linked to the
arrangement of an area's layout. While spatial layouts in wayfinding are defined by certain characteristics, such as content, form, circulation and organization, environmental communication provides the additional, architectural and graphic essentials for effective wayfinding.

Figure 20 Guggenheim by Frank Lloyd Wright, showcasing the clarity of orientation
When in complex settings, people try to find their way by understanding what their surroundings contain and its method of organization. People begin by forming a mental map. This mental map must first begin by finding elements for the user to identify. One of the strongest organizers for this mapping process is an area's spatial characteristic. And unless the area has characteristics that separate them from surrounding spaces, creating this mental map becomes challenging. Fortunately, people have a tendency to group these spatial qualities into zones. Destination zones allow us to break-down complex buildings and environments into image mapping compartments. If, for instance, someone were to look for a new pair of ‘Nike up-tempos’ in a complex downtown facility, that person will probably first identify the shopping area as their first destination zone distinguishing itself from other major destination zones such as institutional or recreational. This major destination zone is of a higher ordering decision, therefore making it one of the largest contributing factors toward spatial wayfinding. Next, this person would assume to look for a sub-zone that groups clothing together.
Destination zones are therefore an embodiment of multiple large scale and smaller scale zones that work together to first identify itself as the major point of origin and then down to the specifics of the final destination.

The Visual Field: Locating Information

One of the joys of reading is being able to sit attentively focused on one word as it follows the other. The perception of what we read moves from these words to sentences, then to paragraphs and so on. Unfortunately, our visual field when “reading” our environment isn’t like that. And our perception of environmental conditions is based on our intuitive ability to scan our visual field to gain and retain information. People, while walking about have a innate ability to scan their visual field only picking out objects of interest, in which the moment a person spends fixated on an object is only for tenths of seconds where it is retained in a short-term memory bank until it is needed to retained longer. (Wayfinding People Signs Architecture 34) Because people generally don’t have time to fixate on any particular object for an extended period of time, they tend to ignore information that is poorly designed and wrongly placed.

Determining your path

Since our years as adolescence, we do not like being told what to do and where to go. This is no different when considering wayfinding options. As people, we enjoy the freedom of doing as we choose where options are given to us and we are open to select amongst them.
Successful wayfinding systems do just this. In order for someone to freely utilize information given to them they must be given information through multiple fashions. Signage and directories are only a single facet of wayfinding and are often too direct if not at all. Telling people a one directional path limits their user experience and spatial discovery. Successful signage, in architecture, is never abrasive or obtrusive. It lends itself to the canvas of the wall to be utilized only when called upon by the user. Its beauty is truly seen when the design of the characters and articulation of the forms are so inherently integrated with the design of the building that if not looking for it, it can be missed.

Alternate ways we determine our path using wayfinding systems is through its spatial definition as mentioned earlier and through qualities that involve the senses.

Figure 22 Image showing the tactile and visual light qualities contributing to wayfinding
Sensory wayfinding

Sound

Our second most used sensory ability in wayfinding is probably our hearing. While sound sources in wayfinding are often reduced due to the unreliability of the source, the ability to perceive environmental characteristics is still apparent and fairly reliable. Our hearing is also useful in indentifying the depth and distance of an object. Imagine crossing a busy street not being able to hear traffic as it passes or the sound of workers within a close range of yourself. This feeling can be very unsettling for many, especially to those who are hearing impaired. Safety may be a major concern for the impaired and unfortunately many of our emergency warning signals (fire alarms, ambulance/fire/police sirens) are largely based on sound and its movement through space. However, for our large population these sounds serve as excellent warning cues. Regardless of our head position, sounds are still perceived. Therefore concerning ourselves with the soundscape of our built environment is crucial to our perception of space.
Light

“Architecture is the wise correct and magnificent play of volumes collected together under the light.” Le Corbusier Light is the element architecture cannot live without. It gives architecture form, space, visibility and habitation. Natural light itself needs no definition, yet it does define what and when we are capable of doing an activity. Light is the transformer of space. It is the one element in architecture that is ever changing. “As with good architecture, good lighting, illuminates, clarifies, stimulates. Bad lighting, like bad architecture, dazzles, confuses and produces weariness.” Light in Architecture

Light in wayfinding is equally important as signage or spatial layouts because it is the one element that architecture relies on to give it life. Light can tell us where we must travel depending on the way it cuts through a form or bends around a wall. Its warmth is inviting. When one emerges from a place of darkness and into the light, one may now know where it was once inhibited. Light is the voiceless tour guide. It can illuminate openings, describe how it moves as it changes throughout the day. It can tell us the importance of taking
one path versus another, all while providing light and safety.
Site Selection

The site for the academy is approximately 270’X470’. On it are three buildings (four additions in all), including its northern most building designed in 1966 by the famous Dutch architect Gerrit Rietveld. This building is utilized by the design departments on campus and stands at 70’ in height. The adjacent building, just south of the Rietveld design, the Sandberg Institute, is the newest wing built in 2003 to house the fine arts departments.

Just north of the Rietveld campus is the Amstel Canal that is joined by its larger entity the Amstel River that runs through the city of Amsterdam. Like all major canals and bodies of water throughout the city, foliage lines the edges adding to the city’s character. On the south side of the site is a fairly large yet underutilized road (Fred Roeskstraat) that

Figure 24 3d aerial of the site within surrounding context

Figure 25 Site plan and existing campus location
provides access to the site. Heading west on this street will take you to one of Amsterdam’s largest roads that encompasses the city: Amstelveensweg. While this road relies heavily on automobile traffic, pedestrian access is still a major asset to this street. On the east side of the site is a small office complex approximately two stories high. The adjacent building west of the campus is Loyens and Loeff, a large commercial complex eight stories high that shares a portion of the Rietveld site due to a land acquisition back in 2003. Indicated in figure 27, the existing Rietveld floor plan contains a double loaded corridor with major amenities including, the café and model shop on opposing ends of the facility. The Sandberg Institute, designed by Benthem Crouwel Architects shows an open plan on the north side used to house the school’s library. There, students have access to a large collection of periodicals and reference novels ranging from graphic design to jewelry. On the Institute’s south side, is an expansive glass façade that the school utilizes as a transitional space before entering the library. Occasionally, members of the student body take use of this space to house small scale projects before presenting them publically to their peers. The benefit of using this space is the greater
amount of room to display their work and the presence of the southern sunlight.

Figure 27 Existing ground floor plan
Figure 28 Conceptual Diagram of adjacent spatial conditions
Analysis of the site began at an early stage in the design process. A strong understanding of where visitors to the site were coming from was crucial, therefore pedestrian and vehicular traffic patterns were studied. The largest contributor to pedestrian and vehicular traffic came from Amstelveensweg. Indicated in figures 31 and 32 as the street running north to south, it serves as the greatest manmade connector to the heart of the city. This major metropolitan road is considered Amsterdam’s largest street as it forms a ring around the city. The greatest benefit of this road is the ability for its users to travel around the outskirts of the city while still remaining in close proximity to all major public amenities. Other major connectors the site contains are a large collection of green spaces along with major and minor canals used to delineate
them. Within the city itself all major and most minor canals are lined by a row of trees generating a strong continuity to the area. This major site feature serves as one of the greatest existing wayfinding conditions found in Amsterdam. Following these green lines of foliage to their ends will take followers to select public spaces in some areas and open pastures in others. Nevertheless, following the row of tree lines will always return people to the city’s major pedestrian areas.

Figure 31 Macro vegetated points of connection

Figure 32 Macro water and vehicular points of connection
Program

The Rietveld Academie is made up of over 900 students in which the facility’s program calls for a total of 90,000 sqft that includes the existing 70,000sqft design by Gerrit Rietveld. The other 20,000sqft encompass a redesign of the east wing (approx. 8,000sqft) while the remaining square footage (approx 12,000sqft) will be used to house students currently housed off-campus.

East wing redesign Program:
Glass Shop w/ studio.......(approx 2,500sqft)
Metal Shop w/ studio.......(approx 2,500sqft)
Wood Shop w/ studio.......(approx 2,500sqft)
Loading bay...................(approx 700sqft)
Net Sqft....................(approx 8,200sqft)

Rietveld Addition requirements:

DOG-time student studios....................(approx 7,000sqft collectively)
Foundation year studios.....................(approx 2,000sqft collectively)
Lounge........................................(approx 800sqft)
Jury Rooms.................................(approx 700sqft)
Faculty Rooms..............................(approx 500sqft)
Temporary Gallery.........................(approx 1,000)

Net Sqft.................................(approx 12,000sqft)

Gross Net sqft...........approx 87,900sqft)
In these conceptual development schemes, the goal was to create, in a single snapshot, a series of wayfinding systems that when used collectively, reinforce the notion of movement and effectively communicate to users the 5 points of wayfinding. Moreover, these design schemes were used to identify how the addition could connect itself to the Rietveld Academie and what characteristics the forms would take on once established.
Figure 36 Wayfinding possibilities along the exterior and within the interior of the redesigned addition
In Figure 41 the first scheme is established. Indicators demonstrate not only the quality of light but also the texture of the walls, the entrance and exit conditions as well as the degree of habitation that would be used to simulate the 5 points of wayfinding. The goal of this first scheme was to demonstrate in one model how multiple wayfinding ideas come together to create a single solution and how within that solution, each wayfinding element can be used independent of the others to aid in a user’s movement.

In figure 43, an advanced level drawing, the idea was to give a more accurate visual of what a user would encounter as they approached the Academie from the street edge. The biggest gesture of this rendering was its architectural implications denoted by a single path, overhead planes and grand
entrance features. In figures 46 and 47 this architectural condition can be seen clearer.

In the figures mentioned previously, special note should be made of the removal of the original addition and exhibition house. These newer conceptual developments connote an architectural attachment that adheres itself to the southern façade and is pulled through to the northern face. Additionally, these schemes denote a renewed presence to the courtyard. Indicated by the three central trees found in the images, the courtyard now serves as a passive meeting space for students before transitioning into the Rietveld building.

In figure 47, the distinguished orange path is used to represent the intended path that a visitor would travel upon arrival. From the edge of the street, users would first be guided by the ground condition that if walked on, would take them through the campus and out to the water’s edge. Once experienced,
users would return through which they came in order to experience the interior of the building. Once inside, the users would be greeted with bamboo and a large esplanade to shelter them from exterior conditions, as indicated in figure 46. After breaking the threshold of the entrance, users would then encounter the single most path-orienting element within the interior of the building: the green corridor.

Conceptually speaking, the green corridor was envisioned as a hallway that would contain a naturally planted material running from the basement up through the roof. Once visited, this element would serve as a placeholder for users to determine where they are in relation to the building.

In the conceptual scheme shown in figure 48, the proposal was to establish a cadence within the arrangement of the vegetation in order to create a seamless transition from the site’s entrance to the interior of the redesigned proposal. After further review and critique, the consensus was to maintain the movement of users through vegetation, but much like the previous conceptual iteration, use it to allow a greater transition out to the canal.
Schematics

As the schematic phase began the development of the building form took shape. The design called for three main architectural components to take place. The primary component envisioned was to create a juxtaposition between the original Rietveld design and the new addition.

In the adjacent figures, this condition can be understood more clearly. Additionally, the design also called for establishing a greater connection between the proposed condition and the Sandberg Institute through articulation of the courtyard. Elongated walls were used to generate continuity while expressing alignments of major elements.
Figure 43 Rietveld entrance conditions.
Figure 44 Information desk
Figure 45 Main staircase

Figure 46 Cafe

As a result of the fore mentioned design schemes, the building now attained a method of guiding visitors through the site.

By this stage in the design process the building forms were finalizing and a breakdown of different wayfinding elements were being established.

Once broken down, an individualized wayfinding scheme was created. Upon review of the schemes it was inherent that each user of Rietveld Academie would need their own wayfinding.

The wayfinding proposal was broken down into three major groups: faculty, students and visitors. The reasoning for the three different paths was to accommodate the different user destinations. For instance, a visitor, more likely needs to find the administrative offices, jury rooms or the auditorium. Therefore, a set path would need
to be generated in order for them to find their way.

Each one of these user groups have set paths designed to aid in their journey. Along the way, each entity will encounter additional wayfinding elements to lead them. Figure xx is an indicator of this claim.

The graphics displayed reference the room allocation while the green space running through the center of the structure showcases the building’s largest-orienting feature. Furthermore, the archetypes used in the project also play a major role in the user’s wayfinding. Wall textures, ceiling conditions and floor plane materials serve as contributors in specifically delineating pathway choices.

High order schemes such as spatial adjacencies will also serve as a wayfinding contributor telling someone using it that similar spaces can be found at alternate locations.

Light, the highest ordered scheme of all,
is used to guide users more intuitively. The goal was to use natural light found at the terminus of each path to take inhabitants from one space to the next. Louis Kahn once claimed that, “...light is the source of all being...” and as such, its presence within this project is felt once someone transitions from the beginning to the end.

The next hierarchical wayfinding element designed were a series of spaces that people found through discovery.

Due to the nature of wayfinding, often times it becomes too direct offering minimal effort by the user. By creating these discovery spaces, people now have a passive system in place that they will aid in their destination location but will do it through intuition and observation. The goal of these spaces is for students, faculty and visitors to find each other creating opportunities, architecturally, for informal dialogue. Once found, these spaces
would be used more frequently by the entities that encounter its location. Other wayfinding elements used include vertical vegetation, graphic indicators and fire exit illumination. Of these spatial positioning devices mentioned, graphic indicators are the sole contributor to a traditional wayfinding.

Graphic indicators or signage, as it’s better known, refers to images, text, icons or symbols that are used to denote space or information about an area. When used effectively, graphic indicators can communicate to someone a large amount of information quickly and efficiently. However, due to its simplicity, signage is often overused in institutions and building complexes to the point where they lack order and hierarchy. Therefore, the goal was to use these graphic displays more eloquently by minimizing the amount of surfaces they are used on and limiting the amount of text when being used.
Figure 5 below describes how the approach to which these graphic indicators are used.

Figure 53 Wayfinding fire exits

Figure 54 Wayfinding lecture spaces
Final Design

The final design for the Rietveld Academie is displayed in images 62-72. They were designed as a series of views that demonstrate the spatial characteristics of the proposed additions and how they relate to the existing conditions.

Following the images from left to right will showcase how the spaces are perceived when walking through the building. Further development of the archetypes mentioned earlier, have now been given a relationship to each user group. The floor plane, when finished with a wood decking, represents the path for visitors to. Next, concrete wall textures are used to denote the architectural feature for students utilizing the facility. And finally, undulating ceiling planes delineate the path for faculty members to use.

Figure 55 Proposed Rietveld Basement Plan
Figure 56 Proposed Rietveld Ground Floor Plan

Figure 57 Proposed Rietveld Second Floor Plan
Figure 58 Proposed Rietveld Third Floor Plan

Figure 59 Proposed Rietveld Fourth Floor Plan
Figure 60 Cross-section through Green Corridor
Figure 61 Site Section from Fred Roeskestraat to Amstel Canal indicating how spaces contribute to wayfinding in section
Figure 62 Entrance/courtyard view (visitor path)

Figure 63 Courtyard/exhibition house view (visitor path)
Figure 64 Guest lounge/side entrance view (student path)

Figure 65 Second floor landing view (student path)
Figure 66 Green corridor/jury room view (student path)

Figure 67 Fashion design view (student path)
Figure 68 Third floor landing view (faculty path)

Figure 69 Faculty offices view (faculty path)
Conclusion

The final design is shown in figures 70-72. Architecturally, only a few changes were made yet they added to a greater sense of perception when inside the building. The auditorium, once located on the west wing of the Rietveld design from earlier iterations, has now been relocated just above the main entrance to be a clearer indicator from both the interior and the exterior of the hierarchical space within the structure.

Figure 70 Final model northwest aerial view

Figure 71 Final model view from Sandberg deck to courtyard
Figure 72 Final model entrance view
Works Cited

Area. New York: Phaidon P.


