USA PROPERTY AWARDS
INTERIOR DESIGN

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BEST INTERIOR DESIGN APARTMENT NEW YORK, USA

Naturally Lit Townhouse by Rusk Renovations

2019-2020


# Light Filled Townhouse

## A West Village Townhouse Lit by the Sun

# A

# Overview

This incredibly accomplished and intelligent couple had decided to have children. They bought this townhouse to renovate so that they would have a place to begin their family.

The project started with a different design team and after Rusk had worked to develop the plan and started construction, Hurricane Sandy flooded the lower 19 feet of the house; flooding in through a shared sub-cellar as the Hudson River flowed over the West Village.

The project started over with a new design team and a challenging brief.

# B

# Brief & Concept Stage

# Project Brief

The goal of this Greenwich Village townhouse designed by Haute Architecture was to have a cutting-edge design yet still be comfortable as a family home. One of the prime considerations was an issue endemic to most townhomes – the lack of light in the interior spaces which results from narrow buildings of reduced height with only two main exposures.

The project includes a new double height living room which required the cutting of structural concrete, a new rear façade featuring high performance bronze framed windows, a solid stone vanity with carved basins at the master bath, two additional bedrooms, kitchen and both a rooftop garden and a rear garden.

In this minimalist interior, the stair was to be spectacular and the most remarkable feature of the house. The house was among the first to built to a "Wellness Standard" and includes circadian lighting and filtration for both air and water.

Finally, time was of the essence. Following the storm, Rusk was given ten months after the project began again, to complete the project in time for the baby; and the goal was to have zero change orders.

# The Problems

## Light

Natural light decreases dramatically as you move inward from the front and rear windows. How can this be improved?

## Staircases

The spine of the house must be durable, meet code, and provide simple access. While satisfying technical requirements, how can they also serve as the design centerpiece of the home?

## Health

For a family expecting their first child, true luxury is a supremely healthy environment. How can air, water, and light quality be addressed in the center of a busy city?

## Cost and time overruns

Hurricane Sandy wiped out the house after 6 months of renovation. Extra time and money was washed out to sea. How could its second start remain on time and budget?

## Calm

For busy professionals, Manhattan affords constant stimulation. How can a multilevel townhouse create a sense of peace?

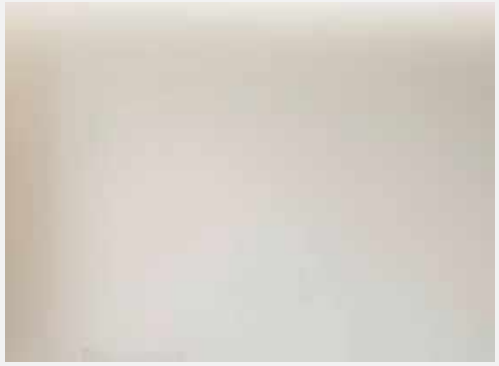
# Material Palate

Fire

Natural concrete

English white oak, waxed

Gaudi stone



Stucco Encausto No color, waxed

Natural concrete, polished

# C

# Chosen Design

# Light moves through the house

By cutting out the ceiling slab of the first floor and then detailing the new ceiling with a dramatic beveled cut, light penetrates deeply into the interior.

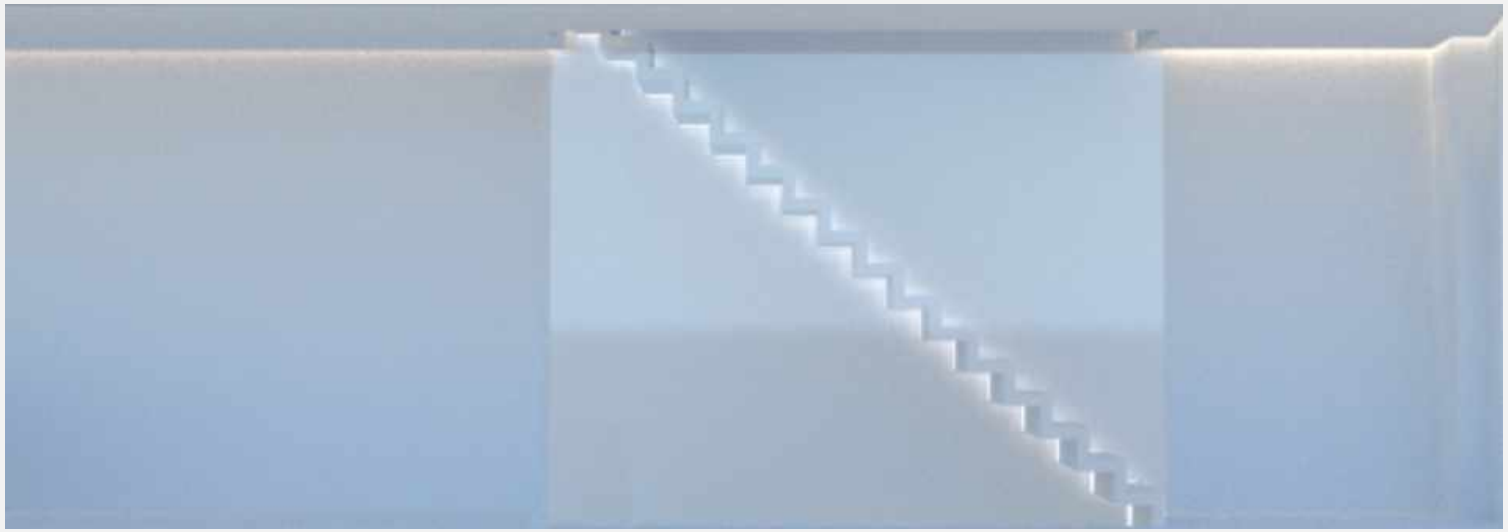
The rear windows from the Italian manufacturer Brombel are solid bronze and replaced traditional “punch” windows through the former masonry rear façade.

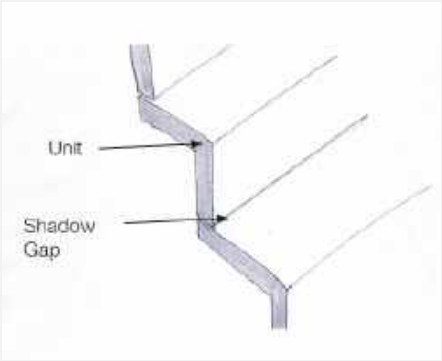
By placing all "utility" spaces in a central core that travels up through the house, light is able to wrap around the core and penetrate from front to back with no hallways or openings.

The central core, from the cellar to the roof is wrapped in the veneer of a single white oak tree and was fabricated in Switzerland by Röthlisberger.

Doors open floor to ceiling with stops that magnetically raise from the floor only when the door passes over it. Passages travel front to back around the core without interruption.

# Staircases provide the core of the house





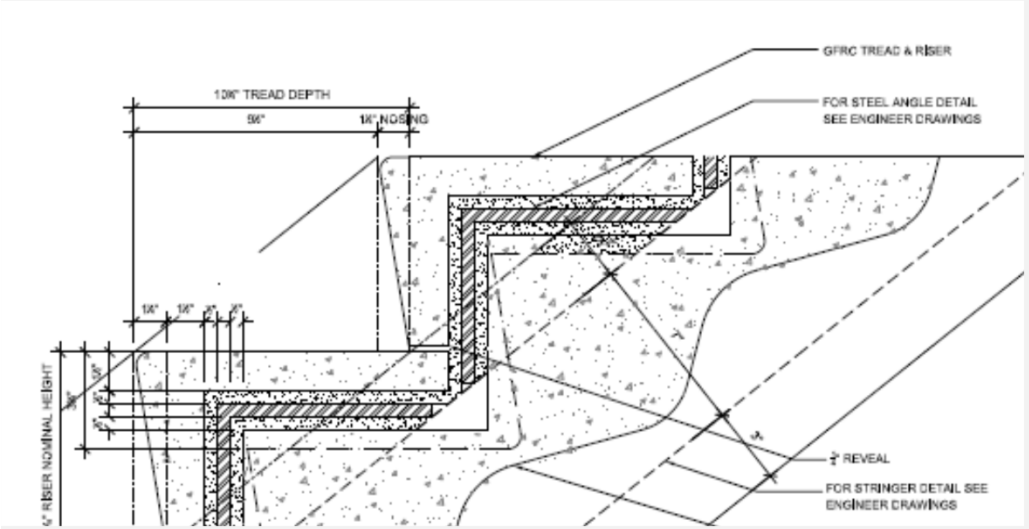

An early version imagined a simple steel plate stair. Austere and potentially overly flexible

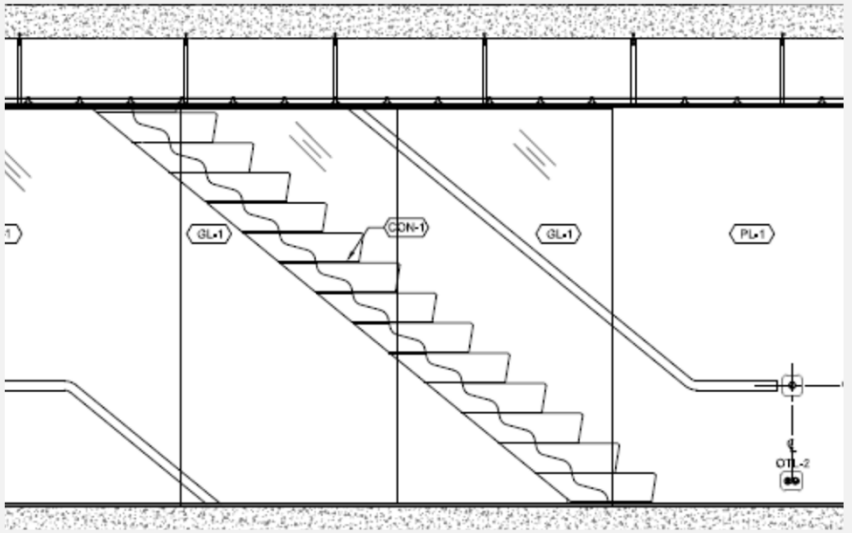
# Staircase designed with reveals, contrary to design intent

The final design for the stair case called for a monolithic concrete stair featuring a sculpted underside that was to be an abstraction of the human spine.

The internal steel structure and concrete materials required a horizontal reveal to be located on the underside of the stair in order to provide a control joint for cracking should the structure flex or move.

Rusk asked if the reveal was part of the artistic intent and the design team said no, the goal was to have a continuous surface but the reveals were necessary in response to the physical limitations of the concrete.



Rusk introduced the architects to glass reinforced gypsum which was a material that would not require the control joints at the underside.

The material was able to be skimmed in a finish coat of concrete which provided the aesthetic goal of the design team.

The change in material allowed for a more stable design which was able to achieve the design team's goals and create enduring beauty.

The concrete treads are practical and strong and the floor to ceiling tempered glass panels satisfies building code regarding the balustrade.  The handrail was a custom carved piece by the millworker.

# Health

The owners were fit, health conscious, and concerned about raising children in Manhattan.

Working with Delos, a wellness firm who was just beginning to establish an international wellness standard, the project incorporated a suite of wellness driven features, including an advanced whole house water filtration systems which was specifically designed based upon the tested water quality at the site. The house also includes an air purification system that uses both air filtration and ultra-violet light to improve air quality.

The project features a circadian lighting system which emulates natural lighting temperatures and adjusts based on time of day and season. In the master bedroom, the custom lighting system had a dawn simulation program which raised lighting levels slowly over thirty minutes as an alternative to an alarm clock.

Two rows of LED lighting in the cove of the main room, one blue and one amber, can be custom mixed to mimic the color temperature of the outside environment. Early morning and day time feature a mix of blue white light which energizes the inhabitants, while at night, the balance shifts to red/yellow light mimicking candlelight.

# Finances

After the setback from Hurricane Sandy, the owner wished to maintain their remaining budget and have no change orders for the project. Because of the time lost to the storm, the project also needed to complete within 10 months of on-site time.

The design team and Rusk worked together for 5 months to thoroughly plan a complete redesign of the house before starting. Making the project more challenging was the fact that all the millwork was to be fabricated in Switzerland by Röthlisberger and the solid stone countertops with custom carved sinks were made by Pizzetti in Italy.

The owners moved in, in 10 months with less than 1% change orders.

| TRADE BREAKDOWN | % of Total |
|---|---|
| Pre-Construction | 0.75% |
| General Conditions | 5.34% |
| Interior Demolition | 0.92% |
| Concrete | 4.74% |
| Masonry | 1.21% |
| Metals | 3.77% |
| Carpentry and Drywall | 6.18% |
| Finish Carpentry | 0.79% |
| Architectural Millwork | 16.89% |
| Fireplace | 0.38% |
| Doors and Frames | 0.14% |
| Architectural Hardware | 0.22% |
| Windows | 4.45% |
| Stone and Tile | 2.55% |
| Mirror and Glass (Budget) | 4.01% |
| Painting & Terra Natural Finishes | 4.65% |
| Specialties | 0.38% |
| Appliances | 0.73% |
| Plumbing | 2.22% |
| Plumbing Fixtures | 1.13% |
| Fire Suppression | 3.96% |
| Hvac | 2.94% |
| Electrical | 11.32% |
| Shades | 0.44% |
| Audio/Visual | 5.81% |
| Electronic Safety and Security | 1.19% |
| TOTAL COST | 83.68% |
| Project Management | 1.67% |
| Insurance | 1.67% |
| Overhead, and Fee | 12.97% |

# Calm

A single 3000-pound block of carved stone floats between the walls, cantilevered from the back wall, over polished concrete floors

The first of two children would come home from the hospital to a calm, minimalist home, flooded with natural light.

Change orders were less than 1% of budget.