

The Importance Of Quantum And Its Application In Accessible Architecture

My thesis aims to challenge our normalized model of the world using principles taken from quantum physics. Within quantum physics, objects can behave in irrational ways, like simultaneously exhibiting behavior found in different states of matter. In our normalized world, objects are fixed and static. They are permanent and exist even outside of our awareness and presence. However, in a quantum environment, it can be intrinsically linked to our existence and awareness; one where our surroundings can only exist with our unique output of bodily data. Using this concept, the dynamism of a quantum environment can bring about new forms and designs that change according to the already dynamic nature of the world. With this new simulated model, it can adapt differently to every user, creating a tailored experience for every need. The body is a complex collection of variable data, so to investigate more precisely, this part of the research focuses on the body's ability and the environment's accessibility.

The aim is to dismantle the separation of spaces between abled-bodied and disabled-bodied people and to equalize the inequity of accessible routes for people with disabilities. In this way, the question becomes; how can we highlight accessibility in a building that we have taken for granted using these concepts of agency, dynamism, and adaptability (all inspired by concepts taken from quantum physics)? Can we challenge these notions of static existence by linking awareness to existence? And, does our unique input of data from our bodies have the power to put things in and out of existence?

3d composition of multiple directed paths

single plan of the directed path in the slowhouse

applying multiple quantum modules in the volume of the slowhouse



Taxonomy Of Quantum Characteristics Derived From Precedents

Parametric & Code-Generated

No clear definition

Vertice Mapping

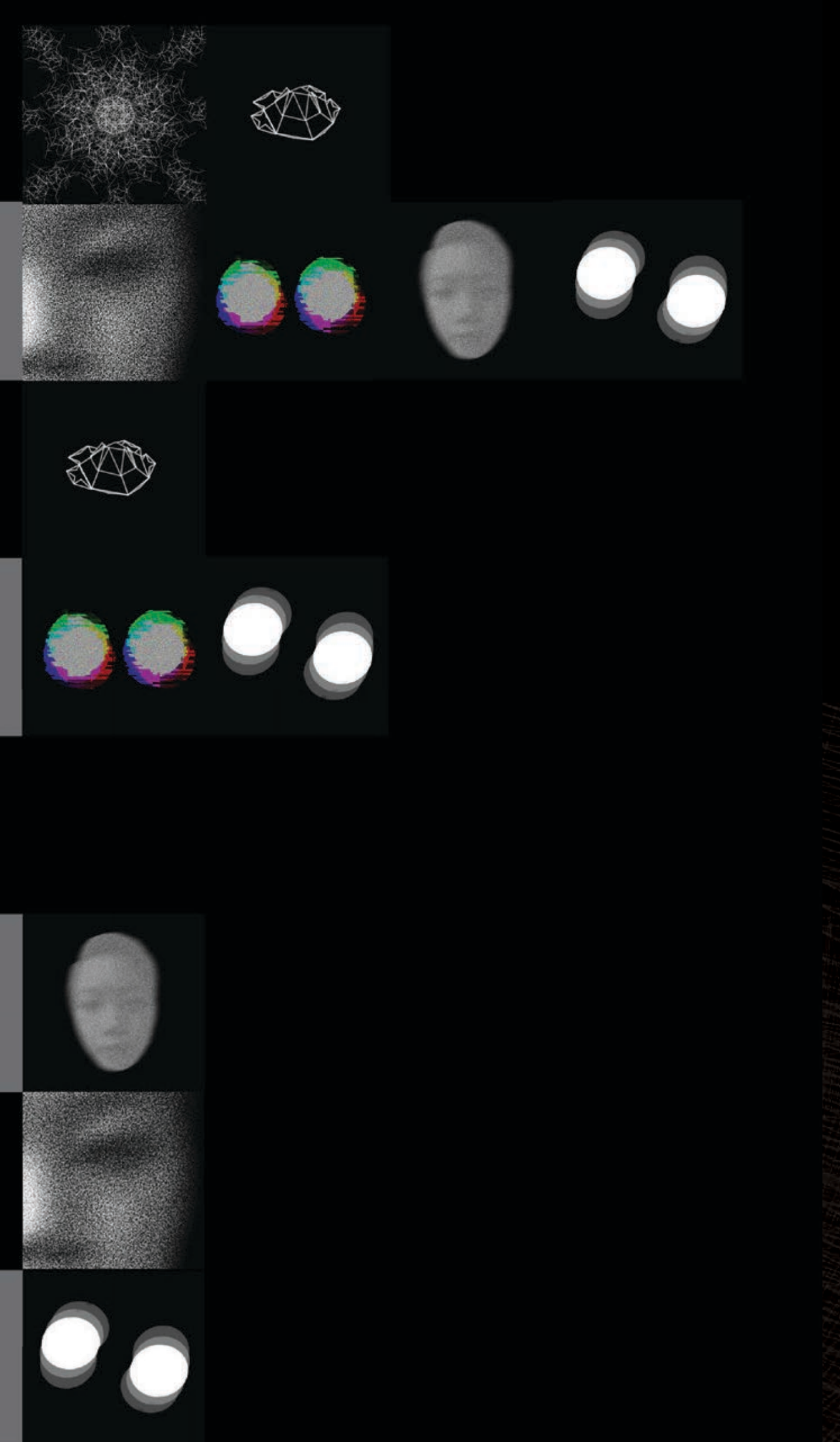
Entanglement

Anamorphosis

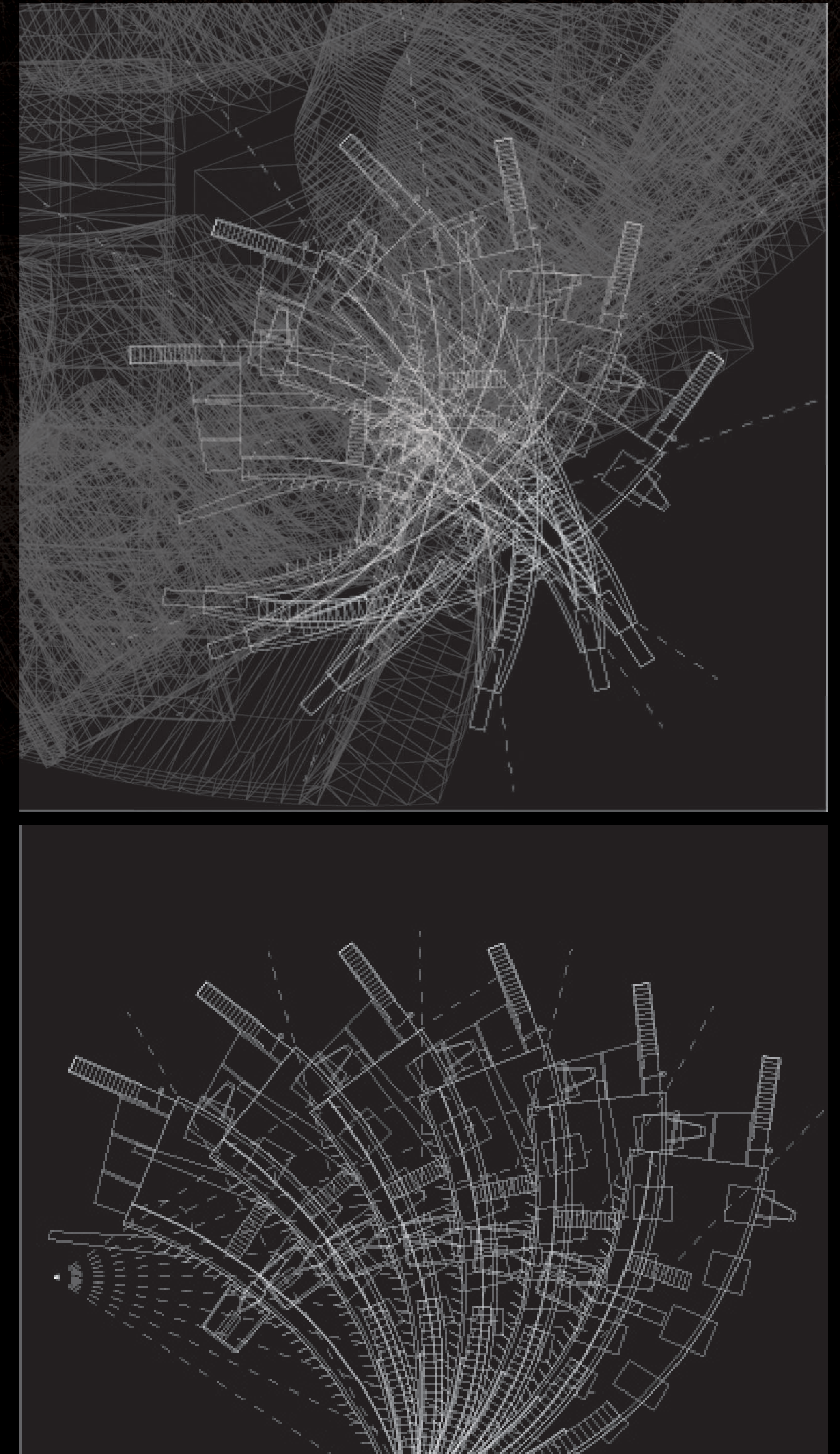
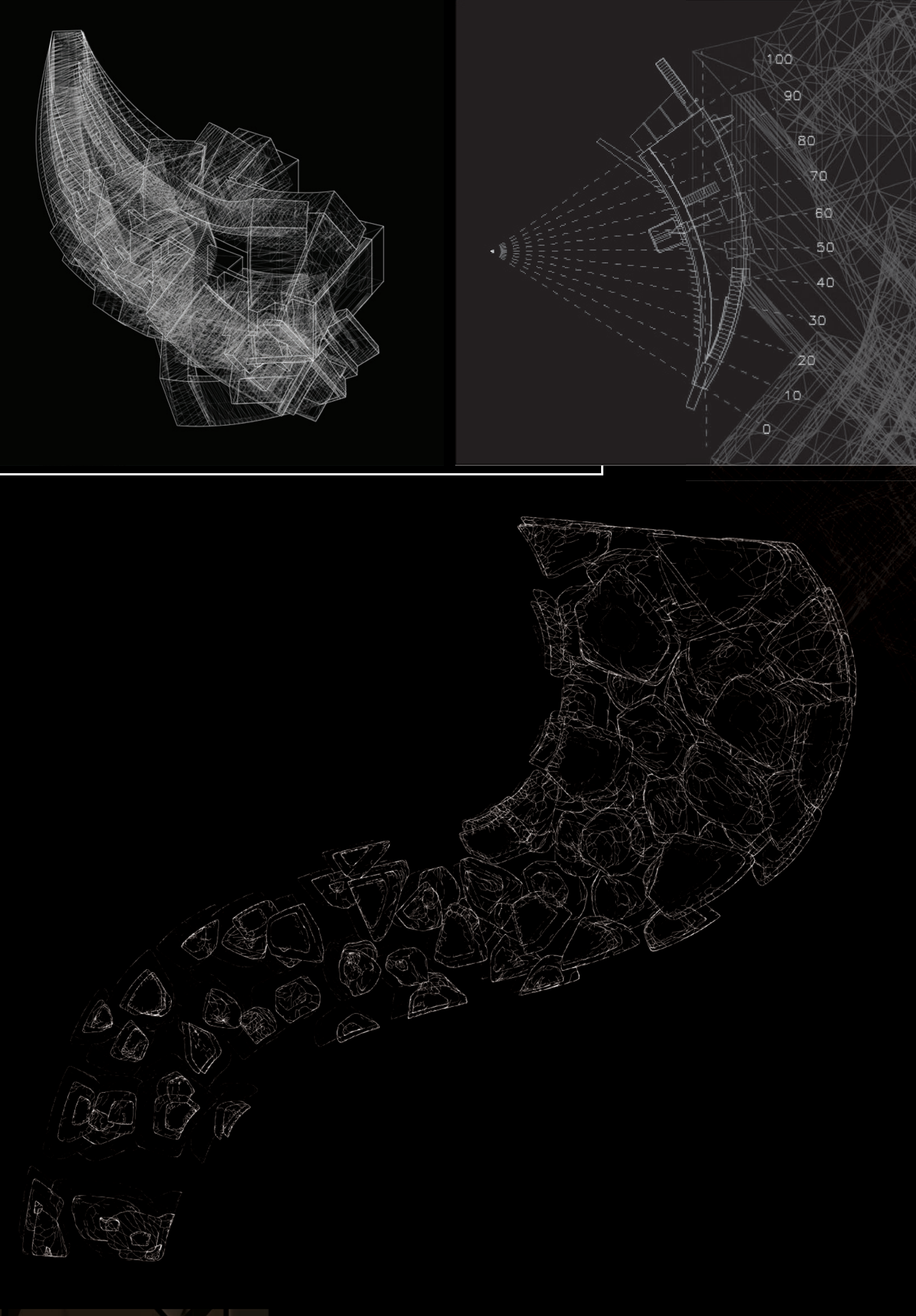
Pareidolia

Part vs. Whole

Blurred Boundaries



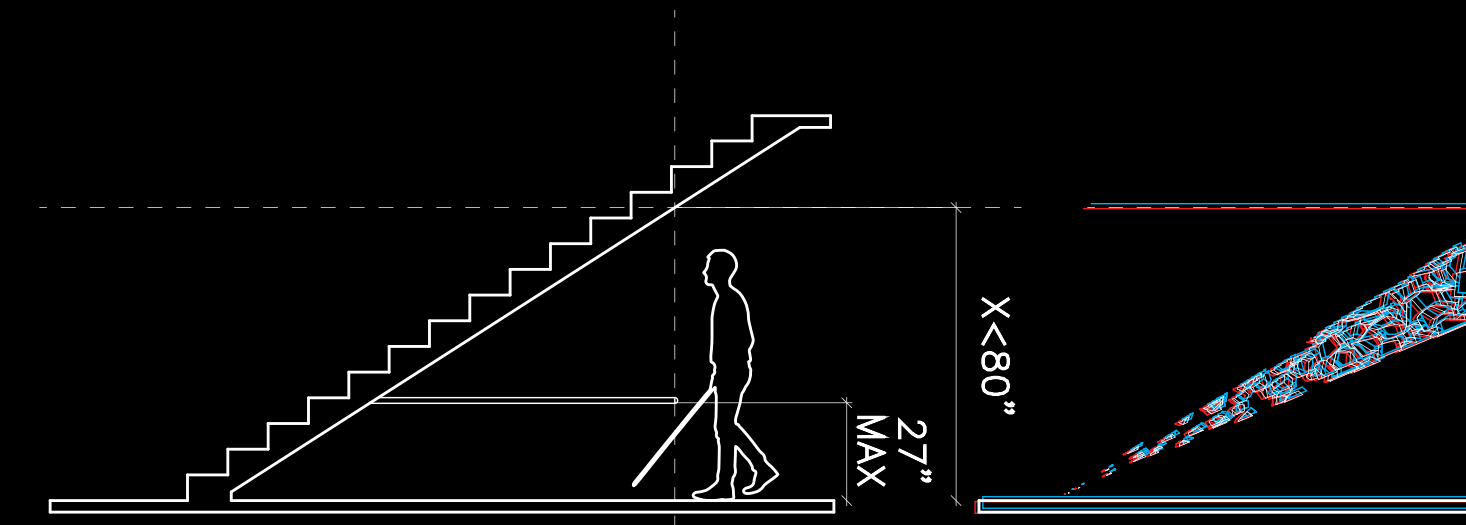
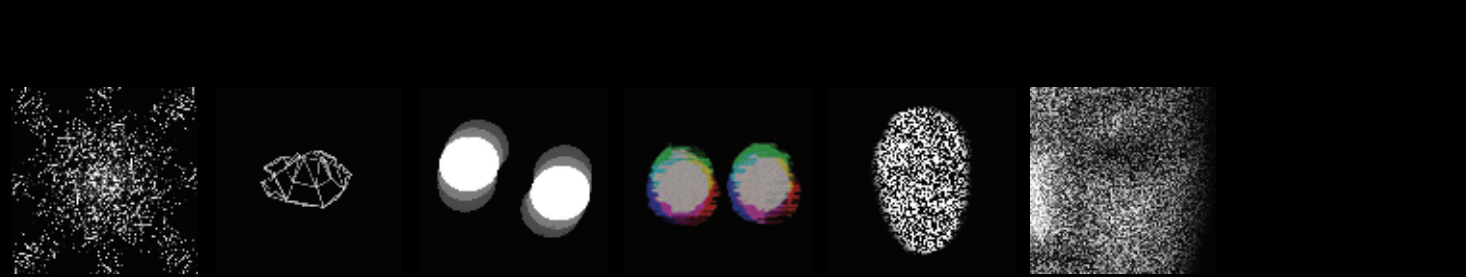
Analyzing Directed View From The Slowhouse



The Problem Of Current Ada Standards For Accessible Spaces

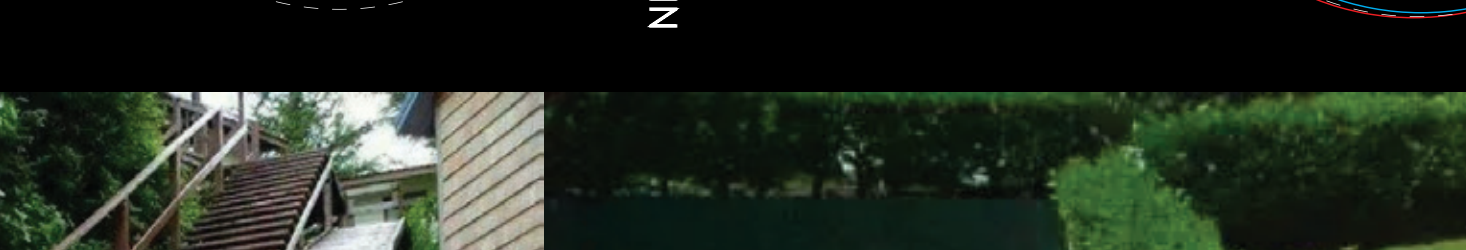
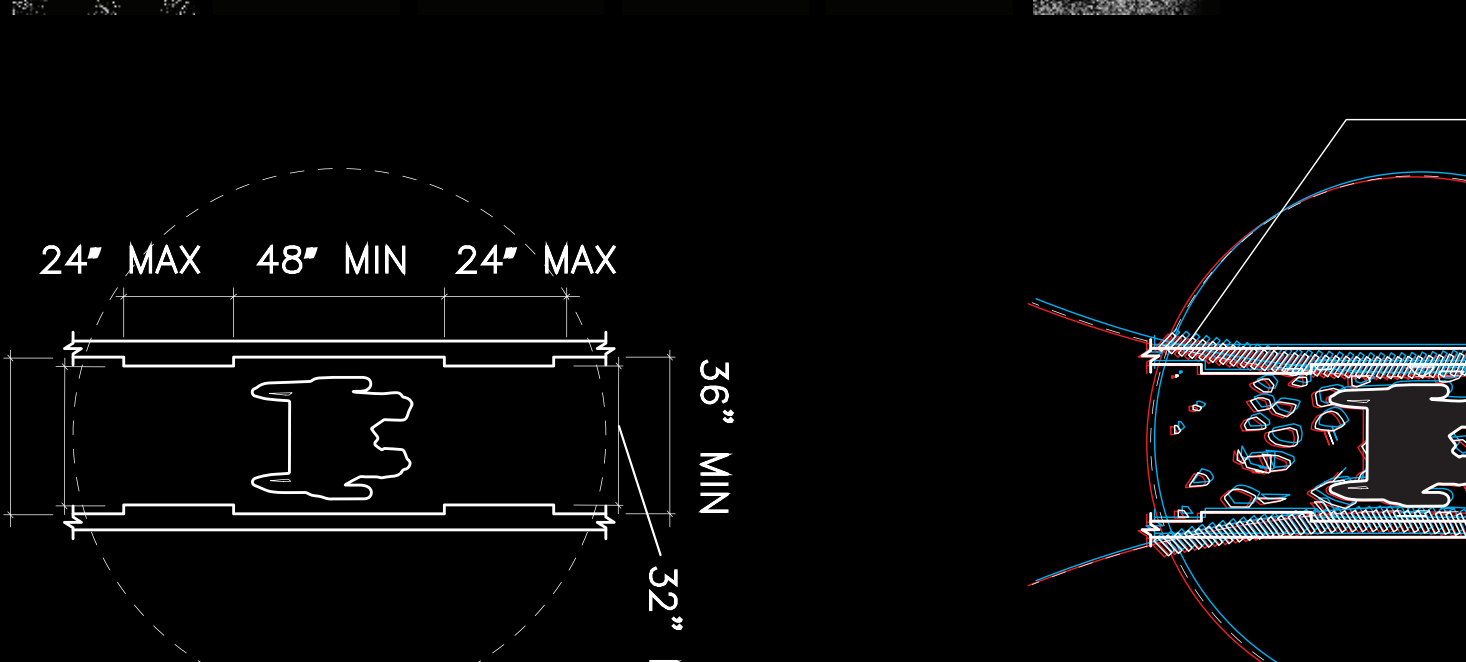
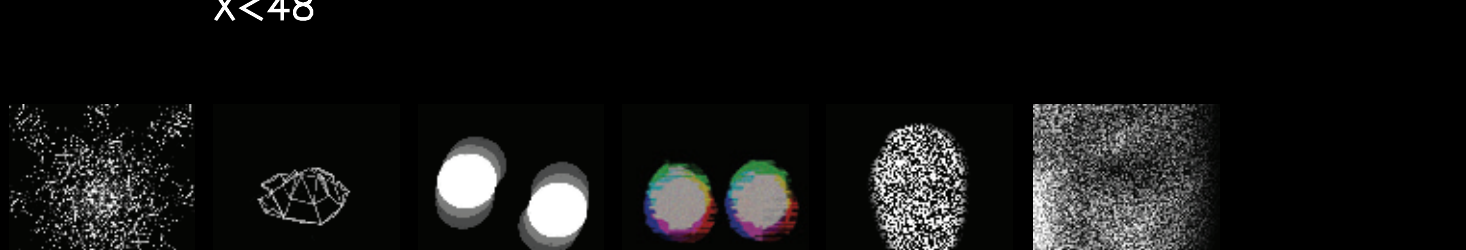
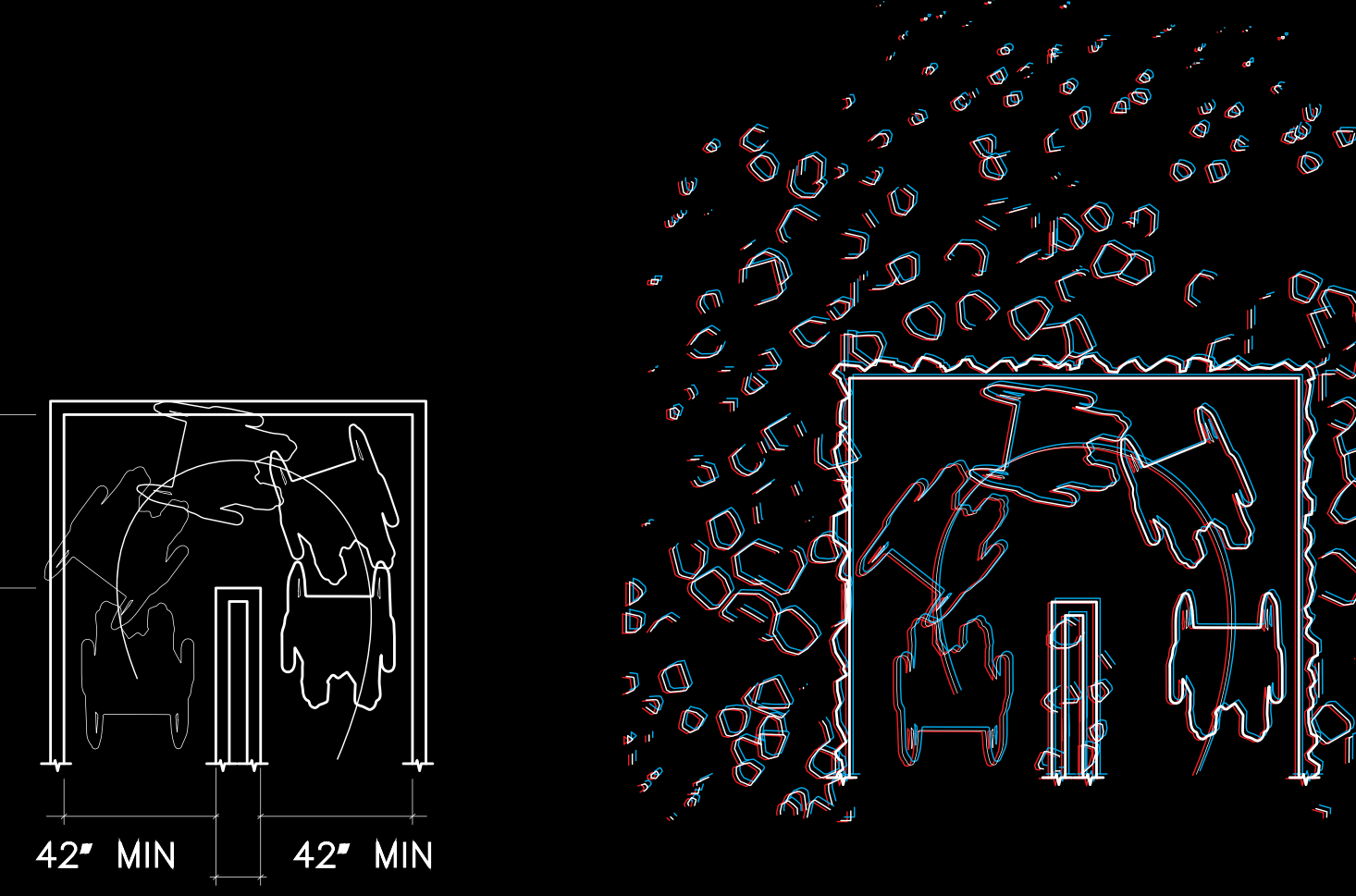
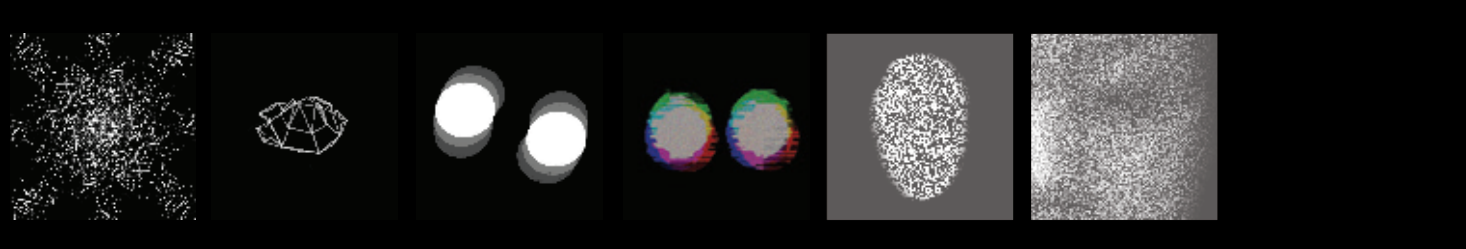
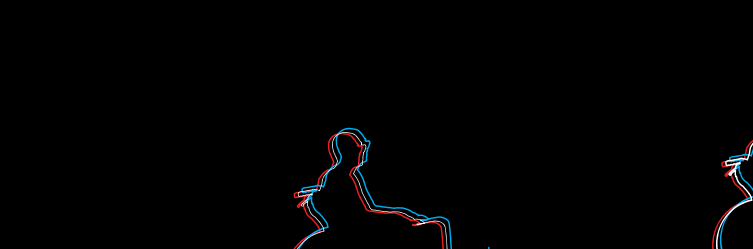
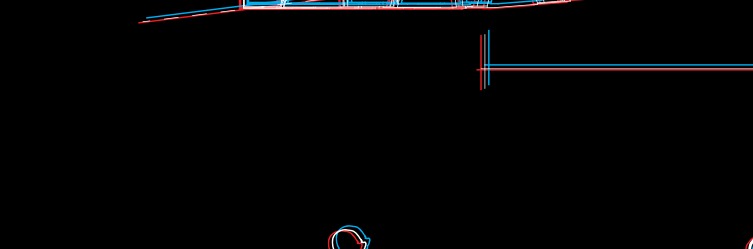
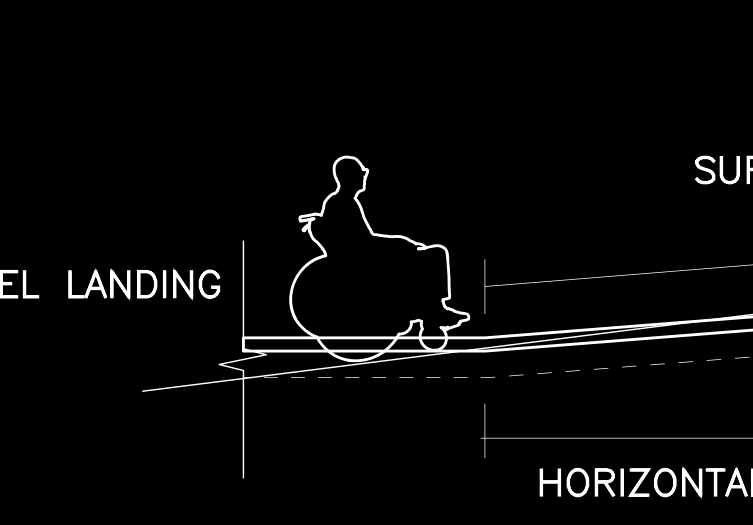
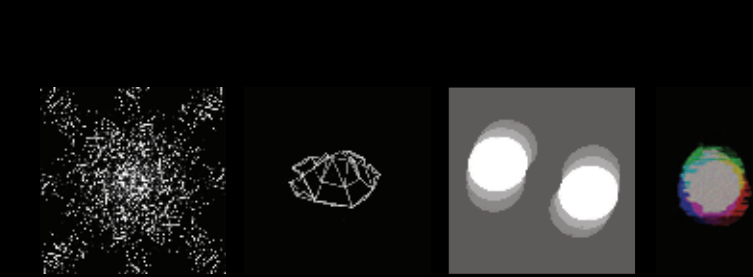
ramps that fail to meet the minimum standard- creating inaccessibility and the quantum application

VERTICAL CLEARANCE FOR A PATH OF ACCESSIBILITY



AT 90° OR LESS OF THE HEIGHT OF THE STAIR, A GUARDRAIL OR OTHER BARRIER MUST BE PRESENT AT MAXIMUM 27" FROM THE GROUND

RAMP LANDING AND RATIOS



A Critique of the Normative Standard

The ADA or American Disability Act set some standards for an accessible architecture, all with minimum widths, heights, required components, and general rules for those with disabilities and primarily those in wheelchairs. Using primary examples of accessible standards we see often implemented in the industry, I start to change these standards as a critique as to how much more we can do for accessible standards. And so, I applied some of the characteristics derived from my quantum analysis to challenge these minimum ADA standards. Each of the normative standards requires a certain minimum width for a safe passage, whether it is for those who are visually impaired, or those mainly in wheelchairs. However, my proposal seeks to go beyond the minimum, and to morph and change the forms of stairs, ramps, and walls in order so that every person who passes that space can experience a tailored environment that is uniquely suitable for them. So, no matter the user, the environment becomes intrinsically specific to the needs of the user. With this analysis of the ADA, I am starting to reconfigure these outdated guidelines into a set of rules that are set within a quantum reality to go beyond the solutions we have now for people with disabilities. Through using quantum concepts, the ADA standard becomes a system that can be applied as a framework to adapt to any building context or population of users.

