



Cure

vs.

Heal

analyzing the patient-centered
approach against
prototypical health-care delivery
design conventions

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ERIK PISZAR

erik piszar
master of architecture
university of detroit mercy
school of architecture
noah resnick, professor
arch 5100, 5110, 5200, 5210

For Gloria

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abstract.

This thesis is an exploration on the contemporary design philosophies of Healthcare facilities and their shortcomings. Most Americans can readily conjure images of the stereotype of a typical hospital environment: sterile, unfeeling spaces built for efficiency in technical care delivery without significant thought given to comfort and psychological well-being of the patient. And in many ways, this design approach is a “necessary evil”. After all, the ability for physicians, nurses, and other staff to deliver comprehensive care is a crucial component to the overall delivery system. This should not imply that care is not meant to extend to emotional and psychological well-being, however. The traditional issue is that if hospitality impedes on care delivery, there is no longer a balanced return on investment. What needs to be recognized however is that technical care and the patient-centered approach are not isolated, but are both inter-related components of the larger care delivery system. Where hospitality was once seen as a superfluous amenity, it is now understood that these alternative delivery methods have tangible, measurable results that can have a profound impact on patient recovery. The critical issue at hand is two-fold: how to apply the broader term ‘hospitality’ in a means that does not obstruct physician and staff applications, and what means of design approaches are appropriate in order to accomplish the goal of patient psychological well-being. While a harsh and unforgiving environment can hinder a patient who is already emotionally-compromised, a condescending environment which panders to psychological stereotypes may have no effect other than to waste resources which may have been better spent elsewhere. This project aims to activate a dormant system through which speciality and hospitality are not at odds with one another, but rather connect to provide the most efficient and well-balanced approach to care delivery.

thesis.

“One of the things that is different about cancer patients is that they keep coming back. A heart patient or a general surgery patient will most likely have a procedure and go home and get on with their life. But for Cancer patients, it’s not an afternoon event.”

- Bruce Knepper, *Burt Hill*

“Because of that, cancer patients want an atmosphere that promotes healing and wellness. They don’t want an atmosphere that makes them feel any sicker than they already are.”

- Debra Bemis, R.N., *Kish Health System*

Introduction

As the Baby Boom generation continues to reach retirement age, cancer rates in the United States are expected to rise exponentially. The American Cancer Society estimates there will be 1.4 million new cases of cancer diagnosed this year alone ⁶. The healthcare design field has traditionally compensated for increased hospitalization rates through a means of strict design efficiency. The fundamental mechanic of this is through the need to create environments which in no way hamper the ability of the staff to perform their duties: creating a working environment as efficiently as possible with as little expense as possible ⁸. There is significant justification for this, as in itself it is an admirable goal which can easily be attained. However this leaves out a crucial component in patient recovery methods, that being the ability of the patient to receive more than just technical care.

Consider what goes into the design of an “efficient” hospital space as balanced against physician and staff needs. Signaling within a facility allows the staff to be aware of critical conditions of the layout and patient statuses. Linear circulation of the interior provides for a well-organized environment with quick and easy precision traversal. Local patient

quarters ensure that patients are easily-reached and watched when they need to be. Additionally, the basic need for infection control defines the materiality: clean, hard surfaces for easy sterilization ¹. This conventional design approach is intentional. It is meant to increase staff efficiency and reduce infection. These spaces are designed to Cure, with machine-like efficiency. And to this end, the designs are successful. This is a 'necessary evil' in some ways. Regulations and basic common sense dictate that healthcare facilities must be easy to clean, non-conductive to infection, and easy for staff to perform tasks ⁹. But these each have obvious drawbacks. Loud auditory signaling creates a foreign and less hospitable environment. Angular and narrow circulation breeds an unfamiliar feeling. Cramped spaces causes stress and anxiety on patients who are already feeling emotionally compromised. And sterile interiors provoke an equally sterile and cold feeling in patients with low morale ⁴.

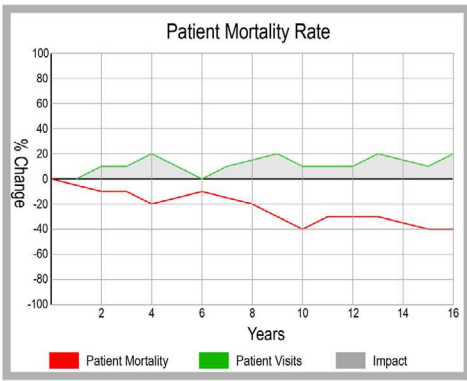
Might these be acceptable exchanges in the name of life-saving care, however? Of course creating a warm and inviting environment is commendable for emotionally-compromised patients, but if the trade-off is the loss in ability for a physician to perform or a nurse to administer care, it could be argued that we would be losing necessity in the face of the means no longer justifying the ends, particularly when no measurable goal is achieved.

But perhaps this is an outmoded concept. The Massachusetts Medical Society Health and Reform Study conducted a 10-year analysis of various healthcare facilities across the state with respect to 3 categories: Patient Mortality, Technological budget increases regarding equipment, and Hospitality budget increases. The output measured was both the change in patient visits and patient outcomes. The initial hypotheses were strongly weighed in favor of technological increases and patient mortality rates as a means to increase patient visits. However, while patient mortality rates decreased, patient visits remained somewhat consistent.

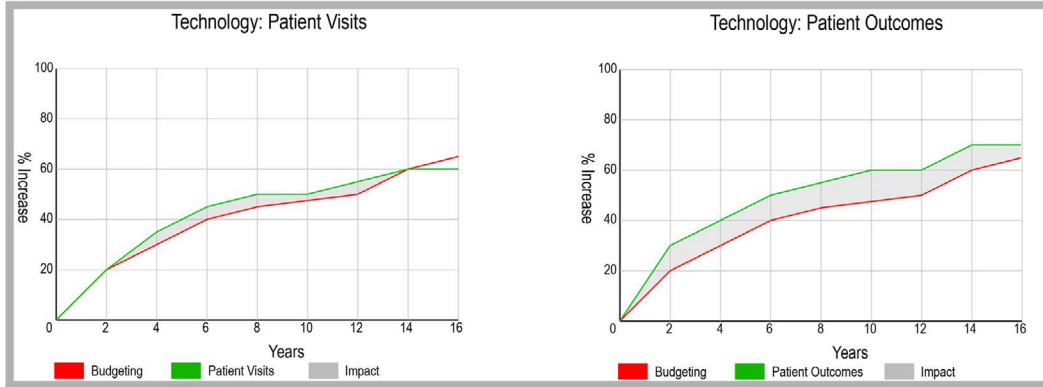
Patient Comfort v. Clinical Approach



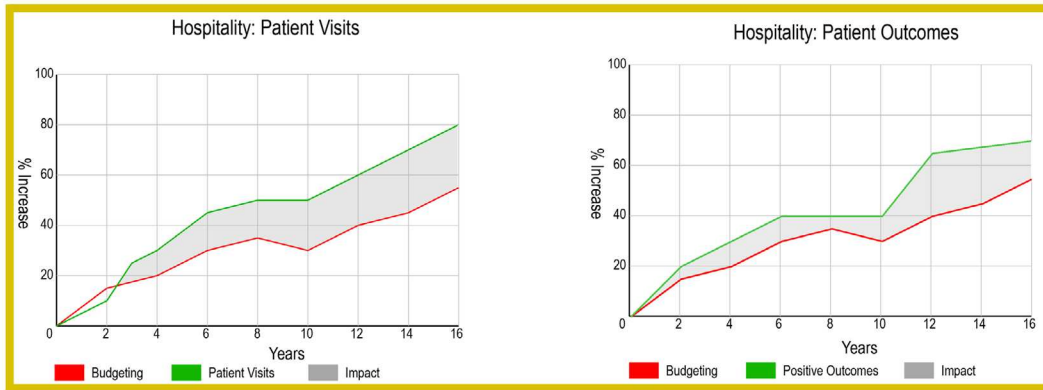
PATIENT MORTALITY



TECHNOLOGY



HOSPITALITY



Furthermore, while an increase in Technology and Equipment spending did have positive effects on patient outcomes, there was a neutral response to patient visits. Profoundly, increasing in Hospitality and Environment spending had the largest impacts on both patient outcomes and patient visits ⁷.

Graph data, 2010 MMS study

This has become the greatest indicator that traditional methods may not have been as effective as originally thought, and that there was a well-documented and definable distinction between **Cure** and **Heal**.

Concept

Curing the patient is crucial to patient recovery of course, but the holistic approach to patient care can have a profound impact not only on patient outcomes, but it serves as an effective marketing method ². By designing facilities only to **Cure**, we permit a significant element in patient care to go underutilized, and can in some ways be detrimental to recovery. It is this dichotomy between finding the balance between **Cure** and **Heal**, or Patient Comfort vs. Clinical Approach that I intend to address. The goals of these concepts do not necessarily have to come at the expense of the other, but rather designers can account for both.

Debra Bemis, the Director of Oncology Services at the Cancer Center at Kishwaukee Community Hospital states that “cancer patients want an atmosphere that promotes healing and wellness. They don’t want an atmosphere that makes them feel any sicker than they already are.” ⁴ These ideas are derived out of patient comfort, but additionally that patient comfort and a positive impact on their psychology and mental attitudes can have tangible effects on recovery. The gravity of their diagnosis is profound, and of course the care delivery should make every effort in making terminal patients as comfortable as possible; however, it’s been documented that this approach to care is no longer surface-level but should be integral into the delivery process ^{5, 7}.

This goes beyond the care itself, but in the approach to the environment. Aiding comfort is an architectural solution, but how can this be done to aid comprehensive medical procedures while adhering to comfort levels? And at what levels might those be appropriate?

Programmatic Response

Oncology became the program for the facility due to the extreme emotional impact of patients in the aftermath of a critical diagnosis, or the pain during treatment. To facilitate the working relationship between staff and patient, as well as between patient and architectural issues with contemporary and conventional hospital design, I felt this would provide an appropriate base for conducting the thesis argument.

Oncology as a specific facet of the healthcare delivery system became an approach due to its universal impact on patient attitudes. Bruce Knepper, a healthcare environment designer with Burt, Hill stated that, “One of the things that is different about cancer patients is that they keep coming back. A heart patient or a general surgery patient will most likely have a procedure and go home and get on with their life. But for cancer patients, it’s not an afternoon event.”⁴

Oncology, specifically, produces a particular effect on the patient and their relationship with the delivery methods insofar as that relationship is continually cultivated. General care is delivered with a degree of regularity but lacks the psychological impact of a cancer diagnosis. Additionally, extreme diagnoses requiring surgery or immediate intensive care rarely last throughout the patients lifetime, often ending at the conclusion of several visits or upon surgery completion. What was found to be unique about oncology was that it had both the psychological severity needed to test the thesis argument, as well as that it provides a patient-to-staff and patient-to-environment that is lasting for years or even decades. The patients, for better or worse, will cultivate relationships with the staff delivering the care, and due to the sheer frequency of visits will develop a connection or affiliation with the environment. This cannot be said about patients visiting on an infrequent or short-term basis.⁴

Design Implementation

The goals for the final design will be conducive to patient mentality. I aim to decrease anxiety by building a means to ease tensions of emotionally-compromised patients. Initial spatial designs have been tested through contemporary design philosophies. Initial phases of schematic layout development will incorporate contemporary designs and will identify failing elements. Predominantly, the goal should be to look for a de-compartmentalization of spaces, clear processions, and open and non-confining areas adaptable for privacy or patient collaboration (depending on their preference). Based on a focus group performed by Dianne Shunbruch of Cultural Page Hospital as illustrated in the Health Facilities Management Executive Dialogue Series, “Some patients want privacy and some patients want to have an area where they can sit side by side with another chemo patient.” The goal is to design a “flexible space so patients can choose to have a more private space or to have an open space,” which is a challenge “when you have nurses be able to see the patients at all times”.⁴

This also leads to the design requirements that must still accommodate for staff efficiency. Interior finishes and surfaces must still be easily-cleaned and non-absorbing of bacteria, but will still be easily accommodating of a welcoming environment for the mental well-being of the patient. Coordination of physician-to-staff, staff-to-patient, and physician-to-patient experiences will be taken into account.¹

site.

site selection.

In approaching the site selection, I intended to find a correlation with the concept of the interior space. Specifically, the intention is to avoid the space identifying with one, single demographic but rather could incorporate all cultures and beliefs and would therefore be best-suited to addressing the varying emotional needs of individuals. The election should reflect an opportunity to design for broad and diverse demographics. As a result, I intend to select a location based on a multi-cultural center. Information had been gathered from census data taken in 2010 for Chicago, IL. The location does not identify with strictly one demographic.³

Initial goals were to find an area of mixed cultures, however the final site was selected at districts which transition to multiple neighborhoods or districts of predominantly single-cultural demographics. The justification being that the interior space is adaptable to all social milieus, which is intended to challenge that concept. The space should be able to adapt to cultural cues. Patient anxiety is developed by an unfamiliarity in perceptions of the environment. There is potential to use varying demographics as a means to test that adaptability. The setting of the new oncology center will bridge these demographics.

racial / ethnic
self-identification
in chicago
in the year 2010

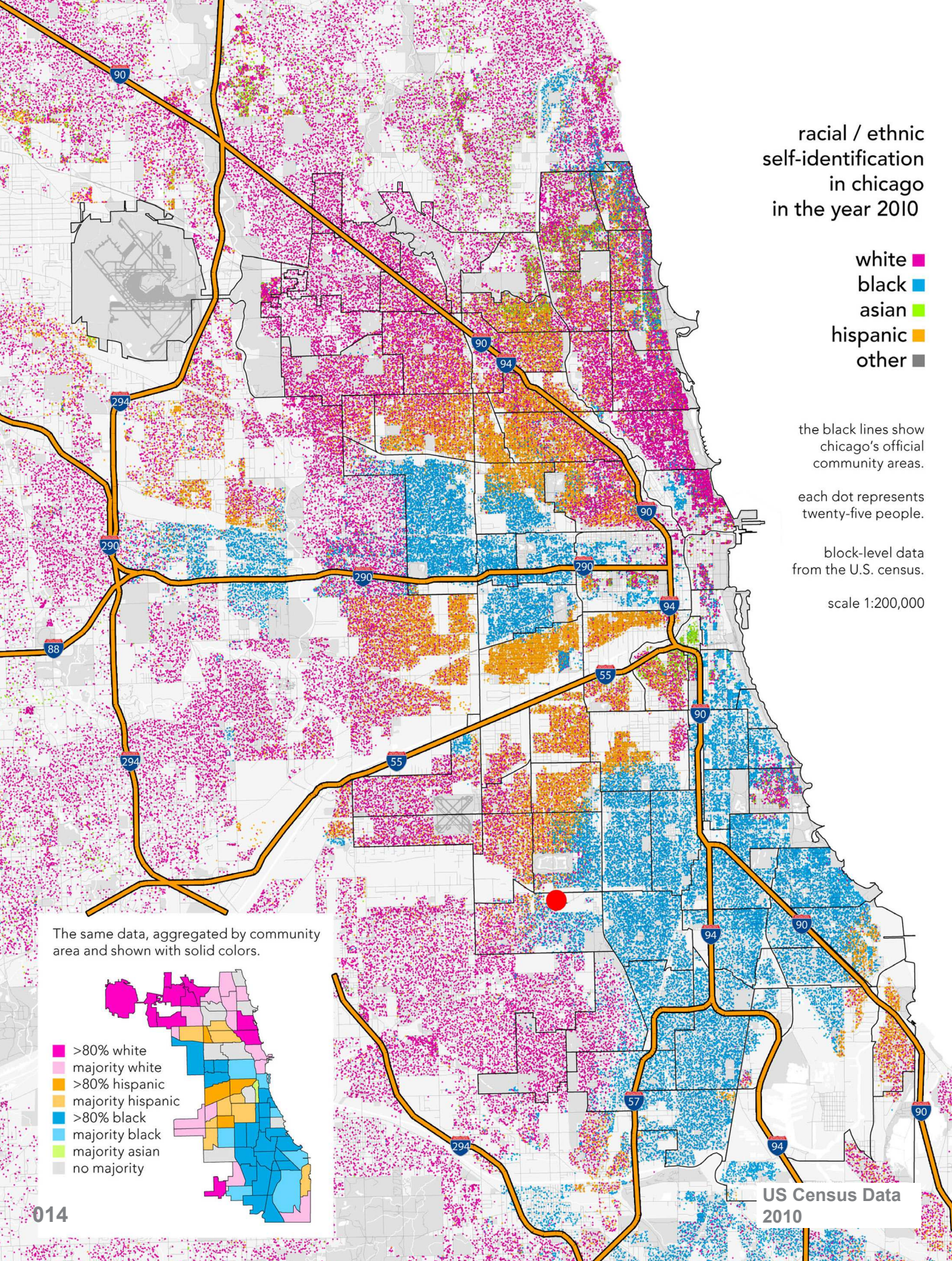
- white ■
- black ■
- asian ■
- hispanic ■
- other ■

the black lines show
chicago's official
community areas.

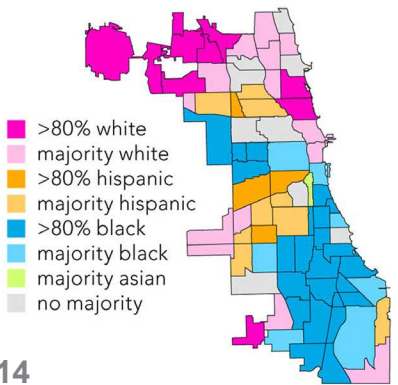
each dot represents
twenty-five people.

block-level data
from the U.S. census.

scale 1:200,000

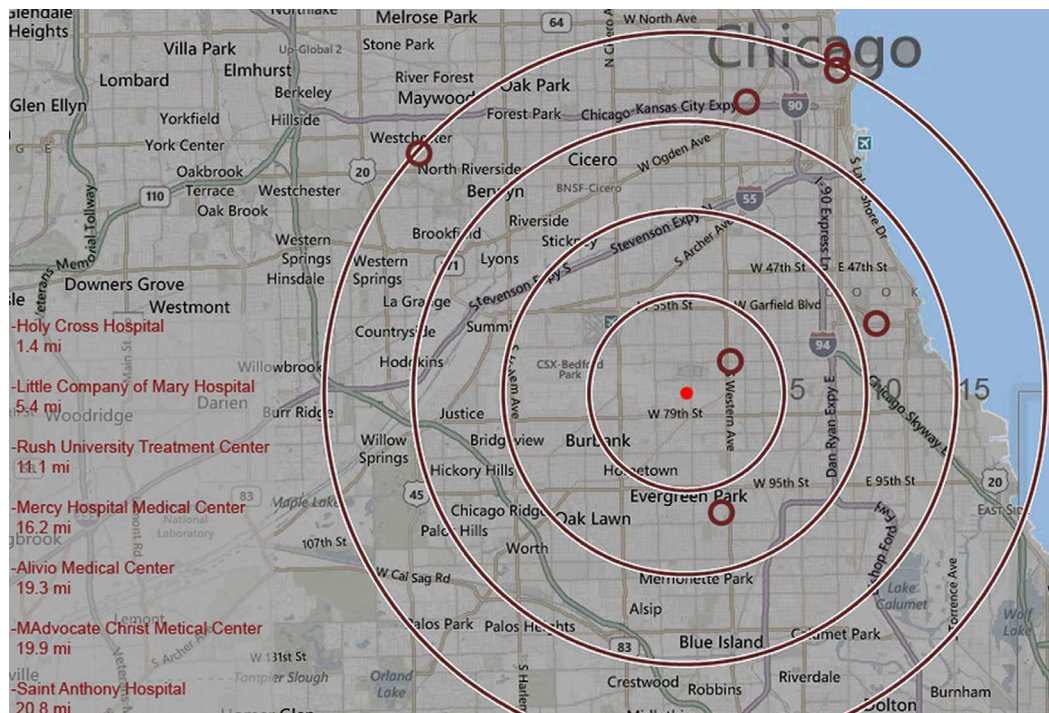


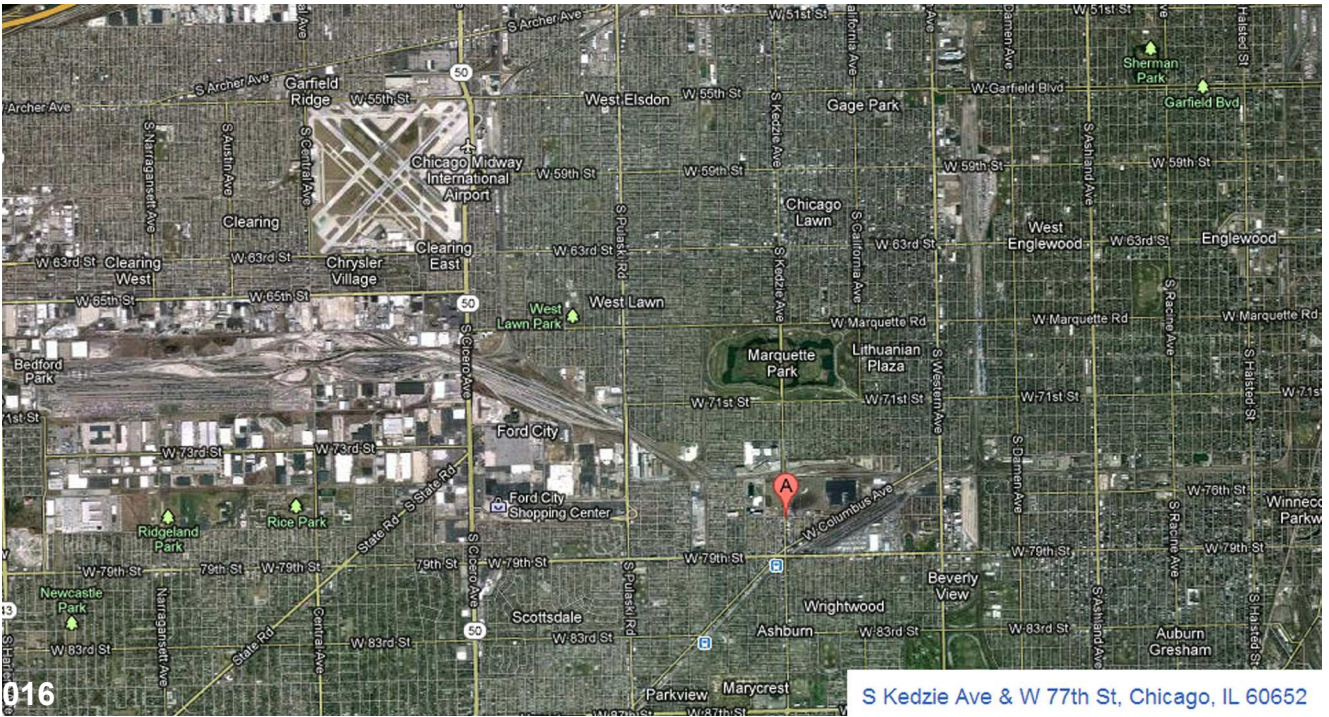
The same data, aggregated by community area and shown with solid colors.



The final site was selected for a balance in cultural demographics. In order to test the thesis of a universal space, the intent was to place the test site in an area that did not identify strictly with one single demographic. The south end of Chicago, IL represents a mixed cultural area that an adaptable interior may take advantage of.

The selection has benefit in proximity to local hospitals that do not have the capabilities I intend to design for, primarily to include cancer rehabilitation as well as a surgical component.

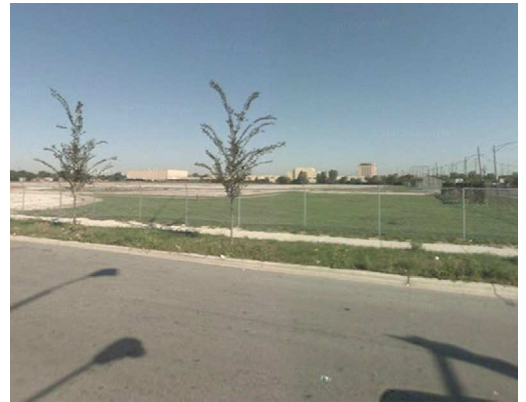


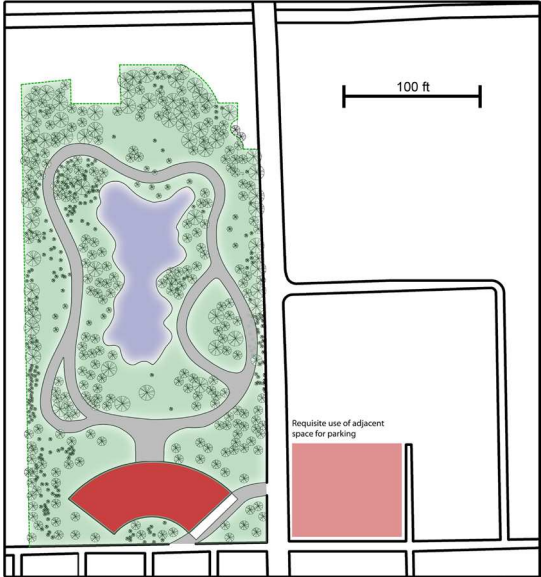
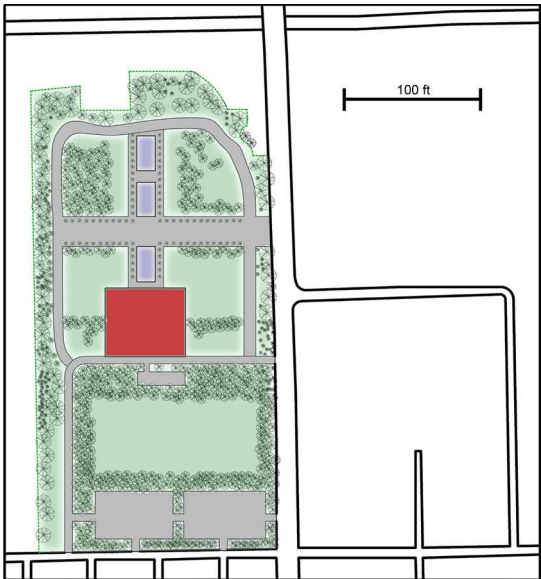


site analysis.

The site is presently completely flat, or a 'blank-slate' location, situated in a largely residential area. There are some minor industrial zones to the north and immediate east and west of the site. Use of subtle topography changes and landscaping will give a visual barrier between these zones and the selected site.

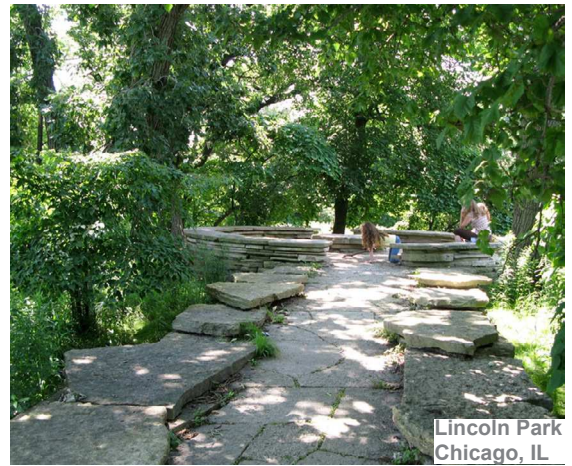
The reduction in industrialization to a more suburban condition at this location has been used in selection. Older factories are in the process of being torn down and the plots sold for other use.





site intent.

Topography is to be developed simultaneously with the oncology center's space planning. Gradation changes will vary throughout the site. Naturalistic elements have been found to have crucial benefits to holistic patient healing, so integration of nature at the site and the building itself will be an integral component to the concept. Similarly to marrying physical and digital environments, designing for built and natural environments will also have a component in the design. Layout and components are Jens Jensen inspired, so as to allow patients to have views based on case studies.



design approaches.

categorization.

By selecting a healthcare architectonic, I intended to analyze the current model of a typical healthcare delivery facility. This analytical model would contain elements of both the delivery system itself as well as environmental and architectural factors.

This was broken down into 4 categories:

- What is done well?
- What is not done well?
- What is not done at all?
- What is done but is unnecessary?

By analyzing these concepts of a current typical design model, I was able to extrapolate the basis of my design approach. The results would allow the design to be tailored towards the patient-centered design model while incorporating elements that would encourage a working relationship between the **Cure** vs. **Heal** concepts.

What is done well?

- Healthcare facilities have been at the forefront of integrated Systems Design. These operate at high efficiency to create a clean, sterile environment.
- Imaging centers are required to have certain specification and performance goals. Critical machinery and the spaces used to house them typically cannot be changed.
- Critical advances have been made in the last 10 years with respect to Patient Safety, particularly with disease and infection control.

What is not done well?

- For all advances in Patient Safety, basic injury protection such as slip-and-falls are high occurrences.
- Systems Implementations are not adaptable. Surrounding space operates efficiently, but is not easily accommodating of rapid changes in new technologies.
- Lack of a clear Patient Procession leads to confusion and anxiety in patients, “What will I find where I’m going?”
- Environments are not particularly suited towards easing the patients’ state of mind and not encouraging of a healthy General Psychology of the Patient. Fear and anxiety in the surrounding environment can have harmful effects on recovery.
- Facility layouts have not kept up with changes in technology or care delivery, leading to poor Nurse and Staff Response Time and Efficiency.
- Similar to procession issues, Orientation and Wayfinding problems cause further anxiety. “Where am I going and why?”
- Staff Turnover: The field of Healthcare is traditionally extremely stressful not only on patients but on staff. Measures are not taken to account for the fact that facilities are also places of business and employee morale can have crucial effects on care delivery, leading to a poor rate of [Staff Turnover].

What is not done at all?

- Insufficient interaction with peers, with Social Contact who can provide relatable support.
- Lack of Emotional Contact stems from perceived hostility of a sterile environment. Hospitals designed to cure, not heal.
- Care is not tailored individually, but rather facilities are designed with a ‘one-size-fits-all’ approach ignoring the User’s Cultural Diversity.
- Information is not provided adequately enough for families or patients. Many work through the process with relative uncertainty regarding the diagnosis.
- There is limited Family Integration and Involvement through the process. Limited space is provided but it is seldom sufficient to meet basic accommodations.

What is done but is unnecessary?

- Superfluous and unnecessary procedures are performed, which leads to excess spending.



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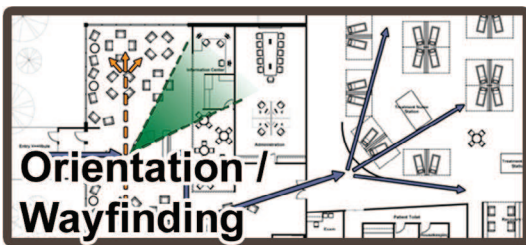
1. Systems Implementation
2. Patient Procession
3. General Psychology of the Patient
4. Nurse/Staff Response Time and Efficiency
5. Orientation and Wayfinding
6. Social and Emotional Contact
7. User’s Cultural Diversity
8. Family Integration and Involvement

results.

The results of this analysis provided a basis for the design model. Through it, I was able to introduce 4 distinct categories which were either not addressed, or insufficiently addressed in the modern approach to healthcare facility design. These categories are:

- Orientation and Wayfinding
- Social and Emotional Contact
- Hospitality and atmosphere
- Systems Implementation

By addressing these categories in a new model for a care delivery facility, I intend to show the necessary revisions to conventional design in creating a patient-centered delivery experience.



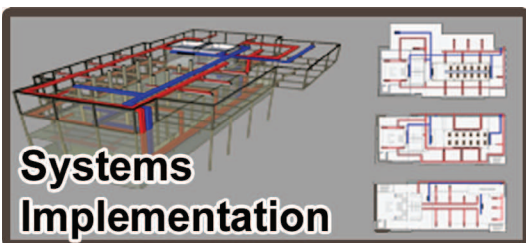
- This is one of the top causes in patient anxiety. They not only do not know what the process is, but how to find it.
- Unfamiliar environments are damaging to patient well-being.
- Considerations for patient procession.
- Increase response time and efficiency.



- De-structured environment to encourage interaction among patients.
- Modern accommodations are inefficient. Space is limited in efforts to house as many patients as possible.
- With integration of inpatient spaces at surgical components, larger patient occupancies are not required. Consider patient suites as opposed to patient rooms.

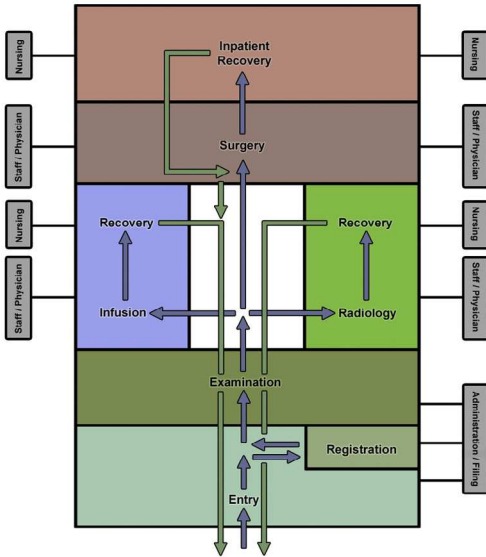


- Hospitality approach to patient-centered design.
- Must be able to cure but should not feel like a 'cure' environment.
- Lounge environment, spaces should feel like anything but a hospital. Considerations for patient psychology.
- Considerations for universal demographic.
- Necessary systems applied in new ways.



- Limited layout revisions, however adaptability for new technology must be addressed.
- Modular, easy to implement, install, remove, and replace.
- Adapt to noise control, 'smart' systems in use when needed, not activated when inconvenient.

category 1: orientation and wayfinding ISSUES

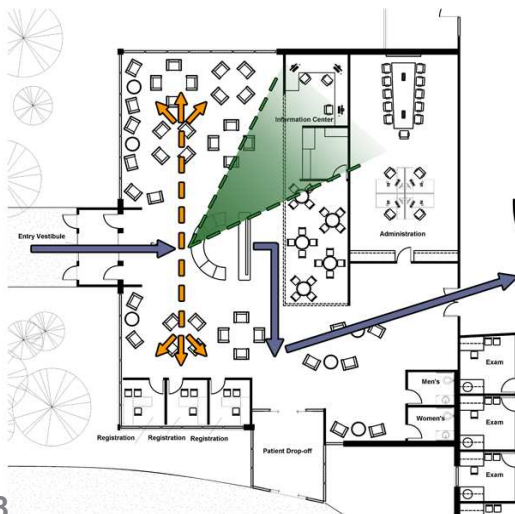
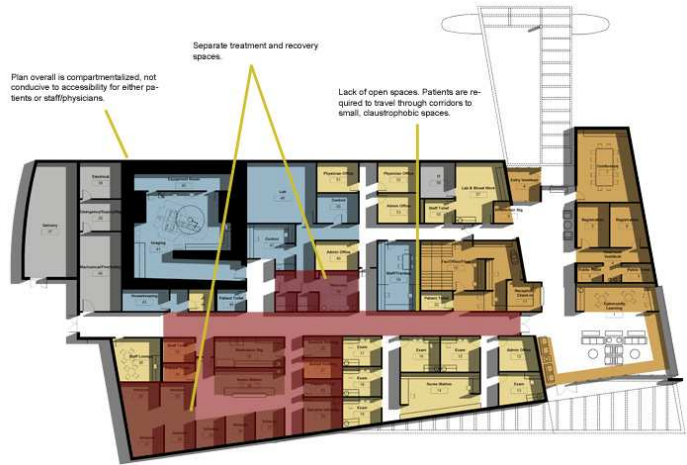


COMPONENT LAYOUT

Functional components are compartmentalized and convoluted. Navigation is an issue for patients who are prone to anxiety and stress. Each delivery center is, while connected, isolated from one another. Patients who may take advantage of multiple components are forced to backtrack through divulging pathways to reach a destination. Spaces do not communicate architecturally with one another.

CONTEMPORARY CIRCULATION

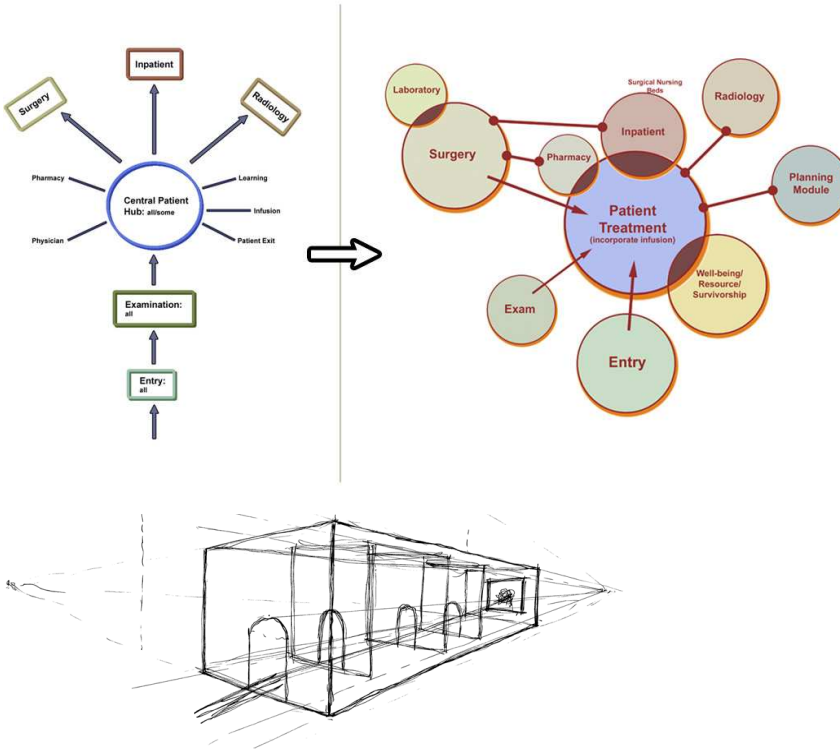
Spatial layout of a contemporary facility relies on corridors more typical of an office building than a place of healing. Patients will often feel claustrophobic. Similar components among varying functions are not shared, but compartmentalized often requiring patients to utilize separate areas for the same functions.



VEWS and PATHS OF TRAVEL

Views within a space are not conducive to providing patients with a sense of "What's next? Where do I go?", causing additional anxiety and unfamiliarity with their environment. Views are drawn to points of interest but not necessarily directed for thoughtful procession. Additionally, paths of travel are not streamlined, requiring significant backtracking.

ORIENTATION AND WAYFINDING- SOLUTIONS



CIRCULATION and ADJACENCY

In an effort to combat narrow spaces and corridors which are not clear to patient procession, a new layout is required. Instead of compartmentalized areas for specific processes, a singular 'hub' is used. All patients will circulate through this location and will familiarize themselves with a single space throughout their entire treatment plan.

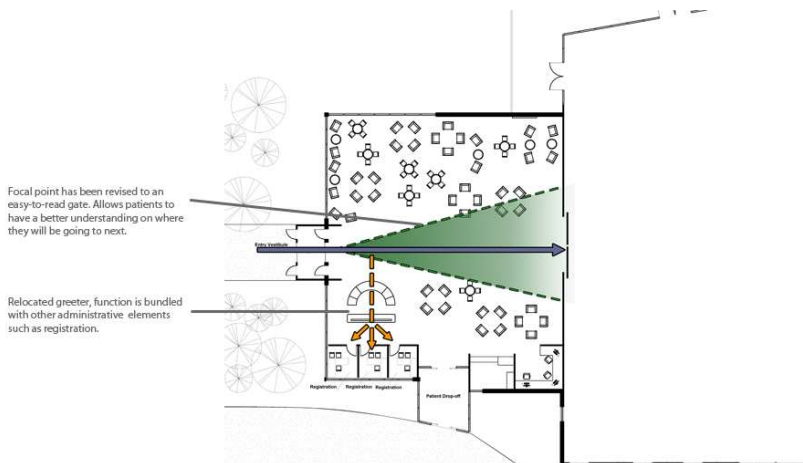


WAYFINDING

Utilization of alternate components to aid in patient wayfinding. Digital technologies have strong potential for aiding in this process. RFID wrist bracelets in use for patient identification can have an architectural response. Signaling devices can be implemented within the architecture for patient ease and staff clarity.

PROCESSION and SIGHT

Stress and patient anxiety can stem from a lack of awareness and an introduction in an environment they feel is both unfamiliar and hostile. Procession has come to play a crucial role. Existing facilities are not designed to accommodate holistic care delivery techniques, but by increasing awareness through transparency in the process, patient anxiety can be reduced. Complete transparency is not possible in order to protect the privacy of all patients, however visibility can be achieved by obscuring direct lines of sight while still providing glimpses of what the next steps in the process are.



ORIENTATION

Design elements should be aware of the patient's visualization of the 'next steps' during their visits. Original layout of elements were convoluted and not clear with respect to where the patient was intended to proceed, and the focal point of their paths of traversal were hidden. This should be clearer upon redesign.

category 2: social and emotional contact ISSUES



FAMILY ACCOMMODATIONS

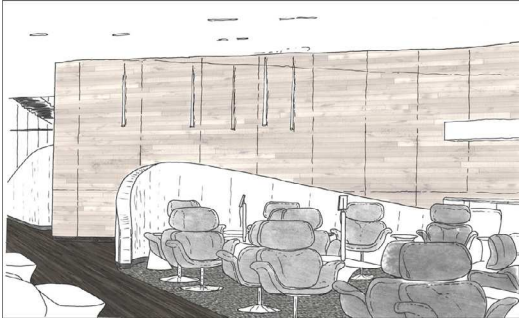
Patient contact with friends and family is vital to a patient's mental well-being. Current accommodations are focused on efficiency as opposed to comfort. Patient rooms and interior public spaces are not concerned with family accommodations or comfort for long-term stays or visits. Visiting loved ones in a hospital setting is not viewed with an air of comfort, aggravating an already-stressful situation.



PATIENT ACCOMMODATIONS

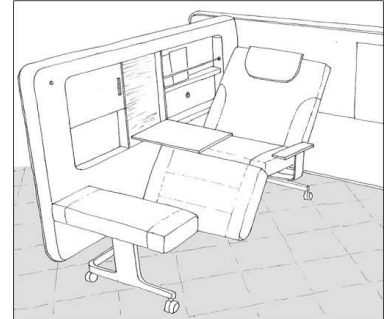
Spaces for patients are contemporarily designed for efficiency over comfort. While necessary for physicians and staff to perform their jobs, efficiency of current models leaves little room for psychological well-being. Patients are catalogued and ordered, often relegated to perimeter spaces with few environmental amenities.

SOCIAL AND EMOTIONAL CONTACT-SOLUTIONS



INFUSION SETTING

This will contrast the typical infusion setting. The convention of separation between infusion and recovery will be challenged, as the infusion spaces will tend to be more group-oriented. Spaces should encourage interaction amongst patients and their families as opposed to isolation.

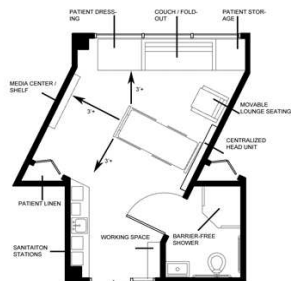


INDIVIDUAL STATIONS

Not all patients are receptive to group environment care delivery. All patients should be accommodated for with flexible technologies adapted for modern delivery.

FAMILY ACCOMMODATIONS

Modern accommodations for inpatient rooms are extremely limited due to both space and budget constraints. For the purposes of this thesis argument, I intend to take advantage of the greater amount of inpatient space afforded and attempt to utilize this as a patient suite as opposed to a patient room.



TYPICAL ICU PATIENT ROOM



POPOSED PATIENT ROOM



Individual space provided for patient privacy.
Conventional inpatient accommodations are insufficient to meet patient needs of care delivery. Space constraints will negatively impact the quality of physician care as well as patient morale. Spaces are provided to create a patient suite. Inpatient spaces are single-bed as opposed to double. Ample amount of space is provided for visitors and family including dining and kitchen spaces, as well as privacy quarters within the patient room.

category 3: hospitality ISSUES



HOSPITALITY- SOLUTIONS



RETAIL

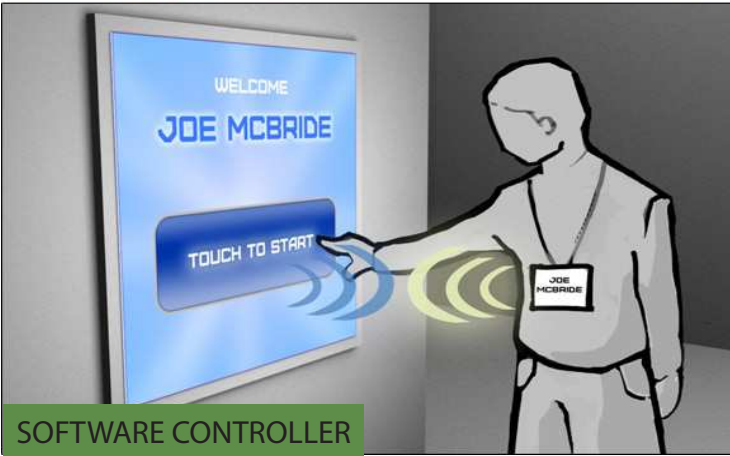
Inclusion of retail space within reception area of the oncology center. Inclusion of amenities center. Retail implementation should promote health and well-being.

ATMOSPHERE

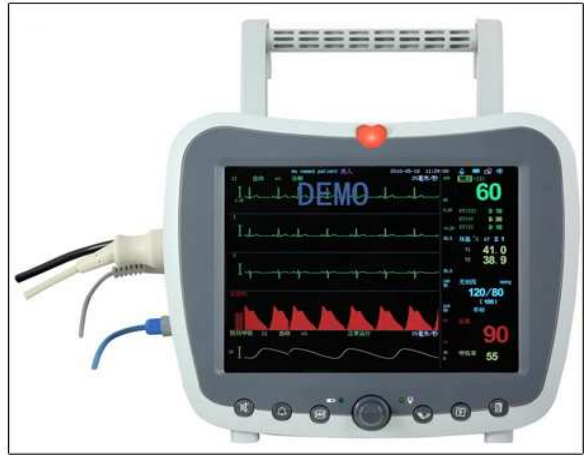
The interior atmosphere of the patient spaces is a critical component in the design approach goals. As oncology was selected due to its extreme emotional and psychological impact on patients, the aesthetics should be an acknowledgement of the emotional weight of the affliction. To avoid condescension and pandering through surface-level 'comforts of home', the design should instead instill a sense of confidence instead of trying to artificially emulate psychological comfort.



category 4: systems implementation



SOFTWARE CONTROLLER



Software control is readily available. Technology is able to track patients and interior climates, and adapt accordingly.

Patient RFID technology is already in place for records and patient identification. Use of this can be adapted for architectural responses with minimal staff input and no patient input, allowing for immediate reactions.

Climate monitoring systems are implemented to read environmental inputs and react accordingly.

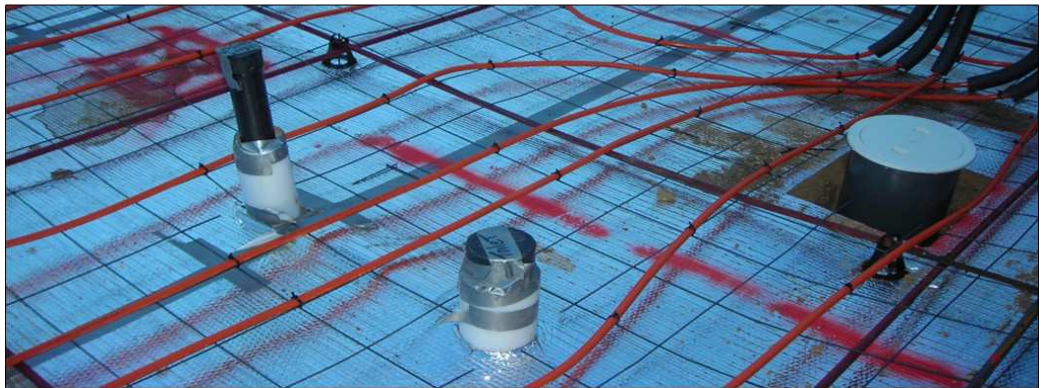
RFID technology allows for unique architectural responses tailored to individual patients. Instead of systems which are constantly activated, they may be activated and deactivated when not in use, read automatically by patient presence. This is also useful for wayfinding.

Patient monitors are already in place throughout all hospital systems. These are traditionally used to monitor patient biology and inform staff automatically. This can also be used as an architectural tool to adjust environmental factors.

SYSTEMS IMPLEMENTATION- SOLUTIONS

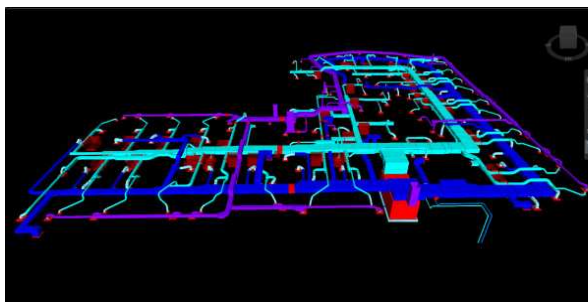
TEMPERATURE

Integrated heating and cooling systems, active upon automatic input from occupant.



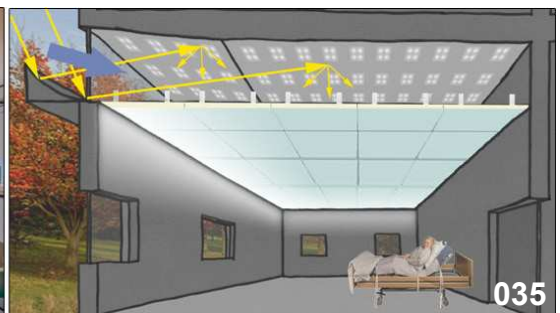
SOUND

Upon reading the automated input from the user, systems are able to activate and shut down automatically. Ambient sound is incorporated.



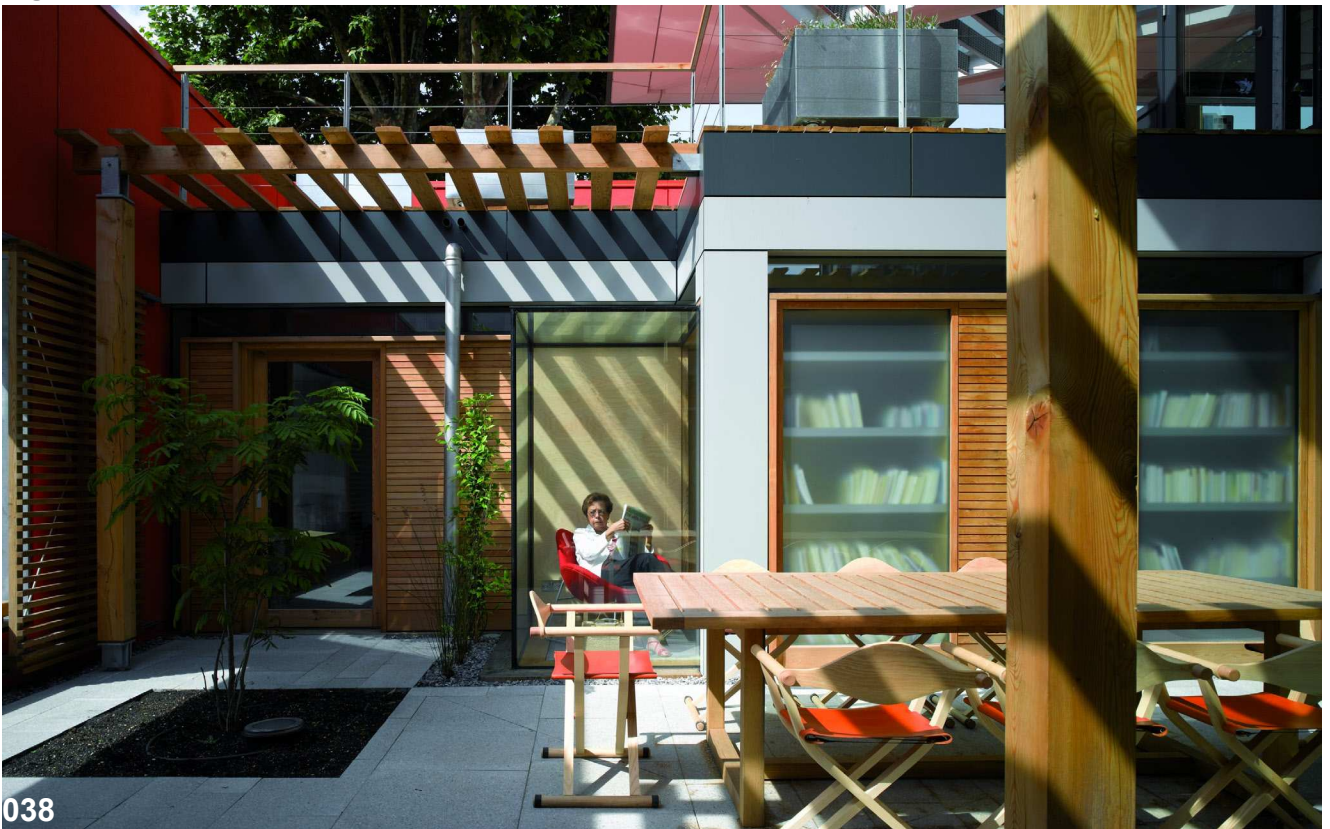
LIGHTING

Incorporated use of ambient lighting as well as natural daylighting techniques.



case studies.

Maggie's Cancer Caring Centre - London
Rogers Stirk Harbour + Partners



Maggie's Cancer Caring Centres

Maggie's Centres are a network of care centres within Great Britain which aim at "empowering people to live with, through, and beyond cancer by bringing together professional help, communities of support, and building design to create exceptional centres for cancer care".

Founded by Charles Jencks, an architect who had lost his wife Maggie Keswick Jencks to cancer, it is an open acknowledgment of the **Cure** vs. **Heal** concept, with an understanding that the environment around a patient has a great potential to impact well-being.

Meant to combat those who feel frightened, vulnerable, and uncertain, Maggie's Centres can be used as a powerful base for holistic care.



Maggie's Cancer Caring Centre - Dundee
Frank Gehry

Maggie's Cancer Caring Centre - London
Rogers Stirk Harbour + Partners



Maggie's Cancer Caring Centre - Fife
Zaha Hadid



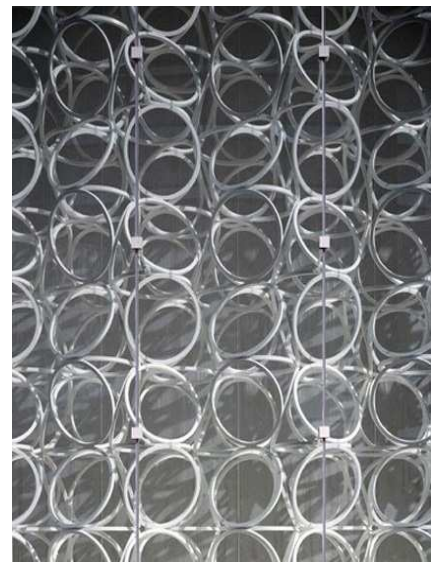
White Chapel - Osaka, Japan
Aoki Jun



White Chapel

Space designed specifically for spiritual contemplation. The space combines the use of transparency without strict visualization through the membrane.

The monolithic interior lends to a space devoid of substantial architectural detail, but uses a specific focal point for spirituality and ceremony. This allows the subject matter being the utilization of spiritual contemplation as opposed to it being something the architecture is able to force.



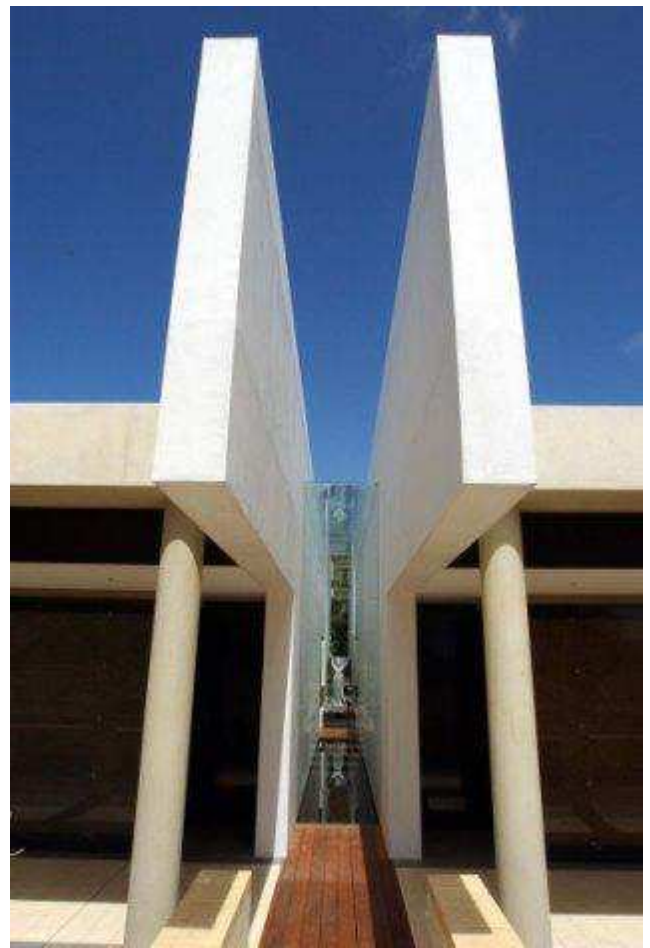
Fremantle Mausoleum - Palmyra, Australia
DesignInc



Fremantle Mausoleum

The subject matter of this space is a remarkably heavy one, addressing the direct response of the death of family or loved ones.

Procession in and out of this mausoleum is a key factor in the determination of spirituality and the contemplation of life. Detail is reserved, instead relying on the simplicity of design to allow occupants to reflect. The atmosphere is comforting without being derivative, and direct use of the display of the deceased in these spaces allows for contemplation. While tackling death, occupants acknowledge the weight of the reality of lost loved ones with dignity, however this is a distinct celebration of life.



Cedars-Sinai Cancer Center - Los Angeles, CA
Morphosis



Cedars-Sinai Cancer Center

This comprehensive oncology center is an addition to an existing hospital, with a patient-centered care approach to design.

What is unique about the design of this oncology center is the deviation from what would ordinarily be considered a 'patient-friendly' environment. Complete with angled surfaces and a distinctly industrial feeling, the center is even set underground; the design is an acknowledgement that a "happy" oncology center cannot exist. Instead on relying on a false sense of euphoria forced upon the patient through the architecture, a sense of confidence is instilled. Patients are aware of the gravity of their situation, and Morphosis' approach was to acknowledge that this was a serious environment instead of one of condescension.



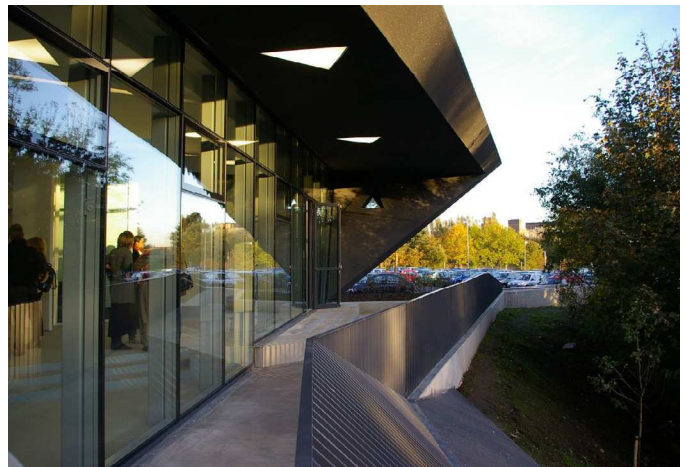
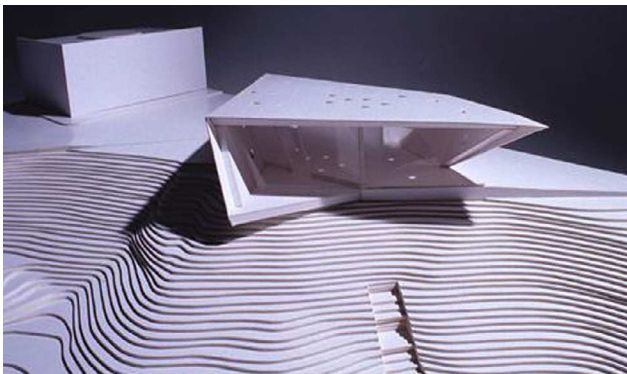
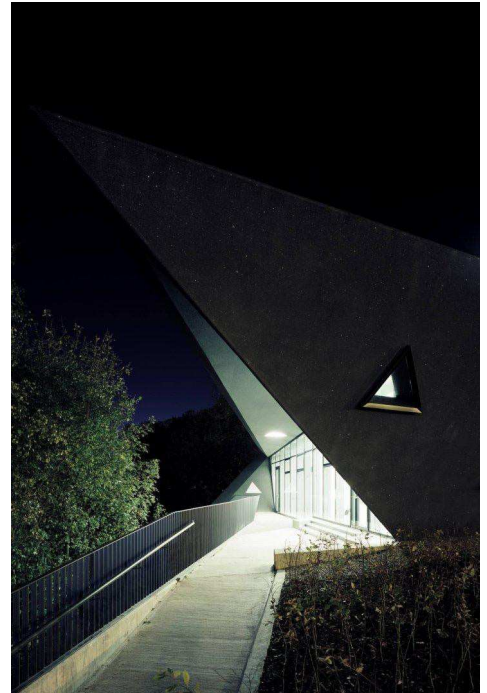
Maggie's Centre - Kirkaldy, Fife
Zaha Hadid



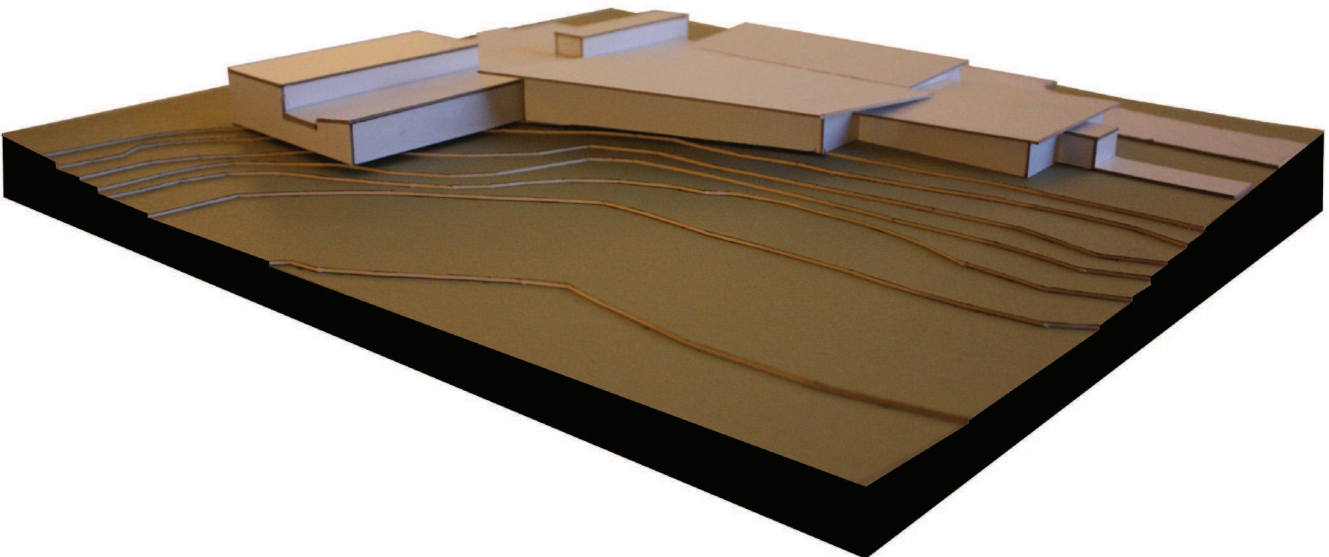
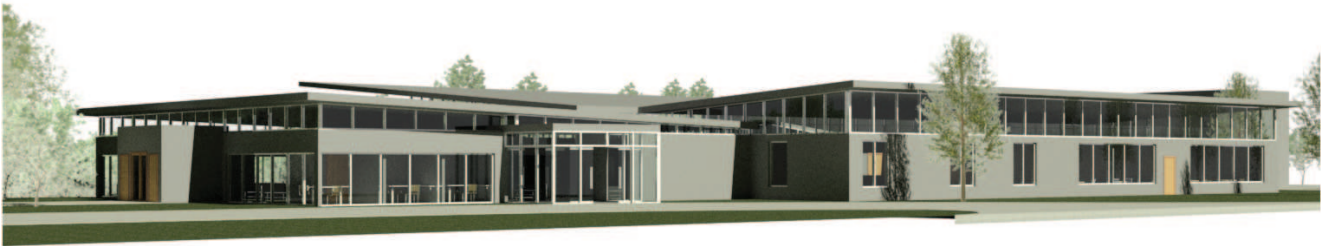
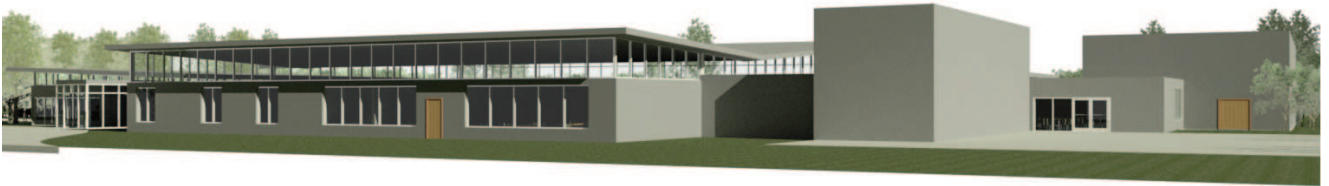
Zaha Hadid's Maggie's Centre

Maggie's Centres are a series of drop-in centres in Great Britain. While these are not intended as a replacement for conventional cancer therapy, they rather aim to aid anyone affected by cancer. This would include families as well as those directly afflicted with the disease.

The focus of these centres are the emotional well-being of the patient and those emotionally affected. The centre in Fife was designed by Zaha Hadid, in a style that would not typically associate with an environment of healing. Like the Morphosis example, this is another acknowledgement of the gravity of the disease. The exterior is a stark reminder, weighted heavily in the dark form. As the patient transitions into the interior space, heavy architecture transfers; however, the environment is rife with natural daylighting and a bright color scheme that is neither condescending nor negative. It is still the same reminder as gained on the exterior, but an understanding that while the patient's situation is serious, taking the steps to wellness will lead to a more inviting outcome.



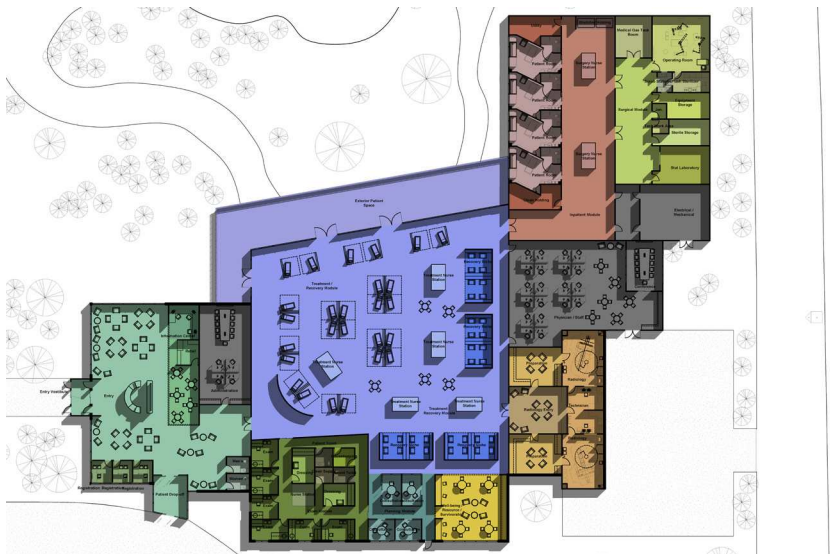
pre-design.



Prototyping and Test Fit

If the aim of the project was to create an interior environment which was easily navigable for a patient-friendly approach, then my initial test fits were unsuccessful. While adjacencies and program areas proved advantageous, the layout suffered from compartmentalization and segmentation. Original aims were for a single-story facility to avoid tired patients needing to traverse from one level to another, however the areas of the program called for sizes which ultimately produced a sprawling complex. This was not conducive to a straightforward patient traversal method.

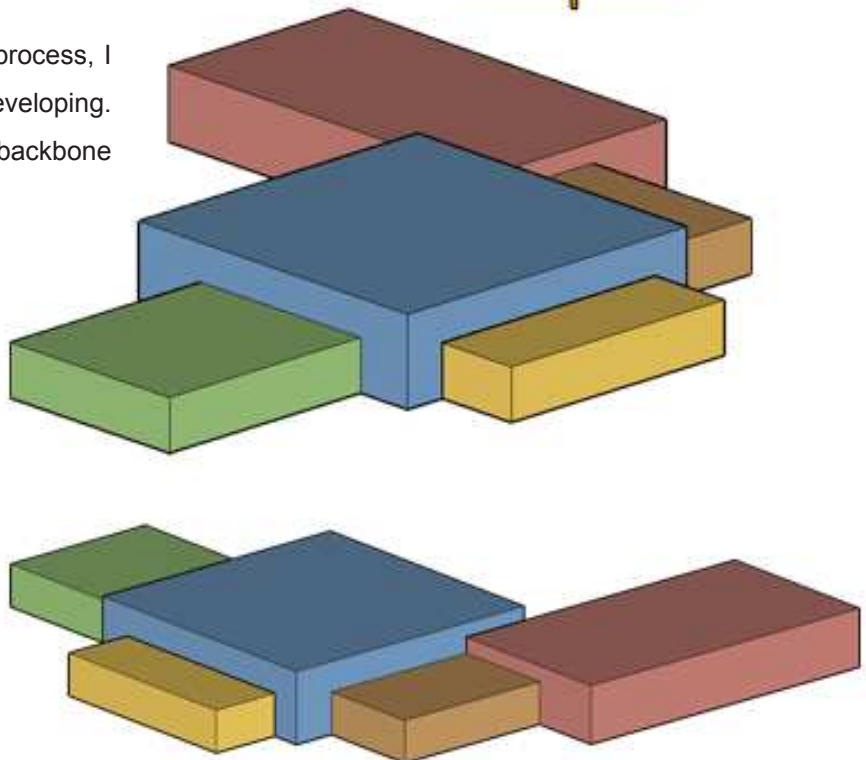
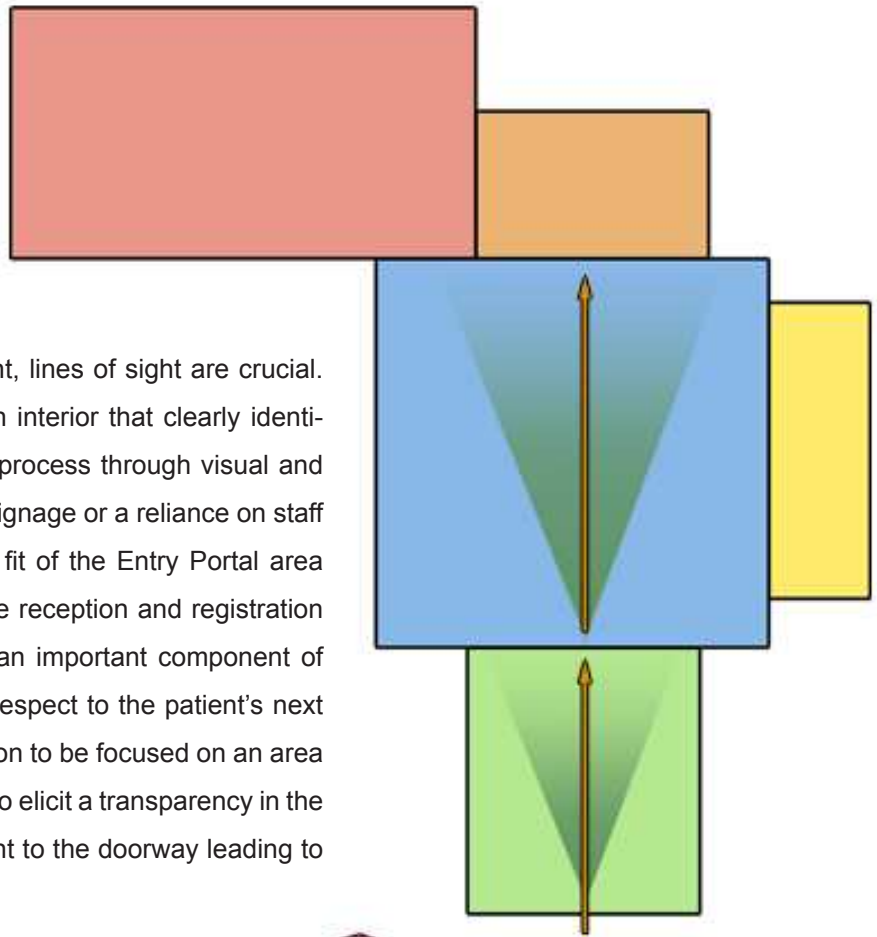
These test fits were beneficial in producing an analytical model which would be drawn from numerous times during the design process. Of particular aid were the ability to further revise adjacencies and determine lines of sight and visibility throughout the facility.



Reorganization and Alignment

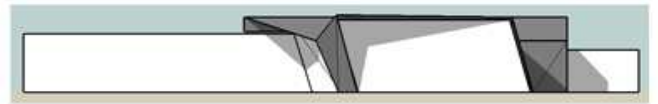
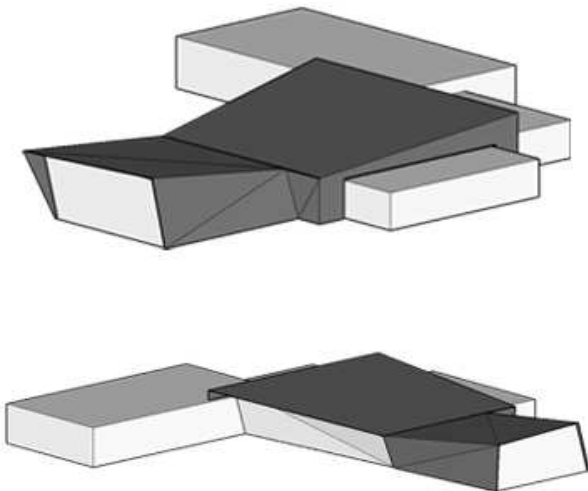
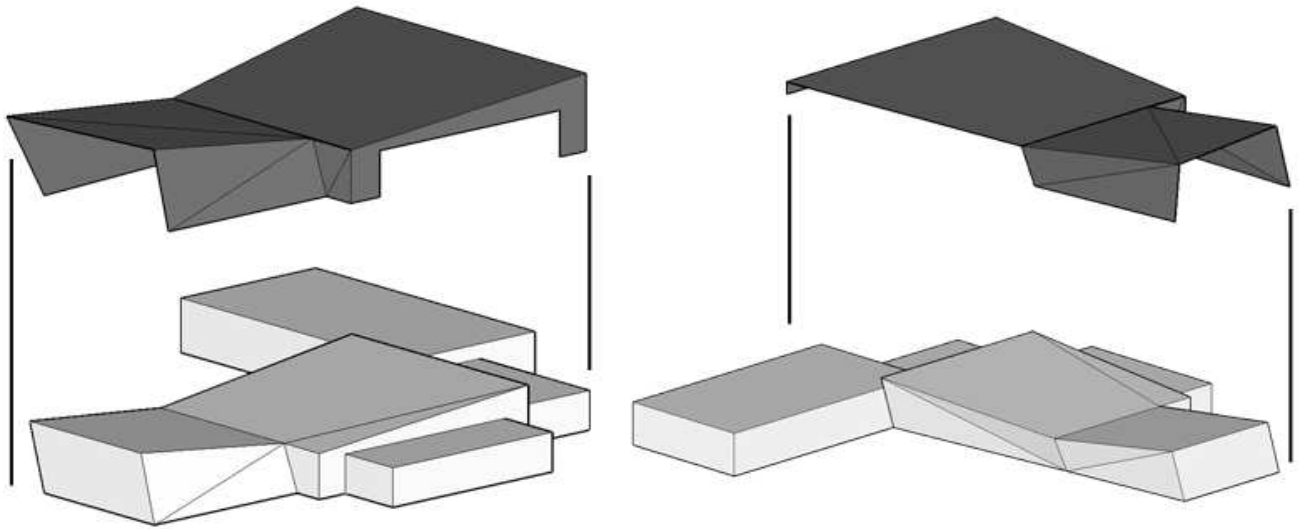
For a patient undergoing treatment, lines of sight are crucial. The project's aim is to develop an interior that clearly identifies the patient's next step in the process through visual and architectural cues as opposed to signage or a reliance on staff direction. For example, the test fit of the Entry Portal area would direct the line of sight to the reception and registration desk. While this is undoubtedly an important component of the portal, it was not critical with respect to the patient's next step. Instead of forcing the attention to be focused on an area associated with paperwork, I tried to elicit a transparency in the process by drawing the line of sight to the doorway leading to the Patient Hub.

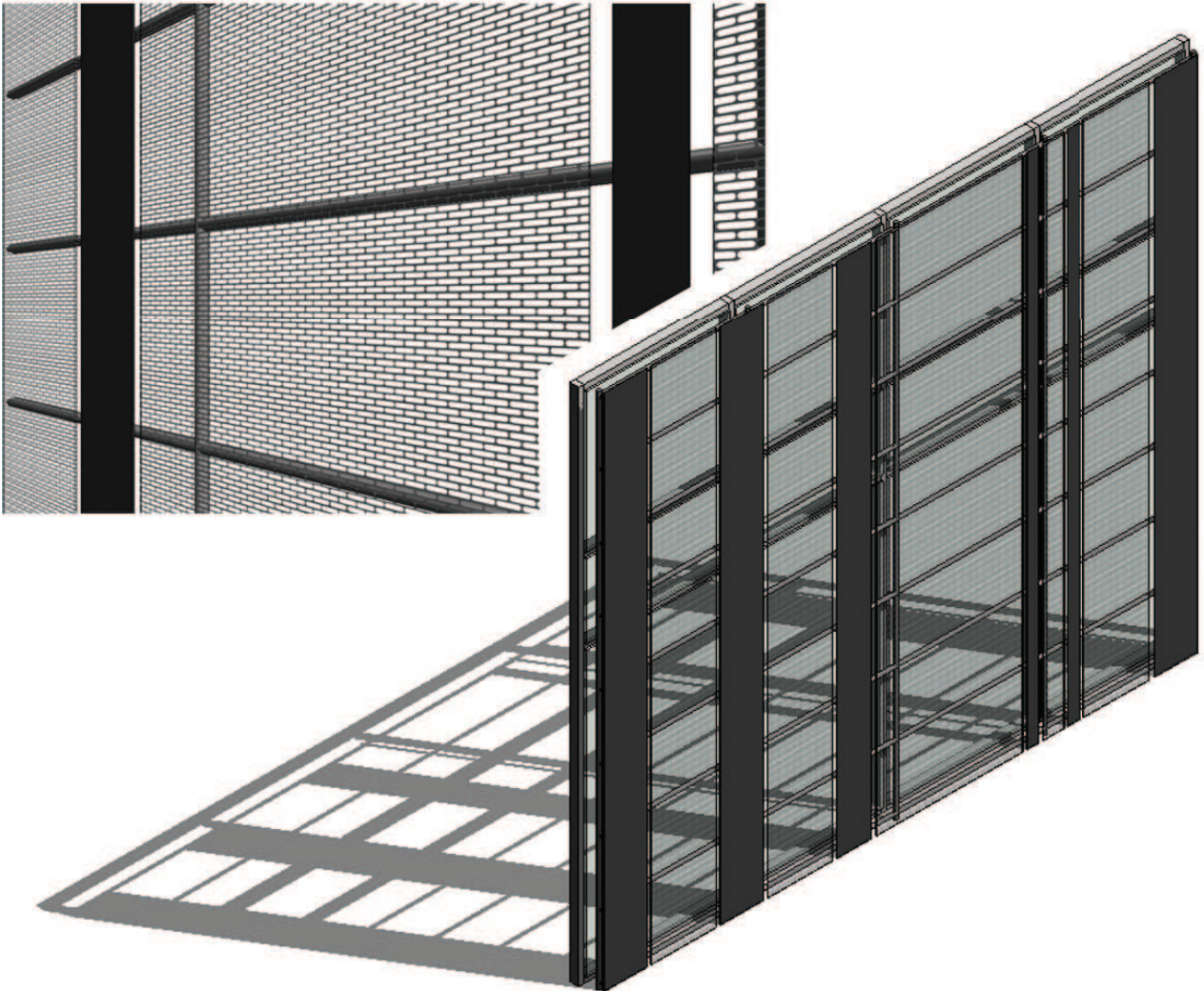
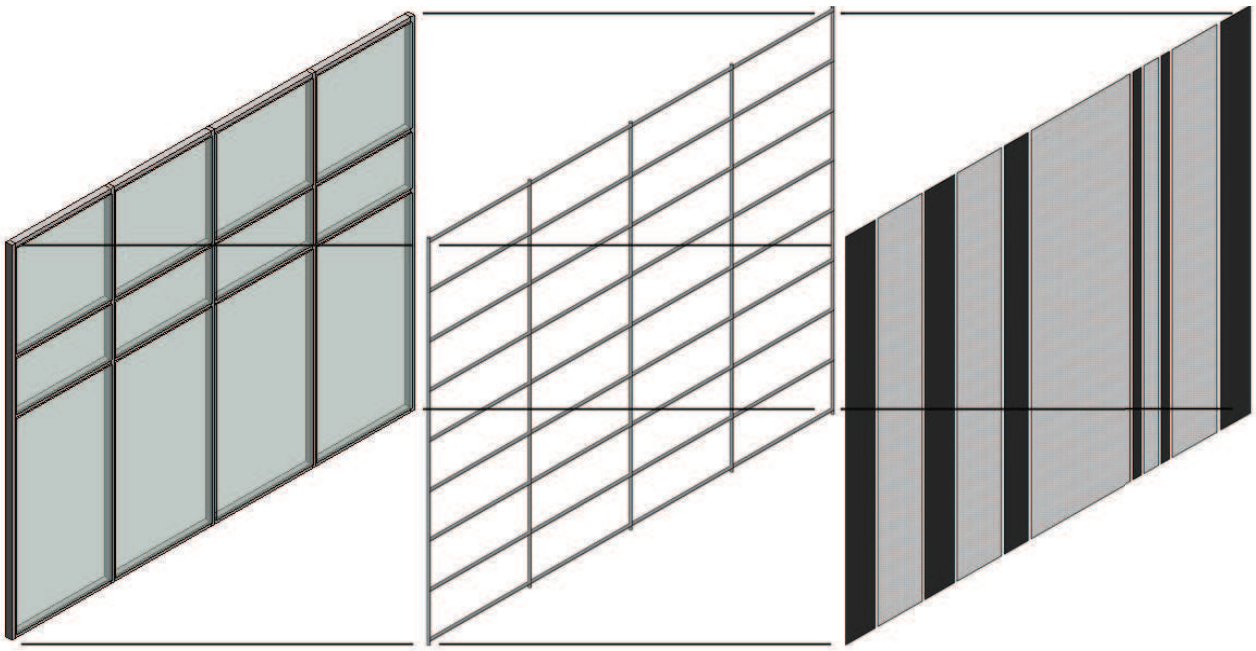
Through a gradual reorganization process, I began to notice an axial format developing. This would ultimately become the backbone of the facility layout.

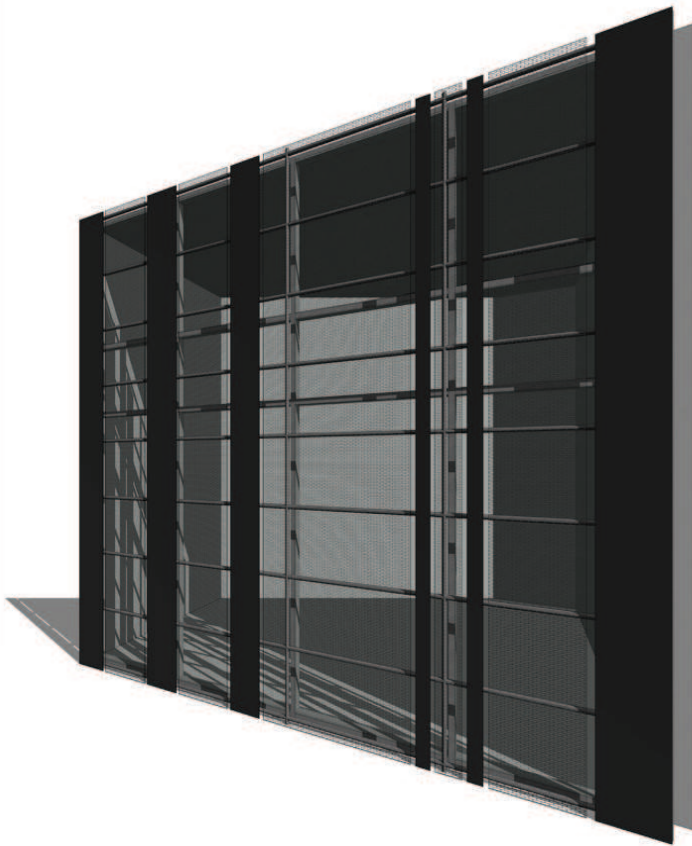


Transitional Spaces and Form

Spaces are intended to be transitional throughout the patient procession, however this should include the aesthetics of the building envelope as well. Patients frequently do not wish to be regarded as 'display pieces', set in a glass box. In keeping with the approach where the building should instill a sense of confidence in the patient, a heavier skin was selected which surrounds the primary patient spaces. This shell structure will ultimately be the driving force behind the exterior aesthetic.

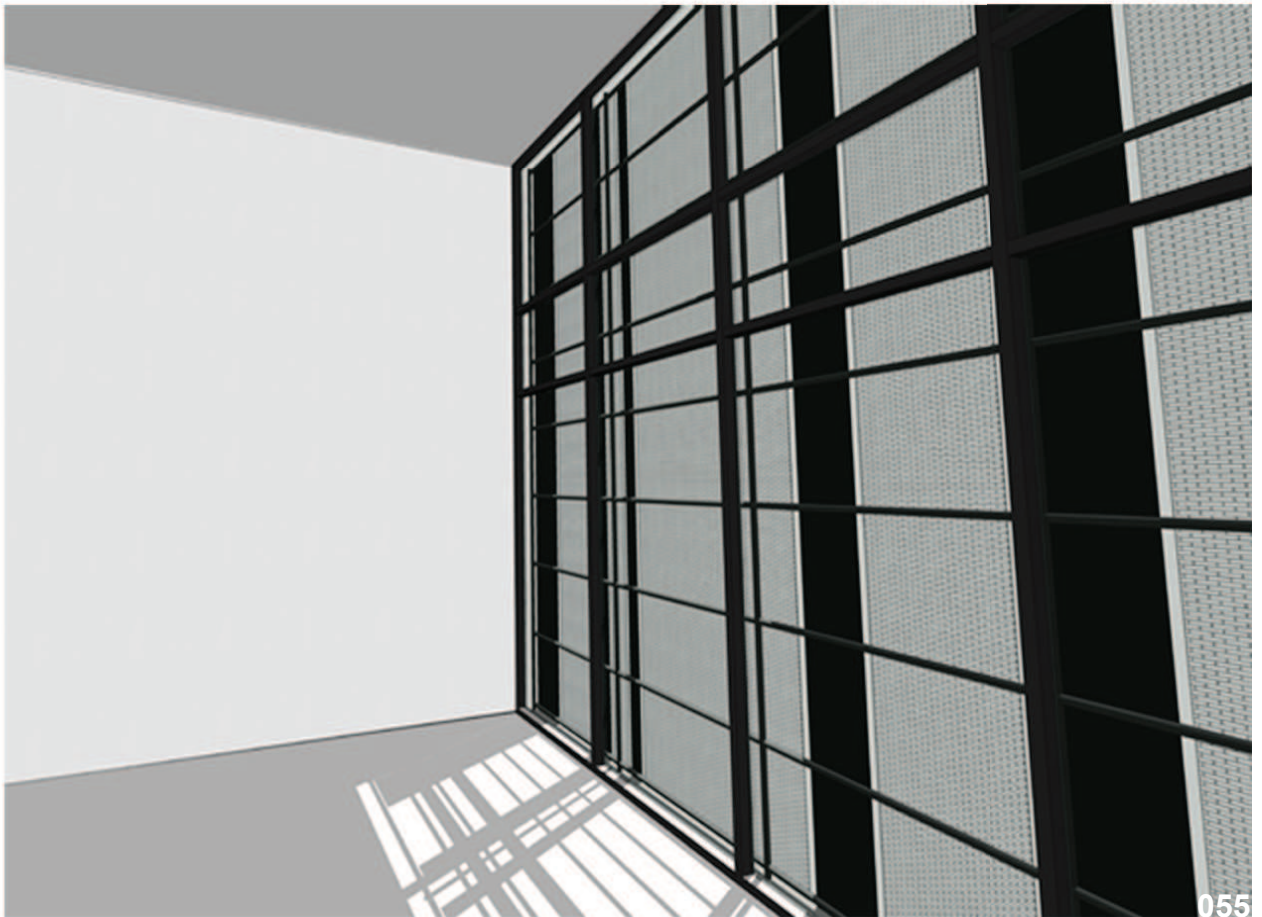






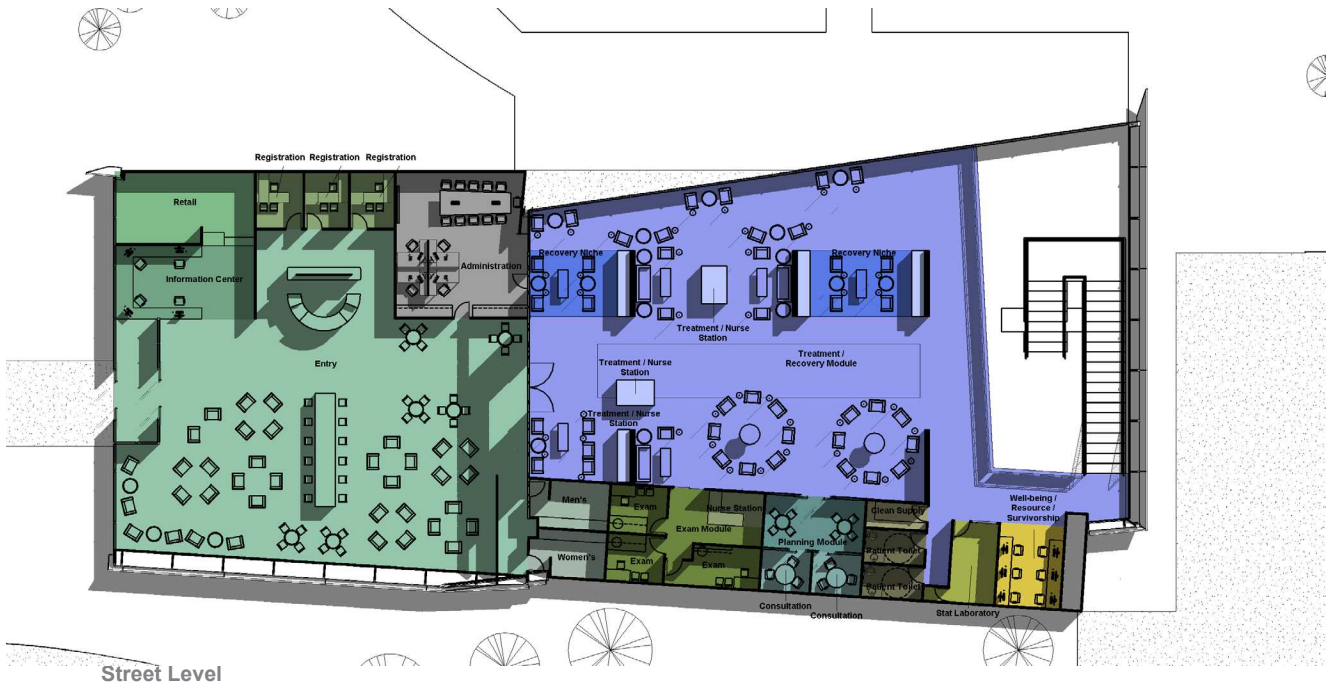
Exterior Screen

The intended exterior envelope of the building (at least at the patient entrance) will exhibit an exterior representation of the gravity of the subject matter. Interior views are skewed and the exterior is textured and heavy. From the building interior, however, the screen itself is skewed by the penetrating daylight, and the interior itself is transformed into something unexpected.



final design.

floor plans



Street Level



Sub Level

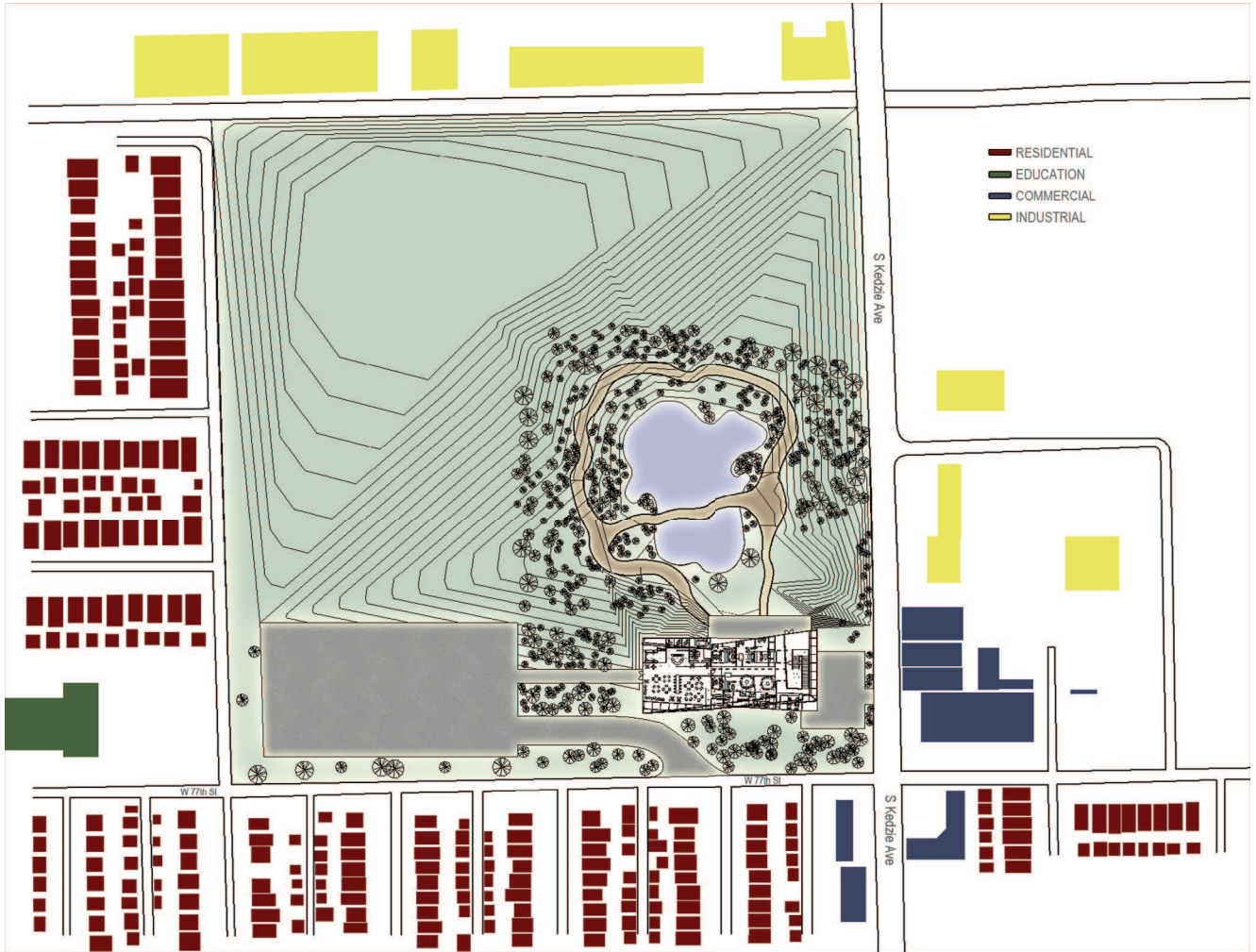
layout and circulation

The final design layout incorporated a two-story configuration. The street-level layout would include the primary Entrance and 'Patient Hub' spaces as intended for every patient to experience during every visit. The more equipment-intensive spaces such as surgical and radiology rooms would be on the sub-level, for a form where the broader patient experience is built on the foundation of the facility's technical delivery.

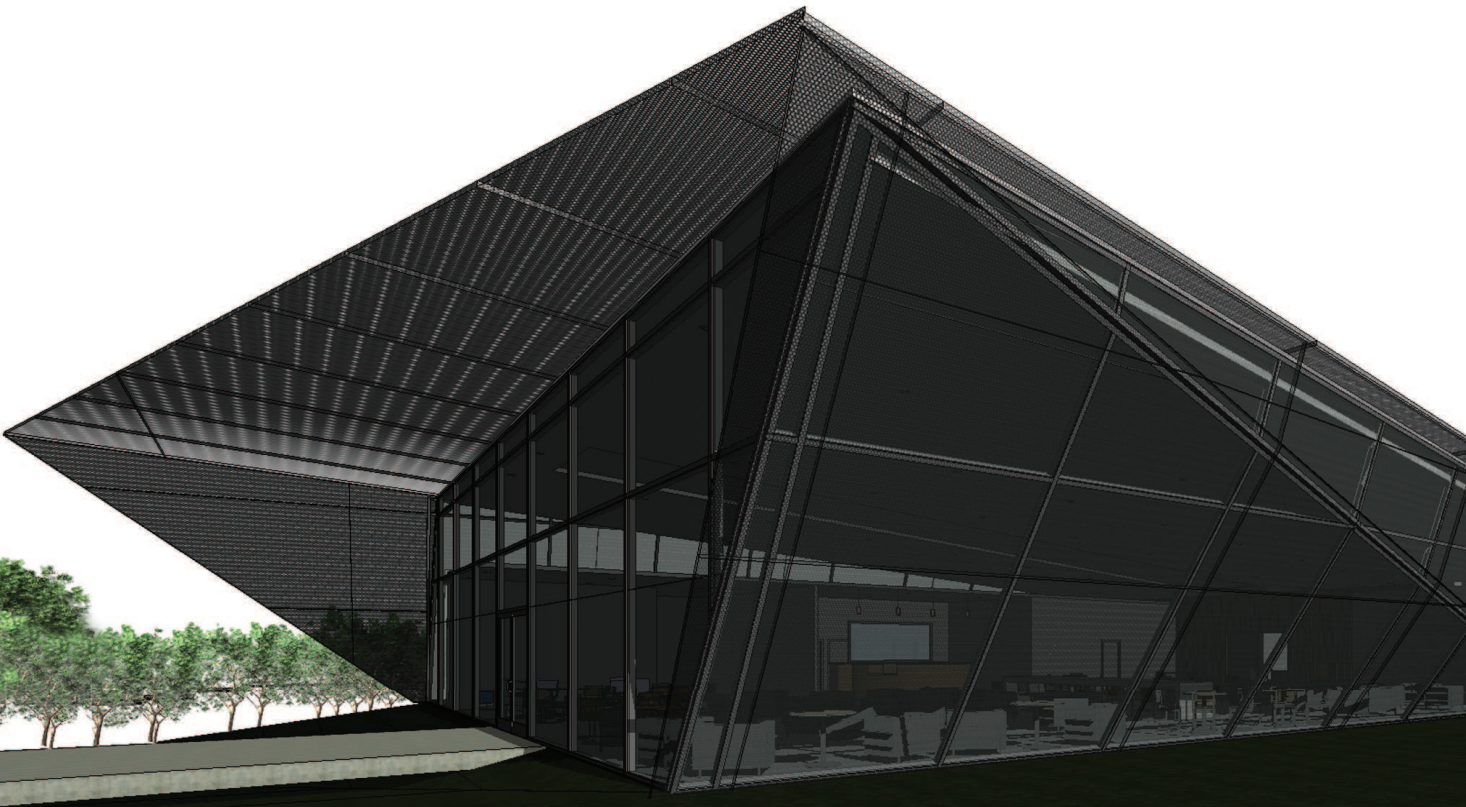
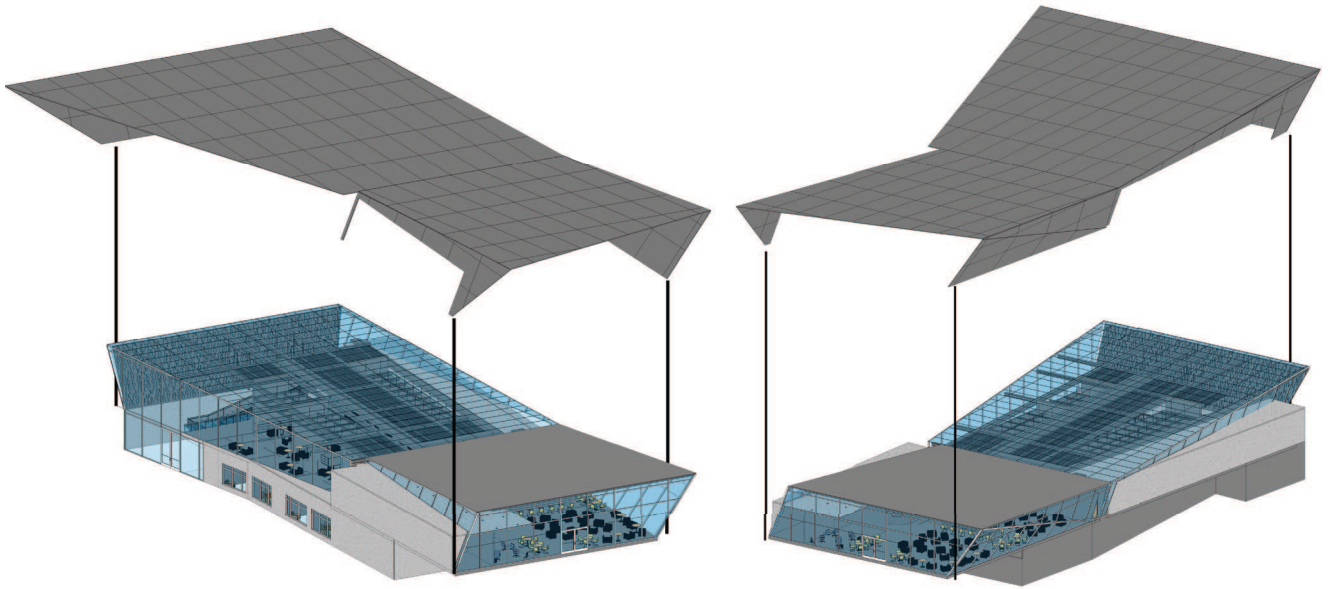
The northern facade will, while underground, open into the Jens Jensen-inspired landscape. As the patient enters the Patient Hub infusion and recovery area, subtle angular treatments open the space from the entry focal point. From here all technical functions are handled in an ancillary capacity on the perimeter of the building, both to allow views opening to the natural landscape and as not to impede the axial circulation spaces of the hub.



site layout



exterior shell structure





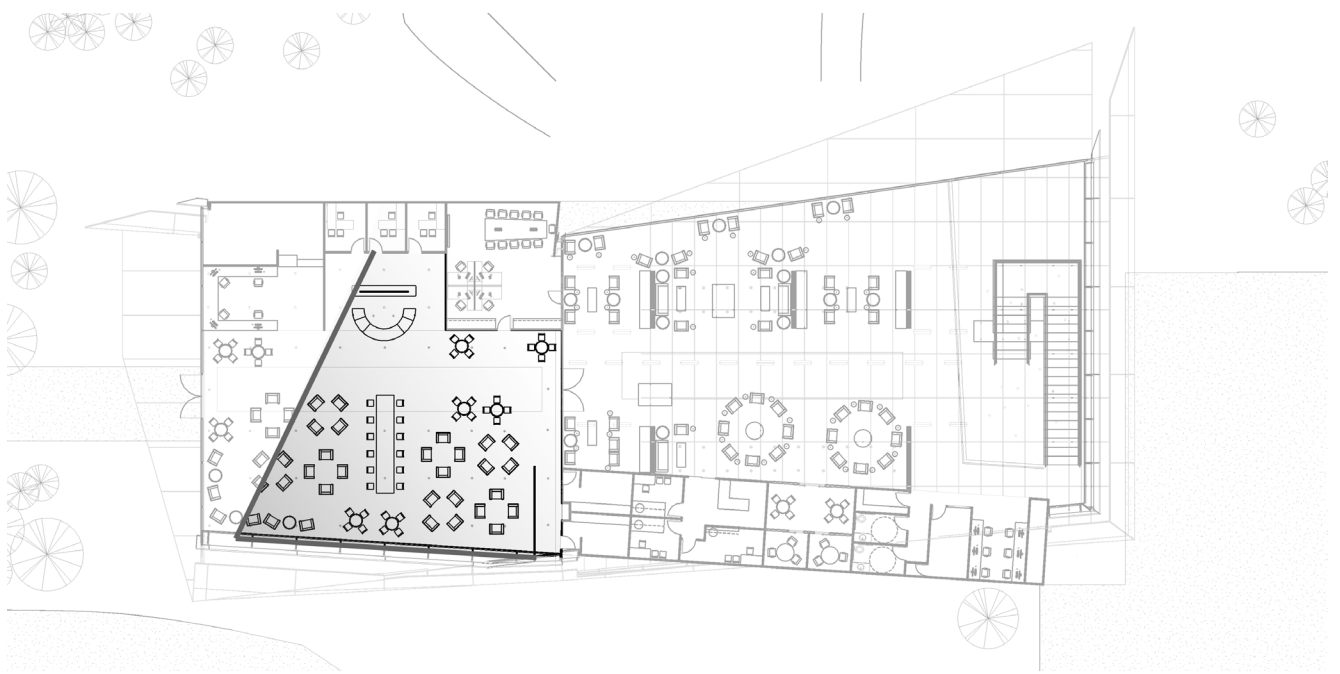




impression.

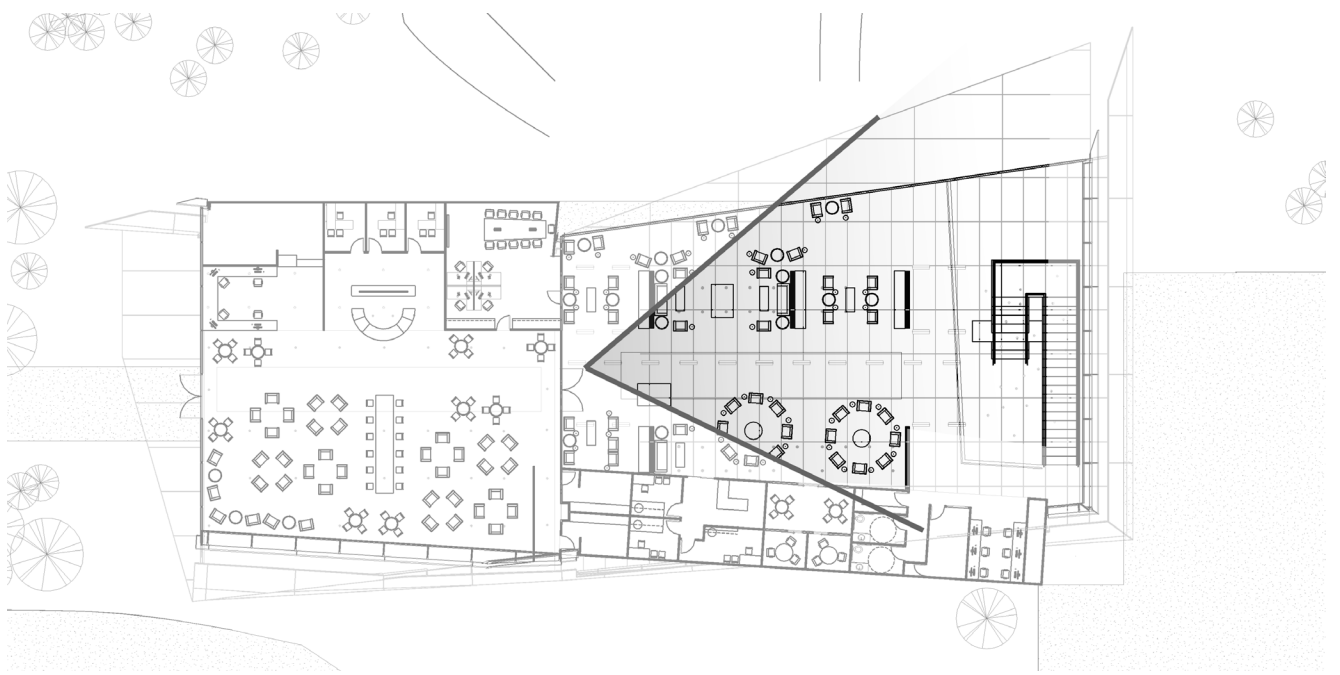
The final design is both an understanding that patient psychology is a fundamental aspect in care delivery which should not be ignored in care delivery and design, as well as a rejection that the approach must be based on attempts to emulate what would typically be associated with 'healing' and avoidance of the idea that 'pretty' architecture should only be in place as a means to distract patients from the weight of their situation. Rather, this weight is something that should be acknowledged as a means to instill confidence in the patient.

Emotional well-being and pure technical efficiency as each a means to accomplish patient recovery are not isolated concepts, but ones that are required to work in conjunction with one another in order to accomplish the same goal.



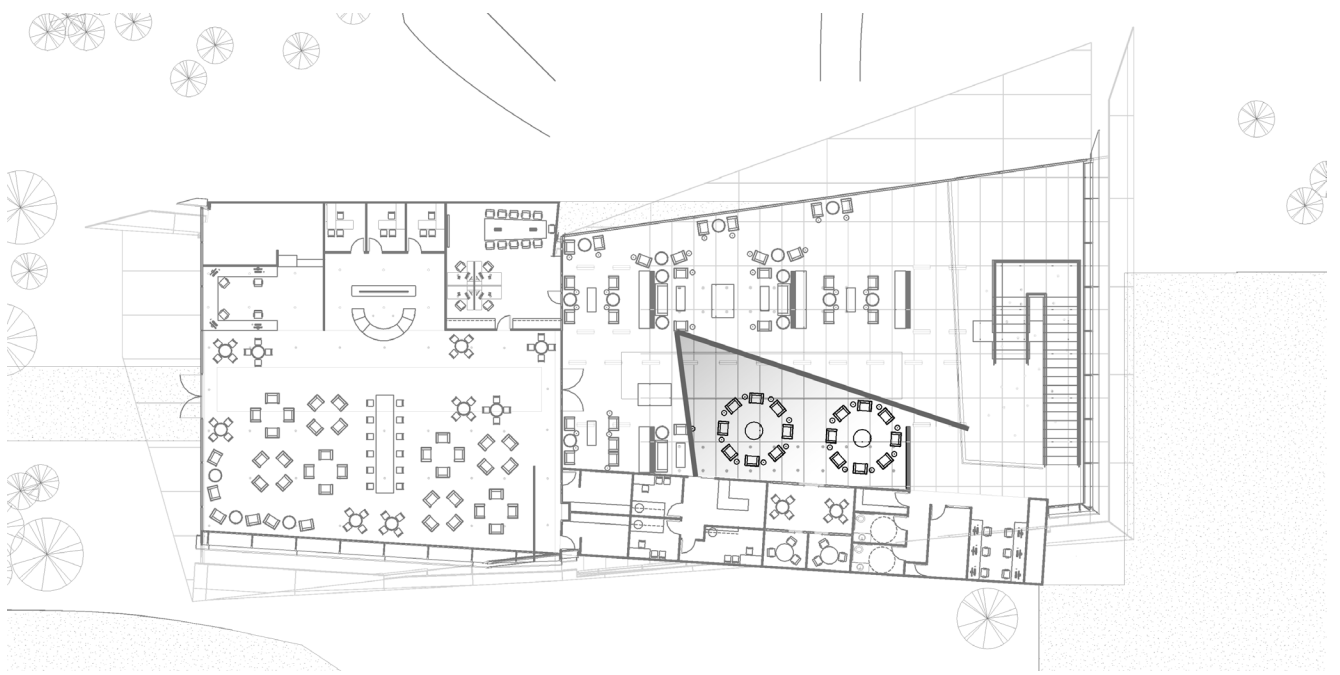


entry.



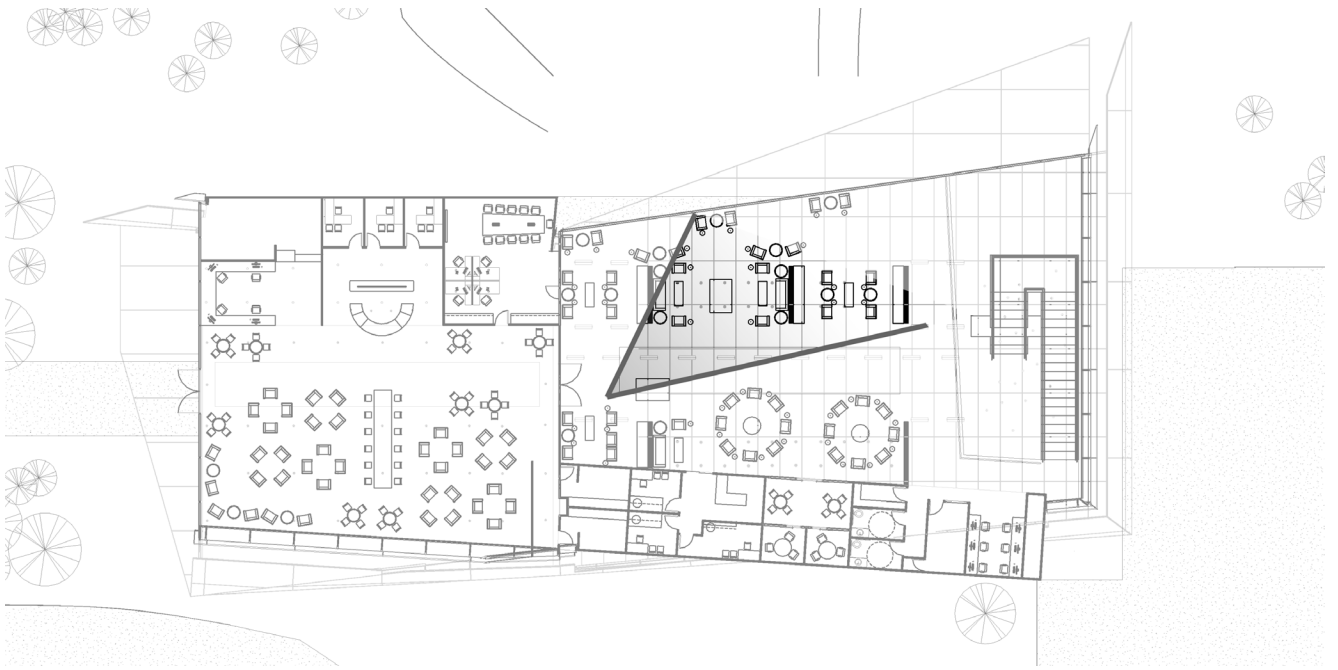


patient hub.





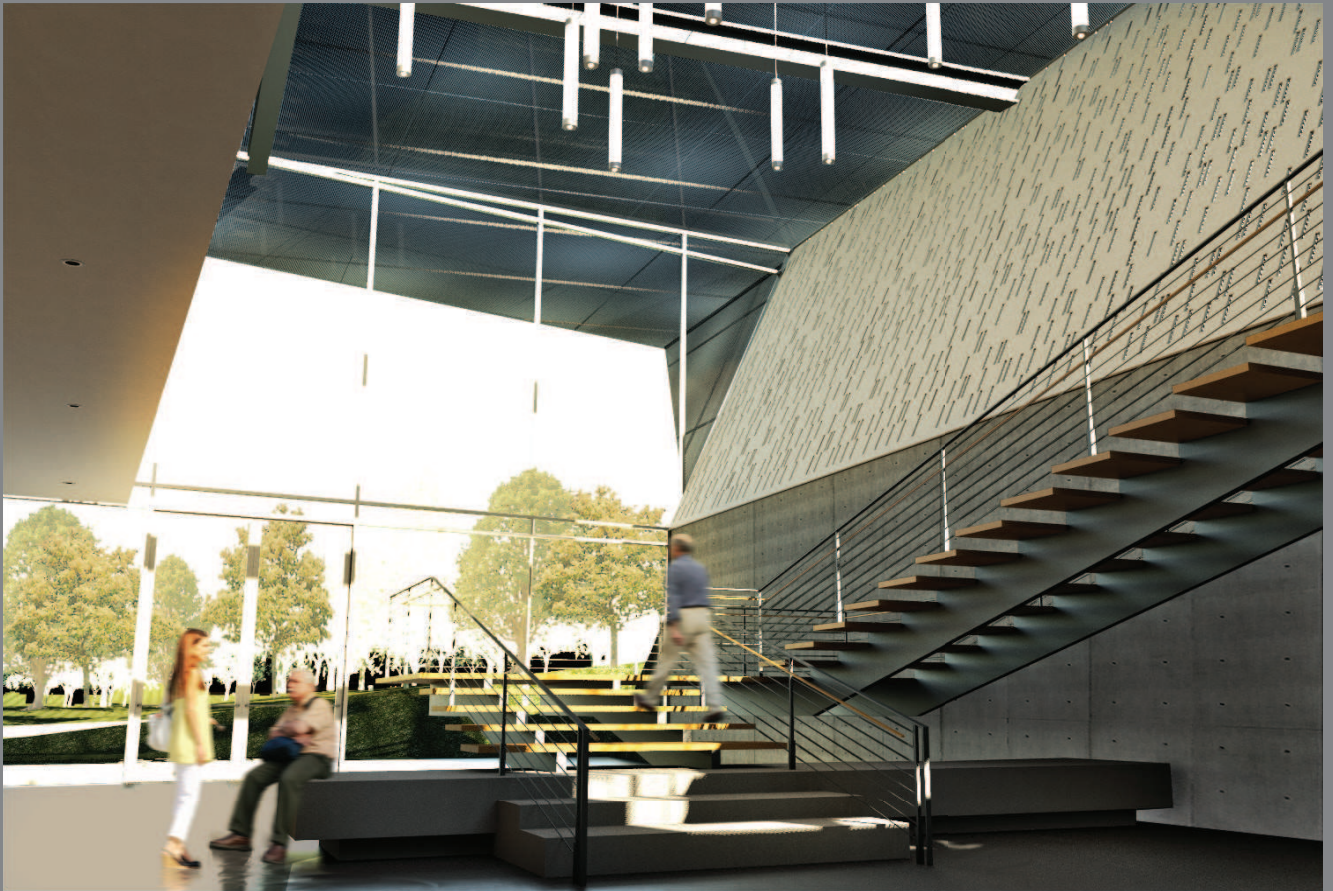
patient hub- south.



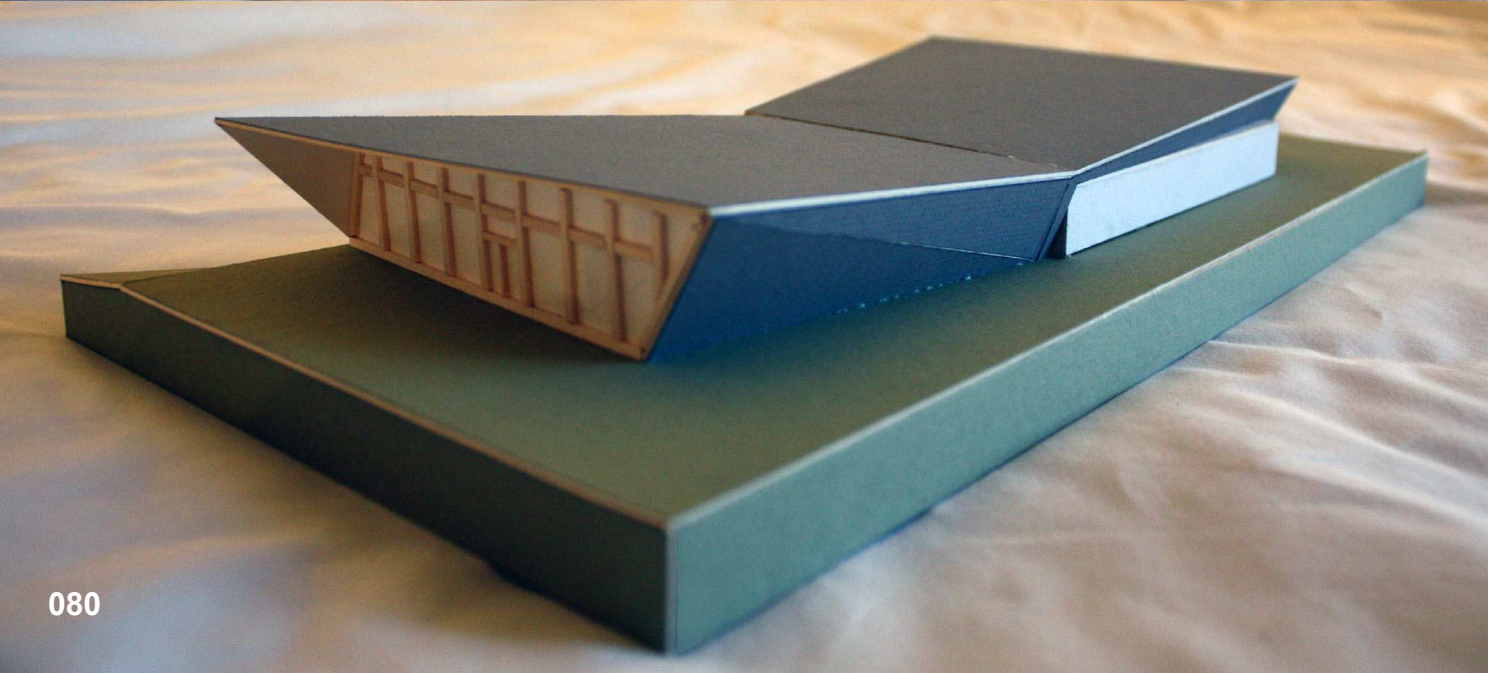
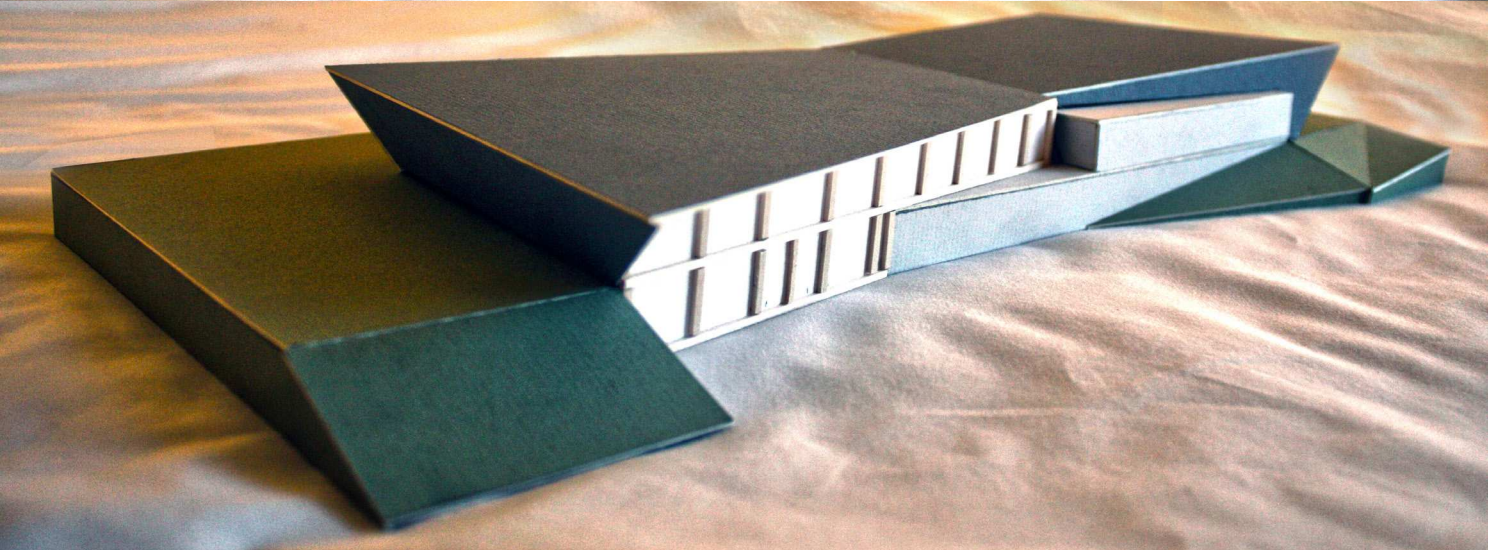
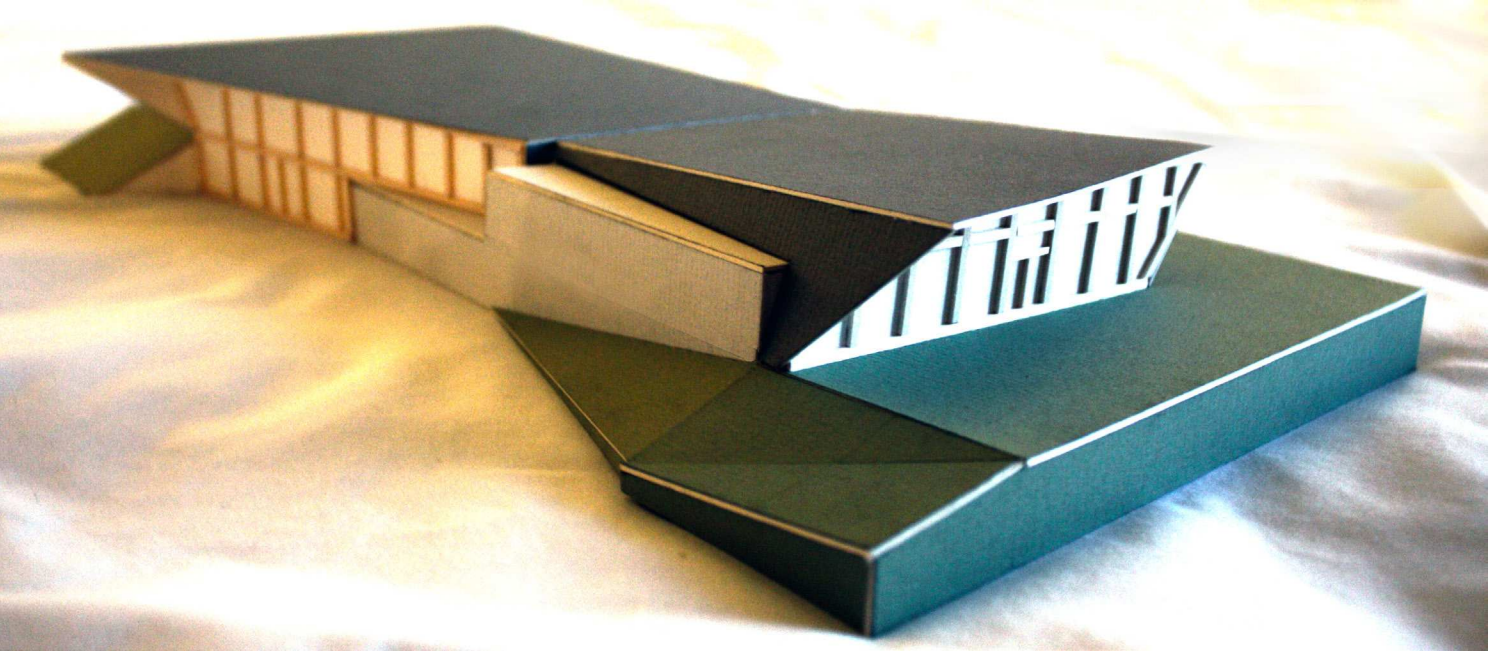


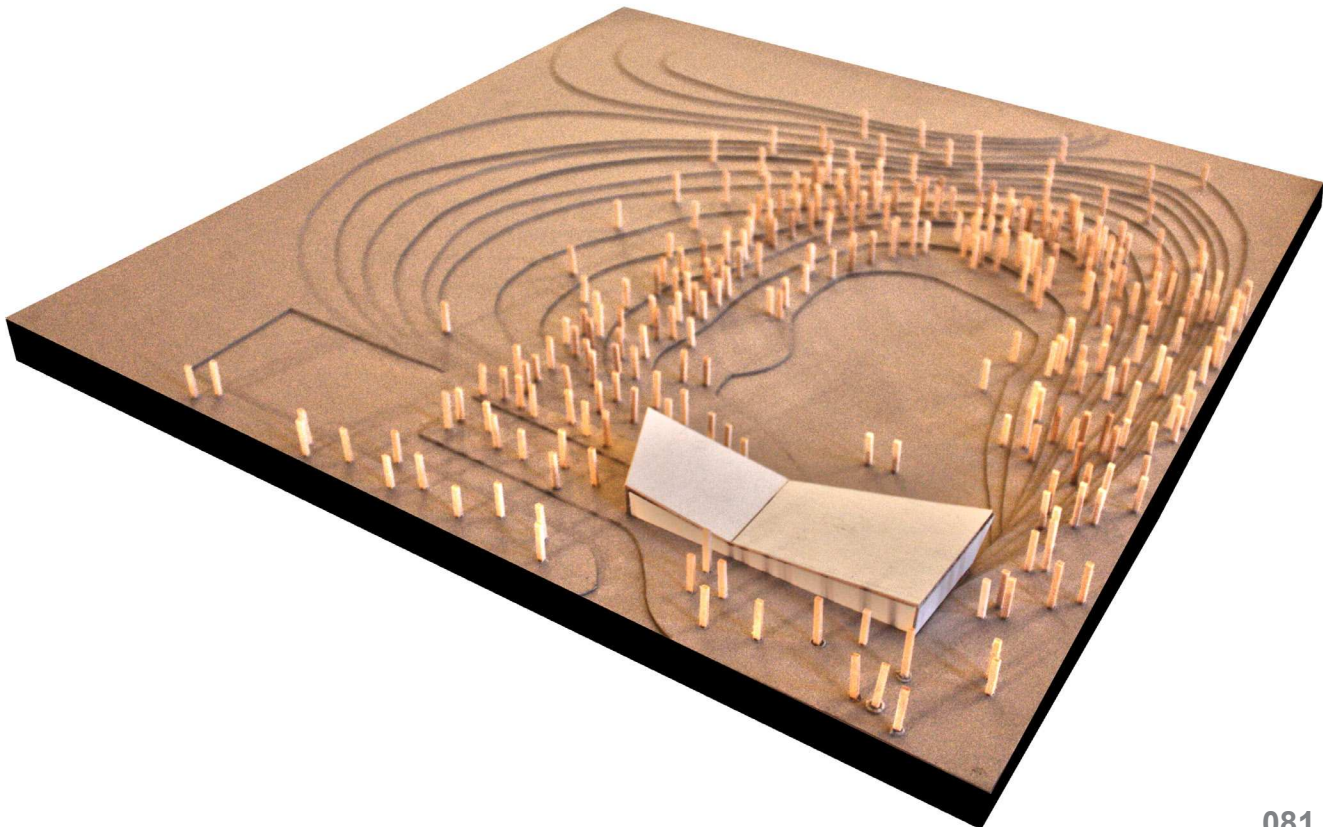
patient hub- north.





stairwell.





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