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ACCESSIBLE ARCHITECTURE

Creating Possibilities for Adults with Cerebral Palsy

By: Caitlin M. Mayo





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Creating Possibilities for Adults With Cerebral Palsy

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Special Thank You To:

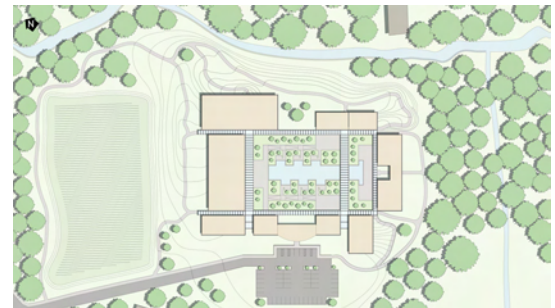
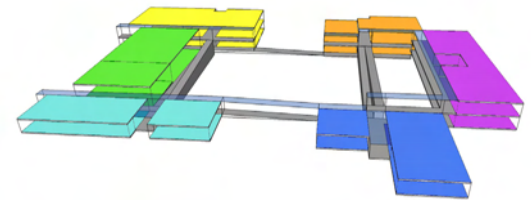
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1 Introduction



What makes an architectural experience memorable? Take for instance the Sistine Chapel; one is easily mesmerized by the extraordinary painting of Michelangelo Buonarroti. Another example is Mies van der Rohe's Barcelona pavilion which has become an icon of the Modern movement. These great works have been visited by generations of architectural patrons and tourists of every culture. The memorable experience goes far beyond just being there to see the architecture, it pertains to the feeling of being in those spaces and the knowledge of what makes them significant. Furthermore, this thesis poses three questions;

1. *How can an architectural experience change from person to person?*
2. *What makes a building memorable to someone who does not see it from the position that the designer intended?*
3. *How can the experience be altered with different architectural approaches?*



Problem Statement



As architects everything we design is shaped with our clients or the users in mind. Most often we design by imaging ourselves standing in the space we are trying to create. From there we generate a place we feel would be desirable to the client. At what point do we consider accessibility for those who cannot experience the building like everyone else?

All too often people who have a disability¹ are neglected or forgotten during the design phase of a building. As a result their needs become an afterthought, included only to meet minimal legal ADA requirements. What would change if the intention of the design was to create a building to fit the needs of someone with physical impairments²? Life is already difficult enough for people with disabilities; everyday can be an obstacle that deals with accessibility, discrimination, as well as continuous frustration and exhaustion from trying to keep up with normal daily activities. Is it possible that the creation of a facility for the disabled and the handicapped³ could help reduce the obstacles they face and enable them to live with less aggravation?

Cerebral palsy (CP) is one of the disorders on a list of conditions that can affect a person's ability to complete daily activities. Statistics say that five in two-thousand infants are born with congenital cerebral palsy⁴. Despite advances in obstetrical and pediatric care this statistic has recently increased over the years, especially in the United States and other industrialized counties. CP is a collection

-
- 1 Disability- denotes restricted ability to perform normal activities of daily living.
 - 2 Impairment- means a deviations from the normal.
 - 3 Handicapped- means being unable to achieve an age-appropriate roles in society
 - 4 Congenial cerebral palsy- cerebral palsy that exists before birth

of motor disorders resulting from damage to the brain that occurs before, during or after birth. The damage affects the motor system and can result in poor coordination, poor balance and abnormal movement patterns. Cerebral palsy may also come with a variety of other health problems; most of which are related to the brain injury. These issues can include a variety of neurological, orthopedic, and secondary problems.

Neurological Problems:

mental retardation
learning disabilities
attention deficit-hyperactivity disorder
seizure disorder (epilepsy)
visual impairment
swallowing difficulties
speech impairment (dysarthria)
hearing loss

Orthopedic Problems:

scoliosis
hip dislocation
contractures of joints
discrepancy in leg length

Secondary Problems:

poor growth
poor nutrition
aspiration pneumonia
upper airway obstruction
gastroesophageal reflux
constipation
hernia
communication disorder
sleeping disorders
drooling
depression
frequent bone fractures
tooth decay and gum disease
bladder control problems

There are several different variations of this disorder, they are typically classified based on the type of movement and the body parts affected. The following are classifications based on movement:

By type of movement:

Spastic: *too much muscle tone*

Athetoid: *no muscle control*

Hypotonic: *decreased muscle tone (not enough tone)*

Ataxis: *balance and coordination problems*

Mixed: *mixture of two or more of the above*

The following are classifications based on body parts:

By type of body parts:

Hemiplegia: is cerebral palsy that involves one arm and one leg on the same side of the body

Diplegia: primarily involves both legs

Quadriplegia: refers to a pattern involving all four extremities as well as trunk and neck muscles.

(Generally someone who has quadriplegia does not walk independent.)

A high school senior generally has two options upon receiving his or her diploma. One option is to attend college to further their education before entering the workforce. The other option is to begin work as soon as graduation is done. Either way most young adults yearn for independence and have an opportunity to pursue their own goals while creating a lifestyle that is their own. When a person with cerebral palsy finishes high school they have limited options that depend primarily on the severity of their impairments and their ability to do daily activities without assistance. Unlike the average graduating senior, they do not typically have the option to decide their future. Even cases with the hemiplegia and limited/to no neurological problems have to deal with discrimination from specific career paths. Those who have diplegia or quadriplegia have even less options to pursue after high school. In reality there are very few places where a person with their disabilities can continue to thrive. Often parents and/or care givers are left with no choice but to stay home or hire someone to assist these young adults with day to day activities.

Project ³ Proposal



ARCHITECTURE HAS THE ABILITY TO BREAK THE BARRIERS OF ACCESSIBILITY.

Architects can remove the obstacles that people with disabilities face everyday. With the combined effort of architects and clients, designs can be created for everyone to experience equally. Making a building accessible should be more than just meeting minimal ADA requirements. The goal of this proposal is to establish an accessible design that people with physical impairments can experience without limitation. A Center for Adults with Cerebral Palsy will solve two major issues;

- 1. Accessibility in the world of architecture**
- 2. Provide a place where disabilities can become ABILITIES.**

The center will accommodate the physical impairments of cerebral palsy and allow clients the opportunity to progress in life. The project will put accessibility first, and create a place where clients can participate in a wide range of activities to learn, grow and socialize. In additions, the facility will provide a variety of therapy options and optional housing for those who wish to become more independent.



Furthermore, this project will investigate how people with disabilities can be aided in their daily routine through architecture. The intention is to create a place where someone with a physical impairment can function successfully with daily activities. The facility aims to serve as a safe haven for the disabled, a place where they can continue to grow and be active. The Center will become a place where people's disabilities will no longer diminish the opportunities presented to them.

Two projects that have helped shape this vision of ACCESSIBLE ARCHITECTURE are The Indian Community School of Milwaukee by Antoine Predock, and Maison à Bordeaux by Rem Koolhaas.

The architect, of The Indian Community School of Milwaukee focused on giving better accessibility to people in wheelchairs. They produced wider circulation areas and where floor level changes occur, these areas get celebrated as special connecting nodes with ramps and bright natural daylight that are used as gathering areas, places for storytelling, and small teaching spaces.

Time Magazine named Rem Koolhaas' Maison à Bordeaux "Best Design of 1998." The house was designed to accommodate a man who was confined to a wheel chair after an automobile accident.



INDIAN COMMUNITY SCHOOL OF MILWAUKEE, ANTOINE PREDOCK



Like the Indian Community School of Milwaukee, circulation will play an important role in designing for wheel chair access. Transitions between level changes are an integral part of Predock's design and have evolved into a strong theme for this project proposal. As a result, ramping will not only be the primary form vertical circulation throughout the building, it will also become a transitions space that creates a special experience as clients pass from activity to activity.



The innovative design of Koolhaas brings into question a different approach in making a place accessible. In the same way that the wheelchair can be interpreted as an extension of the body, the elevator platform in the Bordeaux House, is an indispensable part of the handicapped client. This concept opens the doors to new and exciting ideas for this ACCESSIBLE project.

BORDEAUX HOUSE, REM KOOLHAAS

4 Precedent Analysis



Relevant precedents were analyzed base on the their relationship to the theme of this project.

Two classification of precedents are included:



Architectural Precedents:

1. BRADLEY HOSPITAL
East Providence, RI



2. CROTCHED MOUNTAIN REHABILITATION CENTER
Greenfield, NH



3. DISCOVERY CENTER
Harris, NY

Conceptual Precedents:



4. TRIANGLE
Malden, MA

Bradley Hospital

Location: East Providence, RI
Architects: S/L/A/M Collaborative
Date Completed: 2009
Size: 52,000 SF- New/ 10,000 SF - Reno
Project Cost: \$31.1 million



Bradley Hospital is the nation's first psychiatric hospital devoted exclusively to children and adolescents. A Lifespan partner and a teaching hospital for Brown Medical School, Bradley Hospital has established itself as the national center for training and research in child and adolescent psychiatry. Bradley Hospital is a private, not-for-profit hospital and also operates the Bradley School, a fully certified special education school.



The Children's Inpatient Program and CADD share the first floor, with each unit serving 15 patients each. The second floor is occupied by the Adolescent Inpatient Program, which has been expanded from 20 to 30 beds to meet the program's needs and growing demand for services.

Child and Adolescent Inpatient Programs

- For children between the ages of 2 and 18 who suffer from serious disorders and are in need of short-term stabilization, assessment and treatment.

The Center for Autism and Developmental Disabilities (CADD)

- An inpatient service for children with serious behavioral disorders and developmental disabilities.

"Every detail in the design for this new building – from décor to layout to color schemes – was based on input from physicians, nurses and parents. We believe it offers a warm, compassionate and therapeutic environment for our patients and their families."

-Henry T. Sachs, MD, medical director for Bradley Hospital.

Comforting shades of yellows, blues and greens are used to reflect the concepts of nature and the coastline. The units also feature spacious great rooms and sun rooms with views of Narragansett Bay that were designed to better accommodate therapeutic group activities and make family visits more comfortable and relaxing. An enclosed central courtyard and gazebo also provides a beautiful and safe place for children to enjoy the outdoors and visit with their families.



Crotched Mountain Rehabilitation Center

Location: Greenfield, NH
Architects: Monahon Architects
Size: 400 acre Campus

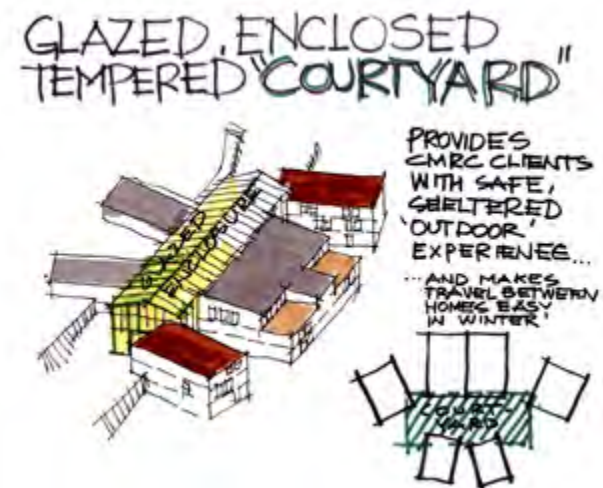
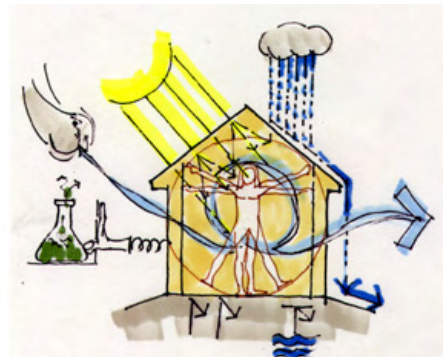
CMRC is a private, non-profit organization that provides educational, therapeutic, and residential services for physically and developmentally challenged children and young adults. CMRC also provides residential and day support for adults and children with severe brain injuries living in southern NH and northern MA. Its facilities include two hospitals, administrative offices, preparatory school, auditorium, indoor pool, gym, guest houses, staff housing, students' group homes, and combined student/staff residence.

The countryside of NH where CMRC is located has the unique ability to inspire awe while providing the highest quality educational, vocational, therapeutic and recreational opportunities. The goal at CMRC is to enable as many children as possible to learn to live and work independently as possible.



CMRC addresses 5 main issues:

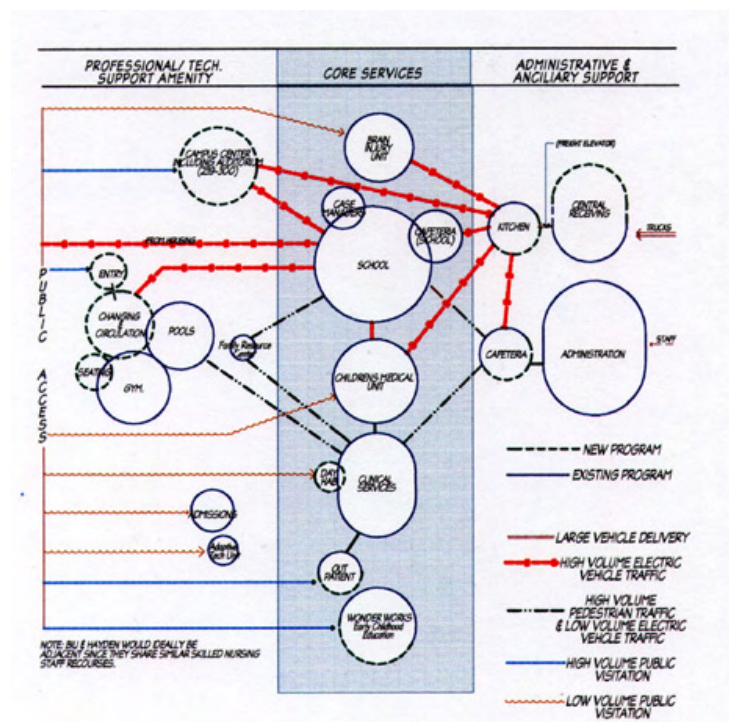
1. Accessibility
2. Relationships
3. Community Connection
4. Sustainability
5. Cost



The Crotched Mountain School offers a joyful place to learn for children ages 5-22 who have physical disabilities, developmental disabilities and/or emotional disabilities. Students in grades K-12 thrive with the individualized educational and therapeutic services they receive throughout the year.

This school allows children to make friends and excel. They experience an environment of complete acceptance, respect and dignity from our staff and from their peers. Students who have been overlooked in other school settings blossom here. Students are actively engaged in organized activities and in exploring personal interests after school and on weekends. Activities are designed to reinforce skills, meet sensory needs, build self-esteem and provide social interaction. Many students have special health care needs that require attention during the school day and after school hours. Depending on the level of need, students access expert medical care through our school nurse, health center and hospital.

The residential programs are developed around the unique needs and interests of each child. Each day is seen as an opportunity for students to grow as a person, learn new skills, and experience different aspects of home and community life. From the moment a



student enters Crotched Mountain School, their goal is for all students to participate fully in life with dignity, respect and the right to make choices that determine their own future with the fewest restrictions possible.





The Skills Center at Crotched Mountain provides students with vocational education, work exposure and career development. Students can learn valuable skills, such as task completion and teamwork, in a genuine workplace environment that supports the management of our campus. Additional vocational opportunities are available to students through local businesses, community volunteer work and informational workshops at Crotched Mountain.

Since 1995, Crotched Mountain has partnered with school districts throughout New Hampshire and neighboring states to support students with neurological, genetic, and behavioral conditions. This includes those with sensory impairments (blind, visually impaired, deaf, hard of hearing, or deaf-blind).

In addition Sunnyfield Farm, a 60 acre working farm, is currently owned and operated by Crotched Mountain. It is designed to support the vocational and social needs of people with disabilities, enabling them to form natural relationships with individuals from the larger community.

Patrick H. Dollard Health Center

Location: Harris, NY
Architects: Guenther 5 Architects
Date Completed: March 2003
Size: 28,300 sq. feet
Project Cost: \$ 5.6 Million
Building type: Health care, Special needs housing

Located in a Rural setting The Patrick H. Dollard Health Center is U.S. Green Building Council LEED-NC, v.2/v.2.1--Level: Certified. (27 points)



For fifty years the Center for Discovery has created a safe, caring environment to support the intellectual, social, and recreational development of its community. Its 250 full-time residents require constant and specialized medical care, provided at the new Patrick H. Dollard Health Center. This Article 28 diagnostic and treatment facility serves those with profound neurological and developmental impairments who need primary and specialty medical and dental care.

This is the first licensed medical facility for the Center, which includes a residential school for children and an outpatient facility for adults, and also the first in New York State to implement green building standards that meet Department of Health requirements.



This newly constructed, 27,000 square-foot diagnostic and treatment facility in rural New York is part of a 350-acre campus that serves children and adults with profound neurological and developmental impairments. This is the first licensed medical facility built by the Center for Discovery, a non-profit agency and the largest employer in Sullivan County. The new center offers comprehensive outpatient primary/specialty medical and dental services to residents of the county and its surrounding area. The architects are awaiting LEED certification based on the building's siting, its use of renewable materials (and lack of toxic materials, including vinyl), and its geothermal heating and cooling system.

The site was a brownfield, specifically an abandoned chicken farm with coops, crates, related equipment, and other site infractions. The center integrates agriculture into its programming via an on-site working farm (dairy and food) and therapeutic horse pasture. These, along with the new diagnostic and treatment clinic, are open amenities that encourage hands-on training to all people regardless of their physical limitations. A partnership program defines the treatment facility so that patients and locals interface and work together.

The building is shaped as a rectangle, split along the long axis, to form four quadrants with two levels each. Staff and back-office areas are invisible and inaccessible to visitors and the center's patients. At each end of the building and at its major intersections natural light emanates from double-height ceilings and window walls so that the space feels open and simple. This project ensures that



basic health needs in the community are met, and does so by raising awareness of the links between medical frailties and ecological health.

Environmental Aspects

- Green measures safeguard already fragile health and build a foundation for high-performance healing environments.
- The building is 48% more efficient than a building minimally compliant with ASHRAE 90.1 standards due to a ground-source heat-pump system; a tight, high-performance envelope; extensive daylighting; and efficient products and equipment.
- A staggered, narrow building footprint and bold fenestration pattern allow public spaces the benefit of daylighting during normal operating hours and reduce artificial lighting use. Structural shading devices and a reflective metal roof are expected to reduce heat gain and air conditioning demands during the summer.
- In selecting this site, the Center avoided prime agricultural land, opting instead to infill on a previously abandoned industrial agricultural site. A bucolic pedestrian path system, open pasture, native plants, and farming fields occupy the site.
- Environmental health goals that apply directly to healthcare operations were considered at a structural level. Lifecycle assessments for finish materials and furnishings considered downstream health effects in addition to cost and durability.



Owner & Occupancy

Owned and occupied by The Center for Discovery, Corporation, nonprofit

Typically occupied by 34 people, 40 hours per person per week; and 40 visitors per week, 3 hours per visitor per week

Building Program

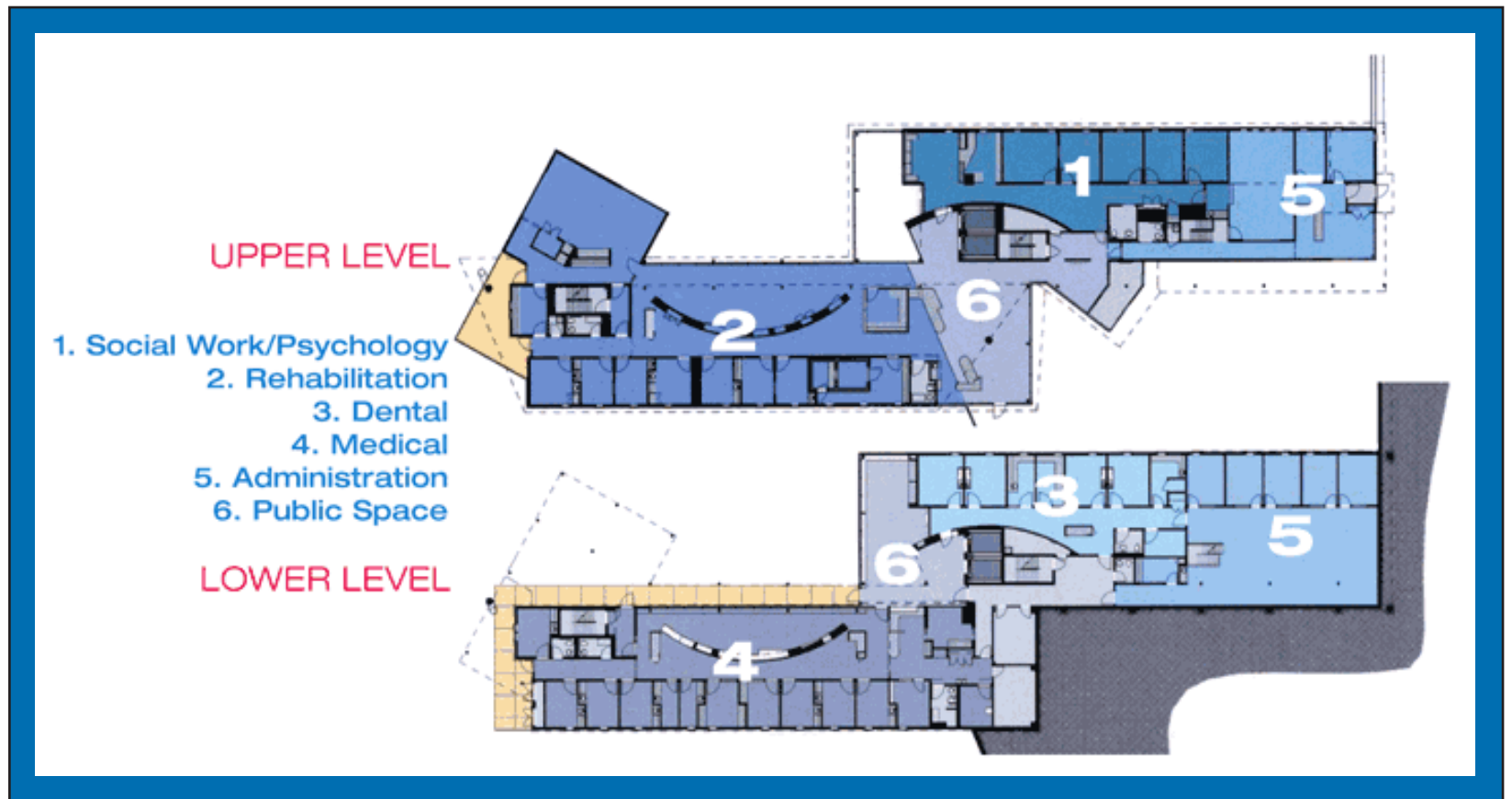
Indoor Spaces:

Child care, Circulation, Other, Medical treatment, Lobby/reception, Electrical systems, Office, Public assembly, Conference, Mechanical systems, Restrooms

Outdoor Spaces:

Drives/roadway, Parking, Shade structures/outdoor rooms, Other, Interpretive landscape, Pedestrian/non-motorized vehicle path, Wildlife habitat, Restored landscape





Trianlge

Location: Malden, MA
website: www.triangle-inc.org
phone: 781-322-0400

Trianlge's Mission Statement:

Through support, challenge and opportunity, Triangle empowers people with disabilities and their families to enjoy rich, fulfilling lives. We are committed to helping the world realize that we are all people with ability.



Triangle was founded in 1971 by a small group of individuals who believed that people with disabilities could learn to lead more independent and dignified lives. It began serving five people with developmental disabilities, and grew over the next decade to provide employment training for over 80 individuals and opened two community residences in Malden. Today Triangle serves over three thousand people from 170 communities throughout Southern New England. It operates six employment service centers and ten residences in Malden, Danvers, Beverly, Braintree, Brockton, Lynn, Reading and Waltham.

Services include an award-winning School-to-Career program for young adults with disabilities, an array of career planning services for the deaf, comprehensive employment training and planning services for individuals with disabilities, an award-winning television show called Ablevision, a medical manufacturing facility, a contract fulfillment center and café that are staffed by trainees and a robust set of daytime activities for all of the people we serve.



The national award-winning School-to-Career Project provides students with the individualized support they need to pursue and achieve their career and personal goals. We currently partner with ten public schools in order to help students transition successfully from education to employment.

“80% of young adults with disabilities who don’t have job experience before they graduate from high school will never secure employment. -- 100% of Triangle’s School-to-Career Project graduates are pursuing their goals and 36% are actively employed in the community.”



Mentoring

Triangle matches students with adult and peer mentors who encourage the students to pursue their career plan. Mentors provide the encouragement, modeling and challenge that our students need to succeed.

Skill Testing and Training

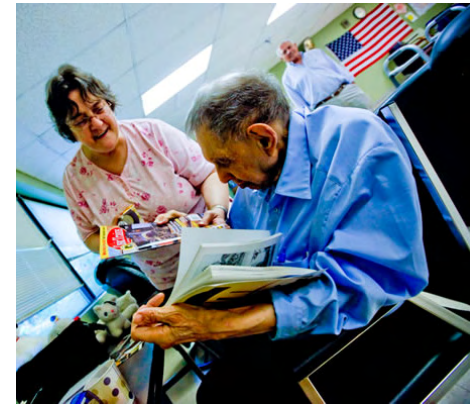
Every student completes two weeks of basic skill testing in areas like money handling, data entry and filing that helps them identify their current skills and effectively plan for future skill development. The results of these introductory tests help shape the class schedule and on-the-job training sessions so that they reflect each student’s skill level and interest. Throughout each session students also participate in career competency classes that focus on developing the time management, listening and teamwork skills that are so essential to keeping a job.

On-the-Job Training and Job Shadowing

Students have many opportunities to explore and try out different jobs. Hands-on work experiences at local businesses give students a chance to learn new skills and see those skills modeled by company employees. Behind-the-scenes employment tours give students an opportunity to evaluate different work environments for compatibility and style. Hands-on job training and employment tours take place at companies like Bank of America, The Clarks Companies, N.A., Citizens Bank, Youville Hospital and Rehabilitation Center, Sheraton Hotels, New England Coffee.

Clear Paths to Future Success

After graduation the School-to-Career staff reports on the student's employment strengths and career interests. Graduates are also offered additional supports they might need - such as internship opportunities, career placement services or in-depth career assessments – in order to achieve their career and personal goals.



5 Program Outline



The Program will be designed specifically for the disabled user. The objective will be to create spaces that are fully accessible to each of the clients. The breakdown of the program will include:

Housing ● ● ● ● ● ● ● 12,500 SF

Administration ● ● ● ● ● ● 5,900SF

Education Facilities ● ● ● ● 5,600 SF

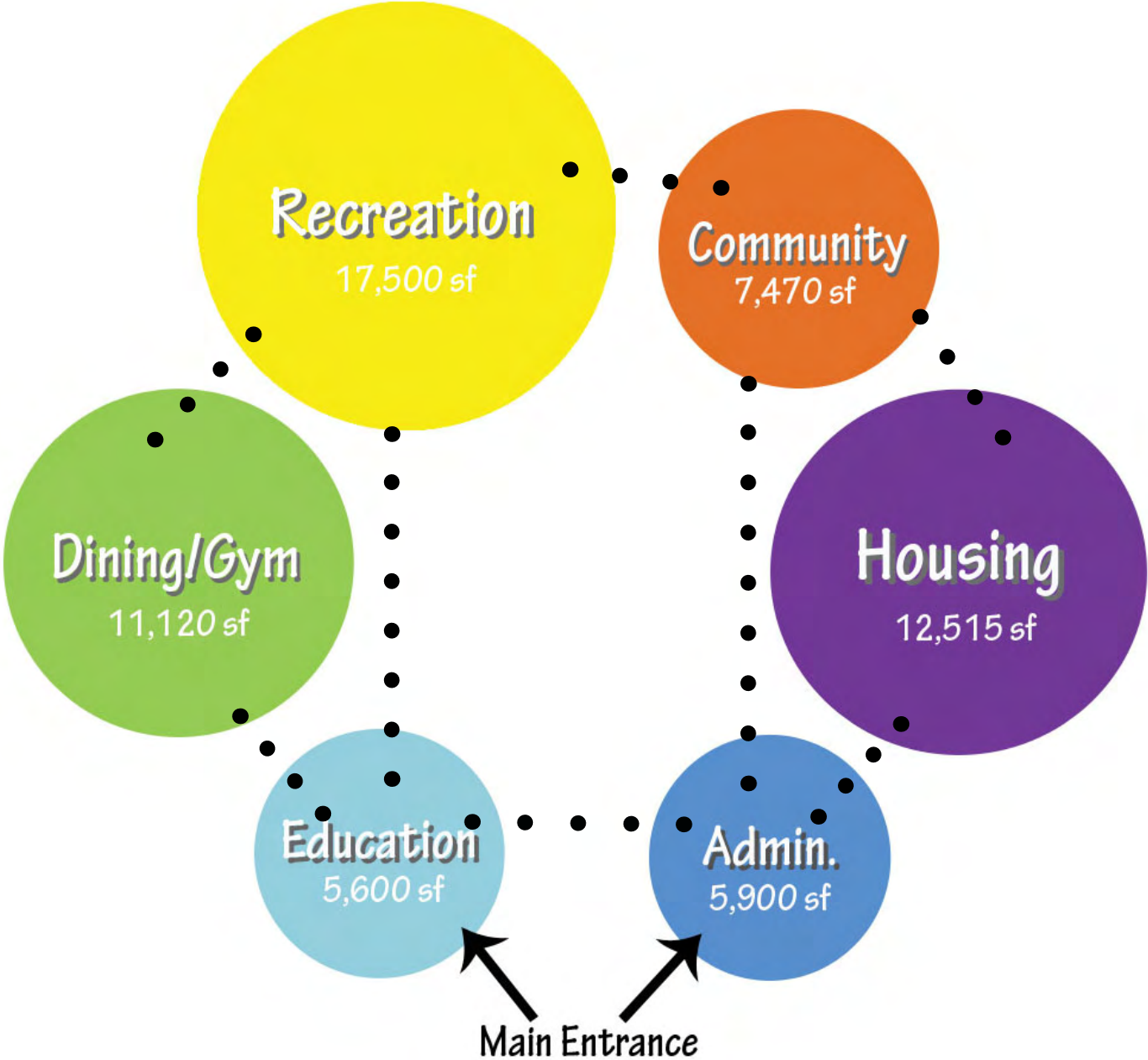
Dining/Gymnasium ● ● ● ● 11,120 SF

Recreation Facilities ● ● ● ● 17,500 SF

Communal Areas ● ● ● ● ● 7,470 SF

Total Net Area 60,090 SF

Program Relationship Diagram



Based on research of program use it is essential that certain relationships exist:

Main Entrance should be directly connected to both Education as well as the Administration facilities.

- This is primarily for security , all visitors will pass by a receptionist before entering the facilities.
- In addition, this also gives a separation of entry for day patients and full time residence.
- Locating the main entrance near both education and administration also allows these program elements access to one another.

Education must have access to the Dining area, the Gymnasium and the Recreation facilities.

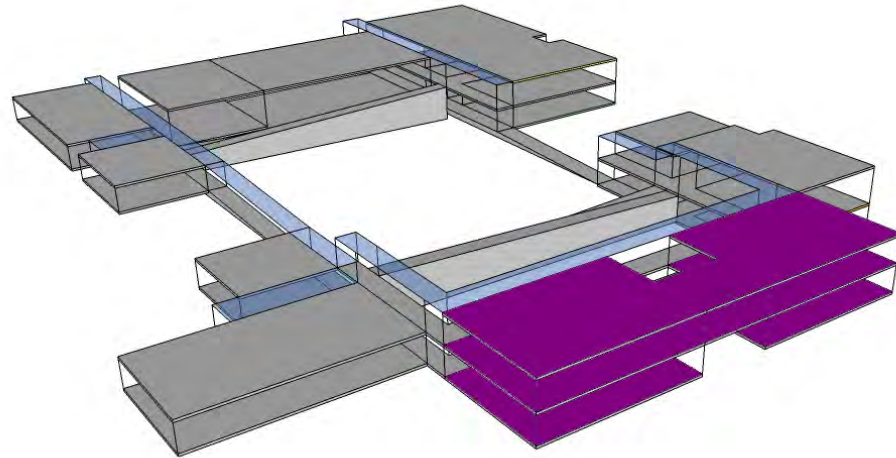
- Each of these facilities will be used primarily during the day.
- Its important to have these facilities farthest away from housing because it creates a separation from the area where patients sleep from where they spend there day. (This relationship has significant psychological effect on people, it has been shown that it can create motivation to be productive and live a happy and fulfilling life.)
- Education facilities also host to a nurses station so it is imperative that nurse have quick access to all of the day facilities. Housing must have access to the Communal areas and Administration facilities.
- It is essential that all of the patients have the opportunity to socialize, community areas are designed specifically so that people have a variety of options of things to do where bonds can be formed and developed.
- Nurses Stations Located in the housing facilities need access to administration and community facilities.

Recreation and Community Areas should be accessible to one another.

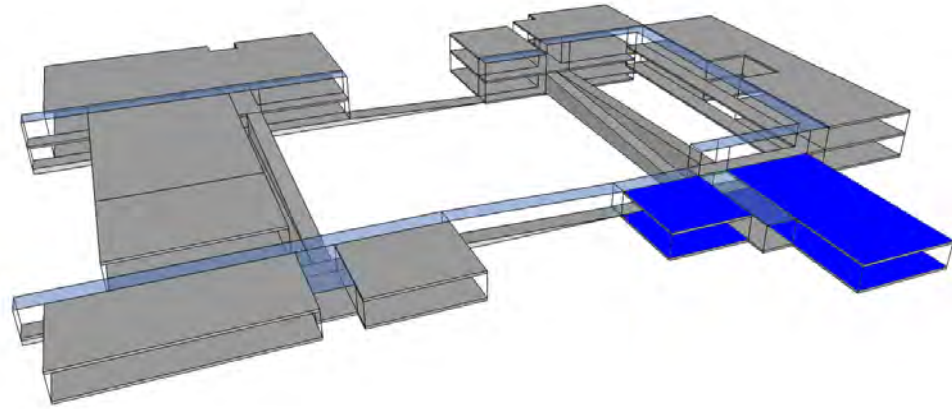
- Both areas are for recreation purposes and allow patients the opportunity to improve their physical abilities and enhance their social life.

These program connections together create the possibility for a central courtyard space. A courtyard or multiple courtyards affords patients the chance to be outdoors in a space completely accessible to them. Additionally, the space can easily be monitored for patients' safety.

Housing			
Nurses Stations	2	260	520
Medical Closets	2	25	50
Single Rooms	12	175	2100
(Bathrooms)	1	120	120
4 Person Apartments	2	1215	2430
(Kitchen)	1	210	210
(Living Room)	1	295	295
(Single Bedrooms)	4	130	520
(Closets)	4	20	80
(Bathroom)	1	110	110
3 Person Apartments	2	1065	2130
(Kitchen)	1	210	210
(Living Room)	1	295	295
(Single Bedrooms)	3	130	390
(Closets)	3	20	60
(Bathroom)	1	110	110
Net Area			7230
Gross Area			12515



Administration			
Reception	1	400	400
Waiting Area	1	380	380
Meeting Room 1	1	180	180
Meeting Room 2	1	260	260
Conference Room	1	500	500
Secretary's Office	1	320	320
Assn't Director Office	1	220	220
Director's Office	1	300	300
Open Office Space	1	760	760
Staff Lounge	1	300	300
Maintenance Room	1	70	70
File Storage	1	115	115
Storage	2	110	220
Bathrooms	2	90	180
Net Area			4205
Gross Area			5900



Housing

The housing will be offered to the clients. These facilities will allow the participants to reach their ultimate independence while creating their own lifestyle. Two kinds of housing will be offered, Single rooms with Nurses Stations and Apartment living.

Monitored Single Rooms (Designed for severe CP patients who need constant medical assistance.)

- Single bedrooms which include a private bathroom.
- Nurses Station at a central location to all of the rooms .

Apartment Living (Designed for patients who can successfully function with limited assistance.)

- Single bedrooms with a shared bathroom.
- Kitchen and Living Space for apartment residence.

The goal of housing is have clients feel as independent as possible and to afford them the opportunity to live either alone or with roommates.

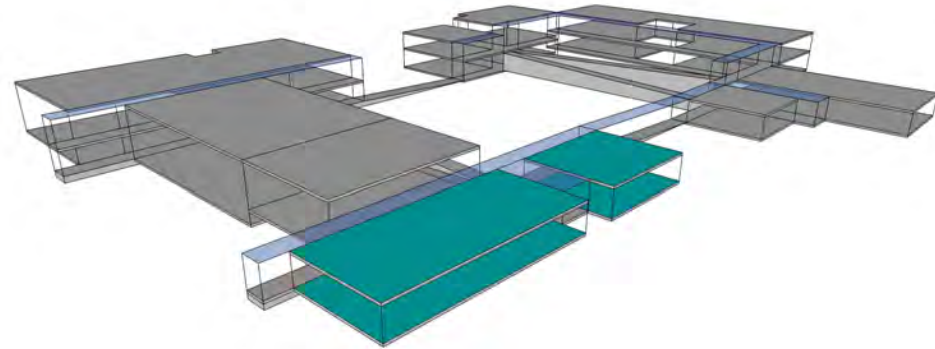
Administration

The Administration area will primarily serve the administrative staff , visitors, and patients on occasion. This area will include:

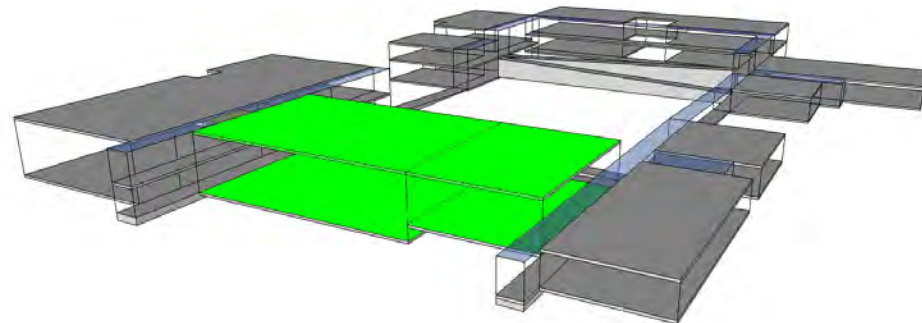
- Reception Area, and reception desk.
- Waiting area for visitors.
- Offices for the director, the assistant director, their secretaries and the other administrative staff.
- A conference room for large meetings, and two smaller meeting rooms for potential patients and their families to sit down with counselors.
- A staff lounge or break area.

The staffs most important role is to provide assistance and support to the patients so that they can reach their full potential. Staff is also responsible for creating a safe environment for the patients to reside. Nurses will be available 24-7 for emergencies and to provide assistance to severe CP patients.

Education Facilities			
Reception Area	1	330	330
Secretary Office	1	265	265
Faculty Offices	2	135	270
Nurses Station	1	400	400
Medical Storage	1	95	95
Office Storage	1	65	65
Day Lounge	1	450	450
Bathrooms	2	200	400
Activity Rooms	3	275	825
Classroom 1	1	590	590
Classroom 2	1	280	280
Storage Closets	3	30	90
Net Area			4060
Gross Area			5600



Dining/Gymnasium			
Dining Area	1	2220	2220
Kitchen	1	945	945
Kitchen Storage	1	100	100
Gym	1	7340	7340
Net Area			10605
Gross Area			11120



Education Facilities

The Education Facilities provide intellectual stimulation by offering job training and an assortment of classes ranging from speech to arts and crafts. In addition lessons on every day activities, such as cooking and sewing will also be introduced. The program includes:

- Reception area and Reception desk.
- Secretary Office and Two Faculty Offices.
- Nurses Station and Medical Storage.
- Two classrooms varying in size, one for bigger groups, and one for a more intimate learning experiences.
- A small day lounge with access to the dining facilities.
- Three multi-purpose activity rooms.

The variety of classes and lessons that will be offered will be geared to helping the clients gain the knowledge and independence to be able to get a job and possibly live on their own with minimal supervision.

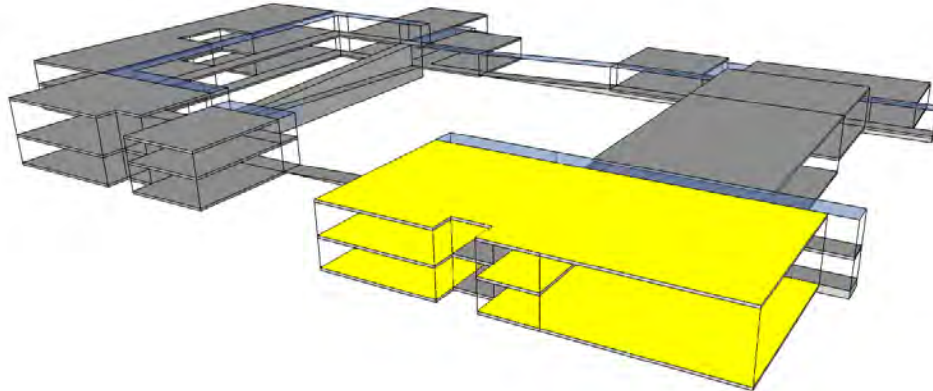
Dining/Gymnasium

The Dining and Gymnasium facilities includes:

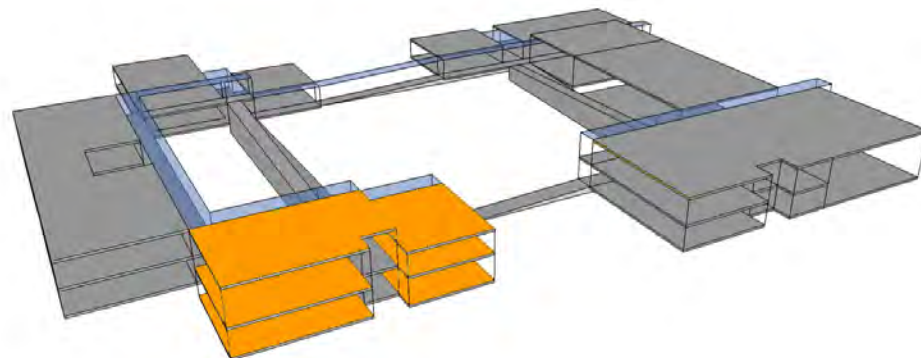
- A dining area that will serve three meals a day.
- A service kitchen where the meals can be stored, prepared and served to the patients.
- Gymnasium for recreational sports and well as the possibility of larger entertainment performances.

These two facilities are not directly connected, however there is a passage for staff during emergency situations.

Exercise Facilities			
Pool	1	3185	3185
Pool Viewing Platform	1	600	600
Pool Mechanical Room	1	1660	1660
Locker Rooms	2	730	1460
Recreation Office	1	500	500
Game Room	1	1260	1260
Bathrooms	2	315	630
Physical Therapy	1	3335	3335
<i>(Rehab Space)</i>	1	1060	1060
<i>(Rehab Room 1)</i>	1	400	400
<i>(Rehab Room 2)</i>	1	440	440
<i>(Therapist Offices)</i>	3	190	190
Mechanical Room	1	1640	1640
Net Area		14270	
Gross Aea		17500	



Communal			
Media Room	1	380	380
Music Room	1	290	290
Entertainment Rooms	1	695	695
Community Lounge	1	1570	1570
Mechanical Room	1	1700	1700
Electric Room	1	500	500
Elevator Room	1	180	180
Net Area		5315	
Gross Area		7470	



Recreation Facilities

The Recreation facilities will allow patients the opportunity to cultivate their physical abilities through a variety of activities. The facilities include:

- A recreation office that oversees all of the activities.
- A pool with raised floor mechanism for maximum accessibility.
- A locker room for patients to change and shower.
- A physical therapy area for patient rehabilitation, with private rooms, and large open room, and offices for the physical therapists.
- A game room with video game areas, board game areas, as well as some billiard games.

The goal of these facilities is to supply these resources so that clients can improve their mobility, strength and balance to ultimately increase their physical abilities and self-confidence.

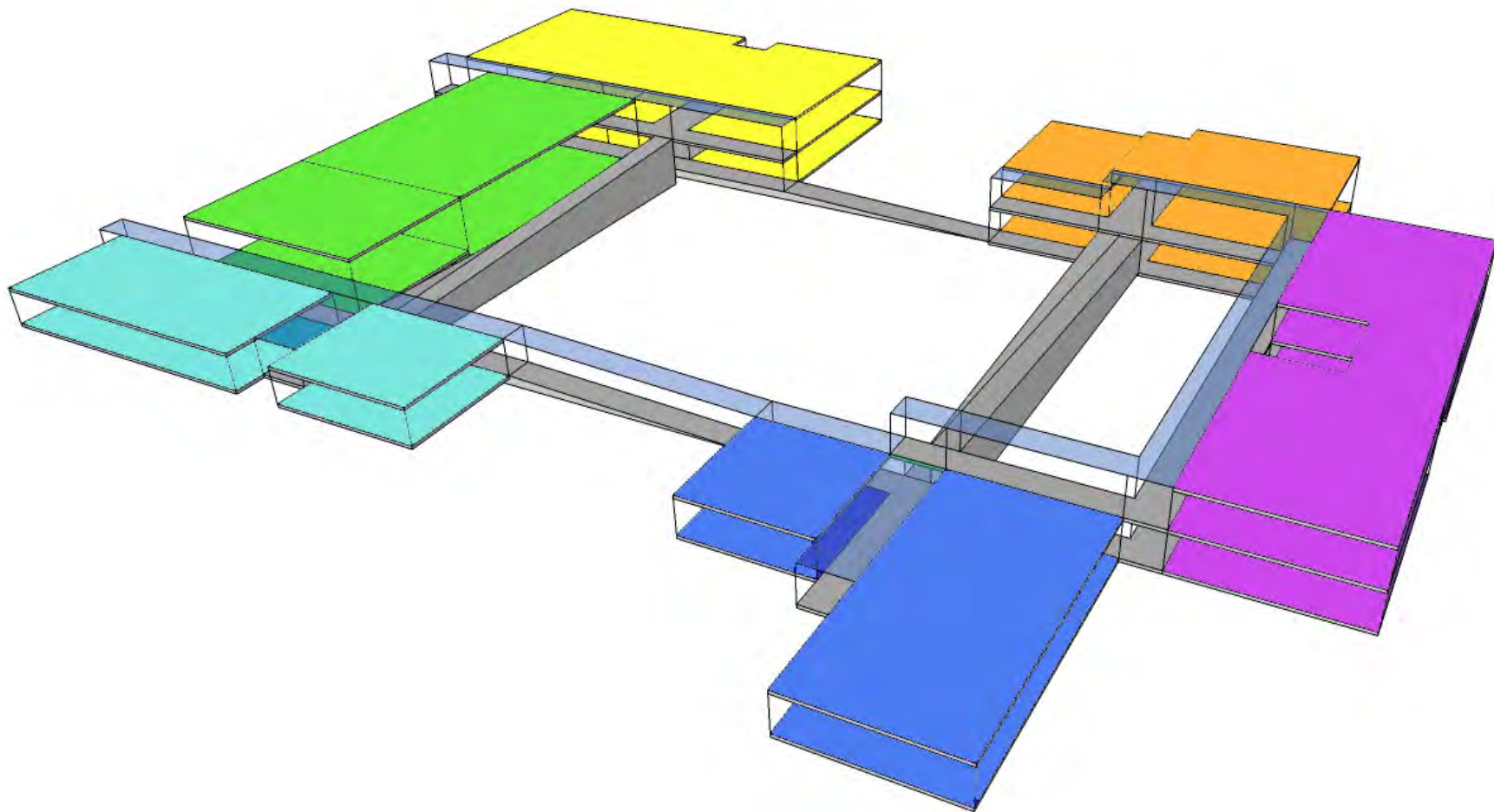
Communal Facilities

Communal areas offer space for the participants to gather and entertain one another. Facilities include:

- A large community lounge with plenty space for social interaction.
- An entertainment room for patients to watch movies and listen to music in a small group.
- A media room with computers for patient use.
- A music room with an assortment of instruments for patients to play.

These spaces provide adequate interaction with others to stimulate their social skills and allow friendship growth.

Total Area	
Net Area	60105
Gross Area	73660



Circulation

Circulation plays an essential role in creating an accessible building for patients with CP. With the program relationships already established and the need for program connections the circulation took shape as an enclosure that both physically and visually connects each of the facilities. The proposed transparent circulation space serves as the enclosure for the two courtyards, allowing the patients to easily be monitored for their own safety.

Courtyards

Two courtyards were formed with the programs layout. One courtyard is located with close proximity to the day facilities, the community areas and administration, creating a more public space that can be used by all patients, administrators and visitors. The second courtyard had direct access to housing to serve as a more private outdoor space for the residence only.

Site Amenities

The site amenities offer continued stimulation outside of the center and establishes transportation into the center of town, and for field trips. This includes:

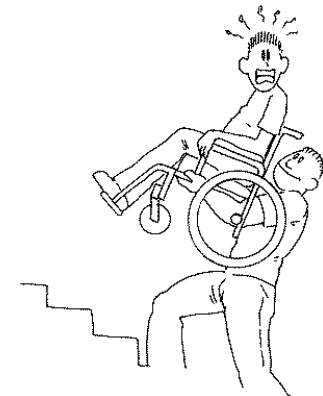
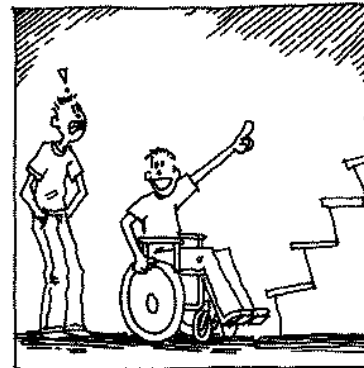
- Meandering paths around the building for exercise
- Access to community gardens
- Parking for transportation vehicles (3), visitors (15), and staff (30).

6 Architectural Themes



This section is formatted with both questions and information that regard these themes as they pertain to this project. Each of the architectural themes that will be addressed in this project were investigated with the clients in mind. The main themes that this project focuses on can be broken into four categories, each of which includes a number of sub themes to be explored during the design phase of this project. The four main themes are:

1. Psychological effects of architectural design
2. Circulation and movement for someone in a wheelchair
3. Therapeutic Outdoor Spaces
4. Accessible Devices and Technology



1. PSYCHOLOGICAL EFFECTS OF ARCHITECTURAL DESIGN

A) COLOR

While most of us may not spend a lot of time thinking about color, it affects every day of our lives:

- Color can influence our mood and our thoughts.
- Color can affect people differently based on age, gender, ethnic background and local climate.
- Certain colors or groups of colors tend to get a similar reaction from most people
- Each color has a psychological value: colors can make you feel anything from tranquil to rage.



Palais des Congrès de Montréal , Montréal, Québec

B) LIGHT

For many Americans winter means months of feeling tired, unhappy, and even depressed -- but now they know why. Medical researchers have found that the lack of natural light during shorter winter days contributes heavily to an emotional disorder called Seasonal Affective Disorder (SAD). The resulting demand for natural light has contributed significantly to an awareness of the role that windows and doors play in creating a healthy, comfortable environment.



“Growing evidence suggests that daylight is essential to health, well being and productivity. By carefully designing window specifications for commercial or residential buildings, architects can contribute to the increased productivity and psychological health.”

- Architects Gregory Franta, AIA, and Kristine Anstead, AIA, of ENSAR Group, Inc., Boulder, Colo. (A design consulting firm specializing in environmentally sustainable architecture, emphasize the importance of daylight.)

c) SHAPE AND FORM

Shape and form can play an important role in how a space is experienced. For example small spaces with low ceiling can feel heavy and unwelcoming, where as a large open spaces with high ceiling can feel energizing and welcoming. This is one theme that will be imperative to creating a facility which has a number of spaces each of which have different uses.



The Genzyme Building is a one great example of a space that effectively uses color, light and shape to create a wonderful architectural experience.

2. CIRCULATION AND MOVEMENT FOR SOMEONE IN A WHEELCHAIR

A) RAMPS

The ramp seems to be the most reasonable option for creating a building that is for patients with limited mobility.

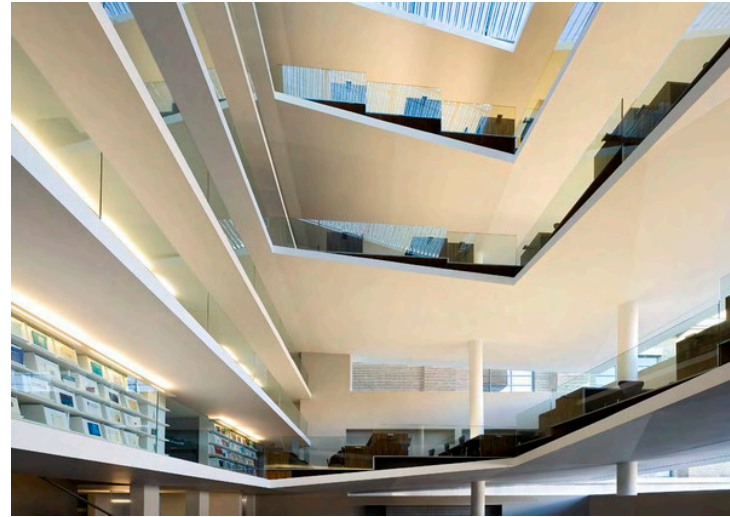
- Slope will play an important role in the length of the ramp and the number of landing that occurs between level transitions.
- The width of the ramp is another factor to consider depending on the traffic with which the ramp will endure. If the ramp will be a heavily used then it should be wide enough for two wheelchairs to easily pass by one another.
- The space that contains the ramp can also be investigated, is the ramp an independent feature or can it be part of another space?

B) VISUAL CONNECTIONS

Having a visual connection with the areas one is passing to and from can have a psychological effect. Is separation needed between certain program elements?

C) ELEVATORS

Another option for vertical circulation, however how necessary is an elevator for a building with limited level change?



3. THERAPEUTIC OUTDOOR SPACES

A) GARDENS AND LANDSCAPE DESIGN

It is now recognized that environment plays a significant role in shaping behavior. It is also realized that people react to or are stimulated by features in their environment. As a result, such human emotions can influence the process of health. There can be a considerable beneficial influence on the health and wellbeing of people who are able to benefit from suitably designed outdoor environments in facilities catering to their special needs. An appropriately familiar landscape environment will help make life more meaningful. People whose lives are narrowly circumscribed become acutely aware of plants and other living things found in gardens.

The elements of good landscape design should entice any individual to venture outdoors and make it easy to do so. Special attention should, therefore, be given to particular features and to the implications of specific medical disorders or limitations. This should include attention to such aspects as accessibility, curtilage interest, views, seasonality, sensory stimulation, suitably designed seating, security and safety, introduction of wildlife, social activities and recreation as well as possible physiotherapy or occupational therapy applications. The ongoing maintenance and associated costs need also to be considered.



4. ACCESSIBLE DEVICES TO ASSIST DAILY ACTIVITIES

A) WHEELCHAIRS

- Most people with cerebral palsy that affects both legs use a power wheelchair for mobility.
- Some more mobile people with cerebral palsy can use a walker to get around, and may not use a wheelchair at all.



B) POOL DEVICES

The reason these devices are so important is because water therapy can be an extremely effective method of increasing mobility for people with disabilities.

There are a variety of devices to aid the disabled in get in and out of a pool:

- Lifts such as the image shown on the bottom right.
- Ramps into the pool (where a water wheelchair can be used)
- The newest technology for accessible pool devices is the pool floor lift, this device brings the entire pool floor up to the deck level and allows easy access into the pool before returns back down and slowly fills with water. This is the best option for a therapy pool because the water level can be adjusted based on the patient who is being cared for.



C) TRANSPORTATION DEVICES

The facility should provide some way for patients to get around, vans are one of the more feasible possibilities especially for farther distances. However location may help with opportunities for patients to use their power wheelchairs to get into down town.

- **ACCESSIBLE VANS**

Image shown top right



D) AUTOMATIC DOORS

Automatic doors will be installed at all of the entrances and may be used in other parts of the building to make entry easier for the patients.

- Wall switches

Shown at the bottom right.

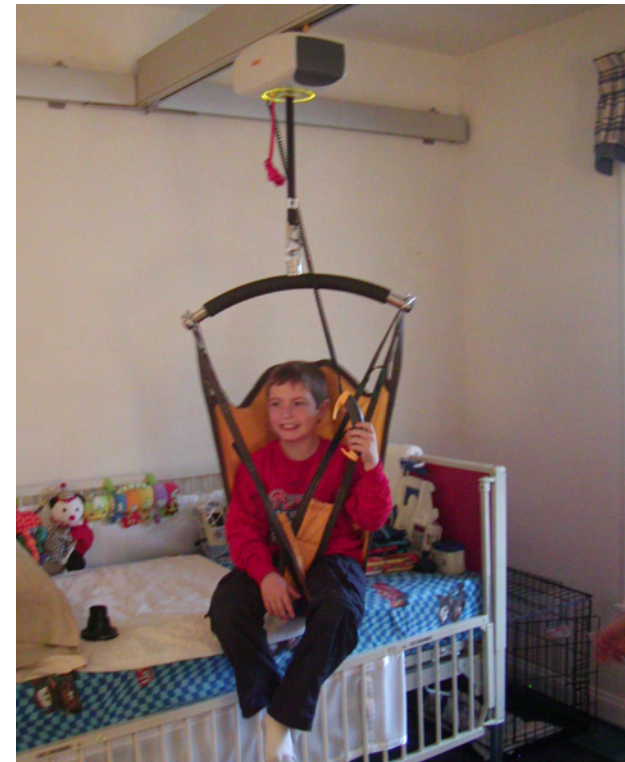
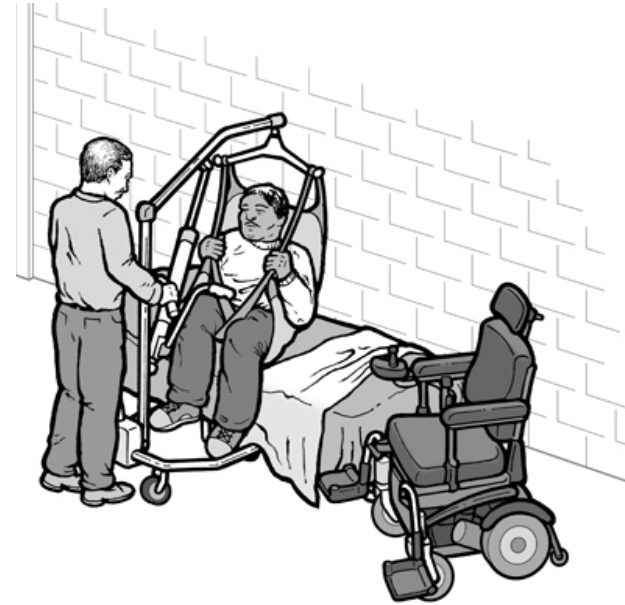
- Motion detectors



E) BED LIFTS

The image at the top right shows a lifting device that simply aids a person with limited mobility to get from bed to their wheelchair.

The bottom right image shows the over head lift which runs on a track and allows a person to be taken from one room to another without the use of their wheelchair. This device is especially useful at night if a someone need to use the bathroom, some people are able to do get into this device on their own without assistance which relates back to the need for independence.

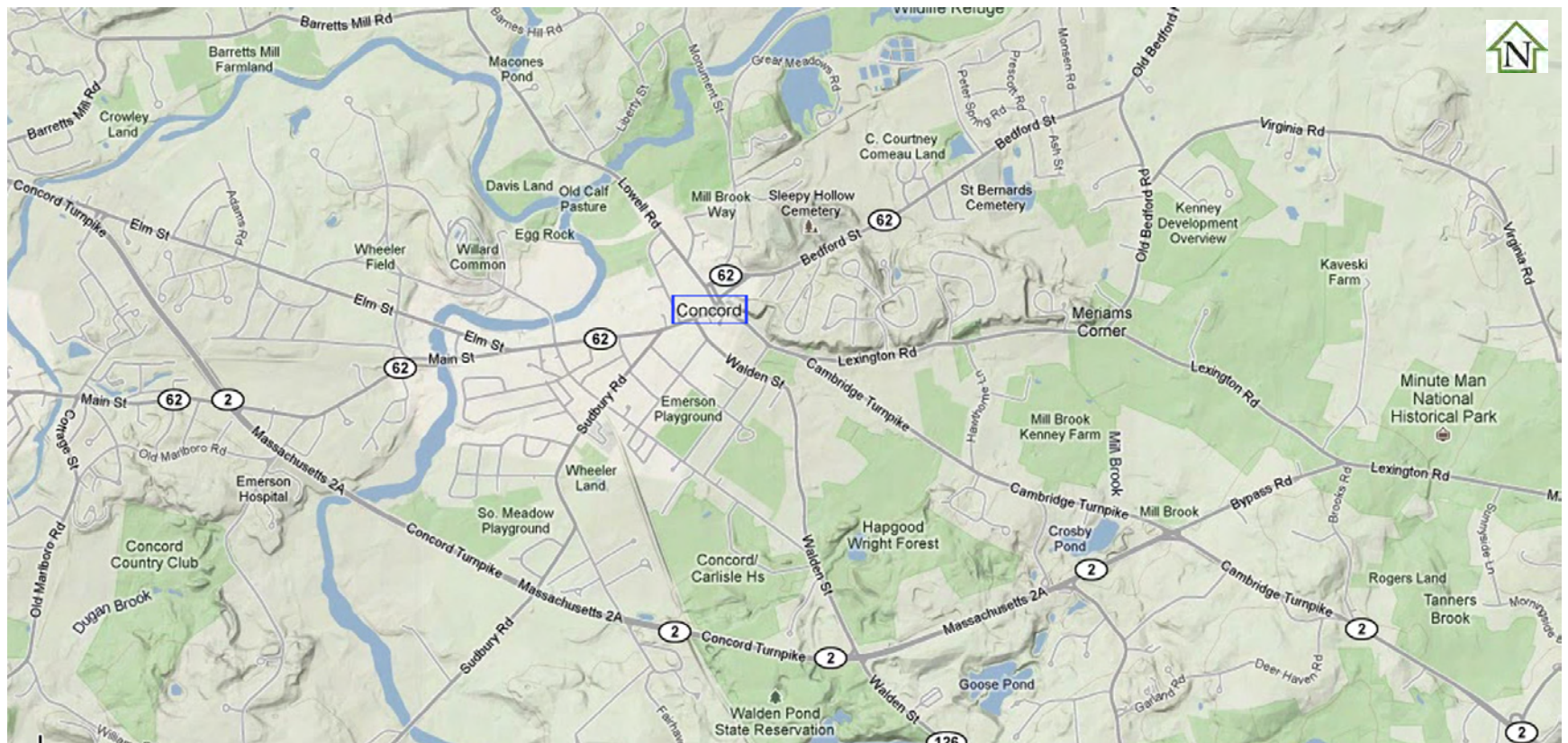


Site Analysis



Concord, Massachusetts

Located 20 miles west of Boston, Concord's population has remained stable at 16,000 over the past several decades. It is a picturesque New England community with significant historical value, handsome residences, preserved open spaces, family-owned farms and thriving commercial centers. The town is served by MBTA commuter rail to Boston, Cambridge and Fitchburg; and a commuter bus to Boston. State highway Route 2 runs through Concord, and Routes 128/95 and 495 are conveniently accessed.



The Site

Located off of Walden Street, the site is set approximately 400 feet back from the road. The site currently hosts the Concord Ice House which is seeking a new location more visible to the public. Neighboring this plot of land is the towns first low incoming housing , the Concord Courthouse, and the Concord Fire and Police Station. Additionally Mill Brook runs through the back of the site and directly adjacent to it is a large crop field which is part of the community maintained gardens. The main community garden is located on the opposite side of Walden Street.





A

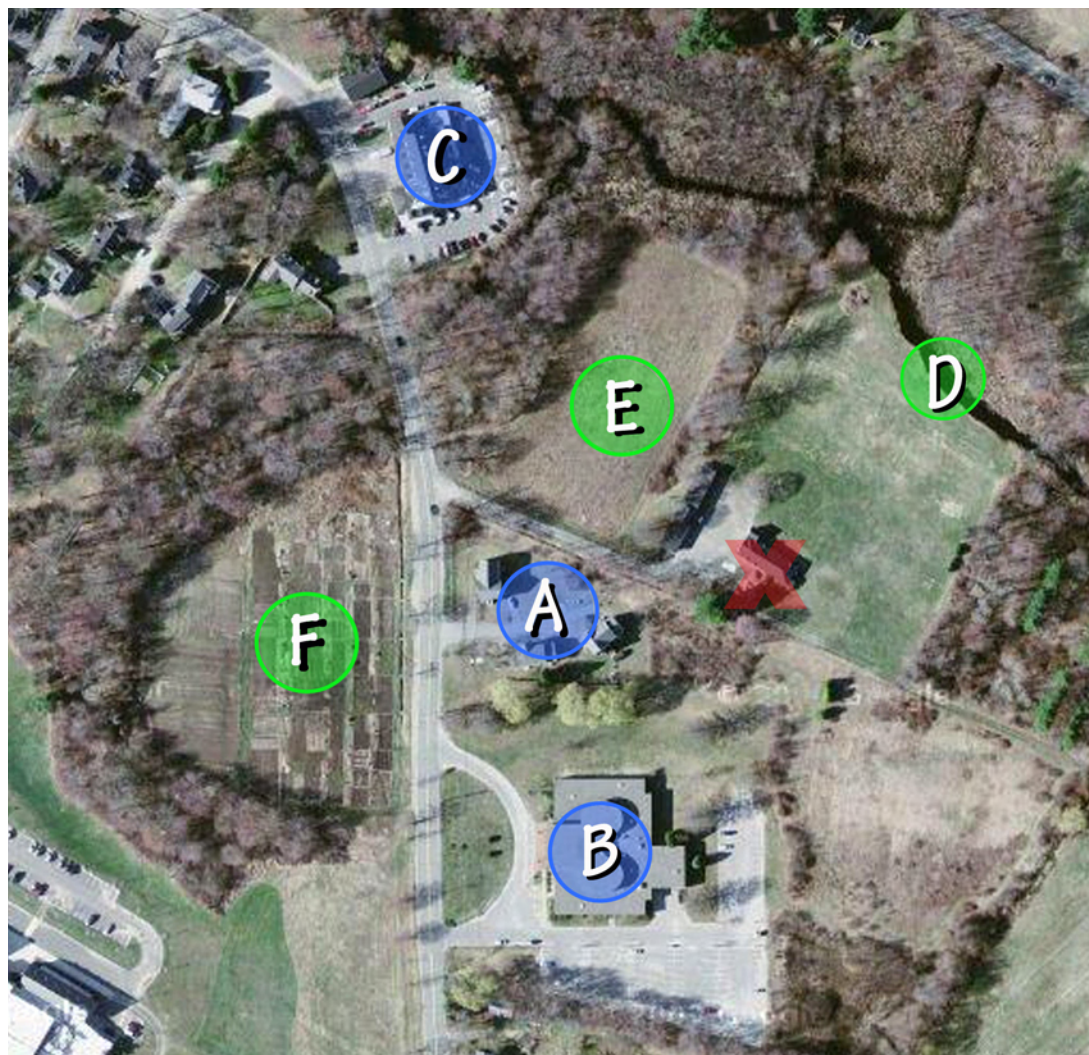


B



C

- A) Affordable Housing
- B) Concord District Courthouse
- C) Concord Fire and Police Station
- D) Mill Brook
- E) Adjacent community Garden
- F) Community Gardens

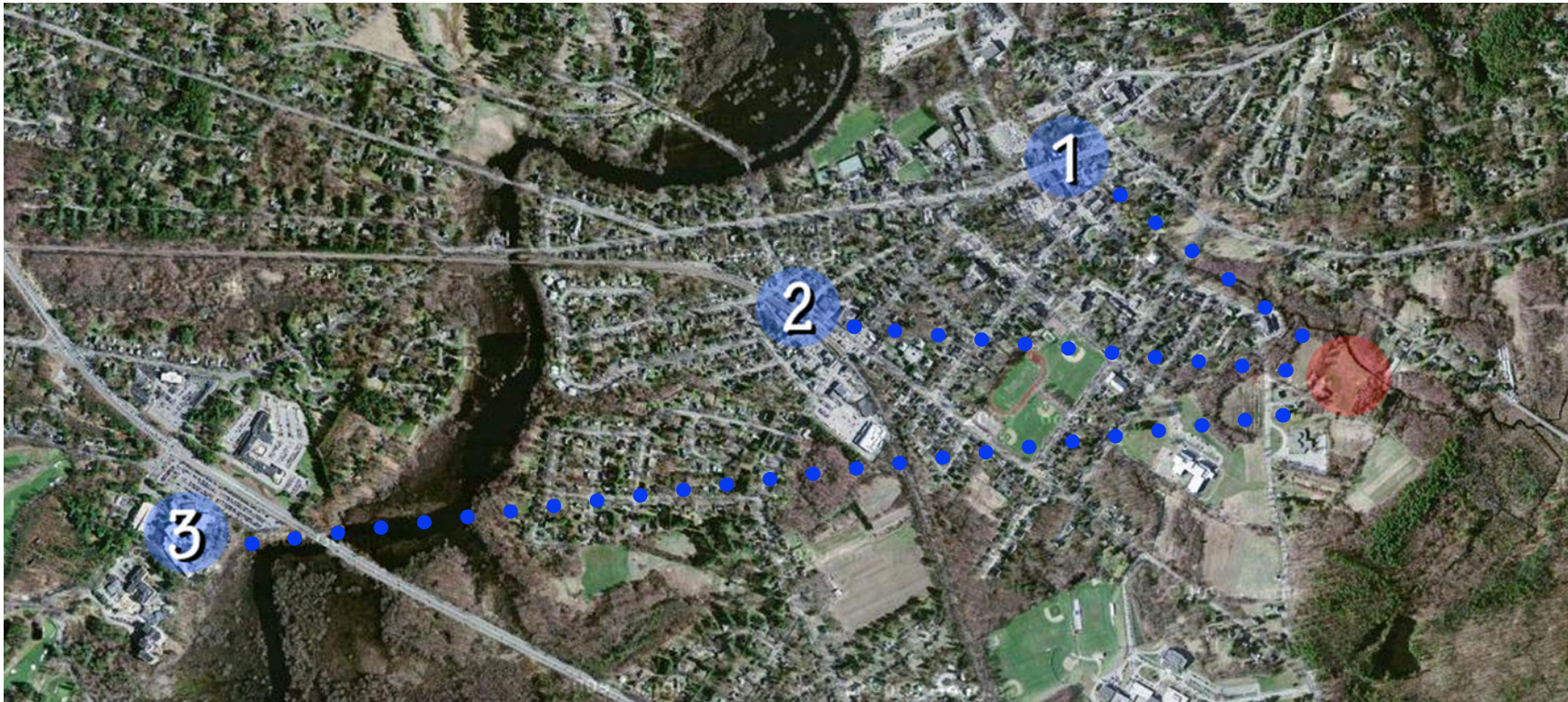


E

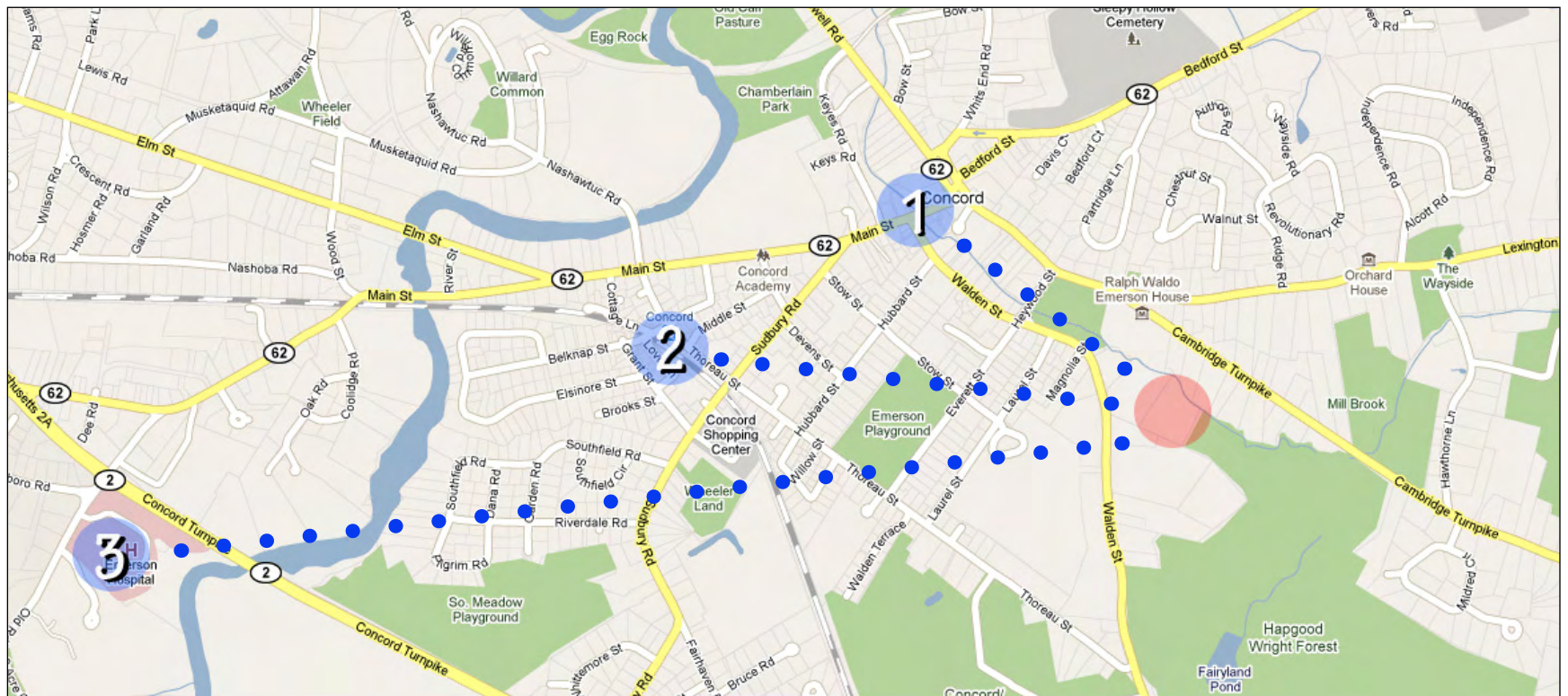


F

The site has three important off-site connections to Emerson Hospital, the Commuter Rail to Boston and Downtown Concord.



- | | | |
|------------------------------|------------|---|
| 1. Concord Town Center | 0.75 mile | <ul style="list-style-type: none">• Having Downtown Concord within walking distance gives clients the ability to venture into town to explore and to shop. |
| 2. Commuter Railroad Station | 1.0 mile | <ul style="list-style-type: none">• The convenience of Mass Commuter Rail allows clients the opportunity to travel to and from Boston for any variety of reasons, be it for medical appointments, personal reasons, or just to visit. |
| 3. Emerson Hospital | 1.75 miles | <ul style="list-style-type: none">• Proximity to Emerson Hospital is crucial for the care of people with Cerebral Palsy because many complications can arise that may need immediate medical attention, and although staff will be trained to handle most situations it is important to have quick access to a hospital for more serious complications. |



1. Concord Town Center



2. Concord Train Station



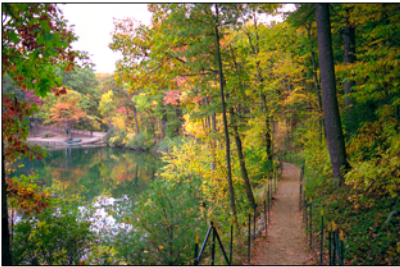
3. Emerson Hospital



Ralph Waldo Emerson House



The Old Manse



Walden Pond



Wayside House



Orchard House



Minute Man National Historical Park



Old North Bridge



Wright's Tavern

Town Information:

- Latitude: 42.46 N, Longitude: 71.37 W
- Average Elevation: 141 feet
- Climate: Temperate
- Land area: 24.9 square miles.
- Population: 16,840
- Population density: 676 people per square mile (low).
 - Median resident age: 42.2 years
 - Population males: 8,434 (50.1%)
 - Population women: 8,406 (49.9%)

Places of interest in Concord include:

- Ralph Waldo Emerson House
- The Old Manse, home of Emerson and Hawthorne
- Walden Pond
- The Wayside House, home of the Alcott and Hawthorne Families
- Orchard House
- Minute Man National Historical Park
- Old North Bridge
- Wright's Tavern

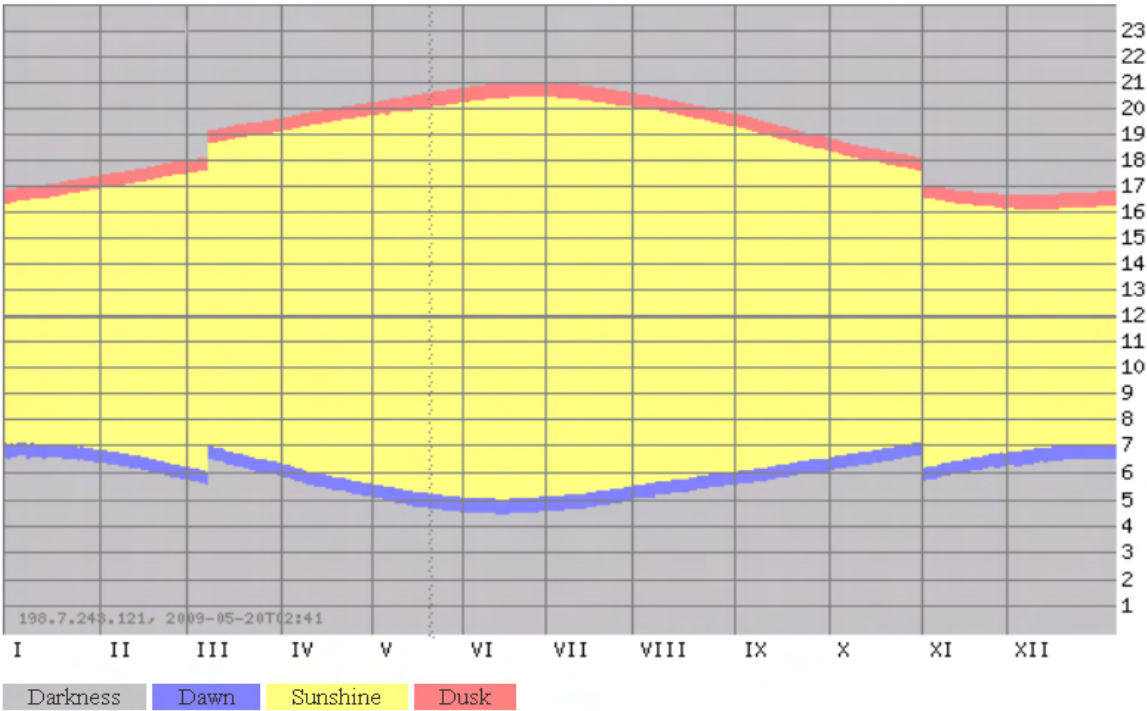
Images of Concord

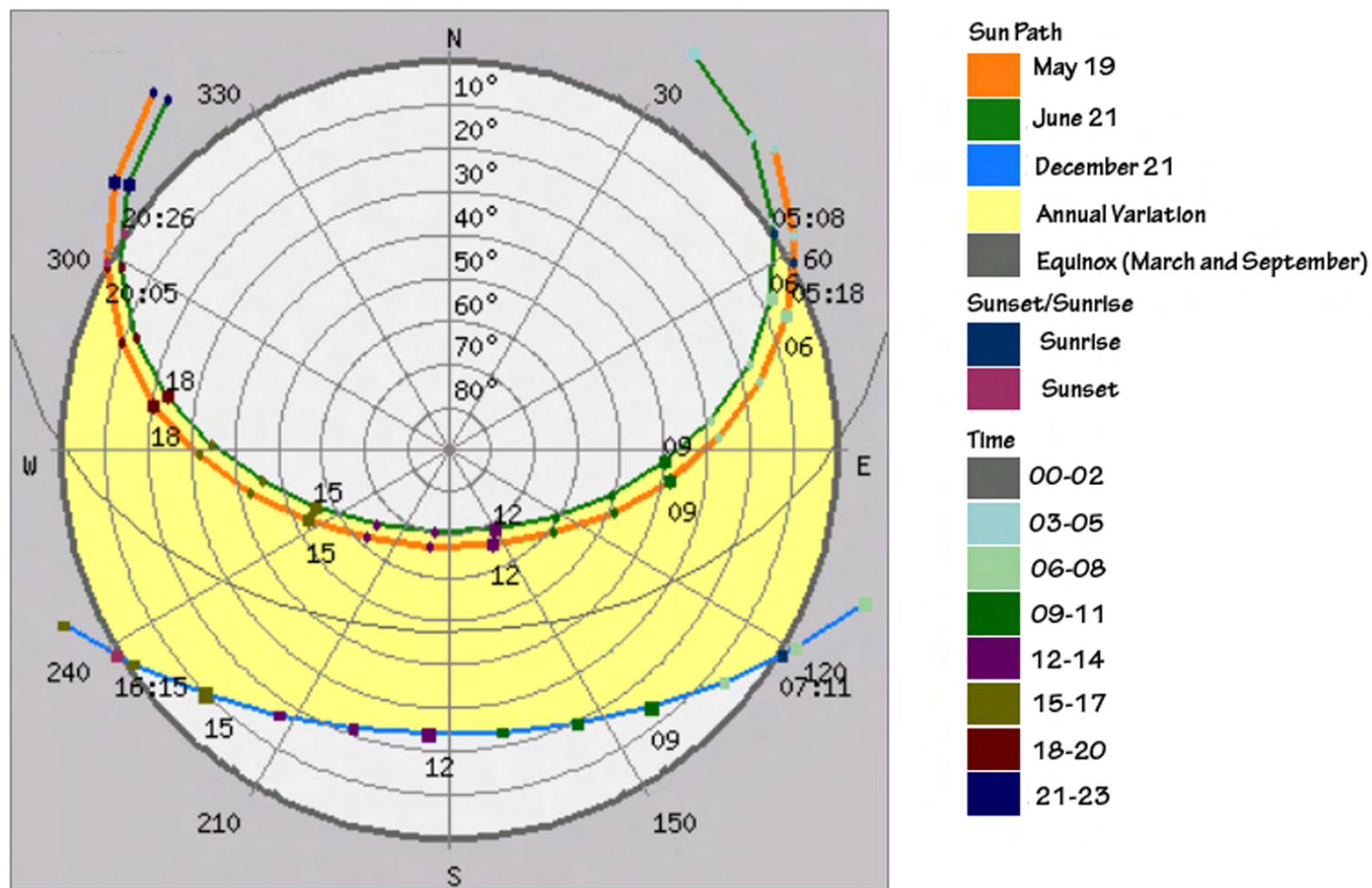


Concord serves as the perfect opportunity for the clients to become more independent and more confident in their own abilities. This small town provides numerous activities for clients to participate in and has an abundance of shops, restaurants and historical attractions for everyone to enjoy. The town library, located at the corner of Main Street and Sudbury Road, offers chances for clients to socialize and become a part of the towns daily activities. In addition, the town also offers two cozy local Inns , The Colonial Inn and the North Bridge Inn, where family and friends of the clients can stay for extended visits.

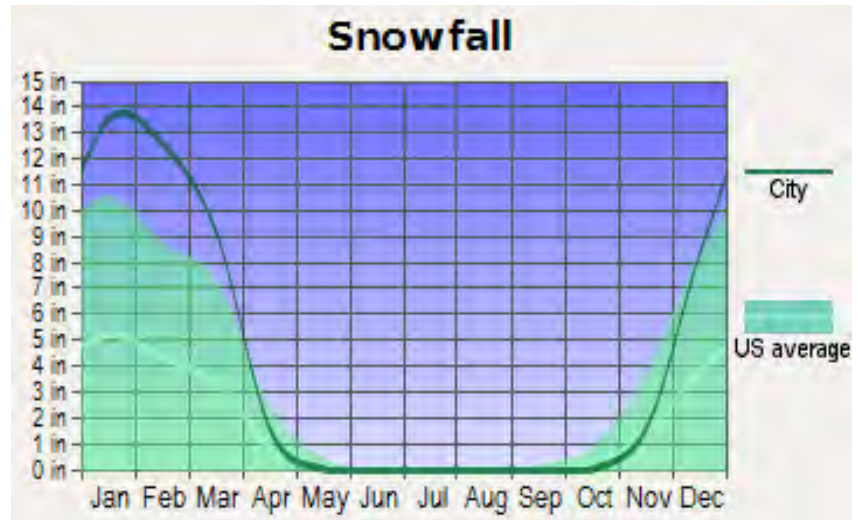
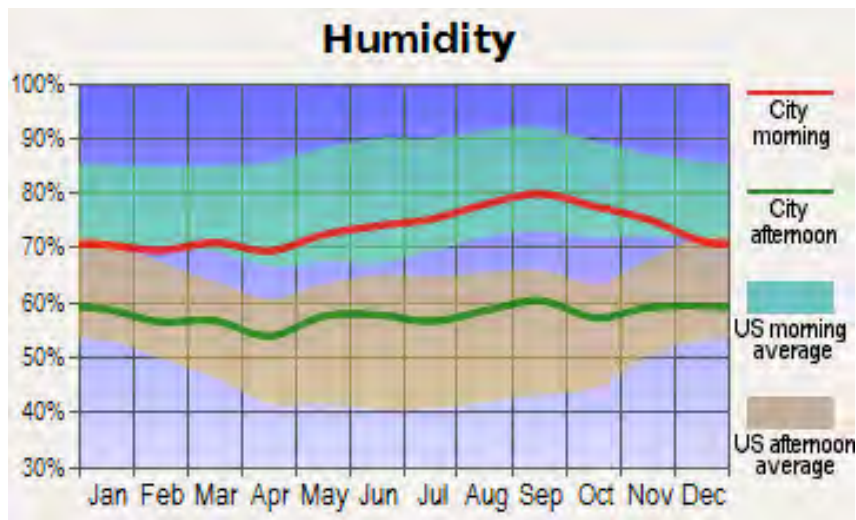
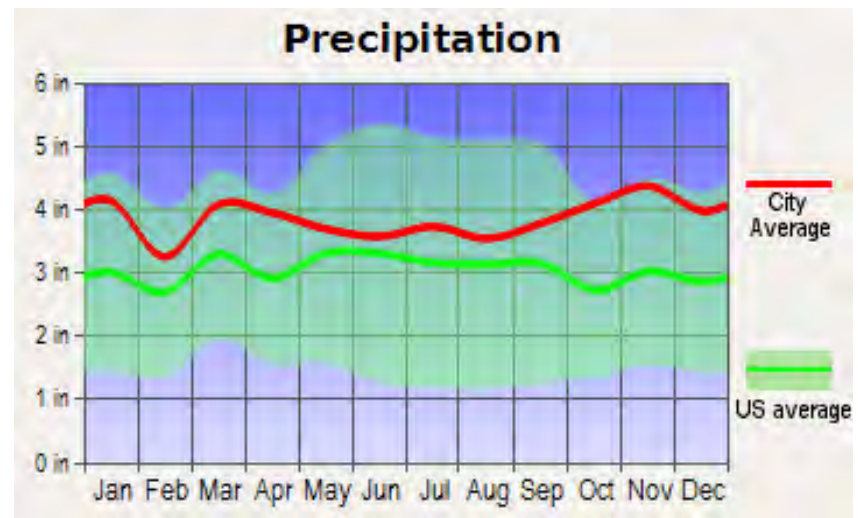
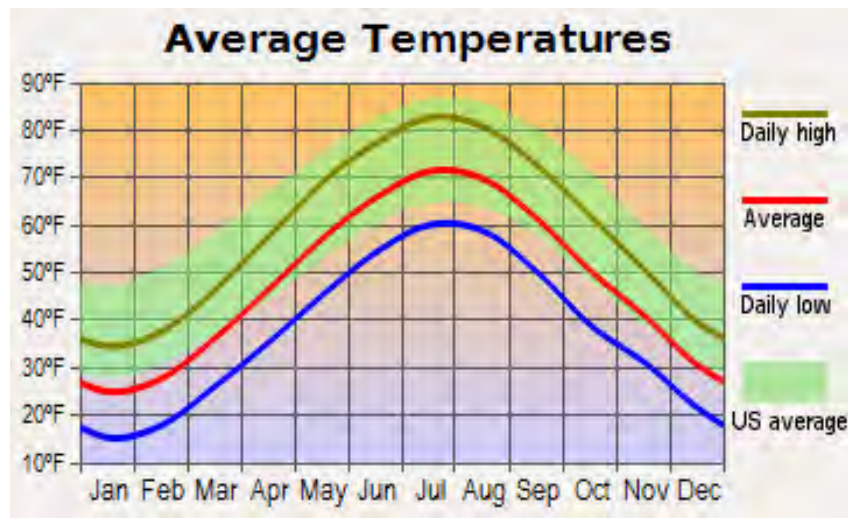
Concord Solar Diagrams

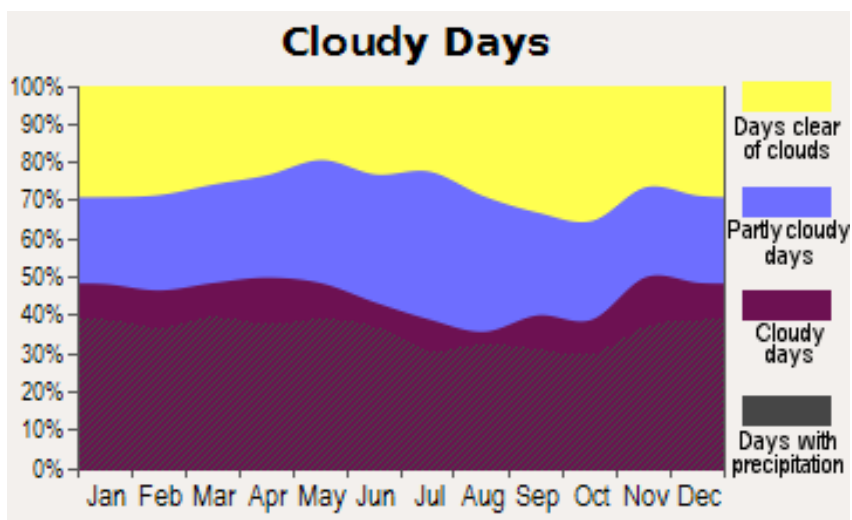
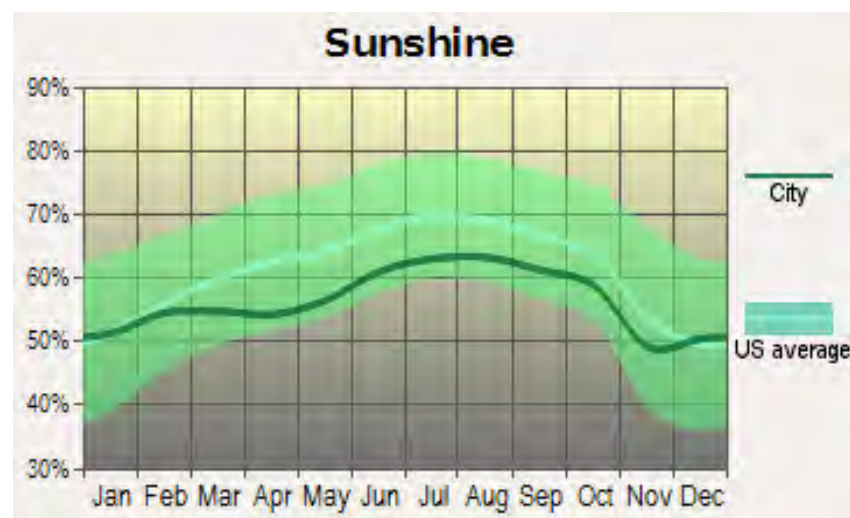
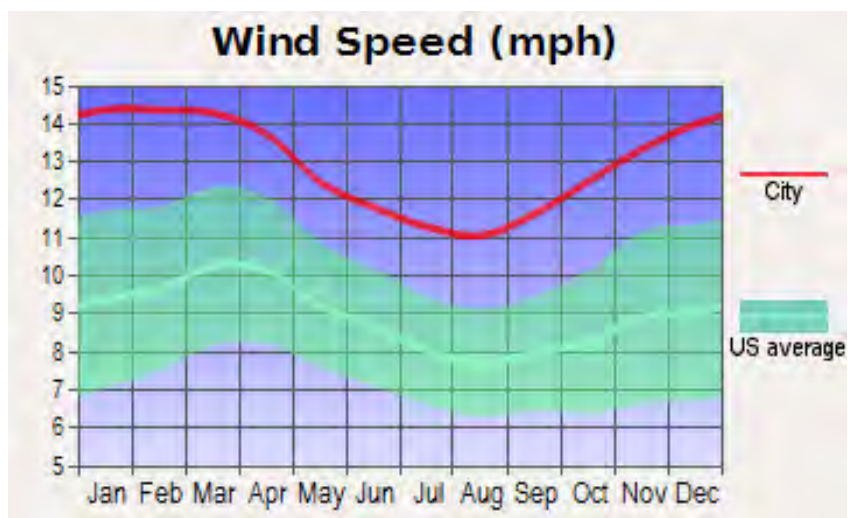
Date	Sunrise	Sunset	Length	Change	Dawn	Dusk	Length	Change
Today	05:19	20:04	14:45		04:47	20:37	15:50	
+1 day	05:18	20:05	14:47	00:02 longer	04:46	20:38	15:52	00:02 longer
+1 week	05:14	20:11	14:57	00:12 longer	04:40	20:44	16:04	00:14 longer
+2 weeks	05:10	20:16	15:06	00:21 longer	04:36	20:51	16:15	00:25 longer
+1 month	05:07	20:25	15:18	00:33 longer	04:32	21:00	16:28	00:38 longer
+2 months	05:24	20:18	14:54	00:09 longer	04:51	20:51	16:00	00:10 longer
+3 months	05:54	19:43	13:49	00:56 shorter	05:24	20:13	14:49	01:01 shorter
+6 months	06:39	16:21	9:42	05:03 shorter	06:08	16:51	10:43	05:07 shorter





Average Climate for Concord, MA





Regulatory Requirements



The regulatory information for this project includes bylaws, rules and regulations based on location, building type, and project theme. Given that the intention of this project is to create a completely accessible facility for persons with cerebral palsy, ADA Requirements and Massachusetts Accessibility Codes have been thoroughly documented and analyzed. The required regulatory documents are recognized in this section in the following order:

- 1. Concord, Massachusetts Zoning Bylaws**

The following bylaws refer to Concord's Zoning Map Interpretations, General Provisions, Classification of Principal Uses, Dimensional Regulations, Parking and Loading Regulations

- 2. ADA Requirements;**

General Information

(Massachusetts requirements based on ADA are found in the AAB Rules and Regulations)

- 3. AAB Rules and Regulations;**

Administrative, Building Type, Exterior, Interior, and Dwelling Units

The Zoning Bylaw for the Town of Concord, Massachusetts (adopted in April 1977)

Land use in the Town of Concord is subject to regulation under various Town Bylaws and Statutes of the Commonwealth. Included among these are the Concord Zoning Bylaw, adopted to Chapter 40A, “The Zoning Act” of the Commonwealth of Massachusetts, and the following:

The Laws of Concord set forth the Board of Selectmen’s Rules and Regulations, Standing Votes and Town Chapter Bylaws including the sign and Advertising Devices Bylaw, which is administered by the Building Inspector.

Subdivision Rules and Regulations set forth the Planning Board’s procedures and standards to be followed in the subdivision of land and the construction of ways.

State Building Code sets forth the regulations, administered by the Building Inspector, relative to the construction, reconstruction, alteration, repair, demolition, removal, inspection, issuance and revocation of permits or licenses, installation of equipment, classification and definition of buildings and structures and use or occupancy thereof.

State Environment Code – Title 5 sets forth the minimum standards for the protection of public health and the environment when circumstances require the use of individual systems for the disposal of sanitary sewage in areas where municipal sewage systems are not available.

Architectural Access Board sets forth the regulations, administered by the Building Inspector, relative to facilitating the use of public buildings by the physically handicapped.

Historic District Zones set forth the boundary description of the Historic Districts and the regulations administered by the Historic Districts Commission pertaining to the preservation and protection of buildings, places, and districts of historic or literary significance in such zones through the development and maintenance of appropriate settings.

State Wetlands Protection Act administered by the Concord Natural Resources Commission and provides for public review of proposed projects which involve construction or other alteration of land in or near wetlands or land deemed subject to periodic flooding.

Board of Selectmen supervises use of Town land, adopts regulations on diverse matters such as metered parking, acts on public utility petitions, and is the local licensing authority for liquor, entertainment, and similar activities.

Purpose

The purpose of this Bylaw is to implement the zoning powers granted to the Town of Concord under the Constitution and Statutes of the Commonwealth and includes but is not limited to, the following objectives: to lessen congestion in the streets; to conserve health; to secure safety from fire, flood, panic and other dangers; to provide adequate light and air; to prevent overcrowding of land; to avoid undue concentration of population; to encourage housing for persons of all income levels; to facilitate the adequate provision

of transportation, water supply, drainage, sewage disposal, schools, parks, open space and other public requirements; to conserve the value of land and buildings, including conservation of natural resources and the prevention of blight and pollution of the environment; to encourage the most appropriate use of land throughout the Town; to preserve and increase amenities; and to preserve and enhance the development of the natural, scenic and aesthetic qualities of the community.

Zoning map interpretations:

2.3.1 Zoning boundaries, which appear to follow streets, railroads or rivers and streams, shall coincide with the center line thereof.

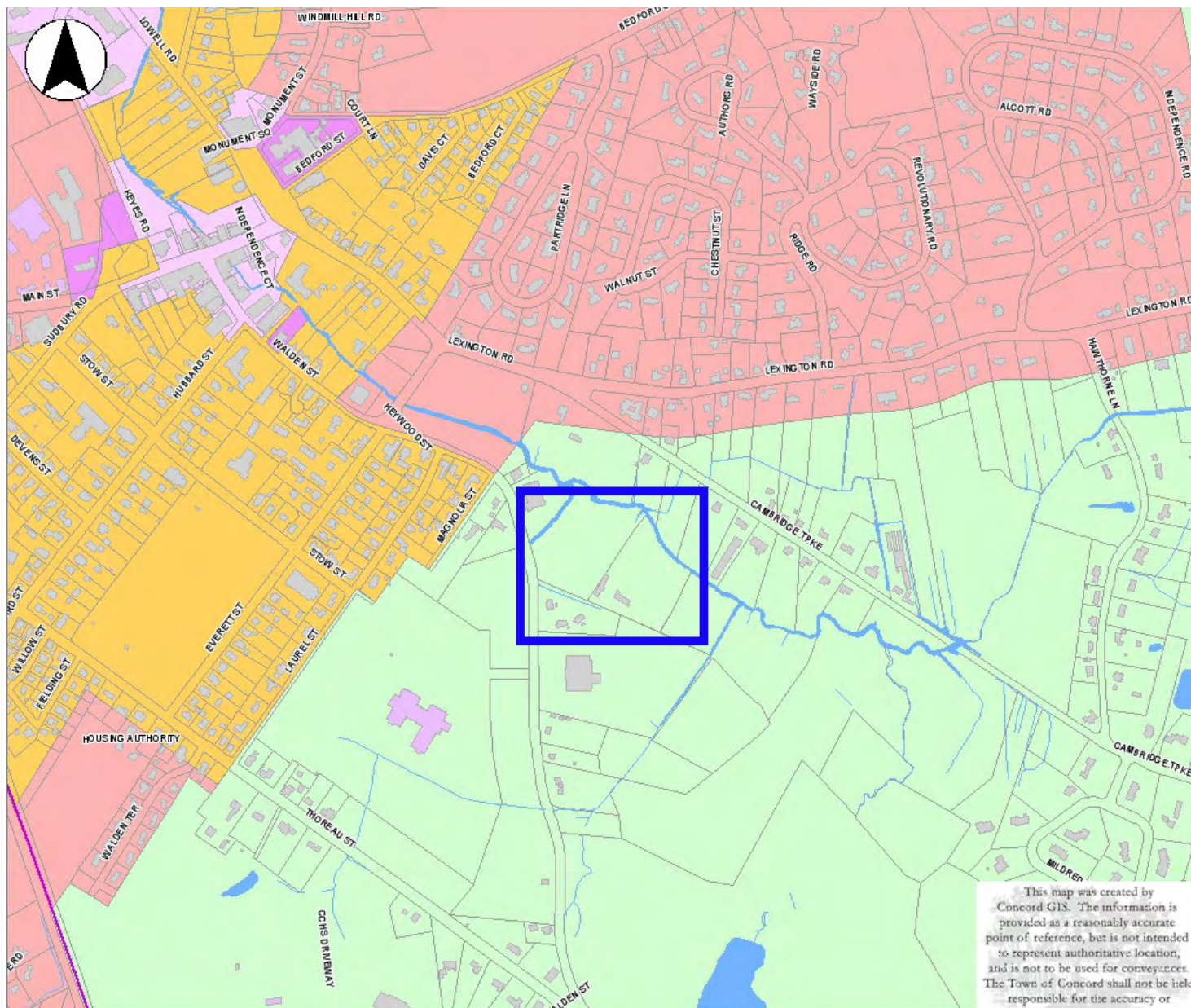
2.3.2 Zoning boundaries, which appear to follow a property of lot line, the exact location of which is not indicated by means of dimensions shown in figures, shall coincide with the actual property or lot line.

2.3.3 Zoning boundaries, which appear to run parallel to the sidelines of streets or railroads, shall be regarded as parallel to such sidelines.

2.3.4 Where a zoning boundary divides a lot at the time such zoning boundary was first adopted, the regulations for either district may, upon the issuance of special permit from the board with the advice of the Planning Board, be extended thirty (30) feet into the other district, provided that, in case where the less restrictive portion of the lot is to be extended into the more restrictive portion, the lot has frontage on a street in the less restrictive district.

2.3.5 The exact boundaries of the Flood Plain Conservancy District shall be the location of the ground of the 100-year flood contours shown on the FPCD maps and as determined by an actual field survey. Supplementary information concerning flood elevations and the limits of the floodway may be found in the "Flood Insurance Study" booklet dated June 3, 1988 and published by the Federal Emergency Management Agency.

(See next page for zoning map)



- Town Boundary
- Abutting Towns
- Commuter Rail
- Commuter Rail Stations
- Commuter Rail
- Streams
- Rivers & Ponds
- School Buildings
- Buildings
- Parcels
- Zoning
 - Business
 - By-Pass
 - Industrial
 - Industrial Park
 - Limited Business
 - Limited Industrial Park
 - Medical Professional
 - Residence A
 - Residence AA
 - Residence B
 - Residence C

0 750 1500 ft

MapsOnline

General Provisions

No land shall be used or building or other structures erected or modified in my district for any use not set forth in Section 4, Table I and denoted either with the word “yes” or by the letters “SP”, except accessory uses permitted pursuant to Section 5 and nonconforming uses as provided in subsection 7.1. It is the intent of this Bylaw to prohibit in any district, any use, which is denoted in Section 4, Table I, by the word “no”.

Provisions Applicable to Section 4, Table I

Existing and future uses of land, buildings, or structures shall be allocated among the categories set forth in Section 4, Table I. Each use set forth in the principal use column of Table I shall be defined by reference to the subsection of Section 4 appearing next to such principal use, and each such use shall be subject to any condition or limitations that are set forth in the Table I or in the applicable subsection.

3.2.1 A use listed in Section 4, Table I, is permitted in any district under which it is denoted by the words “yes”. If denoted by the letters “SP”, the use is permitted only if the Board, or the Planning Board where it is specifically designated in the Bylaw, grants a special permit as provided herein and makes such specific findings as may be required by this Bylaw in respect of such use.

3.2.2 The word “yes” followed by one or more numerals in the Limited Business column denotes that the use is permitted only in the Limited Business District corresponding to such numeral(s). If no numeral appears, the use is permitted in all Limited Business Districts in accordance with the provisions of this Bylaw.

3.2.3 A use listed in Section 4, Table 1, subsection 4.3 Institutional uses, subsection 4.5 Business Uses and subsection 4.6 Industrial Uses, other than parking and loading, is permitted in the Industrial Park Districts and Limited Industrial Park District only when conducted entirely within one or more buildings.

3.2.4 Site plan approval in accordance with subsection 7.7 is required for a use where the letter “R” appears and is not where the letter “NR” appear.

Classification of Principal Uses

4.3 Institutional Uses

4.3.1 Educational: Use of land, buildings and structures for providing learning in a general range of subjects on land owned or leased by the Commonwealth or any of its agencies, subdivisions of bodies political or by a recognized religious sect or denomination, or by nonprofit educational entity which may include athletic facilities, dormitories, administrative offices and similar facilities and activities whose purpose is substantially related to furthering learning.

4.3.6 Assisted living residence: A structure, or structures, used to provide assistance with the activities of daily living in a residential

setting for people who require such services. Assistance with activities of daily living means the provision of physical support, aid or assistance with bathing, dressing/grooming, ambulating, eating, or other similar tasks. An assisted living residence may have central dining facilities, lounges, meeting rooms, laundry rooms, greenhouses, exercise rooms and recreational areas, libraries, offices, medical facilities for diagnosis and out patient services for residents only and such other common areas or facilities of accessory uses for the residents may be desired. An assisted living residence is a facility that is eligible for certification as an assisted living residence by the Executive Office of Elder Affairs pursuant to M.G.L. Chapter 19D and shall conform with the following:

4.3.6.1 A unit defined by M.G.L. Chapter 19D shall be a “dwelling unit” as defined by this Bylaw.

4.3.6.2 There shall be retained in perpetuity for conservation or passive recreation use an area of common open space equal to at least thirty percent (30%) of the total lot area.

4.3.6.3 A minimum of twenty percent (20%) of the total number of assisted living units shall be a mix of affordable units for person who qualify as low, moderate or upper moderate income and assets. In determining the number of affordable units required, a fractional unit of 0.5 or more shall be considered a whole unit. The minimum percentage of affordable assisted living units shall be maintained as affordable units for the duration of the use of the property under Section 4.3.6.

4.3.6.4 To the extent determined to be feasible by the Board (taking into consideration legal and economic constraints, including limitations imposed by financing sources) said affordable assisted living units required in subsection 4.3.6.3 shall be made available to eligible Concord residents, and persons related to such residents by consanguinity or affinity, prior to offering such units to other eligible persons.

(See next page for table)

CONCORD ZONING – TABLE I – PRINCIPAL USE REGULATIONS

Principal Uses	Residential District				Commercial Districts			Industrial Districts			Site Plan Approval
	AA	A	B	C	B	LB	MP	I	IP	LIP	
4.1 Extensive Uses											
4.1.1 Forestry	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	NR
4.1.2 Agriculture, horticulture, floriculture and viticulture	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	NR
4.1.3 Greenhouse	SP	SP	SP	SP	yes	no	no	yes	yes	yes	NR
4.1.4 Earth removal	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	NR
4.1.5 Conservation use	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	NR
4.1.6 Private recreation	SP	SP	SP	SP	yes	yes ¹	no	yes	yes	yes	R
4.2 Residential Uses											
4.2.1 Single-family dwelling	yes	yes	yes	yes	yes	no	yes	no	no	no	NR
4.2.2 Two-family or additional dwelling unit	SP	SP	SP	SP	SP	no	SP	no	no	no	NR
4.2.3 Combined business/residence	no	no	no	no	yes	yes ³	SP	no	no	no	R
4.2.4 Combined industrial/business/residence	no	no	no	no	no	no	no	SP	no	no[SP ^{♦♦}]	R
4.2.5 Residential Compound	SP	SP	SP	SP	SP	no	no	no	no	no	NR
4.2.6 Residential Cluster Development	SP	SP	SP	SP	SP	no	no	no	no	no	NR
4.2.7 Planned Residential Development	SP	SP	SP	SP	SP	no	no	no	no	no[SP ^{♦♦}]	NR
4.2.8 Boarding house	SP	SP	SP	SP	yes	no	no	no	no	no	NR
4.2.9 Hotel and motel	no	no	no	no	yes	yes ¹	no	no	no	no	R
4.3 Institutional Uses											
4.3.1 Educational	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	R
4.3.2 Child care facility	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	R
4.3.3 Religious	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	R
4.3.4 Philanthropic	SP	SP	SP	SP	yes	SP ⁸	yes	yes	yes	yes	R
4.3.5 Hospital and nursing home, provided that in Limited Business Dist. #6 only nursing, rest or convalescent home and hospital parking shall be permitted.	no	no	no	no	yes	SP ⁶	yes	no	no	no	R
4.3.6 Assisted living residence	no	no	no	no	no	SP ⁸	no	no	no	no	R
4.3.7 Cemetery	yes	yes	yes	yes	yes	no	no	no	no	no	NR
4.3.8 Lodge and club	SP	SP	SP	SP	yes	no	no	yes	yes	yes	R
4.4 Governmental and Utility Uses											
4.4.1 Municipal use	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	NR
4.4.2 Underground utility	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	NR
4.4.3 Above ground utility	SP	SP	SP	SP	yes	SP	SP	yes	yes	yes	NR

Dimensional Regulations

6.1 Dimensions:

Minimum lot area frontage, lot width, yard, and corner clearance requirements and maximum lot coverage, height and floor/area ration requirements shall be as prescribed in Section 6 Table III, Dimensional Regulations.

6.2 Interpretation

For purposes of interpretation the following shall apply:

6.2.1 Lot area

In determining lot area no part thereof within the street lines of within a private way or right-of-way travel by motor vehicles shall be included. Street lines shall determine lot boundaries.

6.2.2 Minimum lot area

6.2.2.1 When computing minimum lot area for any lot laid out and submitted for approval by the Planning Board, in accordance with Chapter 41 of the General Laws, after September 1, 1991, not more than fifty (50) percent shall be provided by land located within the Flood Plain Conservancy District and Wetlands Conservancy District.

6.2.2.2 When the distance between any two (2) points on lot lines is less than fifty feet, measured in a straight line, the smaller portion of the lot which is bounded by such straight line and such lot lines shall not be considered in computing the minimum lot area unless the distance along such lot lines between such two points is less than one hundred fifty (150) feet.

6.2.3 Frontage

Frontage shall be measured in a continuous line along the sideline of the street between the point of intersection of the side lot lines with said sideline of the street.

6.2.4 Frontage exception

A dwelling in Residence AA, A, and B Districts may be constructed on a lot having eighty (80) percent of the minimum lot frontage, provided that the lot width at the nearest point on the front wall of the dwelling to the sideline of the right-of way shall not be less than the minimum lot frontage and, that the angle formed by the intersection of the side lot line and the sideline of the right-of way shall not be less than 45 degrees.

6.2.5 Lot width

Each lot shall have a width of not less than eighty (80) percent of the required frontage at all points between the sideline of the right-of-way along the frontage of the lot in measured and the nearest point on the front wall of the dwelling upon such lot and, that the angle formed by the intersection of the side lot line and the sideline of the right-of way shall not be less than 45 degrees. Such width shall be measured along lines, which are parallel to such sideline.

6.2.6 Front yards

Front yards shall be measured between the sideline of the right-of-way and the nearest point of any structure, with the exception of uncovered steps and ramps or the construction of walls and fences. In all cases, corner lots shall be considered to have two (2) front yards and two (2) side yards. A lot having frontage on two (2) streets shall have two (2) front yards, each of which shall comply with the requirements of the front yard provisions.

6.2.7 Side Yards

Side yards shall be measured from the nearest point of any dwelling or structure to each side lot line, provided that nothing shall prevent the projection of uncovered steps and ramps or the construction of walls and fences. In the residential districts or for single-family dwellings in the Business or Medical-Professional districts, the width of one side yard may be reduced by an amount not to exceed three (3) feet of accessory use may be placed not less than five (5) feet from a sideline so long as such building is not to be located nearer the sideline of the right-of-way than the rear most point of the dwelling or any structure attached thereto.

6.2.8 Rear yards

Rear yards shall be measured from the nearest point of any dwelling or structure attached thereto to the rear lot line provided that nothing shall prevent the projection of uncovered steps and ramps or the construction of walls and fences. In the residential districts or for single-family dwelling in the Business or Medical Professional districts, no building of accessory use shall be placed nearer to the rear lot line than five (5) feet.

6.2.9 Landscape buffer

Side yards, rear yards and the other lot lines noted in Table III shall be suitably landscaped. Such landscaping shall be designed to reduce the visual impact on the principal use upon adjacent property by the use of trees, shrubs, walls, fences, or other landscape elements. Where the developed area adjoins land developed for residential use, suitable landscaping shall consist of a substantially sight-imperious screen of evergreen foliage at least eight (8) feet in height or planting of shrubs and trees complemented by a sight-imperious fence of at least five (5) feet, but not more than eight (8) feet, in height, or such other type of landscaping as may be required under site plan approval. In all developments, to the extent practicable, existing trees shall be retained and used to satisfy the provisions of this Section 6.

6.2.10 Corner clearance

Between the sidelines of the intersecting streets and a straight line joining points on such sidelines ten (10) feet distant from their point of intersection or, in the case of a rounded corner, a straight line joining the points of intersection of their tangents, no building or structure may be erected and no vegetation may be maintained three (3) feet above the plane through their curb grades.

6.2.11 Height

The height of a building shall be measured as the vertical distance from the mean ground level of each side of the building to either the highest point of the exterior in the case of a flat roof or to the mean average finished grade between the plane and the ridge in the case of a pitched roof. Chimneys, spires, towers and other projections not used for human occupancy or storage may extend above

the height limits herein fixed except with turbine facilities, which can only exceed the maximum height requirement by special permit granted by the Board.

6.2.12 Maximum lot coverage

The total ground area covered by the principal and accessory structures (and in the I, IP, LIP, and LB #4 and #8 districts, all paved areas) shall not exceed the maximum square footage per acre of lot area as noted in Section 6, Table III.

6.2.13 Maximum floor area ratio

The total gross area of all buildings on a lot shall not exceed the maximum square footage per acre of lot area as noted in Section 6, Table III, except as provided in G.L. c.40A, sec. 9C for a child care facility as an accessory use.

(See next 3 pages for Table III)

Parking and Loading Regulations

7.7.2.1 Required spaces: Table IV, Minimum Parking, includes the minimum number of parking spaces required for each principal use.

For Assisted living residence:

0.35 parking spaces per dwelling unit, plus one parking space per two employees during the largest shift, plus one space per company vehicle kept on the premises.

CONCORD ZONING – TABLE III – DIMENSIONAL REGULATIONS

<i>Zoning Districts</i>	<i>Minimum Lot Area in Sq. Ft.</i>	<i>Minimum Lot Frontage in Feet</i>	<i>Frontage Exception in Feet</i>	<i>Minimum Lot Width in Feet</i>	<i>Minimum Front Yard in Feet</i>	<i>Minimum Side Yard in Feet</i>	<i>Minimum Rear Yard in Feet</i>	<i>Corner Clearance in Feet</i>	<i>Maximum Height in Feet</i>	<i>Maximum Lot Coverage %</i>	<i>Maximum Floor Area Ratio</i>
Residence AA	80,000	200	160	160	40	15	Less of: 30' or 25% of lot depth	10	35	-----	-----
Residence A	40,000	150	120	120	40	15	" "	10	35	-----	-----
Residence B	20,000	125	100	100	20	15	" "	10	35	-----	-----
Residence C	10,000	80	80	64	20	15	" "	10	35	-----	-----
Business	-----	-----	-----	-----	10	Where a business or industrial use abuts a residential dist.: 10' of which 5' shall be a landscaped buffer along those side and rear lot lines which abut the residential district unless otherwise specified under site plan approval.		10	35	-----	-----
(A) Dwelling	10,000	80	80	64	20	15	Less of: 30' or 25% of lot depth	10	35	-----	-----
(B) Combined Business/Res.	-----	-----	-----	-----	10	6' side and 25' rear yard in all cases provided that where such use abuts a residential dist., the side yard shall be increased to 10' and a landscaped buffer shall be provided in accordance with the provisions for a business or industrial use.		10	35	Open space equal to the requirements of subsection 4.2.3.2	-----
Limited Business 1	-----	150	-----	-----	100	100' from residential district boundary lines.		-----	25	20	-----
2	-----	-----	-----	-----	10	-----	-----	-----	25	-----	-----
3	-----	-----	-----	-----	10	-----	-----	10	35	-----	-----

CONCORD ZONING – TABLE III – DIMENSIONAL REGULATIONS

<i>Zoning Districts</i>	<i>Minimum Lot Area in Sq. Ft.</i>	<i>Minimum Lot Frontage in Feet</i>	<i>Frontage Exception in Feet</i>	<i>Minimum Lot Width in Feet</i>	<i>Minimum Front Yard in Feet</i>	<i>Minimum Side Yard in Feet</i>	<i>Minimum Rear Yard in Feet</i>	<i>Corner Clearance in Feet</i>	<i>Maximum Height in Feet</i>	<i>Maximum Lot Coverage %</i>	<i>Maximum Floor Area Ratio</i>
Limited Business 4	-----	-----	-----	-----	100	100' from all lot lines of which 20' shall be a landscaped buffer.		-----	35	35, the same to include the gross ground floor area of all buildings and all paved areas.	-----
5	-----	-----	-----	-----	10	-----	-----	-----	25	50	-----
6	-----	-----	-----	-----	100	100' from all lot lines of which 20' shall be landscaped buffer.		-----	35	50, the same to include all paved areas and 25% maximum lot coverage by all structures.	-----
7	40,000	80	-----	-----	10	10' from all lot lines of which 5' shall be landscaped buffer.		-----	35	18	-----
8	5 acres	-----	-----	-----	20	20	20	-----	40 ft., but not more than three stories	50, the same to include all paved areas and 25% maximum lot coverage by all structures.	-----
Medical/Prof.	North of Route 2 10,000	80	-----	-----	20	15	Lesser of: 30' or 25% of lot depth	10	North of Route 2: 35	-----	-----
	South of Route 2 80,000	125	-----	-----	40	15	Lesser of: 30' or 25% of lot depth	10	South of Route 2: 35 to 110 in accordance with subs. 6.2.11	-----	-----
Industrial	20,000	100	-----	-----	10	10' in all cases of which 5' shall be landscaped buffer along those side and rear lot lines which abut the residential districts unless otherwise specified under site plan approval.		10	35	75, the same to include the gross ground floor area of all buildings and all paved areas, or open space equal to 50% of the gross floor area of the building, whichever is greater.	-----

CONCORD ZONING – TABLE III – DIMENSIONAL REGULATIONS

<i>Zoning Districts</i>	<i>Minimum Lot Area in Sq. Ft.</i>	<i>Minimum Lot Frontage in Feet</i>	<i>Frontage Exception in Feet</i>	<i>Minimum Lot Width in Feet</i>	<i>Minimum Front Yard in Feet</i>	<i>Minimum Side Yard in Feet</i>	<i>Minimum Rear Yard in Feet</i>	<i>Corner Clearance in Feet</i>	<i>Maximum Height in Feet</i>	<i>Maximum Lot Coverage %</i>	<i>Maximum Floor Area Ratio</i>
Industrial Park	4 acres	50' on a private interior street constructed as part of the development of a site or 200' on an existing public way.	-----	-----	20' from the side lines of private streets constructed as part of a development of a site and 100' from existing public ways. No parking areas may be placed closer than 30' from the side lines of any public way or 20' from the side lines of private streets within the boundaries of the Industrial Park development.	20' except 100' from property lines of parcels zoned residential and in residential use, 50' of which must be a landscaped buffer. No parking areas may be placed within the minimum side or rear yard except where joint parking areas are permitted by the Planning Board through site plan approval.		10	40, but not more than 3 stories, excluding basements.	50, the same to include all paved areas and 20% maximum lot coverage by all structures.	-----
Limited Industrial Park	5 acres	50' on a private interior street within the LIP development or 200' on a public way.	-----	-----	100' from public ways in existence prior to January 1, 1981 and 50' from all other streets. No parking area may be placed within the minimum front yard.	20' for buildings for which a building permit was issued prior to February 14, 1980 and for any additions thereto, 50' for all other buildings and for additions to all buildings, and 200' from property lines of parcels zoned residential and in residential use, 100' of which must be a landscaped buffer. No parking area may be placed within 20' of the side and rear lot lines except where joint parking areas are permitted by the Planning Board through site plan approval.		10	40, but not more than 3 stories, excluding basements.	35, the same to include the gross ground floor area of all buildings and all paved areas.	6,000 sq. ft. gross floor area per acre for R&D and Light Manufacturing uses, or 3,000 sq. ft. gross floor area per acre for other uses.
By-Pass	-----	200	-----	-----	-----	-----	-----	-----	-----	-----	-----

ADA Standards for Accessible Design

This document sets guidelines for accessibility to places of public accommodation and commercial facilities by individuals with disabilities. These guidelines are to be applied during the design, construction, and alteration of such buildings and facilities to the extent required by regulations issued by Federal agencies, including the Department of Justice, under the Americans with Disabilities Act of 1990.

The content of the ADA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES includes the following:

1. PURPOSE
 2. GENERAL
 3. MISCELLANEOUS INSTRUCTIONS AND DEFINITIONS
 4. ACCESSIBLE ELEMENTS AND SPACES: SCOPE AND TECHNICAL REQUIREMENTS
 5. RESTAURANTS AND CAFETERIAS
 6. MEDICAL CARE FACILITIES
 7. BUSINESS AND MERCANTILE
 8. LIBRARIES
 9. ACCESSIBLE TRANSIENT LODGING
 10. TRANSPORTATION FACILITIES
- APPENDIX

(Specific Guidelines in each section can be found at www.ada.gov.)

Architectural Access Board Rules and Regulations

The AAB Rules and Regulations 521 CMR consist of additional policies set forth by the state of Massachusetts for accessibility in accordance with the ADA guidelines. (Please refer to Massachusetts General Laws Chapter 22 and Section 13A for more information about the Architectural Access Board.) It is the intent of 521 CMR to provide persons with disabilities full, free and safe use of all buildings and facilities so that all such persons may have the educational, living and recreational opportunities necessary to be as self sufficient as possible and to assume full responsibilities as citizens.

PART A ADMINISTRATION

Section 1 Authority*
Section 2 Purpose and Scope*
Section 3 Jurisdiction*
Section 4 Appeal and Variance*
Section 5 Definitions*
Section 6 Space Allowance and Reach Ranges*

PART B BUILDING TYPES

Section 7 Retail Establishments
Section 8 Transient Lodging Facilities
Section 9 Multiple Dwellings*
Section 10 Public Use and Common Use Spaces in Multiple Dwelling *
Section 11 Commercial Buildings
Section 12 Educational Facilities*
Section 13 Medical Care Facilities*
Section 14 Places of Assembly
Section 15 Detention Facilities
Section 16 Houses of Worship
Section 17 Restaurants
Section 18 Transportation Terminals
Section 19 Recreational Facilities*

PART C EXTERIOR

Section 20 Accessible Route*
Section 21 Curb Cuts*
Section 22 Walkways*
Section 23 Parking and Passenger Loading Zones*

PART D INTERIOR

Section 24 Ramps*
Section 25 Entrances*
Section 26 Doors and Doorways*
Section 27 Stairs
Section 28 Elevators*
Section 29 Floor Surfaces*
Section 30 Public Toilet Room*
Section 31 Bathing Rooms*
Section 32 Kitchens*
Section 33 Dressing, Fitting and Changing Rooms
Section 34 Storage
Section 35 Tables and Seating*
Section 36 Drinking Fountains
Section 37 Public Telephones
Section 38 Automated Teller Machines (ATMs)
Section 39 Controls*
Section 40 Alarms
Section 41 Signage

PART E DWELLING UNITS

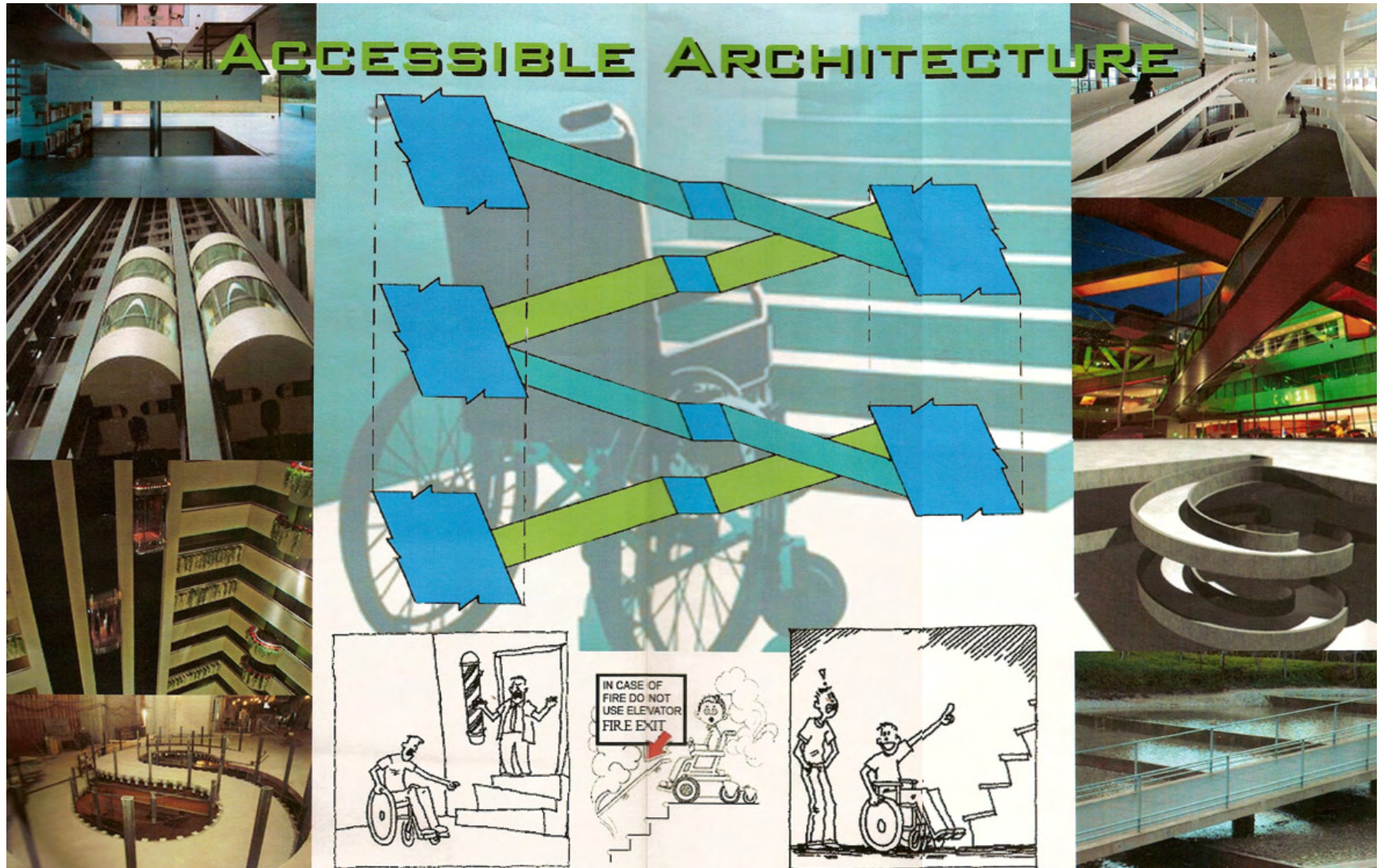
Section 42 Group 1 Bathrooms
Section 43 Group 1 Kitchens
Section 44 Group 2 Bathrooms*
Section 45 Group 2 Kitchens*
Section 46 Group 1 Bedrooms
Section 47 Group 2 Bedrooms*

** -Rules and Regulations that directly pertain to the design of this project.*

See www.mass.gov AAB Rules and Regulations for more information.

8 Process Work

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Initial Program Ideas

	Quantity	SF	Total
Administration			1870
Reception	1	200	200
Director's Office	1	150	150
Nurse's Stations	2	120	240
On-Call Nurses Quarters	1	200	200
Staff Offices	4	100	400
Staff Lounge	1	300	300
Conference Room	1	400	400
Storage	2	100	200
Bathrooms	2	90	180

Communal			3800
Waiting Are	1	200	200
Entertainment Rooms	3	250	750
Game Room	1	300	300
Community Lounge	1	550	550
Dining Are	1	2000	2000

Educational Facilities			3200
Classrooms	2	625	1250
Activity Rooms	2	625	1250
Library/Resource Are	1	400	400
Storage	2	150	300

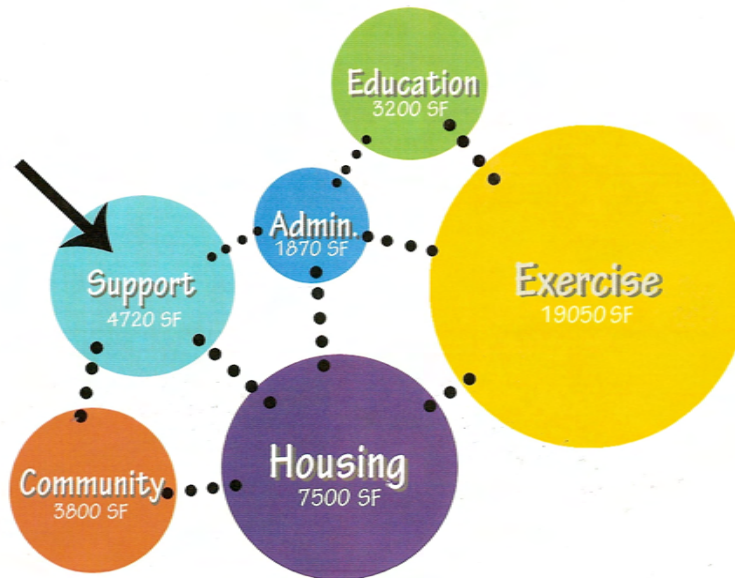
	Quantity	SF	Total
Exercise Facilities			19050
Gymnasium	1	8250	8250
Fitness Center	1	1250	1250
Physical Therapy Room	1	750	750
Locker Rooms	2	400	800
Pool	1	8000	8000

Housing			7500
Single Rooms	10	250	2500
• Bathroom	10	100	1000
Double Rooms	5	500	2500
• Bathroom	5	100	500
Community Rooms	2	500	1000

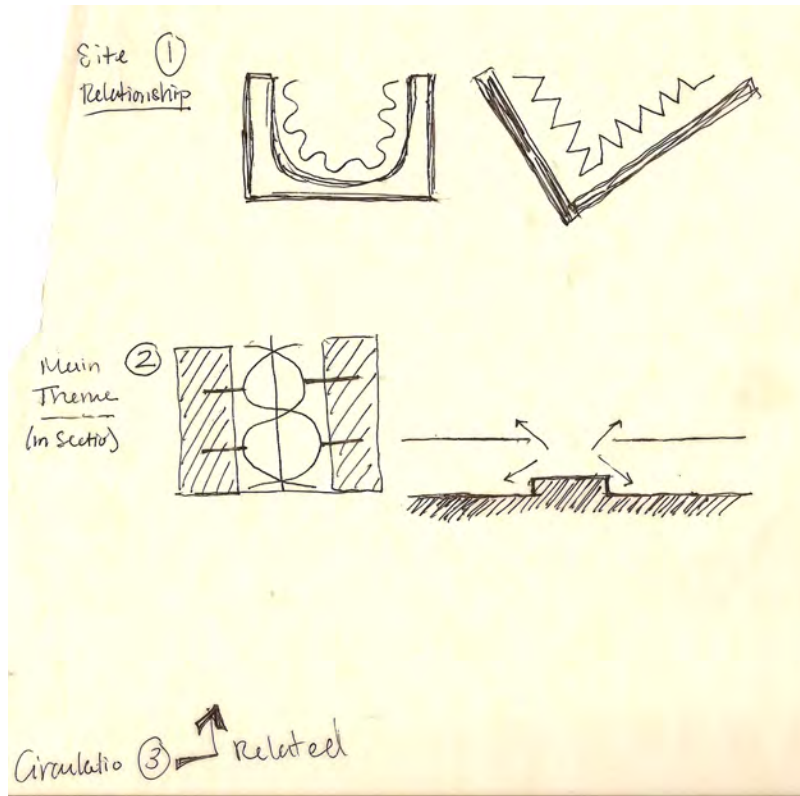
Support Spaces			4720
Entry Space/Lobby	1	500	500
Mechanical Rooms	3	200	600
Service Kitchen	1	650	650
Public Restrooms	6	450	2700
Assisted Restrooms	3	90	270

Total Are			
Net Area SF			40140

Site Amenities		
Walking Paths		
Green Spaces		
Gathering Space		
Community Gardens		
Parking	21	
• Staff	20	
• Visitor	15	
• Facility Vehicles	6	



Initial Sketches

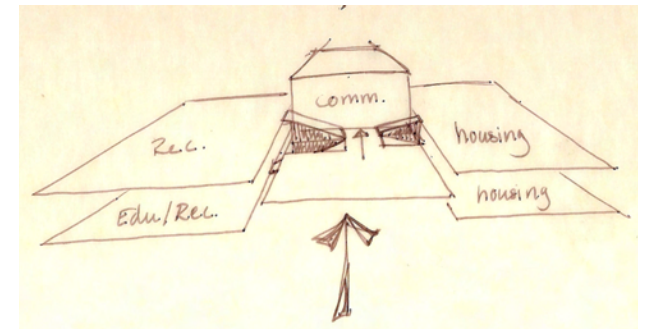
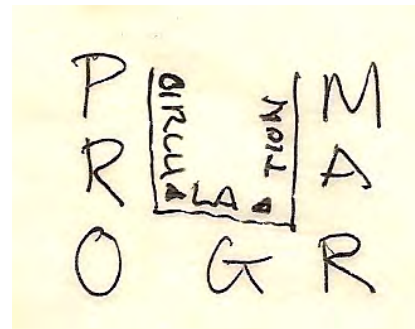
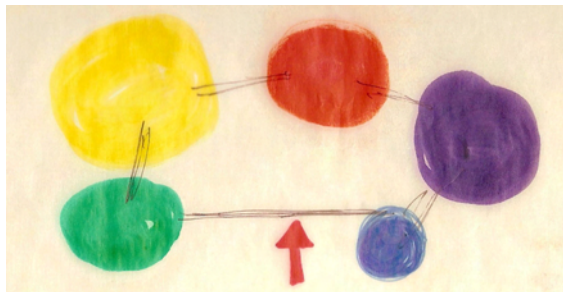


• Face $\left\{ \begin{array}{l} \text{Public - Vernacular} \\ \text{Private - Exciting? (explain)} \end{array} \right.$

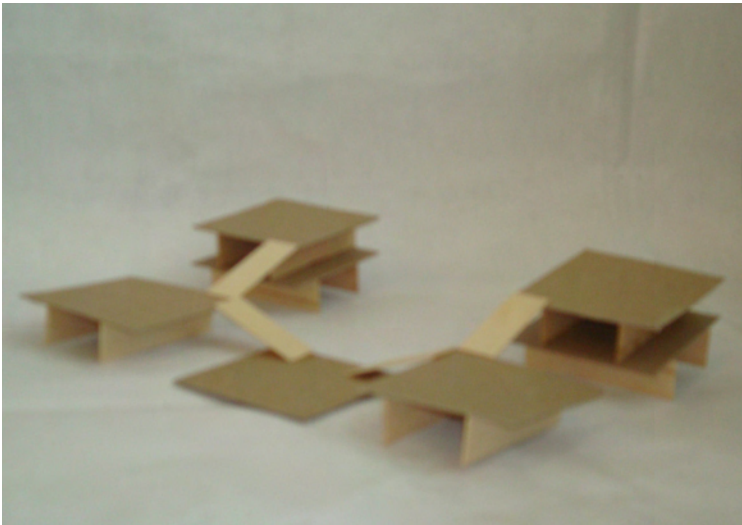
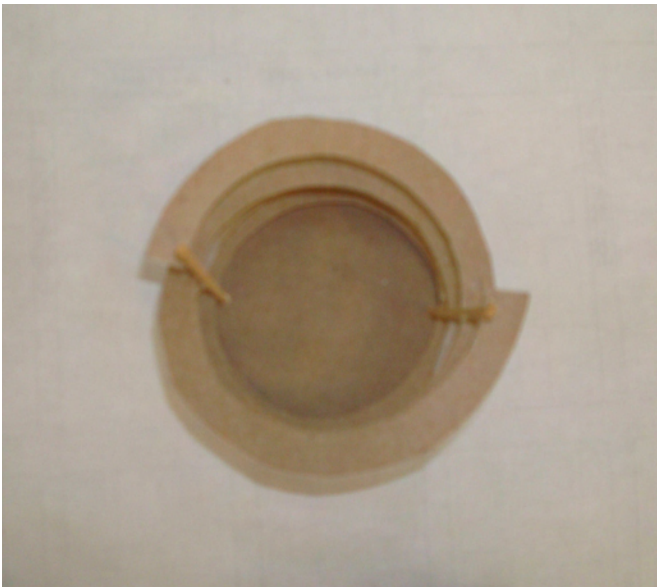
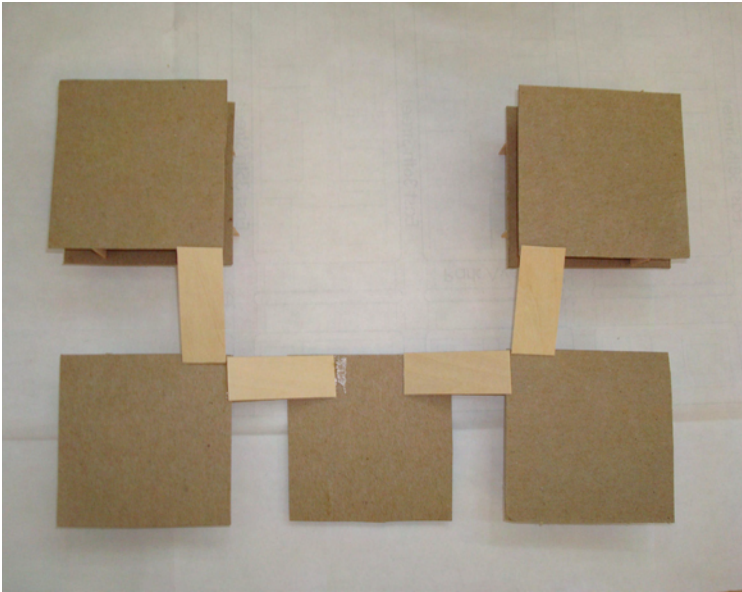
• Shape $\rightarrow V, L, U, O, U$

* 1 floor - multiple levels

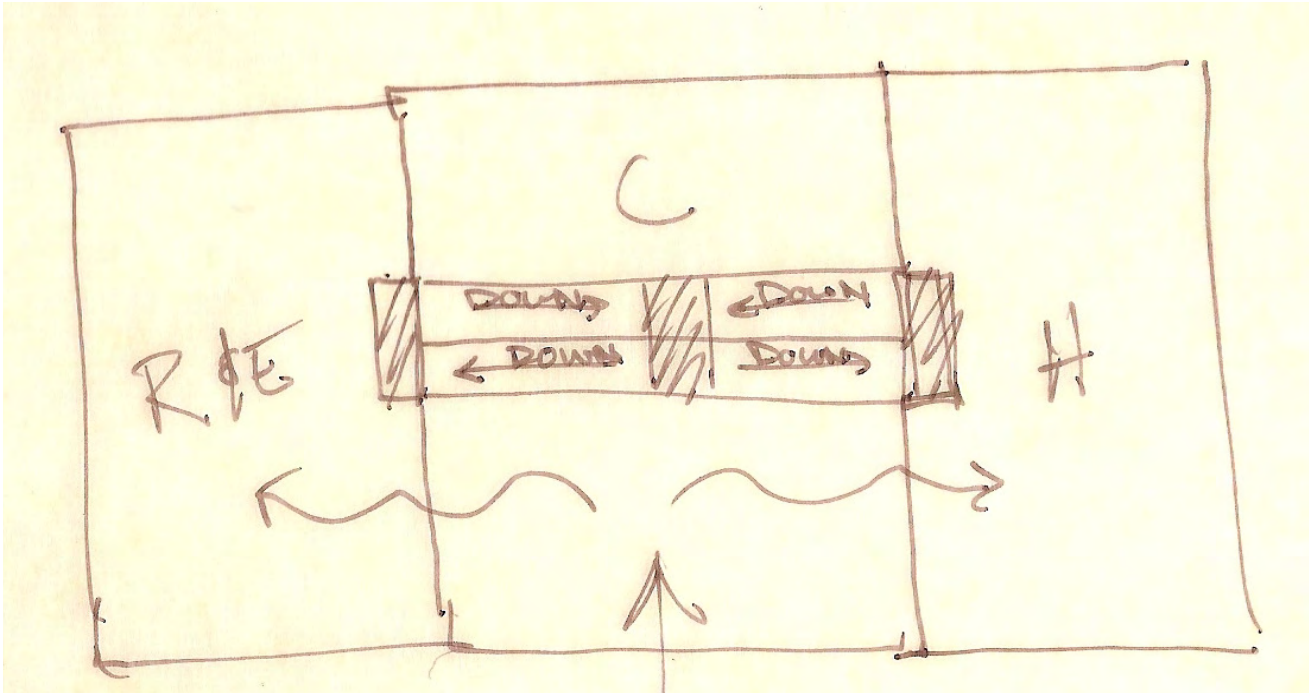
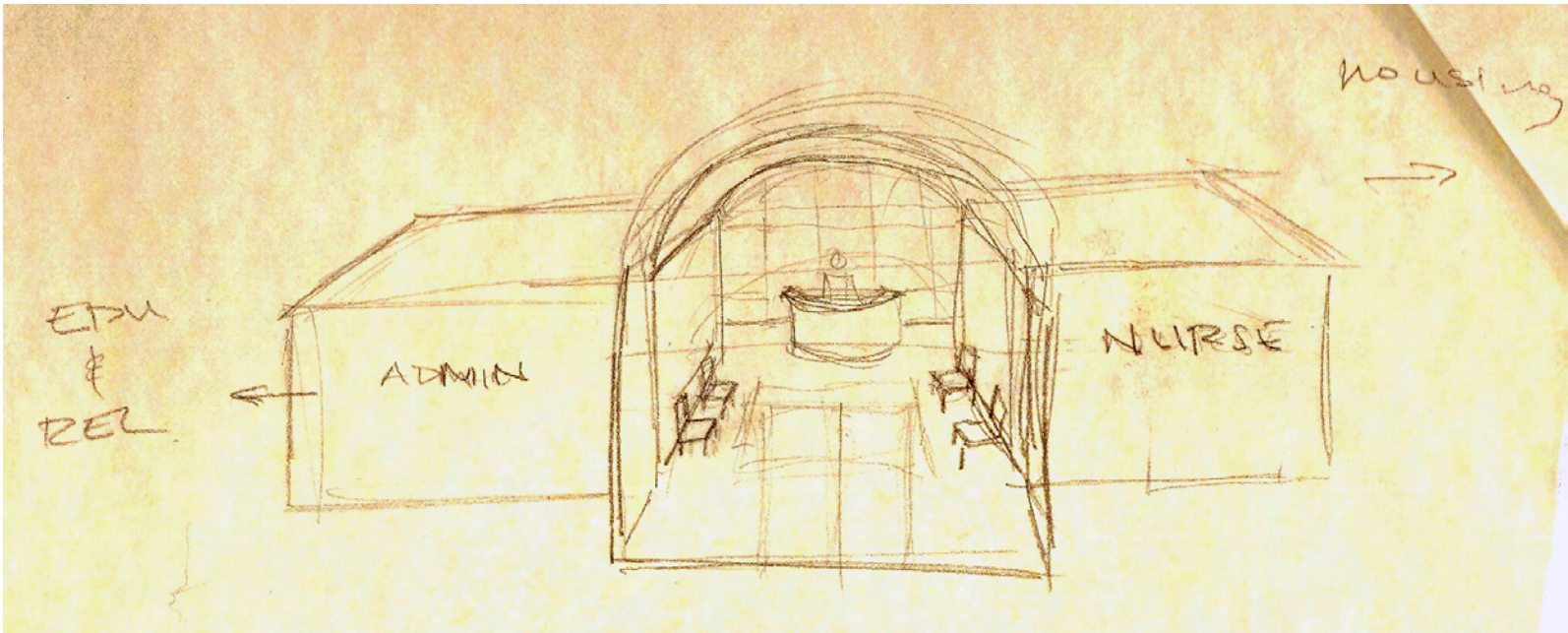
* 3 (Max) floors - w/ sub levels



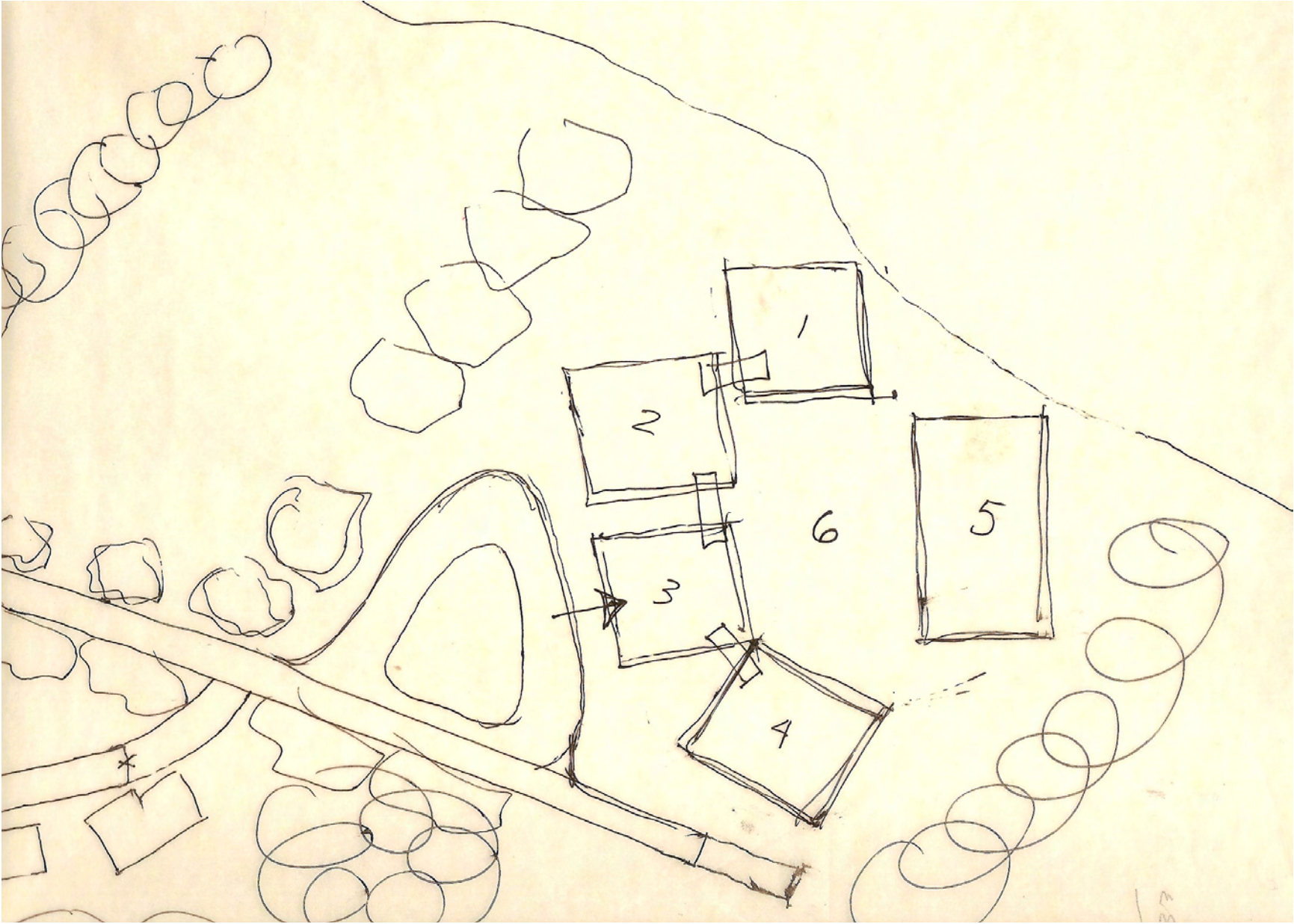
Initial Models

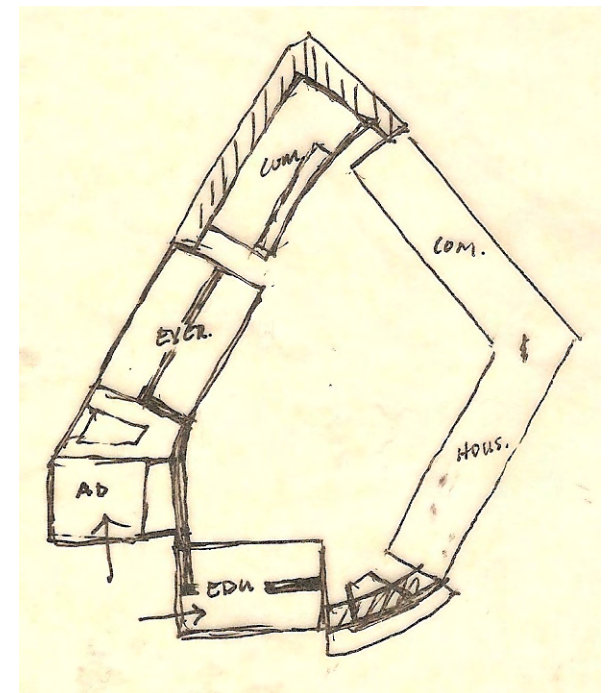
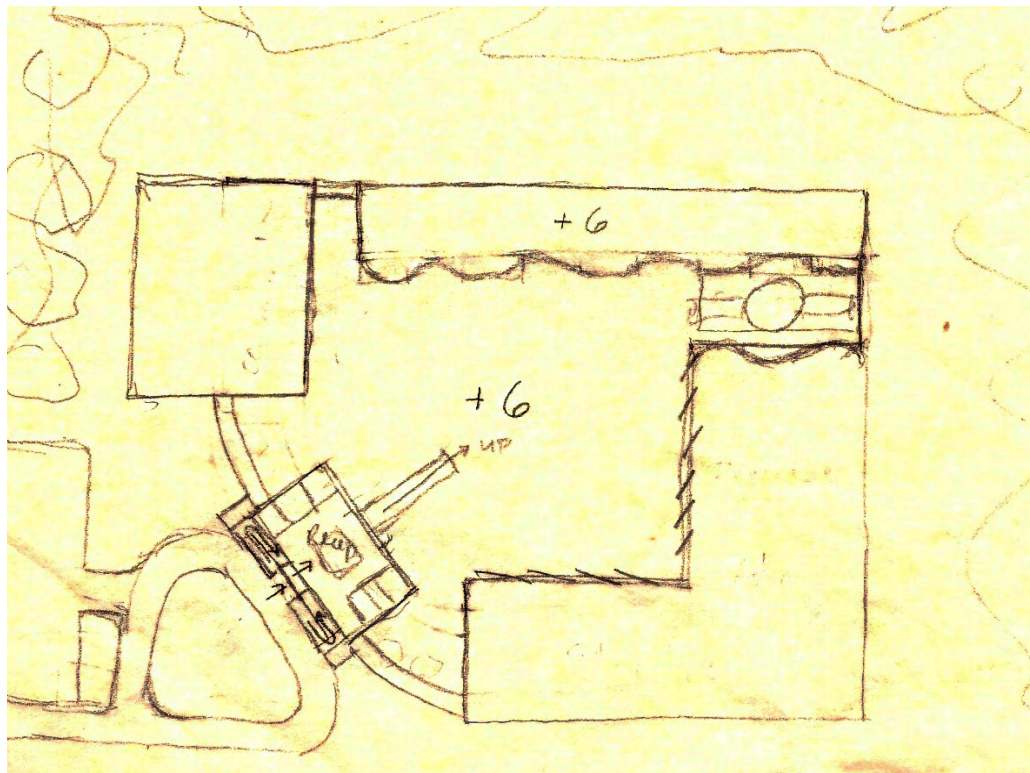
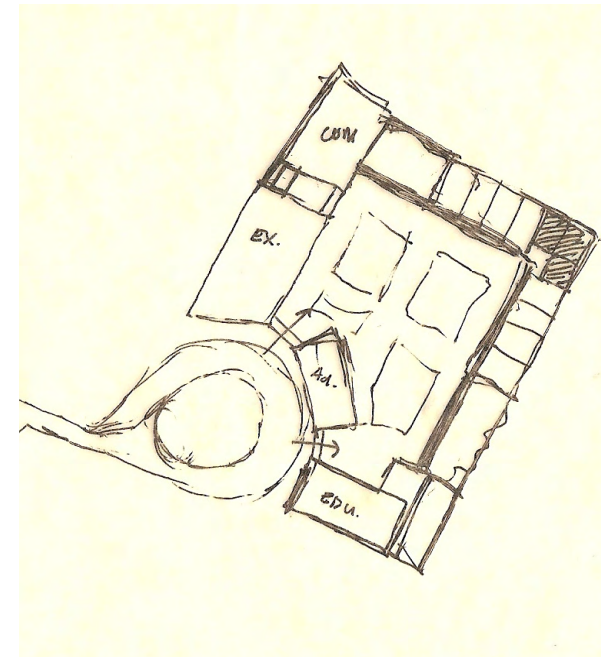
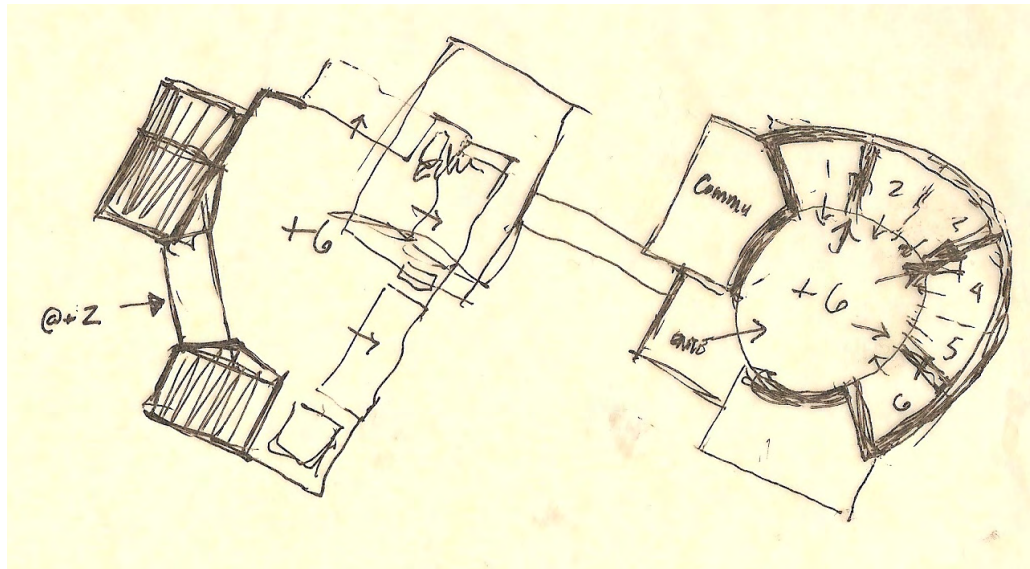


Scheme Sketches

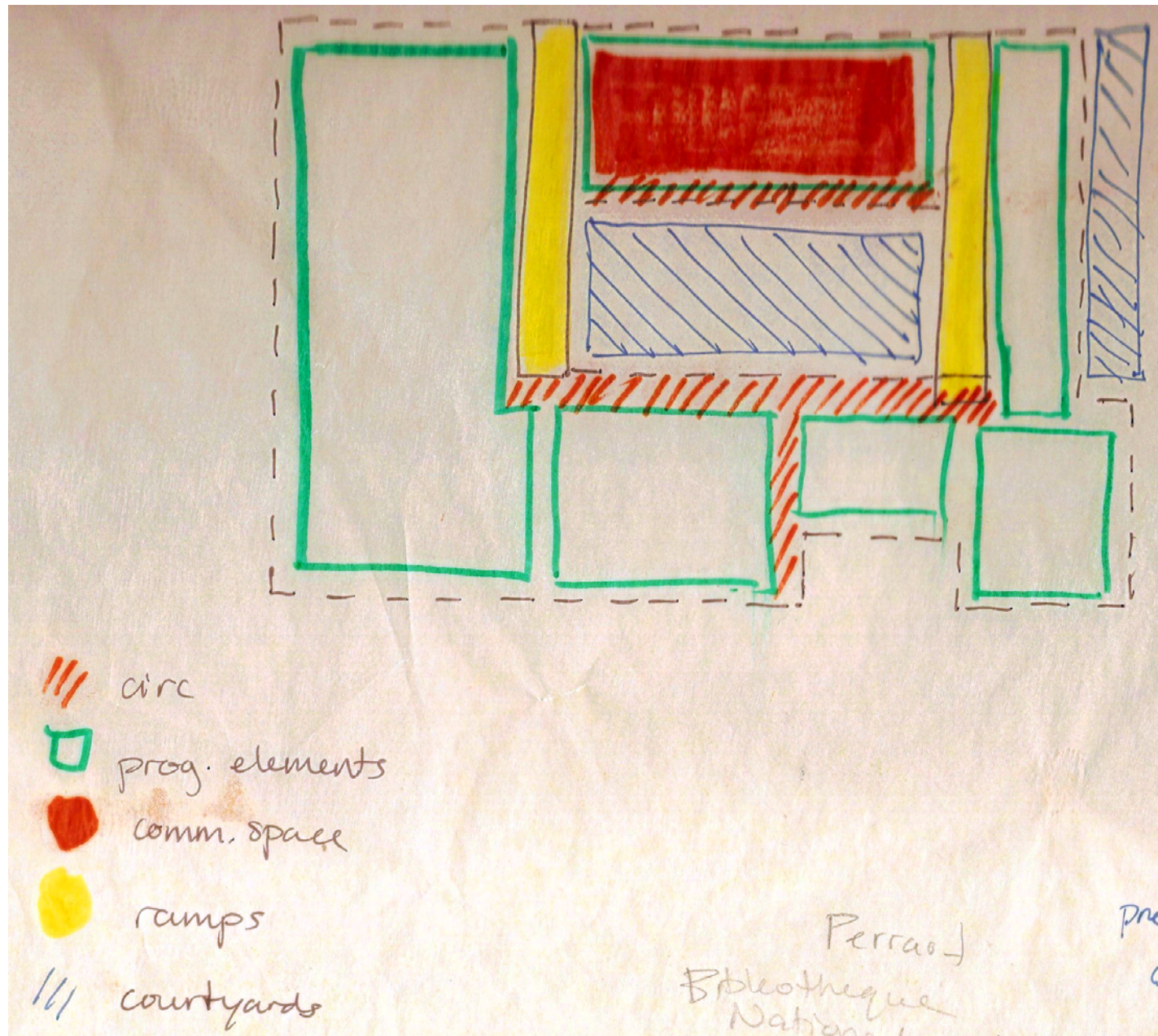


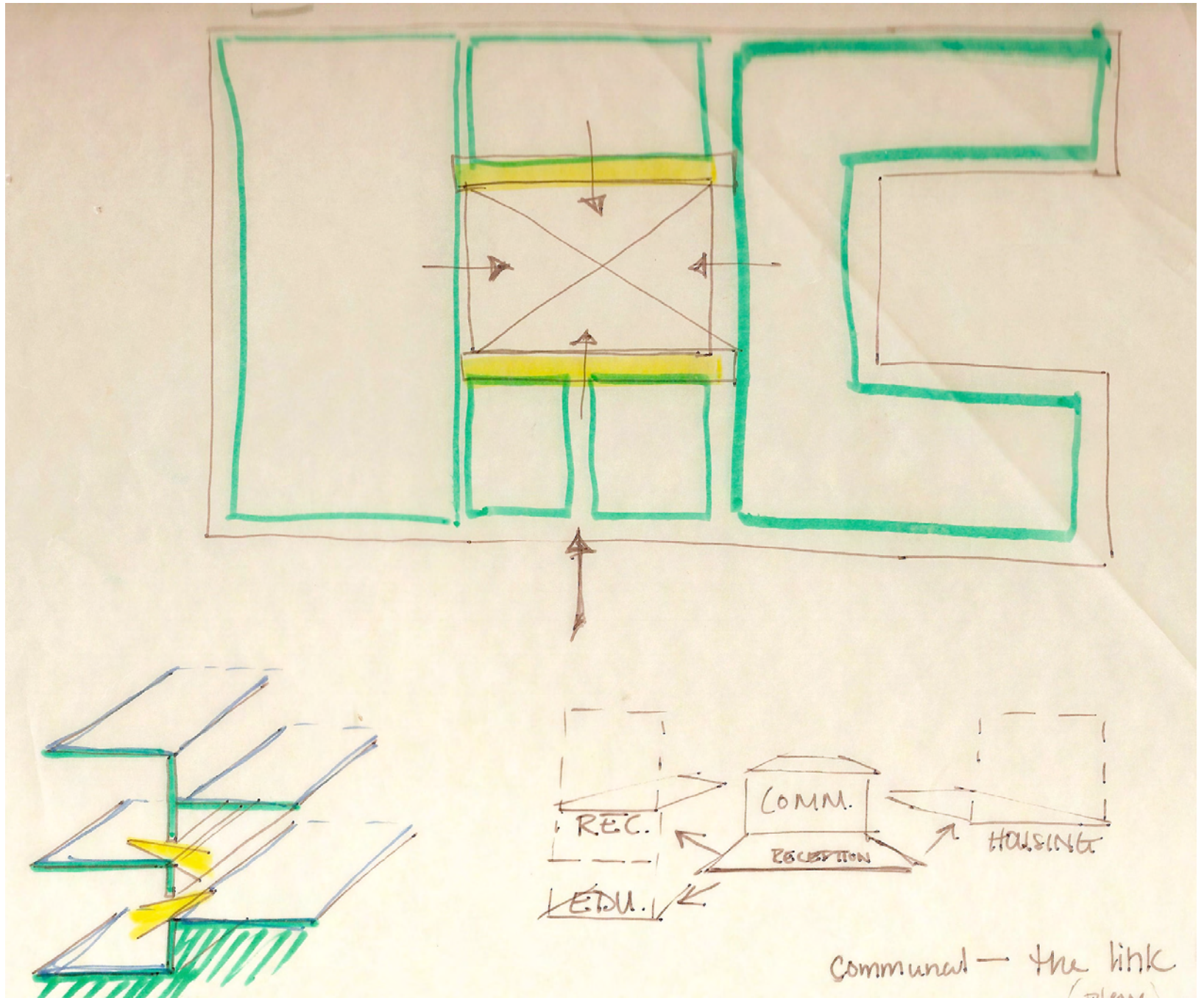
Scheme Sketchs





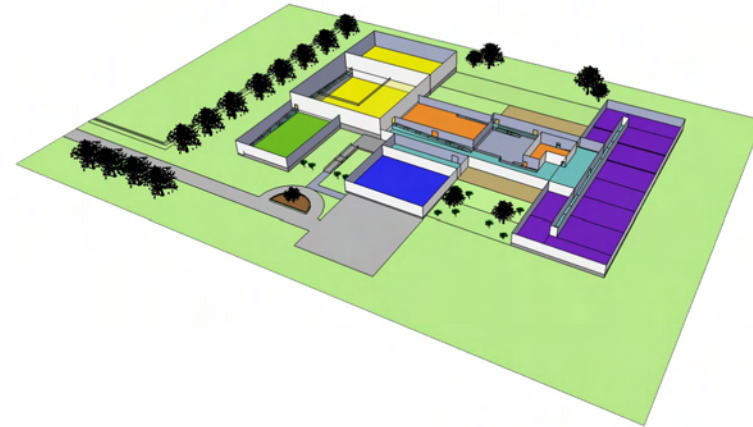
Scheme Sketchs



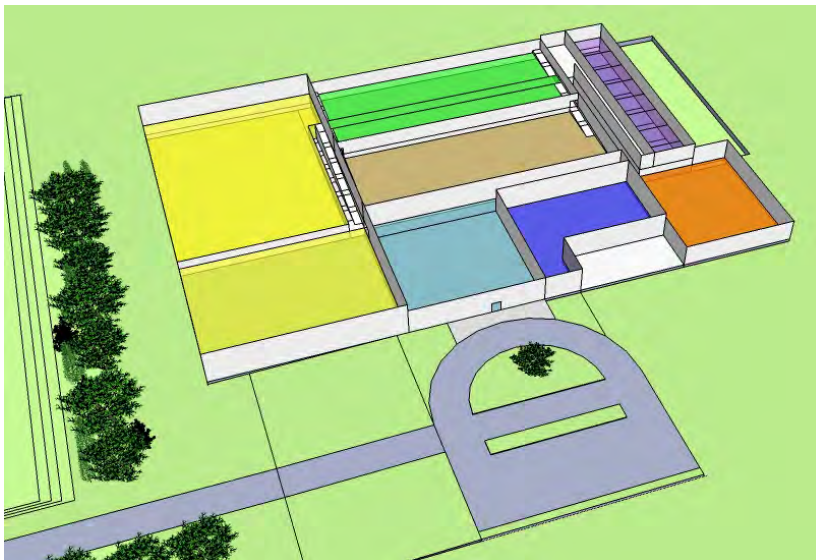
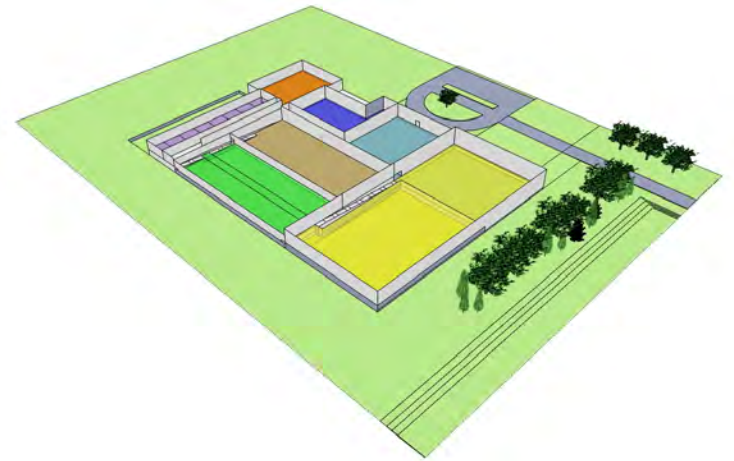
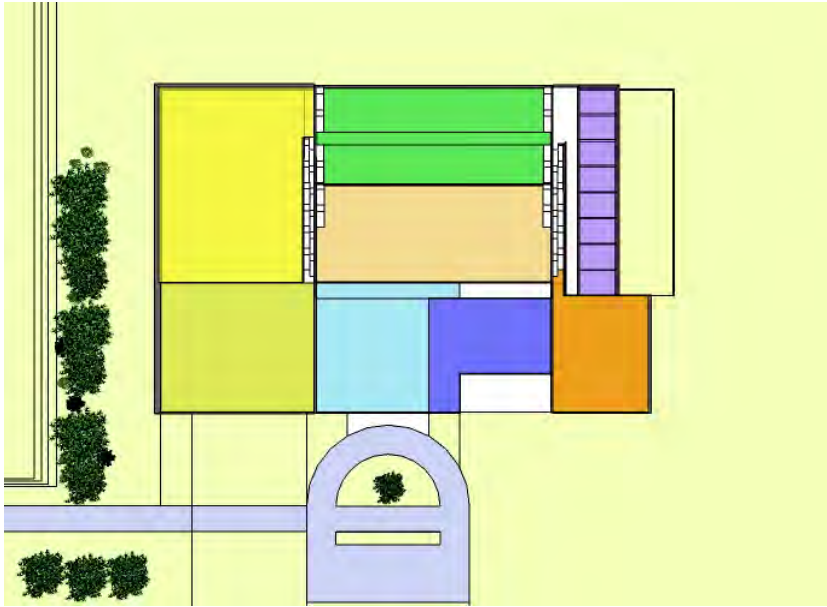


PRESENTATION 1: SCHEME IDEAS

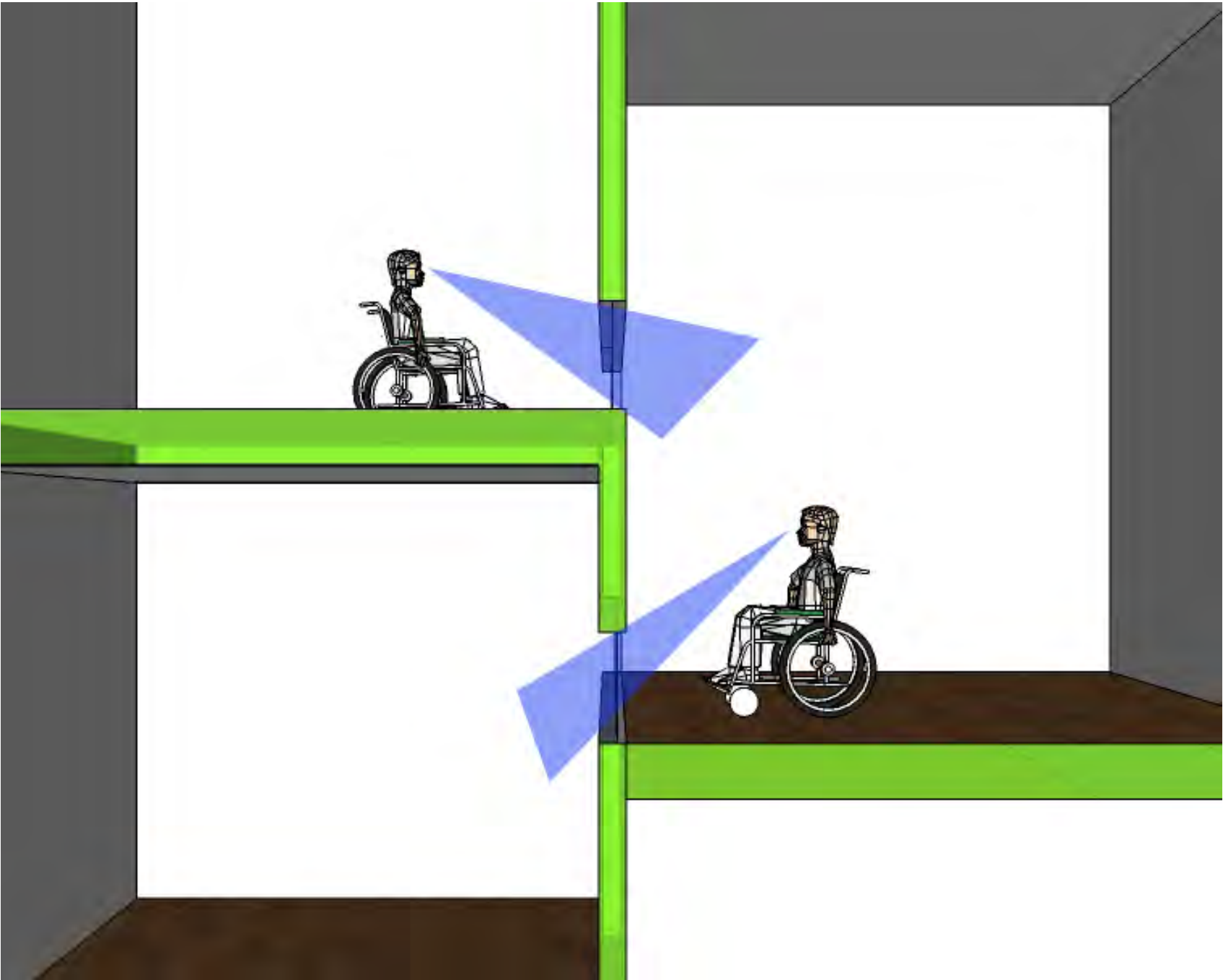
Scheme 1

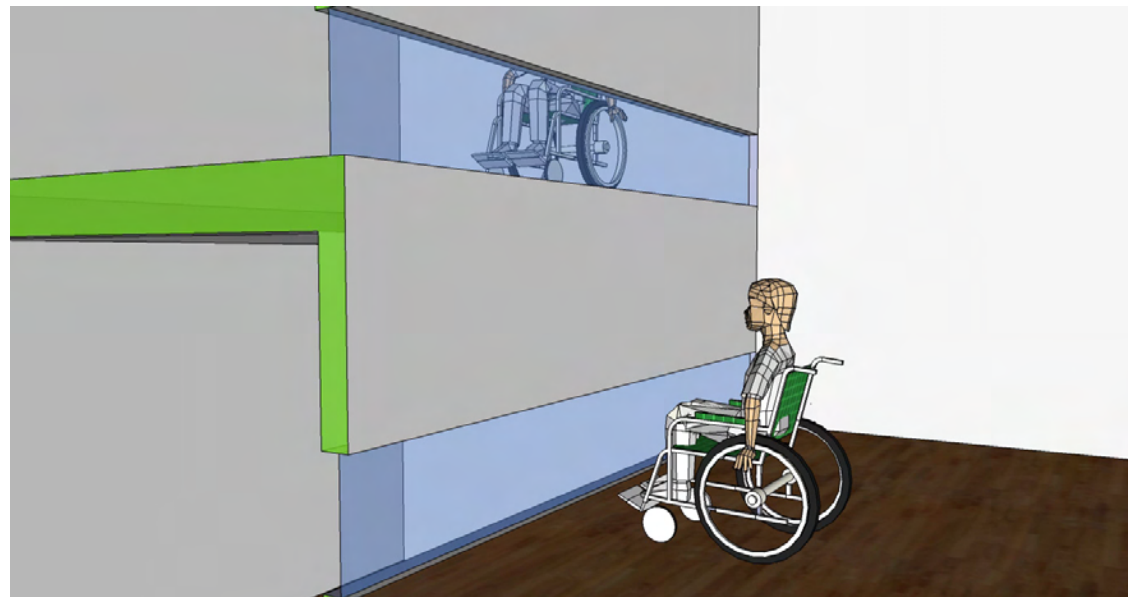
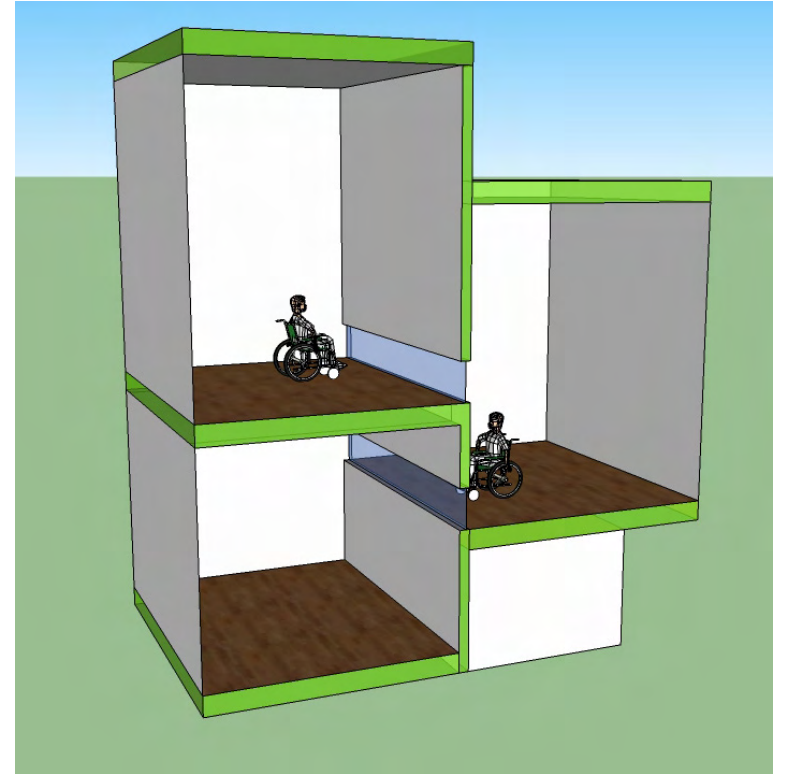
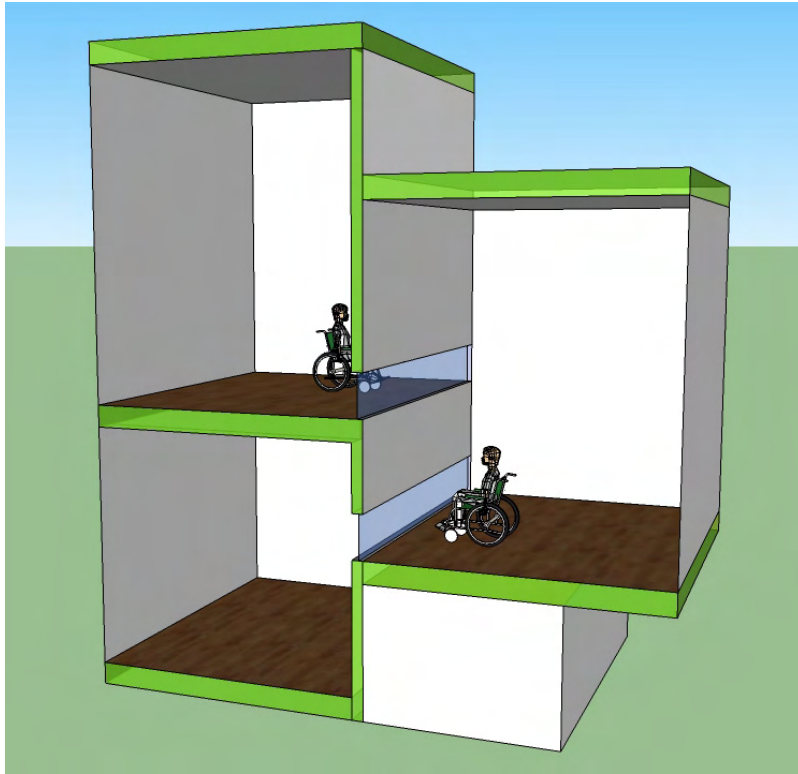


Scheme 2

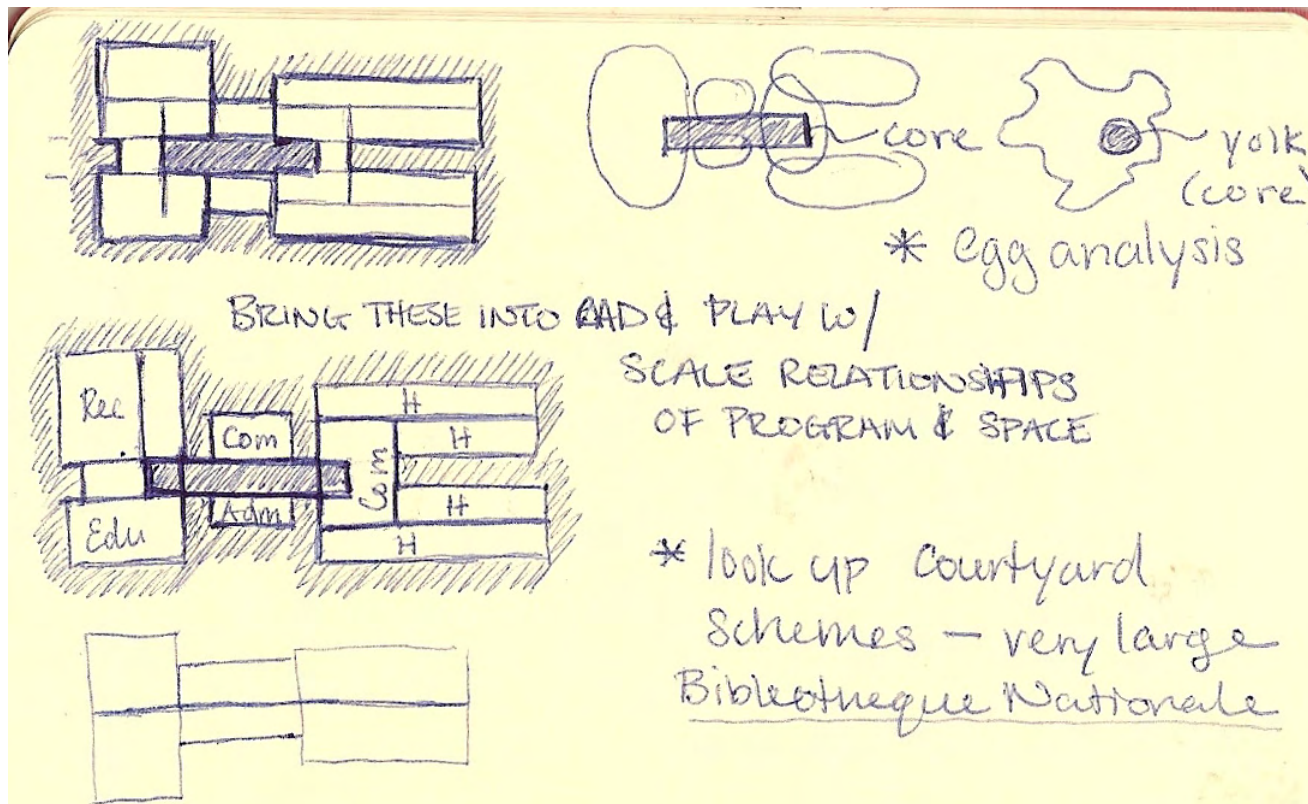
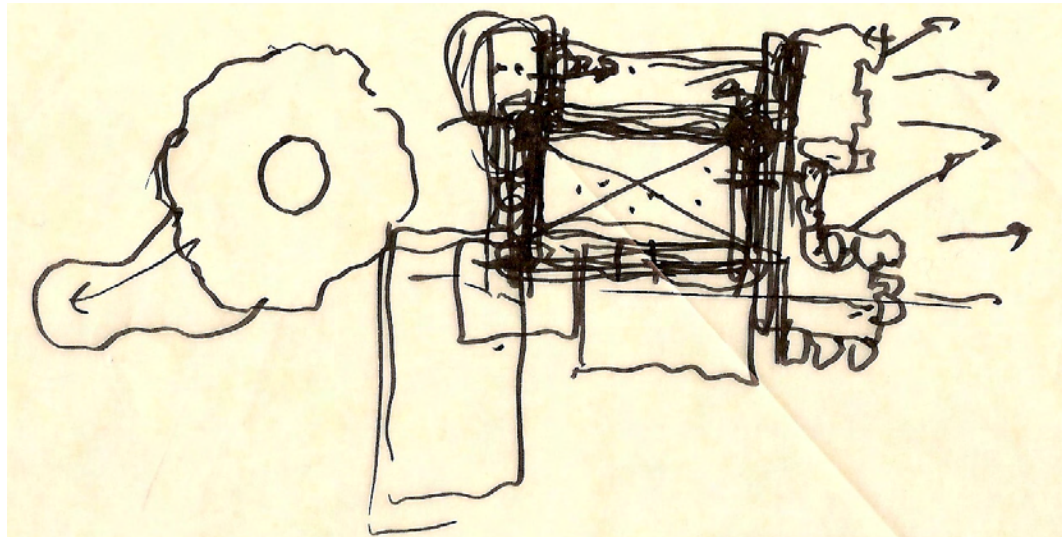


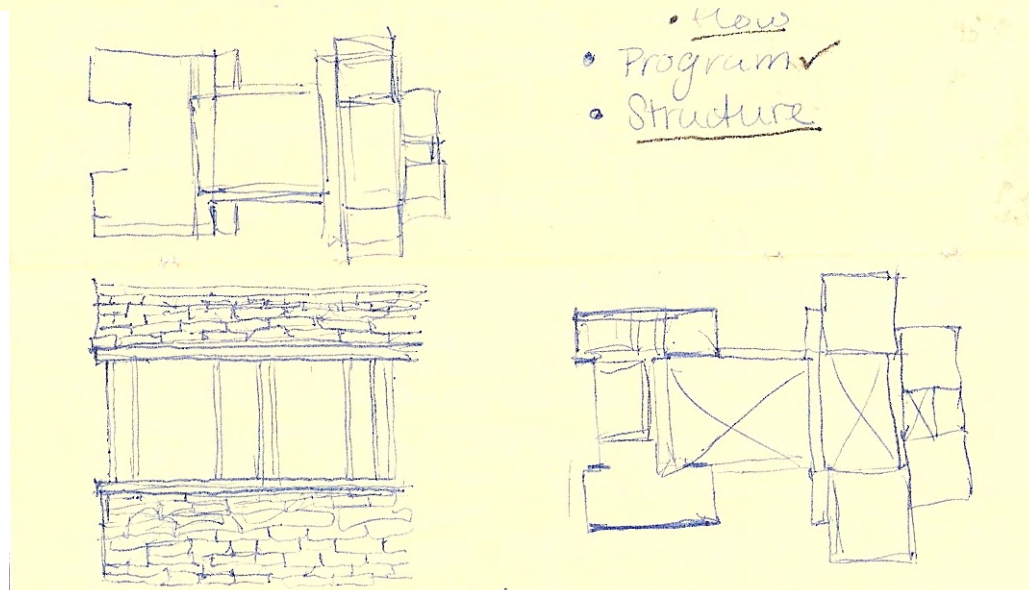
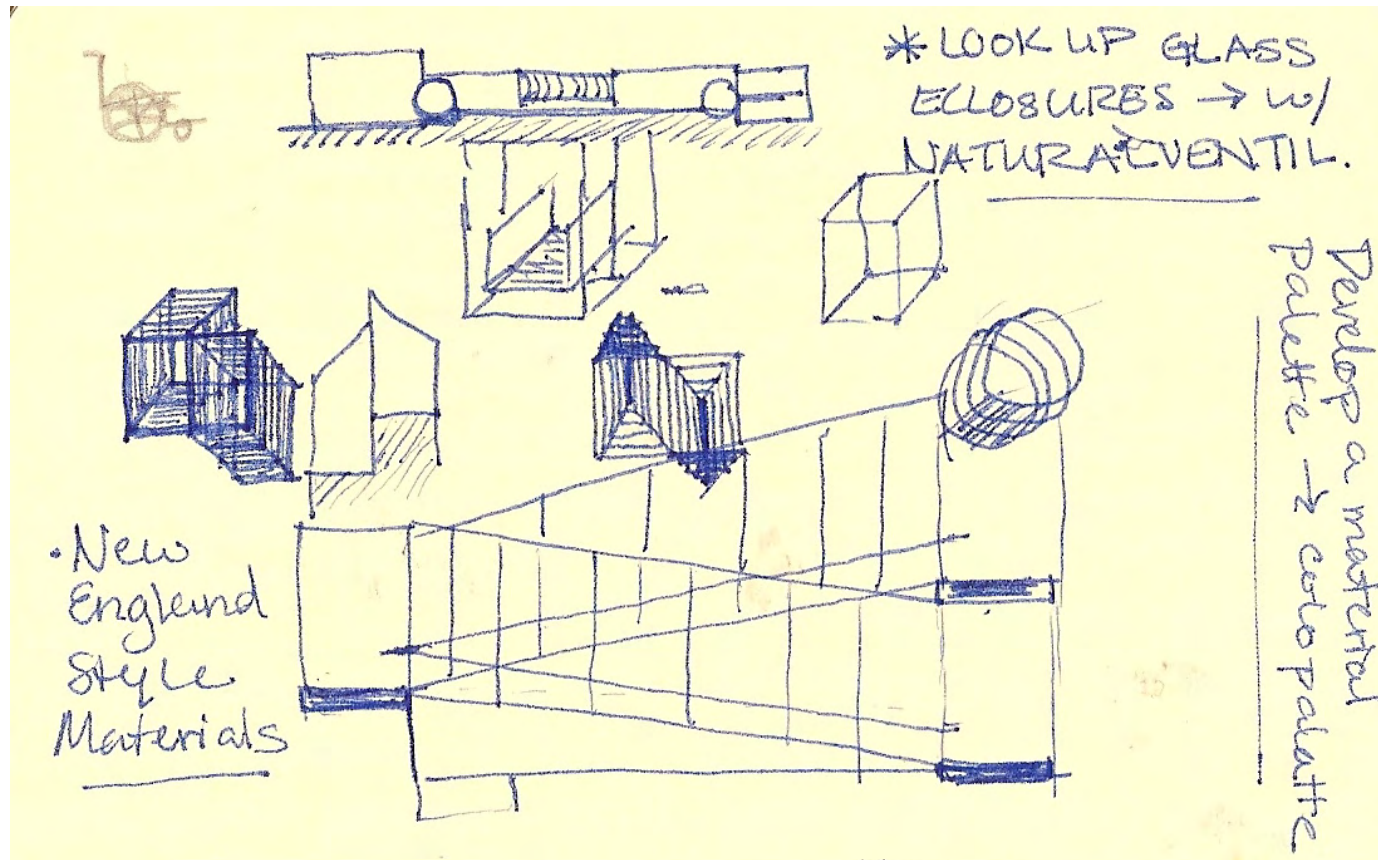
Detail Proposal



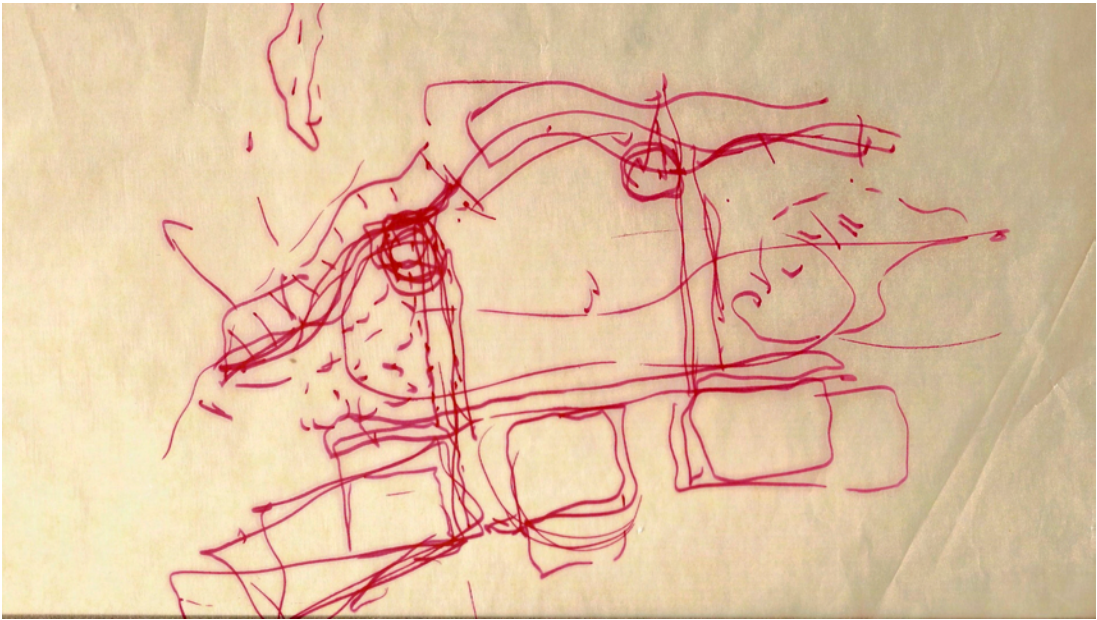
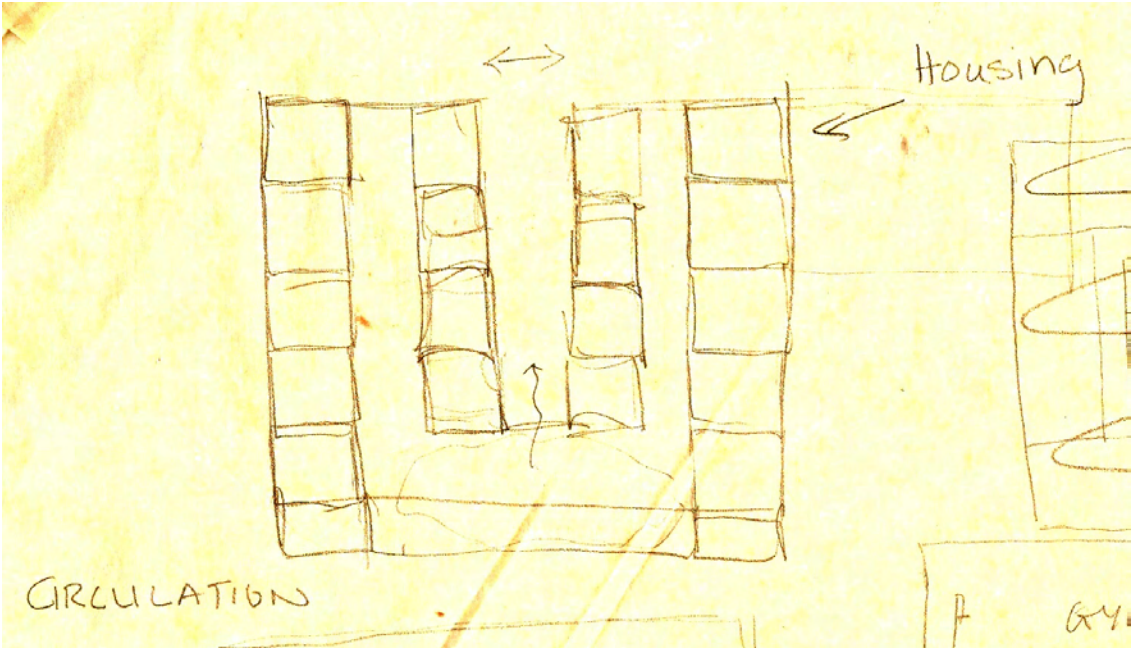


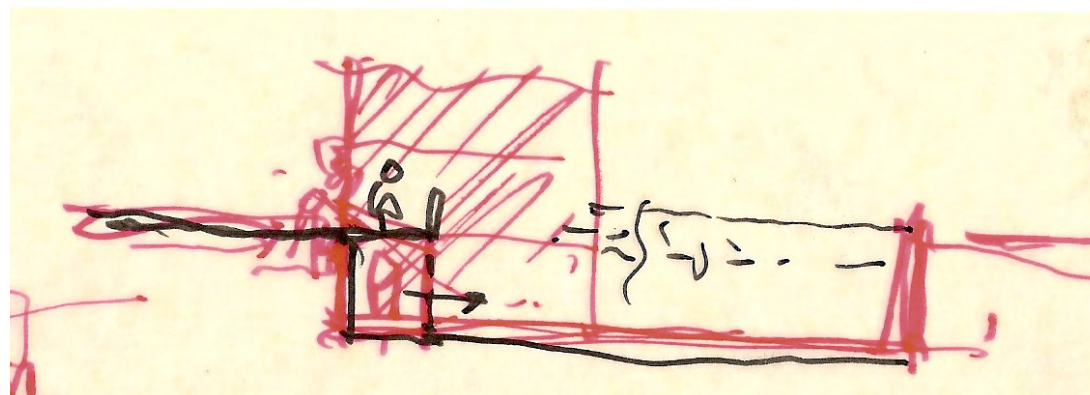
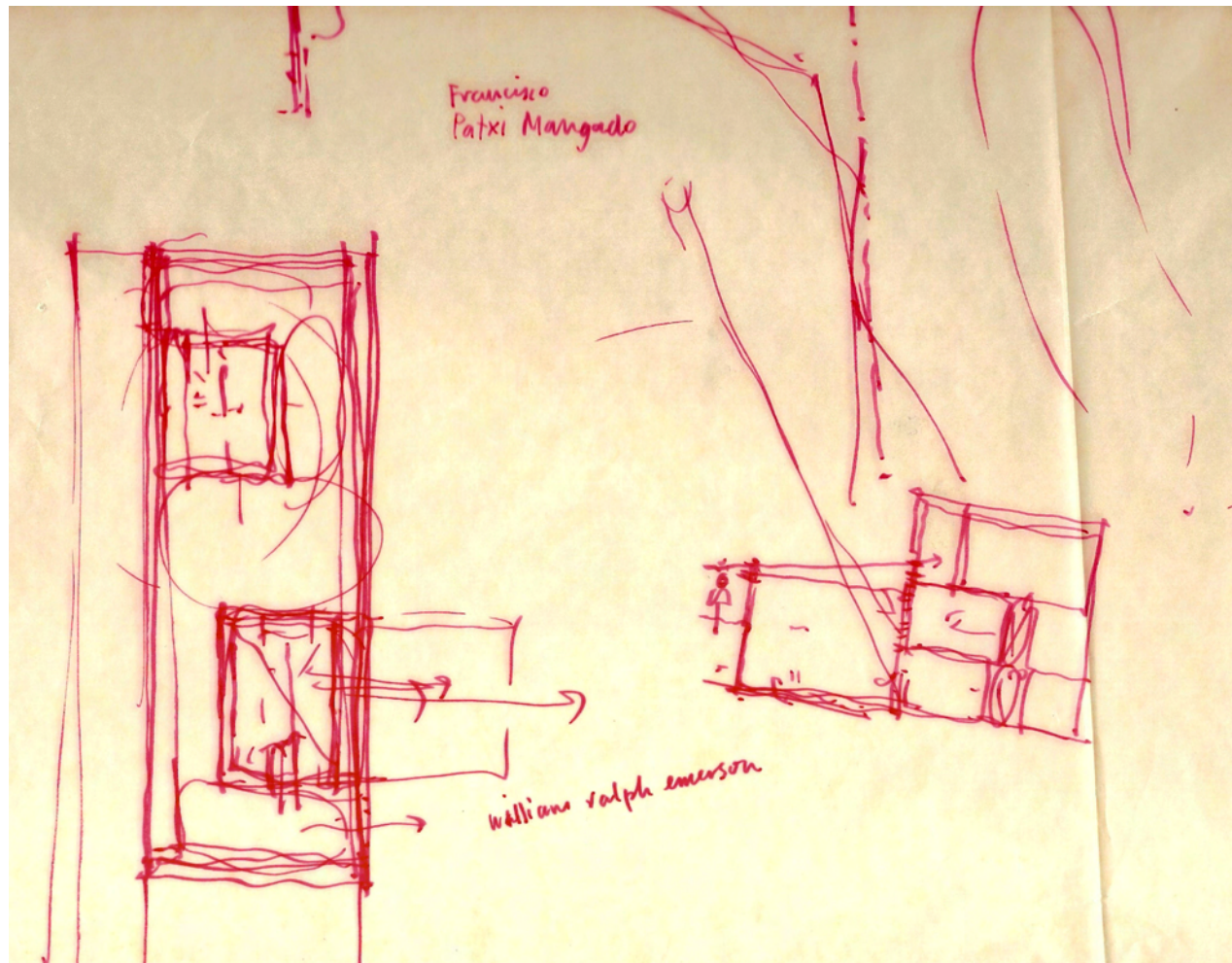
Parti Sketches



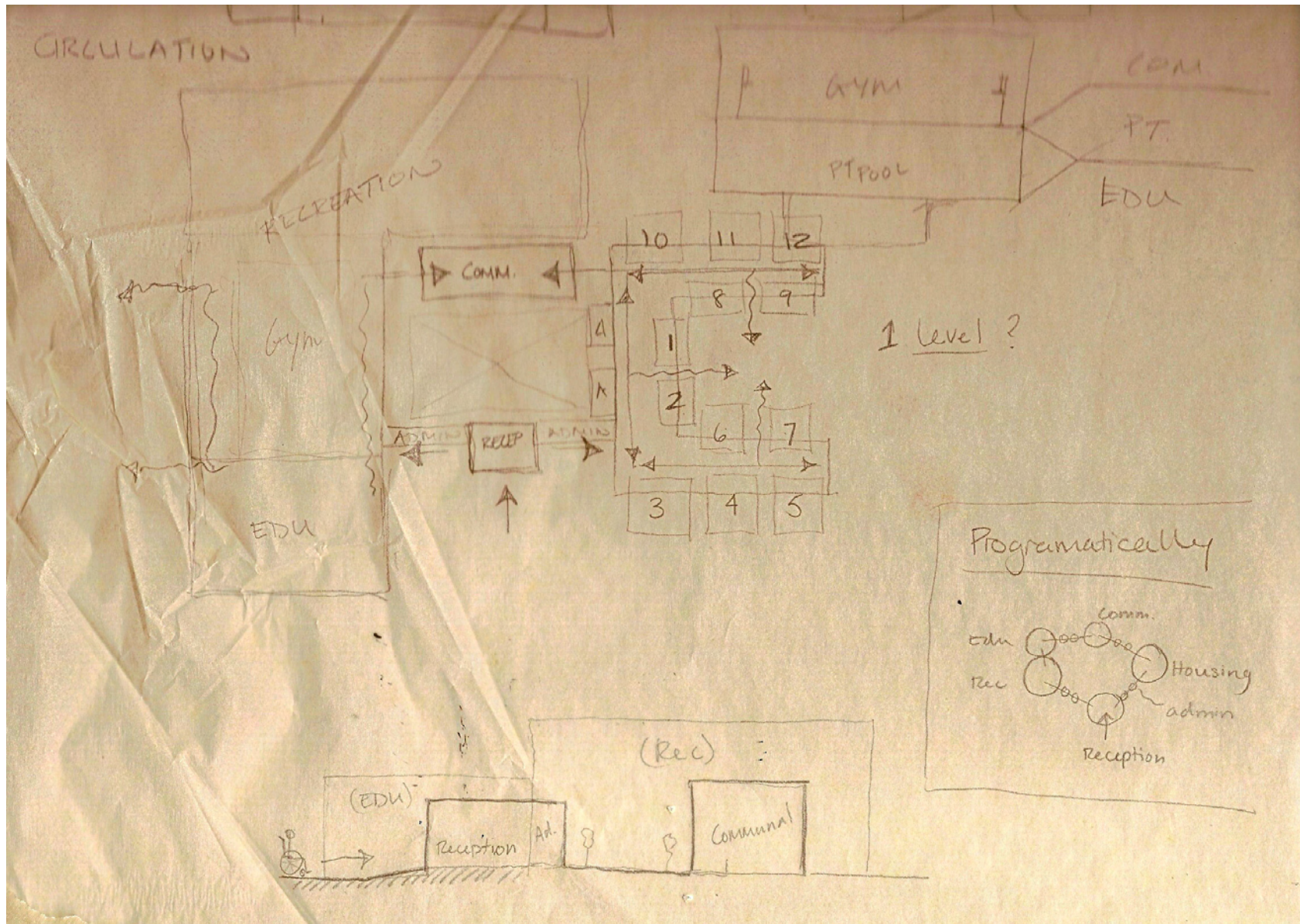


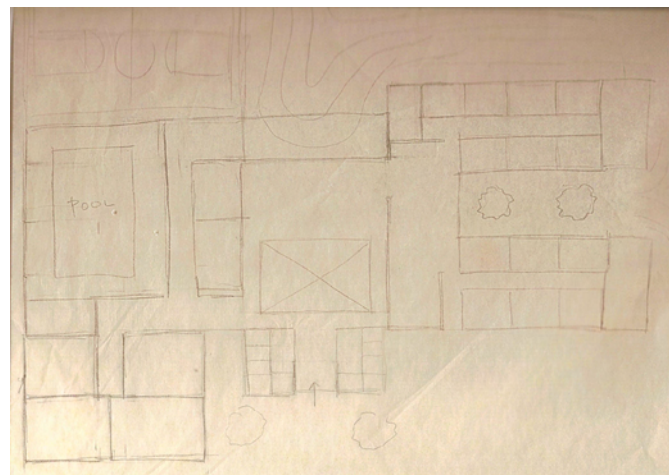
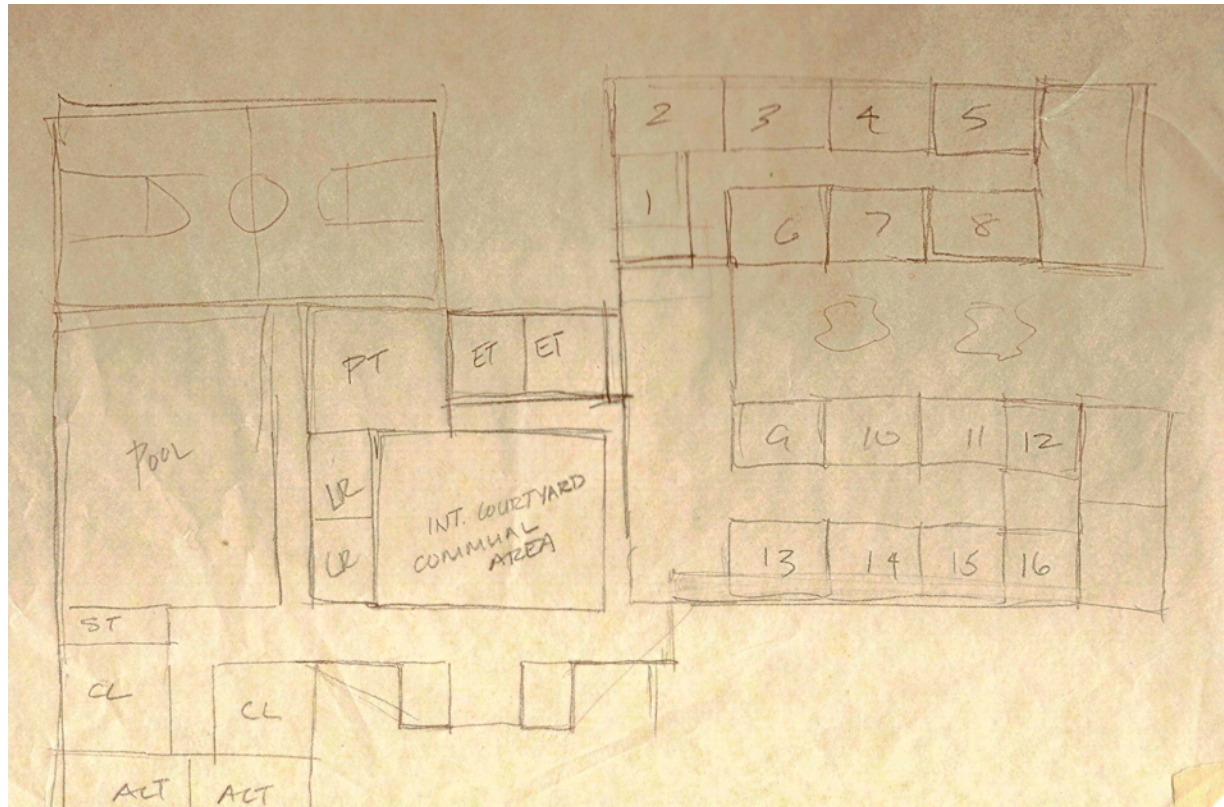
Parti Sketches



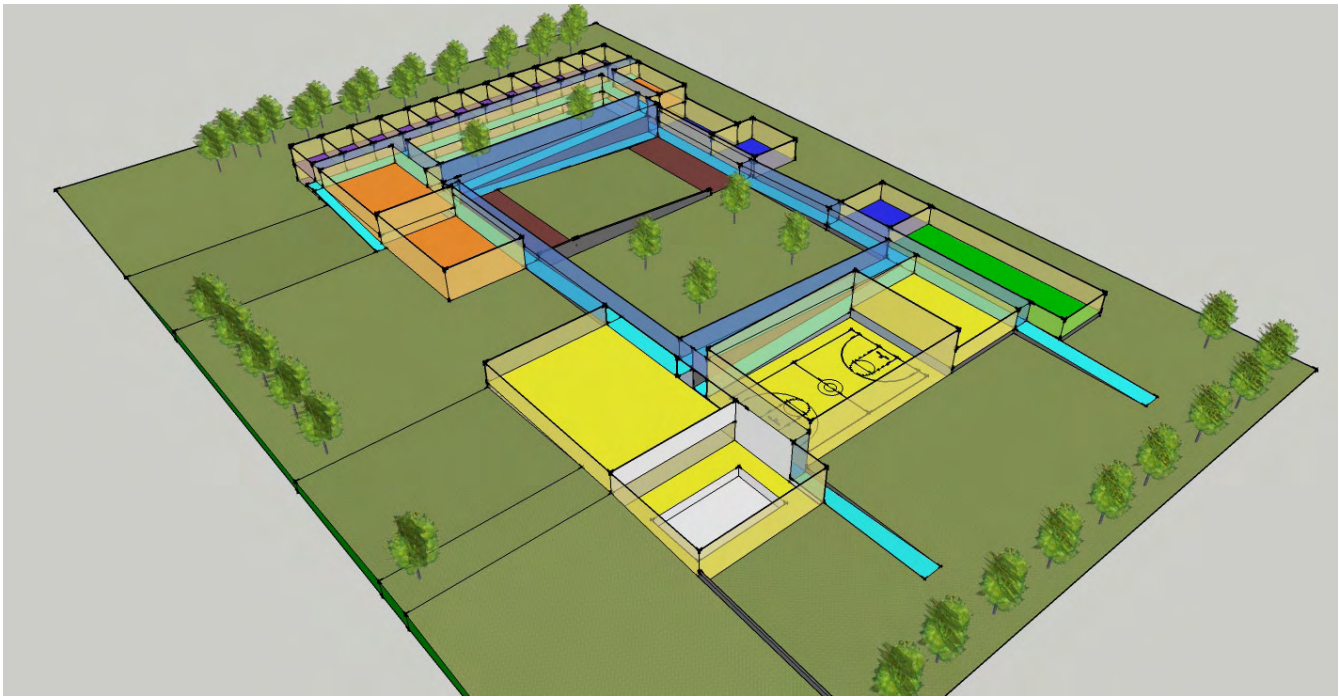
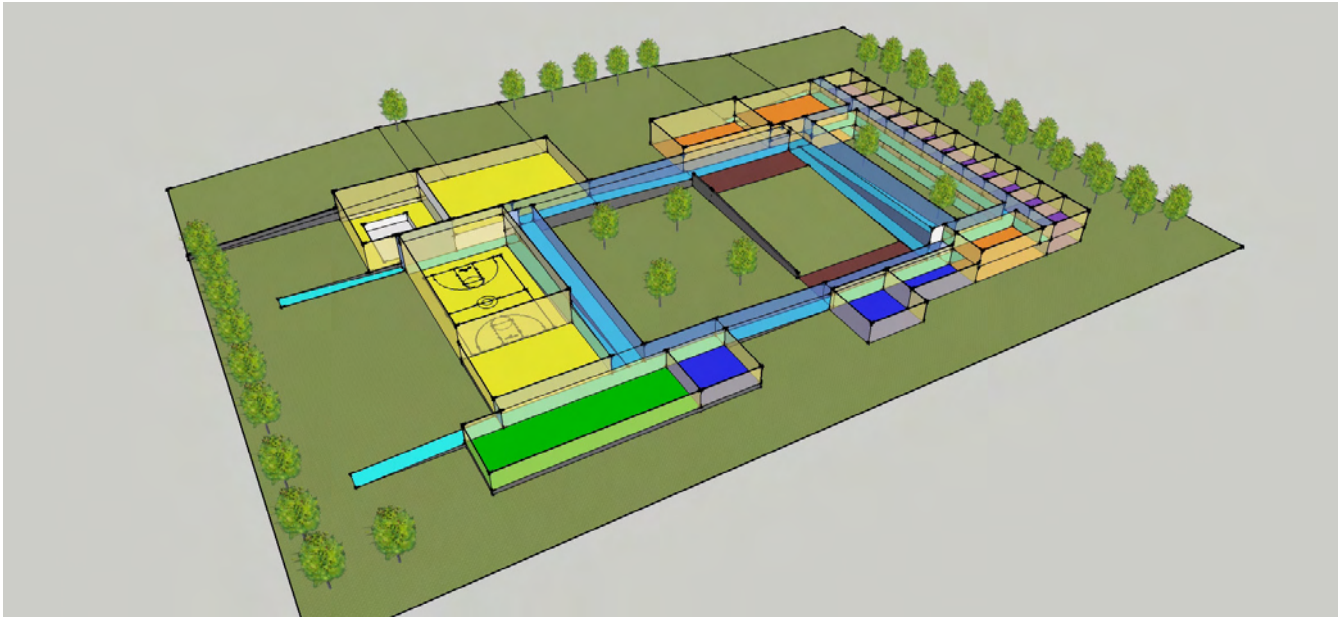


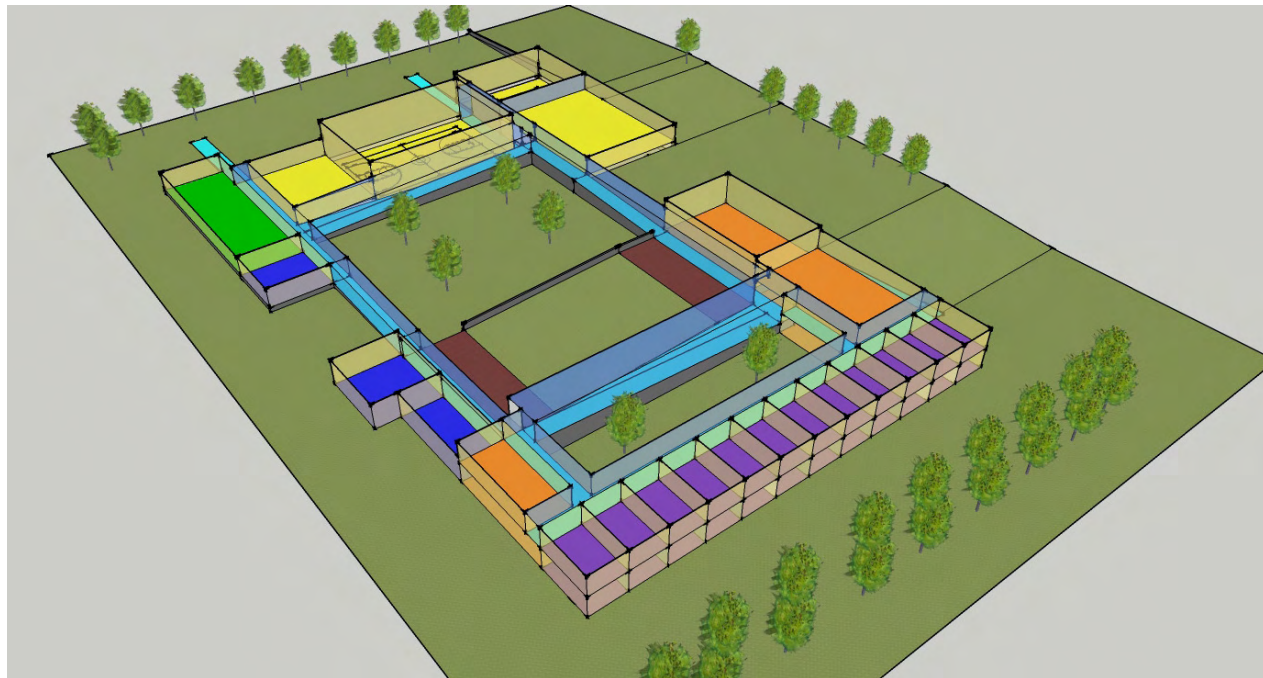
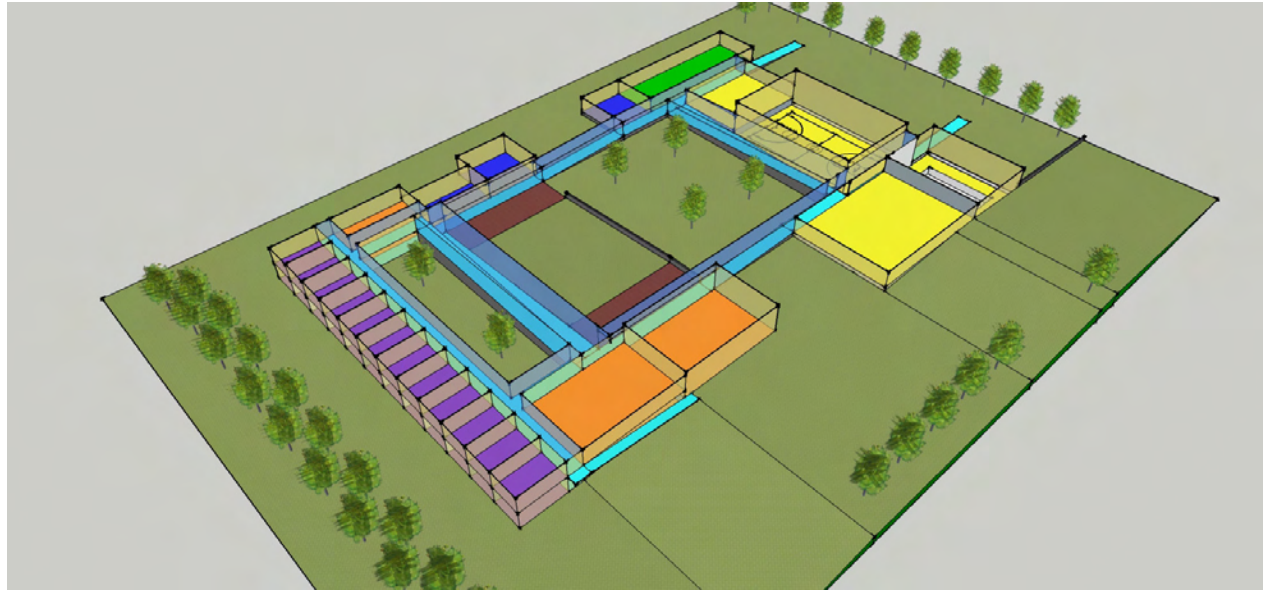
Parti Sketches



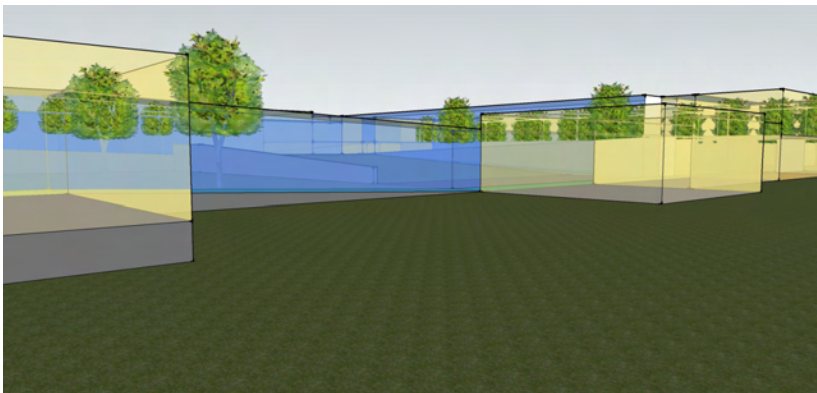
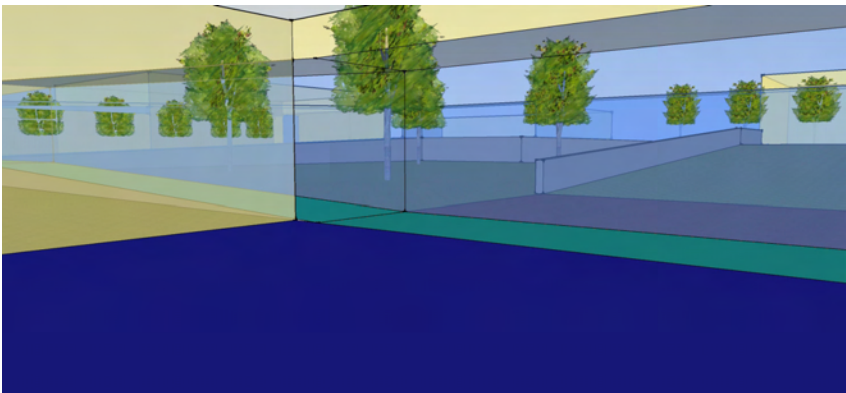
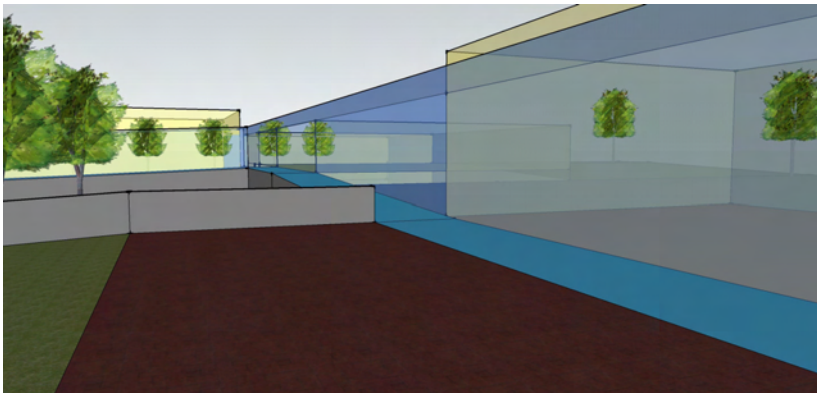
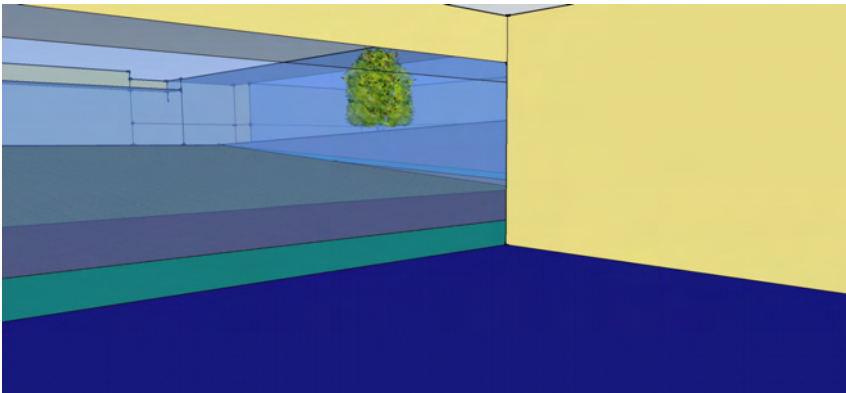
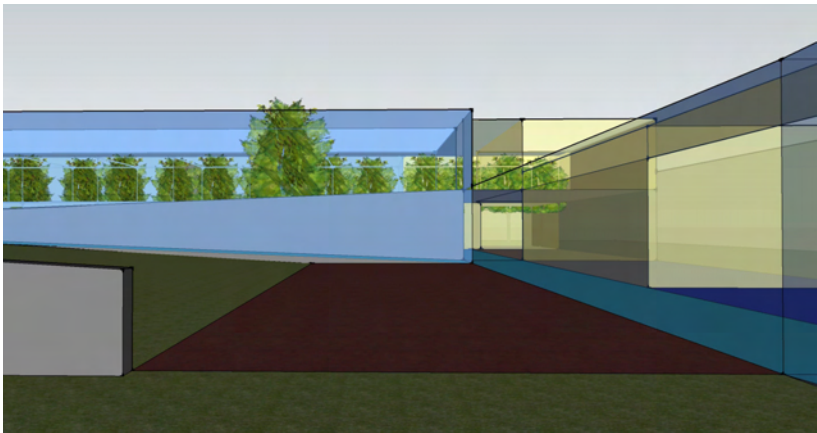
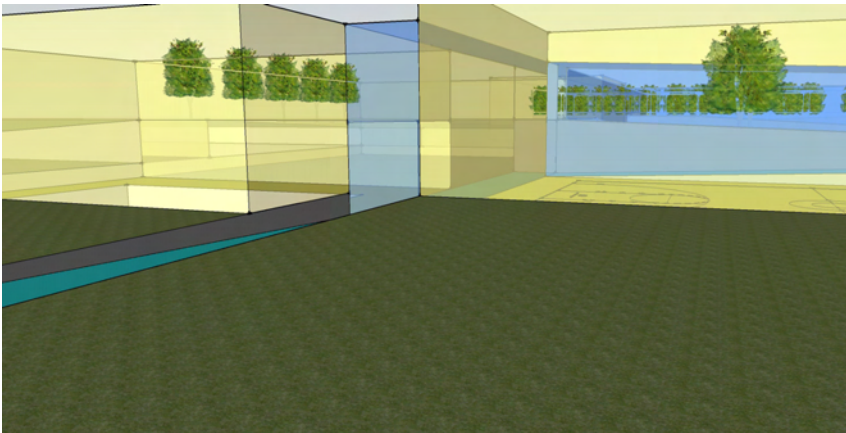


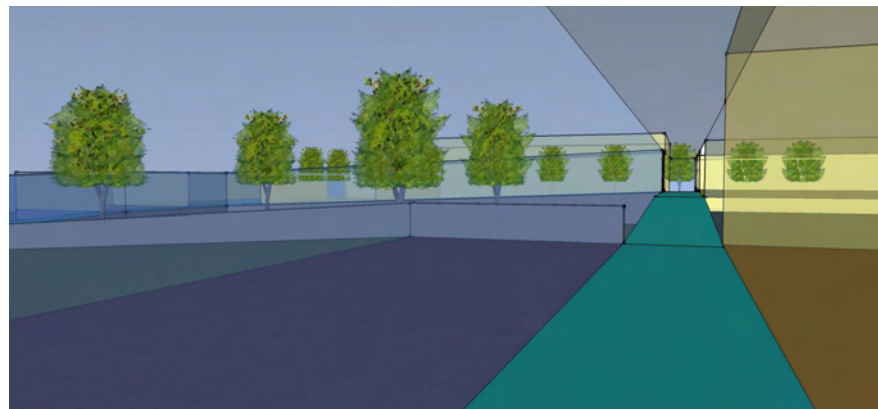
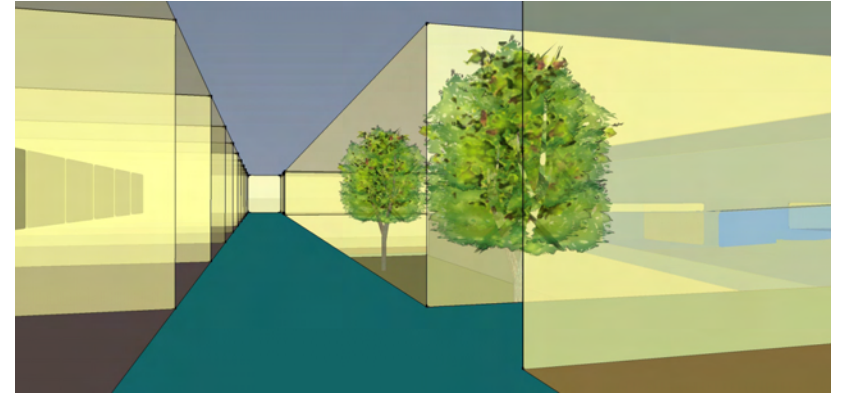
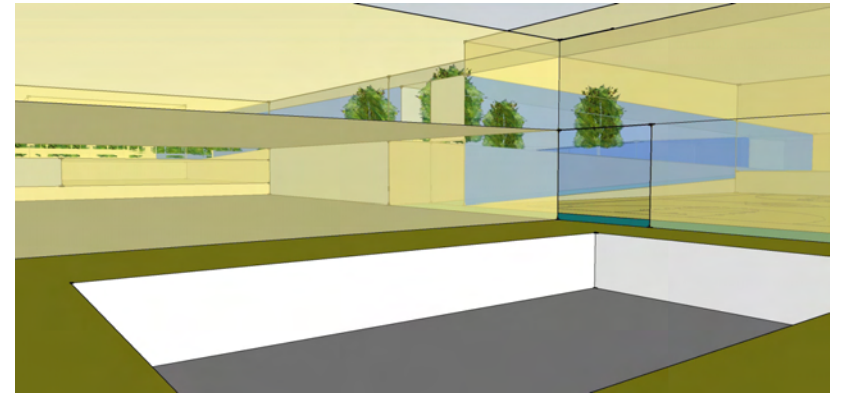
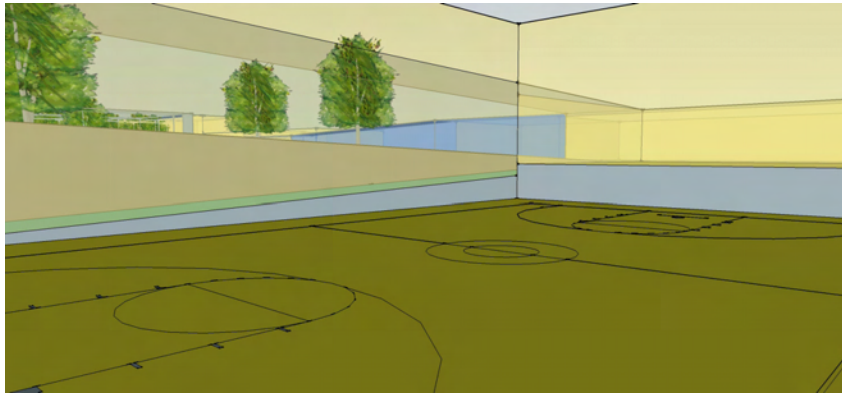
Initial Parti



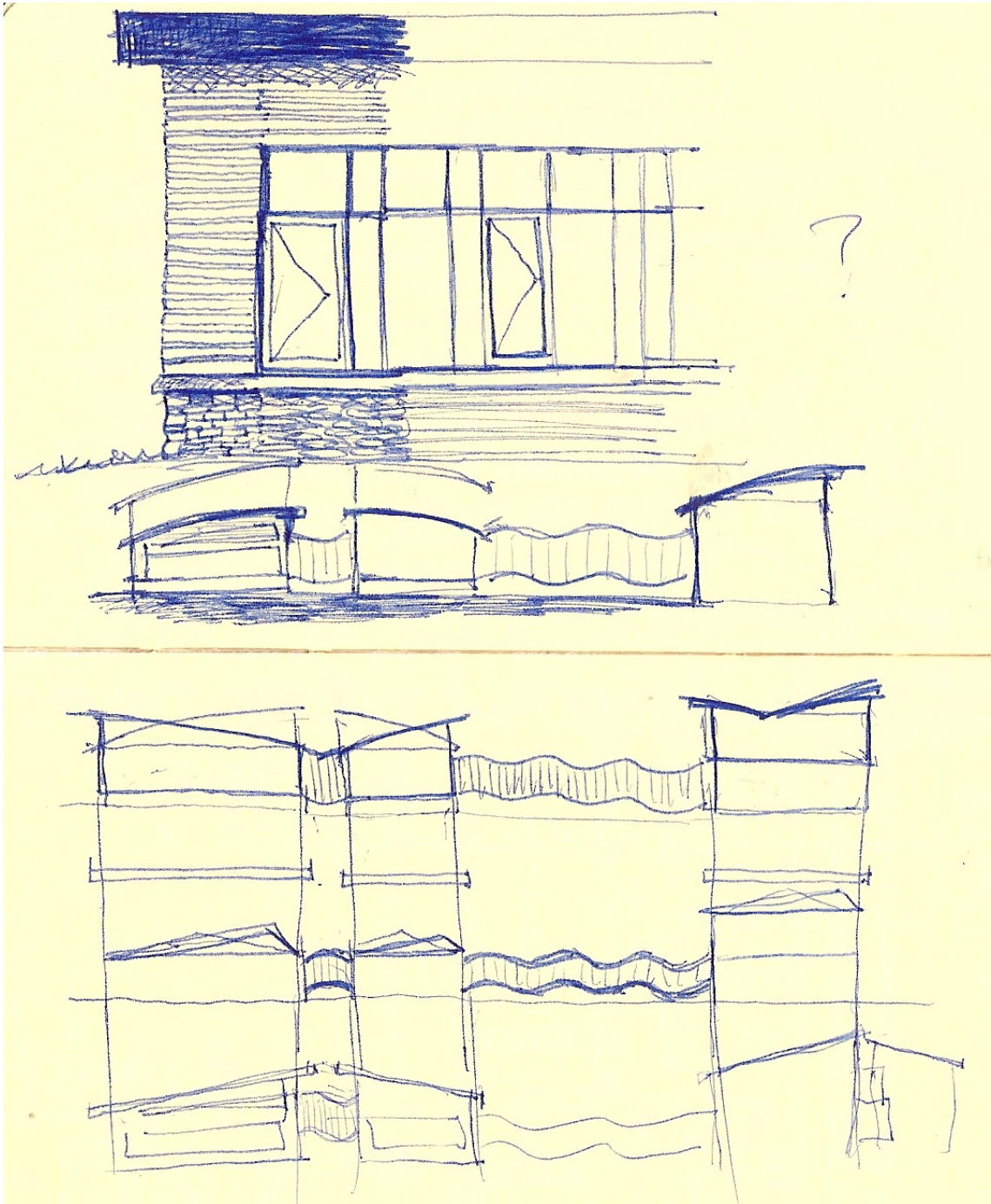


Parti Vignettes



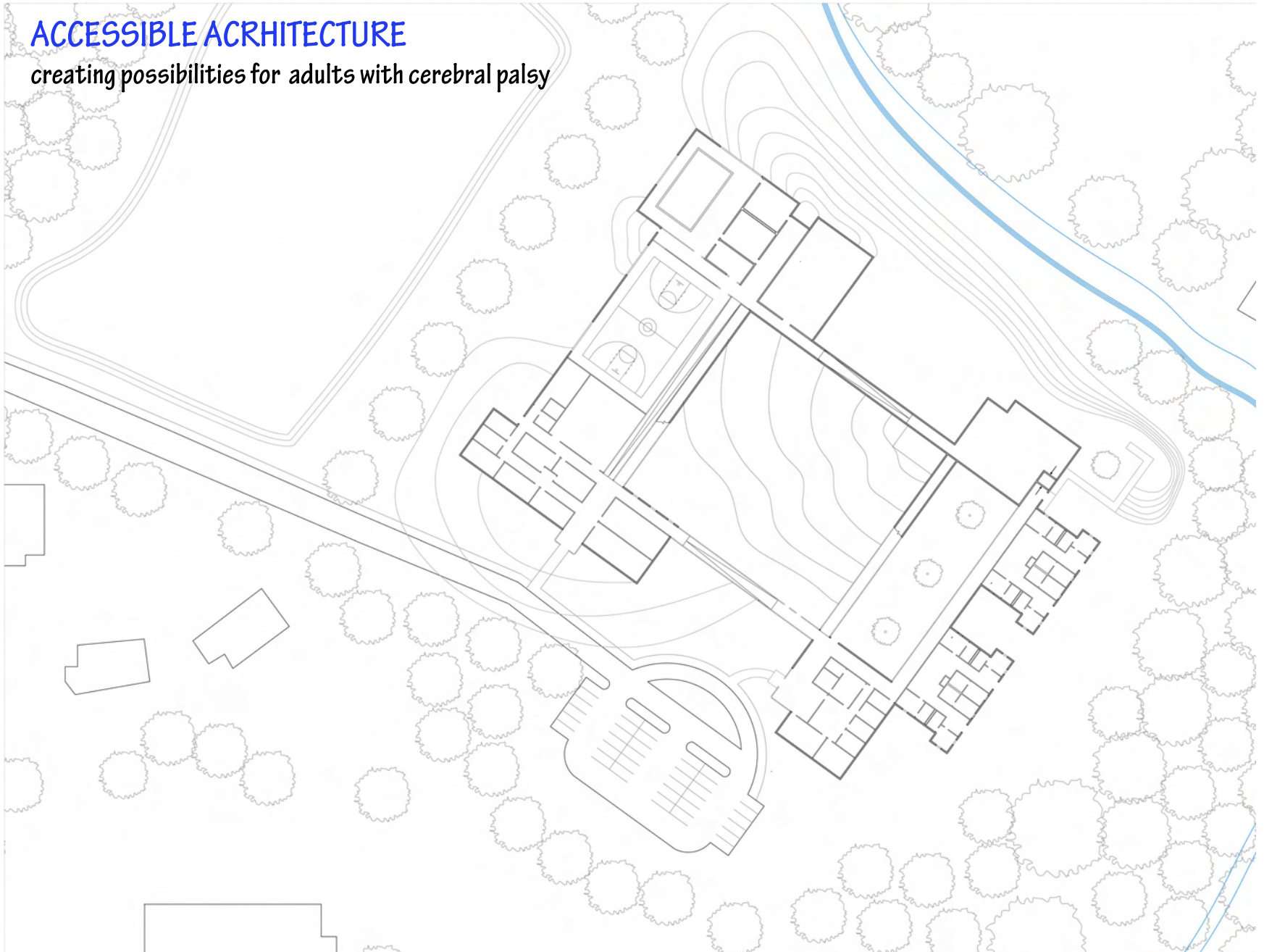


Elevation Studies

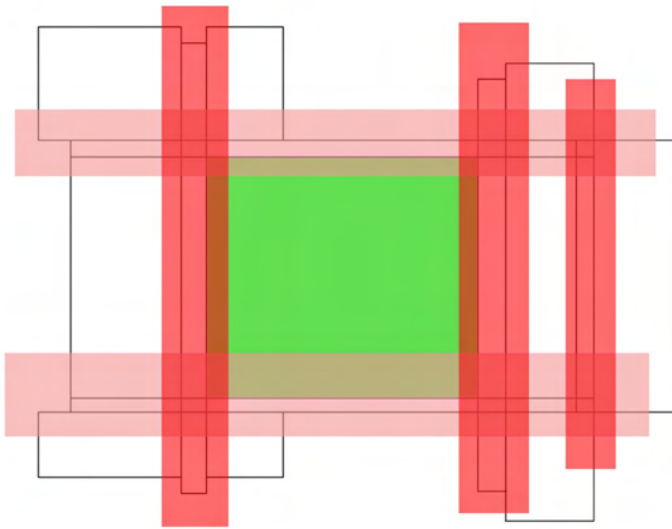


ACCESSIBLE ARCHITECTURE

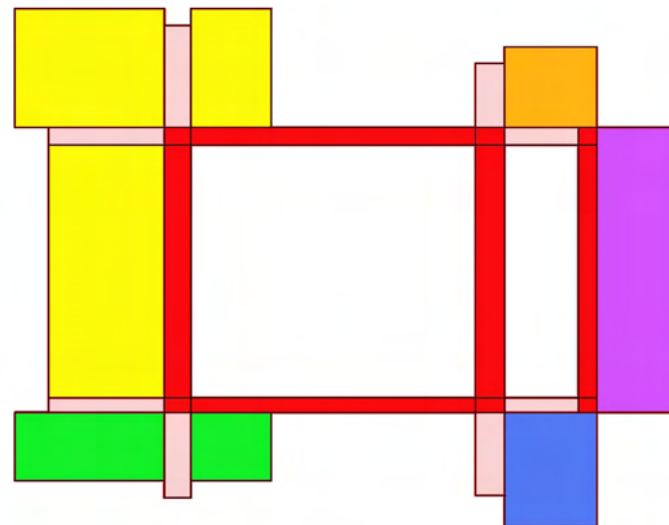
creating possibilities for adults with cerebral palsy



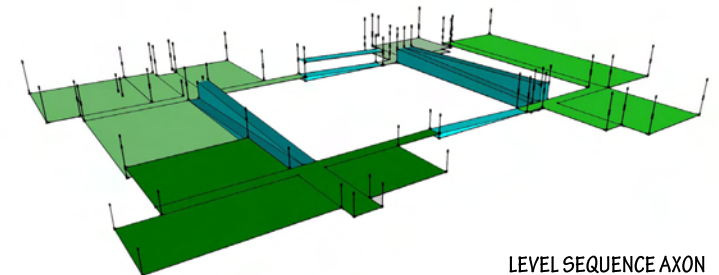
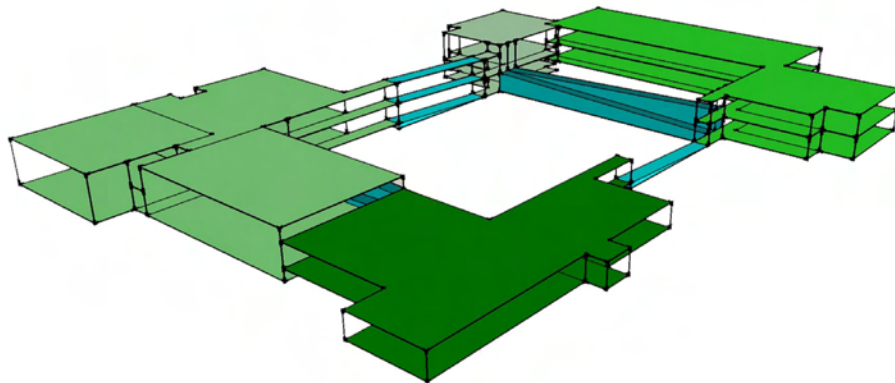
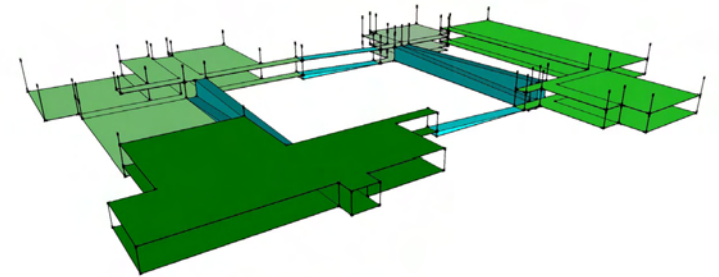
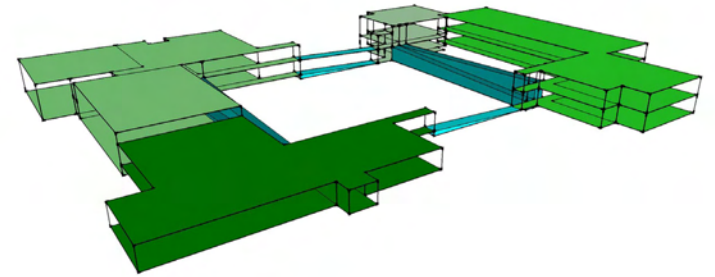
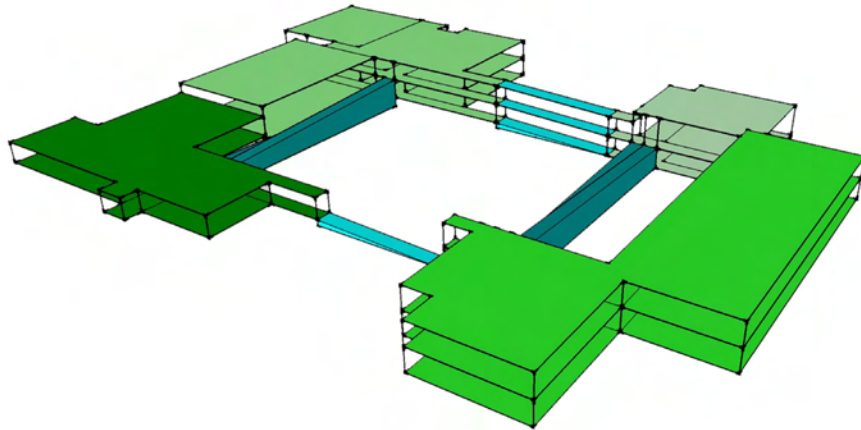
DIAGRAMS



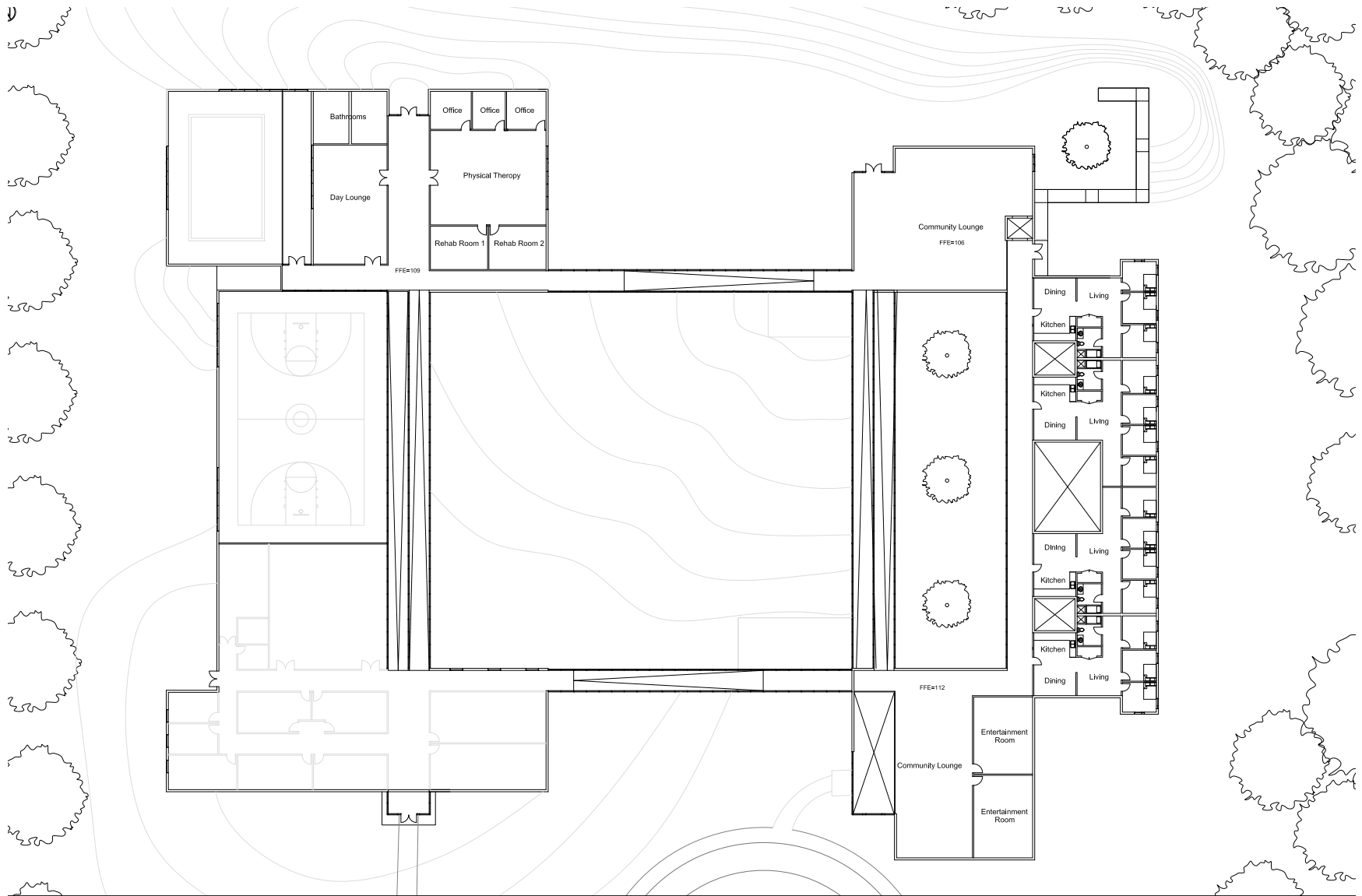
PARTI

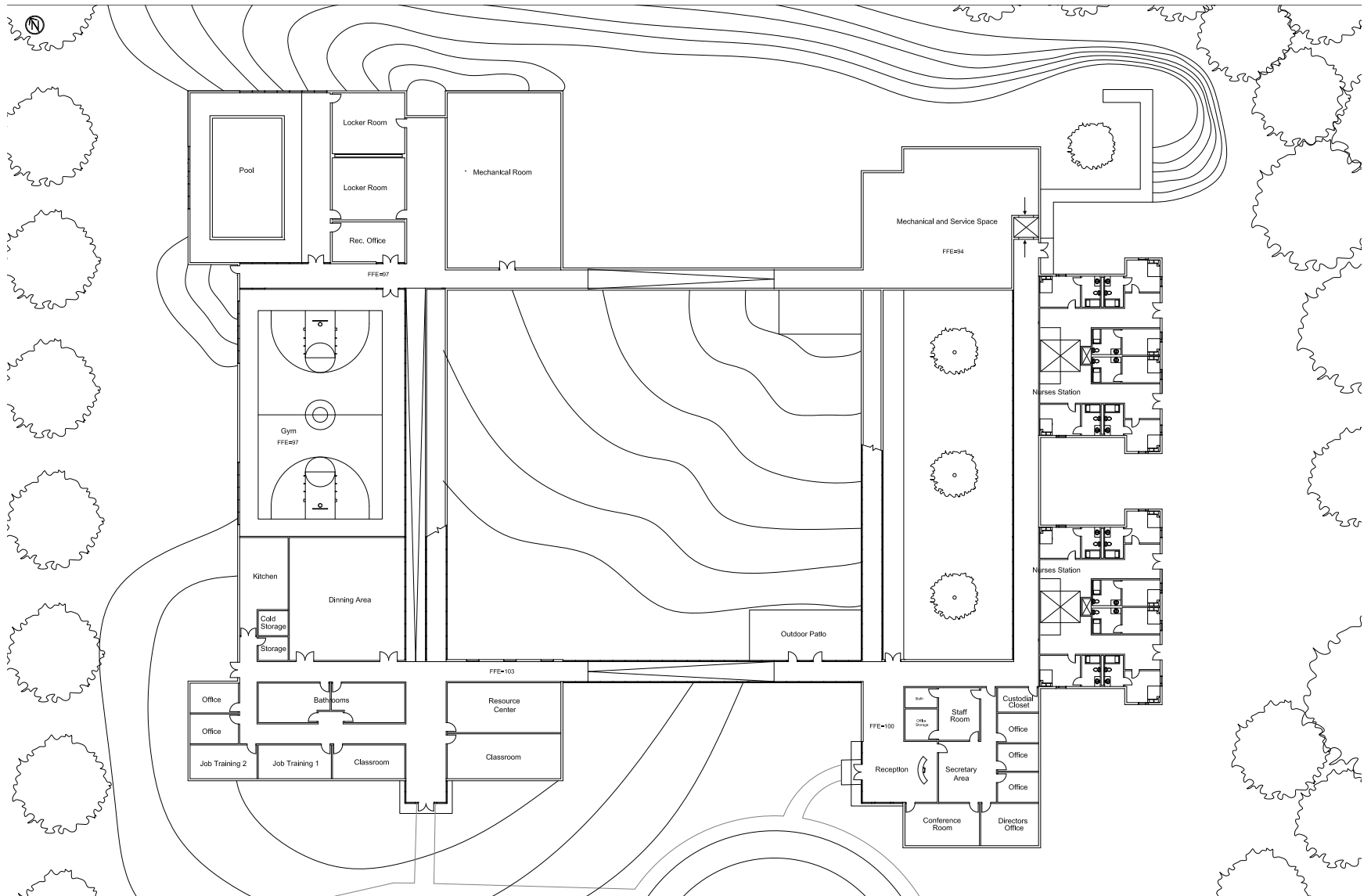


PROGRAM

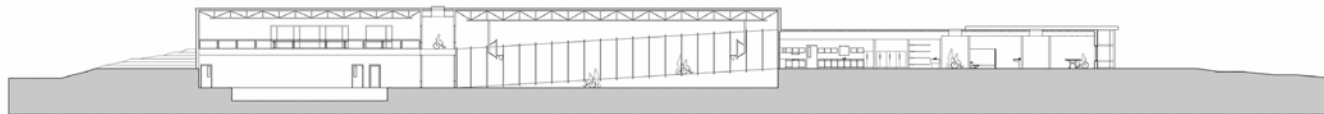
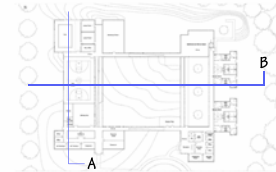


LEVEL SEQUENCE AXON





SECTIONS
SCALE: 1'-0"=1/16"



SECTION A



SECTION B



FRONT ELEVATION



HOUSING SIDE ELEVATION

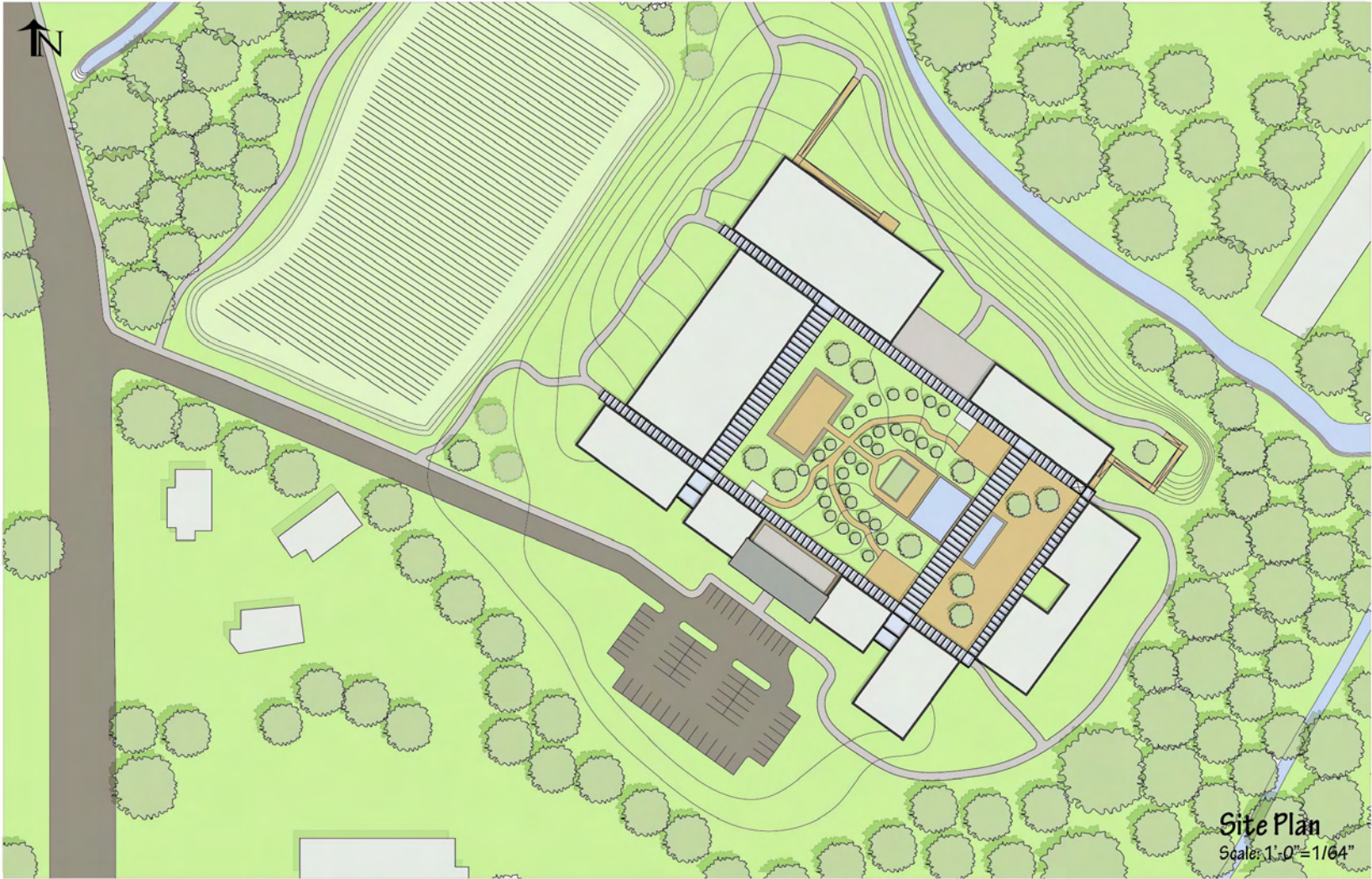


RECREATION SIDE ELEVATION

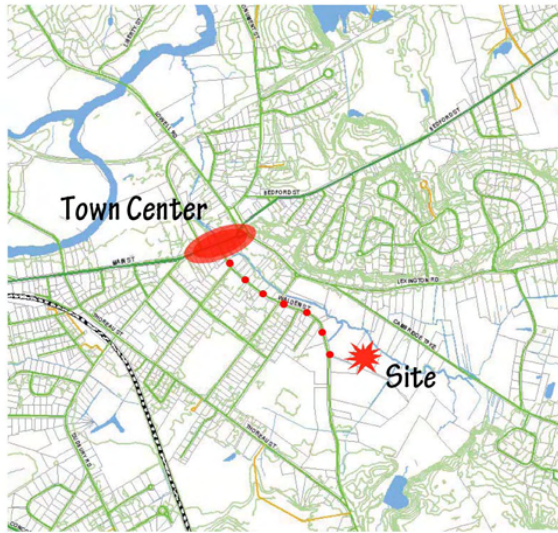


BACK ELEVATION

GATE PRESENTATION



Site: Concord, Massachusetts



Located off of Walden Street, the site mainly was chosen for its proximity to Concord town center. The relatively flat topography currently serves as farm land for the community. Surrounding buildings include the town fire/police station, the town court, as well as some low income housing.



Material Palette

Color Scheme

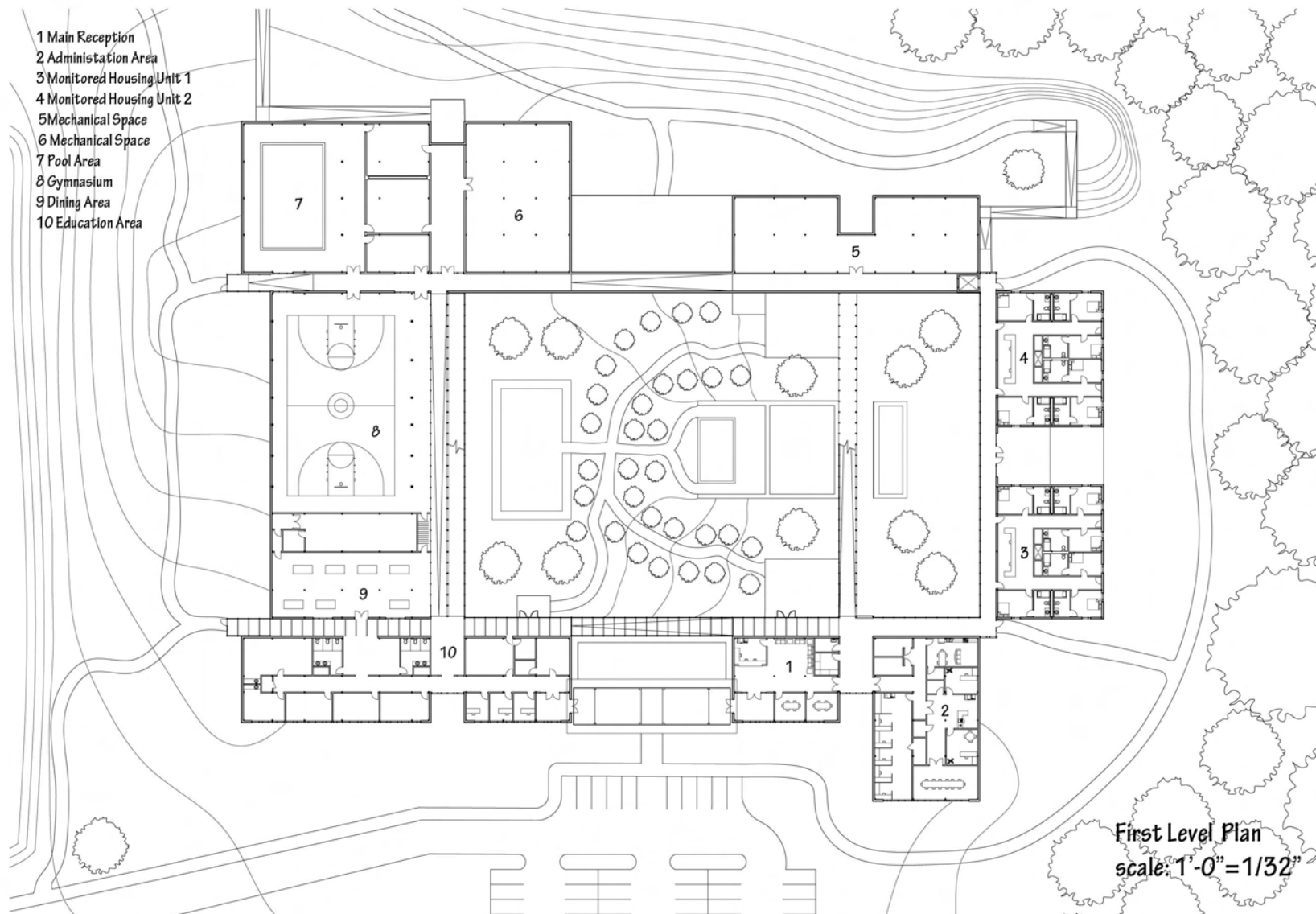


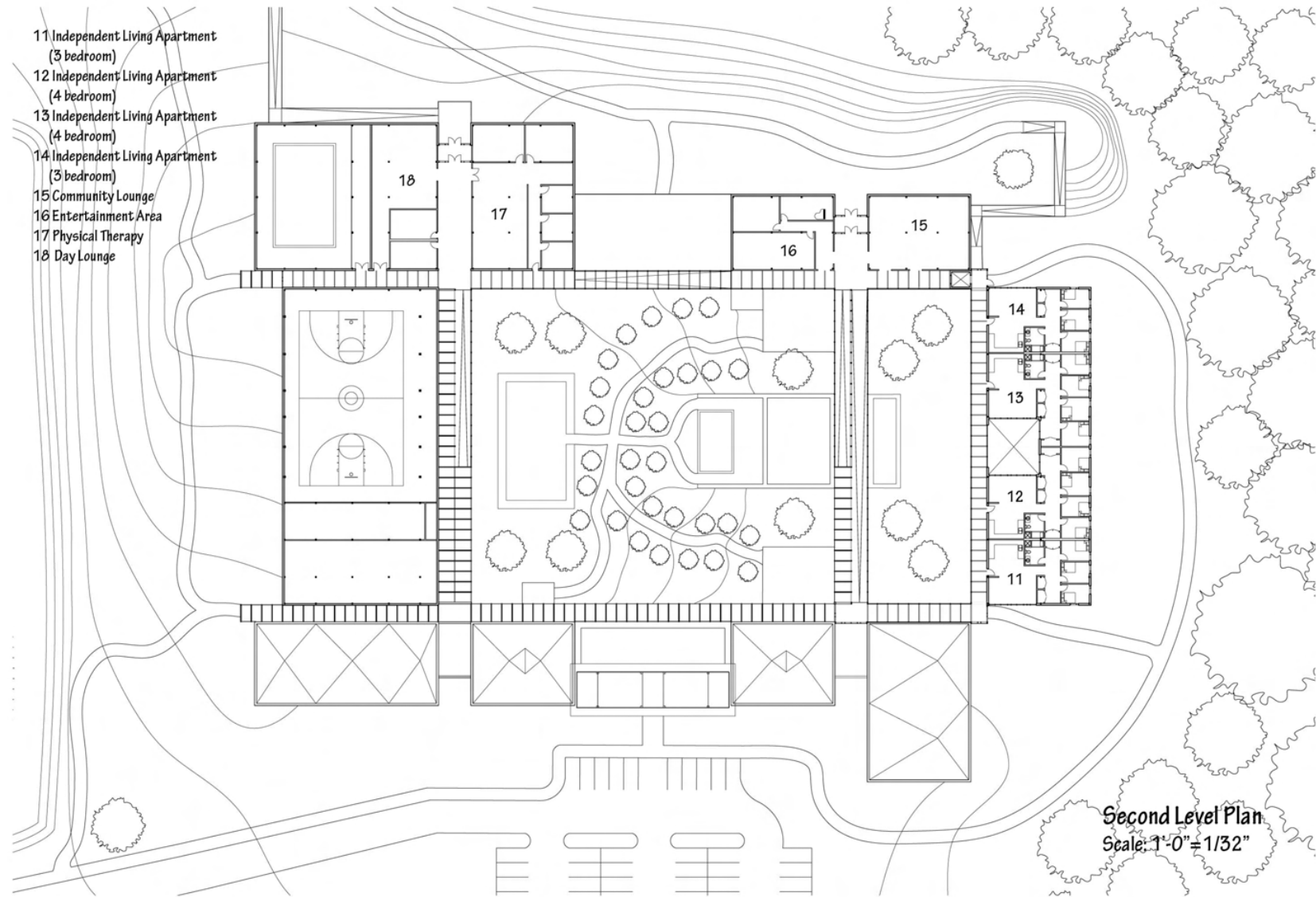
Colored Paneling- (Polycarbonate Panels)

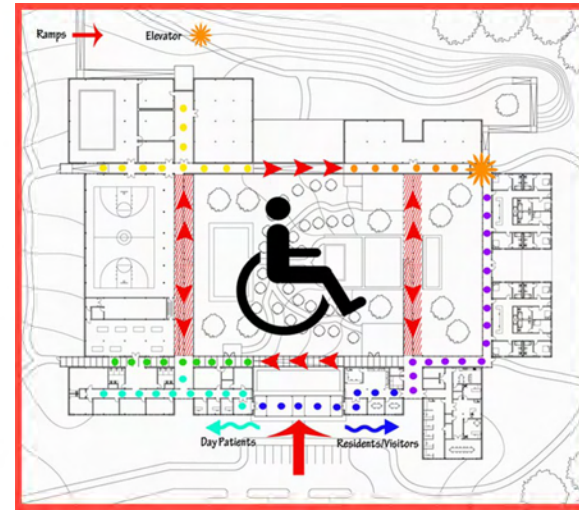


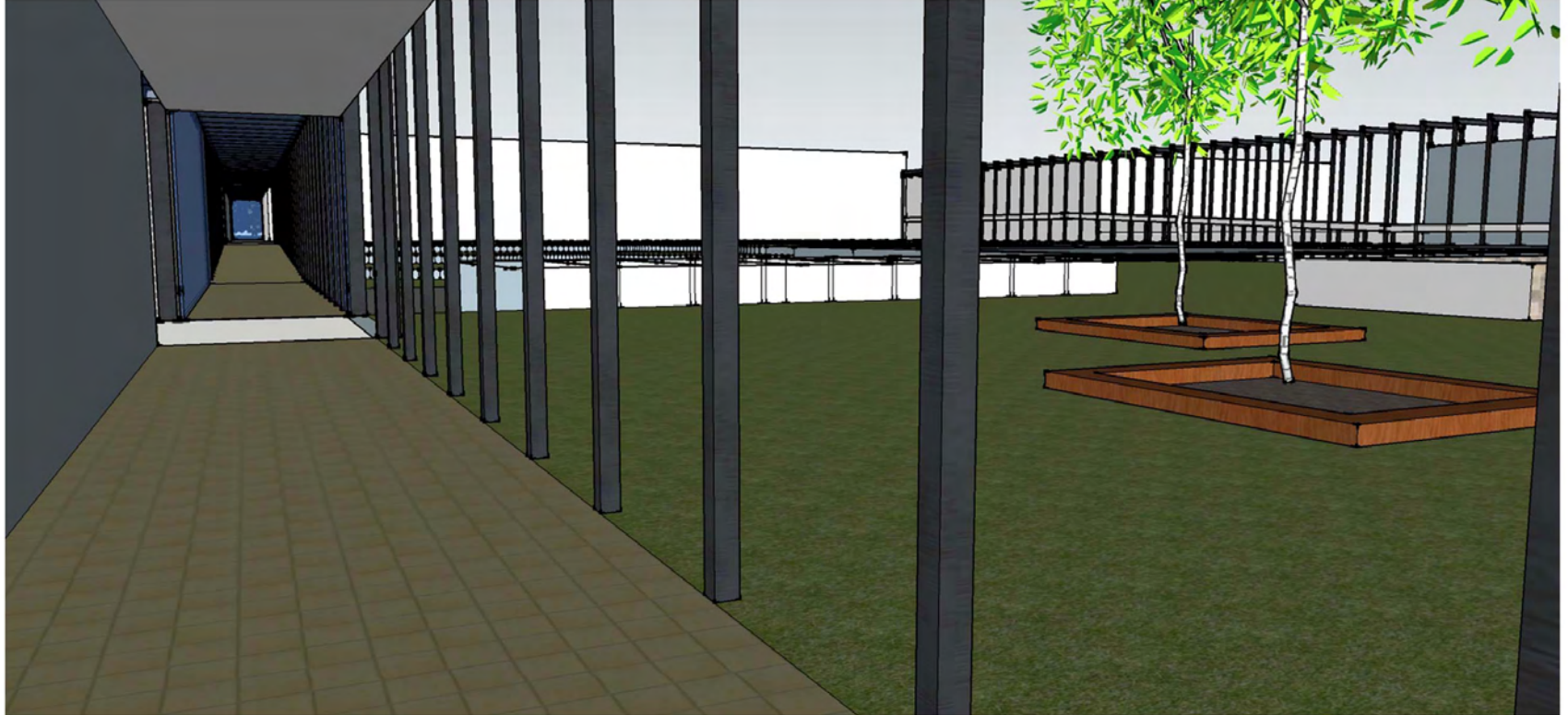
Wood Rainscreen



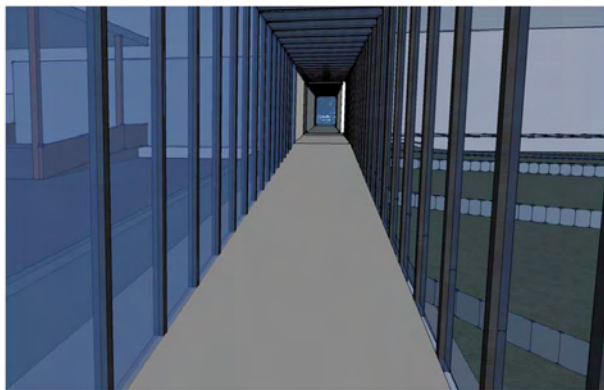








From circulation hallways looking at the courtyards



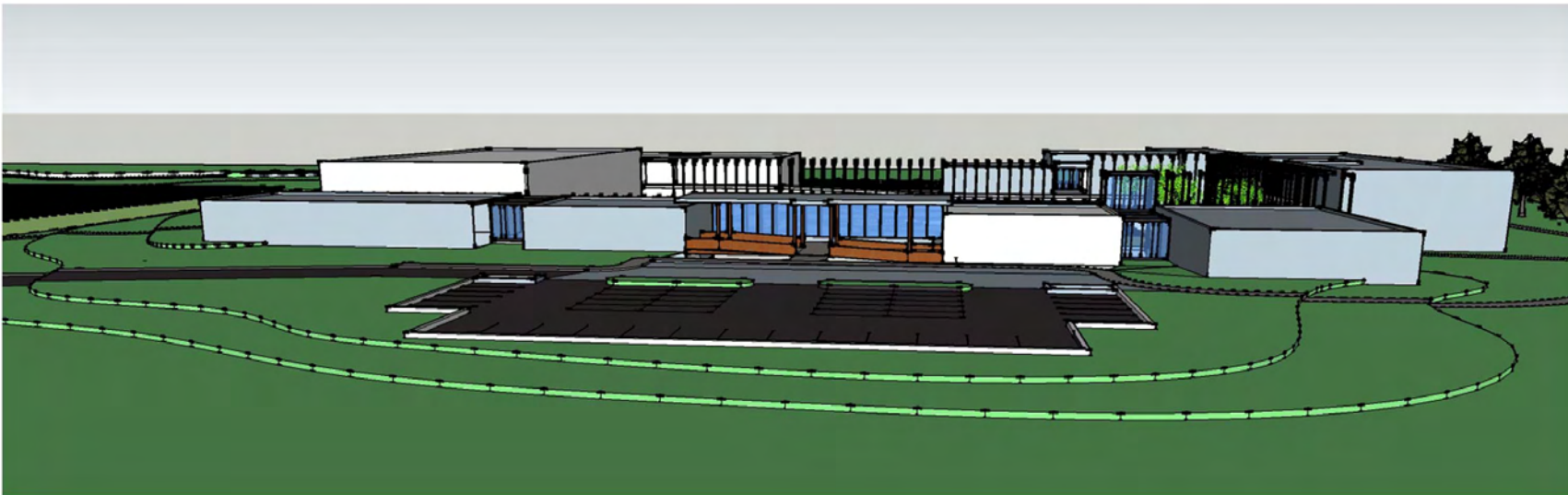
Up ramp to Education



From upstairs circulation looking down on courtyard



Entrance

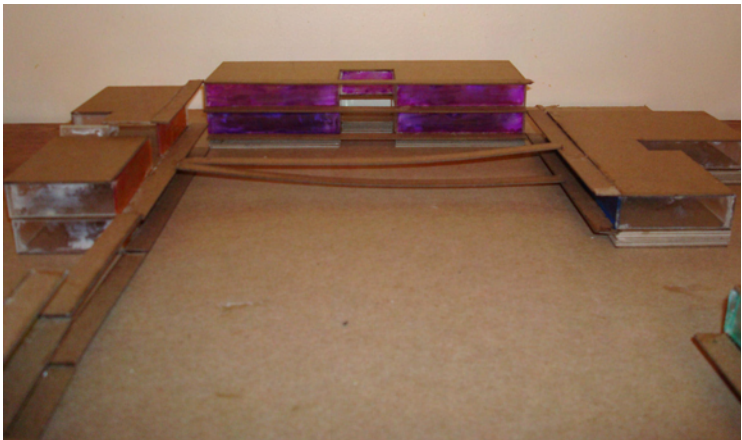
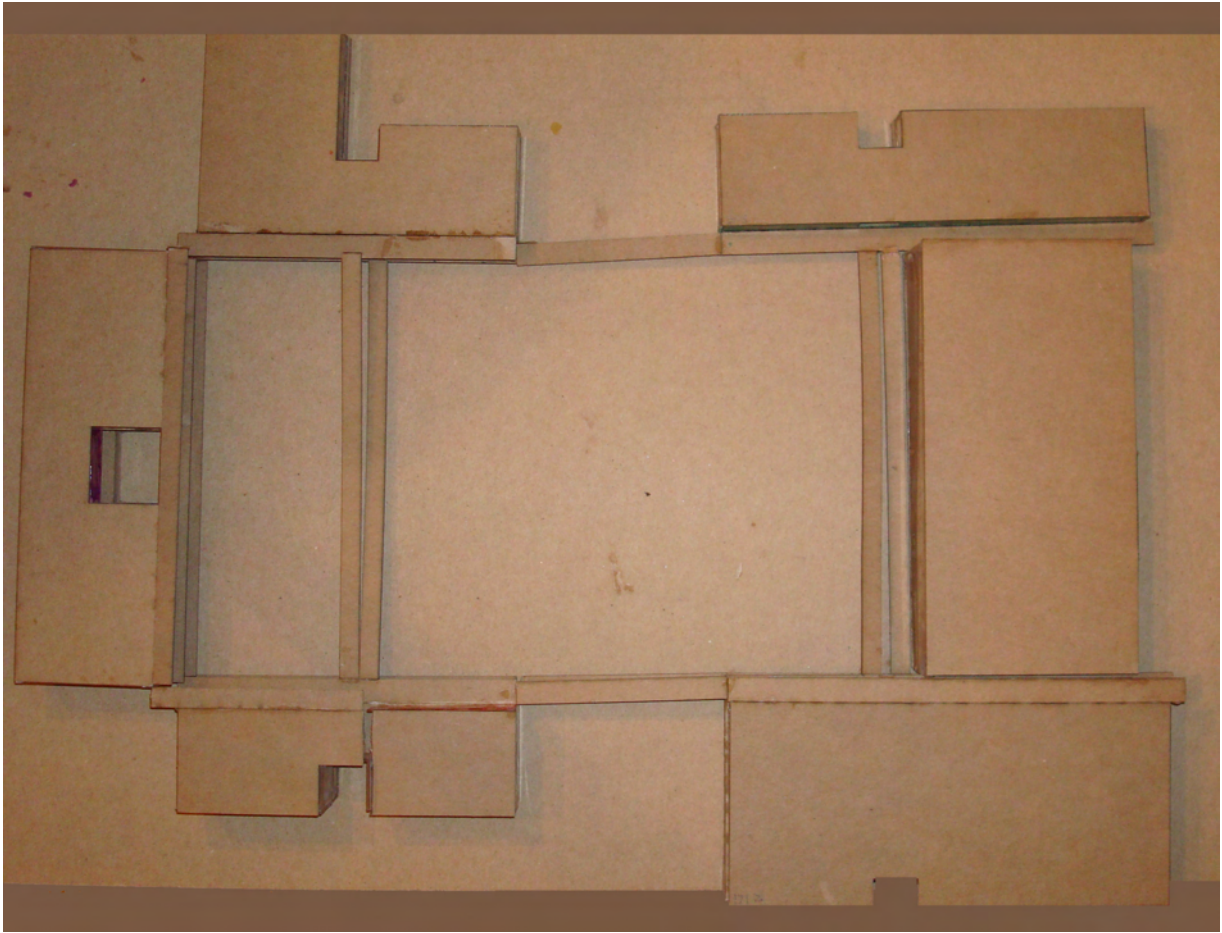


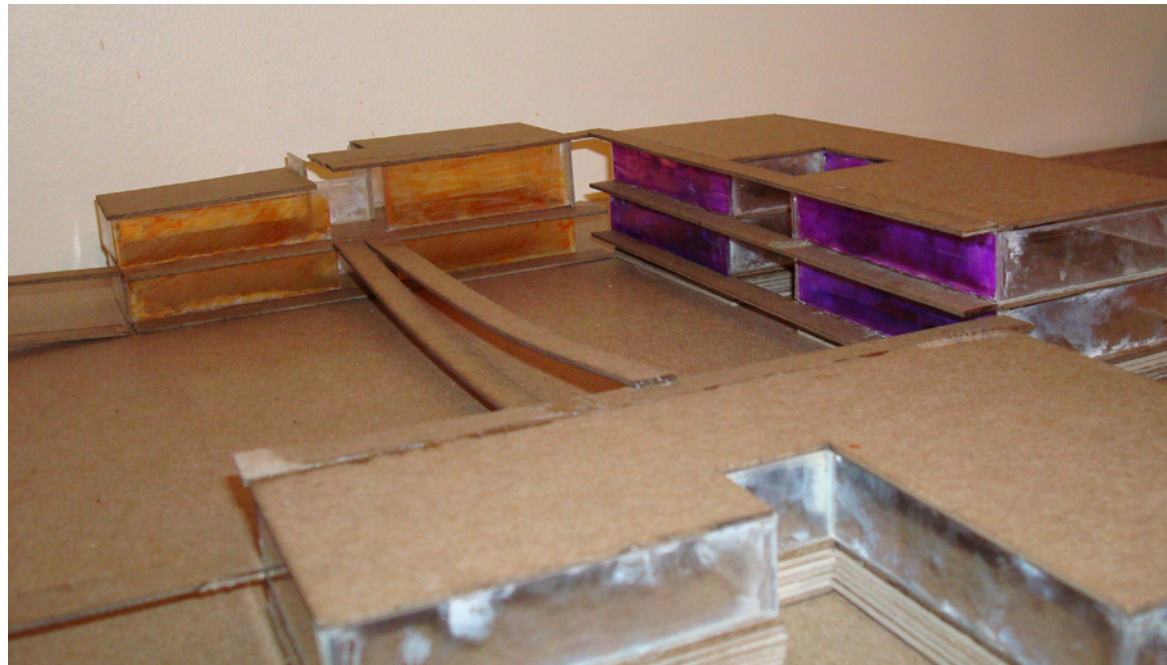
Exterior Perspective

Courtyard Sketch



Parti Model

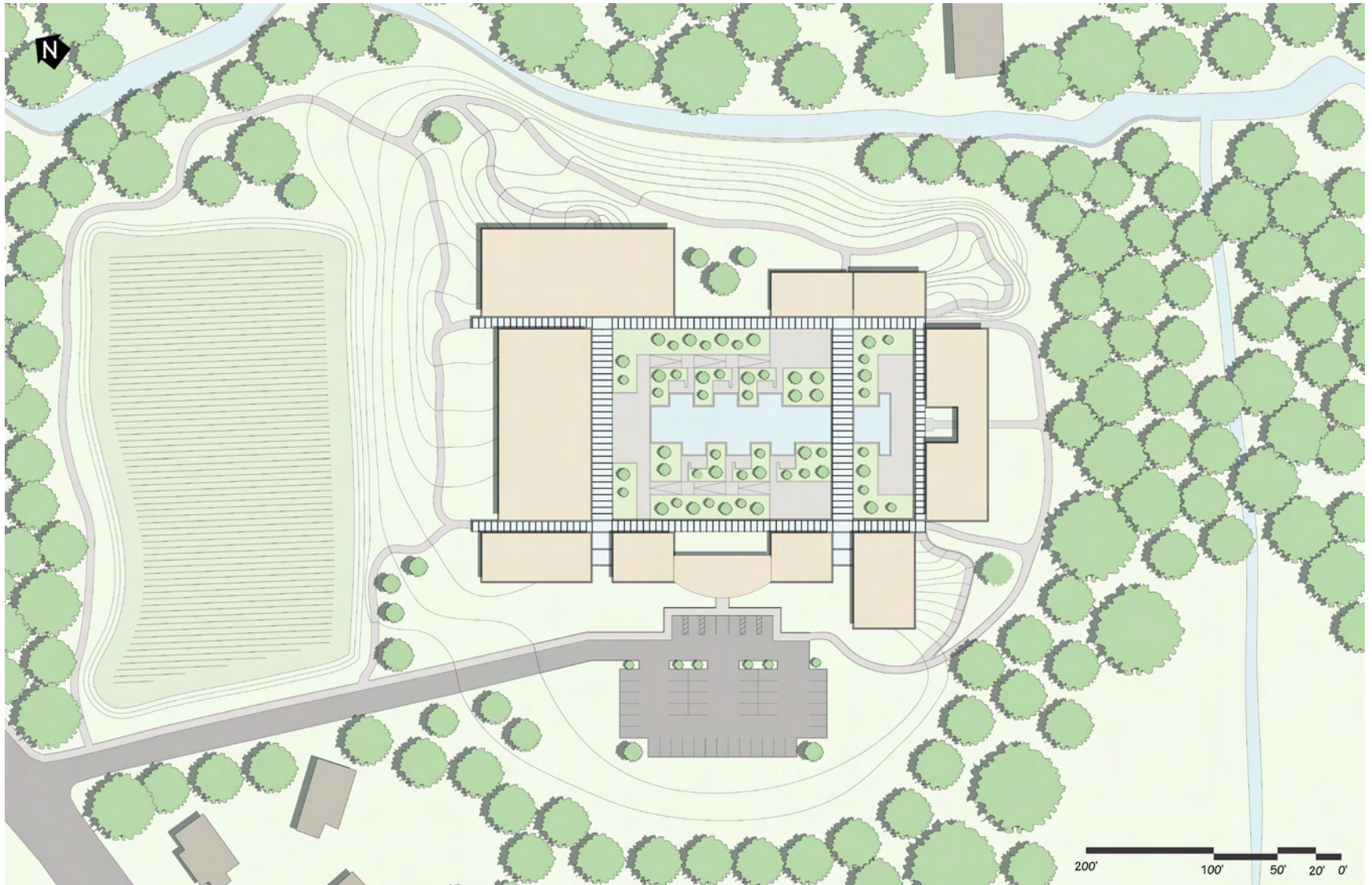




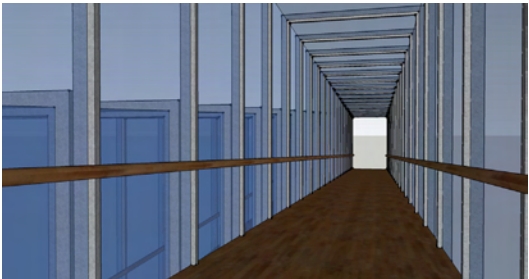
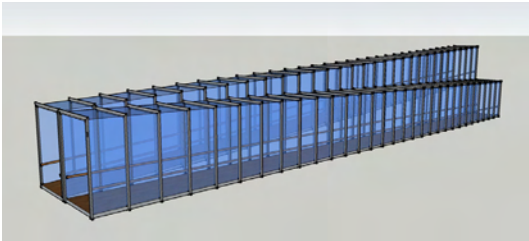
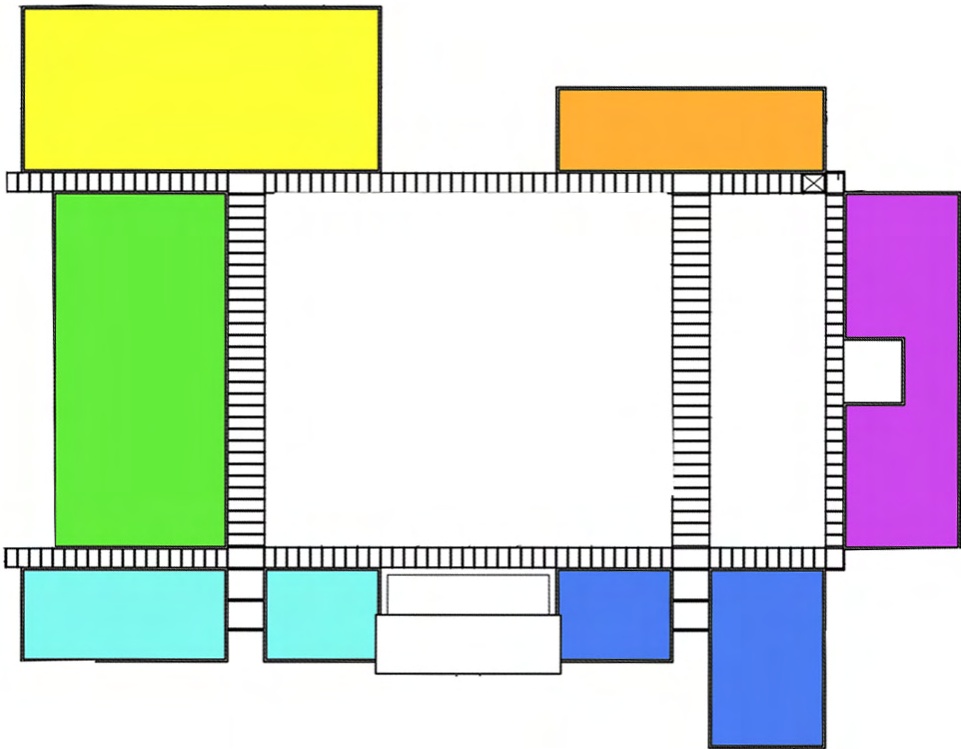
Final 10 Project



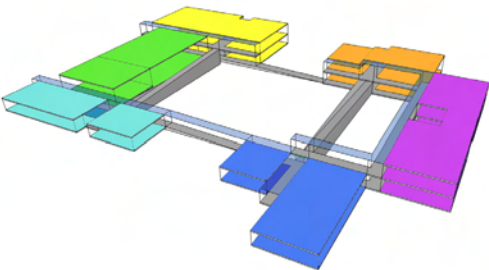
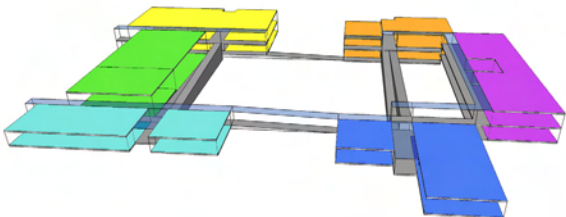
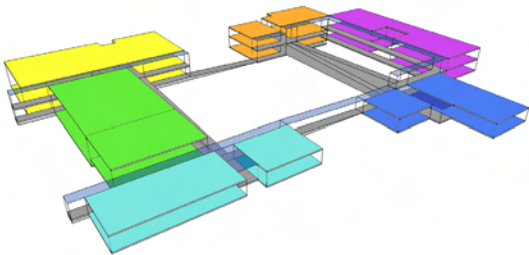
SITE PLAN



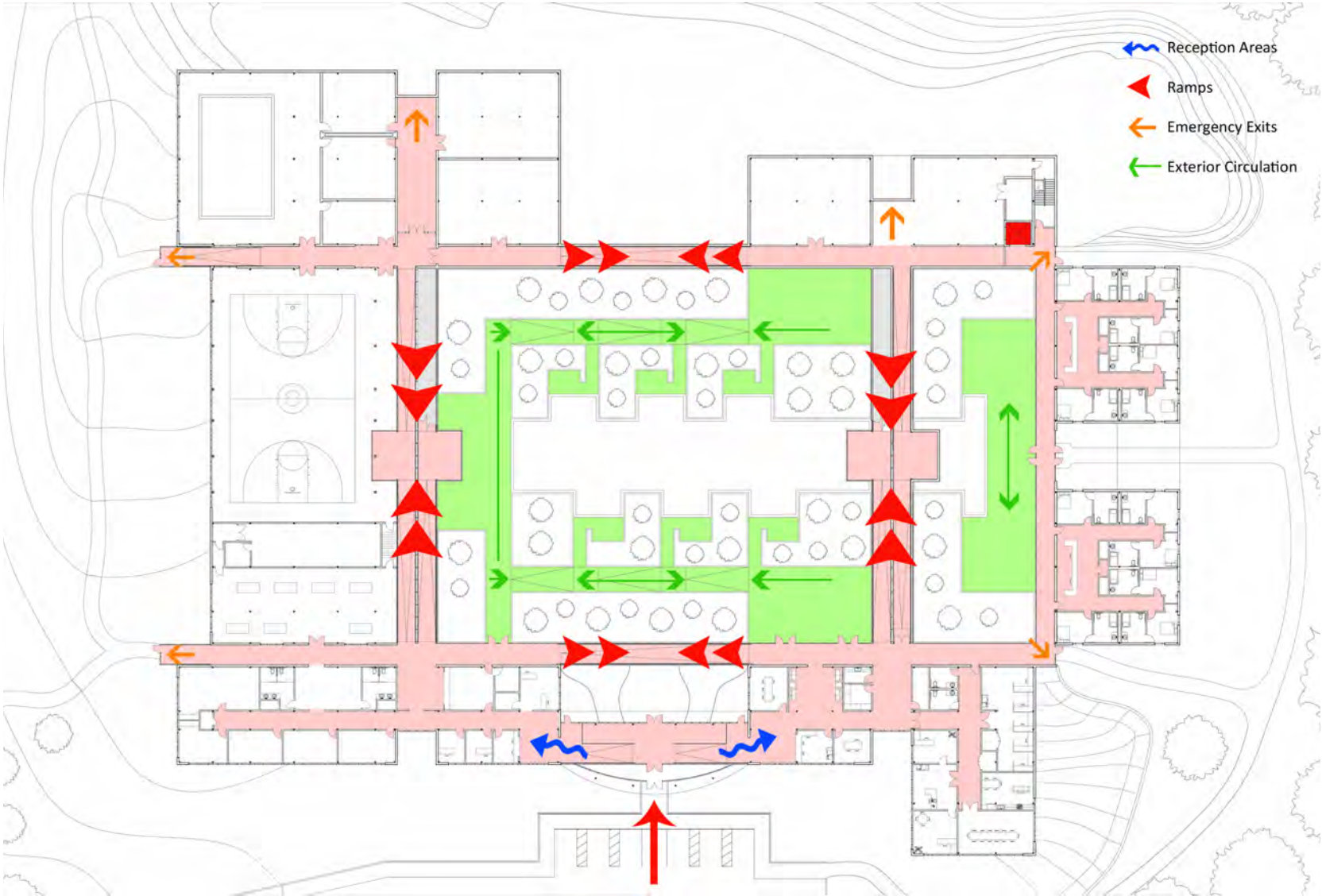
PARTI DIAGRAMS



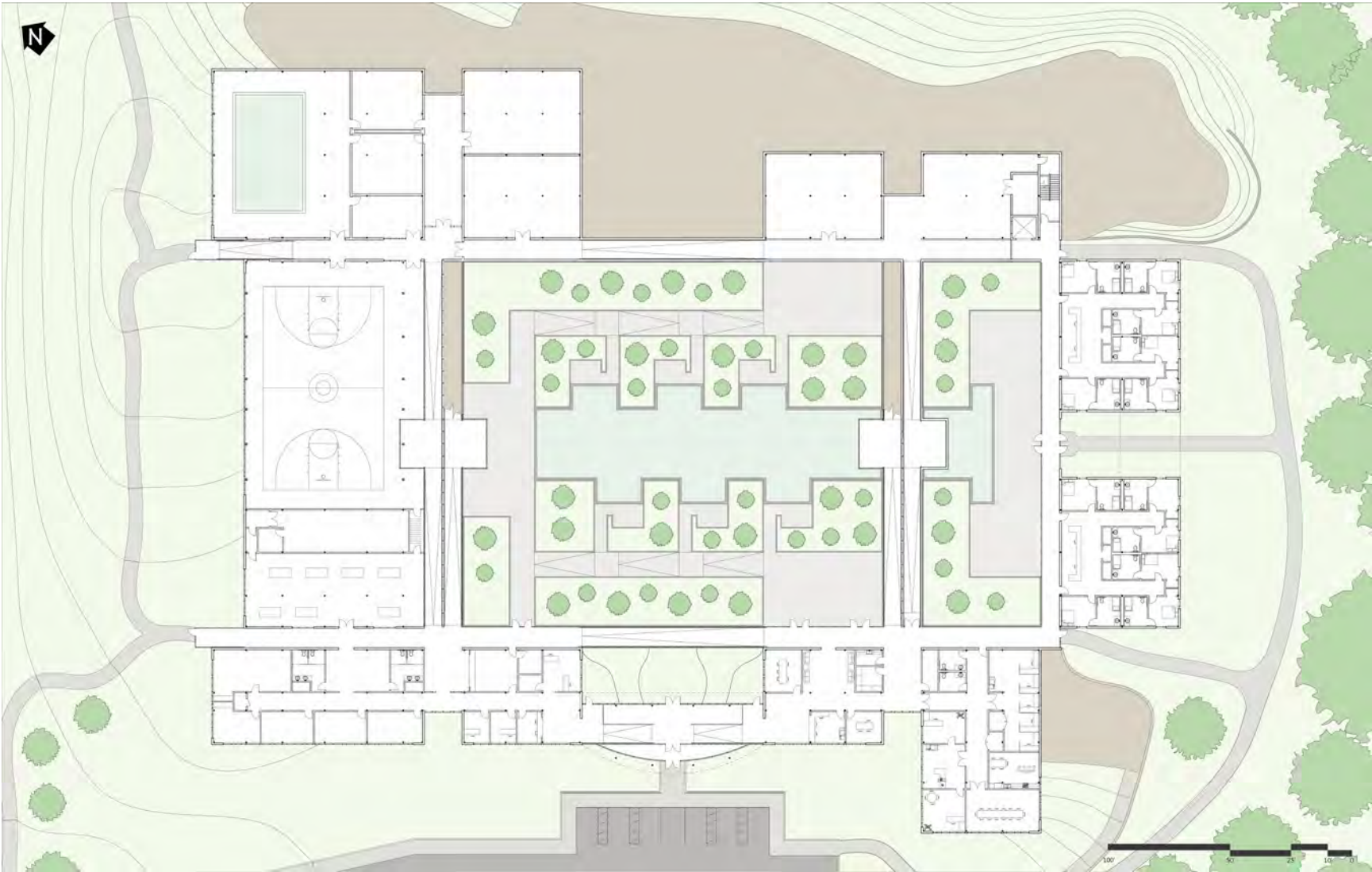
- Housing
- Administration
- Education
- Dining/Gym
- Recreation
- Community



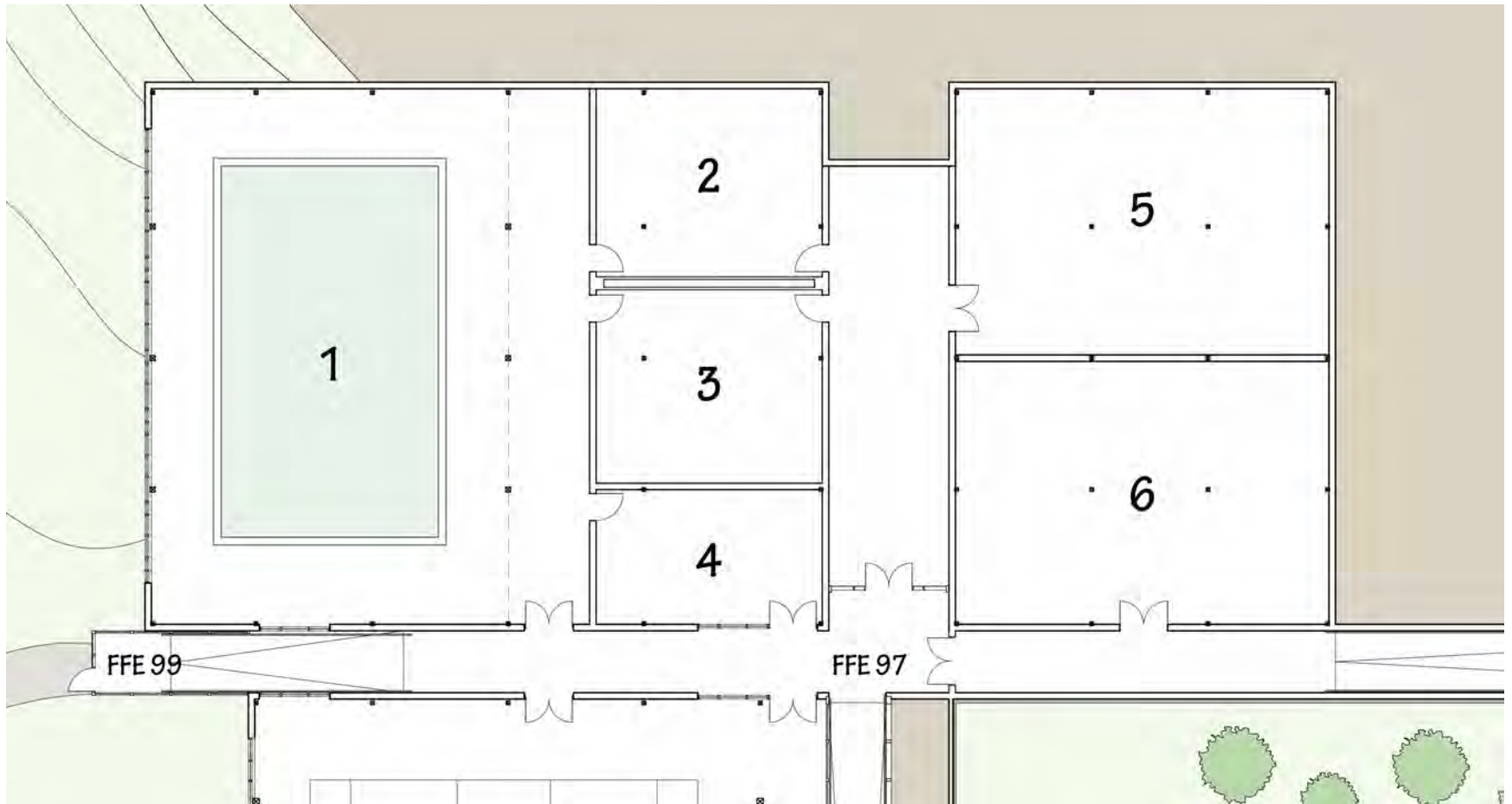
CIRCULATION DIAGRAM



FIRST LEVEL PLAN

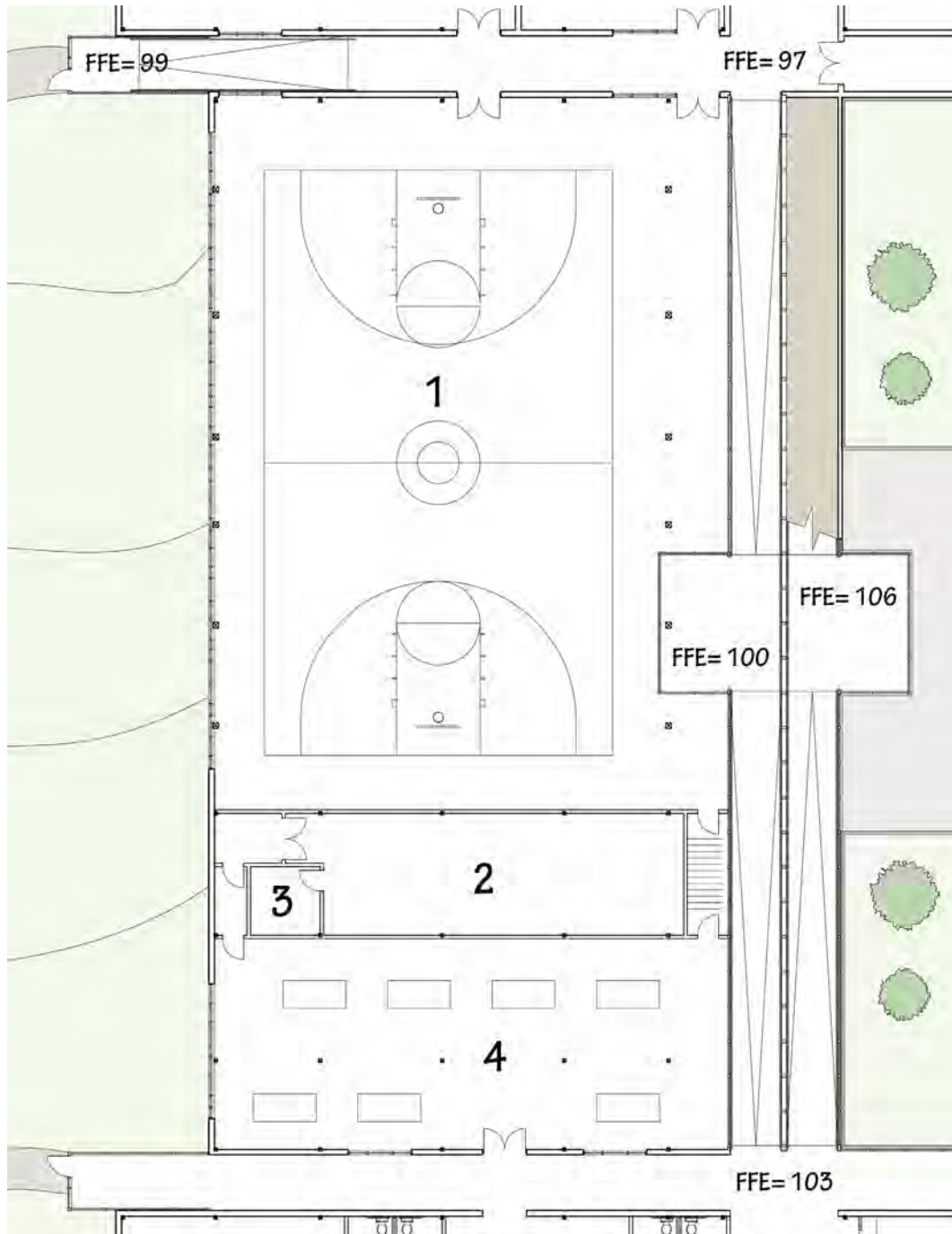


FIRST FLOOR RECREATION



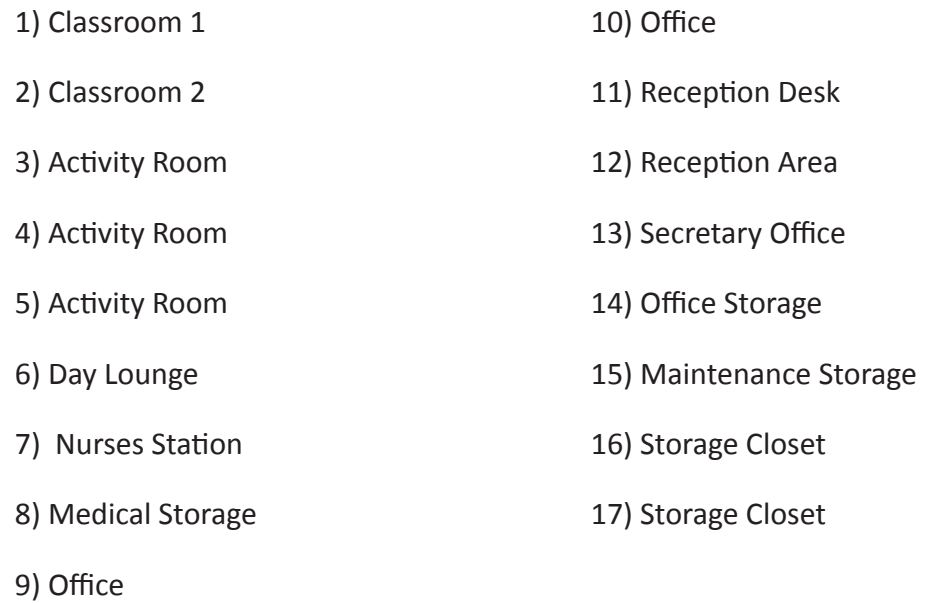
- | | |
|-----------------------|-------------------------|
| 1) Pool Area | 4) Recreation Office |
| 2) Womens Locker Room | 5) Pool Mechanical Room |
| 3) Mens Locker Room | 6) Mechanical Room |

GYMNASIUM / DINING AREA

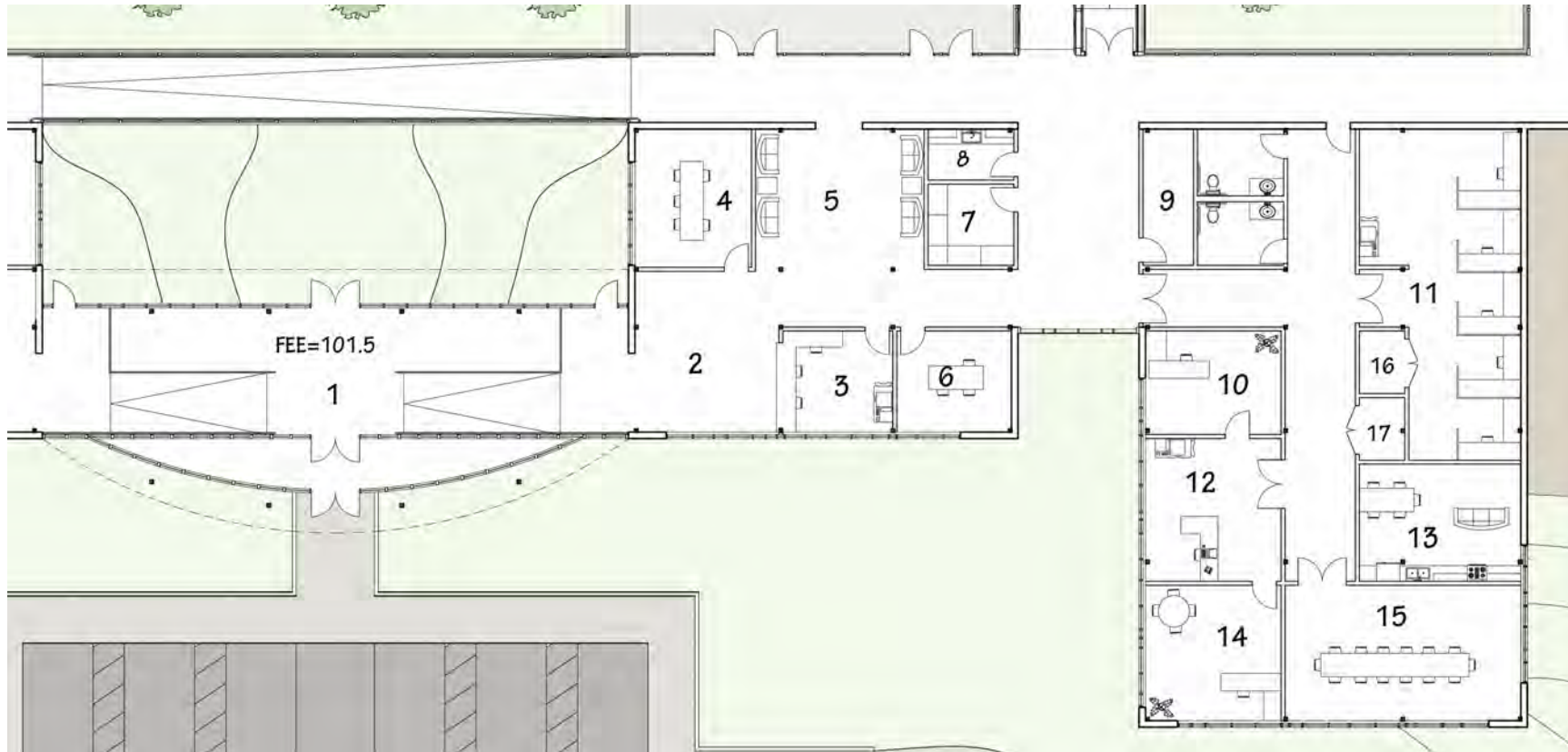


- 1) Gymnasium
- 2) Service Kitchen
- 3) Kitchen Storage
- 4) Dining

FFE=103



ENTRY / ADMINISTRATION



- | | |
|---------------------|---------------------------------------|
| 1) Main Entrance | 10) Assistant Director's Office |
| 2) Reception Area | 11) General Office Space |
| 3) Reception Desk | 12) Administrative Secretary's Office |
| 4) Meeting Room | 13) Director's Office |
| 5) Waiting Room | 14) Staff Lounge |
| 6) Meeting Room | 15) Conference Room |
| 7) File Storage | 16) Office Storage |
| 8) Maintenance Room | 17) Storage |
| 9) Storage | |

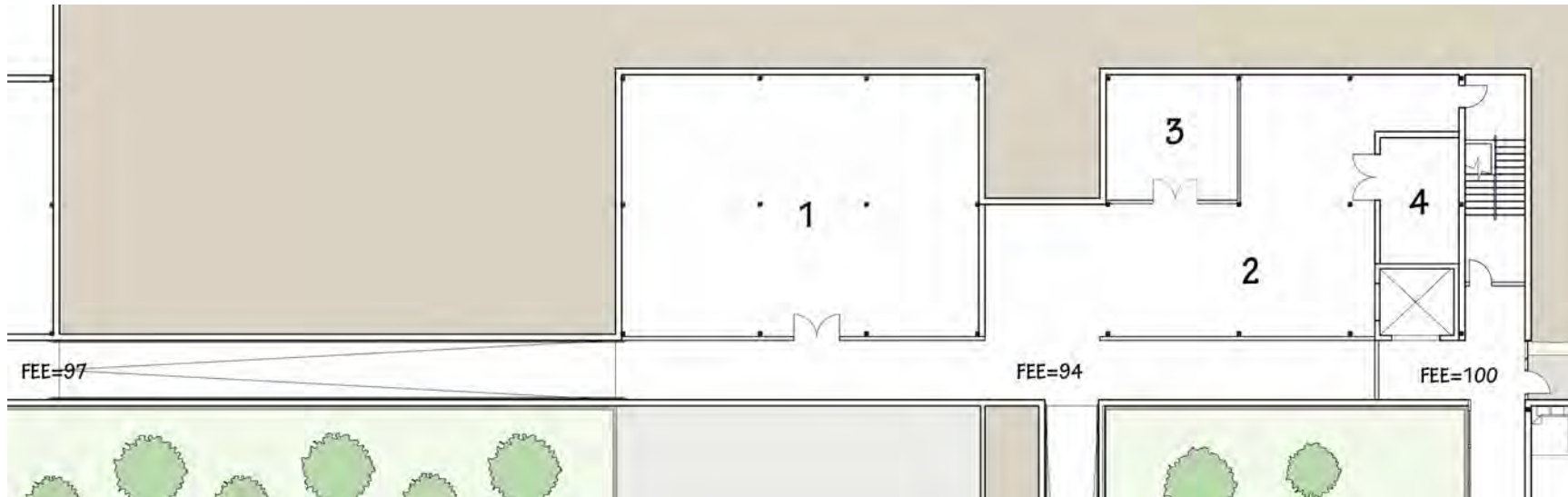
PRIVATE GARDEN / FIRST FLOOR HOUSING



- | | |
|-------------------|--------------------|
| 1) Nurses Station | 9) Nurses Station |
| 2) Room 11 | 10) Room 17 |
| 3) Room 12 | 11) Room 18 |
| 4) Room 13 | 12) Room 19 |
| 5) Room 14 | 13) Room 20 |
| 6) Room 15 | 14) Room 21 |
| 7) Room 16 | 15) Room 22 |
| 8) Medical Closet | 16) Medical Closet |

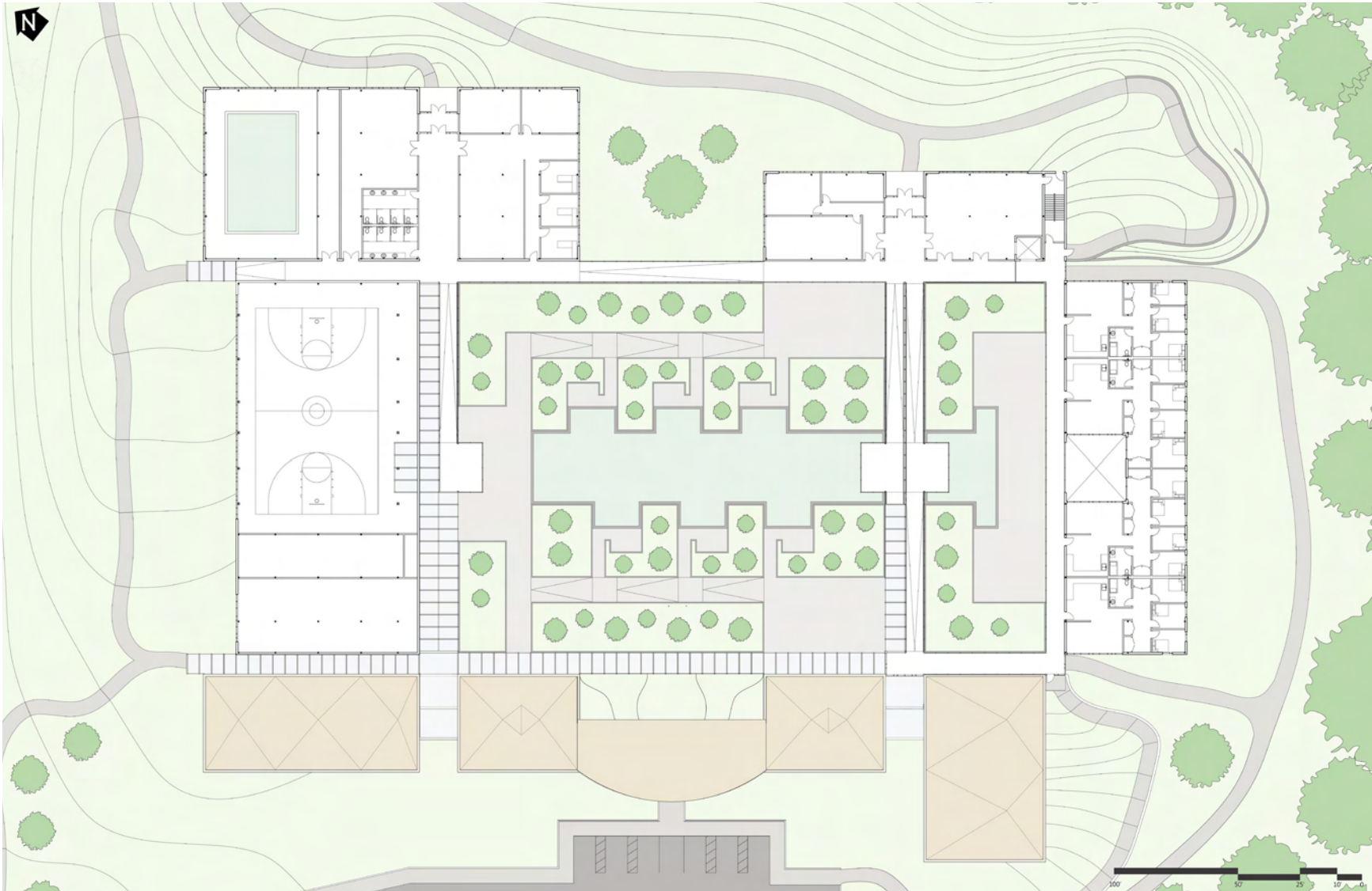
The private garden is for the use of the resident clients. This space can only be accessed on the first level, but provides a strong visual connection to the outdoors from the housing circulation on the second level.

MECHANICAL BASEMENT

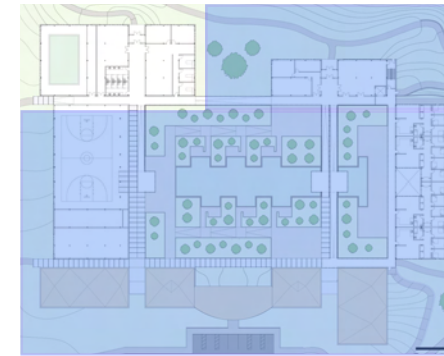
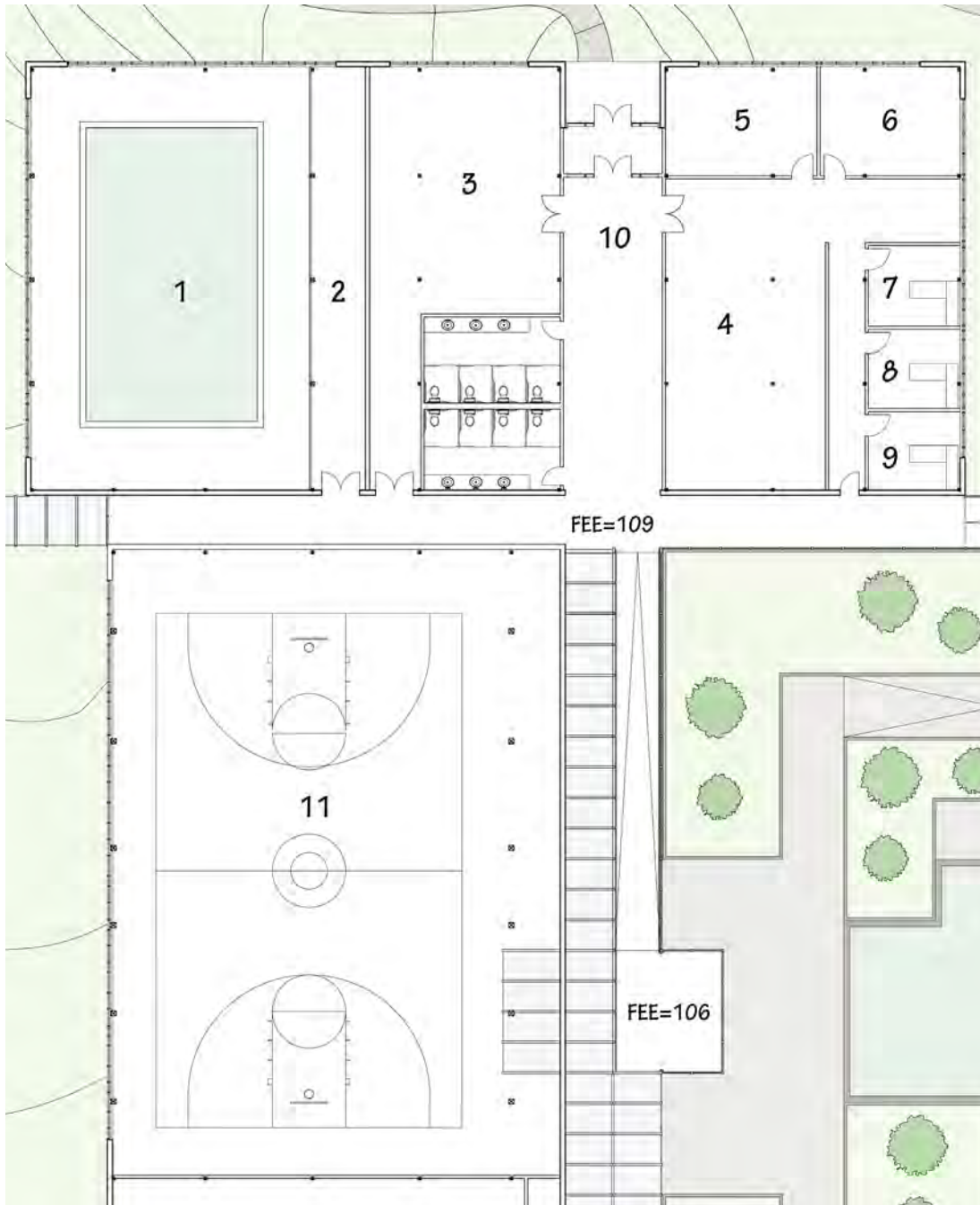


- 1) Mechanical Room
- 2) Storage Area
- 3) Electrical Room
- 4) Elevator Room

SECOND LEVEL PLAN

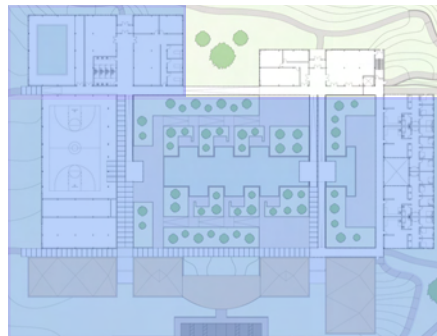
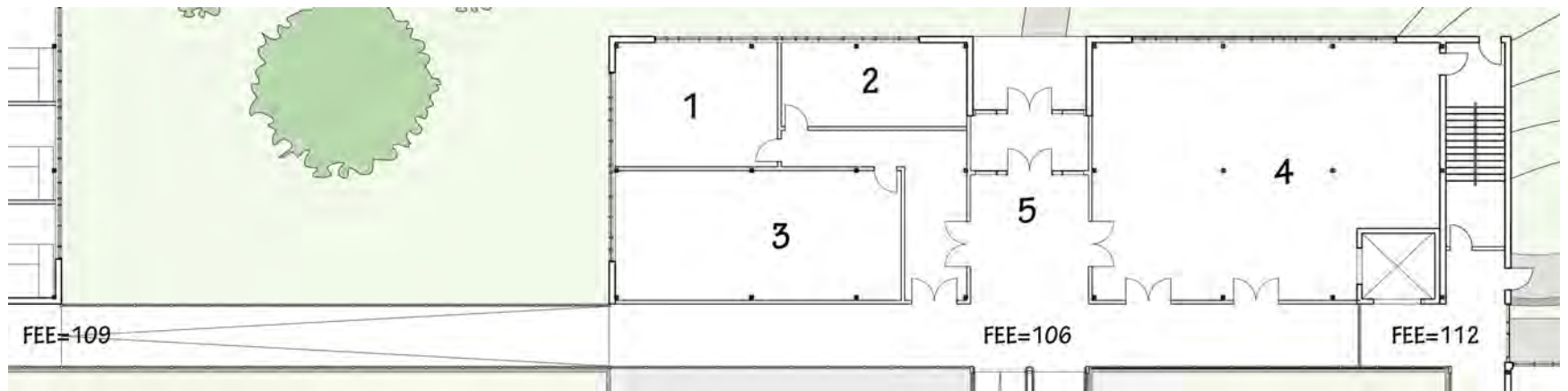


SECOND FLOOR RECREATION



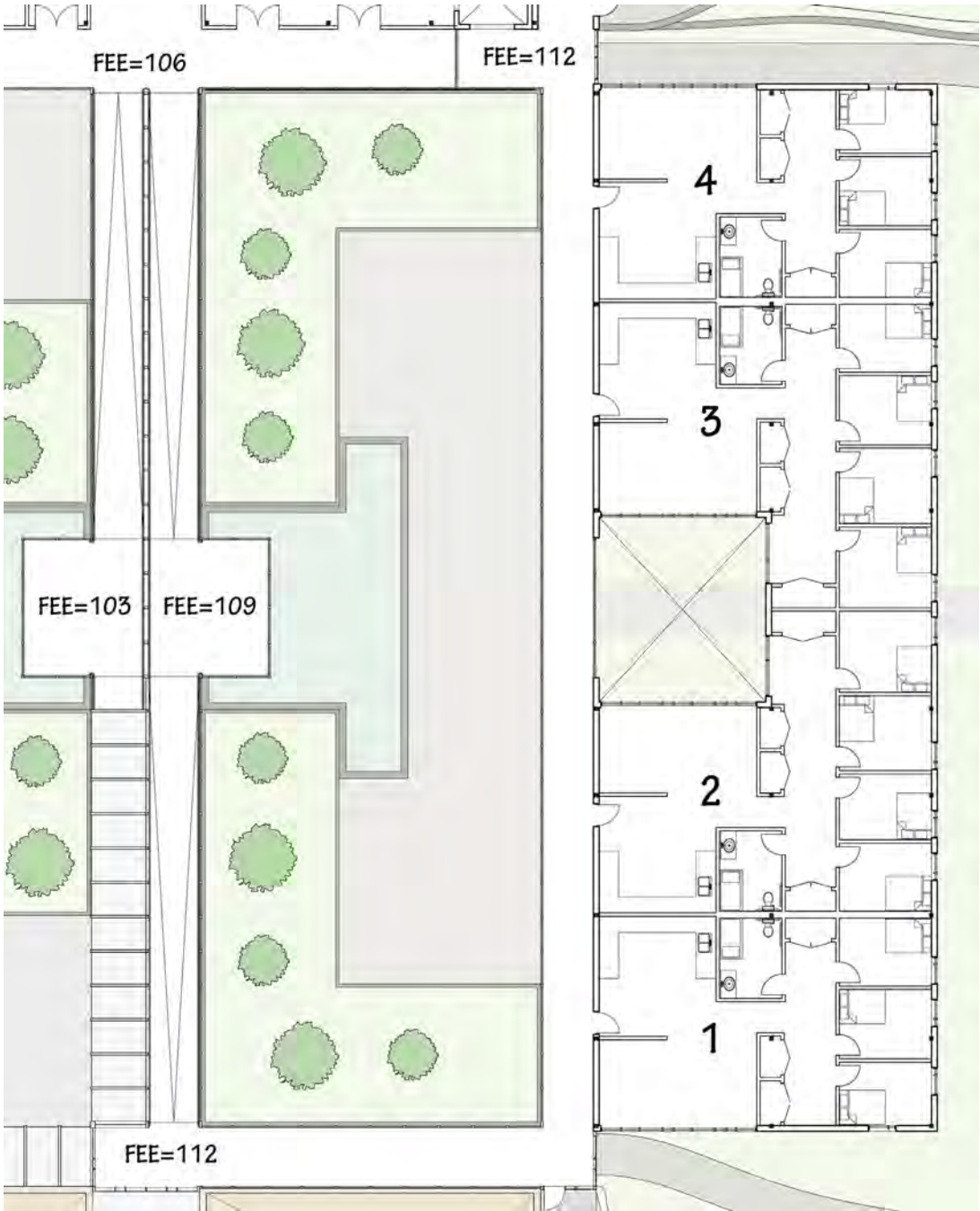
- 1) Pool (Open to Below)
- 2) Pool Mezzanine
- 3) Game Room
- 4) Rehabilitation Room
- 5) Therapy Room A
- 6) Therapy Room B
- 7) Therapist Office
- 8) Therapist Office
- 9) Therapist Office
- 10) Back Entrance A
- 11) Gymnasium (Open to Below)

COMMUNITY FACILITY



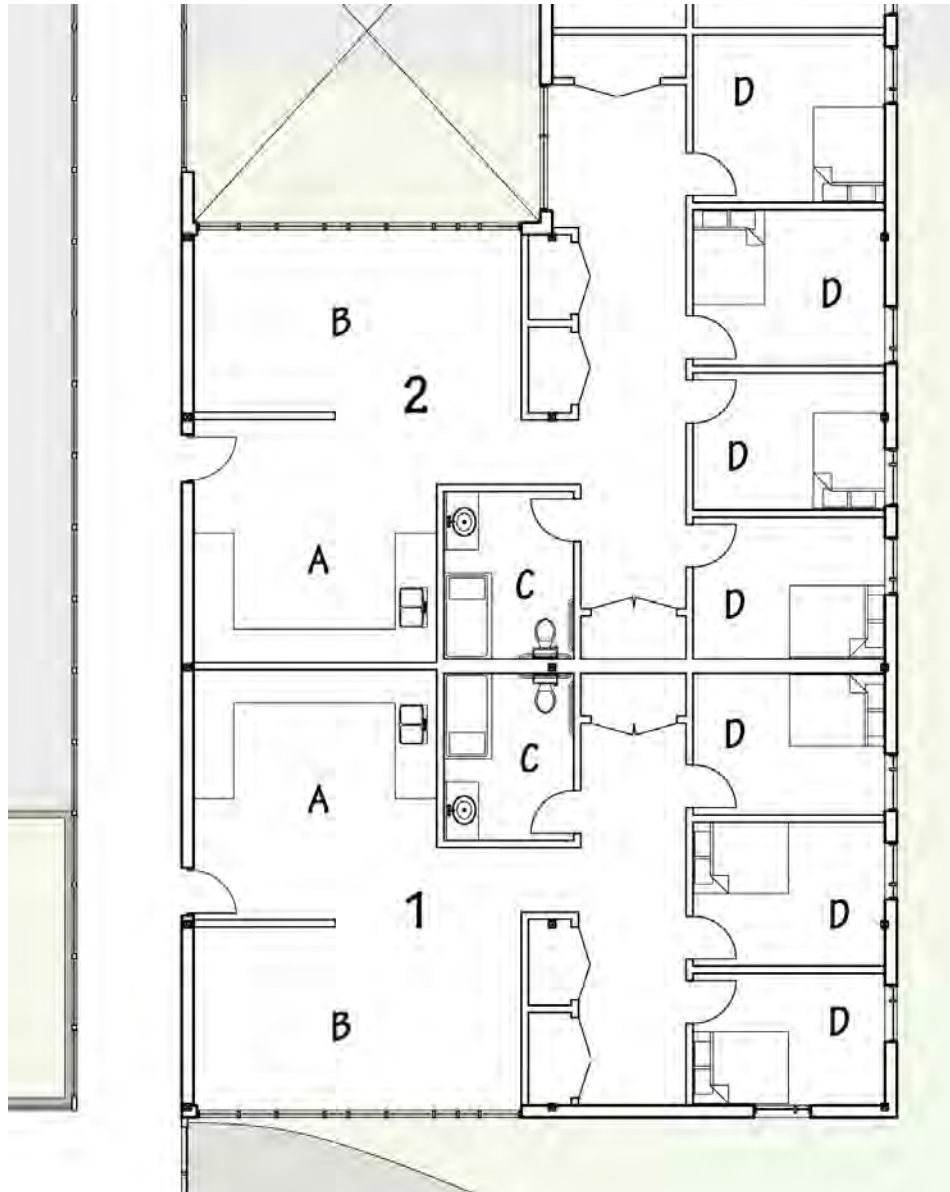
- 1) Media Room
- 2) Music Room
- 3) Entertainment Room
- 4) Community Lounge
- 5) Back Entrance B

SECOND FLOOR HOUSING



- 1) Apartment A (3 Bedroom)
- 2) Apartment B (4 Bedroom)
- 3) Apartment C (4 Bedroom)
- 4) Apartment D (3 Bedroom)

APARTMENT LAYOUT



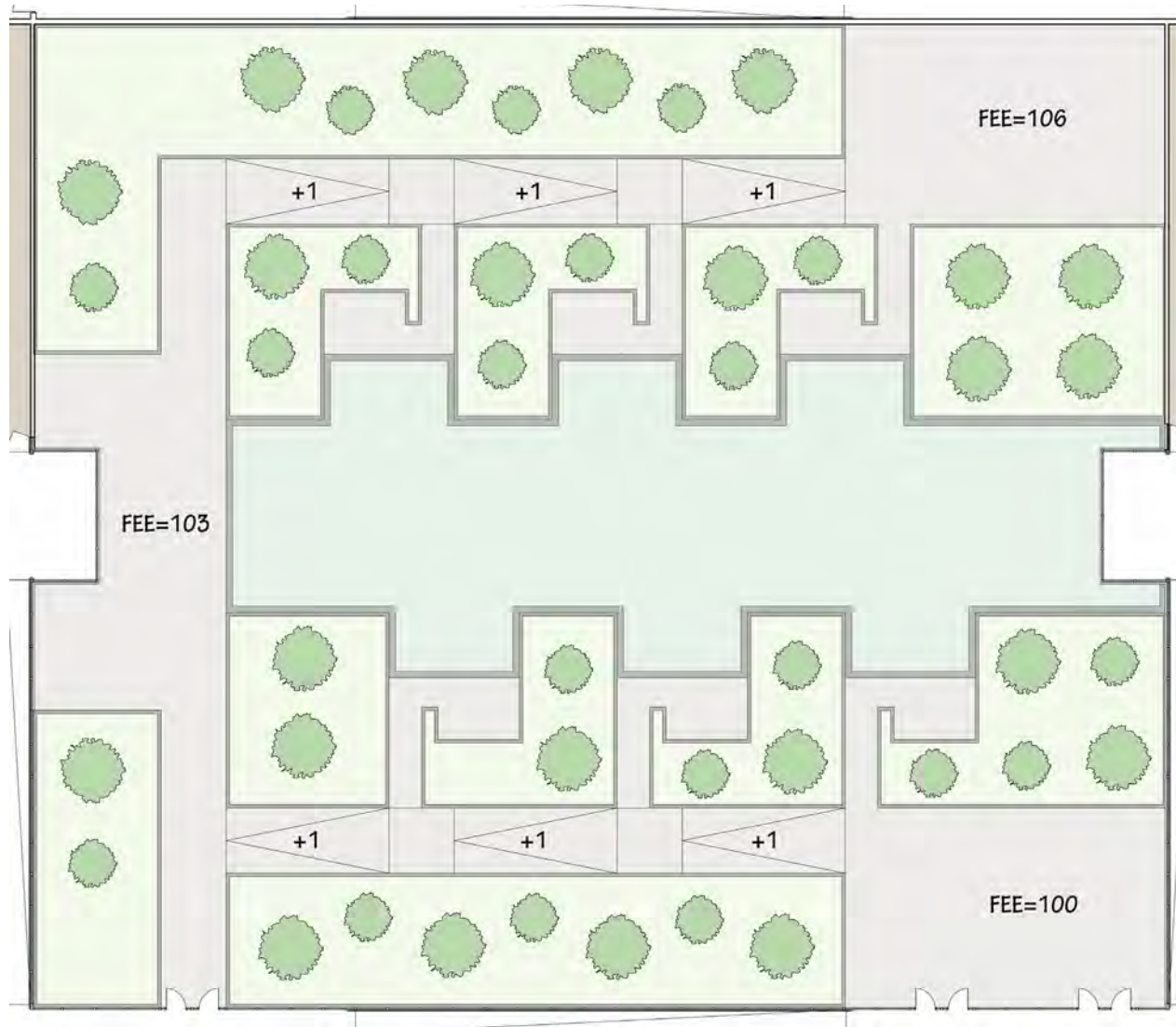
1) Apartment A

- A) Kitchen
- B) Living Room
- C) Bathroom
- D) Bedroom

2) Apartment B

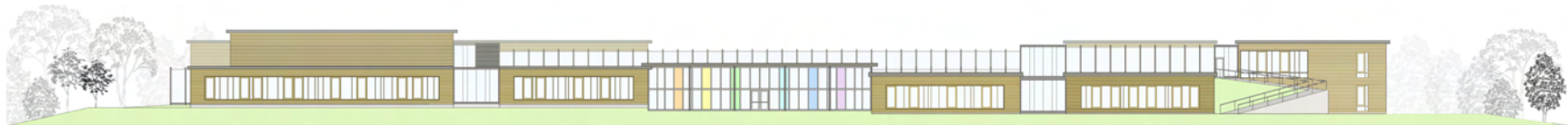
- A) Kitchen
- B) Living Room
- C) Bathroom
- D) Bedroom

COMMUNITY GARDEN



The community garden space will serve all of the building's users and provide a number of spaces to relax and socialize outdoors. The garden's changing elevation offers a continuous connection between each the surrounding program spaces. Between transitions from level to level there are six small cove areas, each of which are separated by the one foot level changes. This incremental level change establishes a variation in experiences from cove to cove. The central water feature provides a peaceful atmosphere for people in the space as well as those looking onto it from inside. In addition the two centrally located landings at either end of the garden generate spaces within the building where clients can rest enjoy the view.

ELEVATIONS



Front Elevation



South-East Elevation



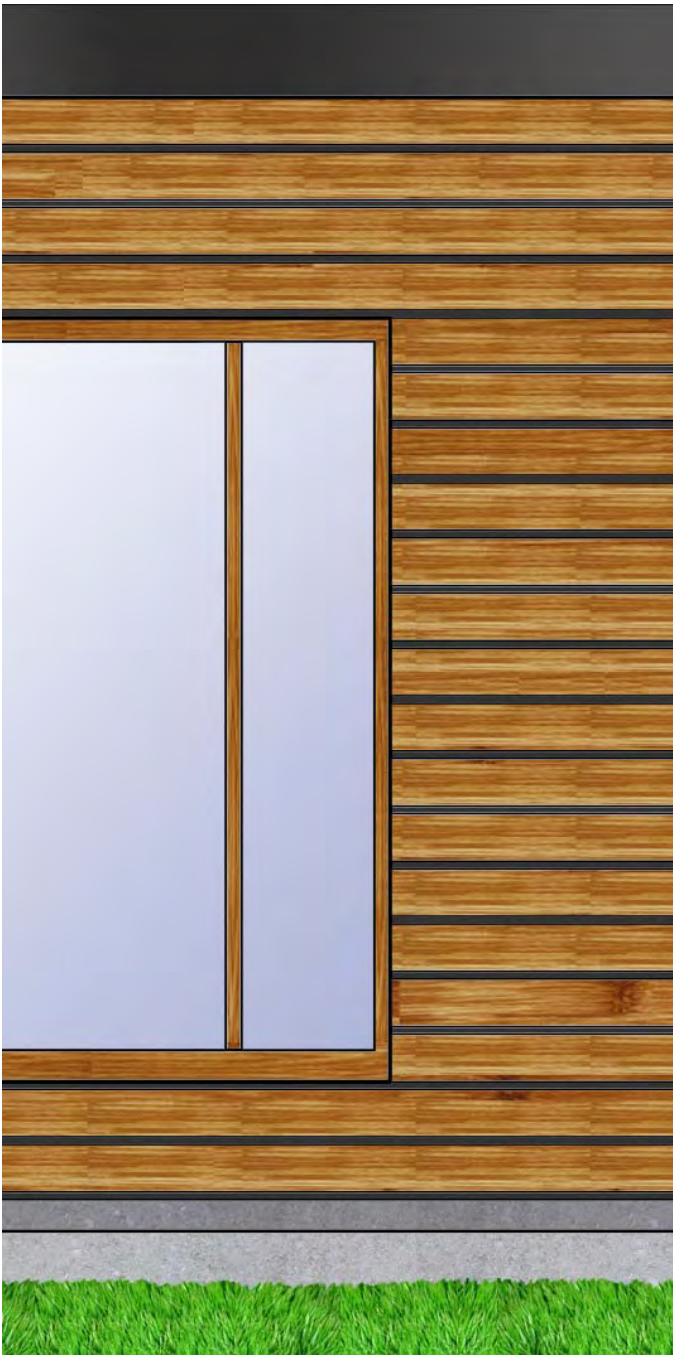
North-West Elevation



Back Elevation

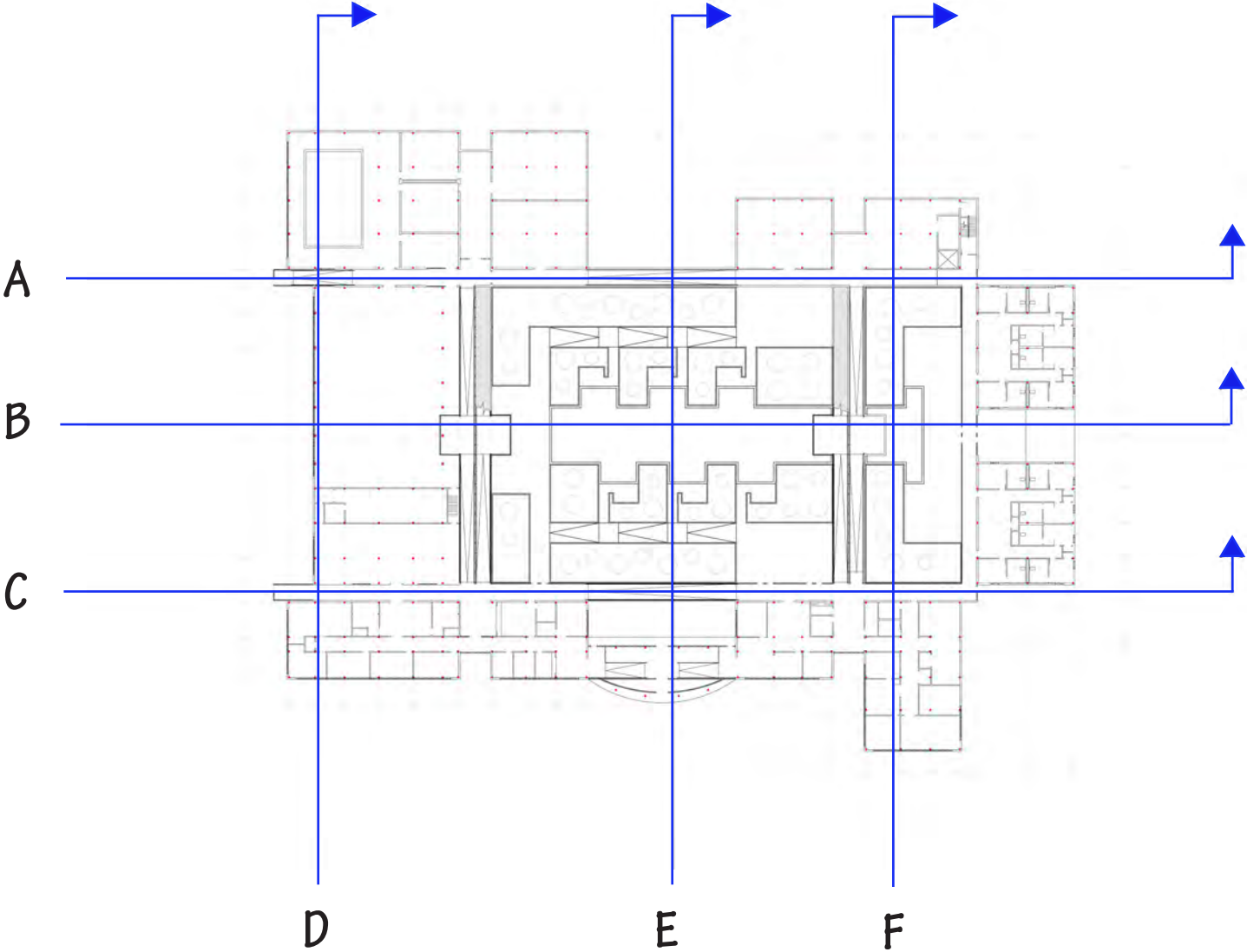


DETAILED ELEVATION

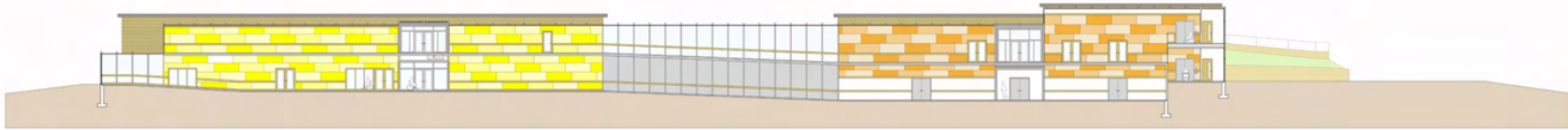


Wood Rain Screen Images

SECTION CUTS



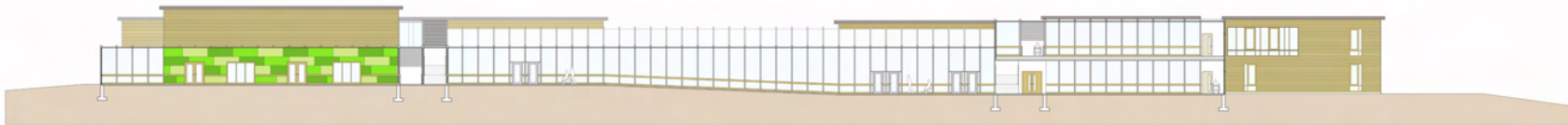
SECTIONS A-B-C



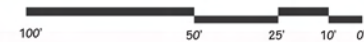
Section A



Section B



Section C



Section A - Cuts through the circulation on the back side that connects recreation facilities and community facilities. This reveals the colored panels that represent the different pieces of program, in this case recreation (yellow) and communal (orange), and the 3 foot level change between the two elements.

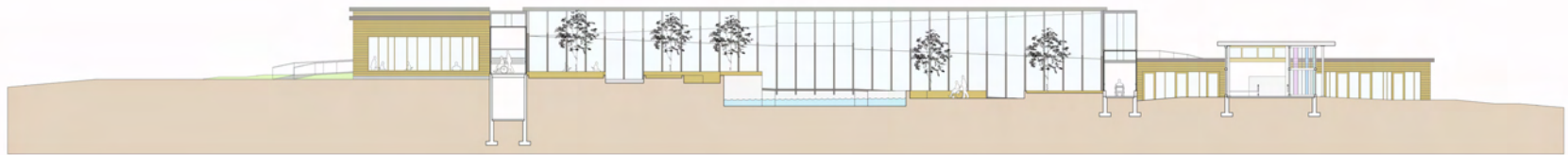
Section B - Cuts parallel to Section A through the Gymnasium, the main ramp circulation, the two gardens and the second floor apartments. This section emphasizes the large outdoor space that the gardens provides within the walls of the circulation.

Section C - Cuts parallel to Sections A and B through the circulation space that connect education and dining to administration and housing. It also shows the 3 foot elevation change between administration and education.

SECTIONS D-E-F



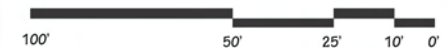
Section D



Section E



Section F

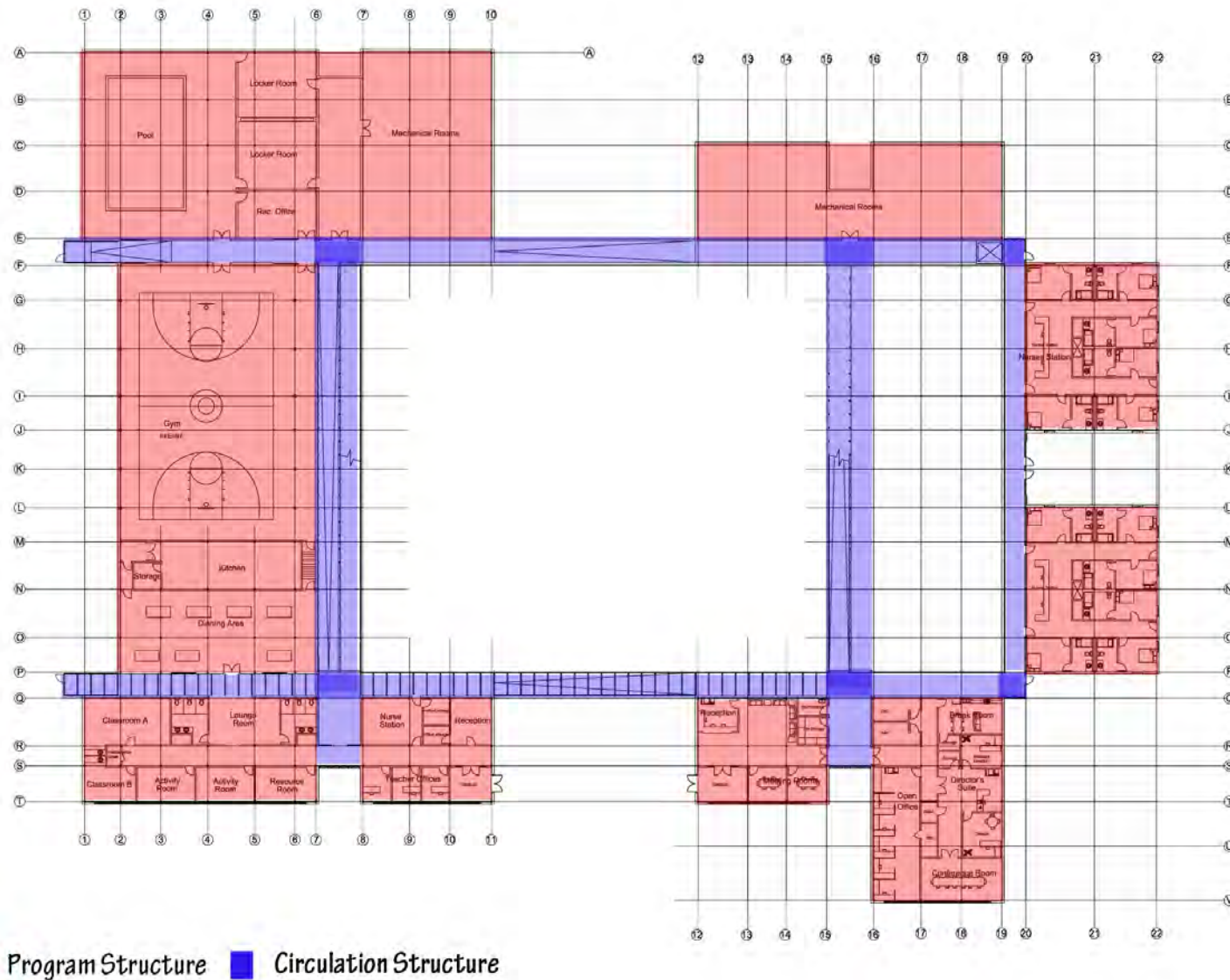


Section D - Cuts through the Pool, Gym, Dining Area and the two classrooms in Education. This section shows the stepping windows in the Gym that creating an experience geared directly toward the clients (these windows are at the eye level of a person on a wheel-chair and step with the sloping ramps beyond).

Section E - Cuts parallel to Section E through the circulation tunnels and the community garden emphasizing the change in elevation from one side of the garden to the other.

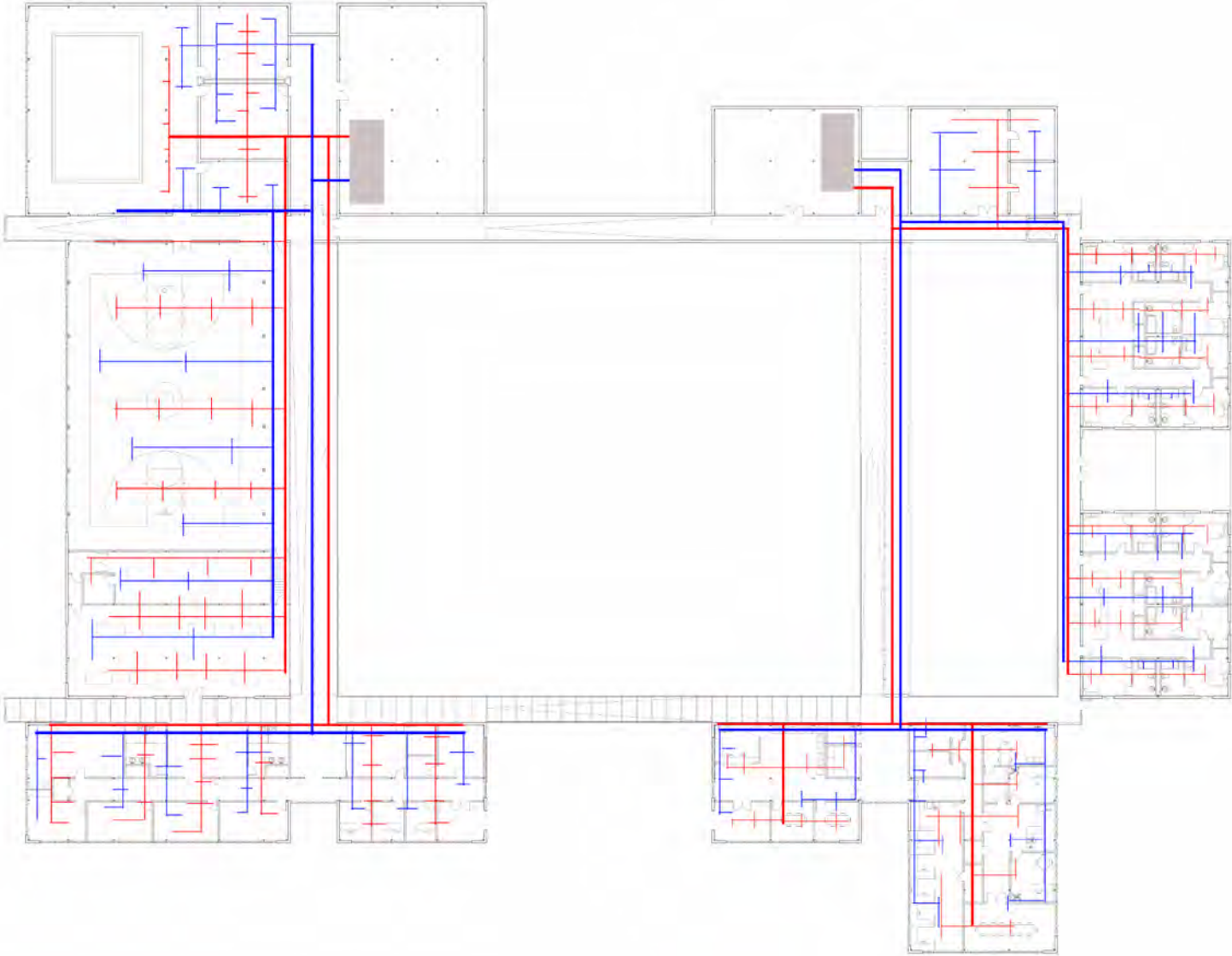
Section F - Cuts parallel to Sections D and E through the community facilities the private garden and the administration area. This cut shows the transparency of the circulation spaces and reveals the purple color theme for housing and the entrances to their living quarters beyond.

STRUCTURE DIAGRAM

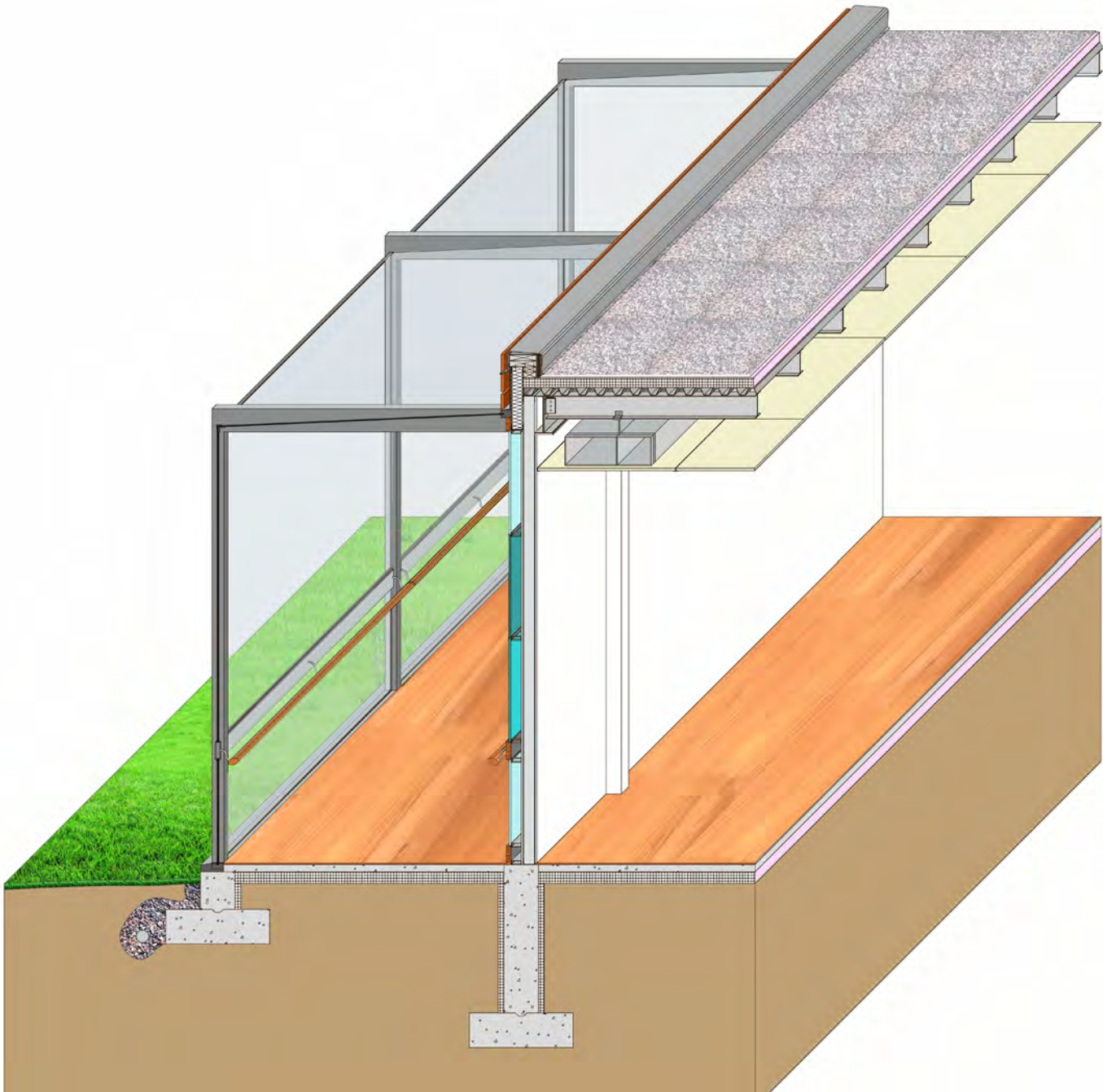


The structure of this building can be broken up in to two parts, each of the program pieces follow the structural grid show above, while the circulation has a seperate structure grid that uses a five foot module. The entire building use steel construction throughout.

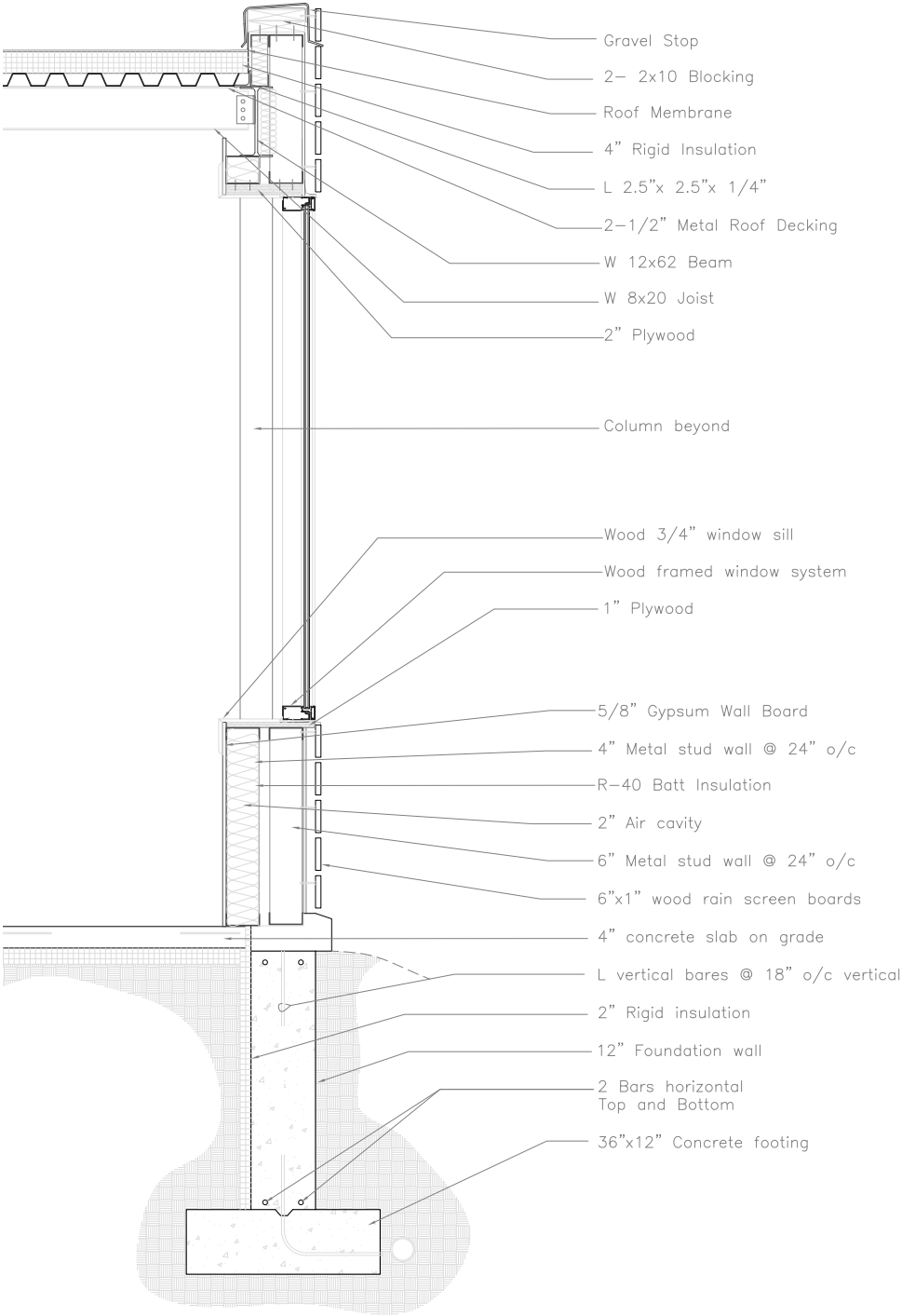
HVAC DIAGRAM



3D BAY RENDER



WALL SECTION



GYMNASIUM



POOL MEZZANINE



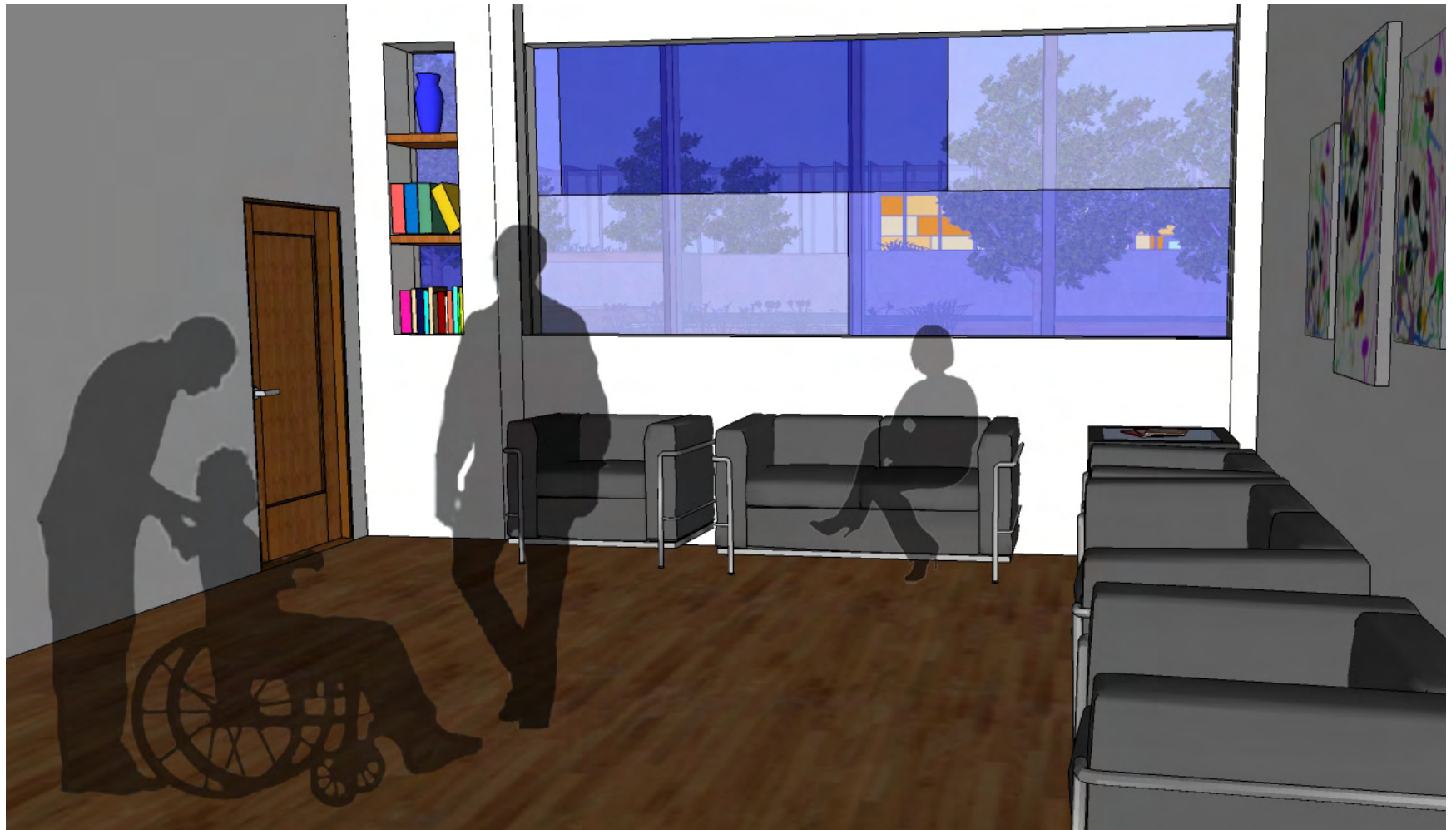
DAY LOUNGE



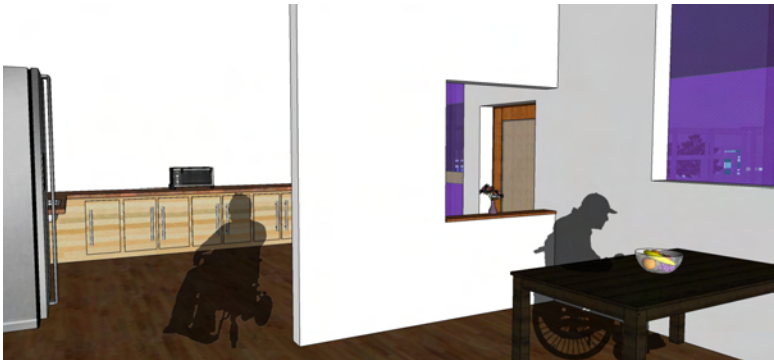
COMMUNITY LOUNGE



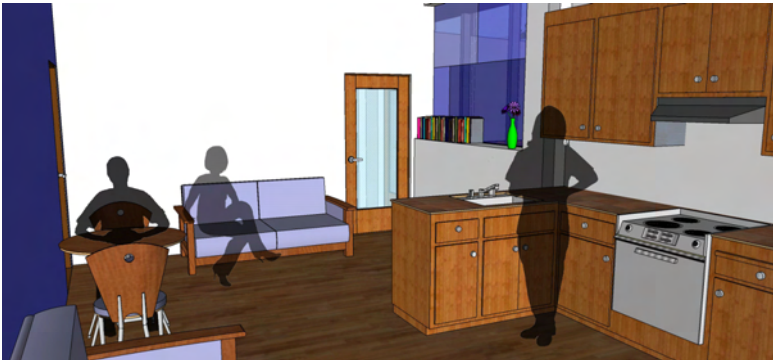
WAITING AREA



HOUSING-NURSES STATION

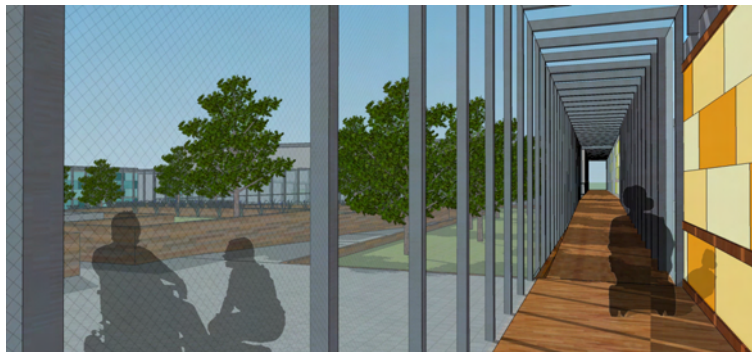


APARMENT LIVING SPACE

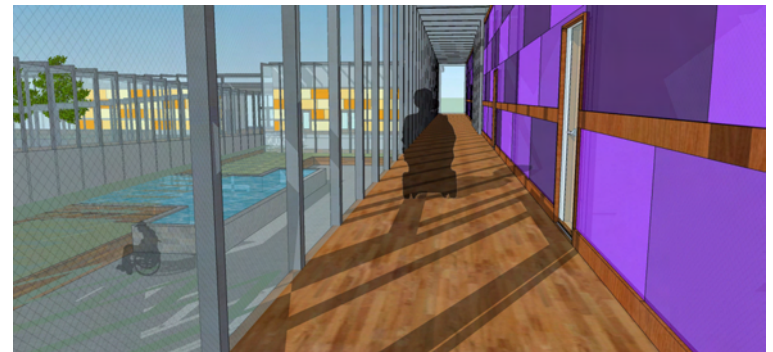


STAFF LOUNGE

CIRCULATION BETWEEN DINING AND EDUCATION



CIRCULATION LOOKING OUT ON TO THE GARDEN



HOUSING CIRCULATION

MAIN RAMP BETWEEN EDUCATION AND RECREATION



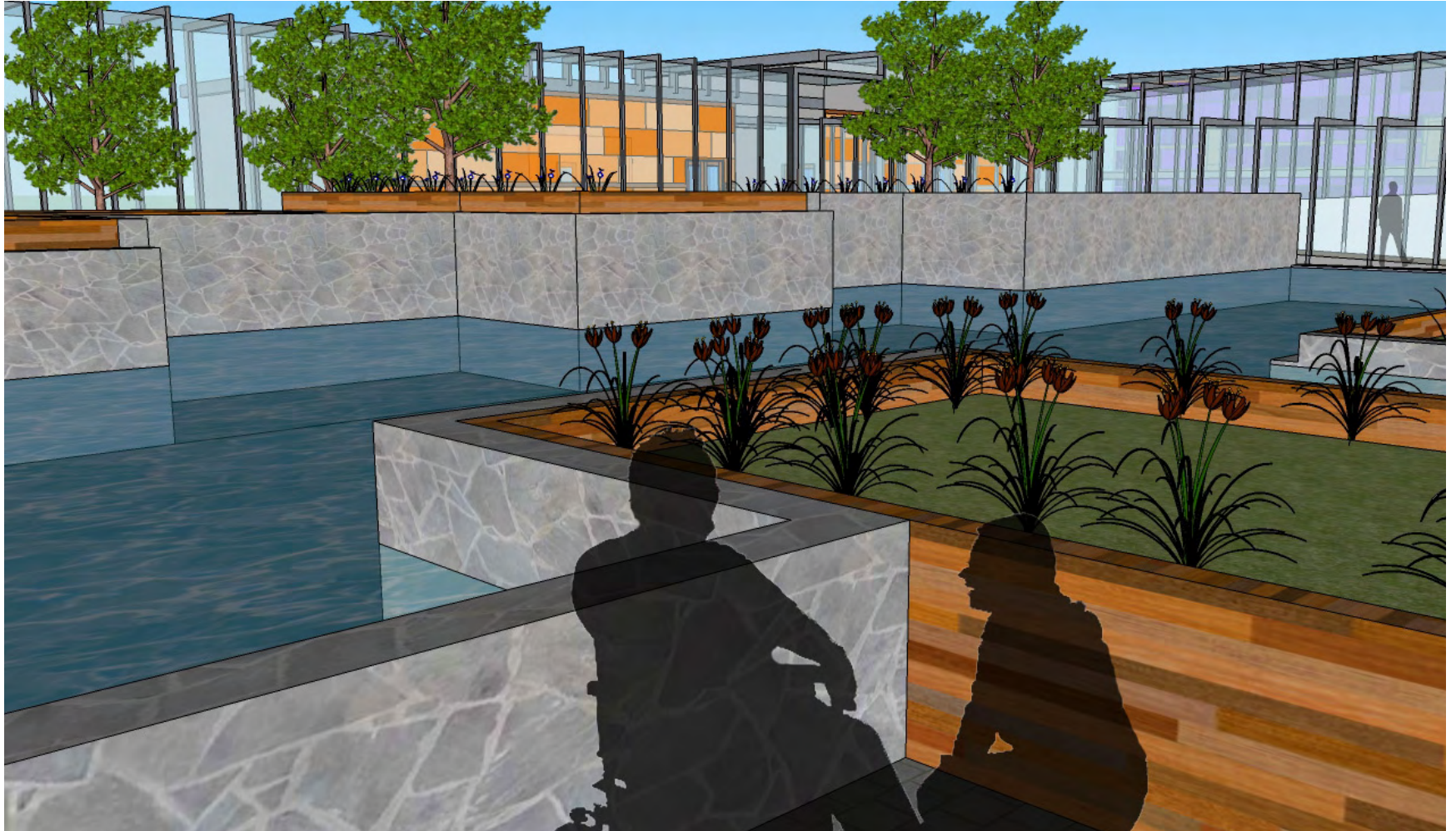
MAIN RAMP BETWEEN ADMINISTRATION AND COMMUNITY AREA



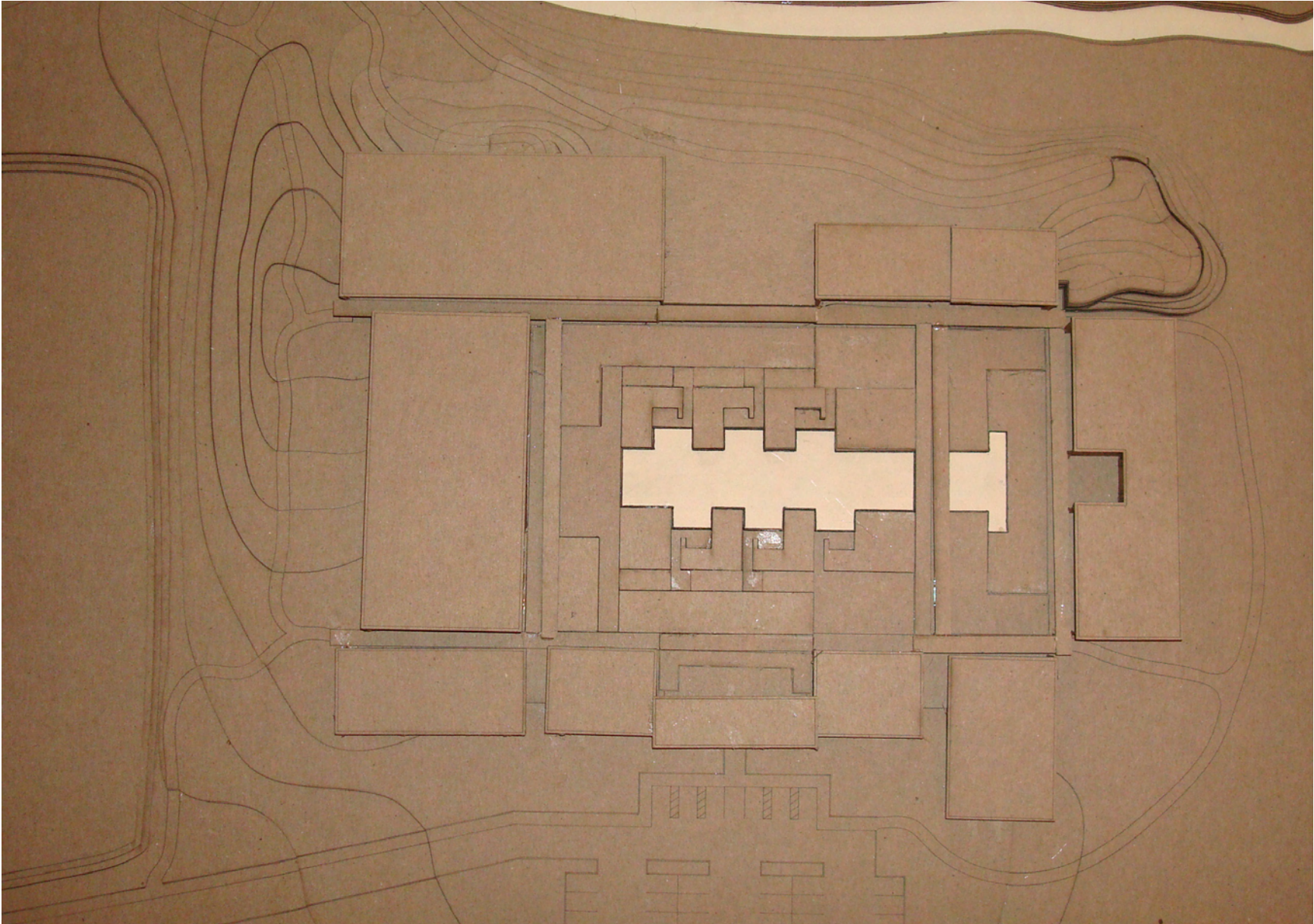
COMMUNITY GARDEN - LOOKING AT THE WATER FEATURE AND RAMPS BEYOND

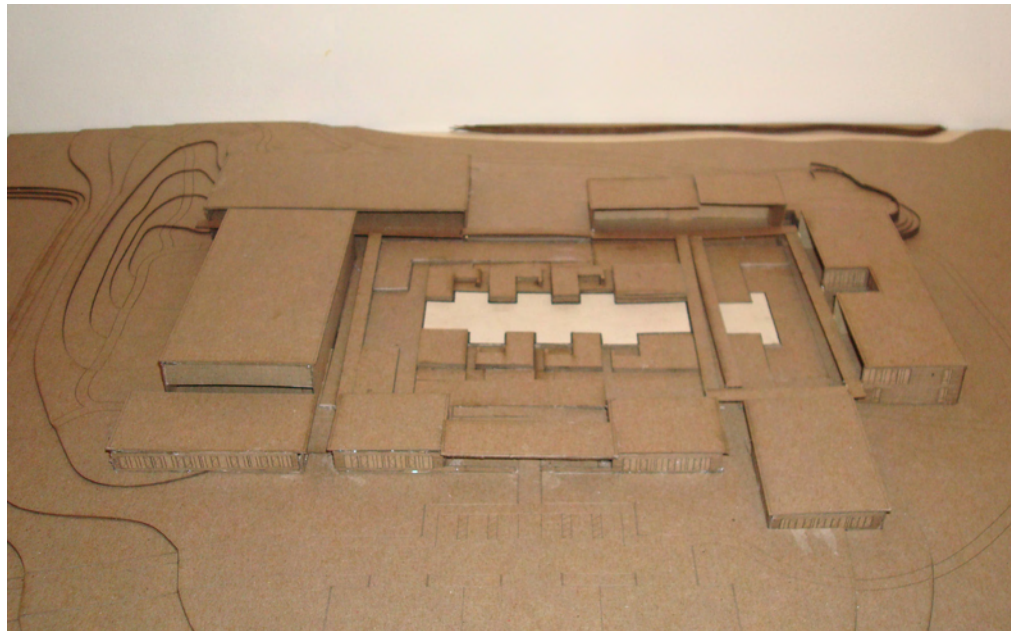
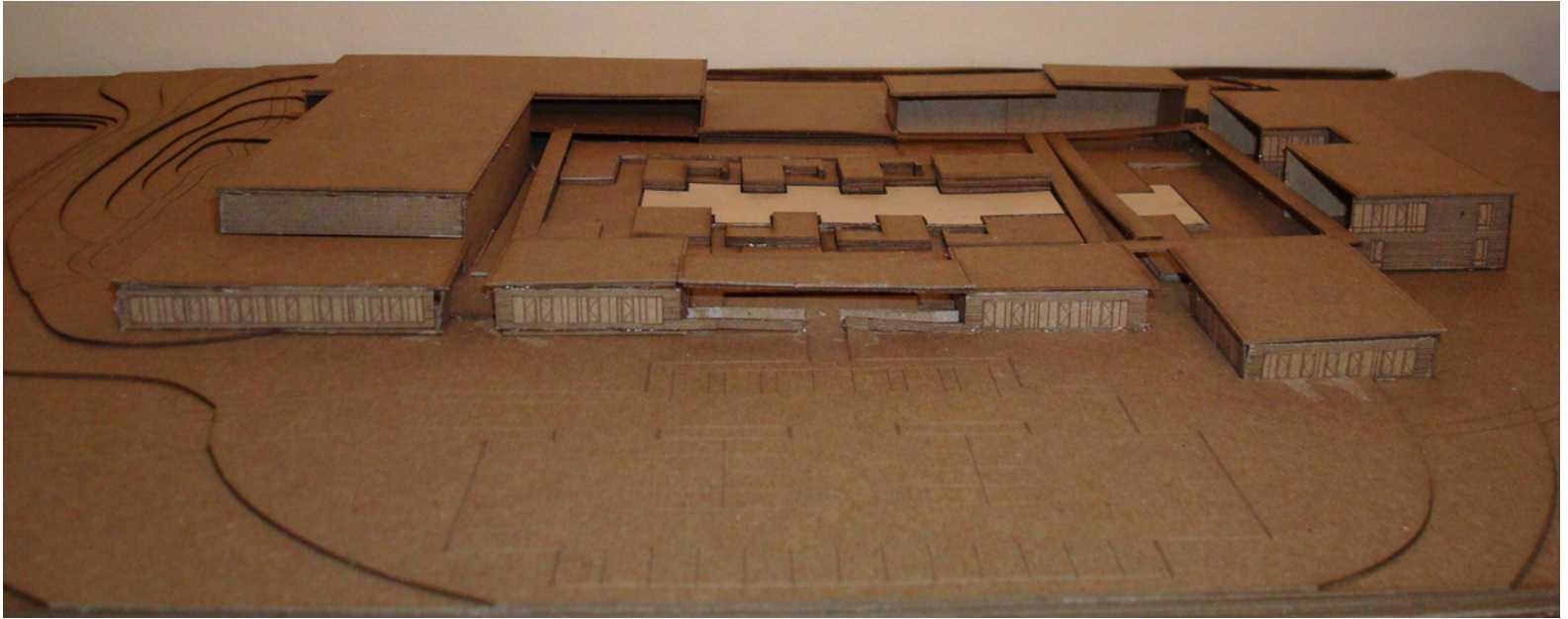


COMMUNITY GARDEN- IN A COVE AREA



Site Model





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