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Hawaiian Health: Community Health through Design and Nature

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COMMUNITY HEALTH THROUGH DESIGN AND NATURE

SPRING 2022 GRADUATE THESIS PROPOSAL

ROGER WILLIAMS UNIVERSITY

MICHAEL WELCH
PROFESSOR: ANDREW COHEN

TABLE OF CONTENTS

<u>INTRODUCTION</u>	1.
<u>ARCHITECTURAL THEMES</u>	4.
<u>THESIS STATEMENT</u>	5.
<u>PROGRAM</u>	6.
<u>SITE INFORMATION</u>	8.
<u>SITE STRATEGIES</u>	11.
<u>PRECEDENTS</u>	13.
<u>BIBLIOGRAPHY</u>	28.
<u>CITATIONS</u>	29.

INTRODUCTION

LEADING A HEALTHY LIFE IS ONE OF THE MOST IMPORTANT ASPECTS OF LIFE IN GENERAL. AS BEING IN POOR HEALTH DECREASES THE QUALITY OF LIFE. WE ALL UNDERSTAND THE IMPORTANCE OF PHYSICAL HEALTH AND THE PURSUIT OF BEST PRACTICES HAS BEEN AROUND FOR LONG AS HUMANS. HOWEVER, A SERIOUS FOCUS ON QUALITY MENTAL HEALTHCARE HAS ONLY BEEN AROUND FOR LESS THAN 100 YEARS. PRE-1950S THE QUALITY OF MENTAL HEALTH IN THE USA WAS APPALLING. INSTITUTIONALIZING PATIENTS IN FACILITIES ILL EQUIPPED TO ADEQUATELY HANDLE AND TREAT THEM. RESULTING IN PATIENTS OFTEN TIMES BECOMING WORSE WHILE BEING TREATED AND RESULTING IN PATIENTS ESSENTIALLY BEING TRAPPED. THIS WAS LARGELY DUE TO INADEQUATE RESEARCH IN MENTAL HEALTH TREATMENT AS WELL AS THE POOR CONDITIONS THAT MANY OF THESE FACILITIES FACED. IN THE 20TH AND 21ST CENTURY THIS HAS STARTED TO TAKE A TURN FOR THE BETTER WITH IMPROVED OPTIONS FOR TREATMENT AND BETTER EQUIPPED AND KEPT FACILITIES.

HOWEVER, OVERALL HEALTH STATISTICS WITHIN THE UNITED STATES ARE NOTICEABLY LOWER THAN THOSE OF OTHER INDUSTRIALIZED EUROPEAN NATIONS. THE ISSUE OF HEALTHCARE IS SEEN IN TWO VASTLY DIFFERENT WAYS BETWEEN THE USA AND EUROPE. WITH THE US TREATING HEALTHCARE AS A PRIVATE PERSONAL PROBLEM, UNLIKE IN EUROPE WHICH TREATS HEALTHCARE AS A PUBLIC SOCIAL ISSUE. THIS IS THE BASIS FOR THE DIFFERENCE AS WHEN HEALTHCARE IS TREATED AS A SOCIAL ISSUE THERE IS MORE PUBLIC INVESTMENT AND MORE WIDE SPREAD ACCESS. WHEREAS THE UNREGULATED HEALTHCARE SYSTEM WITHIN THE USA LEADS TO PROHIBITIVE COSTS AND LACK OF ACCESS TO MOST PEOPLE WITHIN THE COUNTRY.

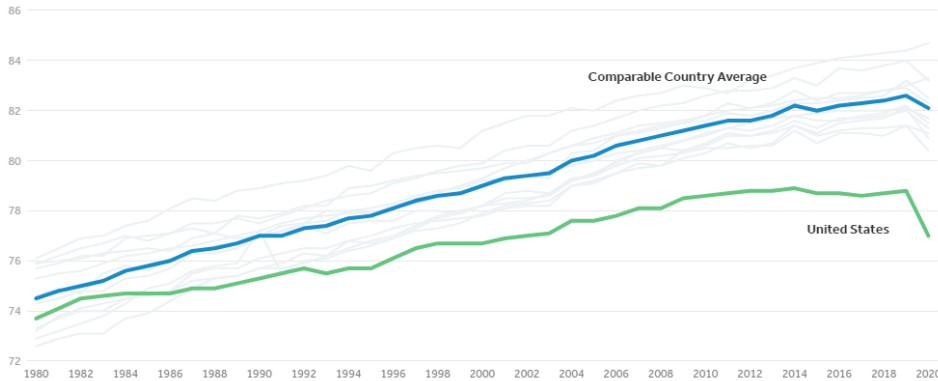
WHILE HEALTHCARE IS ONE OF THE PRIMARY THEMES OF THIS PROJECT; THE OTHER PRIMARY THEME IS THE INTEGRATION OF NATURE INTO THE BUILT ENVIRONMENT. AS MODERN LIFE HAS BECOME FURTHER AND FURTHER REMOVED FROM OUR NATURAL WORLD; THE REINTRODUCTION OF NATURE INTO THE HUMAN ENVIRONMENT HAS BECOME CRITICAL. AS PEOPLE ORIGINALLY CAME FROM THE NATURAL ENVIRONMENT IT IS ONLY RIGHT THAT WE SHOULD RETURN TO IT.

THE OVER INDUSTRIALIZATION AND DEVELOPMENT OF CITIES HAD LONG STIFLED THE DEVELOPMENT OF NATURAL SPACES. THIS WAS LARGELY UNTIL THE LIKES OF FREDERICK LAW OLMSTED STARTED TO INTEGRATE THE IMPORTANCE OF PARKS AND NATURAL SPACES INTO THE URBAN LANDSCAPE. THIS WAS IN THE MID 1800S WHERE HIS DESIGNS FOR URBAN PARKS STARTED TO TAKE HOLD. YET STILL TODAY'S MODERN CITIES ARE DESCRIBED AS CONCRETE JUNGLES. SEVERELY DISPLAYING THE BUILT ENVIRONMENT AND THE LACK OF THE NATURAL ENVIRONMENT. WHAT NATURAL ENVIRONMENT DOES EXIST IS CAREFULLY MANICURED BOUTIQUE PARKS; THAT OCCUPY AT MOST 15% OF THE TYPICAL URBAN LANDSCAPE. THE INTEGRATION OF THE NATURAL WORLD BACK INTO THE REALITY OF DESIGN WILL HELP RIGHT THIS WRONG. BRINGING PEOPLE BACK TO A HEALTHIER MORE NATURAL LIFE WHILE PROVIDING STEWARDSHIP FOR THE PROTECTION AND MAINTENANCE OF THE ENVIRONMENT.

Long-Term Health Outcomes

Life expectancy dropped sharply in 2020 within the U.S. and most comparable countries

Life expectancy at birth in years, 1980-2020



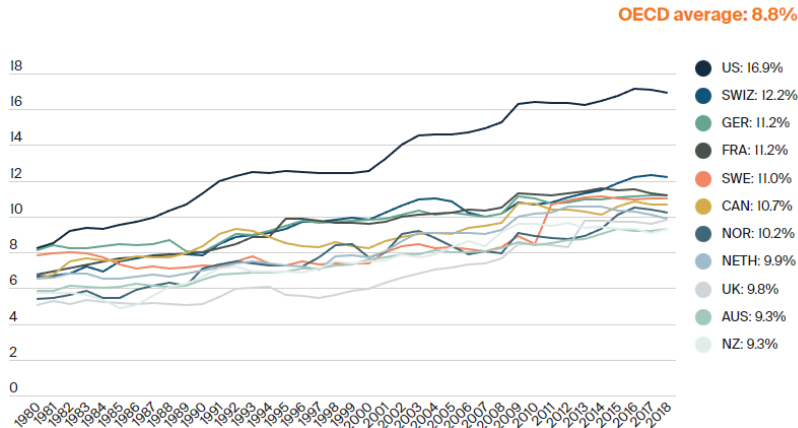
THE US'S LIFE EXPECTANCY IS LOWER THAN ALL COMPARABLE EUROPEAN/DEVELOPED NATIONS

WHILE THE US SPENDS MORE OUR HEALTHCARE SYSTEM IS NOTICEABLY WORSE THAN OUR COMPARABLE PEERS

SPENDING

The U.S. Spends More on Health Care Than Any Other Country

Percent (%) of GDP, adjusted for differences in cost of living
Legend shows 2018 data*



Treatment Outcomes

The U.S. ranks last in a measure of health care access and quality, indicating higher rates of amenable mortality than peer countries

Healthcare Quality and Access (HAQ) Index Rating, 2016



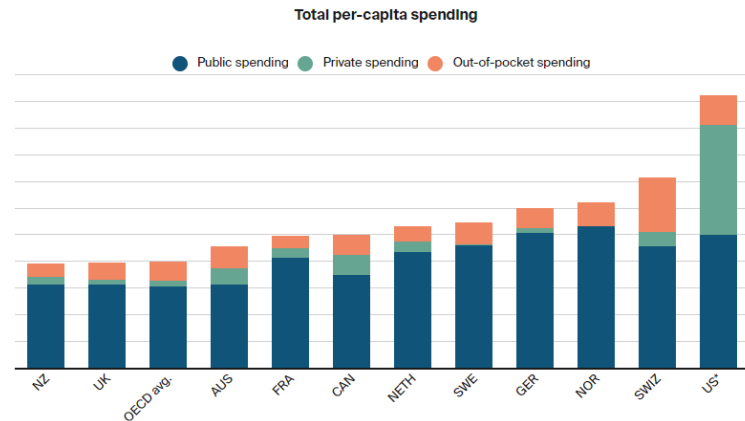
THE QUALITY OF AND ACCESS TO THE US HEALTHCARE SYSTEM RANKS LAST OUT OF COMPARABLE PEER NATIONS

THE US SPENDS COMPARABLE AMOUNTS OF PUBLIC FUNDS ON HEALTHCARE YET STILL HAS LARGE COST THAT ARE DUMPED ON THE PRIVATE CITIZENS

SPENDING

U.S. Public Spending Is Similar to Other Countries; Out-of-Pocket and Private Spending Are Higher Than Most

Dollars (US\$), adjusted for differences in cost of living

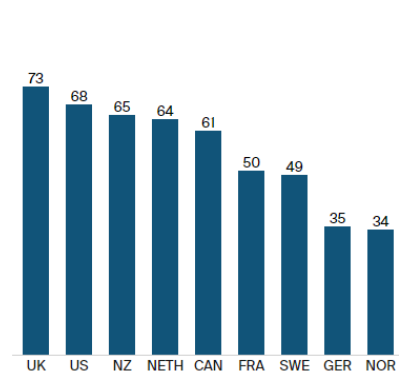


QUALITY AND CARE OUTCOMES

The U.S. Excels in Prevention Measures, Including Flu Vaccinations and Breast Cancer Screenings

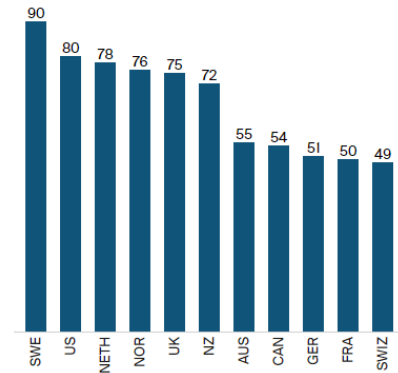
Percent of adults age 65 and older immunized (%)

OECD average: 44%



Percent of females ages 50–69 screened (%)

OECD average: 60%



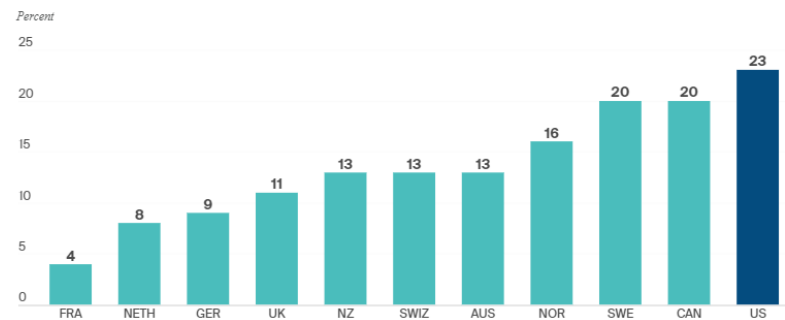
WHILE THE US MIGHT HAVE WORSE STATISTICS FOR CERTAIN ASPECTS OF HEALTHCARE THE COUNTRY EXCELS IN PREVENTATIVE MEASURES

THE US REPORTS MORE CASES OF MENTAL HEALTH ILLNESSES THAN ALL OTHER PEER DEVELOPED NATION

MENTAL HEALTH BURDEN

More U.S. adults have received mental health diagnoses than adults in other high-income countries.

Depression, Anxiety, or Other Mental Health Diagnoses Among Adults, 2016

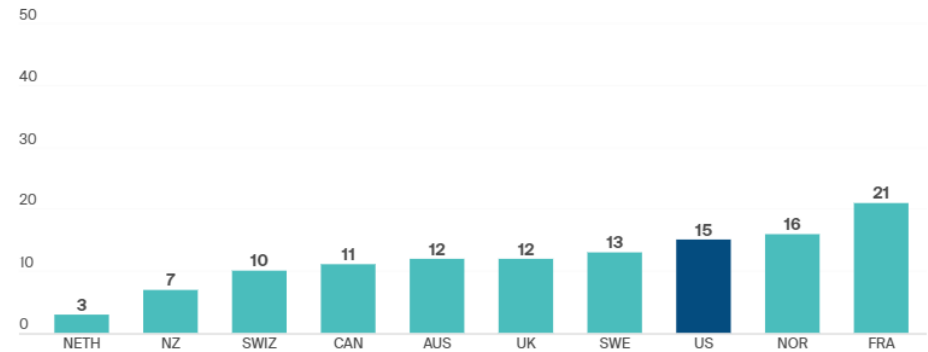


ACCESS AND AFFORDABILITY

One in six U.S. adults is unable to get or afford professional help when experiencing emotional distress.

Unable to Get or Afford Needed Mental Health Care, 2016

Percent who had experienced emotional distress



THE US REPORTS LARGER AMOUNTS CITIZENS BEING UNABLE TO AFFORD OR ACCESS MENTAL HEALTH PROVIDERS

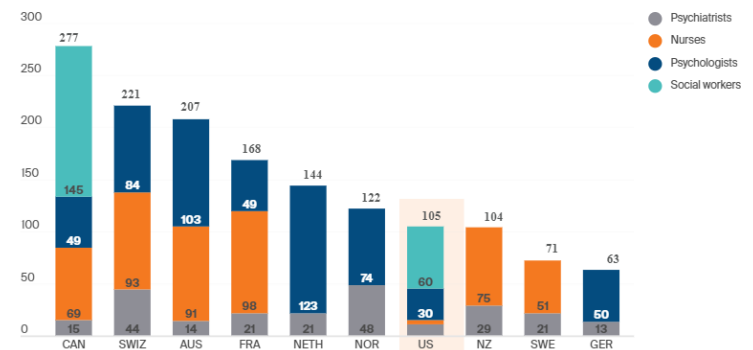
THE US HAS LOWER AMOUNTS OF MENTAL HEALTH WORKERS COMPARED TO PEER NATIONS WITH SEVERAL PEER NATIONS ALMOST DOUBLING THE US'S PROVISIONS

CAPACITY

The U.S. has a relatively low workforce capacity to meet mental health needs.

Mental Health Workforce Supply, 2017

Number of professionals working in the mental health sector, per 100,000 population



ARCHITECTURAL THEMES

HEALTHCARE ARCHITECTURE/DESIGN:

THE DESIGN AND CONSTRUCTION OF BUILDINGS AND FACILITIES THAT CONSTITUTE THE PROGRAM OF HEALTHCARE. THESE INCLUDE HOSPITALS, URGENT CARE CLINICS, PSYCHIATRIC WARDS, ETC. THESE FACILITIES HAVE FOCUSES ON SAFETY, EFFICIENCY, HEALTH OUTCOMES, ETC. IN THAT THEY ARE THE PRIMARY DESIRED OUTCOMES OF THE PROJECT.

BIOPHILIC ARCHITECTURE/DESIGN:

BIOPHILIC DESIGN SEEKS TO CONNECT THE BASIC HUMAN NEED TO INTERACT WITH NATURE INTO THE MODERN BUILT ENVIRONMENT. BIOPHILIC DESIGN IS MORE THAN JUST ADDING GREEN WALLS AND ROOFS TO ARCHITECTURE. ITS DESIGNING AN INTEGRATED BUILT AND NATURAL ENVIRONMENT THAT BENEFIT PEOPLE IN TERMS OF HEALTH AND PRODUCTIVITY.

SUSTAINABLE ARCHITECTURE/DESIGN:

SUSTAINABLE ARCHITECTURE SEEKS TO REDUCE THE IMPACT OF THE BUILT ENVIRONMENT ON THE NATURAL WORLD. SUCH AS REDUCING CARBON EMISSIONS, ENERGY CONSUMPTION, USING GREEN BUILDING MATERIALS, ETC. THIS FOCUS IS MEANT TO REDUCE THE IMPACT OF THE BUILDING SECTOR AS IT IS CURRENTLY ONE OF IF NOT THE LARGEST CONTRIBUTOR TO GLOBAL POLLUTION LEVELS.

SOCIAL RESPONSIBILITY:

SOCIAL RESPONSIBILITY IS NOT NECESSARILY ARCHITECTURAL IN NATURE YET, ARCHITECTURE CAN FACILITATE SOCIAL RESPONSIBILITY. THIS CAN BE DONE THROUGH DEVELOPMENT OF AFFORDABLE HOUSING, PRO BONO WORK, SUSTAINABLE DESIGN, ETC. IN THIS PROJECT THE AIM FOR SOCIAL RESPONSIBILITY WOULD BE TO DESIGN AN AFFORDABLE HEALTHCARE FACILITY FOR AN UNDER-SERVED COMMUNITY. ALL WHILE AIMING TO PROVIDE OTHER SPACES THAT WOULD STAND TO BENEFIT THE COMMUNITY AS WELL.

URBAN ENVIRONMENT

THE LIKELY LOCATION OF THIS TYPE OF PROJECT; THE URBAN ENVIRONMENT IS TYPICALLY SEEN AS A DENSELY POPULATED AND LARGELY DIVERSE LOCATION THAT HOUSES A RANGE OF PROGRAMMATIC USES, SUCH AS HOUSING, CIVIC, ECONOMIC, ETC. THE URBAN ENVIRONMENT TYPICALLY LACKS IN NATURAL ELEMENTS. THOSE THAT DO EXIST ARE URBAN PARKS THAT ARE THE PRIMARY METHOD EXPRESSING THE NATURAL WORLD WITHIN THE BUILT HUMAN ENVIRONMENT. THESE PARKS ARE ACTUALLY SOME OF THE MOST IMPORTANT UTILIZED PROGRAMS WITHIN THE BUILT ENVIRONMENT.

THESIS STATEMENT

DEVELOP A HEALTHCARE FACILITY THAT IS A GENERAL CARE FACILITY WITH A SPECIALIZED WING OR ADDITION FOR MENTAL HEALTHCARE. THE FACILITY WILL HAVE COMPOSITIONAL AND FUNCTIONAL FOCUSES ON SUSTAINABILITY AND BIOPHILIA. THIS FACILITY WOULD EXPRESS IDEAS OF IMMERSING HEALTHCARE WITHIN THE NATURAL ENVIRONMENT. UTILIZING NATURAL ELEMENTS SUCH AS NATURAL LIGHTING, HEALING GARDENS, ETC. TO FACILITATE HEALING. THE FOCUS ON SUSTAINABILITY IS TO ENCOURAGE THE GROWTH AND DEVELOPMENT OF SUSTAINABLE HEALTHCARE FACILITIES THROUGHOUT THE WORLD.

THIS FACILITY IS MEANT TO SERVICE RURAL AREAS THAT HAVE EITHER LIMITED ACCESS TO HEALTHCARE OR LIMITED ACCESS TO SPECIALIZED FORMS OF HEALTHCARE. THESE UNDER-SERVED COMMUNITIES WOULD BENEFIT GREATLY FROM THE DEVELOPMENT OF FACILITIES SUCH AS THESE. THESE FACILITIES WOULD NOT BE LARGE SCALE HOSPITALS FOR SERVING ALL MEDICAL NEEDS RATHER SMALL TO MEDIUM SCALE CLINICS THAT WOULD BE ABLE TO SERVICE ROUGHLY 200 PEOPLE PER DAY. THESE TYPES OF FACILITIES WOULD HELP NOT ONLY THEIR LOCAL COMMUNITIES BUT HAVE THE POTENTIAL TO HELP OTHER NEARBY UNDER-SERVED COMMUNITIES AND REDUCE THE STRESS LOAD ON THE CURRENT MEDICAL SYSTEMS IN PLACE.

PROGRAM

6.

LOBBY:

THE ENTRANCE TO THE BUILDING. A PRIMARY LOCATION OF MEETING BETWEEN THE PUBLIC AND THE STAFF OF THE BUILDING. THIS IS POTENTIALLY A LONG TERM OCCUPATION SPACE FOR THE PUBLIC BUT IS A LONG TERM SPACE FOR STAFF

OUT-PATIENT SPACES:

SPACES FOR THOSE WHO RECEIVE TREATMENT WITHOUT BEING ADMITTED TO A HOSPITAL. STILL LONG TERM BUT IN TERMS OF HOURS RATHER THAN DAYS.

NURSES STATIONS/OFFICES:

LOCATIONS FOR THE STAFF OF THE FACILITY TO CONDUCT PRIVATE WORK ONE OF THE PRIMARY LOCATIONS FOR USE OF STAFF. LONG-TERM USE OF THESE SPACES IS COMMON AND THIS WILL BE A SPACE OF COLLABORATION AND COMMUNICATION.

STORAGE:

NECESSARY SPACE FOR CONTROL AND STORAGE OF ALL MANNER OF THINGS BUT ESPECIALLY SENSITIVE DOCUMENTS PERTAINING TO PATIENT RECORDS

HEALING GARDENS:

A PROGRAMMATIC SPACE THAT IS A GARDEN CURATED TO HAVE SPECIFIC PLANTS THAT WILL ASSIST IN THE HEALING PROCESS FOR PATIENTS. THESE LOCATIONS WILL BE USED EITHER LONG OR SHORT TERM BY BOTH PATIENTS AND STAFF AS THEY ARE MEANT TO BE A MAIN PROGRAMMATIC SPACE WITHIN THE BUILDING. HEALING GARDENS WOULD BE RELATED TO IN-PATIENT, OUT-PATIENT, THE LOBBY, AND NURSE STATIONS/OFFICES.

CORE:

THE LOCATION OF BATHROOMS, ELEVATORS, STAIRS, ETC. WOULD BE LOCATED IN RELATION TO PRIMARY PROGRAMMATIC ELEMENTS AS THIS IS A SUPPORTING ELEMENT.

OPERATING ROOM:

DEPENDANT ON THE TYPE OF FACILITY IF NECESSARY

IN-PATIENT SPACES:

THESE ARE SPACES FOR LONG-TERM OCCUPATION BY PATIENTS. OCCUPATION LASTING FOR DAYS AT A TIME.

PATIENT ROOMS:

THE PRIMARY TREATMENT SPACES FOR THE PATRONS OF THE FACILITY. THESE ROOMS CAN BE DAY ROOMS, OVERNIGHT ROOMS, SINGLE OR MULTI-PATIENT, ETC. THESE WILL BE OCCUPIED LONG TERM BY BOTH PATIENTS AND STAFF MOST LIKELY.

CLINIC:

LOCATION OF TREATMENT SPACES FOR THOSE THERE FOR PSYCHIATRIC CONCERNS.

PROGRAM

Program Type	# of Rooms	# of Occupants per room	# of Occupants	Total Square Footage(sqft)	sqft per room
Community Clinic					
Lobby/Reception	1	100	100	500	500sqft
Patient/Exam Rooms	15	2	30	2250	150sqft
Nurses Work Station/s	15	1	15	1500	100sqft
Offices	15	1	15	2250	150sqft
Meeting Rooms	3	10	30	600	200sqft
Staff Lounge	1	40	40	600	600sqft
Gardens/Active Spaces				exterior unused sqft	
Imaging Room	1	2	2	150	150sqft
Storage(Documents)	1	1	1	200	200sqft
Storage(Medication)	1	1	1	200	200sqft
Laundry Room	1	1	1	200	200sqft
Room For Additonal Program Based on Additional Desires					
Mental Health Clinic					
Lobby/Reception	1	50	50	250	250sqft
Session Rooms/offices	10	2	20	1500	150sqft
Group Session Rooms	2	10	20	400	200sqft
Staff Lounge	1	15	15	225	225sqft
Storage(Documents)	1	1	1	200	200sqft
Patient Rooms					
- Short Term Observation	10	1~2	20	1500	150sqft
- Long Term Observation	20	1~2	40	3000	150sqft
				Total sqft	
				15525	
				Target SqFt	
				20000	

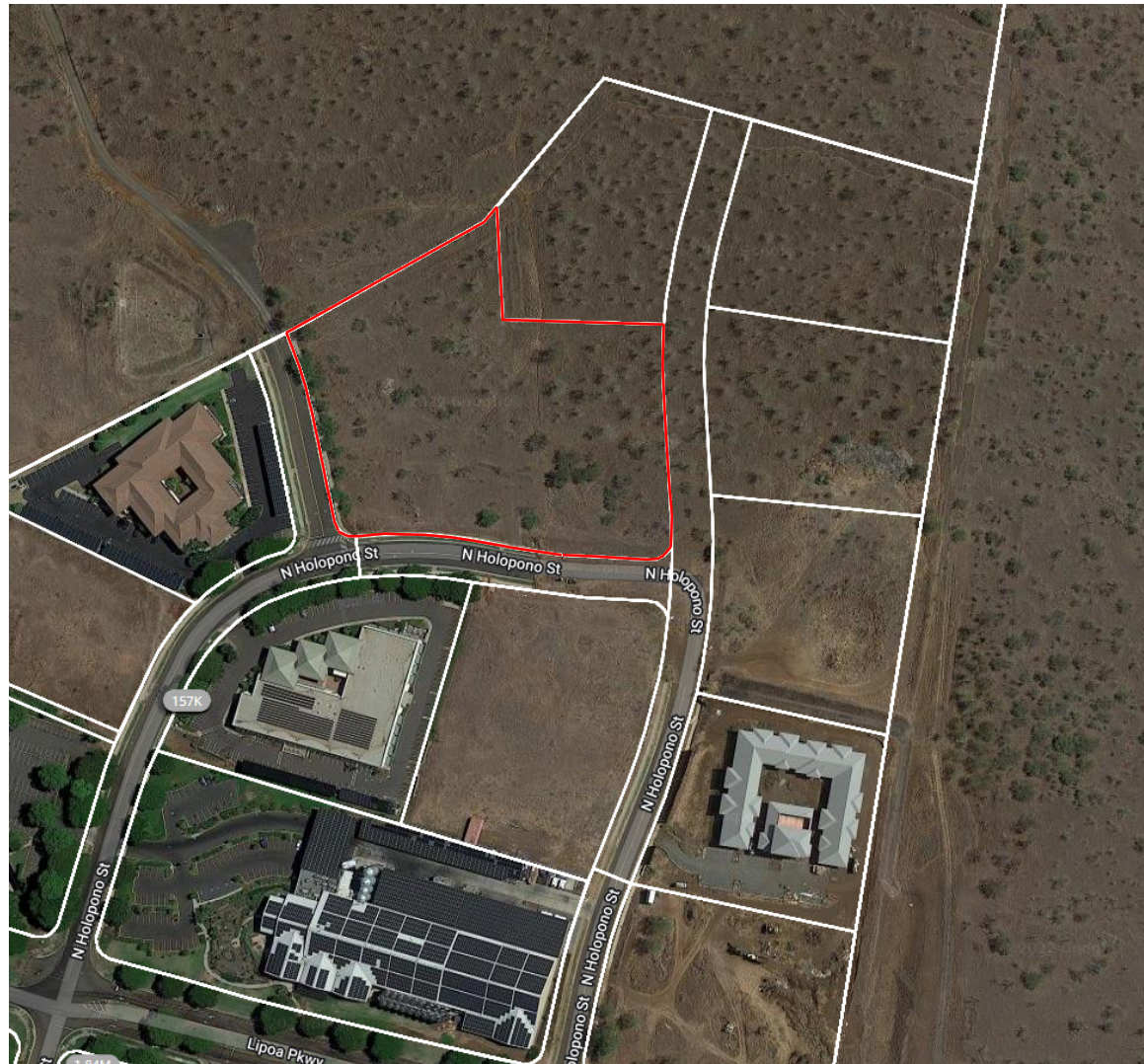
SITE INFORMATION

LOCATION: KIHEI MAUI, HAWAII

SIZE: 182,340 FT2

ZONING CODE: MRTP MAUI RESEARCH AND TECHNOLOGY PARK DISTRICT

ADJACENT ZONING CODES: R-1 RESIDENTIAL AND PK(GC) PARK GOLF COURSE AG AGRICULTURE

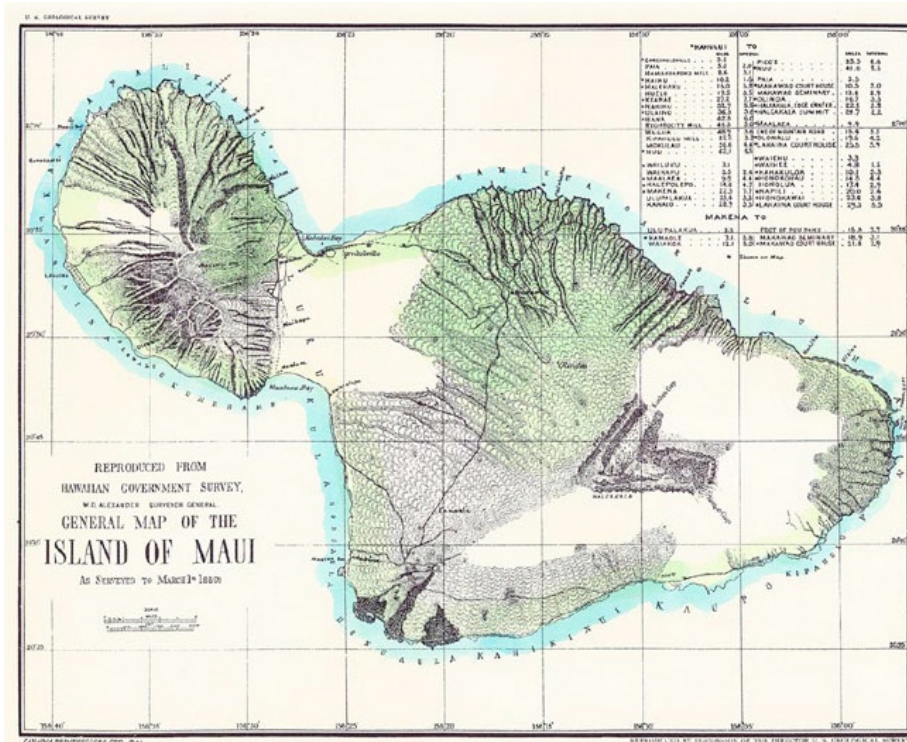


SITE INFORMATION

KIHEI HAWAII IS LOCATED ON THE ISLAND OF MAUI WHICH IS JUST A LITTLE NORTH WEST OF THE BIG ISLAND OF HAWAII. THE STATE OF HAWAII IS A CHAIN OF ISLANDS THAT CONSISTS OF: O'AHU, HAWAII, MAUI, KAUAI, MOLOKAI, LANAI, NIHAU, AND KAHOLAWE. THESE ISLANDS WERE INITIALLY SETTLED BY POLYNESIANS FROM ISLANDS SUCH AS TAHITI, THE SAMOAN ISLANDS, AND THE MARQUESAS ISLANDS. THESE PEOPLE WERE A SEA FARING CULTURE THAT SAILED THE PACIFIC OCEAN IN SEARCH OF OTHER ISLANDS TO SETTLE. THESE SETTLERS TOOK THEIR CULTURE AND BELIEFS TO THESE ISLANDS. SETTLEMENT STARTED ON THE LARGEST OF THE ISLANDS AS IT IS THE SOUTHERN MOST AND THEN SPREAD FROM THERE TO THE OTHER NORTHERN ISLANDS. WHILE HAWAII IS CURRENTLY SEEN AS A LARGE TOURIST DESTINATION HAWAII HAS A HISTORY OF BEING A LARGE AGRICULTURAL PRODUCER.



HAWAII HAS HISTORICALLY PRODUCED LARGE AMOUNTS OF AGRICULTURAL PRODUCTS. SUCH AS SUGAR CANE AND PINEAPPLES. HOWEVER, WHEN CHEAPER LABOR IN THE CARIBBEAN BECAME MORE ACCESSIBLE HAWAII LOST A LOT OF ITS PROMINENCE AS AN AGRICULTURAL PRODUCER. HAWAII IS NOW PRIMARILY A TOURIST DESTINATION THAT SEES ROUGHLY 10 MILLION PEOPLE VISIT EACH YEAR. THE ISLANDS WHILE ALL RELATIVELY CLOSE TOGETHER PRACTICALLY REQUIRE FLIGHTS TO GET BETWEEN THEM WITHIN A REASONABLE TIME FRAME AS A FLIGHT FROM THE FURTHEST AIRPORT ON HAWAII TO THE FURTHEST ISLAND IS TWO HOURS LONG. THIS REMOTENESS IS ONE OF THE PRIMARY REASONS AS TO WHY I CHOSE MY SITE. AS WHILE HAWAII HAS QUALITY MEDICAL CARE THAT MAJORITY OF SPECIALIZED AND QUALITY CARE IS LARGELY FOCUSED ON O'AHU THE ISLAND THAT CONTAINS HONOLULU. MOST ISLANDS HAVE SEVERAL HOSPITALS BUT LARGE QUANTITIES OF THE ISLANDS POPULATIONS WILL HAVE TO DRIVE UPWARDS OF AN HOUR TO AND HOUR AND HALF JUST TO REACH ONE.

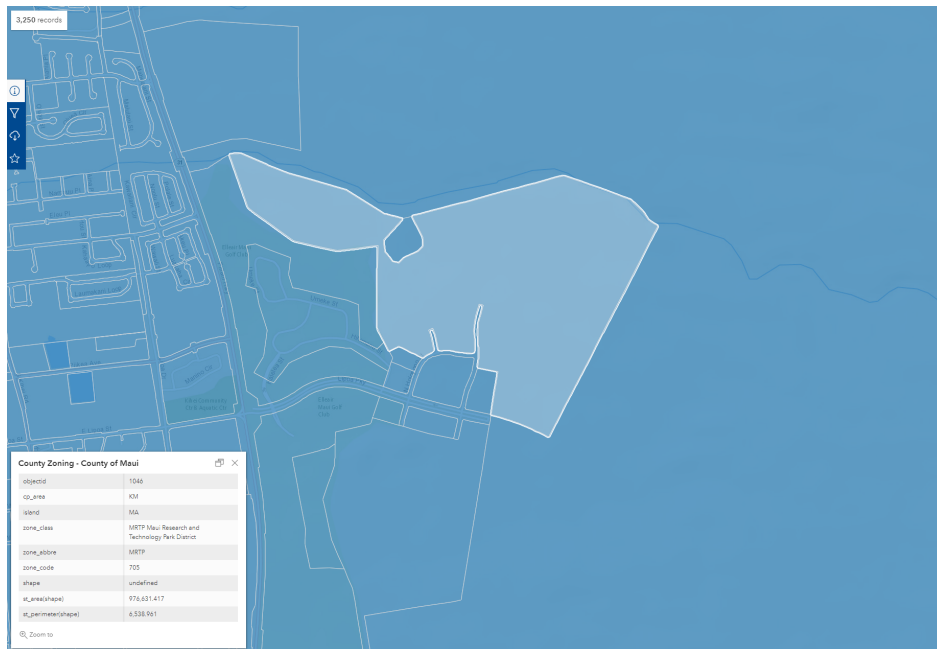


SITE INFORMATION

MAUI ITSELF WAS SETTLED BY THE ORIGINAL HAWAIIANS SOME TIME SHORTLY AFTER ORIGINAL ARRIVAL. THE AREA OF KIHEI DESPITE NOW BEING A POPULAR TOURIST DESTINATION WAS ORIGINALLY INHABITED BY MOST FISHERMAN AND A FEW OTHER LOCALS WHO SURVIVED OFF THE WATER. DURING THE SECOND WORLD WAR THE HAWAIIAN ISLANDS SAW A SURGE IN RESIDENCY AS A STATIONING AREA FOR US TROOPS GOING OFF TO FIGHT IN THE PACIFIC. THE AREA OF KIHEI WAS USED AS A TRAINING GROUND FOR SOLDIERS DURING THE PERIOD. BUT AFTER THE WAR LITTLE GROWTH WAS SEEN FOR KIHEI. IN ORDER TO DRAW INTEREST IN THE AREA THE LOCAL GOVERNMENT STARTED SELLING 11 OCEAN FRONT PLOTS OF WHICH ONLY SIX WERE BOUGHT. THUS THE DEVELOPMENT OF KIHEI DIDN'T PICK UP UNTIL INTEREST IN TOURISM TOOK OFF IN THE 1970S.



IN THE 1970S TOURISM STARTED TO BECOME A PROMINENT ASPECT OF KIHEI'S DEVELOPMENT. WITH SUBSTANTIAL GROWTH AND DEVELOPMENT BEING FUELED BY INTEREST IN THE AVAILABILITY OF CHEAP LAND AND CHEAP ENTERTAINMENT. KIHEI NOW BOASTS A VIBRANT HOSPITALITY INDUSTRY AND HAS BEEN EXPANDING ITSELF INTO EVEN MORE ECONOMIC SECTORS SUCH AS RESEARCH. MY SITE IS LOCATED IN THE MAUI RESEARCH & TECHNOLOGY PARK. THIS AREA IS HOME TO SOME OF MAUI'S GROWING TECH START UPS AS WELL AS A LOCAL BREWERY, A DERMATOLOGISTS OFFICE, AN EYE CLINIC, ETC. THIS IS WHY I CHOSE MY SITE AS A LOCATION WITH PRE-EXISTING AND VARIABLE PROGRAMMATIC USES IT IS NOT HARD TO SEE A HEALTH CLINIC BEING AN ACCEPTABLE LAND USE. THIS LAND IS ALSO JUST OUTSIDE OF THE MOST DEVELOPED PARTS OF THE TOWN OFF OF ONE OF THE MORE PROMINENT HIGHWAYS ON THE SOUTH SIDE OF MAUI.



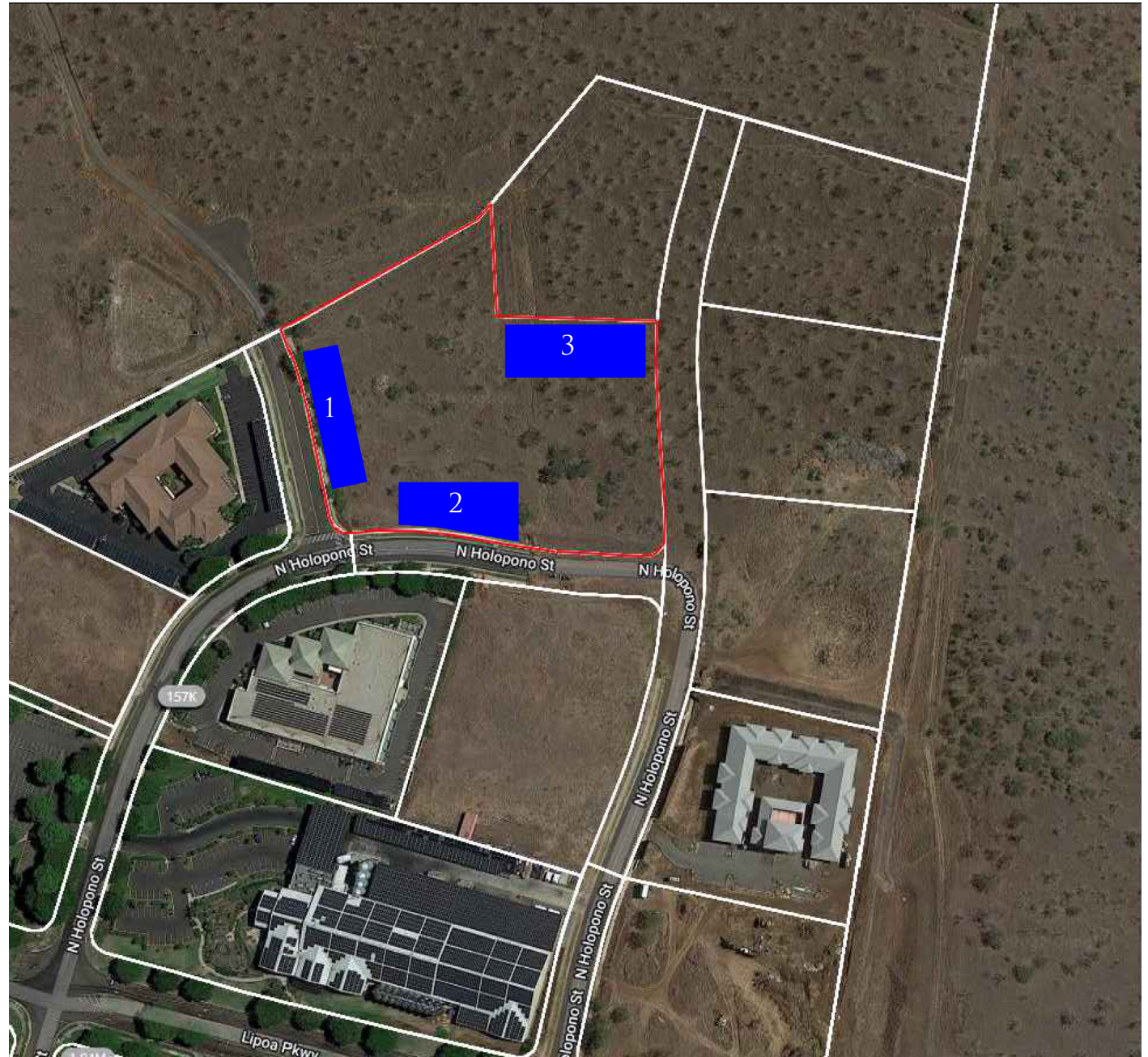
SITE STRATEGIES

1. ADMINISTRATION AND
OUTPATIENT

2. INPATIENT AND TREAT-
MENT

3. PSYCHIATRIC CENTER

THIS STRATEGY FOCUSES LARGELY ON HAVING MULTIPLE ROUTES OF ACCESS INTO THE INTERNAL GROUNDS OF THE PROJECT. WITH THE SEPARATE PROGRAMS BEING CONTAINED WITHIN THEIR OWN SEPARATE BUILDINGS THE COMMON SPACES PROVIDED IN-BETWEEN WOULD BECOME THE AREA FOR GARDENS AND NATURAL INTERACTION. CONTROLLING ACCESS TO THE SITE THROUGH THE PRIMARY MEANS OF ENTRY ALLOWS FOR THE CREATION OF MORE PRIVATE INTIMATE SPACES IN-BETWEEN THE BUILDINGS. THE POSITIONING OF BUILDING 3 CAN ALSO BE ADJUSTED TO CREATE AN EVEN MORE ISOLATED PRIVATE AREA FOR THOSE WHO ARE THERE FOR THAT PROGRAMMATIC USE.



SITE STRATEGIES

1. ADMINISTRATION AND OUTPATIENT

2. INPATIENT AND TREATMENT

3. PSYCH CLINIC

THE STEPPED MOTION OF PLACEMENT WITHIN THIS STRATEGY IS TO IMPLY PRIVACY. AS THE LEVEL OF INTERACTION WITH THE GENERAL PUBLIC IS MEANT TO DIMINISH AS THE BUILDINGS STEP BACK. A MORE PUBLIC GARDEN WOULD BE STREET SIDE AND A MORE PRIVATE GARDEN WOULD BE HOUSED TOWARDS THE INTERNAL SIDE OF THE SITE. SITE ACCESS IS MORE READILY AVAILABLE AS ENTRANCE TO THE SITE FROM THE STREET AT MOST ANY POINT WOULD BE POSSIBLE.



PRECEDENTS

REHAB BASEL

LOCATION: BASEL, SWITZERLAND

ARCHITECTS: HERZOG AND DE MEURON
LANDSCAPE ARCHITECTS: AUGUST KÜNZEL

PROGRAM: BRAIN AND SPINAL CORD INJURY REHAB CENTER

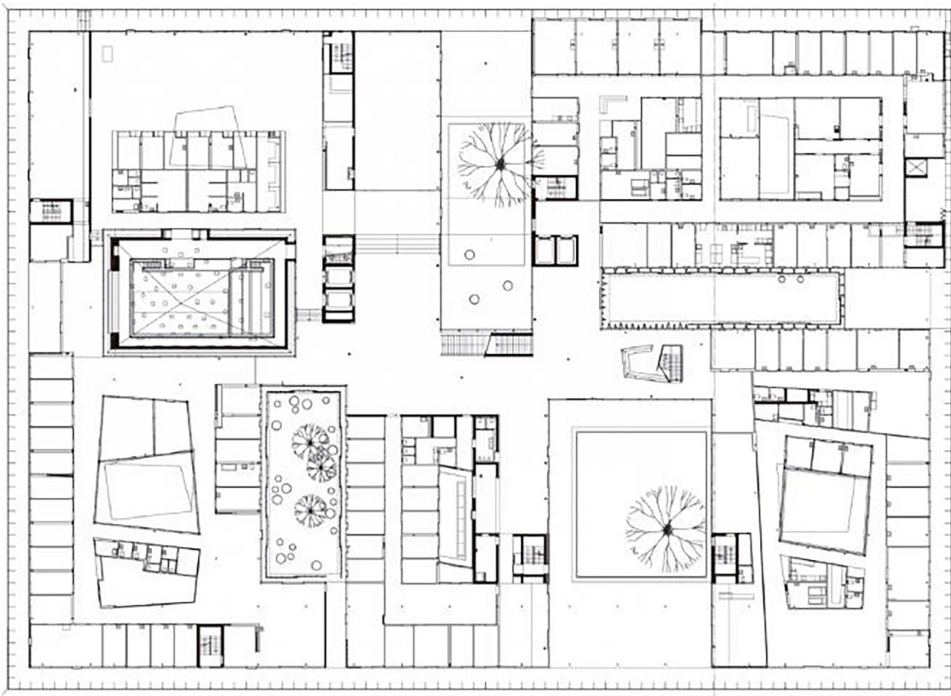
OPENED: 09, 2002

SIZE: 9,500 M2 - 102,258 FT2

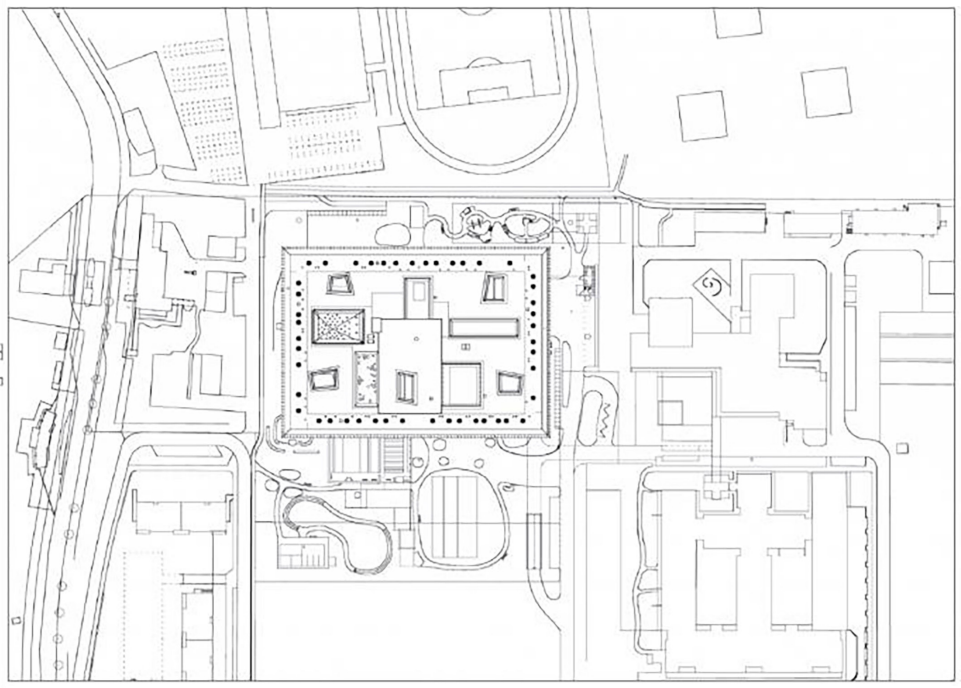
ARCHITECTURAL INTENTIONS:

- MAKE A REHAB CENTER THAT DID NOT FEEL LIKE A TYPICAL HOSPITAL OR CARE FACILITY
- THE PRIMARY CONCERN IS WITH THE CONNECTION BETWEEN INSIDE AND OUTSIDE
- CREATE SMALL PLAZAS AND COMMUNITIES WITHIN THE SPACE TO CREATE A CITY WITHIN A CITY
- SMALL INTIMATE HOUSES AS PATIENT ROOMS

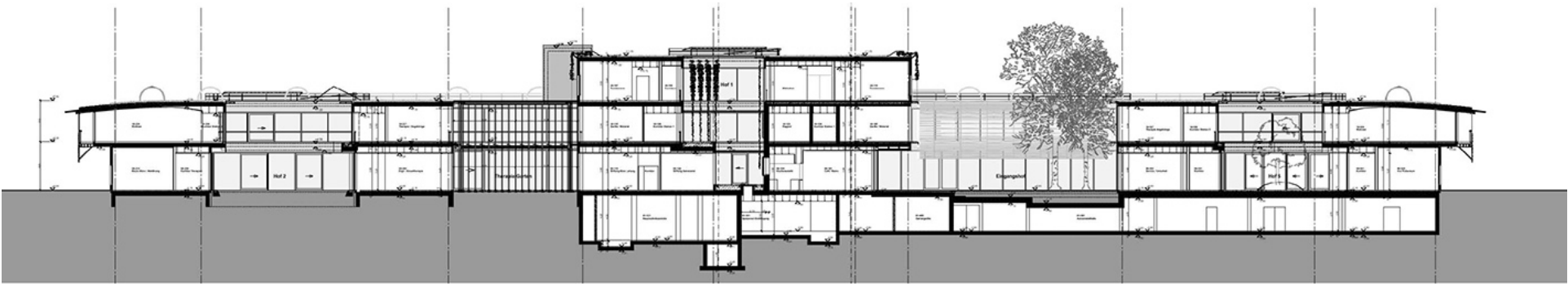
REHAB BASEL IS A PREMIER SPINAL CORD AND BRAIN INJURY CARE FACILITY. PROVIDING THIS SPECIALTY NEED TO THE RESIDENTS OF BASEL AND NEIGHBORING PROVINCES WITHIN GERMANY, FRANCE, AND SWITZERLAND. THIS FACILITY HEAVILY FOCUSES ON THE QUALITY OF CARE THAT PATIENTS RECEIVE AND THE ROAD TO RECOVERY THAT THESE PATIENTS TRAVEL. THIS ROAD TO RECOVERY HEAVILY INVOLVES BEING EXPOSED TO THE OUTDOORS AND THE NATURAL WORLD. THE FACILITY IS ONE LARGE BUILDING WITH A SPRAWLING SET OF LANDSCAPED GARDENS SURROUNDING IT; ALL WHILE CONTAINING WITHIN THE BUILDING SEVERAL DIFFERENT COURTYARDS AND BALCONIES THAT HAVE AVAILABLE EXPOSURE TO THE SURROUNDING GARDENS AND PATHS.



FIRST FLOOR PLAN



SITE PLAN



SECTION



PRECEDENTS

KRONSTAD PSYCHIATRIC HOSPITAL:

LOCATION: BERGEN, NORWAY

ARCHITECTS: ORIGO ARKITEKTGRUPPE

LANDSCAPE ARCHITECTS: SMEDSVIG LANDSKAPSARKITEKTER

PROGRAMS: MENTAL HEALTH CENTER

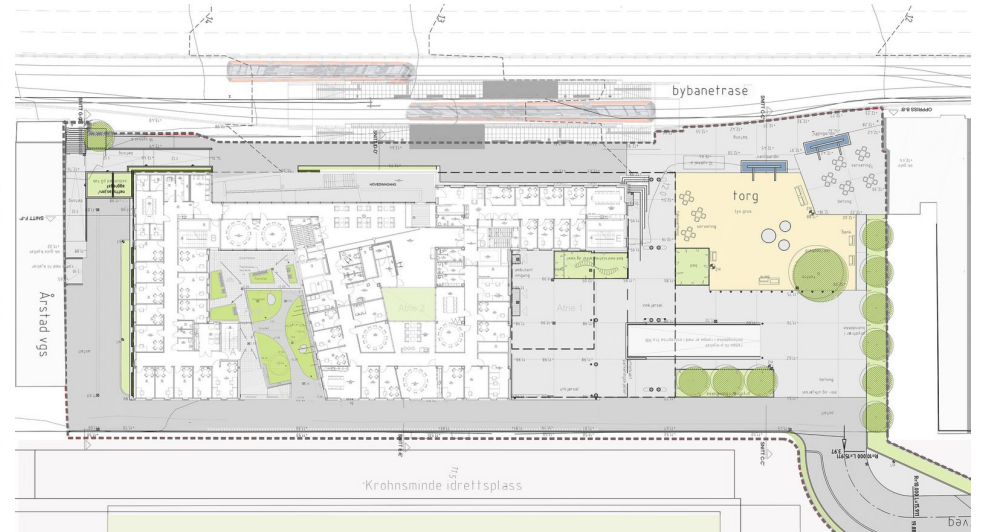
OPENED: 08, 2013

SIZE: 12500 M2 - 134548.88 FT2

ARCHITECTURAL INTENTIONS:

- THE PRIMARY CONCERN IS WITH THE CONNECTION BETWEEN INSIDE AND OUTSIDE
- VISIBILITY THROUGH THE CITY AND THE TRANSPARENCY OF MENTAL HEALTH ISSUES IN THE COUNTRY
- SAFETY OF STAFF WHILE PROVIDING A SENSE OF SECURITY FOR PATIENTS

THE KRONSTAD PSYCHIATRIC HOSPITAL IS LOCATED IN THE HEART OF BERGEN ONE OF THE LARGEST CITIES WITHIN NORWAY. A KEY ASPECT OF THE KRONSTAD FACILITY WAS THE APPEARANCE OF TRANSPARENCY YET THE RETENTION PRIVACY. BY HAVING MULTIPLE DIFFERENT AVENUES INTO THE BUILDING THAT ARE LARGELY OPEN AT STREET LEVEL. THE REMAINDER OF THE PSYCHIATRIC PROGRAM IS WITHIN THE UPPER LEVELS OF THE BUILDING ALLOWING FOR A SENSE OF PRIVACY THAT IS HEAVILY DESIRED WITHIN PSYCHIATRIC CARE. THE UPPER LEVELS ALSO CONTAIN PRIVATE ATRIA AND COURTYARDS IN ORDER TO SERVE THE PATIENTS WITH EXPOSURE TO THE OUTSIDE.

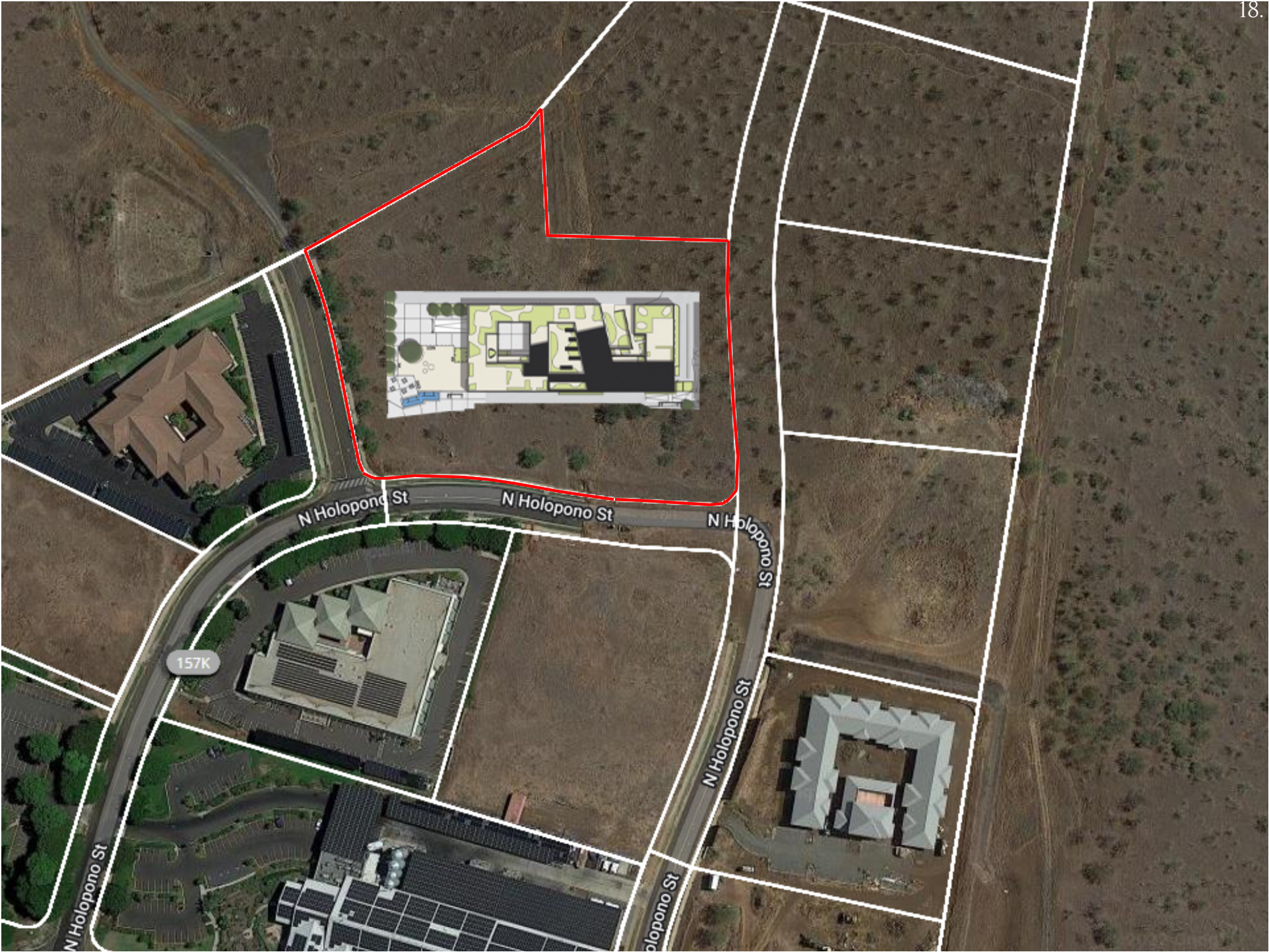


FIRST FLOOR PLAN

SITE PLAN



LONG SECTION



PRECEDENTS

HEALTHCARE FACILITY JOSEFHOF:

LOCATION: GRAZ, AUSTRIA

ARCHITECTS: DIETGER WISSOUNIG ARCHITEKTEN

PROGRAMS: HEALTHCARE FACILITY

OPENED: 09/2019

SIZE: 13500 M2 - 145312.79 FT2

ARCHITECTURAL INTENTIONS:

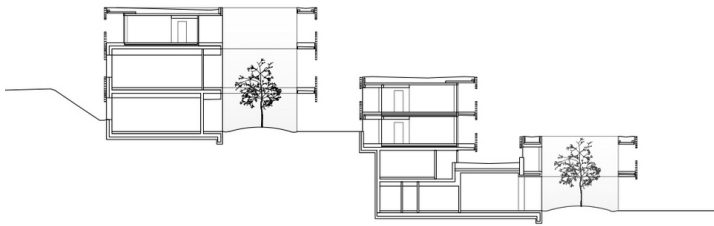
- BLEND THE BUILDING INTO THE LANDSCAPE
- ENERGETIC SUSTAINABILITY THROUGH FACADE AND CARBON-NEUTRAL ELEMENTS
- THE ATMOSPHERE IN THE ROOMS IS DOMINATED BY NATURAL MATERIALS AND UNDERLINES THE MISSION OF THE FACILITY AS A HEALTH CENTER.

HEALTHCARE FACILITY JOSEFHOF IS A BUILDING THAT CONSISTS OF 3 PRIMARY GEOMETRIES LINKED BY COVERED PATHS AND HALLWAYS. IN-BETWEEN THESE LINKS IS SMALL GREEN SPACES THAT ARE COMPLIMENTARY TO THE COURTYARDS CREATED WITHIN THE BUILDING. LOCATED OUTSIDE OF THE CITY OF GRAZ; JOSEFHOF IS IN PART OF A HEALTHCARE COMPLEX THAT IS SURROUNDED BY A NATURAL LANDSCAPE. JOSEFHOF AIMS TO INTEGRATE ITSELF INTO THE NATURAL ENVIRONMENT. JOSEFHOF ALSO AIMS TO BE LARGELY SUSTAINABLE USING MATERIALS SUCH AS TIMBER TO REDUCE THE CARBON FOOTPRINT OF THE BUILDING. A LARGE PORTION OF THE BUILDING WAS MADE OF MODULAR TIMBER UNITS SO AS TO SPEED UP CONSTRUCTION AND STANDARDIZE THE BUILDING.

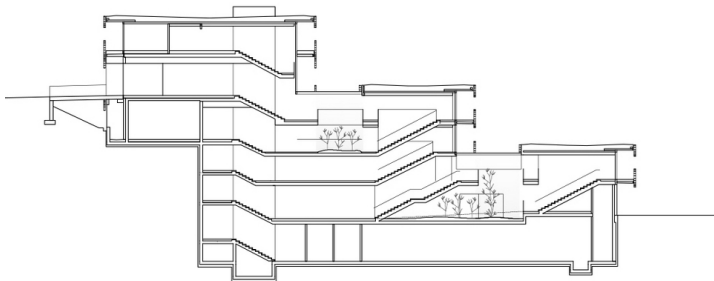


Ebene -2/3
1:750

2ND & 3RD FLOOR PLAN



SHORT SECTIONS

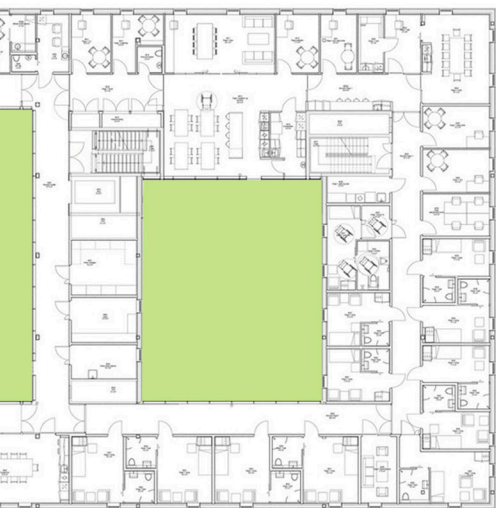


SITE PLAN





THIS DIAGRAM IS SPECIFICALLY DISPLAYING THE INTEGRATION OF COURTYARDS INTO THE PHYSICAL BUILDING. EACH OF THESE PRECEDENTS UTILIZE THEIR COURTYARDS IN DIFFERENT MANNERS BUT INSPIRATION AND INFORMATION CAN BE GLEANED FROM THEIR POSITIONING AND SIZE. SMALLER COURTYARDS SEEM TO BE MORE PRIVATE AND FULLY CONTAINED WHEREAS LARGER COURTYARDS TEND TO SEEM MORE PUBLIC.

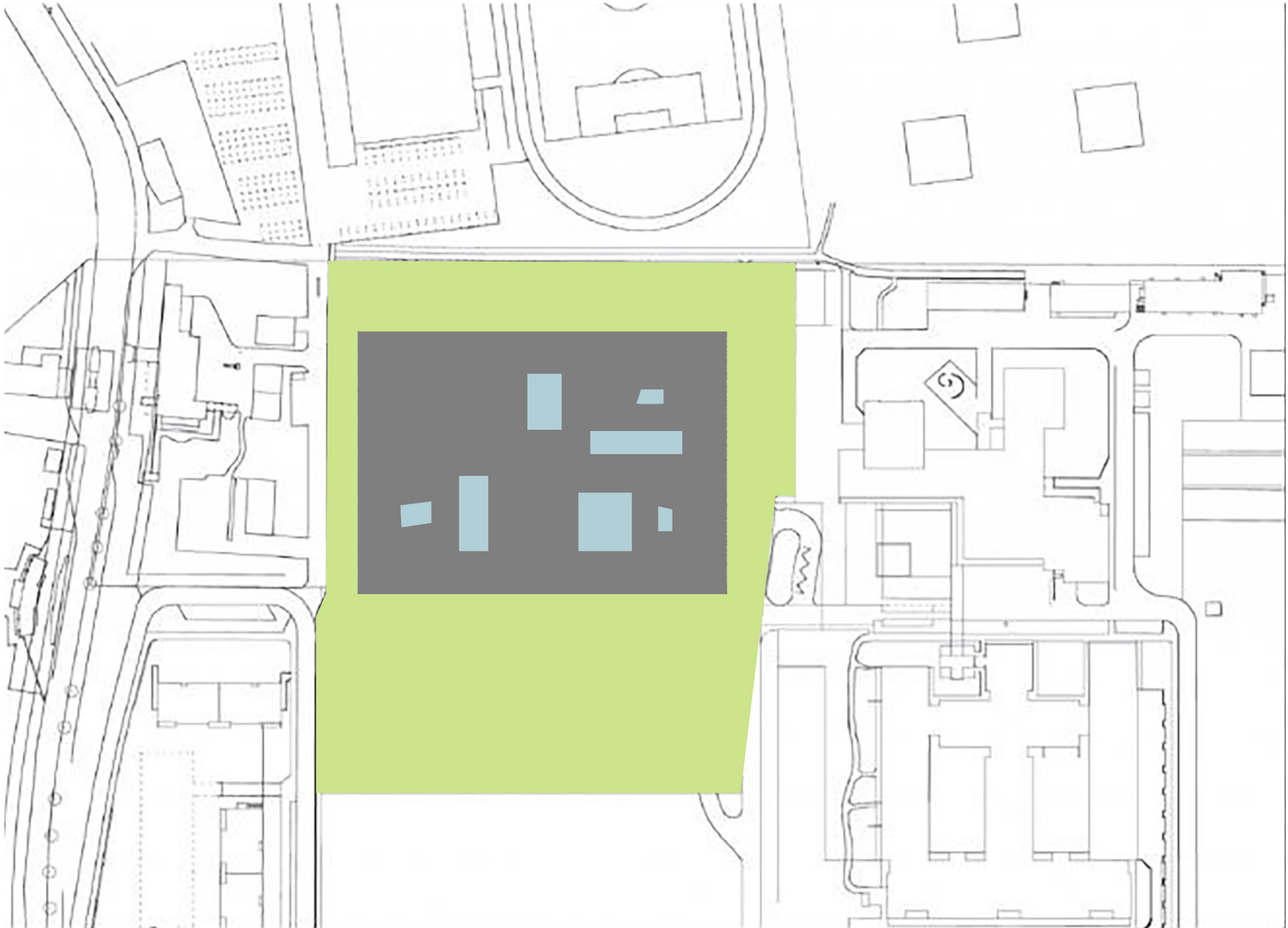


BUILT CONDITION VS. NATURAL CONDITION

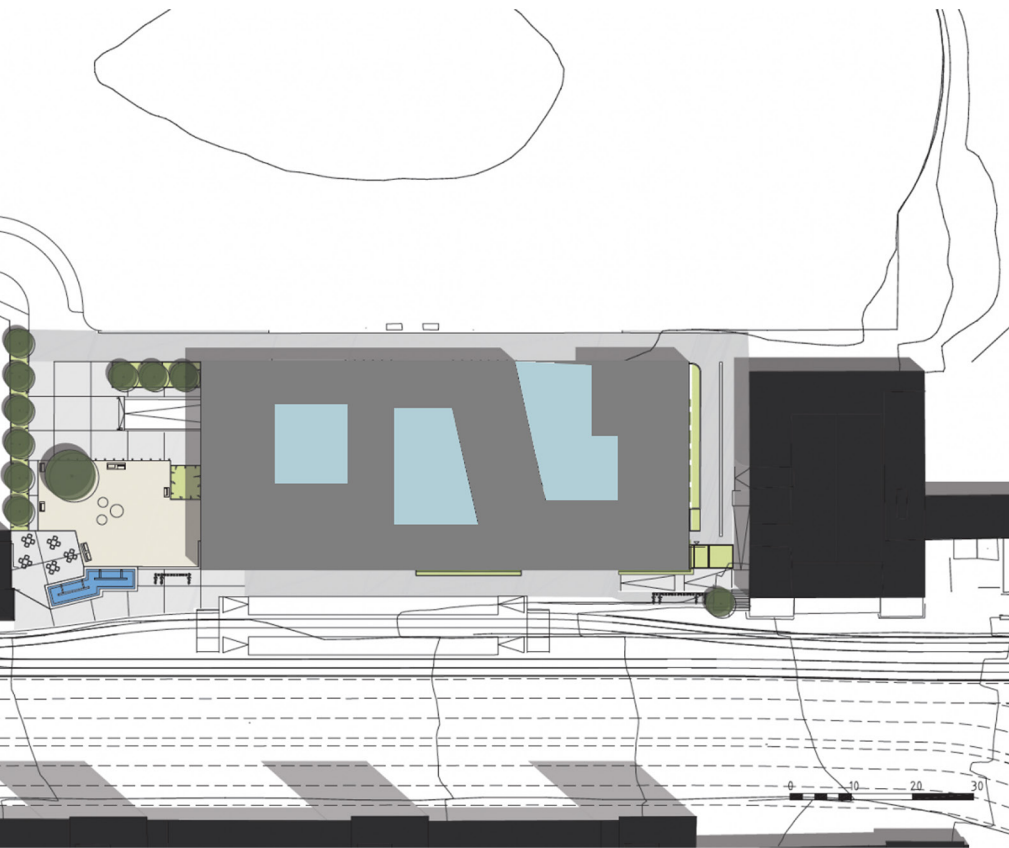
GREY: BUILT

LIGHT BLUE: BUILT NATURAL

GREEN: NATURAL



HERE WE SEE THE DIFFERENCE IN PHYSICAL CONDITIONS. WHILE TWO OF THE PROJECTS HAVE LARGE NATURAL CONDITIONS SURROUNDING THEM ONE OF THEM DOES NOT. HOWEVER, THE ONE THAT DOES NOT; HAS A LARGE PORTION OF BUILT NATURAL CONDITIONS COMPARED TO THE BUILT NATURAL CONDITIONS OF THE OTHERS. IN A PROJECT THAT POTENTIALLY LACKS THE ABILITY TO HAVE TRULY NATURAL SPACES BUILDING THOSE NATURAL SPACES IS A VALID SUBSTITUTE.

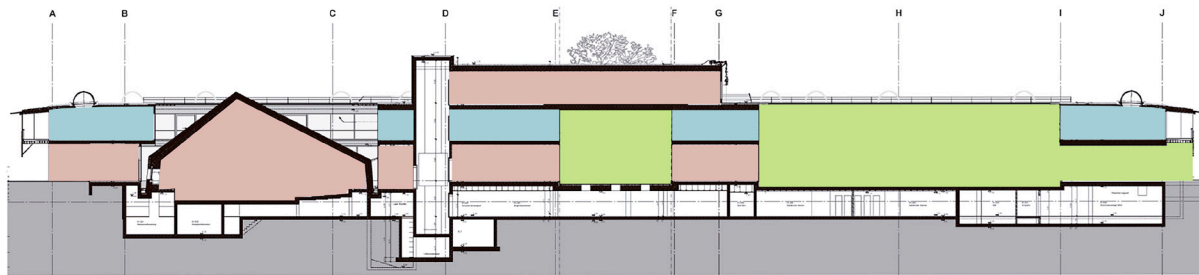


SECTIONAL PROGRAM

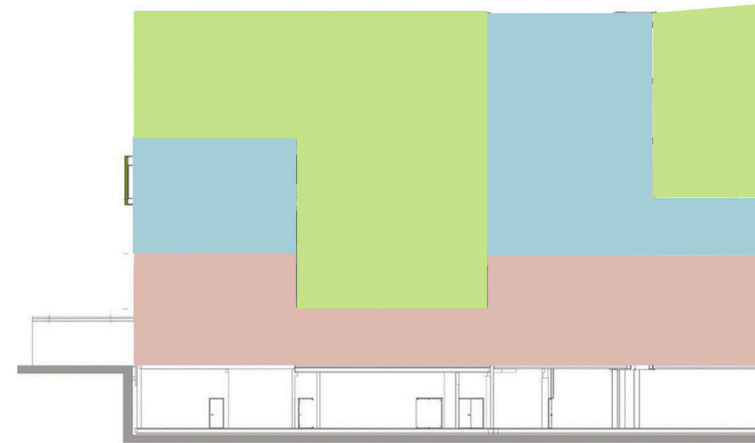
RED: TREATMENT

LIGHT BLUE: PATIENT ROOMS

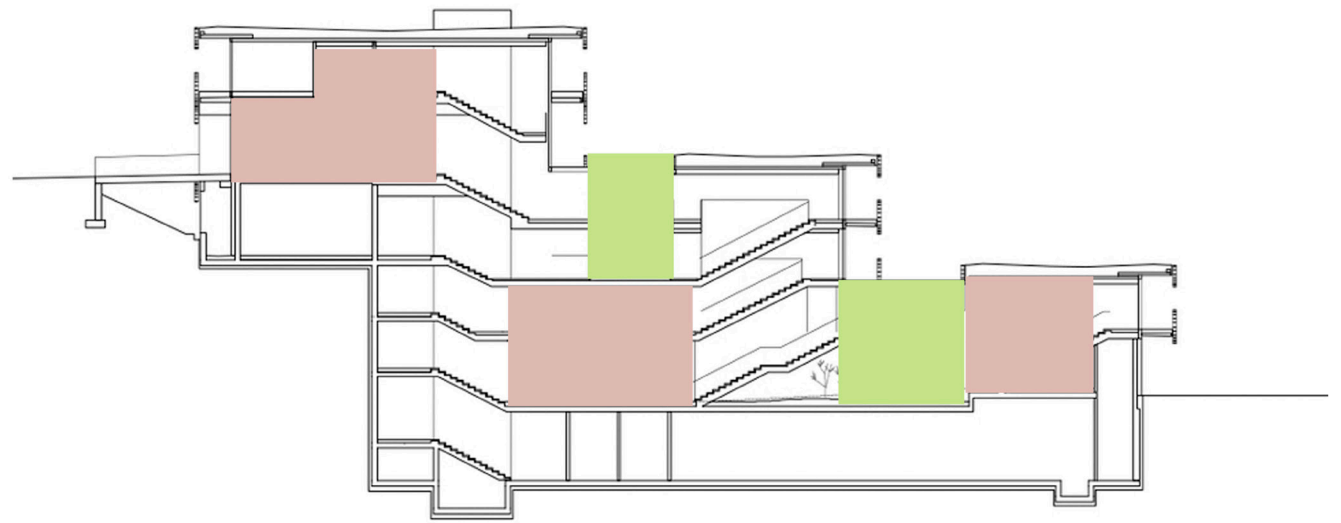
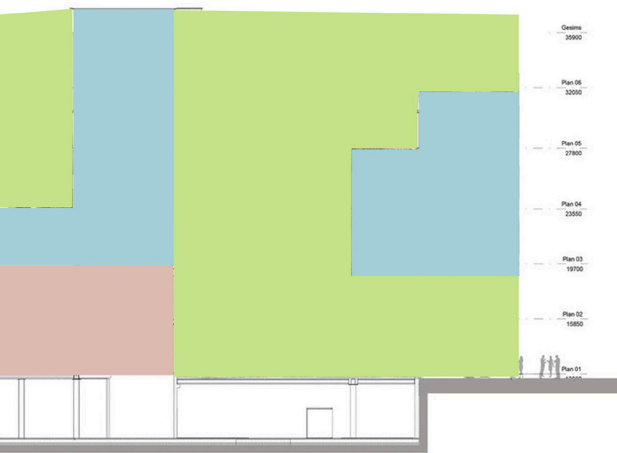
GREEN: COURTYARDS/OPEN-SPACES



Sección longitudinal *Longitudinal section*



THE INTEGRATION OF AND MIXING OF PROGRAM IS WHAT MAKES THESE PROJECTS SUCCESSFUL. HOWEVER, ONE OF THE MORE OBVIOUS TRENDS IS PLACING TREATMENT ON THE GROUND LEVEL AND PATIENTS ON THE SECOND LEVEL. THESE PLACEMENTS ALL THEN CONTAIN INTEGRATED COURTYARDS OR NATURAL SPACES. THEREFORE WHAT IS BEING SEEN IS THE DESIRE FOR PRIVACY AT THE PATIENT LEVEL WHILE STILL HAVING EASE OF ACCESS TO THOSE NATURAL SPACES AND TREATMENT AREAS.



1.) HOW DOES THE QUALITY OF THE U.S. HEALTH SYSTEM COMPARE TO OTHER COUNTRIES? - PETERSON-KFF HEALTH SYSTEM TRACKER

- THIS SITE CONTAINS DATA AND INFORMATION FOR COMPARISON BETWEEN THE US HEALTHCARE SYSTEM AND HEALTHCARE WITHIN THE EUROPEAN UNION. THERE IS MORE INFO ON THIS PAGE THAN THE OTHER TWO BUT THIS ONE LACKS INFORMATION ABOUT MENTAL HEALTH STATISTICS.

2.) MENTAL HEALTH AND SUBSTANCE USE IN U.S. AND 10 OTHER COUNTRIES | COMMONWEALTH FUND

- THIS PAGE IS ALL ABOUT THE COMPARISON OF MENTAL HEALTH STATISTICS ACROSS 11 DEVELOPED PEER NATIONS. HIGHLIGHTING THE SHORT COMINGS OF ALL THE DIFFERENT COUNTRIES BUT IS PRIMARILY FOR COMPARISON OF THE US VS. OTHER DEVELOPED COUNTRIES.

3.) U.S. HEALTH CARE FROM A GLOBAL PERSPECTIVE, 2019 | COMMONWEALTH FUND

- THIS PAGE IS ABOUT COMPARING THE US' GENERAL HEALTHCARE SYSTEM. SHOWING MORE BROAD DATA FOR THE US AND ALLOWING FOR A BETTER ANALYSIS BETWEEN COUNTRIES. THIS SOURCE SHOWS THAT WHILE THE US LACKS IT ALSO HAS SOME STRONG SIDES.

4.) REHAB BASEL, REHABILITATION CENTER, BASEL - HERZOG & DE MEURON | ARCHITECTURA VIVA

- THIS SITE IS THE RESOURCE USED FOR INFORMATION ON THE PRECEDENT REHAB BASEL. IT IS ALSO THE SITE FOR THE SOURCED PLANS AND SECTION.

5.) KRONSTAD PSYCHIATRIC HOSPITAL / ORIGO ARKITEKTGRUPPE | ARCHDAILY

- THIS SITE IS THE RESOURCE USED FOR INFORMATION ON THE PRECEDENT KRONSTAD PSYCHIATRIC HOSPITAL. IT IS ALSO THE SITE FOR THE SOURCED PLANS AND SECTION.

6.) HEALTH CARE FACILITY JOSEFHOF / DIETGER WISSOUNIG ARCHITEKTEN | ARCHDAILY

- THIS SITE IS THE RESOURCE USED FOR INFORMATION ON THE PRECEDENT HEALTHCARE FACILITY JOSEFHOF. IT IS ALSO THE SITE FOR THE SOURCED PLANS AND SECTION.

7.) [HTTPS://WWW.ZILLOW.COM/HOMES/KIHEI,-HI_RB/](https://www.zillow.com/homes/kihei,-hi_rb/)

- SITE BOUNDARY CREATED BY THE LOT LINES PROVIDED BY THE REALITY PROGRAM

8.) [HTTPS://GEOPORTAL.HAWAII.GOV/DATASETS/ZONING-COUNTY-OF-MAUI/EXPLORE?LOCATION=20.749671%2C-156.436157%2C16.00](https://geportal.hawaii.gov/datasets/zoning-county-of-maui/explore?location=20.749671%2C-156.436157%2C16.00)

- ZONING CODE IN MAUI USED TO DETERMINE THE ZONE FOR THE SELECTED SITE

9.) [HTTPS://WWW.HAWAIIANLOCAL.COM/ARTICLES/2/KIHEI-TOWN-HISTORY](https://www.hawaiianlocal.com/articles/2/kihei-town-history)

- A HISTORY OF THE TOWN OF KIHEI. USED TO GATHER INFORMATION RELEVANT TO SITE SELECTION AND SITE INFORMATION.

10.) [HTTPS://SAVEKIHEI.ORG/HIGH-DENSITY-DEVELOPMENT-THREATENS-KIHEI-NEIGHBORHOOD/](https://savekihei.org/high-density-development-threatens-kihei-neighborhood/)**11.) [HTTPS://MAUI-COMMUNITIES.WEEBLY.COM/19TH--20TH-CENTURY-MAPS.HTML](https://maui-communities.weebly.com/19th--20th-century-maps.html)****12.) [HTTPS://WWW.GOHAII.COM/ISLANDS/MAUI/THINGS-TO-DO/AIR-ACTIVITIES](https://www.gohawaii.com/islands/maui/things-to-do/air-activities)**

CITATIONS

PG.2 CHART OF LONG TERM HEALTH OUTCOMES TAKEN FROM HEALTHSYSTEMTRACKER
PG.2 CHART OF TREATMENT OUTCOMES TAKEN FROM HEALTHSYSTEMTRACKER
PG.2 CHART OF US SPENDING TAKEN FROM COMMONWEALTH FUND (#3)
PG.2 CHART OF US SPENDING PUBLIC VS PRIVATE TAKEN FROM COMMONWEALTH FUND (#3)
PG.3 CHART OF US CARE OUTCOMES TAKEN FROM COMMONWEALTH FUND (#3)
PG.3 AVAILABILITY OF PROFESSIONAL MENTAL HEALTH US TAKEN FROM COMMONWEALTH FUND (#2)
PG.3 MENTAL HEALTH DIAGNOSIS IN THE US TAKEN FROM COMMONWEALTH FUND (#2)
PG.3 NUMBER OF MENTAL HEALTH PROVIDERS TAKEN FROM COMMONWEALTH FUND (#2)
PG.7 PROGRAMMING SPREADSHEET MADE BY AUTHOR
PG.8 SITE BOUNDARY MAP TAKEN FROM SOURCE (#7)
PG.9 IMAGE OF KIHEI LOOKING TOWARDS THE NORTHWESTERN SIDE OF THE ISLAND OF MAUI TAKEN FROM SOURCE #10
PG.9 HISTORIC MAP OF MAUI FROM 1880 TAKEN FROM SOURCE #11
PG.10 IMAGE OF KIHEI LOOKING TOWARDS MOUNT HALEAKALA ON THE SOUTH EASTERN SIDE OF THE ISLAND TAKEN FROM SOURCE #12
PG.10 ZONING MAP TAKEN FROM SOURCE (#8)
PG.11 SITE STRATEGY MADE BY AUTHOR SITE BOUNDARY PLAN TAKEN FROM SOURCE (#7)
PG.12 SITE STRATEGY MADE BY AUTHOR SITE BOUNDARY PLAN TAKEN FROM SOURCE (#7)
PG.14 PLAN TAKEN FROM SOURCE (#4)
PG.14 SITE TAKEN FROM SOURCE (#4)
PG.14 SECTION TAKEN FROM SOURCE (#4)
PG.15 SITE OVERLAY MADE BY AUTHOR PLAN TAKEN FROM SOURCE (#4)
PG.17 PLAN TAKEN FROM SOURCE (#5)
PG.17 SITE PLAN TAKEN FROM SOURCE (#5)
PG.17 SECTION TAKEN FROM SOURCE (#5)
PG.18 SITE OVERLAY MADE BY AUTHOR PLAN TAKEN FROM SOURCE (#5)
PG.20 PLAN TAKEN FROM SOURCE (#6)
PG.20 SITE PLAN TAKEN FROM SOURCE (#6)
PG.20 SECTION TAKEN FROM SOURCE (#6)
PG.21 SITE OVERLAY MADE BY AUTHOR PLAN TAKEN FROM SOURCE (#6)
PG.22/23 DIAGRAM OF COURTYARD SIZE AND POSITIONING MADE BY AUTHOR PLANS TAKEN FROM SOURCES (#4,5 & 6)
PG.24/25 DIAGRAM OF BUILT CONDITION VS. NATURAL CONDITION MADE BY AUTHOR PLANS TAKEN FROM SOURCES (#4,5 & 6)
PG.26/27 DIAGRAM OF SECTIONAL PROGRAM MADE BY AUTHOR SECTIONS TAKEN FROM SOURCES (#4,5 & 6)