

THESIS 2022-2023 PROF. WILLIAM TAYLOR PROF. EDWARD DUNSON

EQUITABLE DOMESTIC DESIGN FOR PERSONS WITH DISABILITIES

DEAN BAILEY

03	BREAKDOWN: CASE 1	36
07	BREAKDOWN: CASE 2	44
10	SOLVING: CASE 1	51
11	SOLVING: CASE 2	54
12	REDESIGNING BATHROOM	57
13	RESULTS: CASE 1	63
16	RESULTS: CASE 2	73
18	CONCLUSION	85
19	POTENTIAL OPPORTUNITIES	87
20	CONTINUING THESIS	96
25	The state of the s	
31		
	07 10 11 12 13 16 18 19 20 25	07 BREAKDOWN: CASE 2 10 SOLVING: CASE 1 11 SOLVING: CASE 2 12 REDESIGNING BATHROOM 13 RESULTS: CASE 1 16 RESULTS: CASE 2 18 CONCLUSION 19 POTENTIAL OPPORTUNITIES 20 CONTINUING THESIS 25

TABLE OF CONTENTS

INTRODUCTION

THERE ARE MANY LAPSES IN THE WAY DESIGNERS APPROACH CREATING OUR DOMESTIC,
AND BUILT ENVIRONMENTS ESPECIALLY WHEN TASKED WITH DESIGNING FOR PERSONS WITH
DISABILITIES, INCLUDING OLDER ADULTS AGING IN PLACE.

AS PEOPLE AGE, AND CHANGE, THE INTRICACIES AND CONVENTIONS OF DOMESTIC ARCHITECTURE MAY NOT KEEP UP WITH A RESIDENTS' NEEDS AS DEFINED BY THEIR INDIVIDUAL DISABLING CONDITIONS. THESE CONDITIONS MAY BE PERMANENT OR TEMPORARY, BUT STILL ARE INTENSE ENOUGH TO ALTER AN INDIVIDUAL'S ABILITY TO ACCESS ELEMENTS OF THEIR OWN ENVIRONMENT WITH DIGNITY AND EQUITY.

INDIVIDUALS EXPERIENCING PHYSICAL OR COGNITIVE CHALLENGES MAY REQUIRE ADDITIONAL ACCOMMODATIONS TO ENHANCE INCLUSIVITY IN THEIR DOMESTIC ARCHITECTURAL EXPERIENCE.

MANY SOCIALLY ACCEPTED DESIGNS MISS THE MARK WHEN IT COMES TO PROPERLY ACCOMMODATING PEOPLE'S SPECIAL NEEDS, WHICH LEAVES GAPS IN THE EFFICACY OF CURRENT DOMESTIC DESIGN.



"IN THE 1970S, DISABILITY RIGHTS ACTIVISTS LOBBIED CONGRESS AND MARCHED ON WASHINGTON TO INCLUDE CIVIL RIGHTS LANGUAGE FOR PEOPLE WITH DISABILITIES INTO THE 1972 REHABILITATION ACT. IN 1973, THE REHABILITATION ACT WAS PASSED, AND FOR THE FIRST TIME IN HISTORY, CIVIL RIGHTS OF PEOPLE WITH DISABILITIES WERE PROTECTED BY LAW."

DISABILITY HISTORY

The following is a select list of national and international milestones highlighting people, events, and legislation that affect disability rights.

1817

First school for **disabled children** founded in Hartford, CT

1848

1950

First **residential center** for adults with disabilities founded in Boston

1945

President Harry Truman begins national **Employ the**

Mary Switzer appointed director of **U.S. Rehabilitation Panel**

1961

Handicapped Week

President John Kennedy appoints panel on mental retardation

1963

President John Kennedy calls for increased American **community services**

1965

Medicare and Medicaid are established

1968

Fair Housing Act protects people from discrimination when they are renting or buying a home

1968

1,000 athletes compete in the first **Special Olympics**

1972

Ed Roberts founds the first center for independent living

1973

Handicap parking stickers introduced in Washington, D.C.

400

President George H. W. Bush signs the Americans with Disabilities Act







PERSPECTIVES THROUGHOUT HISTORY

"OTHERS OVER THE CENTURIES HAVE VIEWED DISABILITY AS THE WORK OF THE DEVIL.

DISABILITY WAS SEEN AS A FAILURE, DEFORMITY OR DEFECT OF THE INDIVIDUAL. AS A
RESULT OF THE MYTHS ABOUT DISABILITY, PEOPLE WITH DISABILITIES WERE FEARED AND

OFTEN STIGMATIZED, SHUNNED, ABUSED, OR CONDEMNED."

"DISABILITY IS NOT A NEW CONCEPT AND NOT SOMETHING THAT HAS EMERGED AS A RESULT OF INCREASING NUMBERS OF PEOPLE AFFECTED. RATHER, DISABILITY IS AN ANCIENT CONCEPT THAT HAS EXISTED FOR AS LONG AS PEOPLE HAVE EXISTED. ALTHOUGH DISABILITY HAS NOT CHANGED, OUR VIEWS OF THE MEANING OF DISABILITY HAVE CHANGED OVER TIME-FOR THE BETTER."

"DESPITE PASSAGE OF THE ADA IN 1990 AND GREATER ATTENTION TO DISABILITY IN THE
HEALTHY PEOPLE INITIATIVE BEGINNING IN 2000, PROGRESS IN ACHIEVING THE EQUALITY IN
SERVICES FOR PEOPLE WITH DISABILITIES HAS BEEN SLOW."

INTRODUCING THE CURRENT STANDARDS

HISTORY

THE CURRENT ADA:

"ON JULY 26, 1990, WITH THE SIGNING INTO LAW OF THE AMERICANS WITH DISABILITIES ACT (ADA), OUR NATION CREATED THE WORLD'S FIRST COMPREHENSIVE DECLARATION OF EQUALITY FOR PEOPLE WITH DISABILITIES." THE LAW WAS SIGNED BY GEORGE H.W. BUSH.

MANY OF THE CURRENT STANDARDS DEFINED BY THE ADA AREDESIGNED TO ADDRESS THE CONCERNS OF THOSE WITH PHYSICAL DISABILITIES THAT AFFECT MOBILITY. REGULATORS ATTEMPTING TO ACCOMMODATE THE FULL SCOPE OF DISABILITIES SHOULD CONSIDER THAT MANY PEOPLE DO NOT FIT INTO THE PUBLIC PERCEPTION OF "HANDICAPPED".



"THE ADA IS ENFORCED BY COMPLAINT. FOR EXAMPLE, THE DEPARTMENT OF JUSTICE OR OTHER GROUPS MAY INVESTIGATE COMPLAINTS AND MIGHT FILE A LAWSUIT IF IT'S DEEMED NECESSARY. BUT THERE ARE NO ADA POLICE, THERE'S NO ADA CERTIFICATION, NO REAL MONITORING, OTHER THAN COMPLIANCE TESTING."

THE COMMON VIOLATIONS (IN NO PARTICULAR ORDER) INCLUDE:

"INCORRECT RAMP HEIGHT TO BUILDING AND/OR CURB. INCORRECT ADA SIGNAGE OR NO SIGNAGE AT ALL. NO PARKING ACCESS OR NO AREA FOR DROP-OFFS. INACCESSIBLE RESTROOM FACILITIES AND/OR LOCATION IN BUILDING."

DOES ADA VARY FROM STATE TO STATE?

"WHILE THE ADA DOES NOT OVERRIDE OTHER FEDERAL LAWS, IT WILL OVERRIDE STATE OR LOCAL LAWS THAT PROVIDE LESS PROTECTION OR BENEFIT. HOWEVER, IF A STATE OR LOCAL LAW PROVIDES MORE PROTECTION OR GREATER BENEFIT, IT WILL OVERRIDE THE ADA."

THE STANDARDS

INTERVIEW FROM PETER STRATTON

PAGE 07

WORKING WITH ARCHITECTS, BUILDERS, AND DEVELOPERS, WHAT ARE SOME OF THE CRITICISMS OF ADATHAT YOU'VE HEARD?

"ANOTHER COMMON CRITICISM IS THAT THERE ISN'T ONE TECHNICAL STANDARD FOR COMPLIANCE. DEPENDING ON THE BUILDING'S USE, THERE ARE SEVERAL: ADA, ANSI 117.1, AND FHA STANDARDS, WHICH CAN VARY FROM STATE TO STATE. DIFFERENT STANDARDS RESPOND TO DIFFERENT BUILDING TYPES AND ARE PROMULGATED BY DIFFERENT AGENCIES, SUCH AS THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT OR THE DEPARTMENT OF JUSTICE. THERE IS AN INTENTION TO SHIFT TO HARMONIZING THESE DIFFERENT STANDARDS, BUT WE'RE NOT QUITE THERE YET."

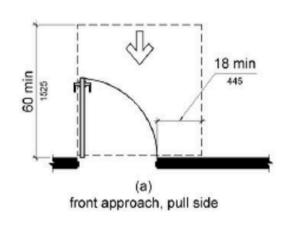
WHAT'S THE MOST COMMON MISUNDERSTANDING OF THE ADA STANDARDS BY ARCHITECTS?

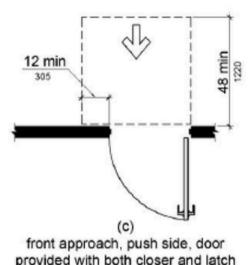
"THE MOST COMMON MISUNDERSTANDING IS THAT COMPLIANCE WITH THE REQUIREMENTS OF THE LOCAL BUILDING CODE AND ITS ACCESSIBILITY STANDARDS IS ENOUGH TO SATISFY THE ADA REQUIREMENTS. THE ACCESSIBLE DESIGN AND CONSTRUCTION REQUIREMENT OF THE CODE AND OF THE ADA ARE MUTUALLY EXCLUSIVE AND MUST BE CONSIDERED SEPARATELY. SO IT'S POSSIBLE FOR A BUILDING TO BE IN COMPLIANCE WITH THE LOCAL CODE, BUT NOT IN COMPLIANCE WITH ADA. MANY ARCHITECTS, CONTRACTORS, AND DEVELOPERS DON'T REALIZE THIS."

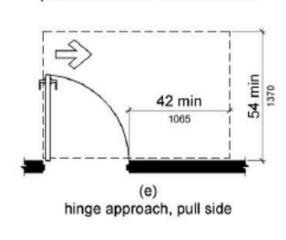
THE STANDARDS

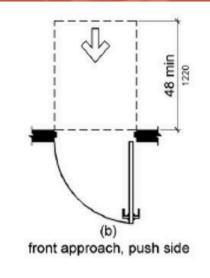
INTERVIEW FROM PETER STRATTON

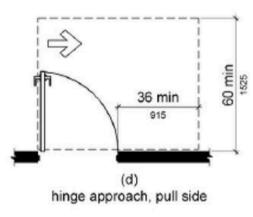
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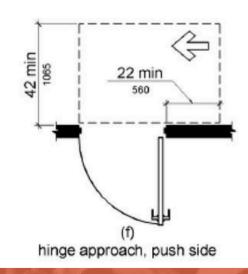












GAPS IN PRACTICAL ACCESSIBILITY AND FURTHER INEQUITY

THE STANDARDS

"IN FACT, FEWER THAN 1% OF SINGLE-FAMILY HOMES IN AMERICA ARE MOVE-IN READY FOR A WHEELCHAIR USER, A STAGGERING FACT CONSIDERING THAT OVER HALF OF AMERICANS LIVE IN SINGLE-FAMILY HOUSES."

THE CURRENT METHODOLOGY AND MORPHOLOGICAL RESPONSES LEAVE MUCH TO BE DESIRED IN TERMS OF EFFICACY AS COMPARED TO DIGNIFICATION OF THE USER. WHILE THESE STANDARDS EXIST, THERE ARE STILL GAPS IN THE WAY ARCHITECTS AND DESIGNERS APPROACH DESIGNING FOR PERSONS WITH DISABILITIES.

OFTENTIMES, THESE STANDARDS ARE FOREGONE IN RESIDENCIES IN LIEU OF DESIGN ELEMENTS AND MOTIFS. ADDITIONALLY, IN SOME CASES, SPACES MIGHT BE LEFT FEELING COLD OR IMPERSONAL IN THE WHEN ACCESSIBLE DESIGN STANDARDS ARE PROPERLY IMPLEMENTED.

BECAUSE OF THE LAPSES IN DOMESTIC DESIGN ACCESSIBILITY, THERE SHOULD BE REFORM IN THE WAY ARCHITECTS AND DESIGNERS APPROACH DESIGN FOR PERSONS WITH DISABILITIES, ESPECIALLY IN A DOMESTIC SENSE.

HOW DESIGNERS RESPOND ARCHITECTURALLY TO A DEMOGRAPHIC'S NEEDS SPEAKS VOLUMES ABOUT HOW SOCIETY TREATS AND CONSIDERS A GROUP.

HOW CAN DESIGN PROCESSES AND RESPONSES BE REIMAGINED TO COMFORTABLY ACCOUNT FOR THOSE WHOSE BODIES AND MINDS ARE DIFFERENT FROM WHAT SOCIETY EXPECTS, AND HOW CAN ARCHITECTURE BETTER RESPOND TO PEOPLE'S EMBODIED EXPERIENCES TO ENHANCE EQUITY FOR INDIVIDUALS WITH DISABILITIES?

THIS IS A THEORETICAL MODE OF INQUIRY

THESIS QUESTION

PRESENTATION OF THE THESIS STATEMENT



WHAT IS DISABILITY?

"A DISABILITY IS ANY CONDITION OF THE BODY OR MIND
(IMPAIRMENT) THAT MAKES IT MORE DIFFICULT FOR THE PERSON
WITH THE CONDITION TO DO CERTAIN ACTIVITIES (ACTIVITY
LIMITATION) AND INTERACT WITH THE WORLD AROUND THEM
(PARTICIPATION RESTRICTIONS)."

-THE CDC

DEFINING "DISABILITY" FOR THIS THESIS

INTENTIONALITY

This project works to emphasize marginalization in the persons with disabilities community.

This project is not a discussion of people's mental health diagnoses, but rather a discussion and acknowledgement of people living with other permanent life affecting physical and cognitive disabilities.

THIS PROJECT DISCUSSES DISABILITY AND NOT DISORDER:

The use of the term "disability" in the name of a medical condition is no longer preferred as it creates conceptual confusion. A disorder is a medical condition that may or may not give rise to disability depending on its severity. Disability is the functional disadvantage suffered by a person affected by that condition.

Despite the ADA considering intense cases of mental illness as an official disability, this project references physical and intellectual disabilities, while acknowledging the disorders that might be connect to them, instead of the disorders themselves.

https://www.loc.gov/item/dc0149

AMERICANS WITH DISABILITIES:

Disability Impacts ALL of US

COMMUNITIE





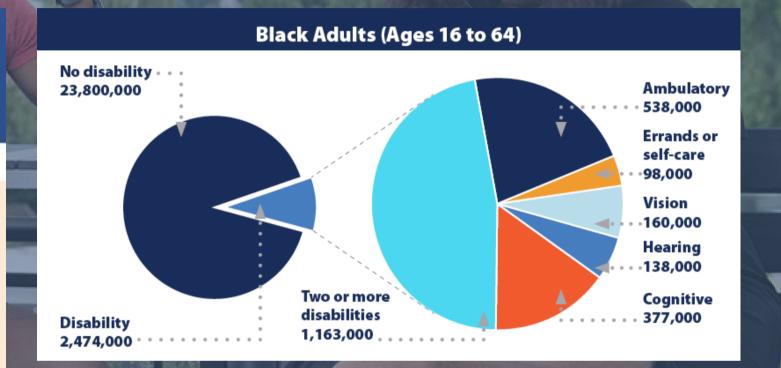
61 million adults in the United States live with a disability



26% (1in 4)

of adults in the United States have some type of disability

The percentage of people living with disabilities is highest in the South



While the entire community of persons with disabilities experiences injustice, Black adults are disproportionally affected bythe inequities present in the American system.





Adults with Disabilities: Ethnicity and Race

When it comes to the health of people with disabilities, it's important to know the health differences among racial and ethnic groups

Approximate number of adults with a disability by ethnicity and race



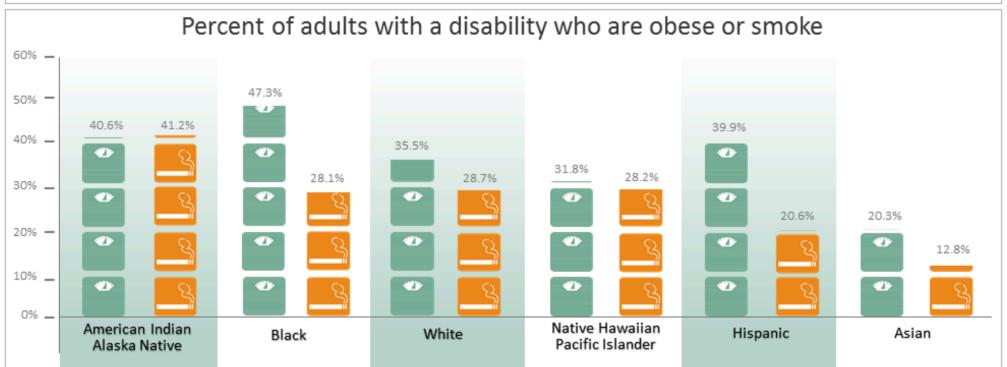














STATISTICS OF DISABILITY

American Community Survey

S1810 DISABILITY CHARACTERISTICS

2020: ACS 5-Year Estimates Subject Tables 🗸

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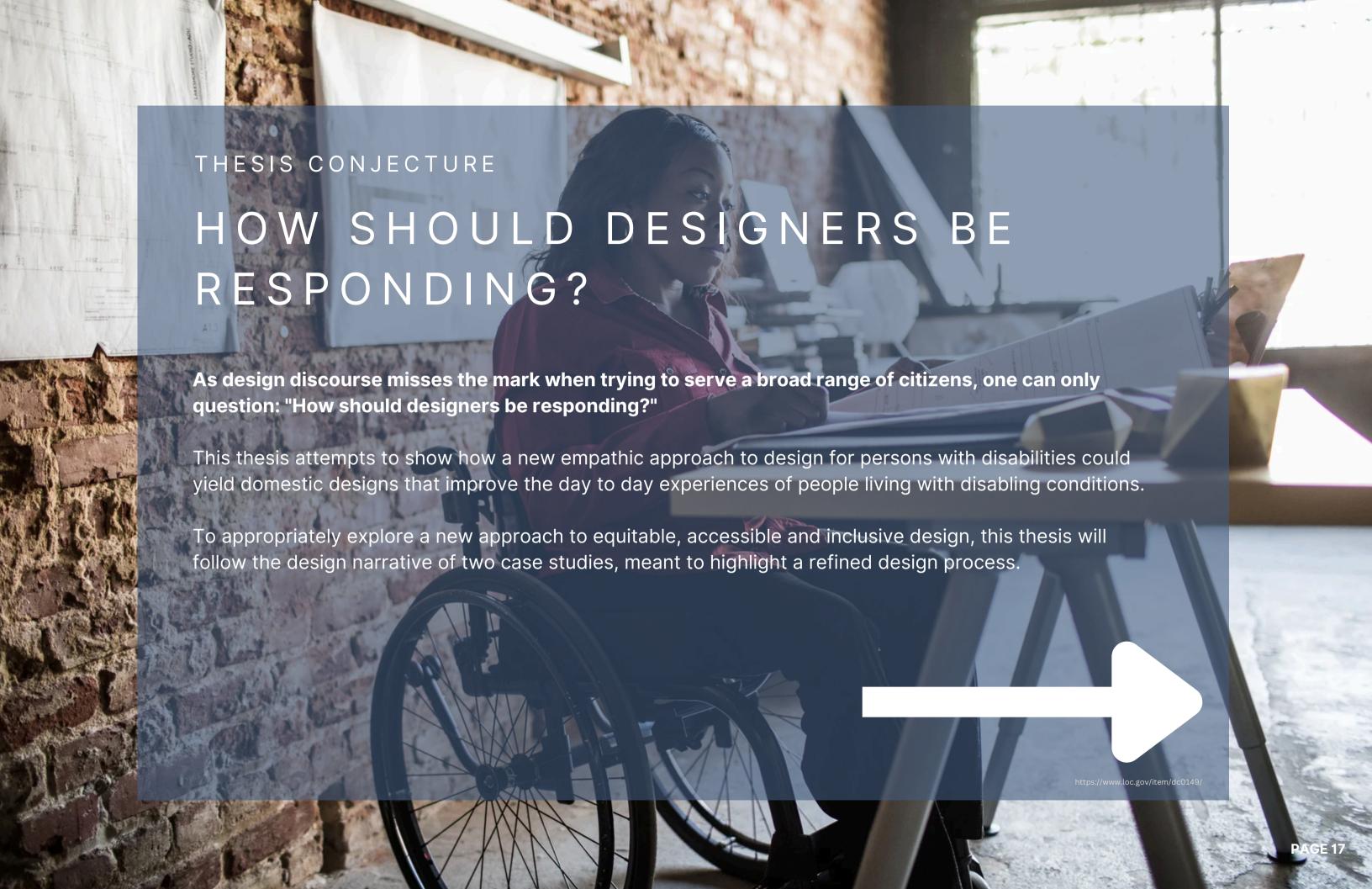
the state of the s		· · · ·	
	United States		
	Total		With a disability
Label	Estimate	Margin of Error	Estimate
➤ Total civilian noninstitutionalized population	321,525,041	±9,950	40,786,461
∨ SEX			
Male	157,140,289	±13,537	19,719,672
Female	164,384,752	±9,631	21,066,789
➤ RACE AND HISPANIC OR LATINO ORIGIN			
White alone	226,784,067	±82,395	30,123,435
Black or African American alone	39,969,583	±35,228	5,589,694
American Indian and Alaska Native alone	2,622,596	±13,688	443,753
Asian alone	18,325,414	±21,514	1,323,361
Native Hawaiian and Other Pacific Islander alone	597,099	±5,501	67,357
Some other race alone	16,578,726	±95,756	1,508,956
Two or more races	16,647,556	±64,156	1,729,905
White alone, not Hispanic or Latino	193,503,130	±25,032	27,070,784

https://data.census.gov/table?q=S1810:+DISABILITY+CHARACTERISTICS&tid=ACSST5Y2020.S1810

DISABILITY AND HOUSING:

- There is a need for accessible/adapted housing.
- In Virginia there is a settlement agreement under which individuals whose disabling conditions are covered may be eligible for special housing vouchers called SRAP vouchers.
- These vouchers are designed to help people with disabilities live independently in their communities.
- SRAP vouchers are granted to people diagnosed with intellectual/developmental disabilities to bridge the gap between the income these individuals often receive from social security and the actual cost of housing. This cost should not exceed 30% of an individual's income.
- Historically many people with cognitive and physical disabilities have not been able to access housing in their communities.
- A large number of individuals with cognitive disabilities were institutionalized, and before the regulations created by the ADA, the ramps and infrastructural accommodations that exists for persons with physical disabilities did not exist.

https://data.census.gov/table?q=S1810:+DISABILITY+CHARACTERISTICS&tid=ACSST5Y2020.S1810



THESIS CONJECTURE

WHATIS EQUITY-CENTERED DESIGN?

Equity-centered design is the practice of purposefully involving minoritized communities throughout a design process with the goal of allowing their voice to directly affect how the solution will address the inequity at hand. Equitable design acknowledges that equity doesn't happen by chance but with intent and focus.

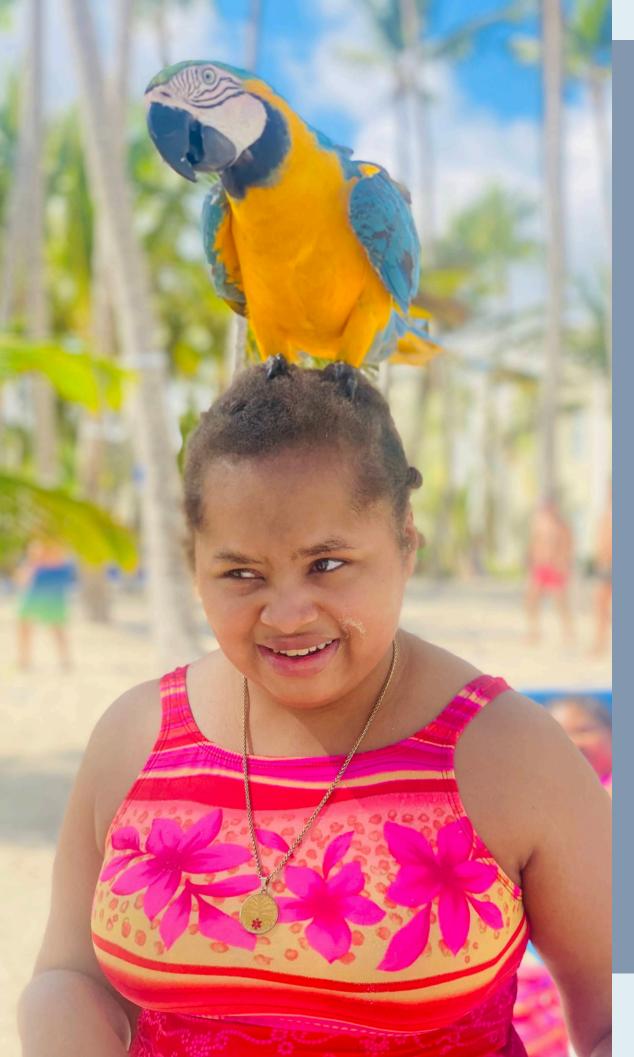
- Equity generally refers to creating opportunities for equal access and success among minoritized populations by providing them with specific, targeted resources.
- Anti-racism is the active process of identifying and eliminating racism by changing systems,
 organizational structures, policies, practices, and attitudes so that power is redistributed and shared
 equitably.
- Human-centered design is an approach to problem solving that develops solutions through a strong, consistent focus on the human perspective by empathizing with the end user.

ps://www.everylearnereverywhere.org/blog/how-equity-centered-design-supports-anti-racism-in-the-classroom/#:~:text=Equity%2Dcentered%20design%20is%20the,but%20with%20intent%20and%20focus.



- Wider implementation of this process could benefit construction companies, government architecture, standard A and E firms, private practices, residential, or even commercial architecture, military, and many other businesses.
- This concept provides an opportunity for investors to create products that have higher value for people who might need extra consideration in terms of specific user experience.
- If more designers followed a participatory for people who are experiencing any number of ailments, and would be valuable to investors approaching their build projects from multiple different angles.





BRYN BAILEY, MY OLDER SISTER

CASE STUDY 1

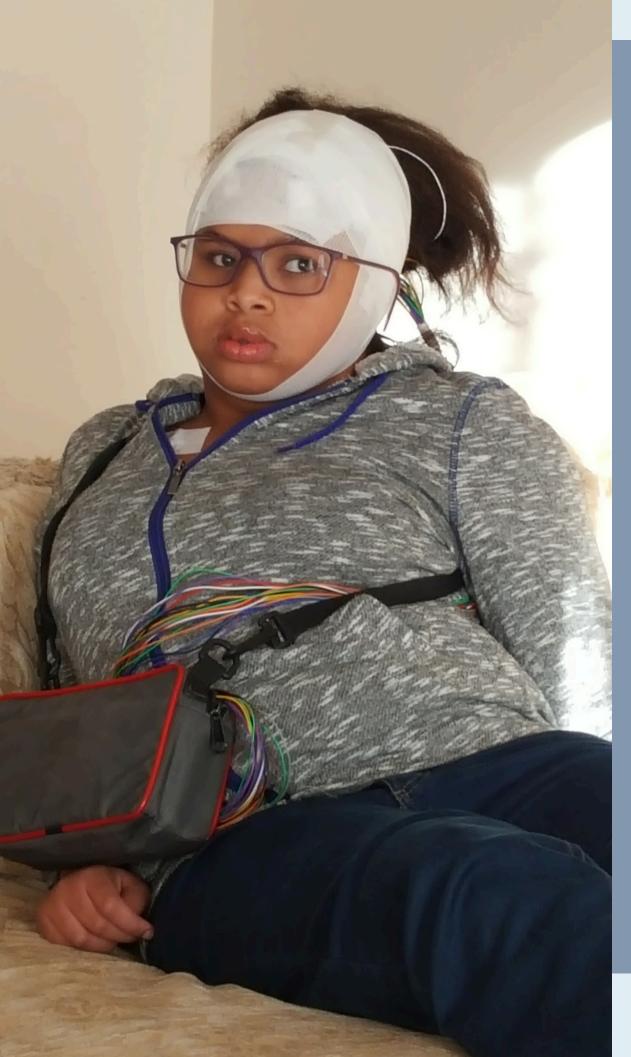
Bryn Bailey, my sister, is an adult with disabilities. She was diagnosed with cerebral palsy, dyslexia, ataxia (low muscle-tone) a seizure disorder, and symptoms on the autism spectrum. Bryn lives in Rockville, MD in a single family home designed in the 90s.

Bryn is 23 years old, and aspires to be an early childcare professional. Currently, Bryn attends Montgomery College, and is working toward a number of vocational certificates.

Bryn's specific mix of conditions makes it challenging for her to navigate her dwelling space with maximum comfort and ease.

Her seizures, which vary in size and intensity, are the most debilitating of her conditions. A serious seizure can leave her in a post-ictal state characterized by disorienting symptoms such as confusion, drowsiness, hypertension, headache, and nausea lasting between 5 and 30 minutes. During and after an episode, she may experience psychosis, confusion, loss of bladder control, fatigue, and other inconveniences.

This study attempts to mitigate some of the difficulties Bryn might experience because of her conditions, and create a more optimal design flow for a person experiencing any number of cognitive differences.



BRYN BAILEY, MY OLDER SISTER

CASE STUDY 1

Bryn's condition makes it so she can have a seizure anywhere at any time, including in her sleep. The episodes can vary in intensity from gran mal to petit mal, and can result in her total collapse in more serious cases.

In the event of an episode, it can be difficult for Bryn to properly navigate spaces, especially when trying to make it to the bathroom from her room after she has regained consciousness.

Bryn enjoys taking relaxing baths, but if the water is too hot, she can have a seizure in the tub. Our family is trained to handle seizures, but the shared hall bathroom with Bryn has a lockable door, which can put her in danger if she has a seizure in the tub. The bathroom floors and tub are slippery, and getting in and out of the tub requires a three-point stand while being mindful of the toilet. Additionally, the bathtub faucet is highly sensitive to temperature changes, making it difficult to maintain thermal control.



Content is no longer available

CASE STUDY 1: SITE

HOME/UNIT PHOTOS

PROGRAMMING & AGENDA - PAGE 24

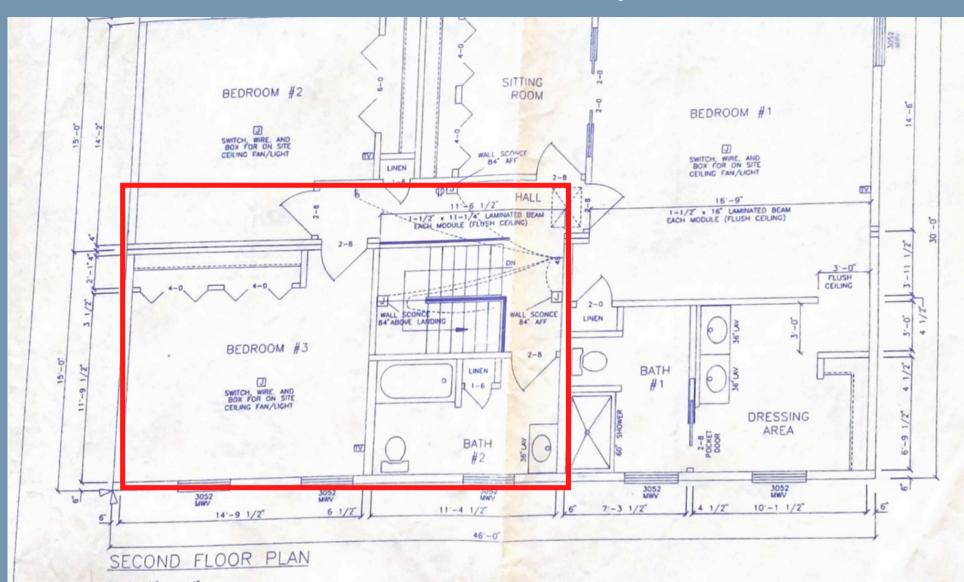
USING THE ORIGINAL CONSTRUCTION DOCUMENTS FOR THE HOME, AND CREATE A MODEL OF THE HOUSE'S CURRENT INTERIOR DESIGN. THIS MODEL WILL FOCUS ON BRYN'S SPECIFIC POINTS OF DWELLING ON THE SECOND LEVEL. BRYN LIVES IN ROCKVILLE, MD IN A SINGLE

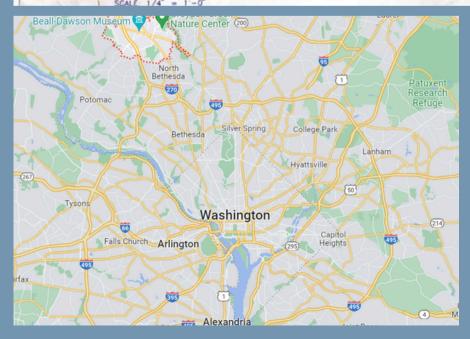
FAMILY HOME CUSTOM DESIGNED IN THE 90S. SHE LIVES WITH HER FATHER, MOTHER, TWO DOGS AND BROTHER (SEASONALLY).



THE BAILEY FAMILY









Case Study 1 Bryn: Cognitive differences; Mild Challenges







CAMERON PATTERSON, A HOWARD STUDENT

CASE STUDY 2

Cameron Patterson. Junior Political Science and Philosophy dual major from Ringgold, GA. He is a member of the HU mock trial team and a member of Young Professionals in Foreign Policy, at Howard University.

He is a paraplegic, but more accurately is an incomplete paraplegic, following a car accident that nearly cost him his life in December, 2021. He is partially paralyzed from the waist down, and often uses his wheelchair to traverse campus. Cameron can also use forearm crutches that help steady his gait as he moves through less accessible spaces.

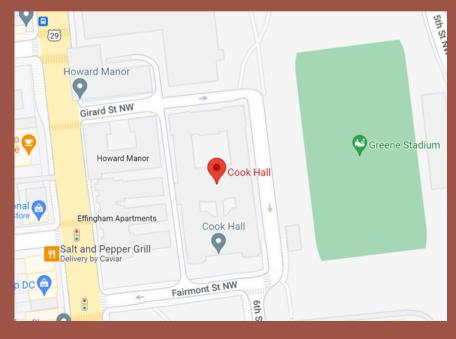
Since his accident, Cameron works to make positive change around campus, dedicating himself to community service, and advocating for the students with disabilities community.

Cameron lives in a single person dorm unit in Howard University's Cook Hall, which is one of the only wheelchair accessible dorms on campus.

Cameron is someone the methodology proposed in this project could benefit.













CASE STUDY 2: HOWARD UNIVERSITY COMMUNITY OUTREACH

MEETING STUDENTS

CAMERON PATTERSON

 Junior Political Science and Philosophy dual major from Ringgold, GA. He is a member of the HU mock trial team and a member of Young Professionals in Foreign Policy.



MYLES CALHOUN

 Freshman Nursing major from Milwaukee, Wisconsin with the goal of becoming a Healthcare Attorney/Executive. During his time at Howard University, he plans to become more involved in student advocacy organizations and initiatives.



NOAH ADEYEMI

 Freshman Computer Science Major from Maryland was diagnosed with Multiple Sclerosis at 14. He lives on Howard university campus and uses an electric wheelchair.



Case Study 2 Cameron: Physical differences as result of spinal injury; <u>Moderate to Severe</u>

<u>Challenges</u>





BATHROOMS: EXTENSIONS OF DWELLING

- A bathroom is more than a place to relieve oneself, but is a space that should respond to a person's intricate personal necessities.
- The ADA and regulation for persons with disabilities creates an element of universality in bathrooms that assumes the extents and allowances of a bathroom. While helpful, these assumptions often fail to address the needs of <u>specific</u> individuals with disabilities.



BATHROOMS: EXTENSIONS OF DWELLING

The modern bathroom is one of the most private spaces in a home, while seconding as one
of the spaces with the worst design to its actual purpose. Especially when designing for
overall accessibility, bathrooms leave much to be desired in how the begin to respond to a
person's actual needs.



CHALLENGES WITH THE CURRENT DESIGN: CASE 1

BRYN'S HALL BATHROOM

- Case Study 1: Cognitive Differences
 - Bryn's bathroom is down the hall and features a tub/shower fixture that has proven dangerous for her use, considering her seizure disorder
 - Her dwelling's current layout often makes reaching the restroom in time difficult

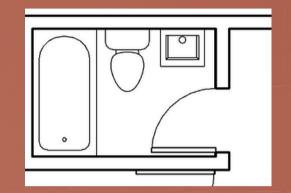






CHALLENGES WITH THE CURRENT DESIGN: CASE 2

CAMERON'S DORM BATHROOM



- Case Study 2: Physical Differences
 - Cameron's bathroom is cramped and difficult to maneuver. Its small size often makes it so he must exit his wheelchair to make proper use of it
 - The current design does not feature any grab bars
 - The small size yields a lack of available turning space for Cameron's wheelchair
 - The size and Cameron's disability make cleaning the space a challenge, especially when he is not using his arm crutches or walking freely
 - There is limited space for Cameron's personal and medical care routines



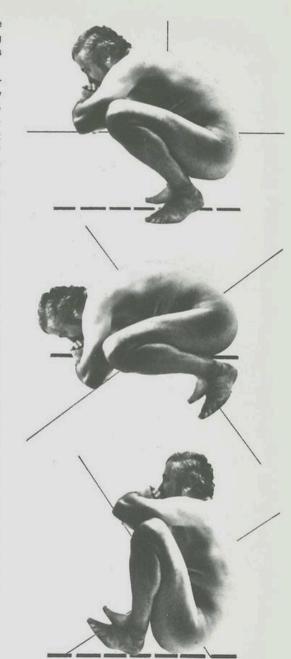




has been encased in a *chaise percée*, a decorative marble shroud, or some other bit of disguising cabinetwork, since in all such instances one is prevented from drawing one's feet back.

ture is an unaccustomed and difficult one for most any length of time, particularly if unaided. While this difficulty can easily be overcome with sufficient practice and exercise, a more serious impediment to its adoption is the problem posed by contemporary Western clothing. In large measure the problem of clothing is responsible for the gradual shift in Japan from their traditional squat closets to Western-style water closets. Having largely adopted Western dress, they also have to adopt the Western closet. In societies where some version of a loose gown is the traditional costume for both men and women, this can easily be gathered up around one's waist, out of the way, leaving the legs free. Western clothing, in contrast, almost invariably involves some form of under or outer garment-trousers, shorts, girdles, panty hose, and so on-that must be lowered around one's legs or else removed entirely. If simply lowered, as is now customary, these garments would interfere with the assumption of a properly balanced stance, which involves spreading the feet. Furthermore, they would be in danger of being soiled in the fixture or by one's own actions. Urination, for example, would be impossible in this situation. In addition, one is liable to lose the contents of one's pockets, as many unfortunate souls can wryly testify. In short, the only satisfactory way to use the traditinal form of hole-in-the-floor squat closet is to disrobe completely from the waist down. Given our accustomed habits and in light of the practical, not to mention the psychological, difficulties,

32 / POSSIBLE ROTATIONS OF SQUAT POSTURE

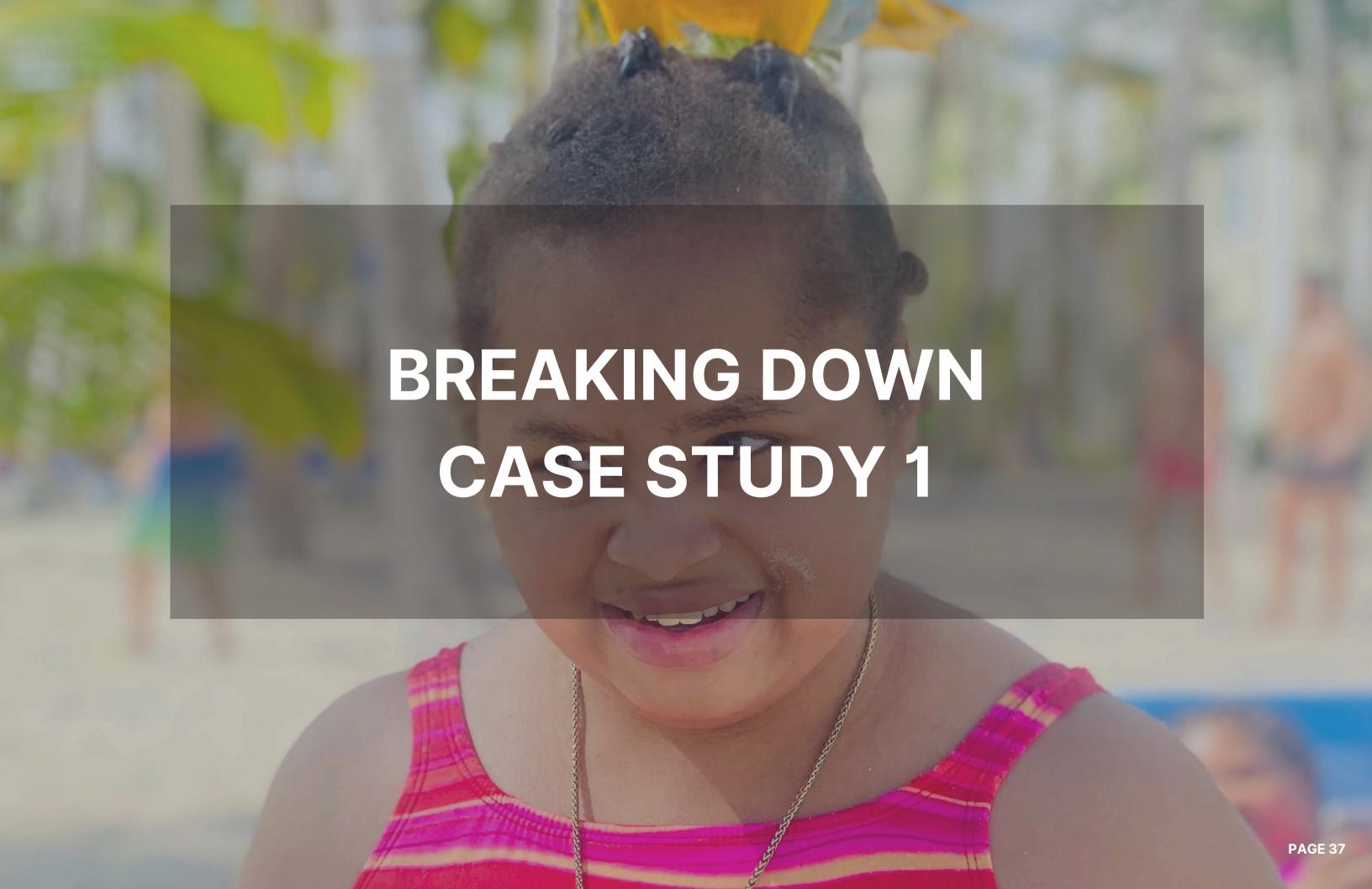


THE BATHROOM

There is a seemingly true argument presented in the introduction of Kira's text: societally, it is not often discussed what happens the bathroom. Americans often equate going to the bathroom with sexual actions or encounters, which further promotes a public discomfort with discussing what happens in a bathroom. Because of the drive to conform to what's appropriate, and a public perception of grossness, bathrooms are often poorly designed for actual human performance.

RELEVANCE TO MY THESIS:

Using the bathroom is a place where all people are brought to the same ends, and deserve to do it with dignity. Despite one's level of ability, people should be able to make use of a bathroom's fixtures with comfort and ease.



POSITIVE CHANGES THAT CAN BE MADE TO THE SPACES

BRYN'S INTERVIEW RESULTS

Bryn's daily routine forces her to maneuver the upstairs of her home:

Bryn's morning routine:

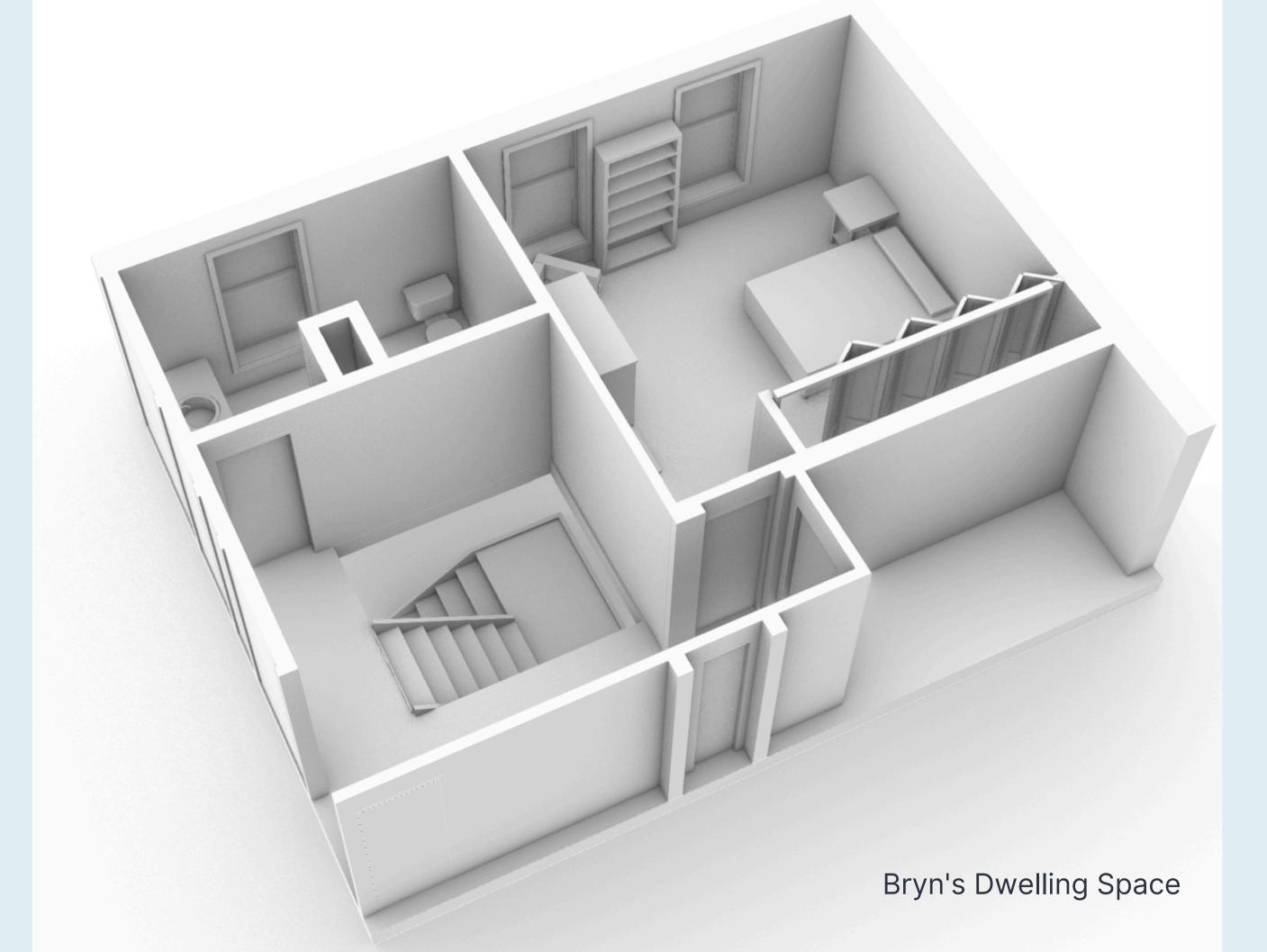
- Wake up, bathroom, parents' room, back in her room to get dressed, back in bathroom, take medicine, eat breakfast, leave
- Time in bathroom: 5min on toilet 2min for face washing, miscellaneous trips in and out of bathroom in between 2 and 6
- 30-40 minutes in total

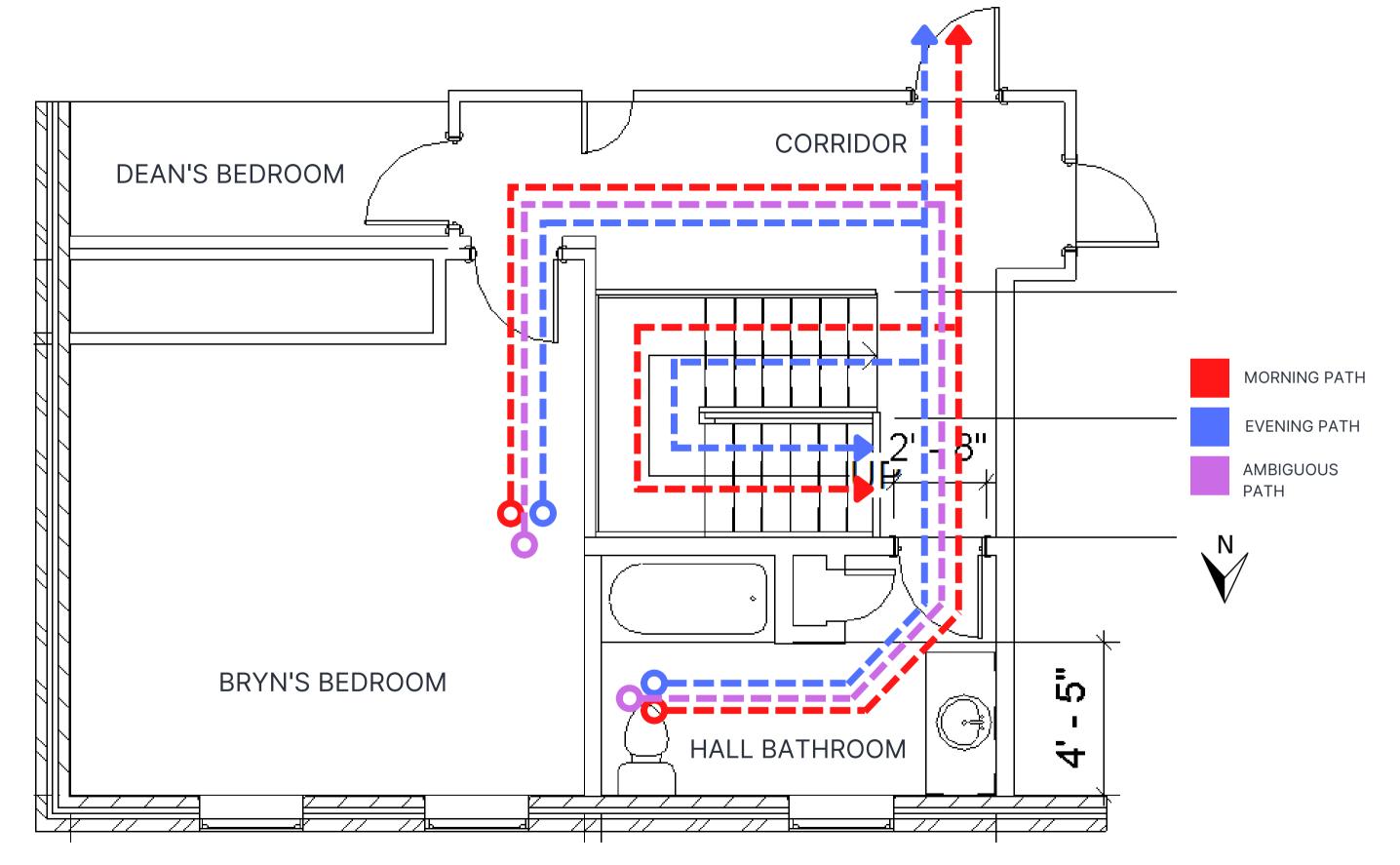
Bryn's nighttime routine:

- Private relaxation (in her room with the door closed): 1hr
- Medicine, eat dinner, bathe, brush teeth, go to bed,
- Time in bathroom:
- Average bath: 1 hr.
- Average shower: 30 min

Middle of night: direct trip to restroom

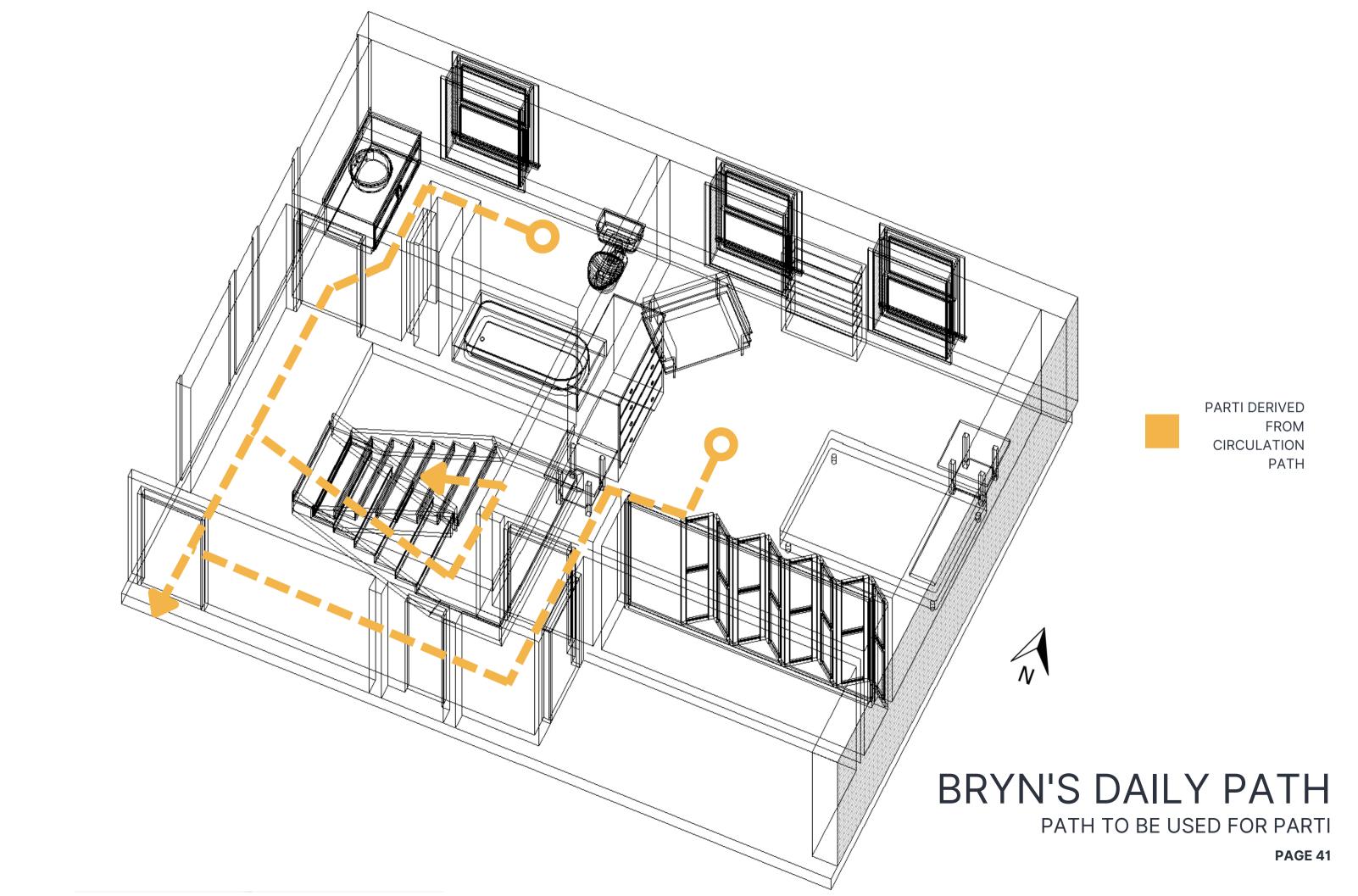
• 3 minutes

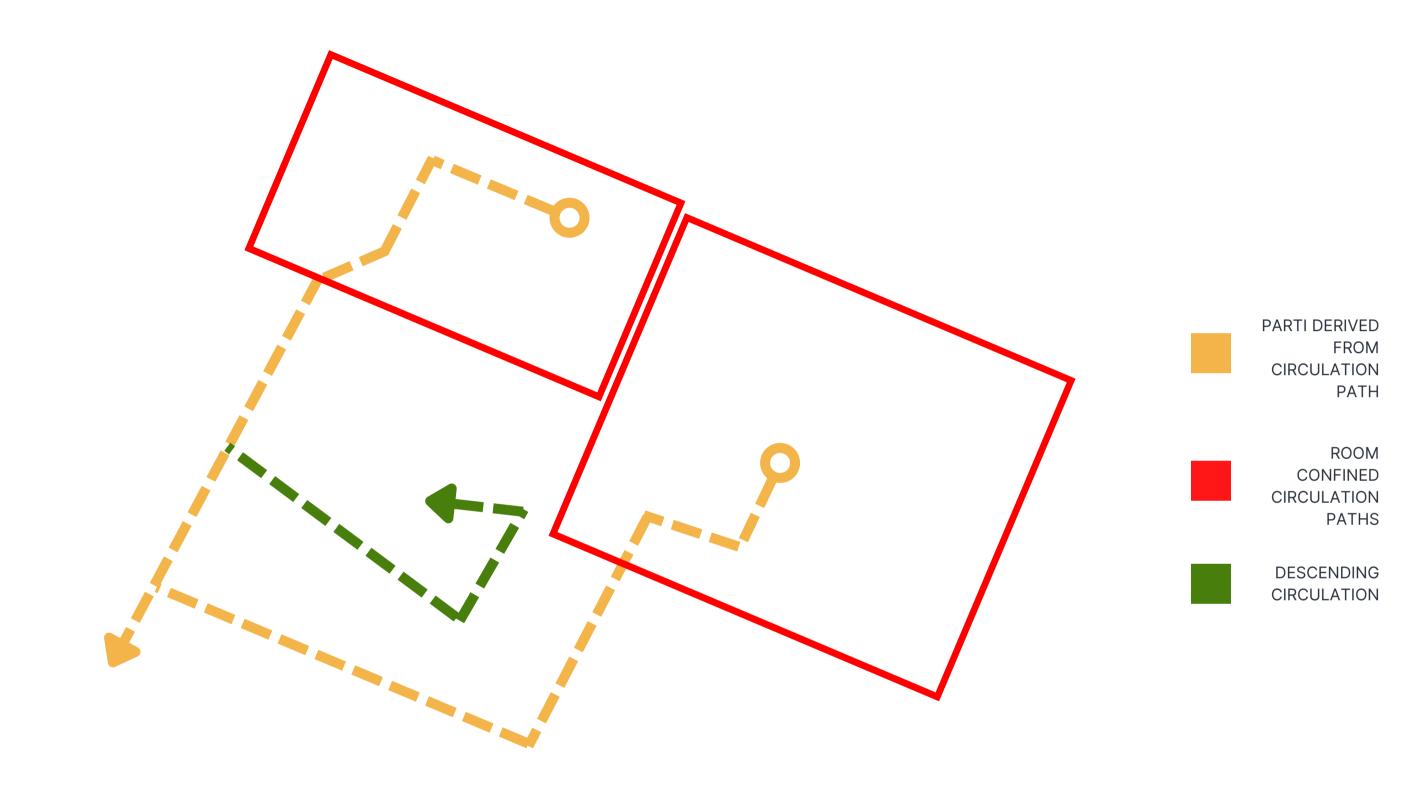




BRYN'S DAILY PATH

MORNING, EVENING AND AFTER HOURS





BRYN'S DAILY PATH

PATH TO BE USED FOR PARTI



INTERVIEW RESULTS

ANALYSIS OF CASE 1

Case Study 1 Bryn: Cognitive differences; Mild Challenges

Bryn's specific case does not actually call for much change to her physical surroundings, but begs for gentle consideration in the direction of specific elements and potential dangers. Such changes might extend to fixtures, surface treatments, and edits to her path of travel, especially when in crisis.

This study will consider:

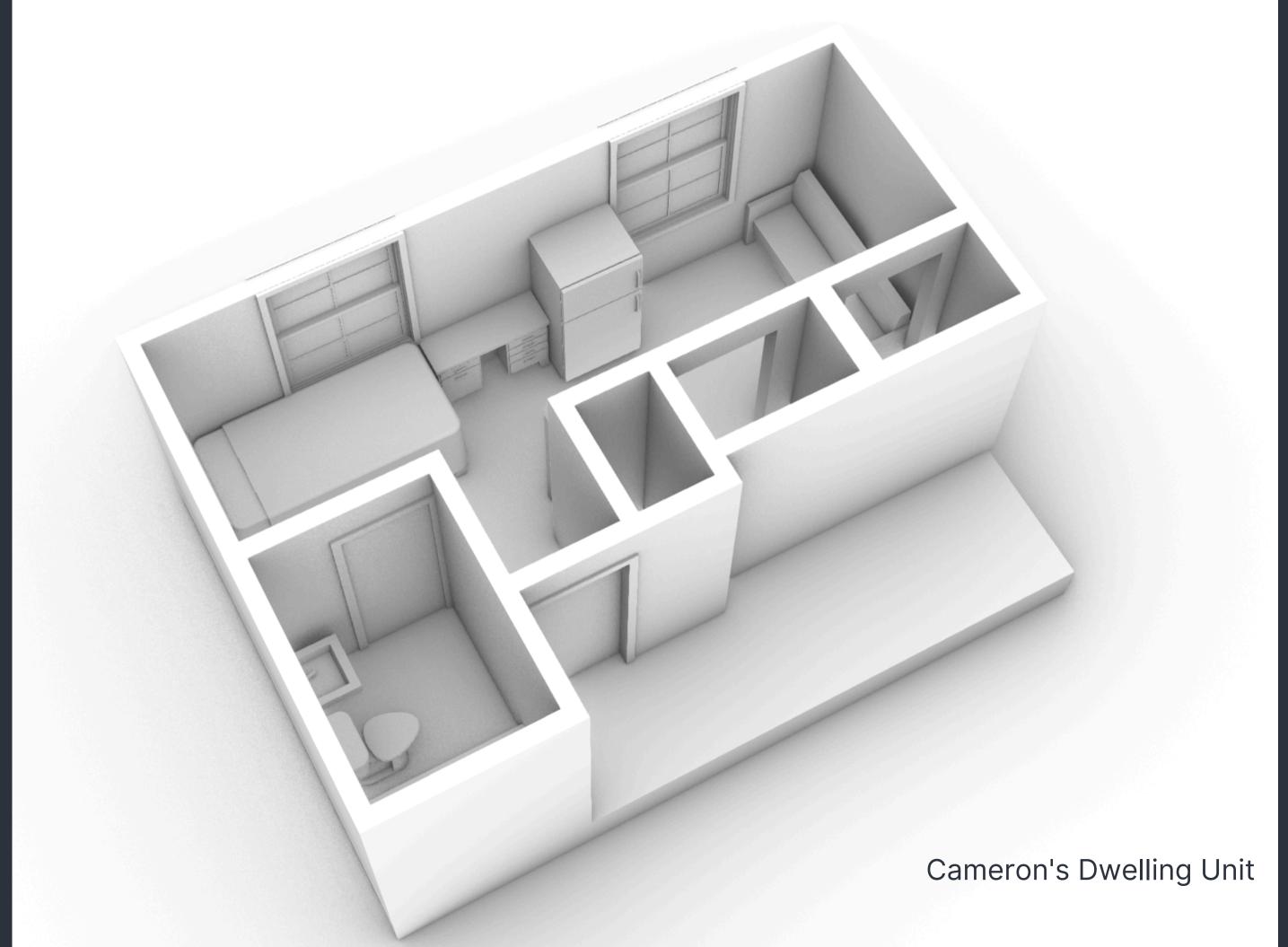
- Bryn's morning and evening routine and how she interacts with her place of dwelling
- The potentiality of Bryn needing to use the restroom in the middle of the night
- How Bryn's challenges affect her dwelling experience
- Methods of improving Bryn's safety and comfort given her challenges
- Improvements that can be made for anyone living with cerebral palsy, and/or a seizure condition
- Bryn's experience and safety in the bathroom and the gendering of her space
- Bryn's actual feedback from the interviews
- General comfort

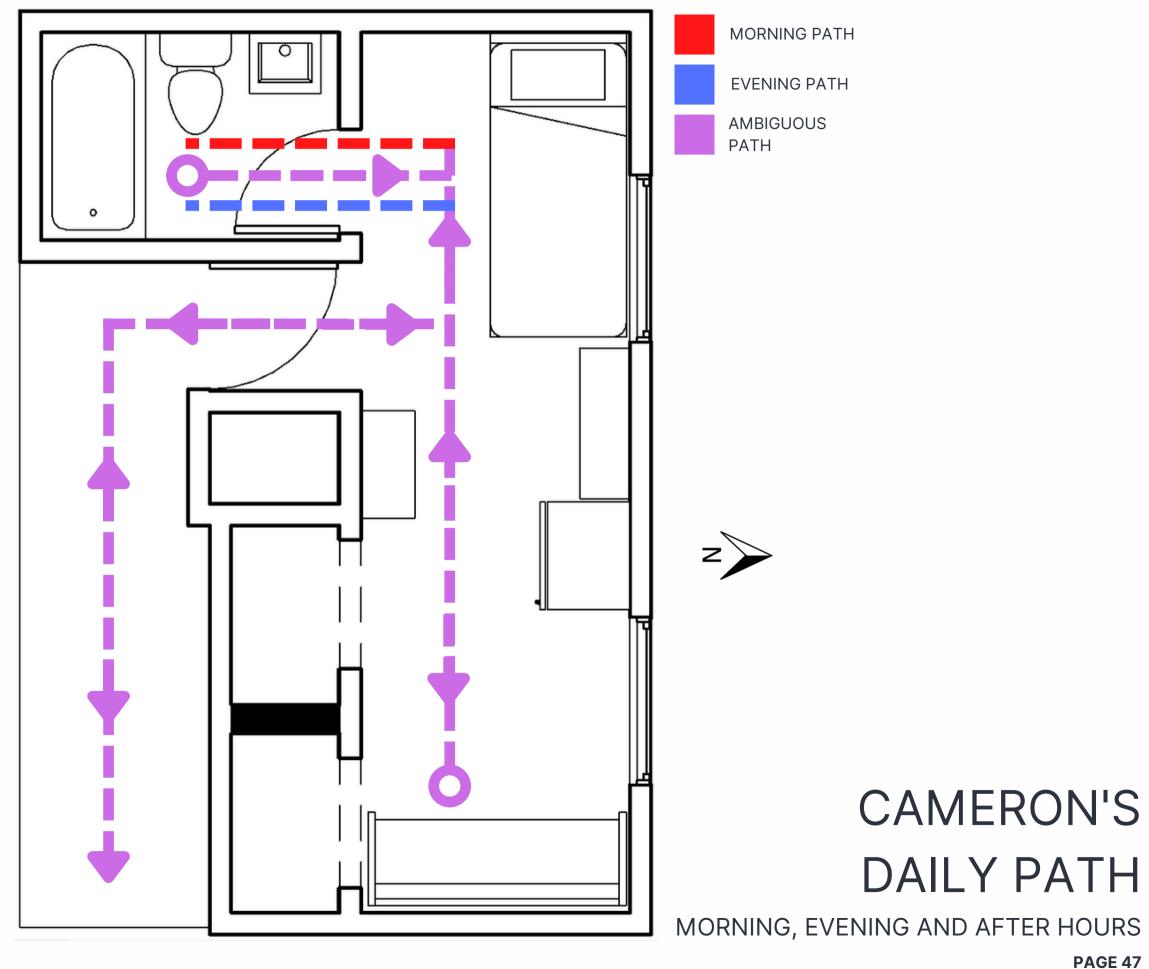


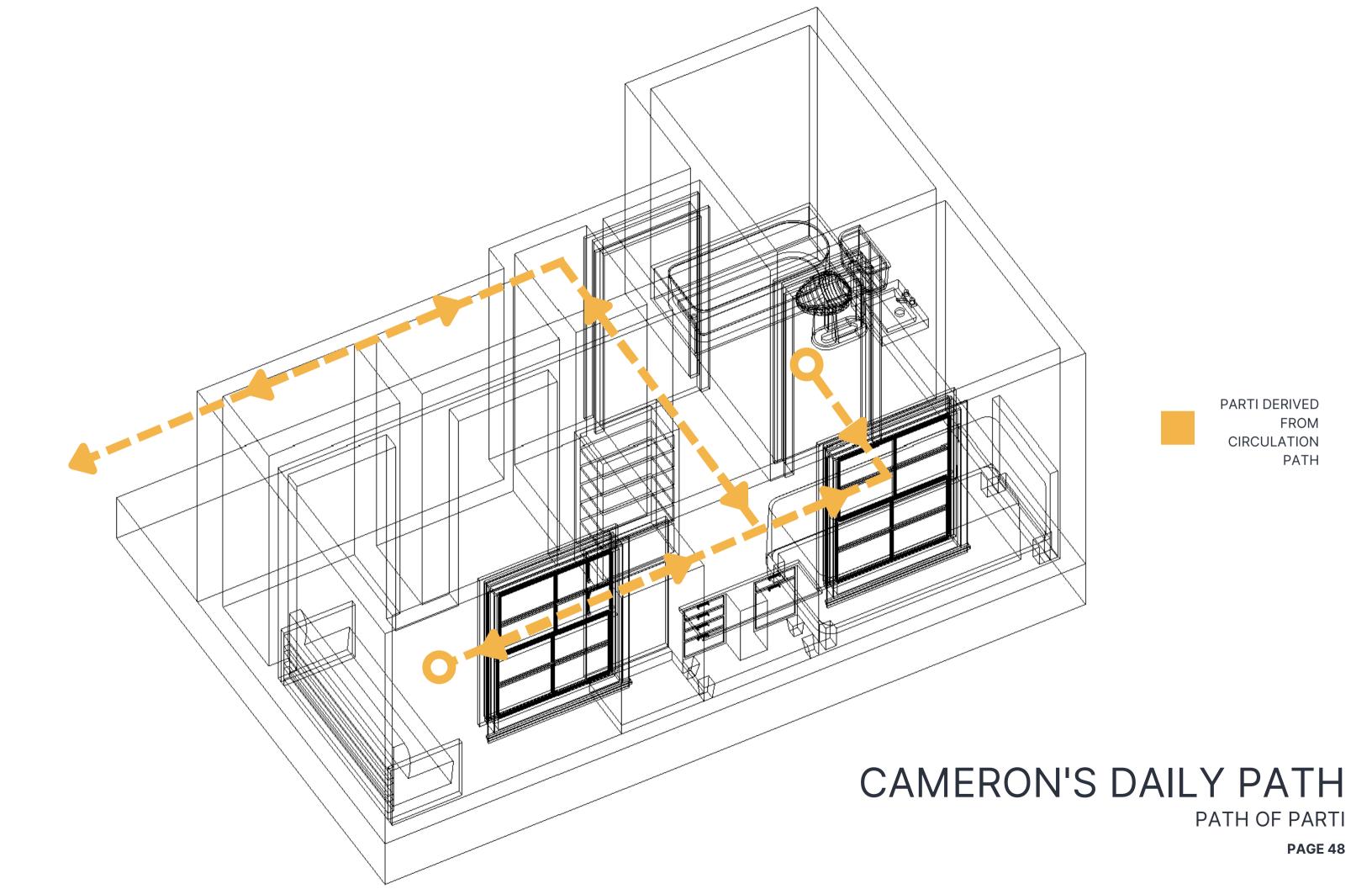
POSITIVE CHANGES THAT CAN BE MADE TO THE SPACES

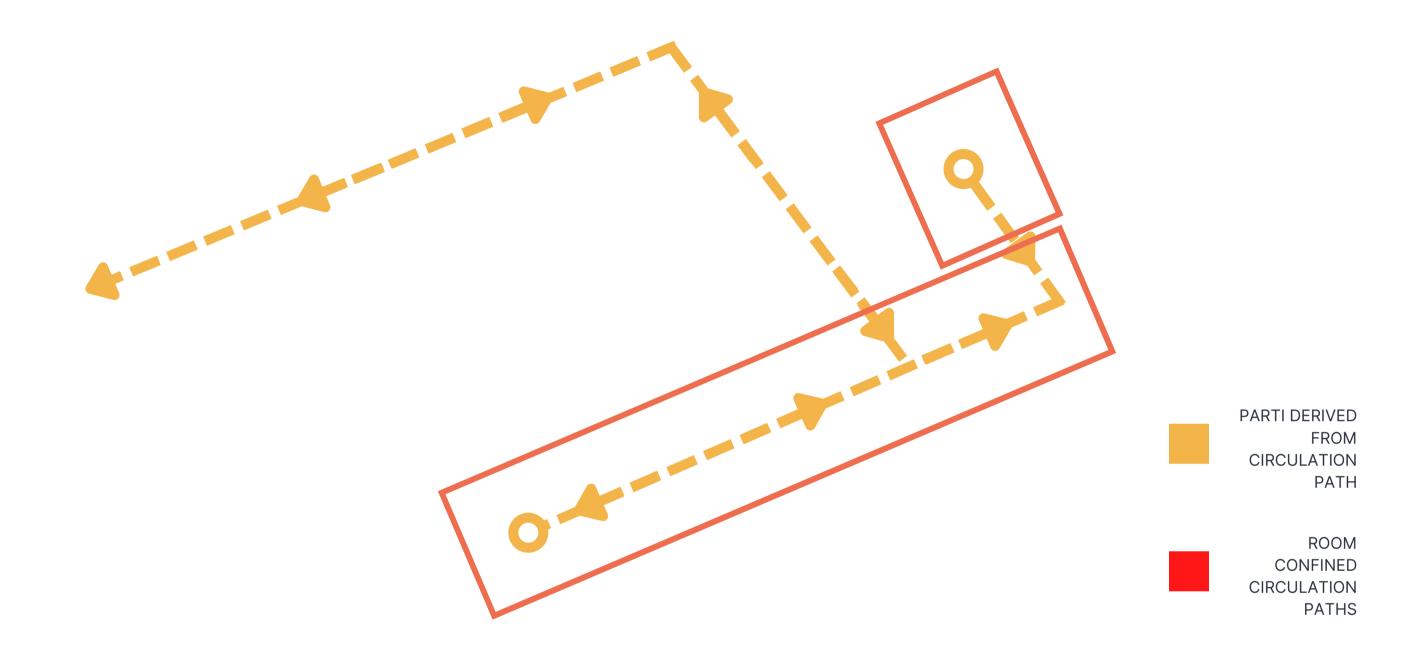
CAMERON'S INTERVIEW RESULTS

- Wake up and catheter
- Drink water
- Get ready for his day
- Classes
- Catheter every 4-6 hours during the day
- So 8-10am. 12-2pm
- Eats lunch and dinner only, and ends the day by clearing himself
- *If Cameron does not clear himself throughout the day, he risks kidney disease and eventual failure. He may have to clear himself at odd hours of the night.









Cameron's parti is largely 2-dimensional, and reflects the limited spatial qualities of his dwelling.

CAMERON'S DAILY PATH

PATH OF PARTI



INTERVIEW RESULTS

ANALYSIS OF CASE 2

Case Study 2 Cameron: Physical differences as result of spinal injury; Moderate to Severe Challenges

Cameron's specific case calls for a reimagining of his physical space. The changes he would require for comfort might extend beyond fixtures and basic renovations, but might include a rethinking of his space, and how he navigates it.

This study will consider:

- Cameron's mobility and accessibility as he lives in the dorm
- Cameron's habits: Morning, and nightly routines
- Cameron's lived experience and struggles as a partial paraplegic in his university dorm
- Cameron's navigation and mobility of the bathroom
- General comfort



FOLLOWING THE INTERVIEW

BRYN: SOLVING

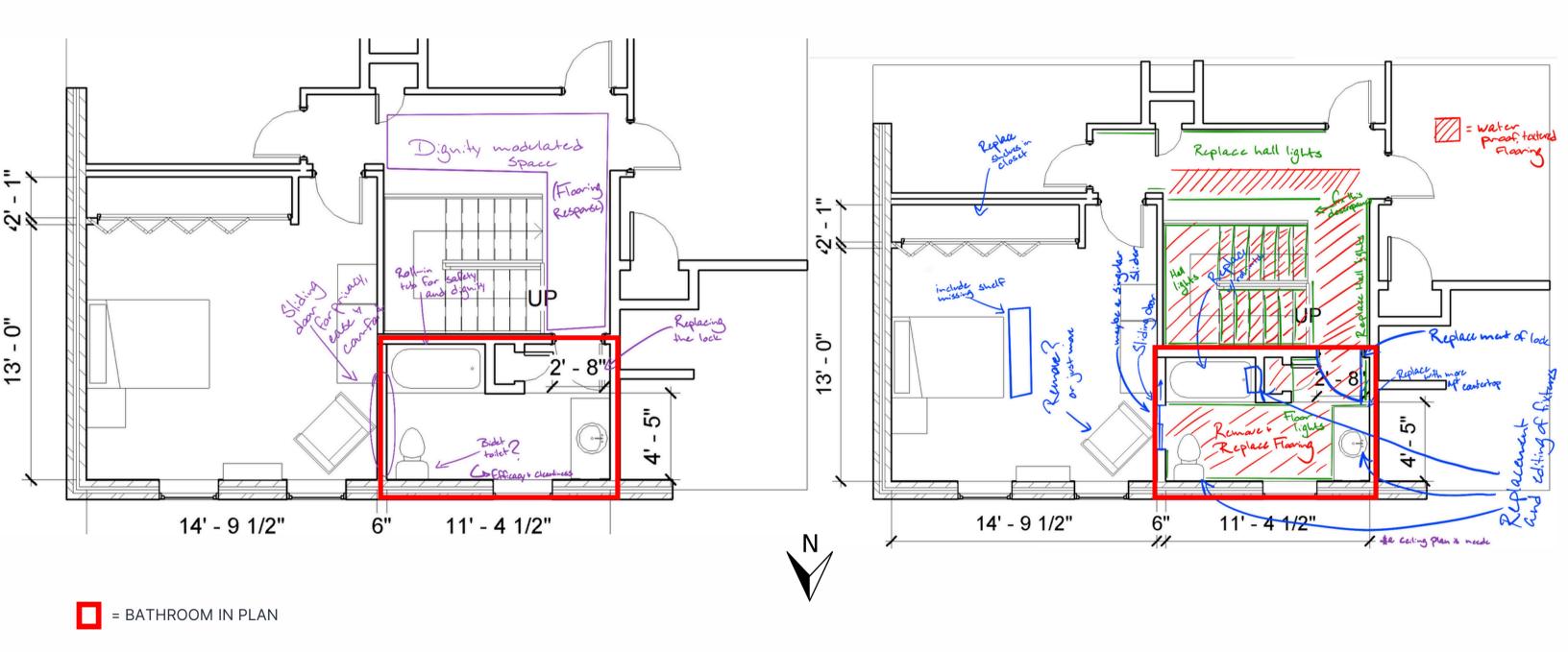
IMPROVEMENTS TO BE MADE TO BRYN'S DWELLING SPACES:

- Demolition of wall that separates room and bathroom
- Installation of a walk in bathtub and improved fixtures
- Installation of a temperature control mechanism
- Installation of low-flow faucets
- Installation of improved toilet with a slow-close seat and lid
- More sustainable light fixtures
- Pop-lock on main door
- Introduction of lightweight sliding door at room entrance
- Quick-dry tiles on bathroom flooring
- Dimmable lights

CORRIDOR:

- Some sort of water proof or rubberized flooring in upstairs hallway
- Lights to line baseboard in upstairs corridor
- Lights to line stairs





EDITING THE PLANS

CASE STUDY 1: BRYN'S FLOOR PLANS

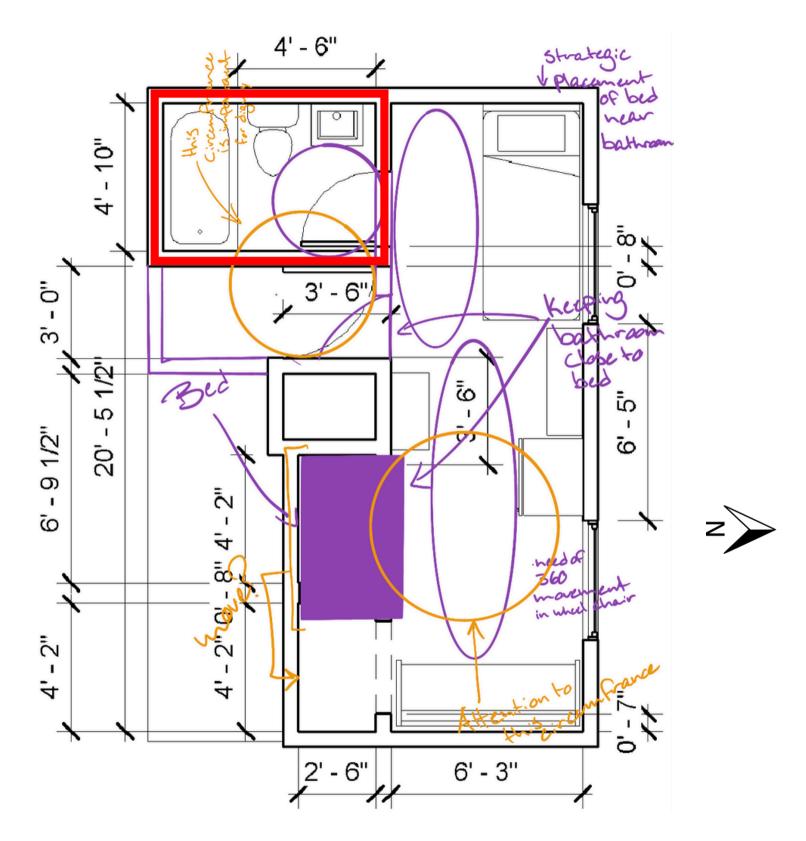


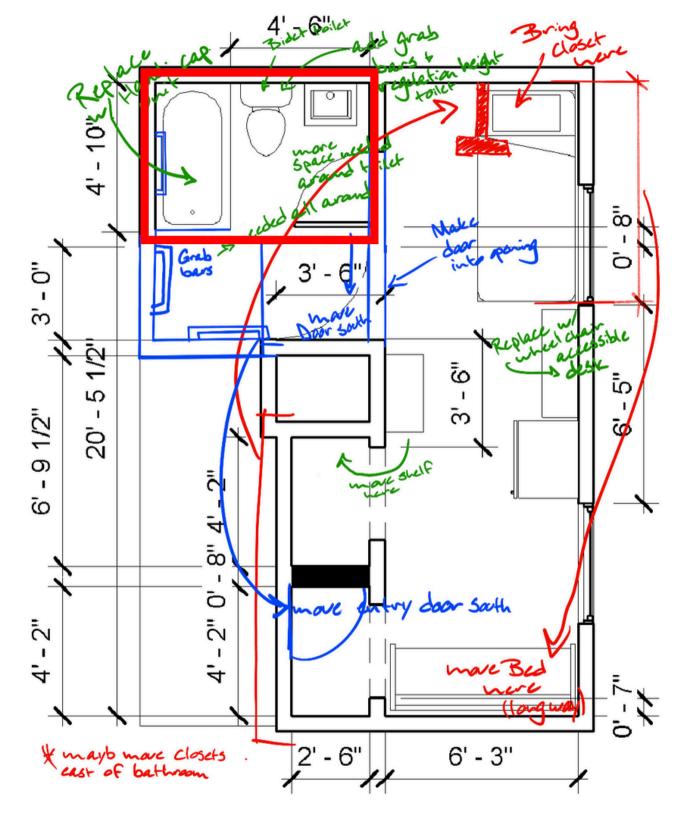
FOLLOWING THE INTERVIEW

CAMERON: SOLVING

IMPROVEMENTS TO BE MADE TO CAMERON'S DWELLING SPACE

- Try to focus on the grouping and zoning of the interior spaces
- How much space is being allocated to storage as opposed to actual dwelling?
- Try fixing each of the door sizes and create a spatial opportunity for a full 360 turn around
- Be careful of the confines of the space that actually exists
- Maybe destroy and move the closet? Could be moved to be adjacent with WC and the removed space could expand bedroom dwelling
- How do we begin to address the lack of directionality in the space?
- Try knocking down the exterior wall?
- Maybe apply the same door openings used for the closet for the door of the bathroom
- A lot of what's cluttering the space is the furniture, does fixing this space extend to the furniture as well
- Replace bathroom fixtures
- Put in a new sink
- Repaint







EDITING THE PLANS

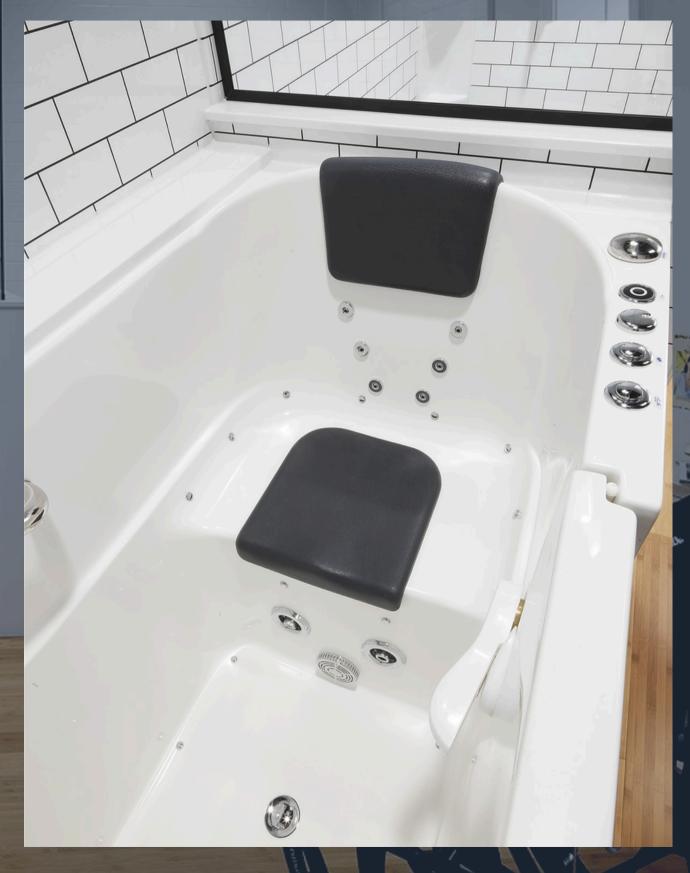


WALK-IN TUBS

ADVANTAGES OF A WALK-IN TUB

"The walk-in tub allows for a similar soaking experience to a regular bathtub. They come equipped with safety features such as anti-slip flooring, grab bars and bench seats. Additionally, luxury models are available which include water jets, digital temperature display, thermostatic temperature control valves, extending handheld flex hose and heated seats. Thus, changing to a walk-in tub can be both a safe and luxurious upgrade to your current bathtub."





HTTPS://WWW.BATHPLANET.COM/BATHS/WALK-IN-TUB/

WALK-IN TUBS

CASE STUDY 1: BRYN'S FLOOR PLANS

DESIRED FEATURES FOR A WALK IN TUB:

FOR THIS EXERCISE COST IS NOT CONSIDERED

- DESIGN THAT KEEPS HEAD ABOVE WATER EVEN WHEN CONSCIOUSNESS IS LOST
- GRAB BARS FOR EASE OF ENTRY AND EXIT
- BUILT IN TEMPERATURE MANAGEMENT FEATURES
- SHOWER, TUB COMBINATION
- NO-SLIP FLOORING
- APPROPRIATE FOR SPACE

Walk-in Tub Style	Uses	Average installation cost
Soaker walk-in tub	Standard tub with no jets	\$2,300 - \$7,500
Bariatric walk-in tub	Larger tub for persons 300+ lbs	\$4,200 - \$11,500
Walk-in tub shower combo	Attached showerhead with option to shower	\$3,300 - \$8,500
Wheelchair accessible tub	Wider entryway to accomodate persons in wheelchairs	\$3,500 - \$11,500
Lay down walk-in tub	Slightly longer with option to lay down and strech out	\$5,000 - \$8,000
Hydromassage walk-in tub	Whirlpool jets for relaxation or muscle soreness	\$4,400 - \$10,500
2-person walk-in tub	Larger tub that fits two bathers at the same time	\$5,500 - \$12,500



THE BATHROOM

""Barrier free showers are low-threshold showers available with a rubber T-Water Stopper to keep water in the pan as it drains. These flexible thresholds allow for shower seats to roll right into the shower, effectively eliminating the danger of falling when entering.

There are also definite cost benefits to opting for an accessible shower. In addition to the money saved on utility bills, the product itself is generally less costly than a bathtub and installation costs are greatly reduced.

Lastly, a roll-in shower is a lifetime solution to safe accessible bathing. Showers which have plywood backing permit the construction of additional grab bars and seats as your mobility changes."



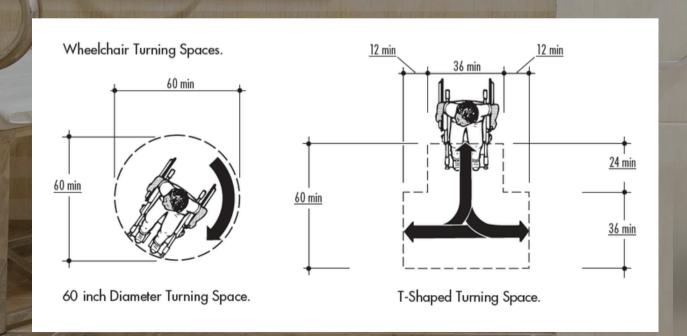
ROLL-IN SHOWERS

CASE STUDY 2: ADA ALTERNATE ROLL-IN SHOWER

DESIRED FEATURES FOR A ROLL IN SHOWER:

FOR THIS EXERCISE COST IS NOT CONSIDERED

- PRIORITIZATION OF ACCESSIBILITY AND PERSONAL INDEPENDENCE IN BATHROOM
- INSTALLATION OF ROLL-IN SHOWER
- CREATION OF PROPER WHEELCHAIR TURN RADIUS
- ADA REGULATED SEATING
- APPOSABLE SHOWER HEAD
- AESTHETIC UPGRADES
- 0'-0" SLOPE DIFFERENCE (THRESHOLD)





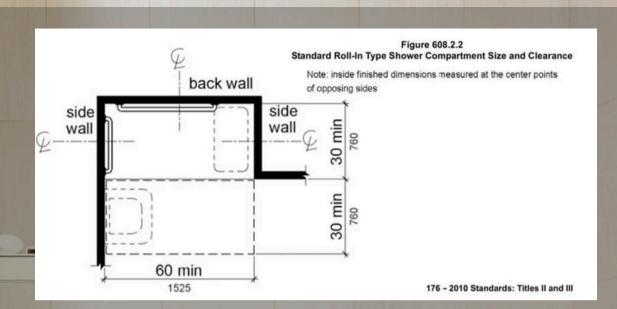
ROLL-IN SHOWERS

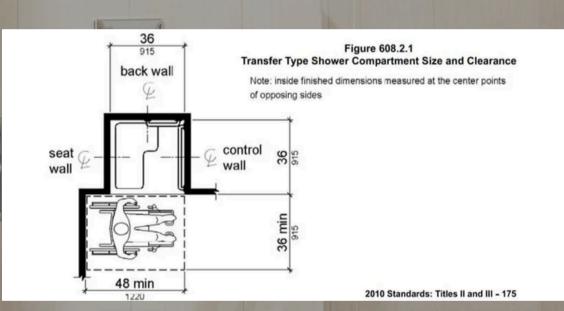
CASE STUDY 2: ADA TRANSFER TYPE SHOWERS

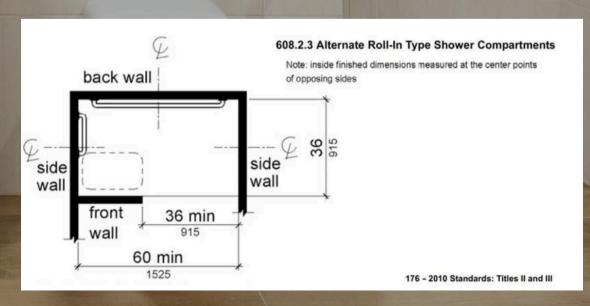
STANDARD ROLL-IN SHOWERS

TRANSFER TYPE
SHOWERS

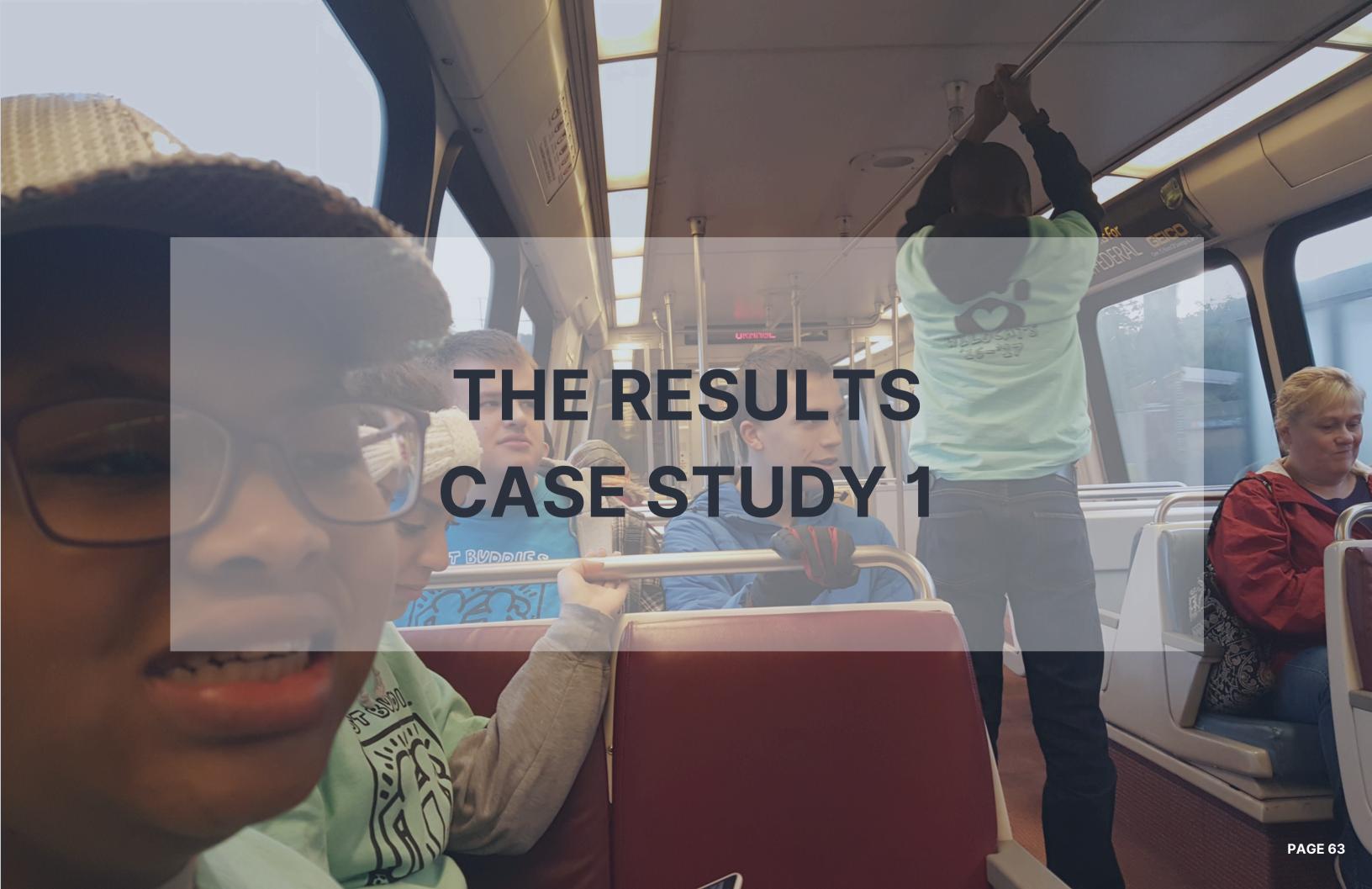
ALTERNATE ROLL-IN SHOWERS

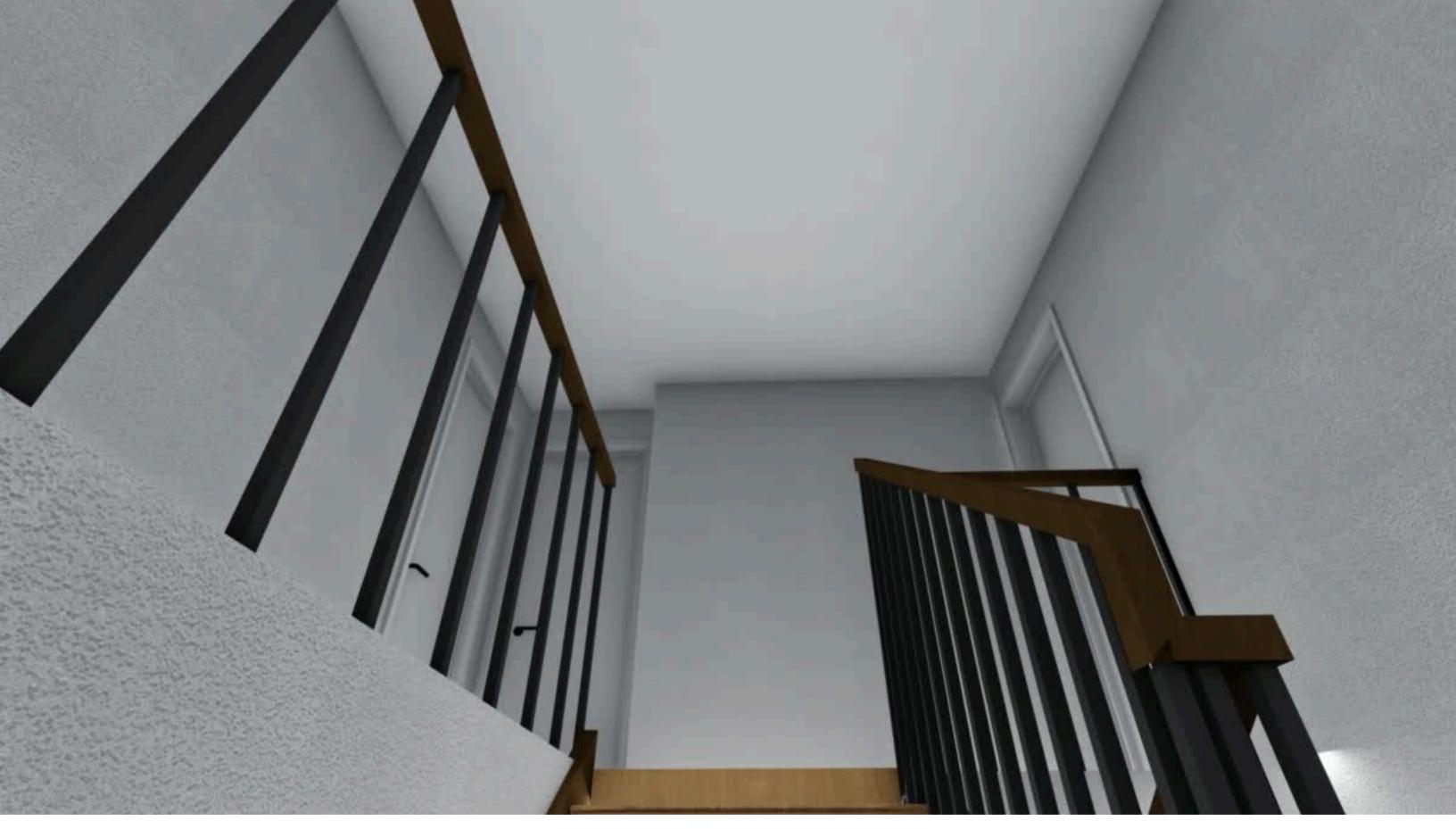






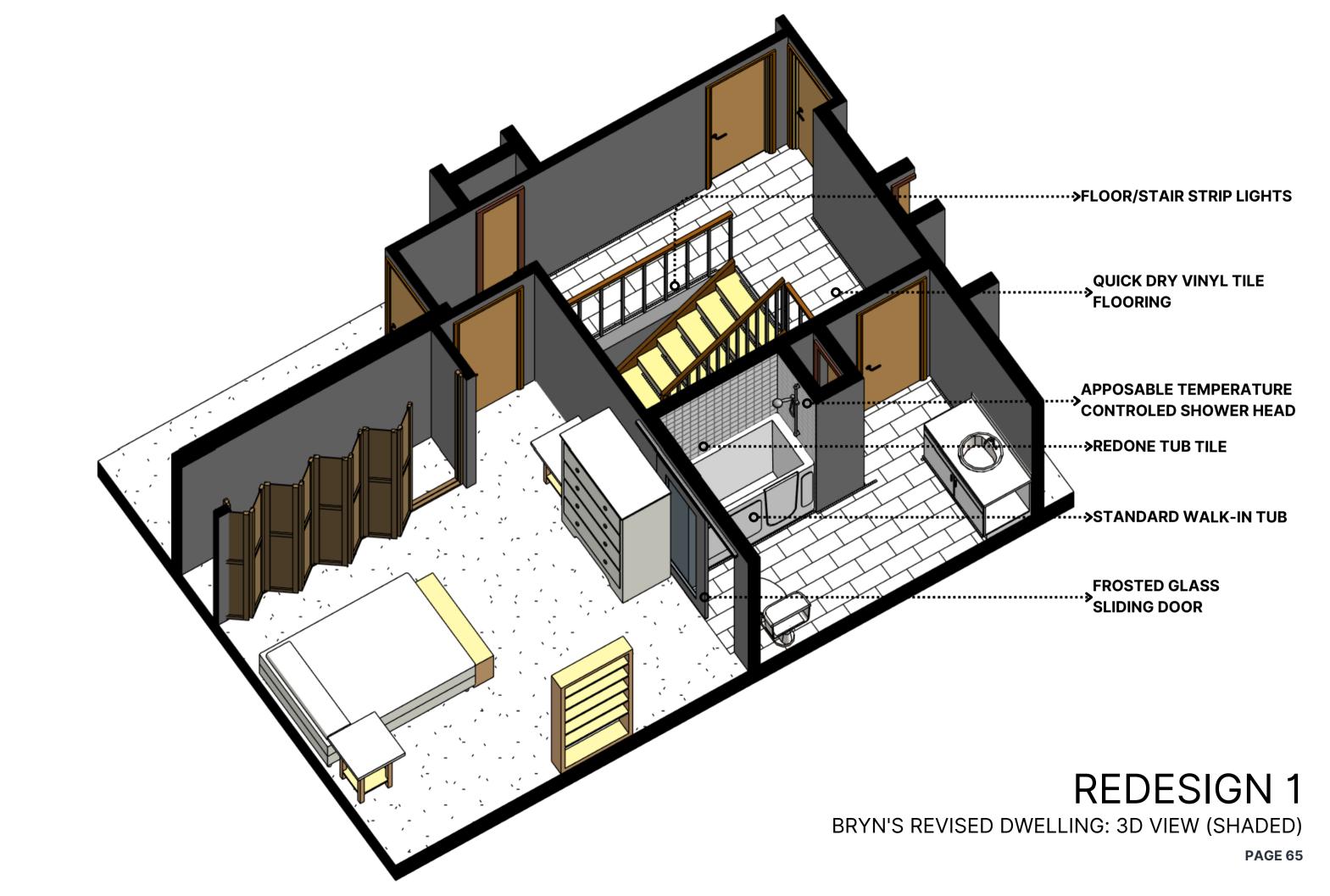
PAGE 62

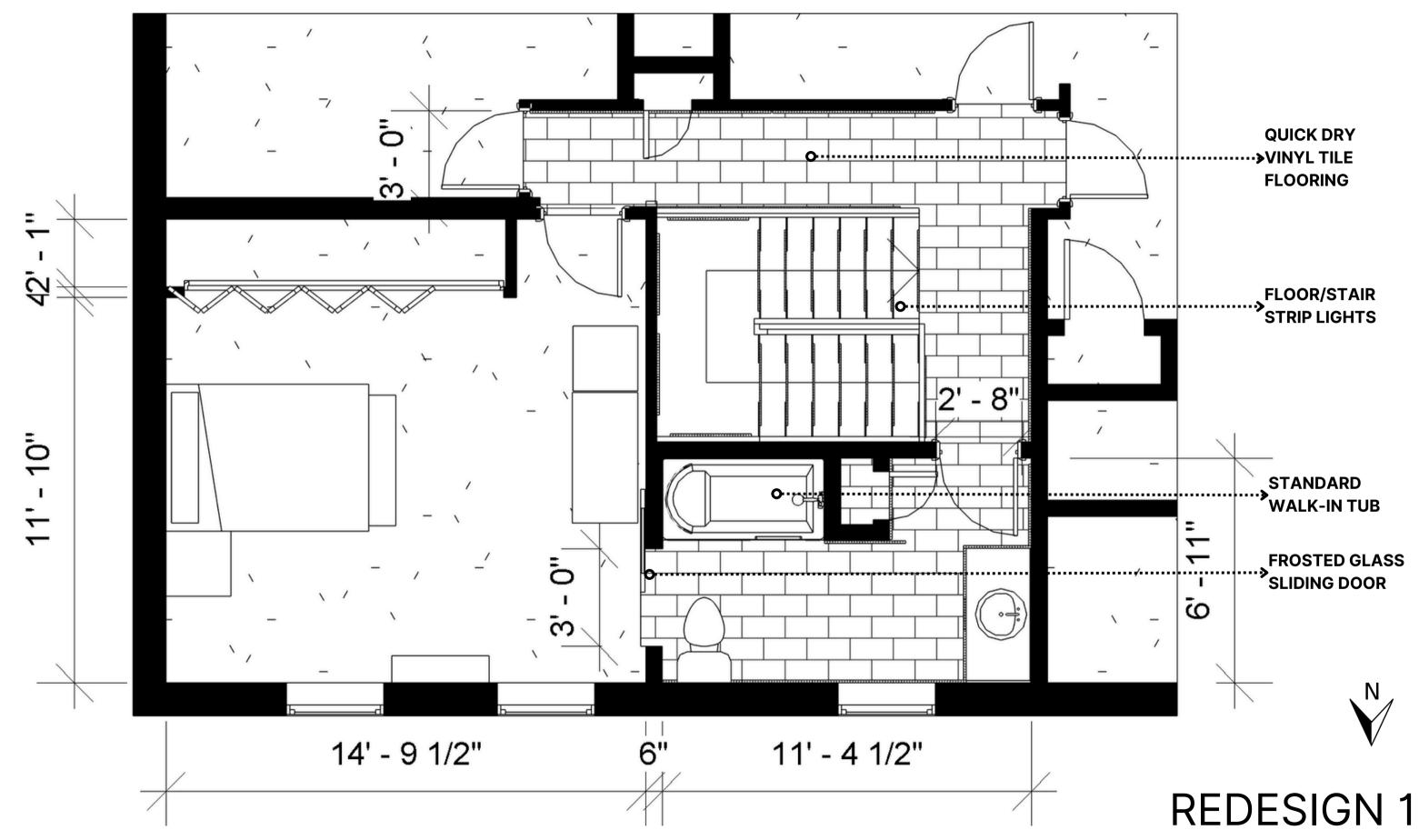




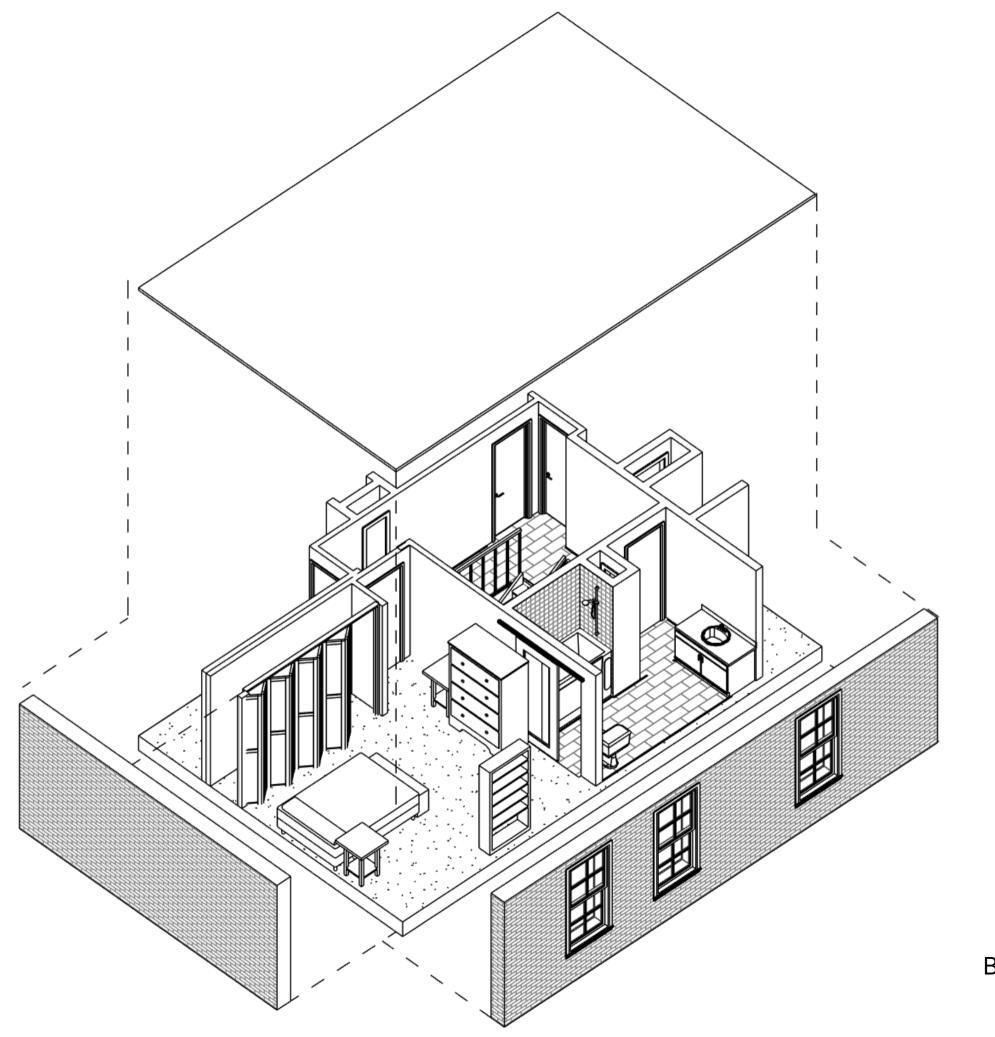
INTERIOR RENDERING

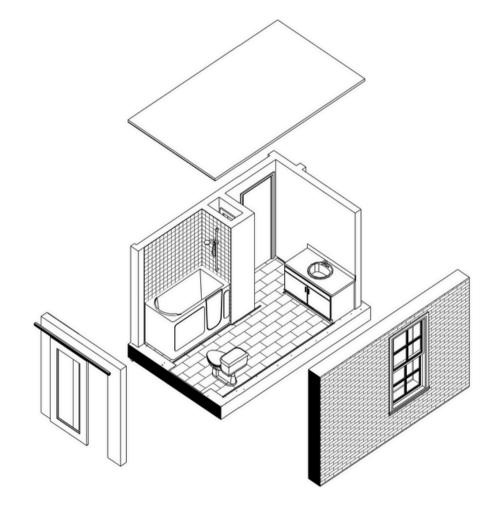
1: BRYN'S DWELLING PAGE 64





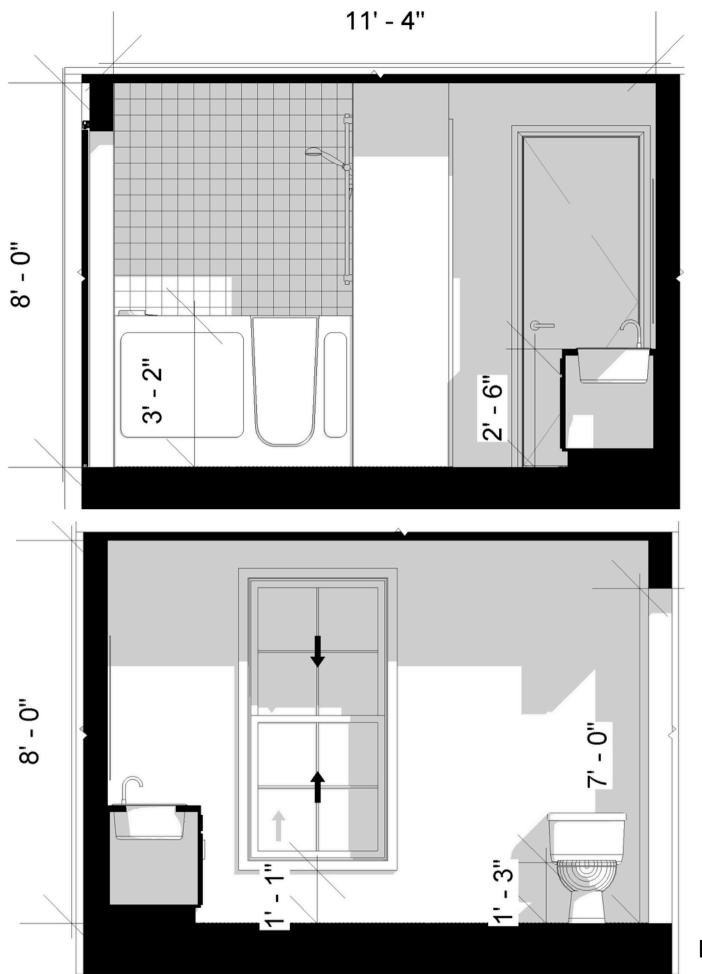
BRYN'S REVISED DWELLING: PLAN





REDESIGN 1

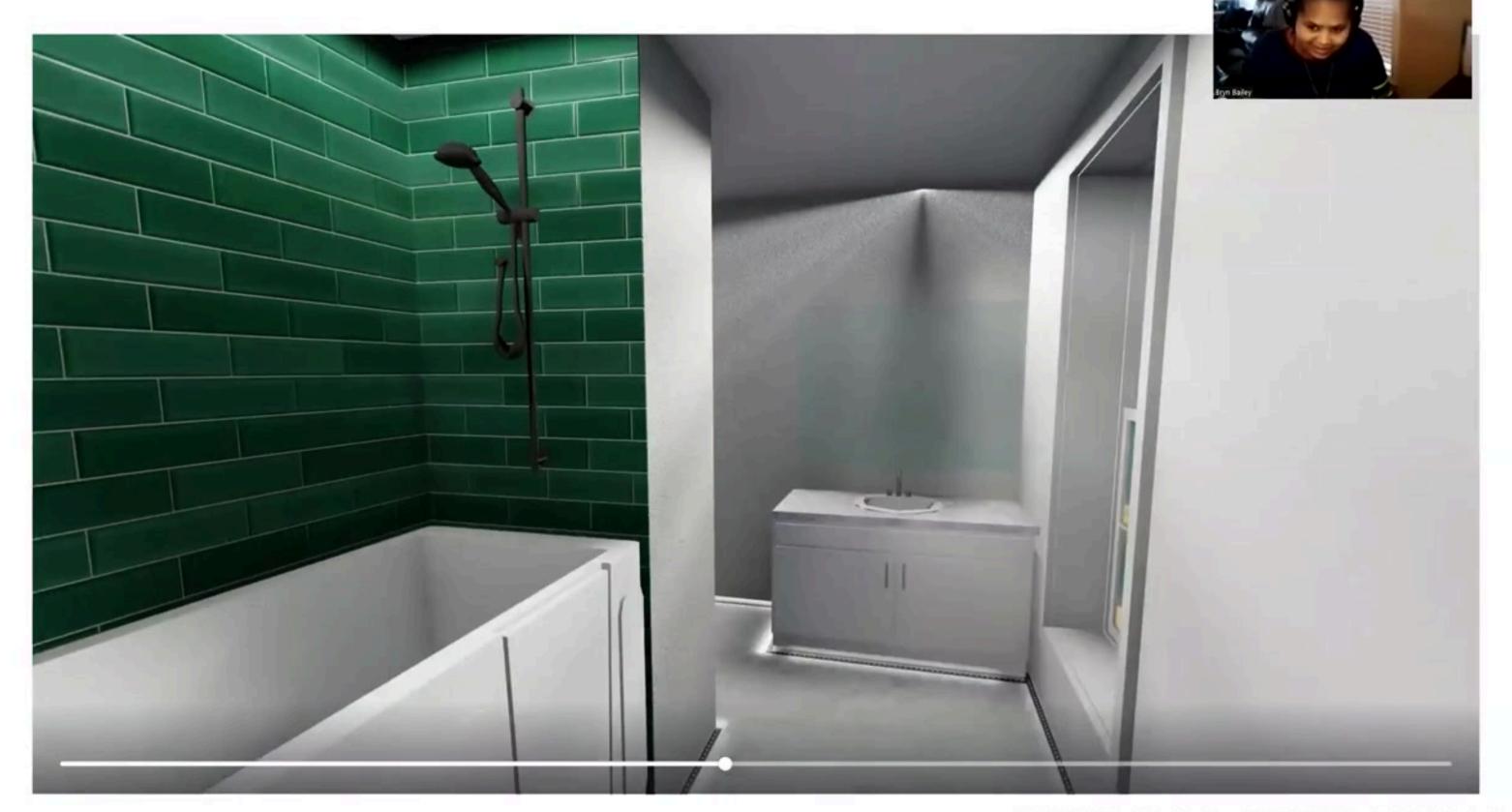
BRYN'S REVISED DWELLING: EXPLODED 3D VIEW



BATHROOM 1

BRYN'S REVISED BATHROOM: SECTION

PAGE 68



INTERIOR RENDERING

1: BRYN'S DWELLING

DWELLING 1 REACTION

PAGE 69

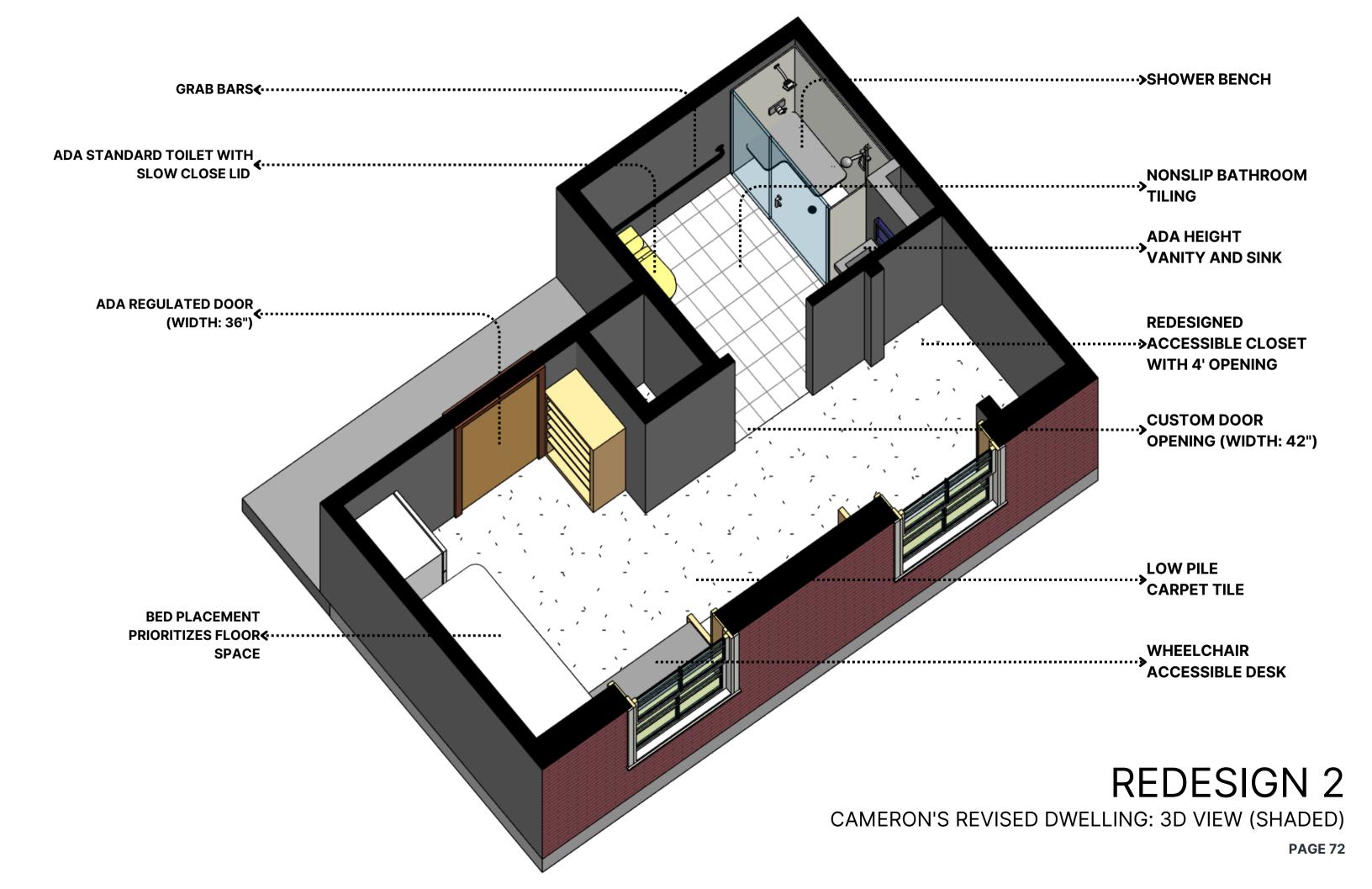


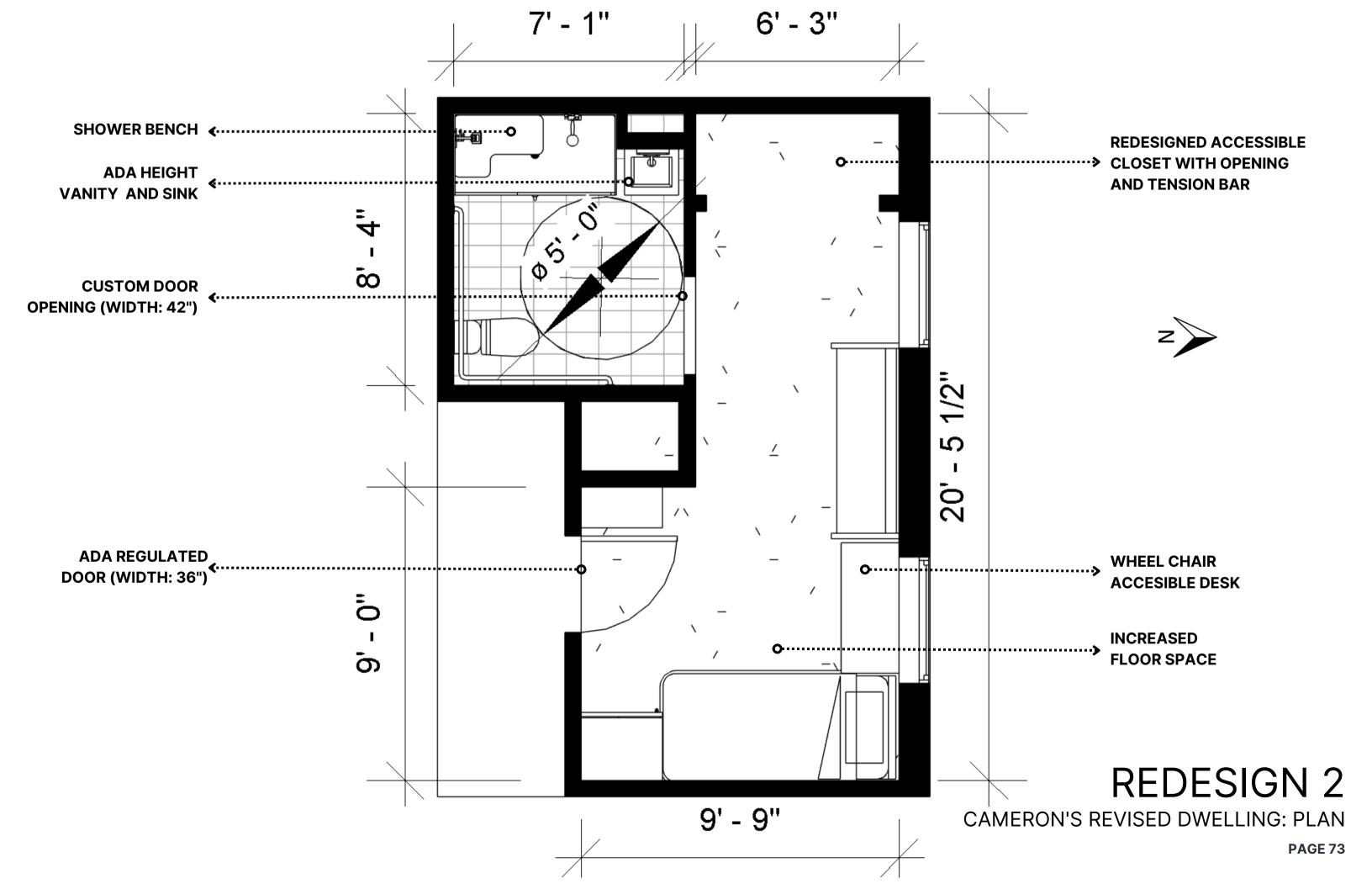


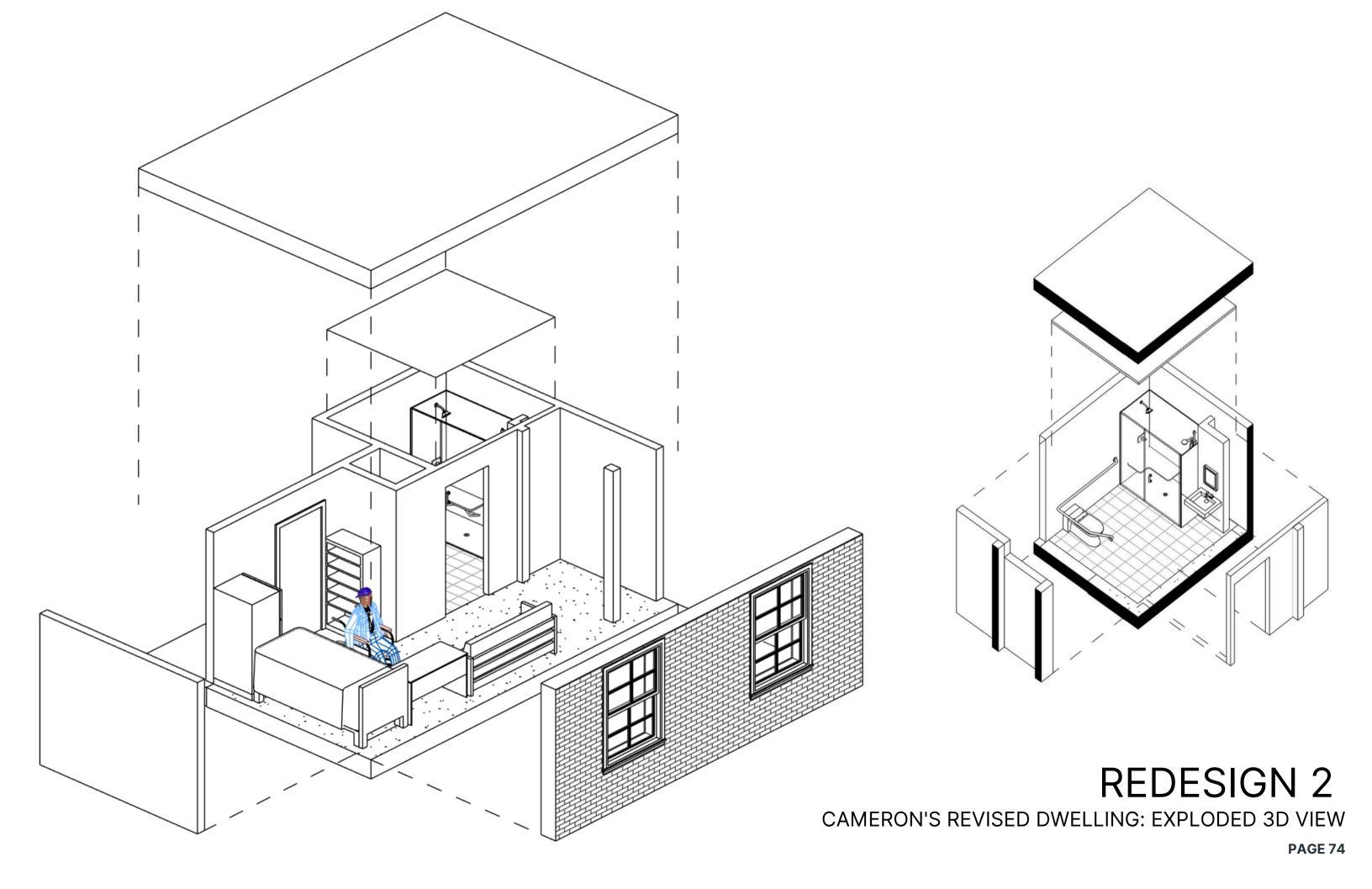
*DOOR IN SHOWER IS MEANT TO SLIDE

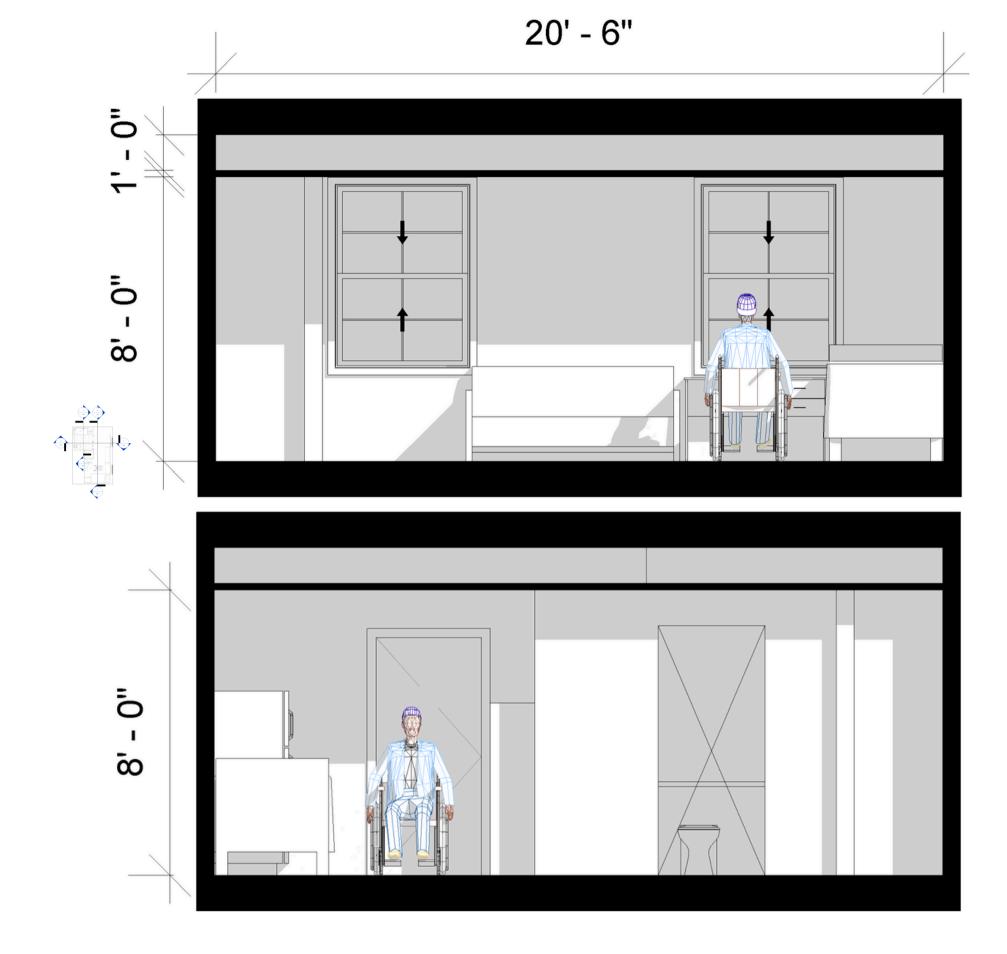
INTERIOR RENDERING

2: CAMERON'S DWELLING
PAGE 71



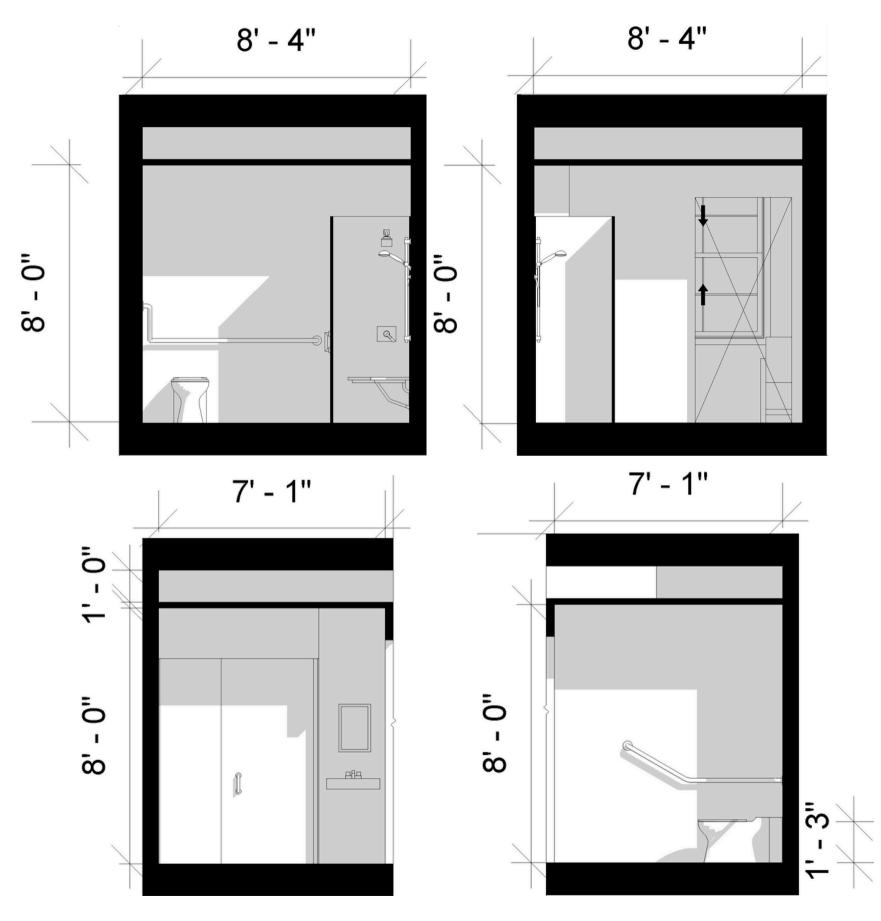






DWELLING 2

CAMERON'S REVISED DWELLING: SECTION





BATHROOM 2

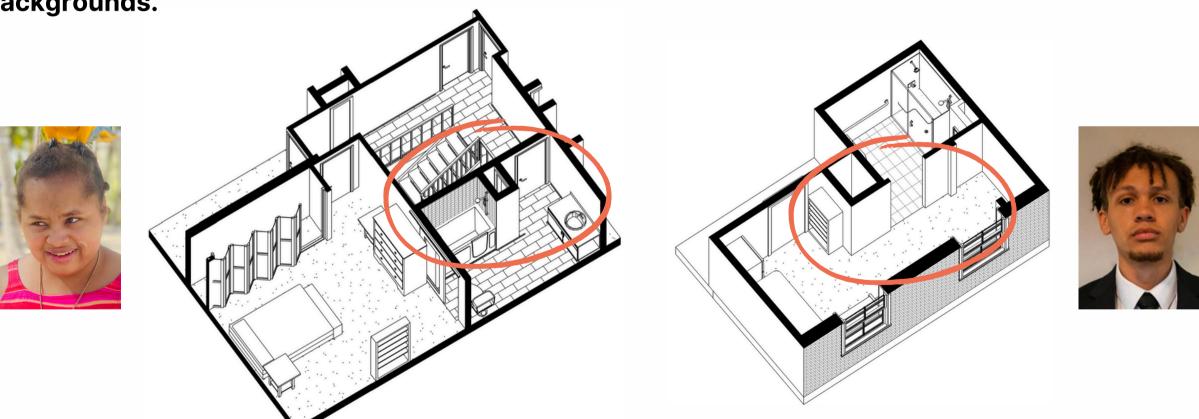
CAMERON'S REVISED BATHROOM: SECTION



DWELLING 2 REACTION

SYNTHESIS

Empathic design can have a profound impact on the customization of domestic dwellings, as evidenced by the experiences of Bryn and Cam. By involving individuals in the design process, designers can create living spaces that are tailored to the unique needs and preferences of the residents. In Bryn's single-family dwelling, for example, participatory design allowed for the integration of safety features that accommodate her physical disabilities, while also providing a calming and accessible environment. Similarly, in Cam's dorm unit, empathic design led to the creation of a space that promotes comfort and inclusivity, with areas that facilitate his movement and wheelchair navigation. By prioritizing inclusivity and client input, empathic design can transform domestic spaces into functional, comfortable, and meaningful environments for individuals with diverse needs and backgrounds.



AFTER REVIEWING THE WORK COMPLETED IN SEMESTER ONE, IT IS POSSIBLE TO CLARIFY THE CHANGES MADE DIAGRAMMATICALLY AND IMPLEMENT FURTHER EDITS TO THE INTERIOR ARCHITECTURE OF THE DWELLINGS.

CEILINGS IN THESE SPACES WERE LEFT UNALTERED TO PROVIDE A LEVEL OF FAMILIARITY TO THE OCCUPANTS.



EXPANDING

TYPOLOGIES

THE EXPLORATION OF THIS PROJECT WOULD BE LARGELY CONCERNED WITH THE EXPRESSION OF INCLUSITVITIY THROUGHOUT ASPECTS OF THE **HOME** (PRIVATE DOMICILE). THE LIST BELOW IS A ROUGH SEPARATION OF DIFFERENT TYPOLOGIES AND THE PROGRAMMATIC SPACES THEY MIGHT INCULDE. SUCH SPACES MIGHT UNDERGO RENOVATION UNDER THE OVERSIGHT OF THE NONPROFIT ORGANIZATION.

DUPLEX

BEDROOM (X)
RESTROOM(X)
KITCHEN(X)
VERTICAL CIRCULATION
INGRESS/EGRESS

SITTING ROOM(X) FOYER

DINING ROOM(X)
PATIO/DECK

STORAGE(X)

LAUNDRY (X)

APARTMENTS

BEDROOM
RESTROOM
KITCHEN
DINING ROOM*

VERTICAL CIRCULATION
INGRESS/EGRESS
SITTING ROOM

PATIO/DECK*
STORAGE

A.D.U.

BEDROOM
RESTROOM
KITCHEN
VERTICAL CIRCULATION*

INGRESS/EGRESS
SITTING ROOM*
STORAGE

TOWNHOUSE

BEDROOM RESTROOM

POWDER ROOM

KITCHEN

FAMILY ROOM

VERTICAL CIRCULATION

INGRESS/EGRESS

SITTING ROOM

DINING ROOM

PATIO/DECK

FOYER

STORAGE

LAUNDRY

SINGLE FAMILY HOME

BEDROOM(X) RESTROOM(X)

POWDER ROOM

KITCHEN

VERTICAL CIRCULATION

INGRESS/EGRESS

FAMILY ROOM

LIVING ROOM

DINING ROOM

MUDROOM

PATIO/DECK

WETBAR*

DEN

FOYER

OFFICE

BASEMENT

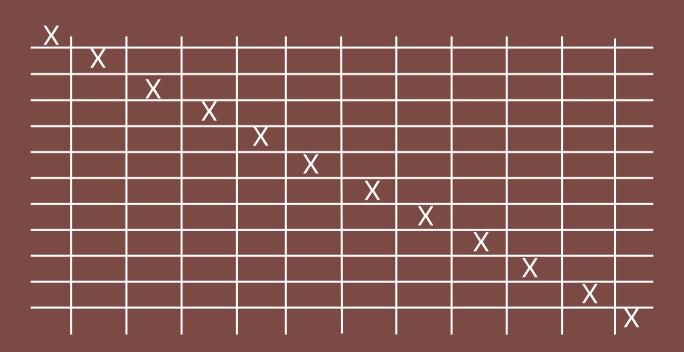
STORAGE

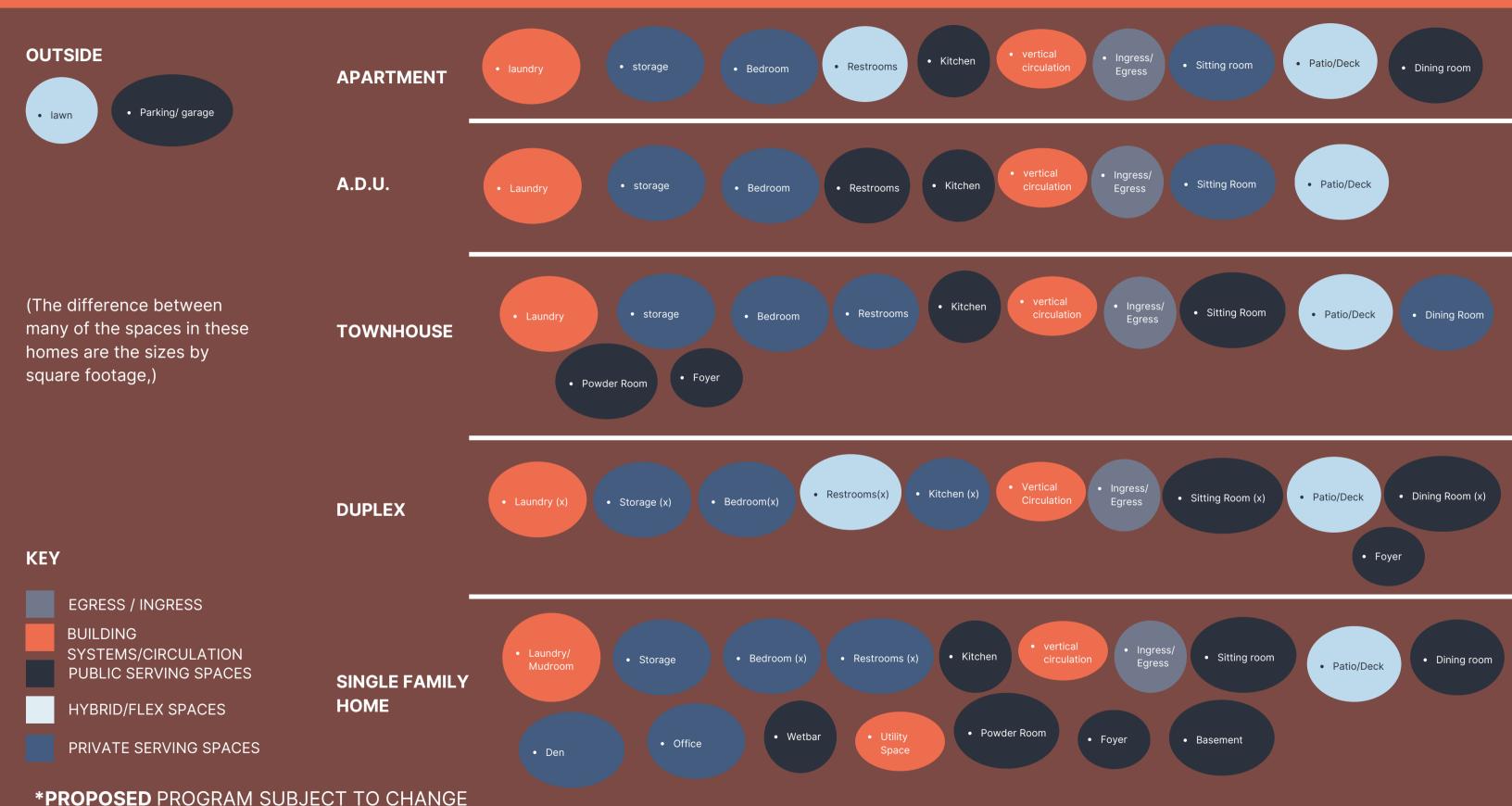
POSITIVE CHANGES THAT CAN BE MADE TO THE SPACES

CHARTING/SPREADSHEET

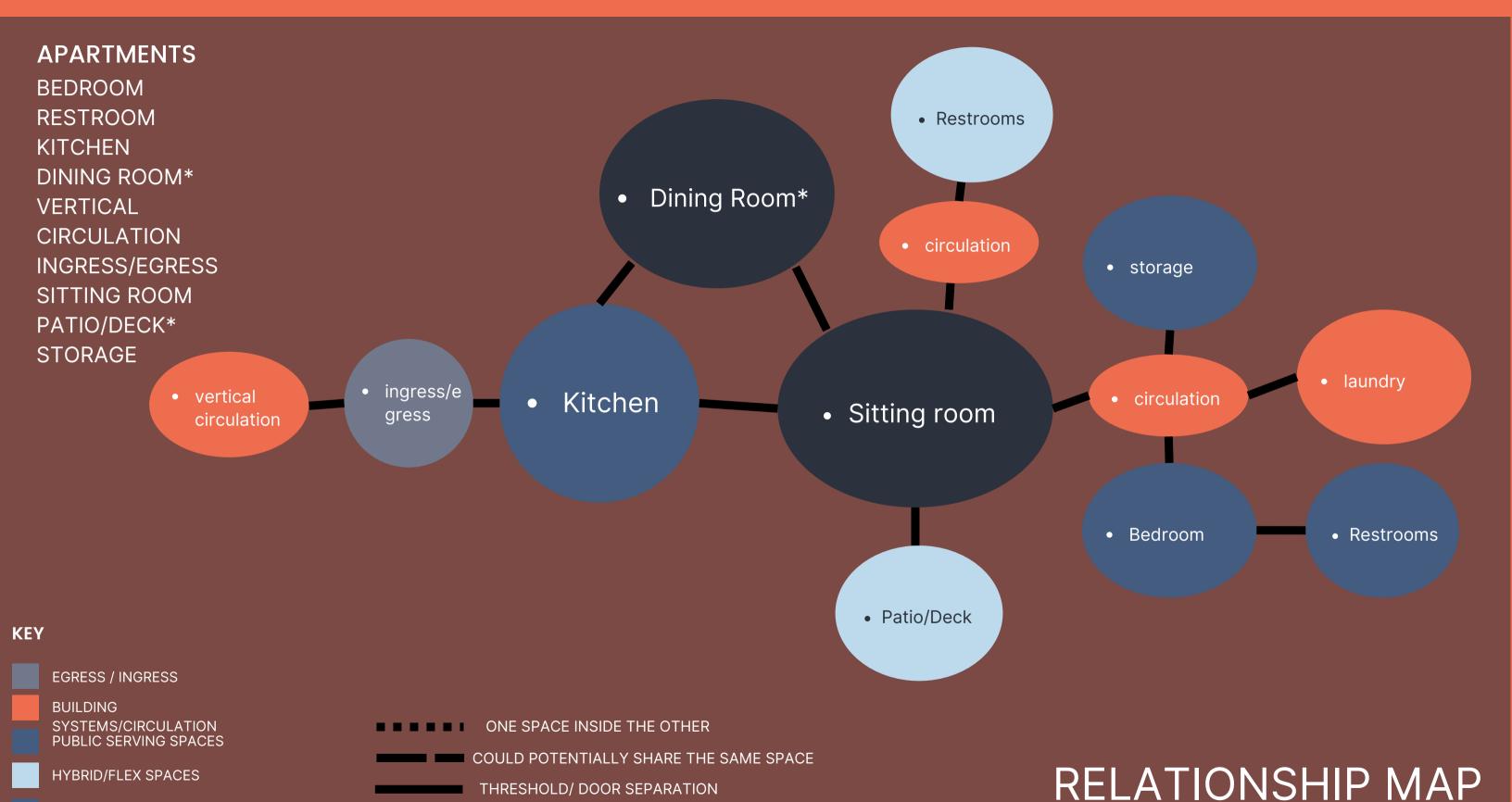
THIS PROJECT CALLS FOR A CHART THAT HELPS DEFINE WHAT CHANGES MIGHT NEED TO BE MADE TO A PERSON'S HOME BASED ON THEIR CHALLENGES.

THE SHEET IS USEFUL IN THE ILLUSTRATION OF WHAT CHANGES MIGHT NEED TO BE MADE TO A SPACE, AND CAN HELP ORGANIZE THE EDITS AND AUGMENTATIONS FOR THE CLIENTS. THE CHART WILL BE SPECIFIED BY SEVERITY OF NEED, AND LIMITATION OF ACCESS, WHILE SPEAKING TO THE ACTUAL NEEDS OF A PERSON WHEREVER THEY MIGHT APPEAR. IT WILL HELP TO DEFINE HARD AND SOFT CHANGES TO THE SPACE, FURNITURE AND FIXTURES INSIDE THE SPACE. EACH CHART WOULD BE SPECIFIC TO THE PERSON IT AFFECTS, AND WOULD SERVE TO THE PREDESIGN PHASE OF THE RENOVATIONS.





PROGRAM SUBJECT TO CHANGE
PROGRAM BUBBLE DIAGRAM



THRESHOLD/ DOOR SEPARATION

INDOOR PROGRAMS ARRANGED WITHIN MAX BUILDABLE AREA

PRIVATE SERVING SPACES





IMPLEMENTING THIS DESIGN PROCESS

SEMESTER ONE FOCUSES ON CUSTOMIZING BRYN AND CAM'S DWELLINGS. CHANGES MADE IN ONE MAY NOT WORK FOR THE OTHER. IF THE PROJECT METHODOLOGY WERE EXPANDED TO A MULTIFAMILY UNIT, COULD A MORE GENERALIZED DESIGN SERVE AN AUDIENCE WITH VARIED ABILITIES?

THESIS THEORETICAL INQUIRY 2:

IF THE A SIMILAR PATH OF LOGIC AND SET OF EDITS ARE IMPLEMENTED TO A BUILDING'S ARCHITECTURE FROM THE DESIGN STAGE, ENHANCED EQUITY CAN BE ACHIEVED FOR PERSONS WITH DISABILITIES. IF SPECIAL ATTENTION IS GIVEN TO FUNCTIONAL AND AESTHETIC ELEMENTS OF THE BUILDING'S DESIGN, WILL THE CHANGES MADE IMPROVE OCCUPANT EXPERIENCE?



IMPLEMENTING PROJECT METHODOLOGIES

THE OLIVER

WASHINGTON, D.C. – Howard University is pleased to announce a collaboration with Rock Creek Property Group to develop a \$62 million **mixed-use building** adjacent to Howard's campus at the corner of Georgia Avenue and Fairmont Street in Washington, D.C. The new facility will include fully furnished residential units; a lounge area and deck with views overlooking Howard's campus; and commercial space to house the Office of Development and Alumni Relations, Office of University Communications, and other administrative functions.



ADDRESS
2711 GEORGIA AVENUE, NW
SIZE
141,689 SQUARE FEET
DESCRIPTION
OFFICE, MULTIFAMILY



"THE FIVE STORY, 140,000 SQUARE FOOT BUILDING WILL INCLUDE 93 RESIDENTIAL UNITS, BELOW GRADE PARKING AND OVER 41,000 SQUARE FEET OF COMMERCIAL SPACE. HOWARD HAS ENTERED INTO A LEASE FOR THE ENTIRETY OF THE COMMERCIAL SPACE, WHICH WILL HOUSE THE OFFICE OF DEVELOPMENT AND ALUMNI RELATIONS AND OFFICE OF UNIVERSITY COMMUNICATIONS, AS WELL AS OTHER ADMINISTRATIVE FUNCTIONS."



WHY THIS BUILDING WAS CHOSEN THE OLIVER



- PROXIMITY TO CAM'S COOK HALL DORM ON HOWARD UNIVERSITY'S CAMPUS
- IS CURRENTLY BEING BUILT, WHICH PROVIDES OPPORTUNITY FOR THE IMPLEMENTATION OF ADDITIONAL ACCESSIBILITY CONSIDERATION
- COULD SHOW OFF THE APPLICATION OF THE THEORETICAL DESIGN APPROACH DISCUSSED IN THIS THESIS THOROUGHLY
- A CONNECTION WAS MADE WITH THE FIRM GTM IN THE EARLY STAGES OF THE SECOND SEMESTER, AND UPON BUILDING A PROFESSIONAL REPOR, THE FIRM SHARED THE OLIVER PROJECT FILE WITH ME.

"GTM ARCHITECTS IS AN AWARD-WINNING RESIDENTIAL AND COMMERCIAL ARCHITECTURE FIRM SERVING CLIENTS IN THE WASHINGTON DC AREA AND NATIONWIDE.
VIEW OUR WORK"

Girard St NW Howard Manor Cook Hall Cook Hall Farmont St NW

Cramton Auditorium Howard University School of Business Howard University College of Arts and... Miner Hall Banneker Recreation Center Howard University Main Gate Howard University Andrew Rankin Memorial Chapel Andrew Rankin Memorial Chapel Greene Stadium NuVegan Cafe Howard University Howard University Vegan Armour J. Blackburn University Center Howard University Andrew Rankin Memorial Chapel

THE OLIVER





"THE APARTMENTS WILL BE DESIGNED TO BE WORK-FROM-HOME POSITIVE, WHILE ACCENTING THE INTERIOR SPACES WITH ACCESSIBLY CONSIDERATE AMENITIES.

DESIGNED WITH A CONTEMPORARY INTERIOR STYLE, THE OLIVER WILL SEEK TO PROVIDE HOUSING TO DC RESIDENTS, AS WELL AS HOWARD UNIVERSITY COMMUNITY MEMBERS.





• THE GEORGIA AVENUE HILL COULD POTENTIALLY PROVIDE OBSTACLE TO RESIDENTS WHO NAVIGATE WITH LIMITED MOBILITY

HTTP://GTMARCHITECTS.COM/



GROUPING PEOPLES' DIFFERENCES

LEVELS OF ADAPTABILITY

THIS PROJECT IS DESIGNED TO PRESENT A LIST OF OPTIONS FOR ACCOMMODATING PERSONS WITH A RANGE OF DISABILITIES, PHYSICAL AND COGNITIVE

SEIZURE DISORDER

AUDIBLY IMPAIRED

SYMPTOMS ON THE AUTISM

SPECTRUM

SCHIZOPHRENIA

MISSING/COMPROMISED

DIGITS/APPENDAGES

PERMANENTLY ON CRUTCHES

OCD (DIAGNOSED)

ARTHRITIS

PEOPLE LIVING WITH FORMS OF DWARFISM

VISUALLY IMPAIRED

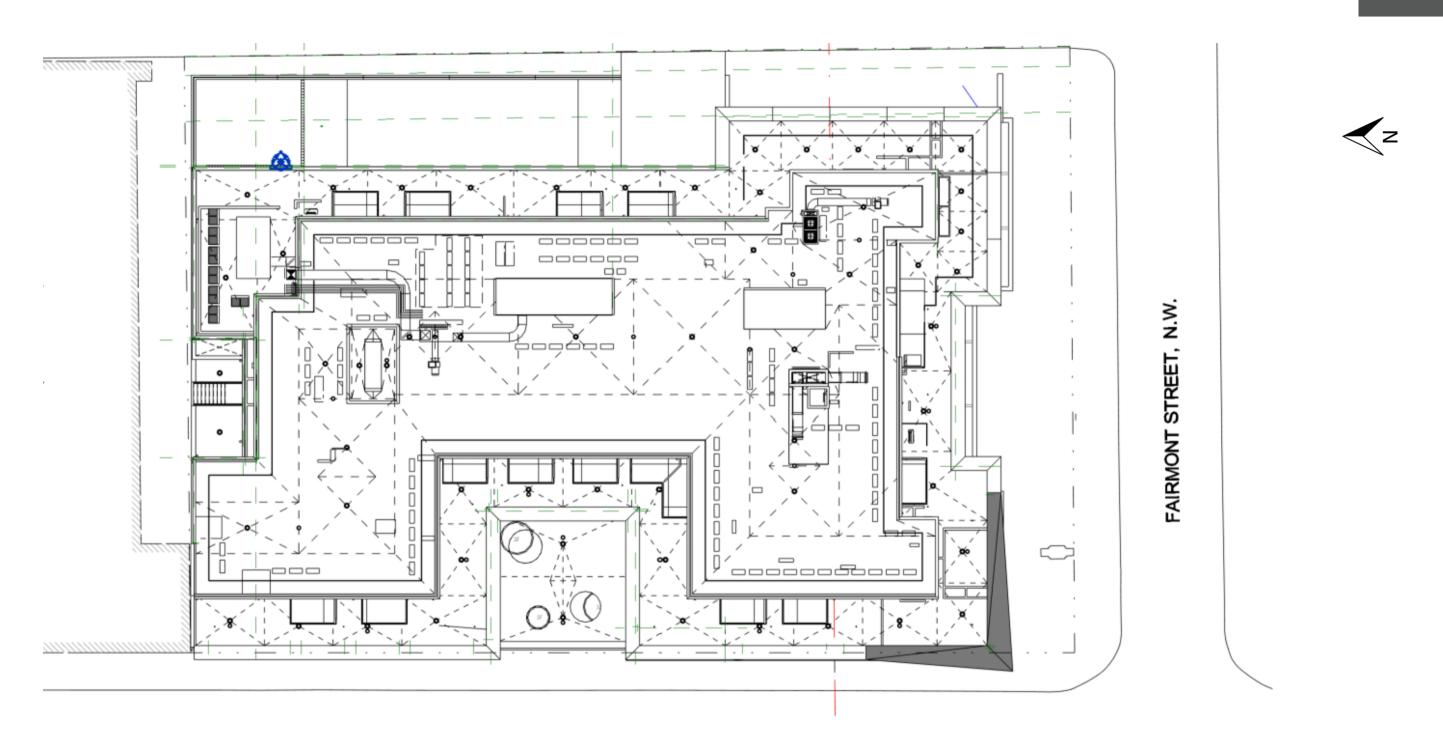
OLD PEOPLE WITH LIMITED

DEXTERITY OR MOBILITY

WHEELCHAIR BOUND INDIVIDUALS

MISSING A LIMB





GEORGIA AVENUE, N.W.

THE OLIVER SITE/ GROUND FLOOR PLAN PAGE 93

NORTH FACING

SOUTH FACING







EAST FACING



THE OLIVER

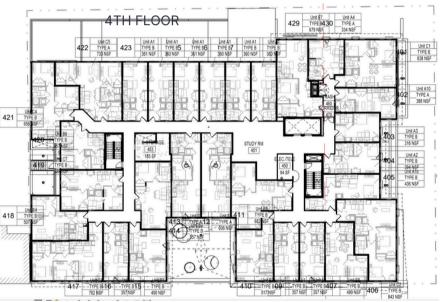
ELELVATIONS AND SECTIONS





ONO

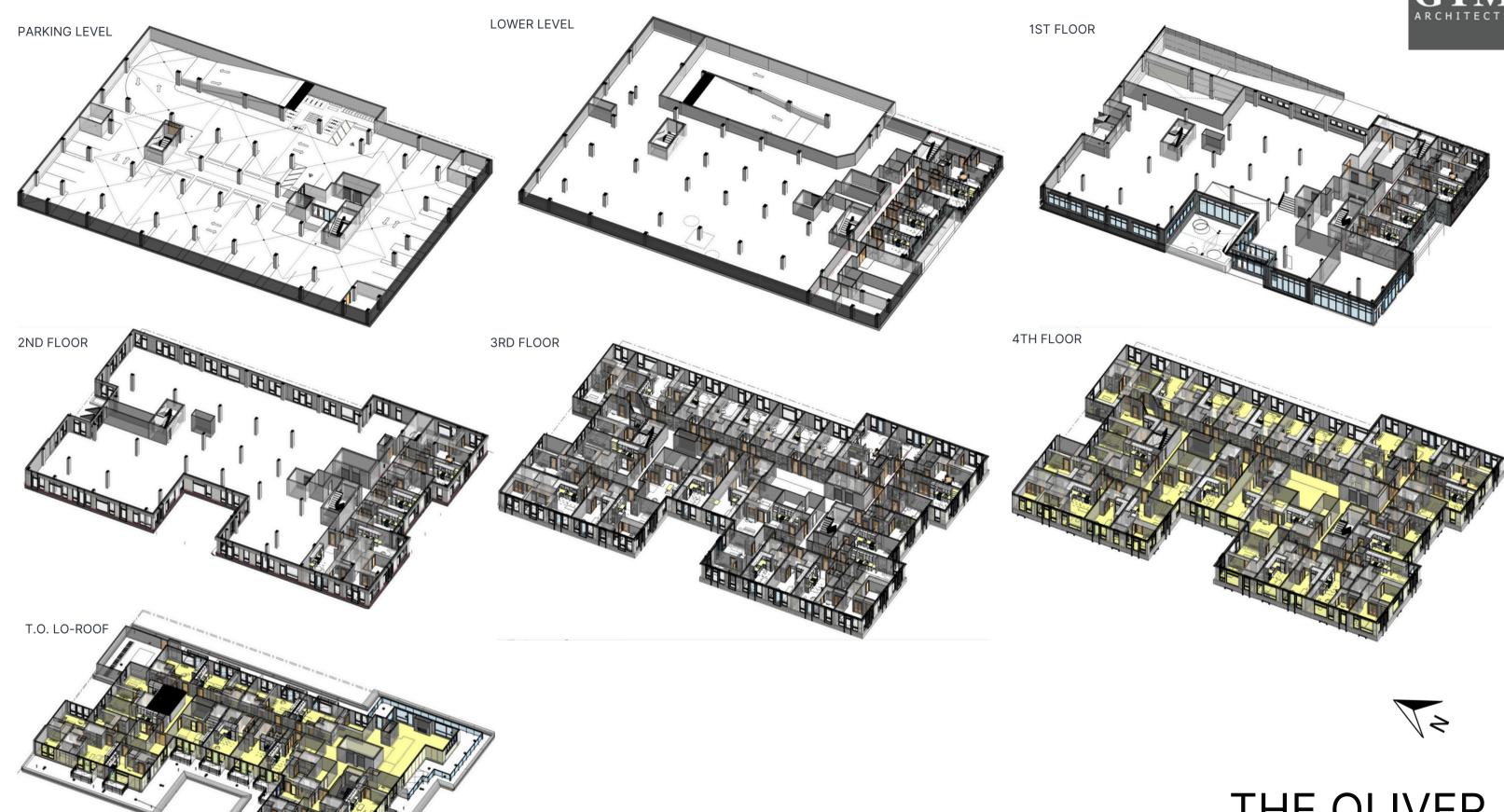






THE OLIVER ORIGINAL BUILDING PLANS

PAGE 95



THE OLIVER

3D PLAN VINGETTES (ASCENDING FROM GRADE)

PAGE 96

ASSESSING DWELLING

UNIT TYPES

A = STUDIO UNITS

B = 1 BED UNITS

C = 2 BED UNITS

TYPES A & B = ADA ACCESSIBLE UNITS

<u>A</u>

- A1
- A1b (A1 FLIPPED)
- A2
- A3
- A3-ALT
- A4-TYPE A
- A5 (EXTRA LARGE)
- A6
- A6a
- A6b (A6a FLIPPED)
- A7 (BALCONY LONG)
- A8 (BALCONY)
- A9 (BALCONY)
- A10-<u>TYPE A (LONG)</u>

<u>B</u>

- B1-TYPE A (BALCONY)
- B2
- B3
- B3a
- B4
- B6
- B7
- B8 (SMALL)
- B9 (T-SHAPE)
- B6a (SQUARE)
- B11 (BALCONY, LONG)
- B12 (BALCONY)
- B13 (BALCONY, L SHAPE)
- B14 (DEN)
- B15 (BALCONY)
- B16 (EN-SUITE, FULL BATH, BALCONY)
- B17 (EN-SUITE, FULL BATH, BALCONY)
- B10 (DEN, BALCONY, FULL BATH)

TOTAL ACCES

TOTAL ACCESSIBLE UNITS: 4

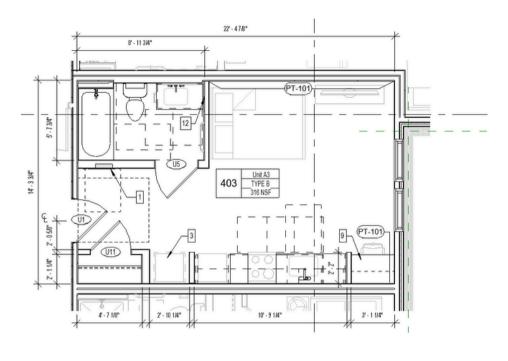
TYPES A & B

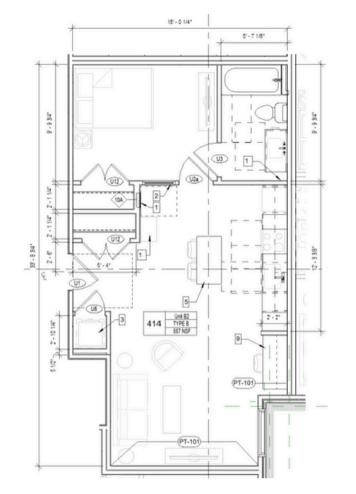
TOTAL UNITS: 40

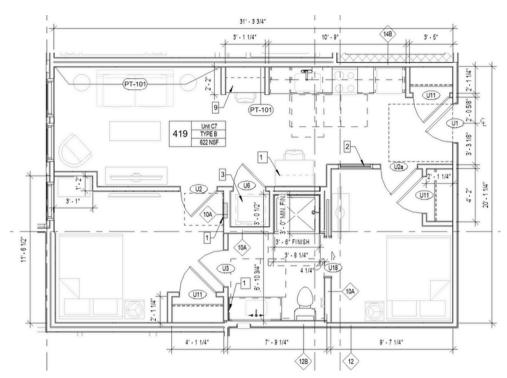
- C5-<u>TYPE A</u> (2 BATH)
- B1-TYPE A (BALCONY)
- A4-<u>TYPE A</u>
- A10-<u>TYPE A</u> (LONG)

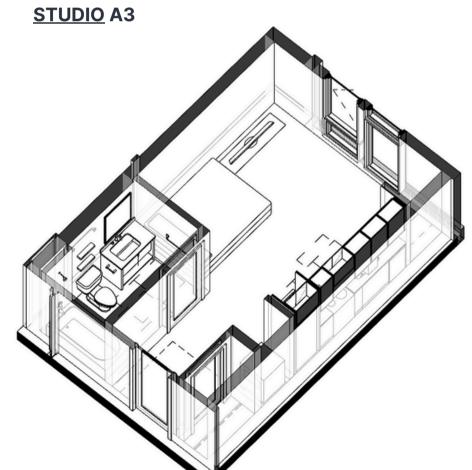
- C1 (CORNER UNIT)
- C2 (2 BATH)
- C3 (2 FULL BATH)
- C4 (1 BATH)
- C5-<u>TYPE A</u> (2 BATH)
- C6 (BALCONY)
- C7 (1 BATH)

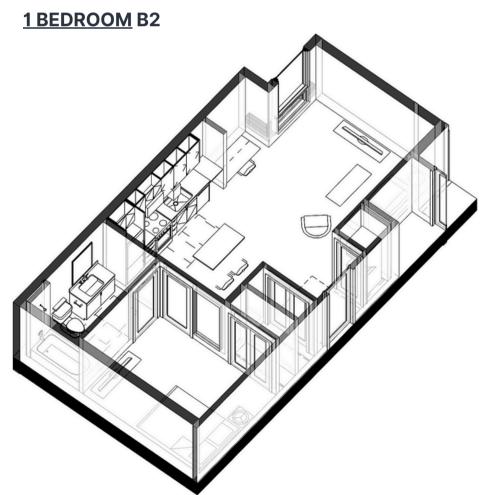


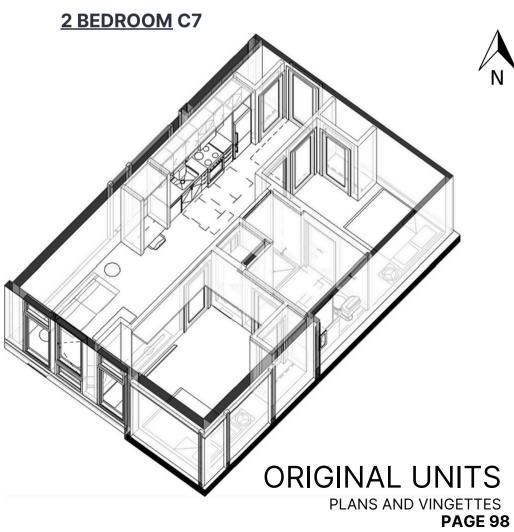














SPOTTING INEQUITY IN THE OLIVER

BARRIERS AT FIRST GLANCE

BARRIES EXIST ALL AROUND GTM'S ORIGINAL DESIGN OF THE OLIVER, INCLUDING:

- CORRIDORS
- PARKING LEVEL
- LOUNGES
- AESTEIC AND FUNCTIONAL FEATURES OF THE INTERIOR

THESE AND MANY OTHER ASPECTS OF THE OLIVER'S ORIGINAL DESIGN MIGHT PROVIDE BARRIERS TO SOME OF THE BUILDING'S DIFFERENTLY ABLED OCCUPANTS IN BOTH ITS **PUBLIC AND PRIVATE SPACES**

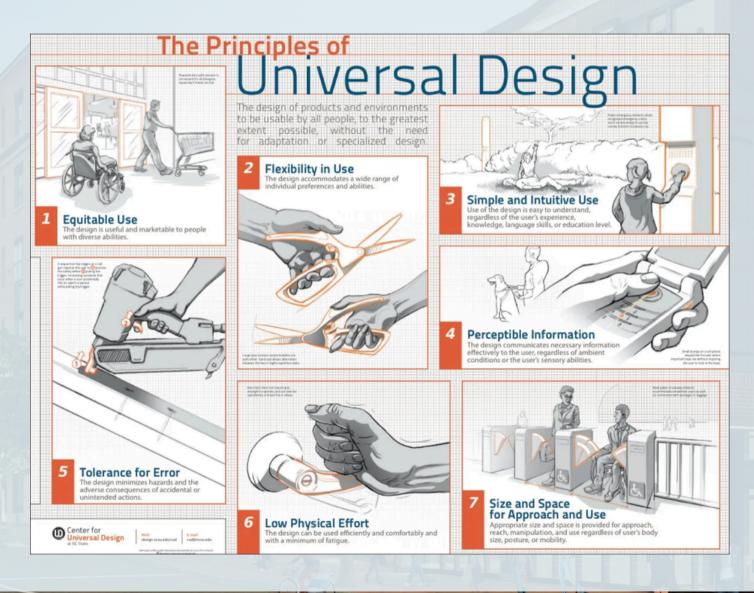
EVEN THOUGH THE OLIVER IS WELL PLANNED, THE IMPLEMENTATION OF ORDINARY ADA REGULATIONS AS THE PEAK FOR INCLUSIVE DESIGN STANDARDS, LEAVES MUCH TO BE DESIRED IN THE WAY OF FULLY OPTIMIZED ACCESSIBILITY.

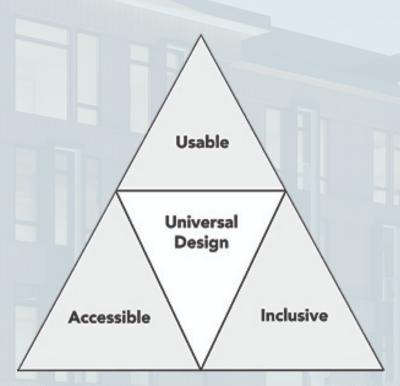
*THIS CHAPTER DISPLAYS THE RESEARCH THAT GUIDED THE DESIGN DECISIOS MADE IN THE FINAL INTERVENTIONS.



PRINCIPLES CONSULTED: UNIVERSAL DESIGN

ATTENTION TO THESE PRINCIPLES AND IDEALS COULD HELP ESTABLISH A "NEW NORMAL" FOR USER EXPERINCE IN THE OLIVER, AND IMPROVE RESIDENTS' RELATIONSHIPS WITH THE INTERIOR.





 "UNIVERSAL DESIGN IS THE DESIGN OF PRODUCTS AND ENVIRONMENTS TO BE USABLE BY ALL PEOPLE, TO THE GREATEST EXTENT POSSIBLE, WITHOUT THE NEED FOR ADAPTATION OF SPECIALIZED DESIGN."

HTTPS://BLOG.SCIOTO.COM/THE-DISABILITY-HISTORY-TIMELINE

PROJECT FLOW: EDITING THE OLIVER

APPLYING UNIVERSALITY

INCLUSIVE REVISIONS COULD BE DONE TO THE USER EXPERIECNE OF THE OLIVER, AND ITS SURROUNDING SITE.

REVISIONS WOULD START ON THE PARKING LEVEL, IMPROVE THE GROUND LEVEL EXPERIENCE, AND WOULD WORK UP THE BUILDING IN ORDER TO IMPROVE THE EXPERINCE OF OCCUPANTS WITH DISABILITIES.

SPECIAL ATTENTION WOULD BE GIVEN TO COMMON SPACES, UNIT PLANS, VERTICAL CIRCULATION, INGRESS AND EGRESS, COMMERCIAL SPACES, AND OTHER SMALL BUILDING DETAILS

TPS://BLOG.SCIOTO.COM/THE-DISABILITY-HISTORY-TIMELINE

PAGE 102

FIXING/CHANGING

REDESIGN MEASURES DERIVED FROM STUDYING PHYSICAL DISABILITIES: **HARD ELEMENTS/ REPSONSES**

THESE ASPECTS AND MEASURES WILL BE
HIGHLIGHTED ON THE PLANS IN AN EFFORT TO
RESOLVE OR IMROVE THEM QUICKLY AND
DIRECTLY (MARKED WITH NUMBERS)

- 1. DIRTY HANDS AND BLISTERS
- 2. RESTLESS DRIVERS HONKING
- 3. NO RAMP OR INACCESSIBLE RAMPS
- 4. NARROW DOORWAYS
- **5. SMALL BUT IMPORTANT DETAILS**
- 6. THE ELEVATOR RACE
- 7. THE RESERVED PARKING SPOTS
- 8. PUBLIC TRANSPORTATION BARRIERS

REDESIGN CONSIDERATIONS DERVIVED FROM STUDYING DEVELOPMENTAL DISABILITIES: SOFT ELEMENTS/ RESPONSES

IF EACH OF THESE CONSIDERATIONS WAS IMPLEMENTED TO THE PUBLIC AND PRIVATE SPACES ALIKE, THE OVERALL INTERIOR AND EXTERIOR EXPERINCES PROVIDED BY THIS BUILDING COULD BE IMPROVED FOR OCCUPANTS UNIVERSALLY.

THE OLIVER PROJECT WILL BE REVIEWED TO IDENTIFY POTENTIAL BARRIERS:

(MARKED WITH ROMAN NUMERALS)

- I.) ATTITUDINAL BARRIERS
- II.) COMMUNICATION BARRIERS
- III.) PHYSICAL BARRIERS
- IV.) POLICY BARRIERS
- V.) PROGRAMMATIC BARRIERS
- VI.) SOCIAL BARRIERS
- VII.) TRANSPORTATION BARRIERS

PLANS WELL BE REVIEWED TO CRITIQUE AND IMPROVE: (MARKED WITH SYMBOLS)

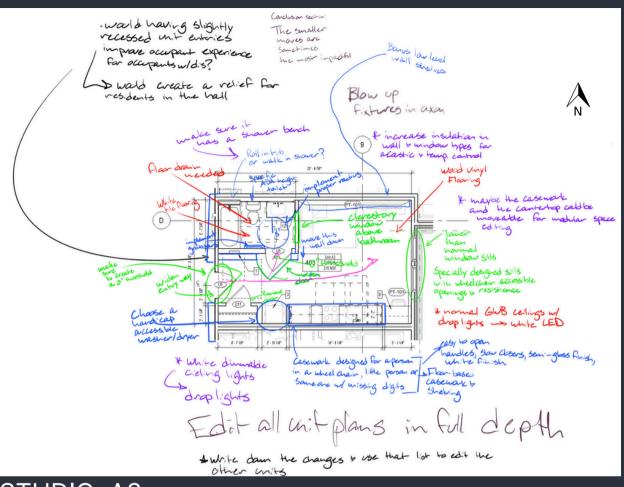
- SPATIAL PLANNING
- **LIGHTING**
- SOUNDS
- SENSORY AND EXPLORATORY SPACES

*CONSIDER WALL FLOOR AND CIELING TEXTURES,
REFLECTIVITY, COLOR, AND EVEN CARPET PILE*

SPACES THAT ARE ORDERLY AND DEFINED ARE
EASIER FOR THE AUTISTIC MIND TO PROCESS. THE
USE OF SEQUENTIAL CIRCULATION, STORAGE FOR
NON-ESSENTIAL ITEMS, SUB-DIVIDING ROOMS, AND
MAKING SPACES RECONFIGURABLE CAN HELP
INDIVIDUALS WITH AUTISM TO BETTER FOCUS.

nttps://www.technearchitects.com/blogs/considerations-when-designing-spaces-for-those-with-autism?format=ar https://www.cdc.gov/media/releases/2018/p0816-disability.ht

ANALYSIS TO CRITIQUE







IMPROVEMENTS:

- 0 INCH DOOR THRESHOLD
- SPECIALIZED DOOR HANDLES
- ACCESSIBLE DISHWASHER
- ACCESSIBLE WASHER/DRYER
- LOW HEIGHT CASEWORK WITH EQUITABLY DESIGNED
- WALL-MOUNTED PINK/WHITE NOISE MAKER WITH SURROUND SOUND
- WALK IN TUB/ROLL IN SHOWER
- ADA HEIGHT TOILET
- 42 INCH THRESHOLD
- FLOOR LIGHTS
- SLIDING INTERIOR DOOR
- DOORLESS WALL OPENING
- ADA HEIGHT DESK
- MODULAR FURNITURE WITH SENSORY CONSIDERATE
- ADA HEIGHT WINDOW SILL
- ELECTRIC WINDOW WINCH
- LIGHT SENSITIVE AUTOMATED BLINDS/ SOLAR
- WHEELCHAIR ACCESSIBLE DINING TABLE
- WHEELCHAIR ACCESSIBLE COFFEE TABLE

WHEELED FURNITURE.

WALL ADJUSTMENTS TO INCREASE TURN AROUND SPACE IN THE BATHROOM.

EASY ON EASY OFF SINK FAUCET.

DIMMABLE LED DROP LIGHTS. ROUNDED COUNTERTOP EDGES.

INCREASED INSULATION AND WALL AND WINDOW

SLOW CLOSE CABINETS.

SLOW CLOSE DOORS. MECHANIZED DOOR OPENERS AND CLOSERS.

SMART HOME SYSTEM.

CLERESTORY WINDOWS FOR ADDITIONAL NATURAL

BATHROOM FLOOR DRAIN.

PULL-OUT ELECTRIC CLOSET RACK.

SLIGHTLY RECESSED UNIT ENTRIES.

FOLDING SHOWER BENCH.

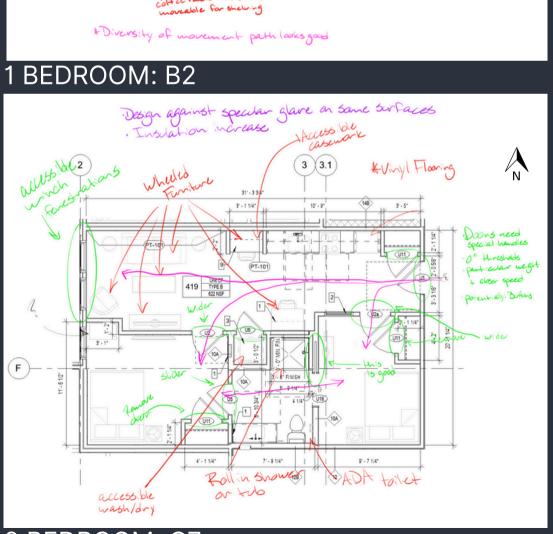
ADA GRAB BARS.

MATTED VINYL FLOORING. LOW POWER CARPET TILE.

BOTTOM OF DOOR SWEEP AND SKIRT

ACOUSTICAL FOAM

(MAYBE) STRATEGIC DIFFERNCES IN FLOOR AND WALL TEXTURES WITHIN THE SPACE



I wood vinyl matter or low gloss flooring

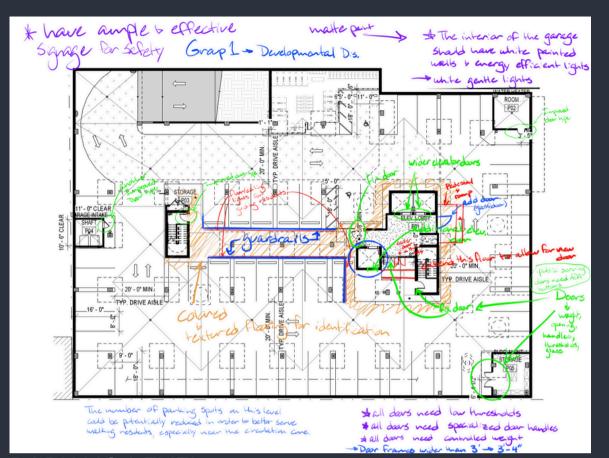
ADA height

· dish masher washing machine to casework shale all be accessibly considerate

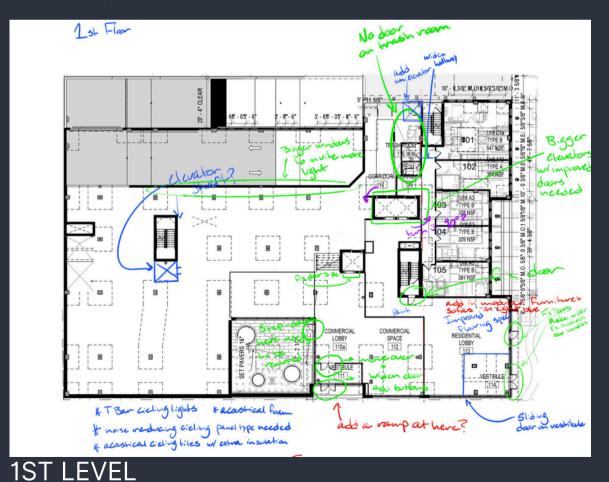
I all doors need zero O"threshold

differences & specialized handles

2 BEDROOM: C7



PARKING LEVEL



Residential Four Laver Level task an additional WC? **IMPROVEMENTS:** Unsaturated earth tones for color Dav. Dis. OMMERCIAL SPACE w/ bubble tobe lamps Focus on L14 the resid • dane? scances in hallway shall be I ward a steel structural - Dot make a list w/ called for can spaces

LOWER LEVEL



• SPECIALIZED DOOR HANDLES

- 0 INCH DOOR THRESHOLD
- ACCESSIBLE DISHWASHER
- ACCESSIBLE WASHER/DRYER
- LOW HEIGHT CASEWORK WITH EQUITABLY DESIGNED
- WALL-MOUNTED PINK/WHITE NOISE MAKER WITH SURROUND SOUND
- WALK IN TUB/ROLL IN SHOWER
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- 42 INCH THRESHOLD
- FLOOR LIGHTS
- SLIDING INTERIOR DOOR
- DOORLESS WALL OPENING
- ADA HEIGHT DESK
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- DIMMABLE LED DROP LIGHTS.
- ROUNDED COUNTERTOP EDGES.
- INCREASED INSULATION AND WALL AND WINDOW TYPES.
- SLOW CLOSE CABINETS.
- SLOW CLOSE DOORS.
- MECHANIZED DOOR.
- OPENERS AND CLOSERS.
- SMART HOME SYSTEM.
- CLERESTORY WINDOWS FOR ADDITIONAL NATURAL
- BATHROOM FLOOR DRAIN.
- PULL-OUT ELECTRIC CLOSET RACK.
- SLIGHTLY RECESSED UNIT ENTRIES.
- FOLDING SHOWER BENCH.
- ADA GRAB BARS.
- MATTED VINYL FLOORING.
- LOW POWER CARPET TILE.
- BOTTOM OF DOOR SWEEP AND SKIRT
- ACOUSTICAL FOAM
- (MAYBE) STRATEGIC DIFFERNCES IN FLOOR AND WALL **TEXTURES WITHIN THE SPACE**

2ND LEVEL



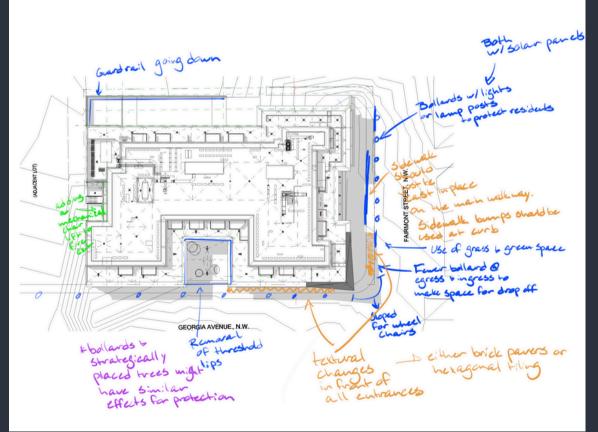
3RD LEVEL

ROOF LEVEL





4TH LEVEL



IMPROVEMENTS:

- 0 INCH DOOR THRESHOLD
- SPECIALIZED DOOR HANDLES
- ACCESSIBLE DISHWASHER
- ACCESSIBLE WASHER/DRYER
- LOW HEIGHT CASEWORK WITH EQUITABLY DESIGNED HANDLES
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- BOTTOM OF DOOR SWEEP AND SKIRT
- ACOUSTICAL FOAM
- (MAYBE) STRATEGIC DIFFERNCES IN FLOOR AND WALL **TEXTURES WITHIN THE SPACE**

SITE LEVEL

FIXTURES, FURNITURE, FLOORING

FENESTRATIONS

ARCHITECTURAL RESPONSES

CIRCULATION PATH

FLOORING

PERSONAL NOTES

PAGE 106



PROJECT FLOW

GROUPING APPROACH

THE BARRIERS IDENTIFIED DURING THE REVIEW OF THE ORIGINAL PLANS WILL BE <u>CATEGORIZED BASED</u> ON THEIR IMPACT TO DIFFERENT KINDS OF <u>DISABILITIES</u> TO MAKE THE DATA COLLECTED IN THE PREVIOUS EXCERCISE USABLE FOR THE RENOVATIONS.



GROUP 1: CITIZENS WITH DEVELOPMENTAL DISABILITIES



GROUP 2: CITIZENS WITH PHYSICAL DISABILITIES

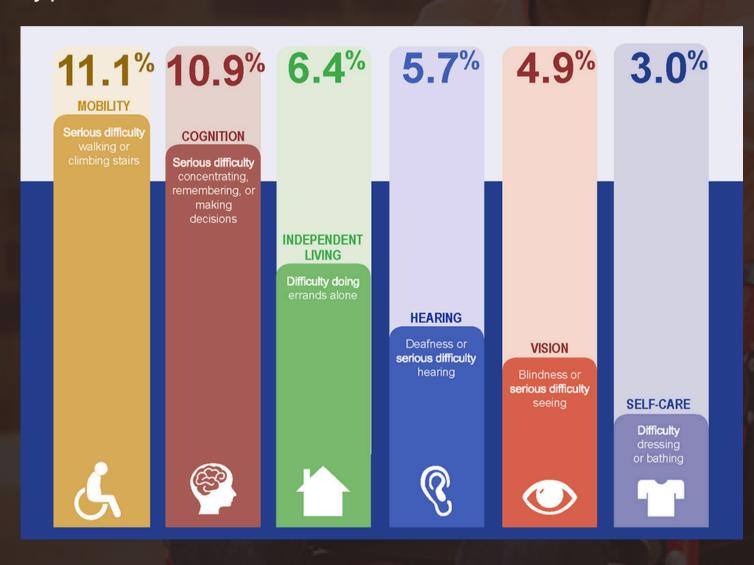
- 1.) A LIST WILL BE CREATED TO ESTABLISH PROSPECTIVE BUILDING/UNIT REVISIONS, FOLLOWING THE DISABILITY RESEARCH STEP
- 2.) THE LIST WILL INFORM EDITS MADE TO GTM'S ORIGINAL PLANS
- 3.) REVISED PLANS (FINAL DRAWINGS) WILL BE DOCUMENTED AND EXPLORED BY MEANS OF PERSPECTIVE VIEWS AND RENDERINGS

TTPS://BLOG.SCIOTO.COM/THE-DISABILITY-HISTORY-TIMELINE

PAGE 10

THE MOST COMMON "DISABILITIES"

"Six types of disability measured using data from the 2016 Behavioral Risk Factor Surveillance System (BRFSS), this is the first CDC report of the percentage of adults across six disability types:"



CONSIDERED IN RENOVATION:

- MOBILITY (SERIOUS DIFFICULTY WALKING OR CLIMBING STAIRS)
- COGNITION (SERIOUS DIFFICULTY CONCENTRATING, REMEMBERING, OR MAKING DECISIONS)
- HEARING (SERIOUS DIFFICULTY HEARING)
- VISION (SERIOUS DIFFICULTY SEEING)
- INDEPENDENT LIVING (DIFFICULTY DOING ERRANDS ALONE)
- SELF-CARE (DIFFICULTY DRESSING OR BATHING)"

https://www.cdc.gov/media/releases/2018/p0816-disability.htm

STATISTIC DATA ABOUT DISABILITIES IN THE US

COMMONALITIES BETWEEN "DISABILITY"

"According to the data presented in this report, women, non-Hispanic American Indians/Alaska Natives, adults with lower income, and those residing in the South Census region of the United States are more likely to have a disability. The report also provides additional insights into the following areas:

CONSIDERED IN RENOVATION:

- MOBILITY DISABILITY IS THE MOST PREVALENT TYPE OF DISABILITY, FOLLOWED BY COGNITION, INDEPENDENT LIVING, HEARING, VISION, AND SELF-CARE.
- THE PERCENTAGE OF ADULTS WITH A DISABILITY INCREASES AS INCOME DECREASES. IN PARTICULAR, MIDDLE-AGED ADULTS (45- TO 64-YEAR OLD) LIVING BELOW THE POVERTY LEVEL ARE ALMOST FIVE TIMES MORE LIKELY TO HAVE MOBILITY DISABILITY THAN THOSE WITH DOUBLE THE POVERTY LEVEL INCOME.
- ADULTS AGED 65 AND ABOVE WITH DISABILITIES ARE MORE LIKELY TO HAVE HEALTH INSURANCE COVERAGE, ACCESS TO PRIMARY CARE, AND RECEIVE ROUTINE HEALTH CHECKUPS WITHIN THE PAST YEAR COMPARED TO MIDDLE-AGED AND YOUNGER ADULTS WITH DISABILITIES.
- DISABILITY-RELATED DIFFERENCES IN HEALTHCARE ACCESS ARE COMMON, PARTICULARLY AMONG ADULTS AGED 18 TO 44 AND MIDDLE-AGED ADULTS. GENERALLY, ADULTS WITH VISION DISABILITY REPORT THE LEAST ACCESS TO HEALTHCARE, WHILE ADULTS WITH SELF-CARE DISABILITY REPORT THE MOST ACCESS TO CARE.

https://www.cdc.gov/media/releases/2018/p0816-disability.html

KINDS OF BARRIERS

"FACTORS IN A PERSON'S ENVIRONMENT THAT, THROUGH THEIR ABSENCE OR PRESENCE, LIMIT FUNCTIONING AND CREATE DISABILITY.
THESE INCLUDE ASPECTS SUCH AS:

- A PHYSICAL ENVIRONMENT THAT IS NOT ACCESSIBLE,
- LACK OF RELEVANT ASSISTIVE TECHNOLOGY (ASSISTIVE, ADAPTIVE, AND REHABILITATIVE DEVICES),
- NEGATIVE ATTITUDES OF PEOPLE TOWARDS DISABILITY,
- SERVICES, SYSTEMS AND POLICIES THAT ARE EITHER NONEXISTENT OR THAT HINDER THE INVOLVEMENT OF ALL PEOPLE WITH A HEALTH CONDITION IN ALL AREAS OF LIFE." 1

OFTEN THERE ARE MULTIPLE BARRIERS THAT CAN MAKE IT EXTREMELY DIFFICULT OR EVEN IMPOSSIBLE FOR PEOPLE WITH DISABILITIES TO FUNCTION. HERE ARE THE SEVEN MOST COMMON BARRIERS. OFTEN, MORE THAN ONE BARRIER OCCURS AT A TIME.

- ATTITUDINAL
- COMMUNICATION
- PHYSICAL
- POLICY
- PROGRAMMATIC
- SOCIAL
- TRANSPORTATION

REDEFINING "DISABILITY"

"TODAY, SOCIETY'S UNDERSTANDING OF DISABILITY IS IMPROVING AS WE RECOGNIZE "DISABILITY" AS WHAT OCCURS WHEN A PERSON'S FUNCTIONAL NEEDS ARE NOT ADDRESSED IN HIS OR HER PHYSICAL AND SOCIAL ENVIRONMENT. BY NOT CONSIDERING DISABILITY A PERSONAL DEFICIT OR SHORTCOMING, AND INSTEAD THINKING OF IT AS A SOCIAL RESPONSIBILITY IN WHICH ALL PEOPLE CAN BE SUPPORTED TO LIVE INDEPENDENT AND FULL LIVES, IT BECOMES EASIER TO RECOGNIZE AND ADDRESS CHALLENGES THAT ALL PEOPLE-INCLUDING THOSE WITH DISABILITIES-EXPERIENCE."

nttps://www.cdc.gov/ncbddd/disabilityandhealth/disability-barriers.htm

BARRIERS (CDC ARTICLE)

ATTITUDINAL BARRIERS

ATTITUDINAL BARRIERS ARE THE MOST BASIC AND CONTRIBUTE TO OTHER BARRIERS. FOR EXAMPLE, SOME PEOPLE MAY NOT BE AWARE THAT DIFFICULTIES IN GETTING TO OR INTO A PLACE CAN LIMIT A PERSON WITH A DISABILITY FROM PARTICIPATING IN EVERYDAY LIFE AND COMMON DAILY ACTIVITIES. EXAMPLES OF ATTITUDINAL BARRIERS INCLUDE:

- STEREOTYPING: PEOPLE SOMETIMES STEREOTYPE THOSE WITH DISABILITIES, ASSUMING THEIR QUALITY OF LIFE IS POOR OR THAT THEY ARE UNHEALTHY BECAUSE OF THEIR IMPAIRMENTS.
- STIGMA, PREJUDICE, AND DISCRIMINATION: WITHIN SOCIETY, THESE ATTITUDES MAY COME FROM PEOPLE'S IDEAS RELATED TO DISABILITY—PEOPLE MAY SEE DISABILITY AS A PERSONAL TRAGEDY, AS SOMETHING THAT NEEDS TO BE CURED OR PREVENTED, AS A PUNISHMENT FOR WRONGDOING, OR AS AN INDICATION OF THE LACK OF ABILITY TO BEHAVE AS EXPECTED IN SOCIETY.

TODAY, SOCIETY'S UNDERSTANDING OF DISABILITY IS IMPROVING AS WE RECOGNIZE "DISABILITY" AS WHAT OCCURS WHEN A PERSON'S FUNCTIONAL NEEDS ARE NOT ADDRESSED IN HIS OR HER PHYSICAL AND SOCIAL ENVIRONMENT. BY NOT CONSIDERING DISABILITY A PERSONAL DEFICIT OR SHORTCOMING, AND INSTEAD THINKING OF IT AS A SOCIAL RESPONSIBILITY IN WHICH ALL PEOPLE CAN BE SUPPORTED TO LIVE INDEPENDENT AND FULL LIVES, IT BECOMES EASIER TO RECOGNIZE AND ADDRESS CHALLENGES THAT ALL PEOPLE-INCLUDING THOSE WITH DISABILITIES-EXPERIENCE.

COMMUNICATION BARRIERS

COMMUNICATION BARRIERS ARE EXPERIENCED BY PEOPLE WHO HAVE DISABILITIES THAT AFFECT HEARING, SPEAKING, READING, WRITING, AND OR UNDERSTANDING, AND WHO USE DIFFERENT WAYS TO COMMUNICATE THAN PEOPLE WHO DO NOT HAVE THESE DISABILITIES. EXAMPLES OF COMMUNICATION BARRIERS INCLUDE:

- WRITTEN HEALTH PROMOTION MESSAGES WITH BARRIERS THAT PREVENT PEOPLE WITH VISION IMPAIRMENTS FROM RECEIVING THE MESSAGE. THESE INCLUDE
 - USE OF SMALL PRINT OR NO LARGE-PRINT VERSIONS OF MATERIAL, AND
 - NO BRAILLE OR VERSIONS FOR PEOPLE WHO USE SCREEN READERS.
- AUDITORY HEALTH MESSAGES MAY BE INACCESSIBLE TO PEOPLE WITH HEARING IMPAIRMENTS, INCLUDING
 - VIDEOS THAT DO NOT INCLUDE CAPTIONING, AND
 - ORAL COMMUNICATIONS WITHOUT ACCOMPANYING MANUAL INTERPRETATION (SUCH AS, AMERICAN SIGN LANGUAGE).
- THE USE OF TECHNICAL LANGUAGE, LONG SENTENCES, AND WORDS WITH MANY SYLLABLES MAY BE SIGNIFICANT BARRIERS TO UNDERSTANDING FOR PEOPLE WITH COGNITIVE IMPAIRMENTS.

PHYSICAL BARRIERS

PHYSICAL BARRIERS ARE STRUCTURAL OBSTACLES IN NATURAL OR MANMADE ENVIRONMENTS THAT PREVENT OR BLOCK MOBILITY (MOVING AROUND IN THE ENVIRONMENT) OR ACCESS. EXAMPLES OF PHYSICAL BARRIERS INCLUDE:

- STEPS AND CURBS THAT BLOCK A PERSON WITH MOBILITY IMPAIRMENT FROM ENTERING A BUILDING OR USING A SIDEWALK;
- MAMMOGRAPHY EQUIPMENT THAT REQUIRES A WOMAN WITH MOBILITY IMPAIRMENT TO STAND: AND
- ABSENCE OF A WEIGHT SCALE THAT ACCOMMODATES WHEELCHAIRS OR OTHERS WHO HAVE DIFFICULTY STEPPING UP.

POLICY BARRIERS

POLICY BARRIERS ARE FREQUENTLY RELATED TO A LACK OF AWARENESS OR ENFORCEMENT OF EXISTING LAWS AND REGULATIONSEXTERNAL ICON THAT REQUIRE PROGRAMS AND ACTIVITIES BE ACCESSIBLE TO PEOPLE WITH DISABILITIES. EXAMPLES OF POLICY BARRIERS INCLUDE:

- DENYING QUALIFIED INDIVIDUALS WITH DISABILITIES THE OPPORTUNITY TO PARTICIPATE IN OR BENEFIT FROM FEDERALLY FUNDED PROGRAMS, SERVICES, OR OTHER BENEFITS;
- DENYING INDIVIDUALS WITH DISABILITIES ACCESS TO PROGRAMS, SERVICES, BENEFITS, OR OPPORTUNITIES TO PARTICIPATE AS A RESULT OF PHYSICAL BARRIERS; AND
- DENYING REASONABLE ACCOMMODATIONS TO QUALIFIED INDIVIDUALS WITH DISABILITIES, SO THEY CAN PERFORM THE ESSENTIAL FUNCTIONS OF THE JOB FOR WHICH THEY HAVE APPLIED OR HAVE BEEN HIRED TO PERFORM.

https://www.cdc.gov/ncbddd/disabilityandhealth/disability-barriers.htm

BARRIERS (CDC ARTICLE, CONTINUED)

PROGRAMMATIC BARRIERS

PROGRAMMATIC BARRIERS LIMIT THE EFFECTIVE DELIVERY OF A PUBLIC HEALTH OR HEALTHCARE PROGRAM FOR PEOPLE WITH DIFFERENT TYPES OF IMPAIRMENTS. EXAMPLES OF PROGRAMMATIC BARRIERS INCLUDE:

- INCONVENIENT SCHEDULING:
- LACK OF ACCESSIBLE EQUIPMENT (SUCH AS MAMMOGRAPHY SCREENING EQUIPMENT);
- INSUFFICIENT TIME SET ASIDE FOR MEDICAL EXAMINATION AND PROCEDURES;
- LITTLE OR NO COMMUNICATION WITH PATIENTS OR PARTICIPANTS; AND
- PROVIDER'S ATTITUDES, KNOWLEDGE, AND UNDERSTANDING OF PEOPLE WITH DISABILITIES.

SOCIAL BARRIERS

SOCIAL BARRIERS ARE RELATED TO THE CONDITIONS IN WHICH PEOPLE ARE BORN, GROW, LIVE, LEARN, WORK AND AGE – OR SOCIAL DETERMINANTS OF HEALTH – THAT CAN CONTRIBUTE TO DECREASED FUNCTIONING AMONG PEOPLE WITH DISABILITIES. HERE ARE EXAMPLES OF SOCIAL BARRIERS:

- PEOPLE WITH DISABILITIES ARE FAR LESS LIKELY TO BE EMPLOYED. IN 2017, 35.5% OF PEOPLE WITH DISABILITIES, AGES 18 TO 64 YEARS, WERE EMPLOYED, WHILE 76.5% OF PEOPLE WITHOUT DISABILITIES WERE EMPLOYED, ABOUT DOUBLE THAT OF PEOPLE WITH DISABILITIES.2
- ADULTS AGE 18 YEARS AND OLDER WITH DISABILITIES ARE LESS LIKELY TO HAVE COMPLETED HIGH SCHOOL COMPARED TO THEIR PEERS WITHOUT DISABILITIES (22.3% COMPARED TO 10.1%).
- PEOPLE WITH DISABILITIES ARE MORE LIKELY TO HAVE INCOME OF LESS THAN \$15,000 COMPARED TO PEOPLE WITHOUT DISABILITIES (22.3% COMPARE TO 7.3%).3
- CHILDREN WITH DISABILITIES ARE ALMOST FOUR TIMES MORE LIKELY TO EXPERIENCE VIOLENCE THAN CHILDREN WITHOUT DISABILITIES.4

TRANSPORTATION BARRIERS

TRANSPORTATION BARRIERS ARE DUE TO A LACK OF ADEQUATE TRANSPORTATION THAT INTERFERES WITH A PERSON'S ABILITY TO BE INDEPENDENT AND TO FUNCTION IN SOCIETY. EXAMPLES OF TRANSPORTATION BARRIERS INCLUDE:

- LACK OF ACCESS TO ACCESSIBLE OR CONVENIENT TRANSPORTATION FOR PEOPLE WHO ARE NOT ABLE TO DRIVE BECAUSE OF VISION OR COGNITIVE IMPAIRMENTS, AND
- PUBLIC TRANSPORTATION MAY BE UNAVAILABLE OR AT INCONVENIENT DISTANCES OR LOCATIONS.

"THE PROBLEMS OF INACCESSIBILITY MOSTLY INVOLVED CURBS AND STEPS; INACCESSIBLE ELEVATORS; STEEP AND NARROW WALKS; GRATINGS IN WALKWAYS; DOORS THAT WERE TOO NARROW, REVOLVED, OR WERE HARD TO OPEN; LACK OF PARKING SPACES FOR THE DISABLED; LACK OF ACCOMMODATIONS FOR WHEELCHAIRS; AISLES THAT WERE TOO NARROW; PUBLIC TOILET STALLS AND TELEPHONE BOOTHS THAT WERE TOO SMALL; AND TELEPHONES, DRINKING FOUNTAINS, VENDING MACHINES, LIGHT SWITCHES, AND FIRE ALARMS THAT WERE TOO HIGH TO USE. AMONG THE WORST OFFENDERS WERE, IRONICALLY, SOCIAL SECURITY OFFICES IN SMALL TOWNS, USUALLY LOCATED ON THE SECOND FLOOR OF BUILDINGS WITHOUT ELEVATORS."

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DEVELOPMENTAL DISABILITIES

A <u>DEVELOPMENTAL DISABILITY</u> IS A TYPE OF DISABILITY THAT AFFECTS A PERSON'S PHYSICAL, COGNITIVE, OR BEHAVIORAL ABILITIES AND USUALLY MANIFESTS IN CHILDHOOD OR EARLY ADOLESCENCE. THESE DISABILITIES CAN AFFECT A PERSON'S ABILITY TO COMMUNICATE, LEARN, INTERACT WITH OTHERS, AND PERFORM DAILY ACTIVITIES INDEPENDENTLY. SOME COMMON DEVELOPMENTAL DISABILITIES INCLUDE AUTISM SPECTRUM DISORDER, INTELLECTUAL DISABILITY, CEREBRAL PALSY, AND DOWN SYNDROME. DEVELOPMENTAL DISABILITIES ARE CAUSED BY A VARIETY OF FACTORS, INCLUDING GENETIC DISORDERS, PRENATAL EXPOSURE TO HARMFUL SUBSTANCES, AND BRAIN INJURY OR DAMAGE DURING CHILDBIRTH OR EARLY CHILDHOOD. INDIVIDUALS WITH DEVELOPMENTAL DISABILITIES MAY REQUIRE SPECIALIZED SUPPORT AND ACCOMMODATIONS TO REACH THEIR FULL POTENTIAL AND LEAD FULFILLING LIVES.

THE FIRST REVIEW OF THE OLIVER'S PLANS WILL BE DEDICATED TO SERVING THE NEEDS OF CITIZENS WITH DEVELOPMENTAL DISABILITIES.

SPECIFICALLY, THIS REDESIGN WILL CONSIDER THE FOLLOWING DIFFERENCES:

- AUTISM SPECTRUM DISORDER
- CEREBRAL PALSY
- DOWN SYNDROME
- SEIZURE DISORDER



DESIGN FOR DOWN SYNDROME--A THESIS PROJECT:

• HTTPS://ISSUU.COM/NARVAEZ.ARCH/DOCS/ARCHITECTUREOFDOWNSYNDROME

DESIGN FOR AUTISM:

HTTPS://WWW.TECHNEARCHITECTS.COM/BLOGS/CONSIDERATIONS-WHEN-DESIGNING-SPACES-FOR-THOSE-WITH-AUTISM?FORMAT=AMP

- https://www.cdc.gov/media/releases/2018/p0816-disability.html
 https://www.mayinstitute.org/autism-aba/developmental-disabilities.html#:~:text=What%20are%20the%20most%20common,followed%20by%20autism%20spectrum%20 disorder.
 - https://www.cdc.gov/ncbddd/developmentaldisabilities/index.html

https://issuu.com/narvaez.arch/docs/architectureofdownsyndromehttps://www.technearchitects.com/blogs/considerations-when-designing-spaces-for-those-with-autism?format=ample.

PHYSICAL DISABILITIES

"A PHYSICAL DISABILITY IS A TYPE OF DISABILITY THAT AFFECTS A
PERSON'S PHYSICAL FUNCTIONING, MOBILITY, DEXTERITY, OR STAMINA.
THIS CAN INCLUDE CONDITIONS SUCH AS PARALYSIS, AMPUTATION,
CEREBRAL PALSY, MUSCULAR DYSTROPHY, AND SPINA BIFIDA, AMONG
OTHERS. PHYSICAL DISABILITIES CAN BE CONGENITAL (PRESENT AT BIRTH)
OR ACQUIRED LATER IN LIFE DUE TO INJURY, ILLNESS, OR AGING. THESE
DISABILITIES MAY IMPACT A PERSON'S ABILITY TO PERFORM CERTAIN
TASKS, MOVE AROUND INDEPENDENTLY, OR ENGAGE IN PHYSICAL
ACTIVITIES. HOWEVER, WITH ASSISTIVE DEVICES AND ACCOMMODATIONS,
INDIVIDUALS WITH PHYSICAL DISABILITIES CAN STILL LEAD FULFILLING AND
PRODUCTIVE LIVES."

THE SCEOND REVIEW OF THE OLIVER'S PLANS WILL BE DEDICATED TO SERVING THE NEEDS OF CITIZENS WITH PHYSICAL DISABILITIES.

SPECIFICALLY, THIS REDESIGN WILL CONSIDER THE FOLLOWING PHYSICAL DIFFERENCES:

- PEOPLE MISSING LIMBS
- PEOPLE WITH MISSING DIGITS
- PEOPLE WHO USE A WHEELCHAIR
- PEOPLE WITH ARTHRITIS

"THE MOST COMMON PERMANENT DISABILITIES ARE MUSCULOSKELETAL IMPAIRMENTS SUCH AS PARTIAL OR TOTAL PARALYSIS, AMPUTATION, SPINAL INJURY, ARTHRITIS, MUSCULAR DYSTROPHY, MULTIPLE SCLEROSIS, CEREBRAL PALSY, AND TRAUMATIC BRAIN INJURY."



WHAT ARE THE MOST COMMON PHYSICAL DISABILITIES?:

- ACCORDING TO THE CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC), THREE OF THE MOST COMMON PHYSICAL DISABILITIES THAT AFFECT PEOPLE INCLUDE ARTHRITIS, HEART DISEASE, AND RESPIRATORY DISORDERS.
 - https://www.cdc.gov/media/releases/2018/p0816-disability.htm
 https://www.mayinstitute.org/autism-aba/developmental disabilities.html#:~:text=What%20are%20the%20most%20common,followed%20by%20autism%20spectrum%20
 - https://www.cdc.gov/ncbddd/developmentaldisabilities/index.htm

https://issuu.com/narvaez.arch/docs/architectureofdownsyndrom https://www.technearchitects.com/blogs/considerations-when-designing-spaces-for-those-with-autism?format=am THINKING OF ARCHITECTURAL SOLUTIONS

DEVELOPMENTAL DISABILITIES

- MUCH OF WHAT IS CONSIDERED IS ON THE SENSORY SIDE OF DESIGN
- CUES IN THE AESTHETICS COULD BE USEFUL ADDITIONS TO THE INTERIOR OF THE BUILDING (I.E.: PAINT ON THE GROUND TO INDICATE FLOORS AND PATHS, AND HELP SOMEONE GET BACK TO THEIR UNIT
- SMALL THINGS: DOOR KNOBS/HANDLES, HOW THE WINDOWS OPERATE, LIGHTING DESIGN ELEMENTS

THESE DISABILITIES SHOULD BE UNDERSTOOD BEFORE THEY CAN BE PROPERLY ACCOMODATED FOR.

CONSULTED:

DESIGN FOR DOWN SYNDROME--A THESIS PROJECT

• HTTPS://ISSUU.COM/NARVAEZ.ARCH/DOCS/ARCHITECTUREOFDOWNSYNDROME

DESIGN FOR AUTISM:

HTTPS://WWW.TECHNEARCHITECTS.COM/BLOGS/CONSIDERATIONS-WHEN-DESIGNING-SPACES-FOR-THOSE-WITH-AUTISM? FORMAT=AMP

HTTPS://WWW.TECHNEARCHITECTS.COM/BLOGS/CONSIDERATIONS-WHEN-DESIGNING-SPACES-FOR-THOSE-WITH-AUTISM?FORMAT=AMP HTTPS://WWW.CDC.GOV/MEDIA/RELEASES/2018/P0816-DISABILITY.HTML

THINKING OF ARCHITECTURAL SOLUTIONS

DEVELOPMENTAL DISABILITIES

CREATING ARCHITECTURE FOR AUTISM

THE ARCHITECTURE COMMUNITY CONTINUES TO GROW AND EDUCATE THEMSELVES IN MANY AREAS, INCLUDING HOW TO PROPERLY ACCOMMODATE THOSE WITH SPECIAL NEEDS. HERE ARE SOME OF THE AREAS OF CONSIDERATION WHEN DESIGNING SPACES FOR AUTISM:

SPATIAL PLANNING

ONE OF THE FIRST AUTISM AND ARCHITECTURE DESIGN CONSIDERATIONS IS SPACE. THOSE WITH ASD (BOTH SEVERE AND HIGH-FUNCTIONING) MAY STRUGGLE WITH JUDGING SPACE AND SPATIAL AWARENESS.

SPACES AND ROOMS THAT ARE ORDERLY AND EASY TO NAVIGATE ARE OFTEN IDEAL AS THEY REDUCE CONFUSION AND MAKE IT EASIER TO FOCUS. THESE TYPES OF SPACES ALSO PREVENT THOSE WITH ASD FROM BECOMING OVERWHELMED AND POTENTIALLY RUNNING AWAY.

FOR PUBLIC LIBRARIES, DAYCARES, SCHOOLS, OR OTHER PUBLIC SPACES, IT'S IMPORTANT TO OFFER A SANCTUARY OR A QUIET AREA WHERE FAMILIES OR TEACHERS CAN TAKE CARE OF THEIR CHILD IF THE CHILD BECOMES OVERWHELMED. THIS AREA SHOULD BE EASY TO FIND AND AVAILABLE AT MULTIPLE ENDS OF A BUILDING SO THAT FAMILIES OR TEACHERS DON'T NEED TO SEARCH TOO FAR.

LIGHTING

THOSE WITH AUTISM MAY FEEL SENSITIVITY TO LIGHTING AND SOUND AND BECOME DISTRESSED AND UNCOMFORTABLE. THE BEST TYPES OF LIGHTING ARE THOSE THAT OFFER INDIRECT LIGHT OR DIM LIGHTING, AS OPPOSED TO FLUORESCENT LIGHTING. IN SOME INSTANCES, HIDING THESE LIGHT SOURCES MAY EVEN BE BENEFICIAL. SOME STUDIES FOUND THAT EXPOSURE TO LIGHT CAN IMPACT MOOD AND BECAUSE OF THIS, ARTIFICIAL LIGHTING MAY DISRUPT THE LIGHT-DARK ENVIRONMENT AND CONTRIBUTE TO MELATONIN SUPPRESSION AND POOR SLEEP.

SOUNDS

SIMILAR TO LIGHTING, SOUNDS MAY ALSO CAUSE AGITATION OR IRRITATION FOR THOSE DIAGNOSED WITH AUTISM. TO AVOID OVERWHELMING THEM OR CAUSING DISRUPTIONS, BUILDINGS SHOULD BE WELL INSULATED FROM OUTSIDE NOISES LIKE TRAFFIC OR CROWDS. HOWEVER, IT'S IMPORTANT TO AVOID TOO SOFT OF AN ENVIRONMENT. ALLOWING THE ABILITY TO ADJUST THE NOISE LEVEL AND ADD BACKGROUND NOISE CAN HELP TO CREATE A SENSE OF PRIVACY.

SENSORY AND EXPLORATORY SPACES

SENSORY PLAY ALSO OFFERS MANY BENEFITS IN HELPING THOSE WITH AUTISM PROCESS SENSORY INFORMATION. OFFERING SENSORY ACTIVITIES OR STATIONS IN COMMUNITY BUILDINGS CAN HELP ENGAGE MULTIPLE AREAS OF THE CHILD'S BRAIN AS WELL AS HELP THEM WITH THEIR EMOTIONAL, AND COGNITIVE GROWTH. MALLS AND DAYCARES CAN OFFER SENSORY ROOMS WHERE CHILDREN CAN PLAY AND EXPLORE. WITH A SINGLE ENTRY POINT AND A PLACE FOR PARENTS AND TEACHERS TO SIT NEARBY, THESE ROOMS CAN PROVIDE A SAFE SPACE THAT ALLOWS FOR BOTH INDEPENDENCE AND SUPERVISION.

- 1. THE BASICS OF A LAYOUT | AUTISTIC PEOPLE
- 2. AUDITORY SATISFACTION
- 3. LIGHTING MAKES A DIFFERENCE | AUTISTIC PEOPLE
- 4. SENSORY ZONING
- 5. MATERIAL MATTERS | AUTISTIC PEOPLE
- 6. COLOUR CONFLUX
- 7. SPATIAL CONFIGURATION
- 8. BUILDING SERVICES | AUTISTIC PEOPLE
- 9. SAFE IN THE SURROUNDING
- 10. THRESHOLD AND ENTRANCE | AUTISTIC PEOPL

TTPS://WWW.TECHNEARCHITECTS.COM/BLOGS/CONSIDERATIONS-WHEN-DESIGNING-SPACES-FOR-THOSE-WITH-AUTISM?FORMAT=AMI

GROUP 2 RELEVANT AREAS FOR IMPROVEMENT/ ACKNOWLEDGING DISABILITY BARRIERS

PHYSICAL DISABILITIES

RESEARCH QUESTIONS:

WHAT ARE COMMON BARRIERS FOR PEOPLE LIVING WITH PHYSICAL DISABILITIES?

WHAT ELEMENTS OF ARCHITECTURE DOES THE ADA HAVE LEGALLY REGULATED VERSIONS OF?

ARCHITECTURAL BARRIER- ARTICLE

• AN ARCHITECTURAL BARRIER IS SOMETHING PHYSICAL THAT PREVENTS A BUILDING OR SITE FROM BEING ACCESSIBLE TO ALL PEOPLE. AN ARCHITECTURAL BARRIER COULD PREVENT A PERSON WITH A DISABILITY FROM GETTING IN THE DOOR—AN EXAMPLE OF THIS WOULD BE STEPS AT AN ENTRANCE. IT COULD ALSO PREVENT A PERSON WITH A DISABILITY FROM USING CERTAIN FEATURES OF THE BUILDING OR SITE. EXAMPLES OF FEATURES ARE SERVICE COUNTERS, BATHROOMS, AND DRINKING FOUNTAINS.

SPD ABILITY WALK & RUN 2019 – EXPERIENCE THE DAILY CHALLENGES OF A WHEELCHAIR USER

- WHEELCHAIR USERS FACE ACCESSIBILITY CHALLENGES DAILY, SUCH AS MANOEUVERING UNEVEN GROUNDS, HAVING TO FIND ALTERNATIVE ROUTES WHEN THERE ARE KERBS AND STEPS, AND REACHING FOR THINGS ON HIGH SHELVES. THEREFORE, A NEW COURSE WILL BE INTRODUCED PROVIDING A MORE REALISTIC VIEW OF THE CHALLENGES BEYOND GOING AROUND ON FLAT EVEN GROUND.
- A RAMP CAN BE USED TO REPLACE OR COMPLEMENT STEPS SO THAT AN AREA BECOMES ACCESSIBLE TO A WHEELCHAIR USER. HOWEVER, IT TAKES MORE EFFORT AND CONTROL TO MOVE UP AND DOWN A SLOPE. IT GETS MORE DIFFICULT AND EVEN DANGEROUS IF THE RAMP OR SLOPE IS TOO STEEP AND THERE ARE NO RAILINGS FOR THE WHEELCHAIR USER TO HOLD ON TO.

DISABILITY BARRIERS-ARTICLE

• FOR INSTANCE, A BUILDING OWNER RECOGNIZES A BARRIER WHEN THEY REALIZE THAT HEAVY DOORS LIMIT PEOPLE'S ACCESS TO THE BUILDING.

HTTPS://SPD.ORG.SG/EXPERIENCE-TH ELCHAIR%20USERS%20FACE%20DIFFICULTIES%20MOVIN HTTPS://NORTH

GROUP 2 RELEVANT AREAS FOR IMPROVEMENT

PHYSICAL DISABILITIES

BASED ON THE RESEARCH, WHAT ELEMENTS INSIDE THE OLIVER SHOULD BE CHANGED? WHAT SOLUTIONS CAN BE FASHIONED FROM THIS DATA (THIS IS SPECIFICALLY FOR CICTIZENS IN WHEELCHAIRS)

TEKWAY'S STRONGGO INDUSTRIES LIST: 8 COMMON BARRIERS FOR USERS OF WHEELCHAIRS

"1. DIRTY HANDS AND BLISTERS

MANUAL WHEELCHAIRS ARE POWERED ONE WAY: HUMAN FORCE. IF THE INDIVIDUAL WITH THE WHEELCHAIR NAVIGATES SOLO, THEY MAY DEAL WITH DIRTY HANDS AND BLISTERS. THIS CAN BE PROBLEMATIC WHEN THEY CANNOT EASILY SANITIZE THEIR HANDS BETWEEN TRIPS. WHEELCHAIR HAND GLOVES ARE A GREAT OPTION FOR SOME.

2. RESTLESS DRIVERS HONKING

Sometimes a wheelchair user must enter or exit a vehicle while blocking a section of road. This may seem annoying to other drivers, but it's likely that the individual with the wheelchair was not given another better option for accessing their car. Honking never helps. In fact, honking can make all parties more nervous or angry.

3. NO RAMP OR INACCESSIBLE RAMPS

One thing that says a lot about the overall accessibility of a building — when there are no ramps in sight! However, in some cases, a building or area is listed with the option of a ramp, but wheelchair users will discover upon arrival that the ramp has a number of problems. These issues usually involve the ramp width, the presence of a few stairs at the bottom of a ramp, or a ramp gradient that's too steep for self-propelled wheelchairs.

4. NARROW DOORWAYS

Doorways are not always constructed wide enough to allow wheelchairs enough room to pass through, and some buildings are just not large enough for these doorways. Doors that have spring hinges are even more difficult for wheelchair users to navigate since they will not hold open long enough to go through. This can make it that much harder for individuals who use wheelchairs to enjoy public or private buildings.

5. SMALL BUT IMPORTANT DETAILS

Mirrors are rarely the right height to benefit individuals who use wheelchairs. Door knobs can be at a height that makes it difficult for wheelchair users to handle a door on their own. Narrow or crowded hallways create unnecessary challenges for an individual using a wheelchair.

6. THE ELEVATOR RACE

Elevators changed the game for many people with mobility issues, allowing access to many different floors without great difficulty. However, wheelchair users often face somewhat of a race or stampede to board the elevator. And individuals who use wheelchairs may also encounter a stranger who thinks that the wheelchair users should board the elevator last since the wheelchair takes up the most space.

7. THE RESERVED PARKING SPOTS

Many parking lots include reserved parking spots for individuals with mobility issues, but many able-bodied individuals use these spots. This can make it even more difficult for individuals who use wheelchairs to go about their daily life activities. Many authorities overlook this recurring issue.

8. PUBLIC TRANSPORTATION BARRIERS

Individuals who use mobility devices often are unable to access public transportation. This can be due to the surrounding infrastructure, lack of information, or the difficulty of boarding or disembarking. Creating public transportation that serves all requires a high level of integration and planning from start to finish.

ONE OF THE BIGGEST BARRIERS FOR USERS OF WHEELCHAIRS IS BEING TREATED LIKE THEY ARE INVISIBLE TO THE GREATER SOCIETY — WHETHER IT'S IN A PERSONAL INTERACTION WHERE A STRANGER MIGHT ADDRESS THE WHEELCHAIR USER'S FRIEND OR FAMILY MEMBER BEFORE DIRECTLY TALKING TO THE INDIVIDUAL TO A MORE GENERAL SENSE WHERE THE NEEDS OF INDIVIDUALS WITH MOBILITY AIDS ARE NOT CONSIDERED WHEN CITY PLANNING."

AESTHETIC VS FUCNTIONAL

DEVISED IMPROVEMENTS TO BE MADE TO T.O.'S DESIGN FOLLOWING THE RESEARCH PHASE TO IMPORVE QUALITY

OF LIFE FOR PEOPLE OF ALL ABILITIES:

AESTHETIC ENHANCEMENTS

IMPROVEMENTS:

WALL-MOUNTED PINK/WHITE NOISE MAKER WITH SURROUND

SOUND

FLOOR LIGHTS

MODULAR FURNITURE WITH SENSORY CONSIDERATE FABRIC

ADA HEIGHT WINDOW SILL

LIGHT SENSITIVE AUTOMATED BLINDS

FACADE TREATMENTS AND IMPROVEMENTS

STRATEGIC USE OF COLORS TO APPEAL TO RESIDENTS ON

THE SPECTRUM

SPECULAR GLARE

EASY ON EASY OFF SINK FAUCET.

DIMMABLE LED DROP LIGHTS.

ROUNDED COUNTERTOP EDGES.

SMART HOME SYSTEM.

CLERESTORY WINDOWS FOR ADDITIONAL NATURAL LIGHT.

BATHROOM FLOOR DRAIN.

SLIGHTLY RECESSED UNIT ENTRIES.

MATTED VINYL FLOORING.

LOW PILE CARPET TILE.

ACOUSTICAL FOAM

(MAYBE) STRATEGIC DIFFERNCES IN FLOOR AND WALL

TEXTURES WITHIN THE SPACE

FUNCTIONAL ENHANCEMENTS

IMPROVEMENTS:

0 INCH DOOR THRESHOLD

SPECIALIZED DOOR HANDLES

ACCESSIBLE DISHWASHER

ACCESSIBLE WASHER/DRYER

LOW HEIGHT CASEWORK WITH EQUITABLY DESIGNED HANDLES

WALL-MOUNTED PINK/WHITE NOISE MAKER WITH SURROUND SOUND

WALK IN TUB/ROLL IN SHOWER

ADA HEIGHT TOILET

42 INCH THRESHOLD

SLIDING INTERIOR DOOR

DOORLESS WALL OPENING

ADA HEIGHT DESK

ADA HEIGHT WINDOW SILL

ELECTRIC WINDOW WINCH

WHEELCHAIR ACCESSIBLE DINING TABLE

WHEELCHAIR ACCESSIBLE COFFEE TABLE

WHEELED FURNITURE.

WALL ADJUSTMENTS TO INCREASE TURN AROUND SPACE IN THE BATHROOM.

EASY ON EASY OFF SINK FAUCET.

INCREASED INSULATION AND WALL AND WINDOW TYPES.

SLOW CLOSE CABINETS.

MECHANIZED DOOR.

OPENERS AND CLOSERS.

BATHROOM FLOOR DRAIN.

PULL-OUT ELECTRIC CLOSET RACK.

FOLDING SHOWER BENCH.

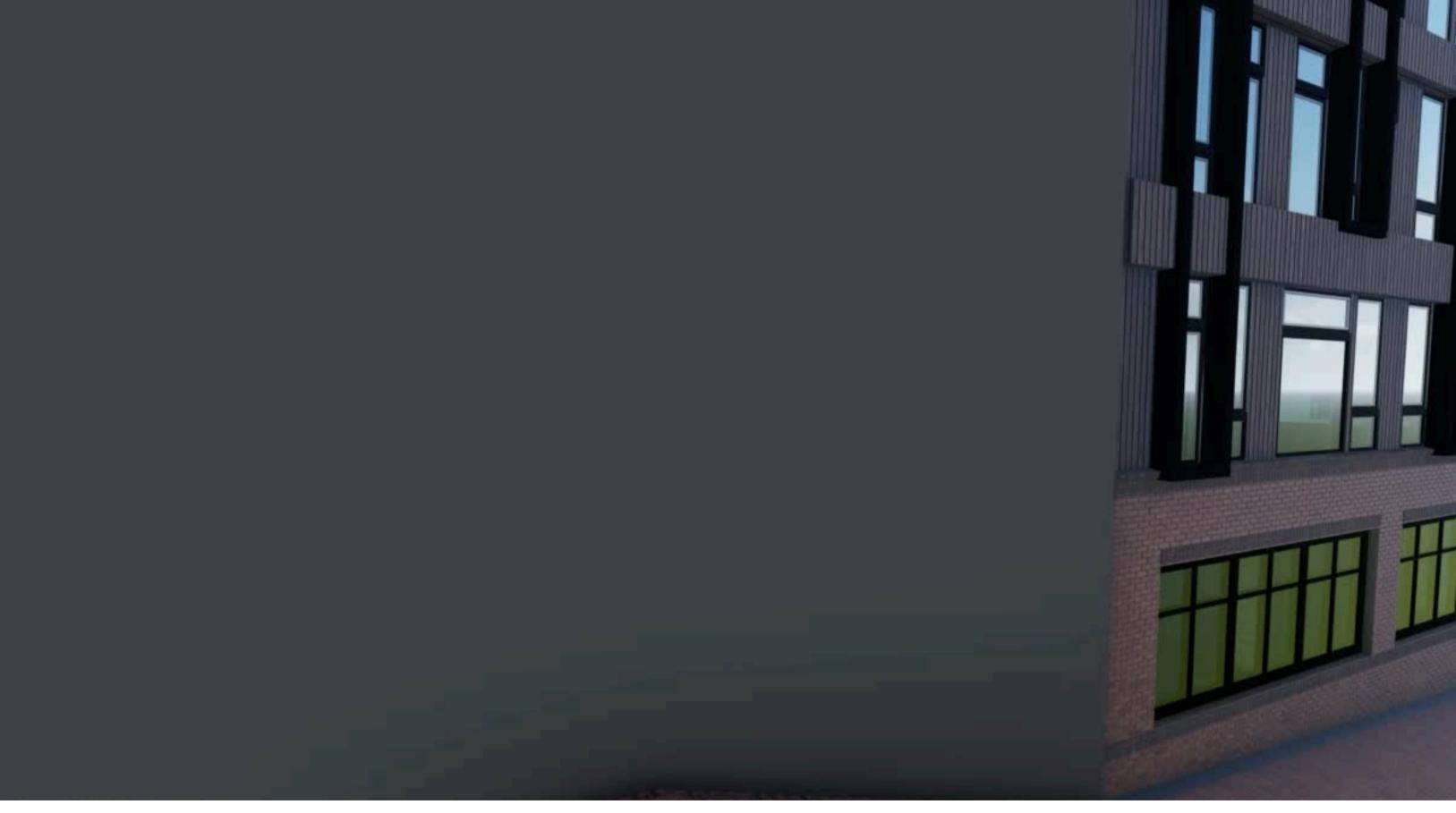
ADA GRAB BARS.

BOTTOM OF DOOR SWEEP AND SKIRT

https://www.technearchitects.com/blogs/considerations-when-designing-spaces-for-those-with-autism?format=amp https://www.cdc.gov/media/releases/2018/p0816-disability.html

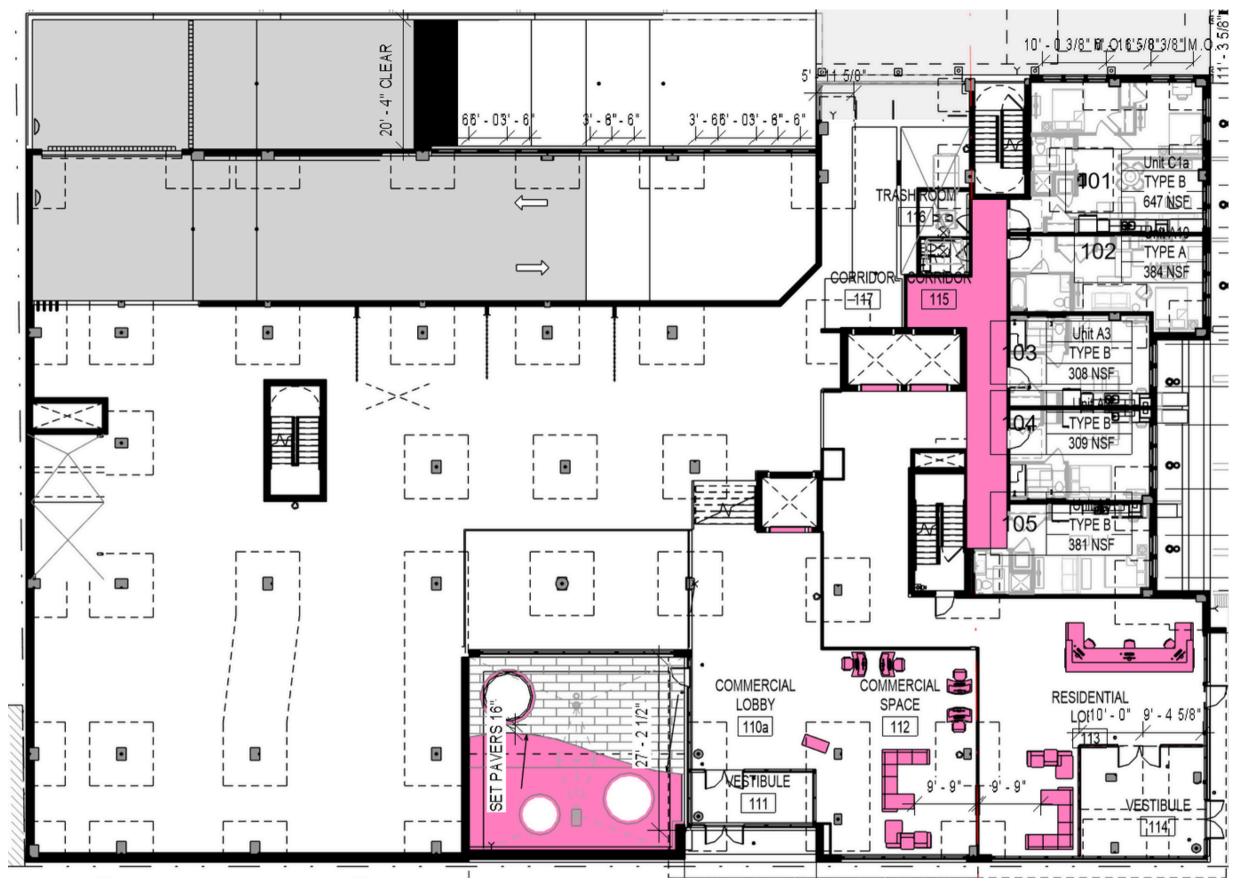
https://www.bdcnetwork.com/blog/four-keys-designing-autistic-friendly-spaces#:~:text=Spatial%20configuration.with%20autism%20to%20better%20focus.



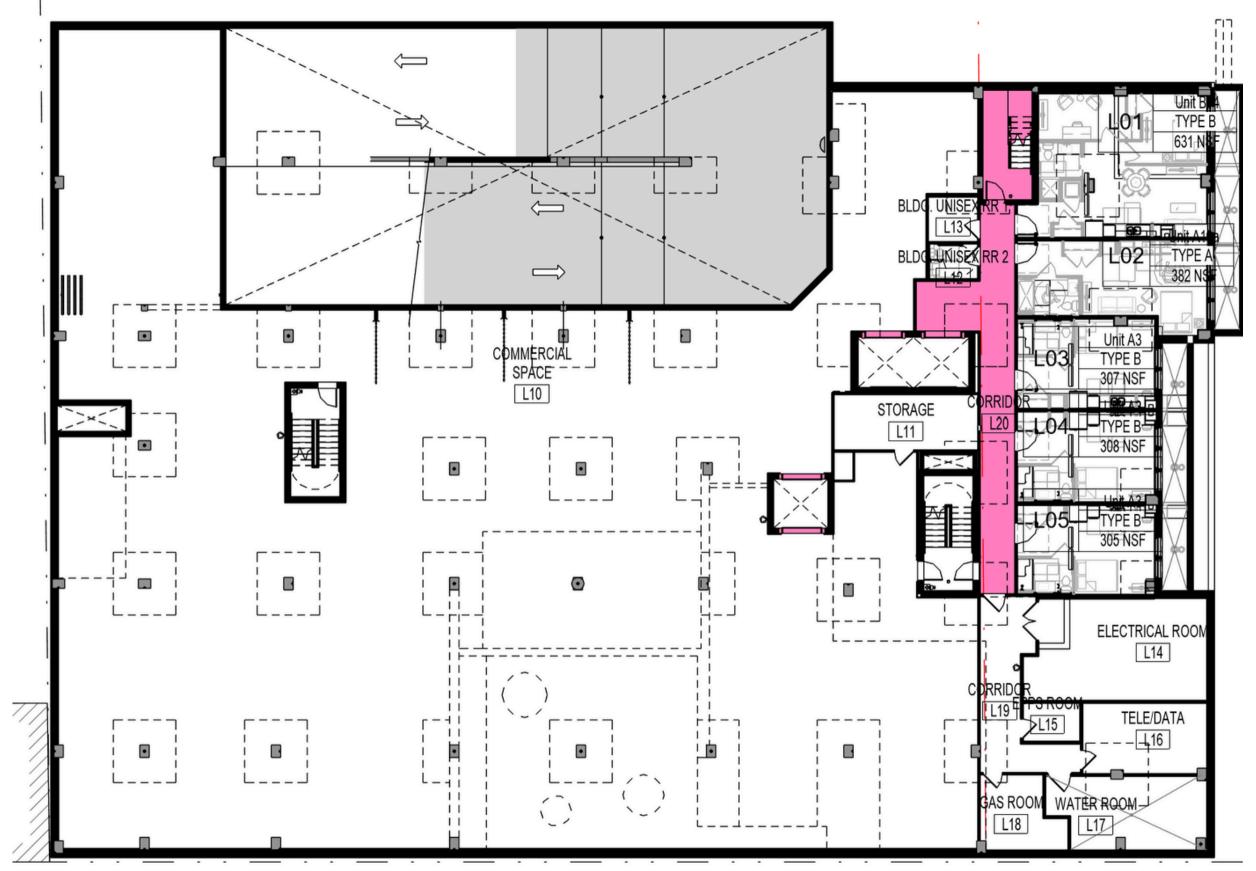


RENDERED VIEW

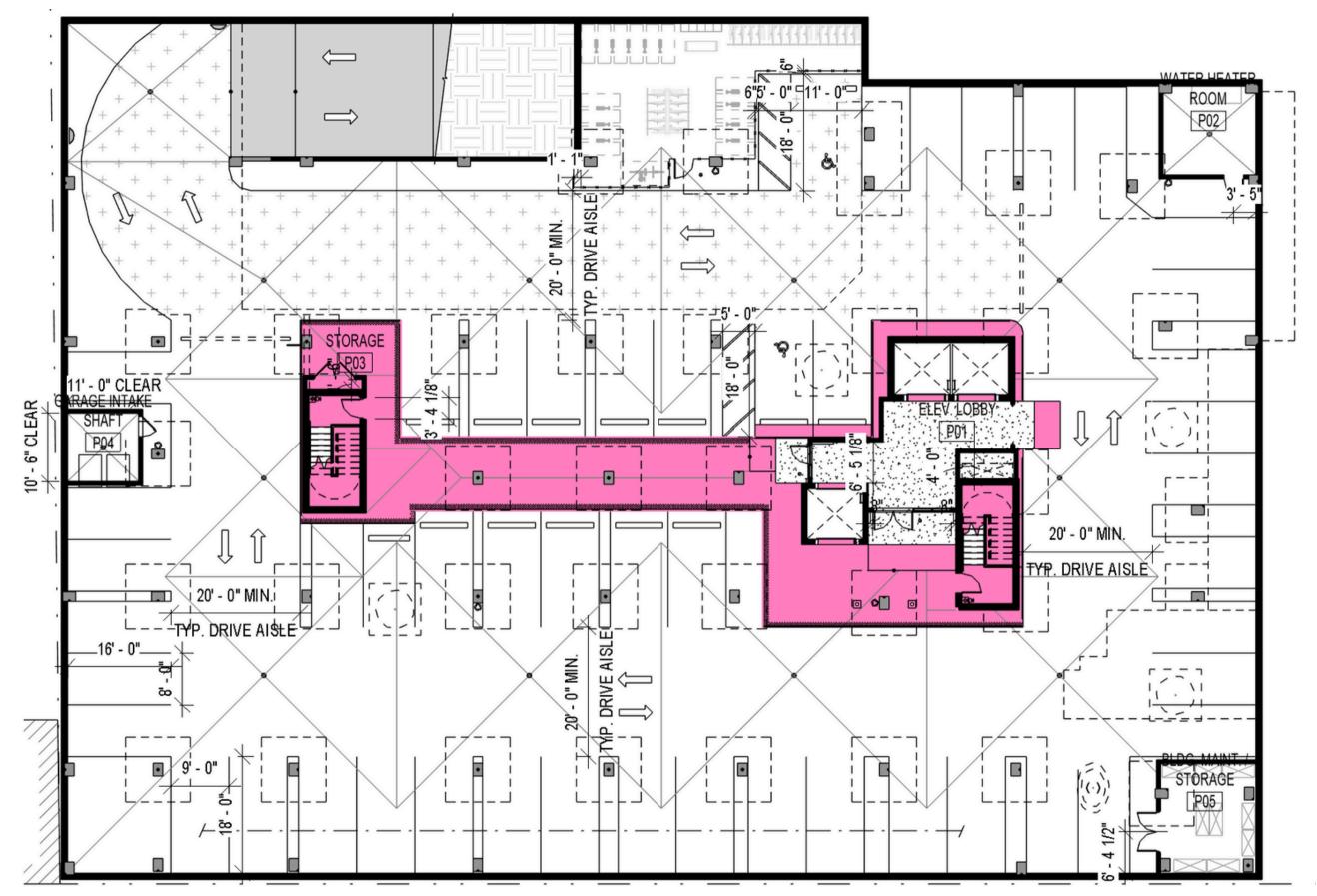
RESIDENTIAL LOBBY AND GROUND FLOOR



RENOVATED: **1ST LEVEL**



RENOVATED: **LOWER LEVEL**

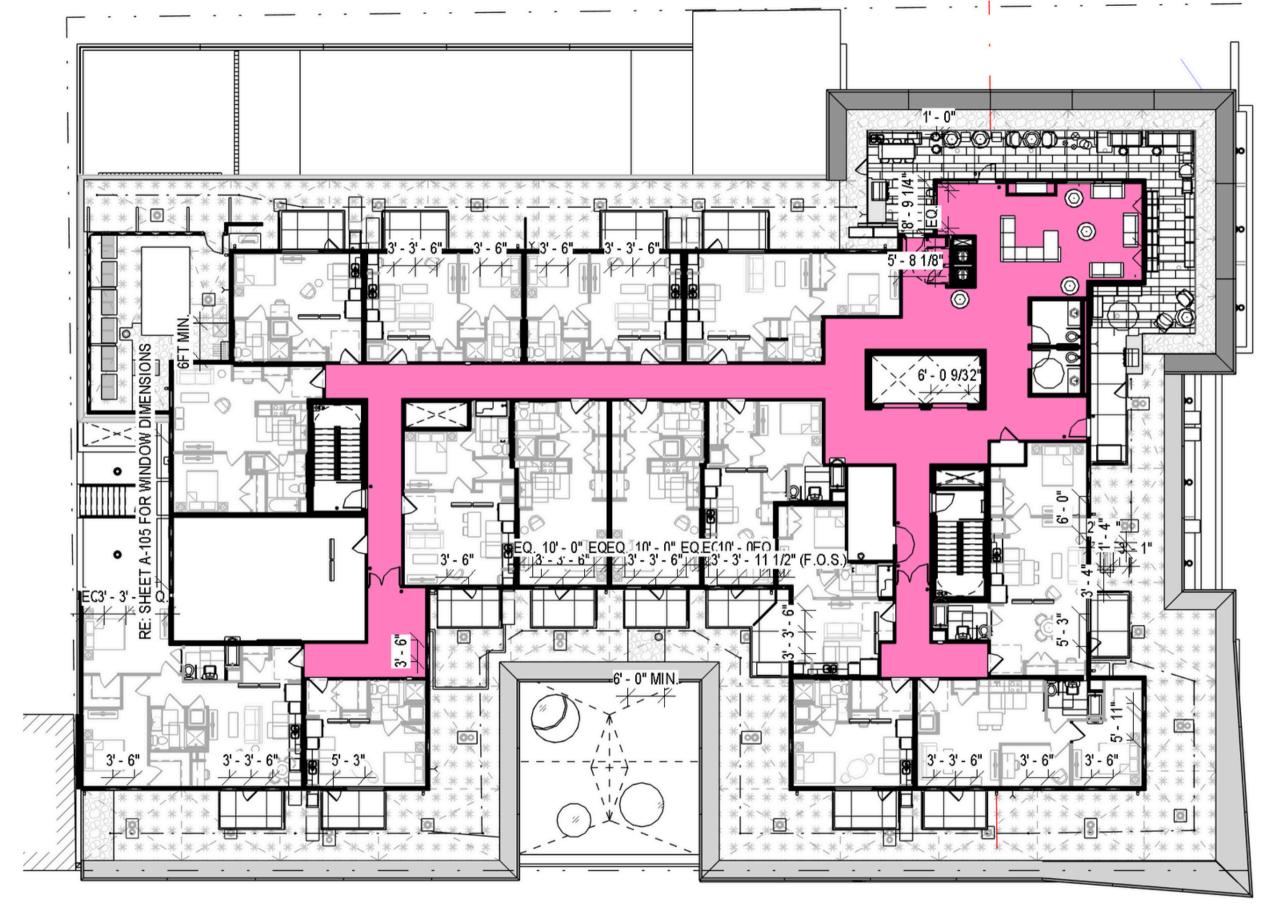


RENOVATED: **PARKING LEVEL**

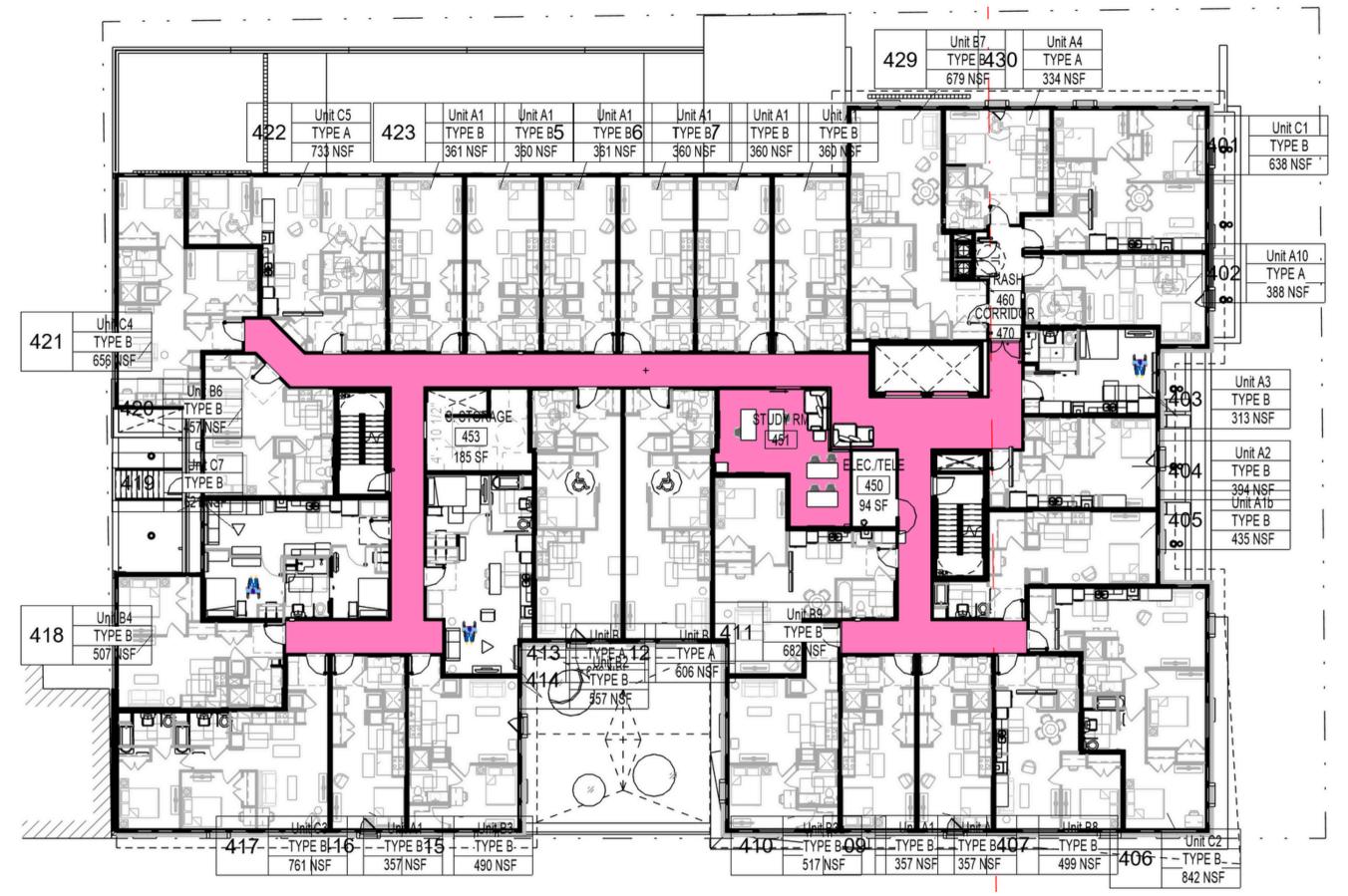


RENDERED VIEW

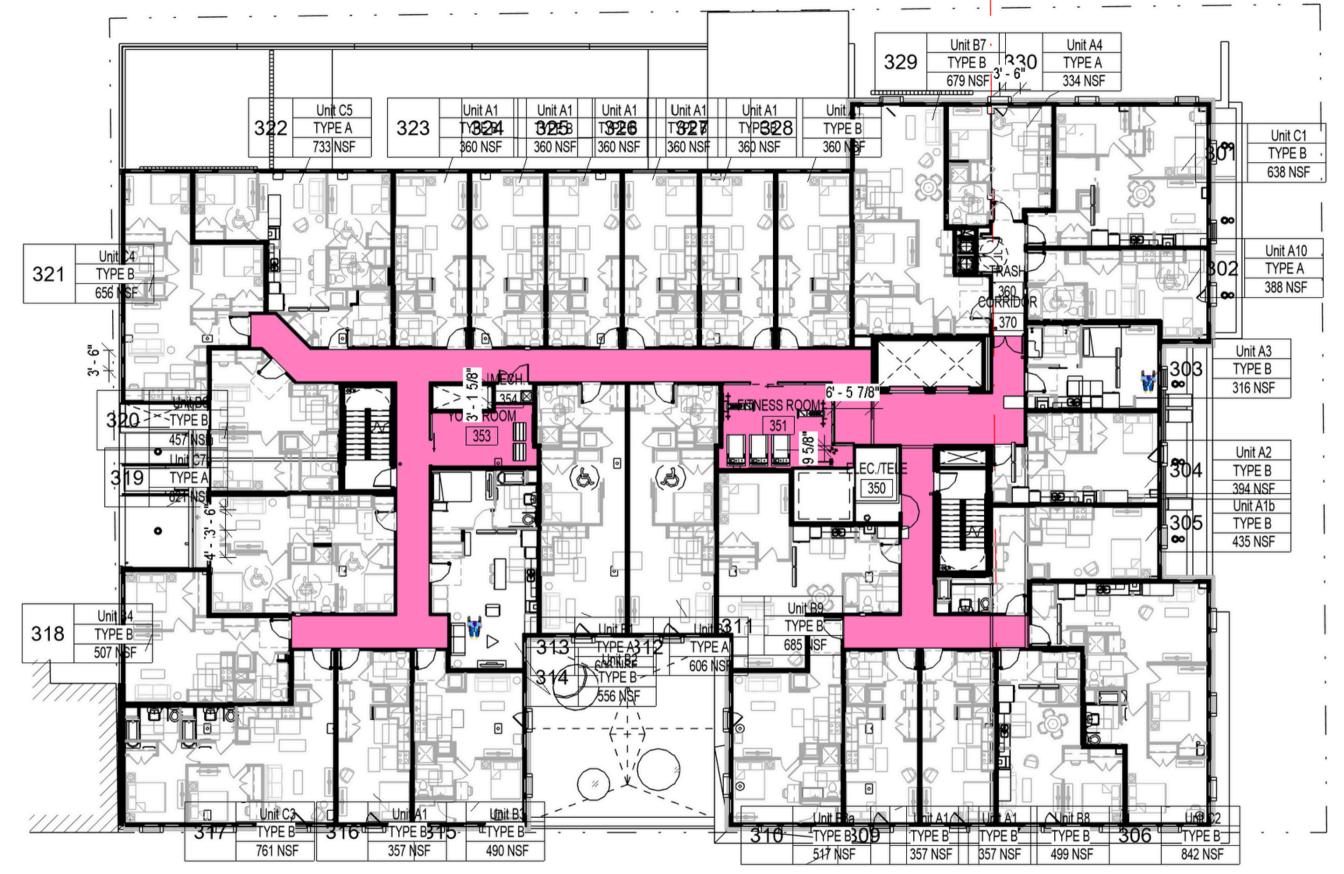
CORRIDOR, AND ROOF LOUNGE



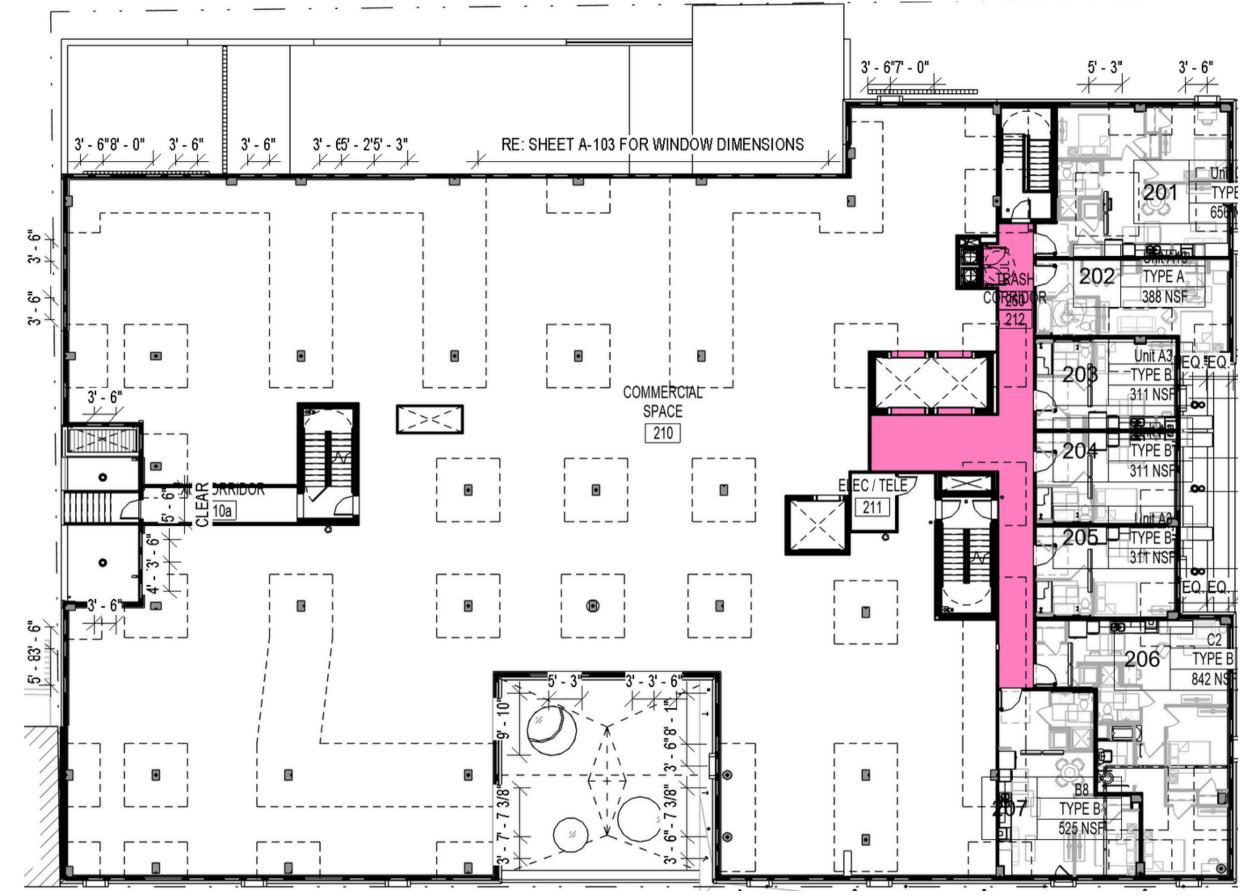
RENOVATED: **ROOF LEVEL**



RENOVATED: 4TH LEVEL



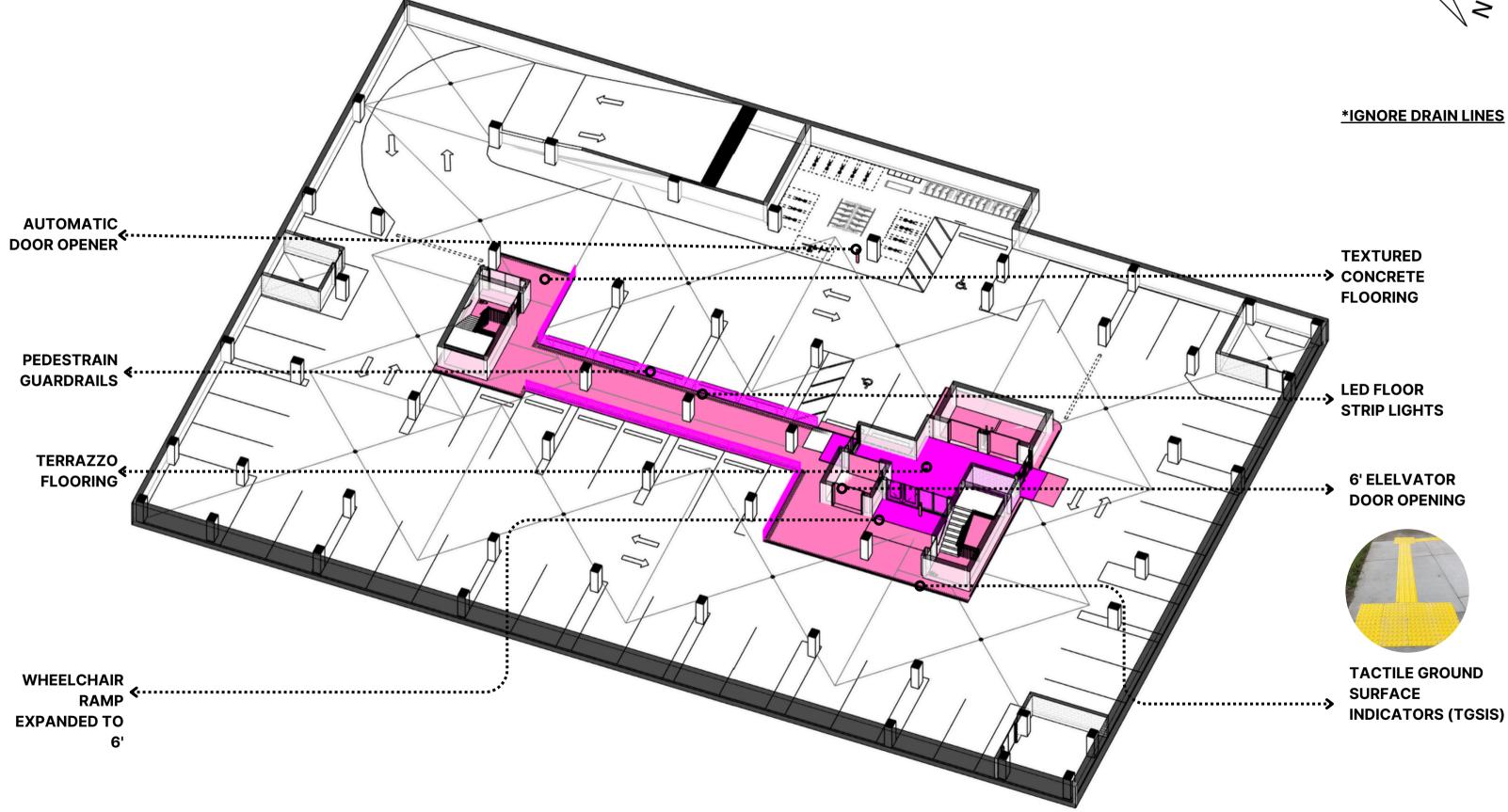
RENOVATED: 3RD LEVEL



RENOVATED: **2ND LEVEL**

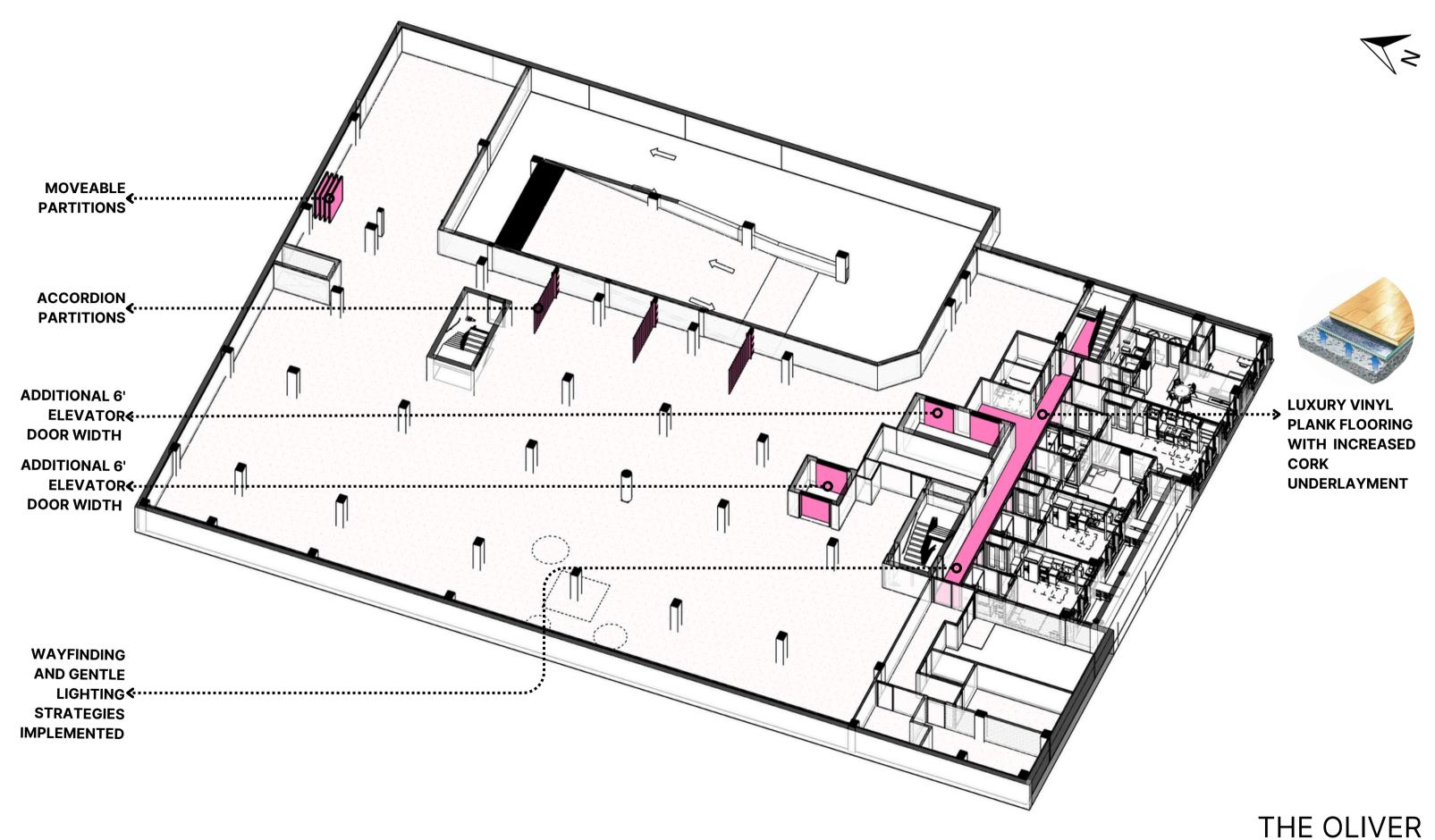






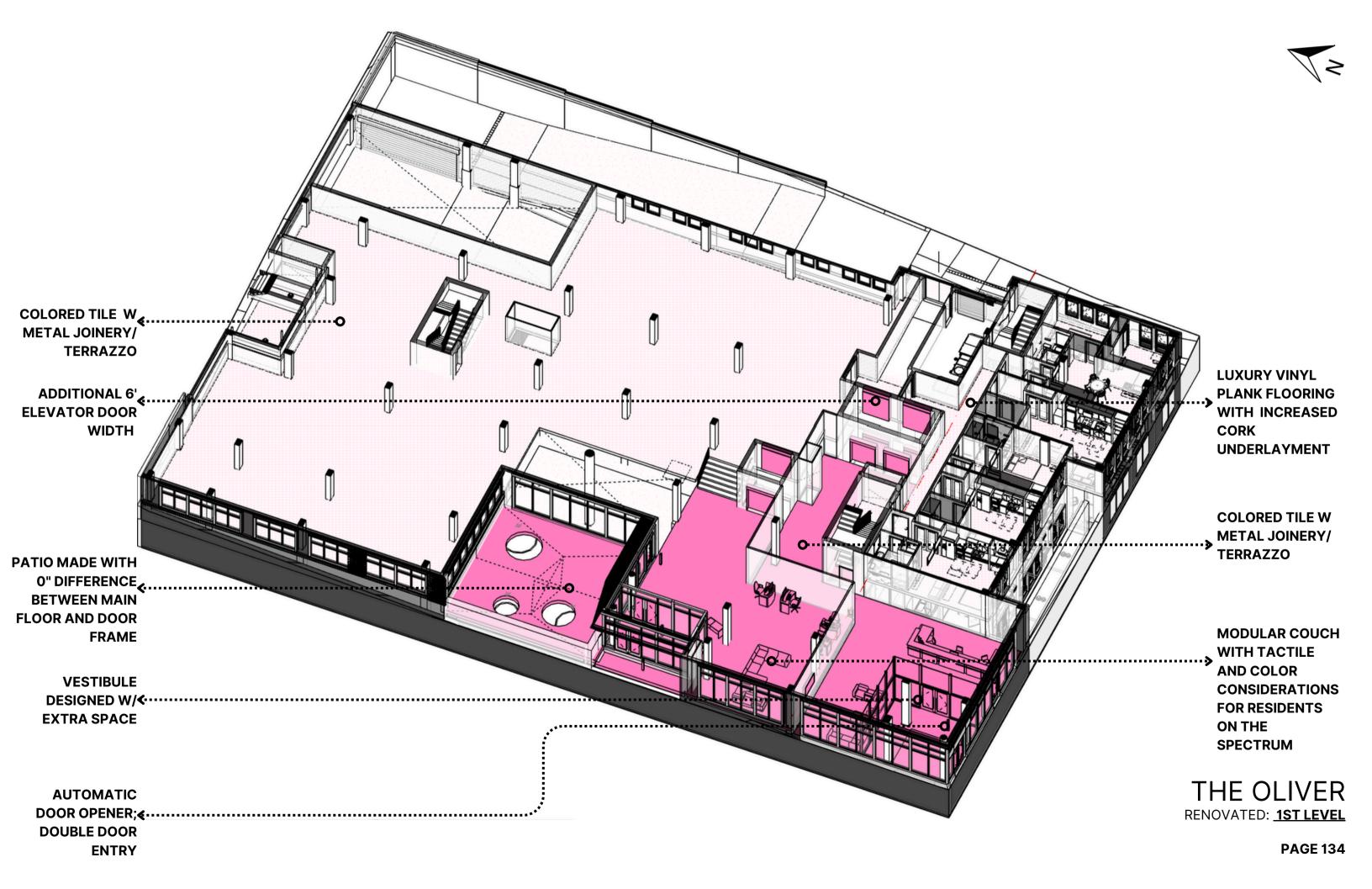
*MATERIALS WERE CHOSEN FOR THEIR SANITIZATION POTENTIAL, TEXTURE AND HAPTIC CONTRIBUTION TO PEDESTRIAN WAYFINDING INSIDE THE OLIVER. AESTHETICS WERE ALSO CONSIDERED

THE OLIVER RENOVATED: **PARKING LEVEL**

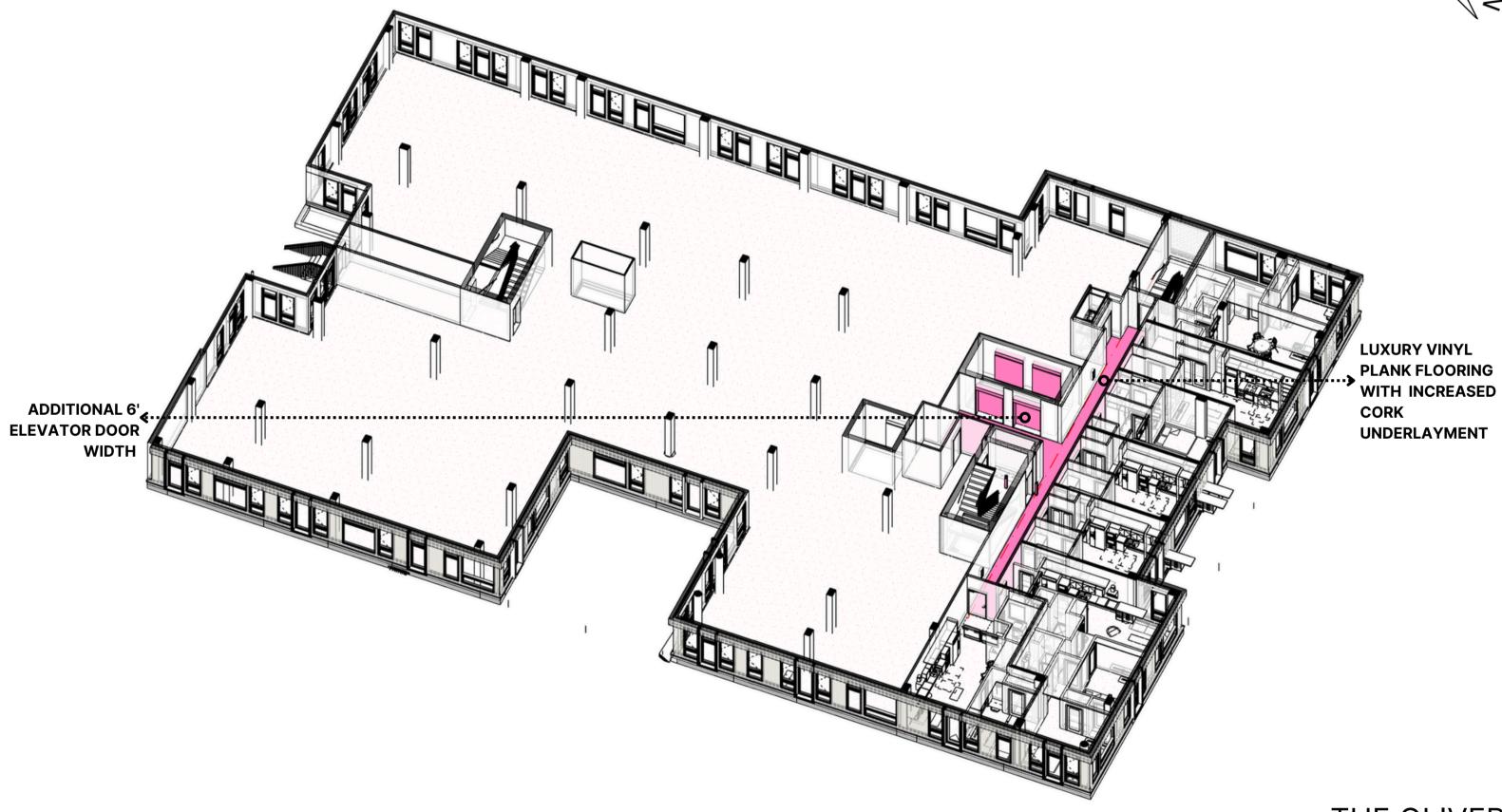


*THIS PROJECT FOCUSES ON OPTIMIZING RESIDENTIAL SPACES FOR PEOPLE OF ALL ABILITY LEVELS, WITH A SPECIFIC EMPHASIS ON DWELLINGS. ALTHOUGH COMMERCIAL SPACES IN THE OLIVER WERE CONSIDERED, THE PRIMARY GOAL IS TO IMPROVE ACCESSIBILITY AND FUNCTIONALITY IN RESIDENTIAL AREAS.

RENOVATED: LOWER LEVEL

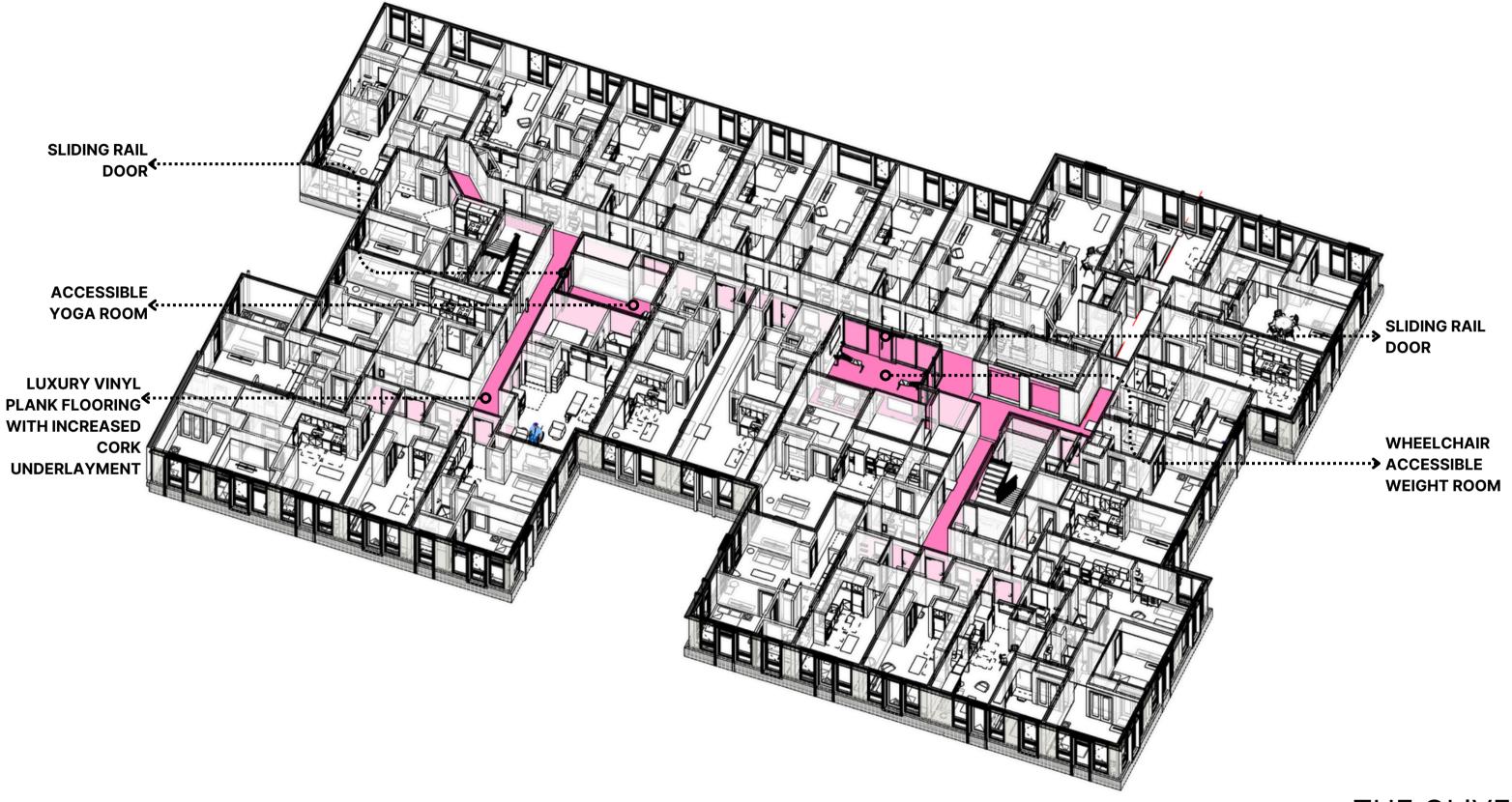






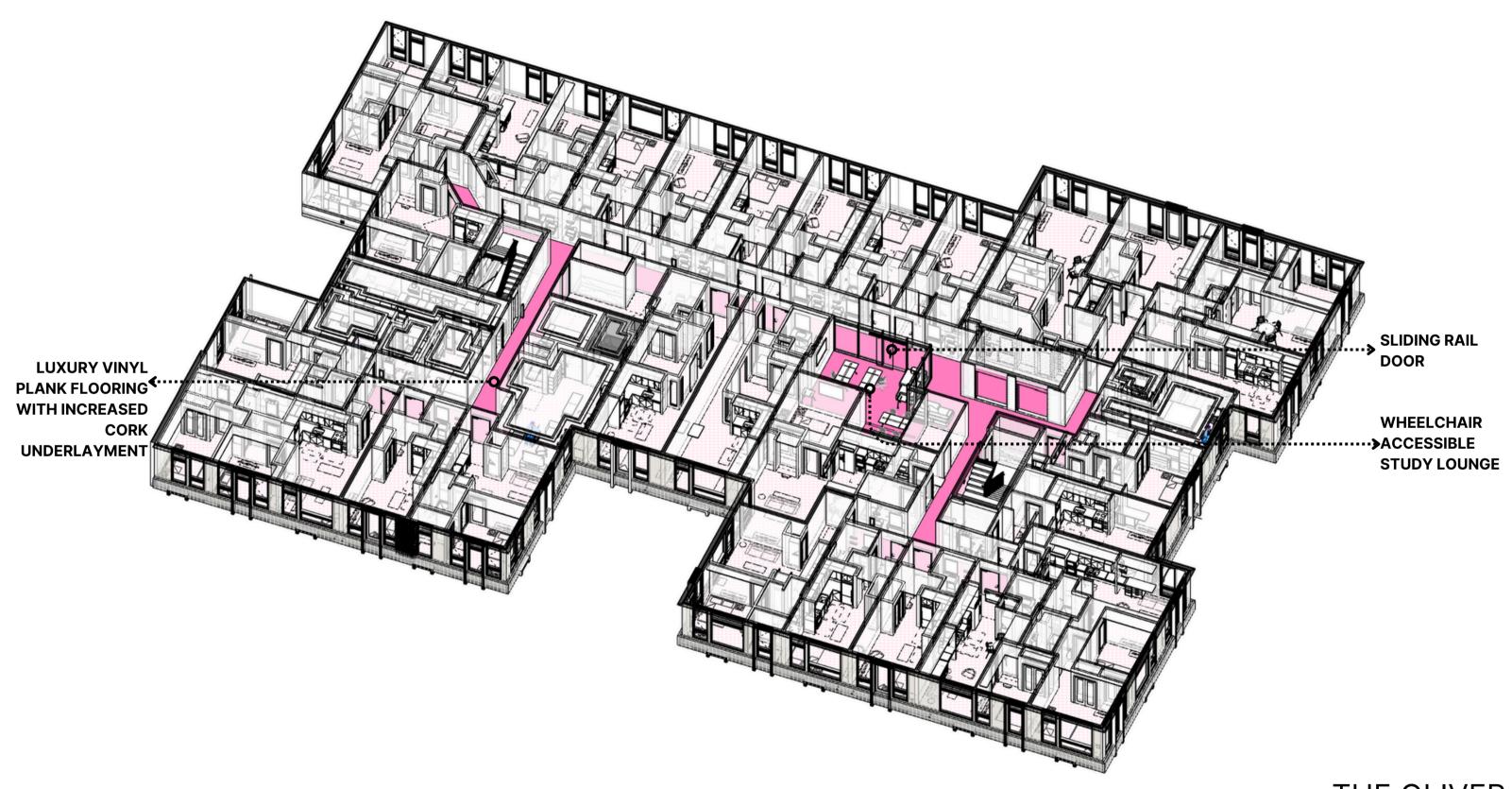
RENOVATED: 2ND LEVEL





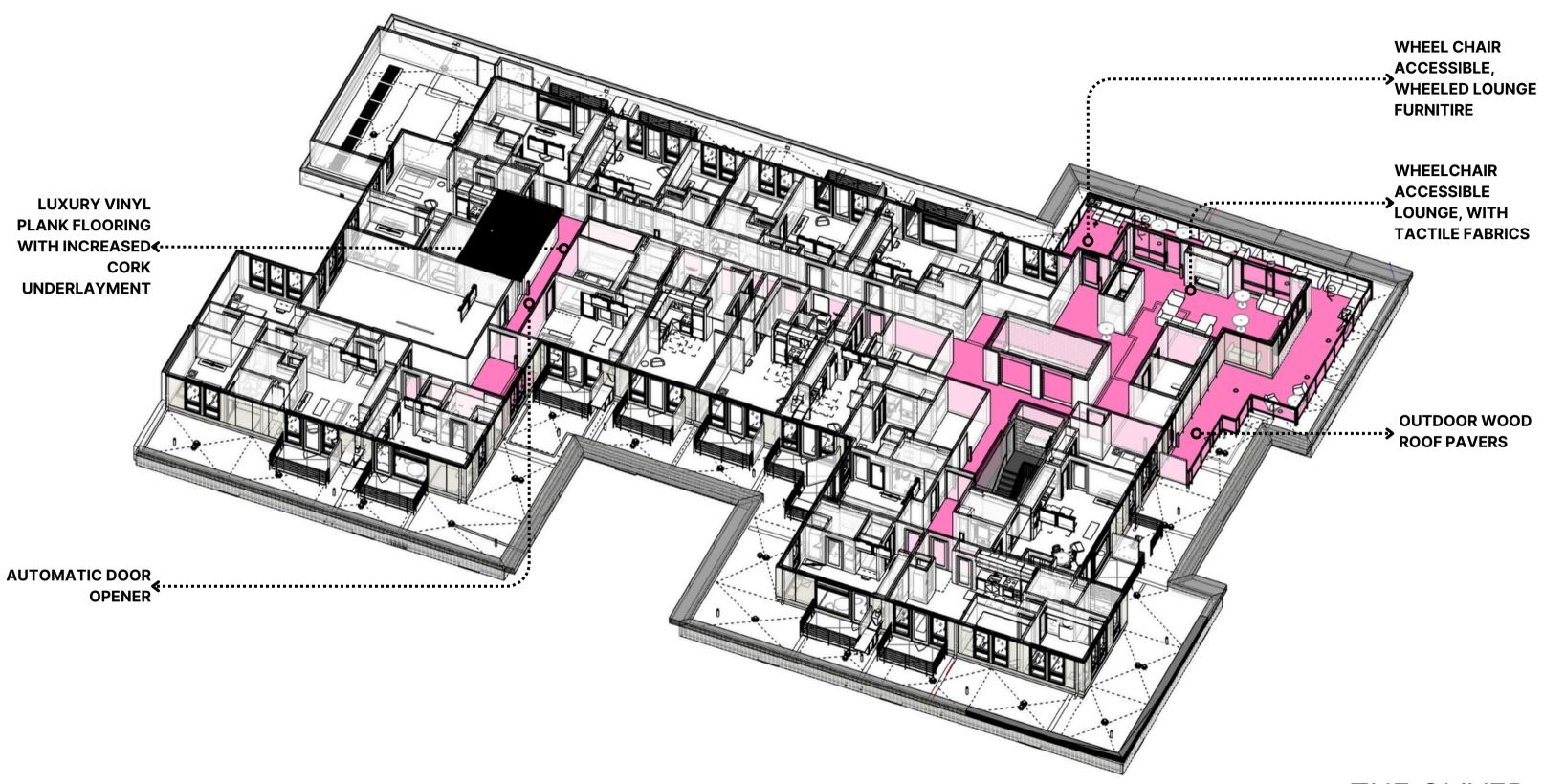
THE OLIVER RENOVATED: 3RD LEVEL





THE OLIVER RENOVATED: 4TH LEVEL



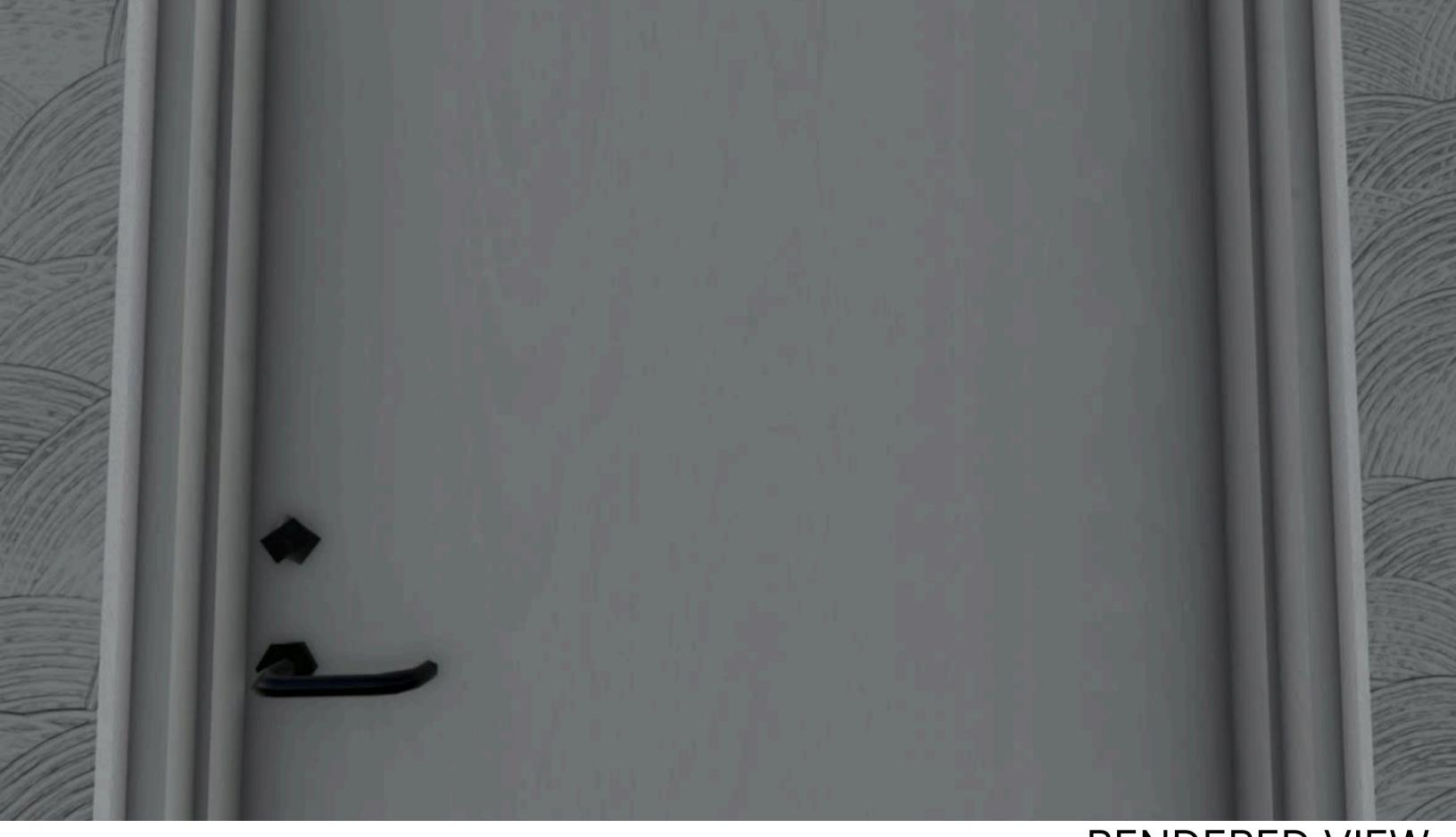


THE OLIVER'S PLANS AND UNITS HAVE BEEN REDESIGNED TO EMBRACE "VISITABLE" SPACES, ENSURING EQUITABLE ACCESS FOR GUESTS OF ALL ABILITIES.

THE OLIVER RENOVATED: ROOF LEVEL



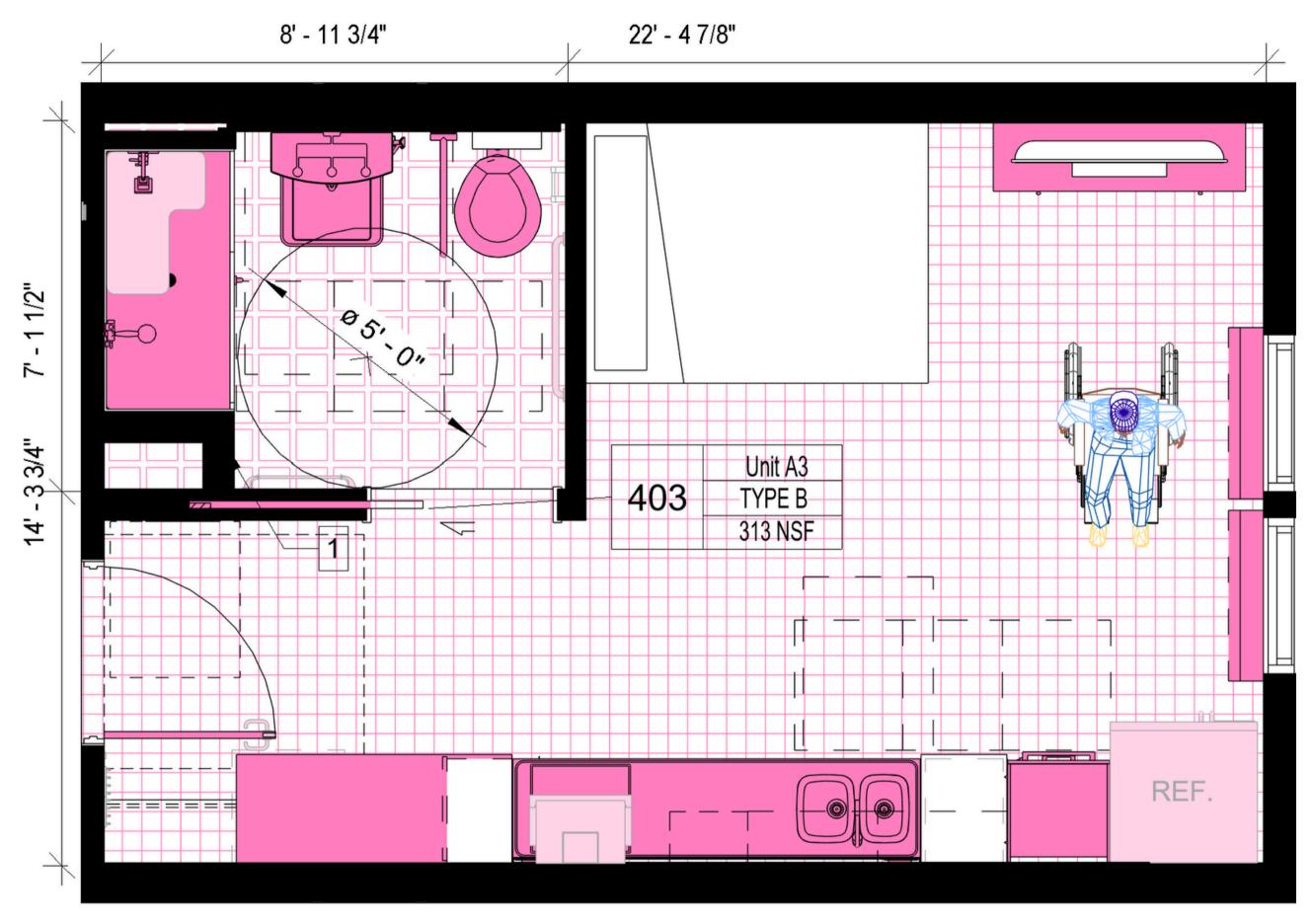




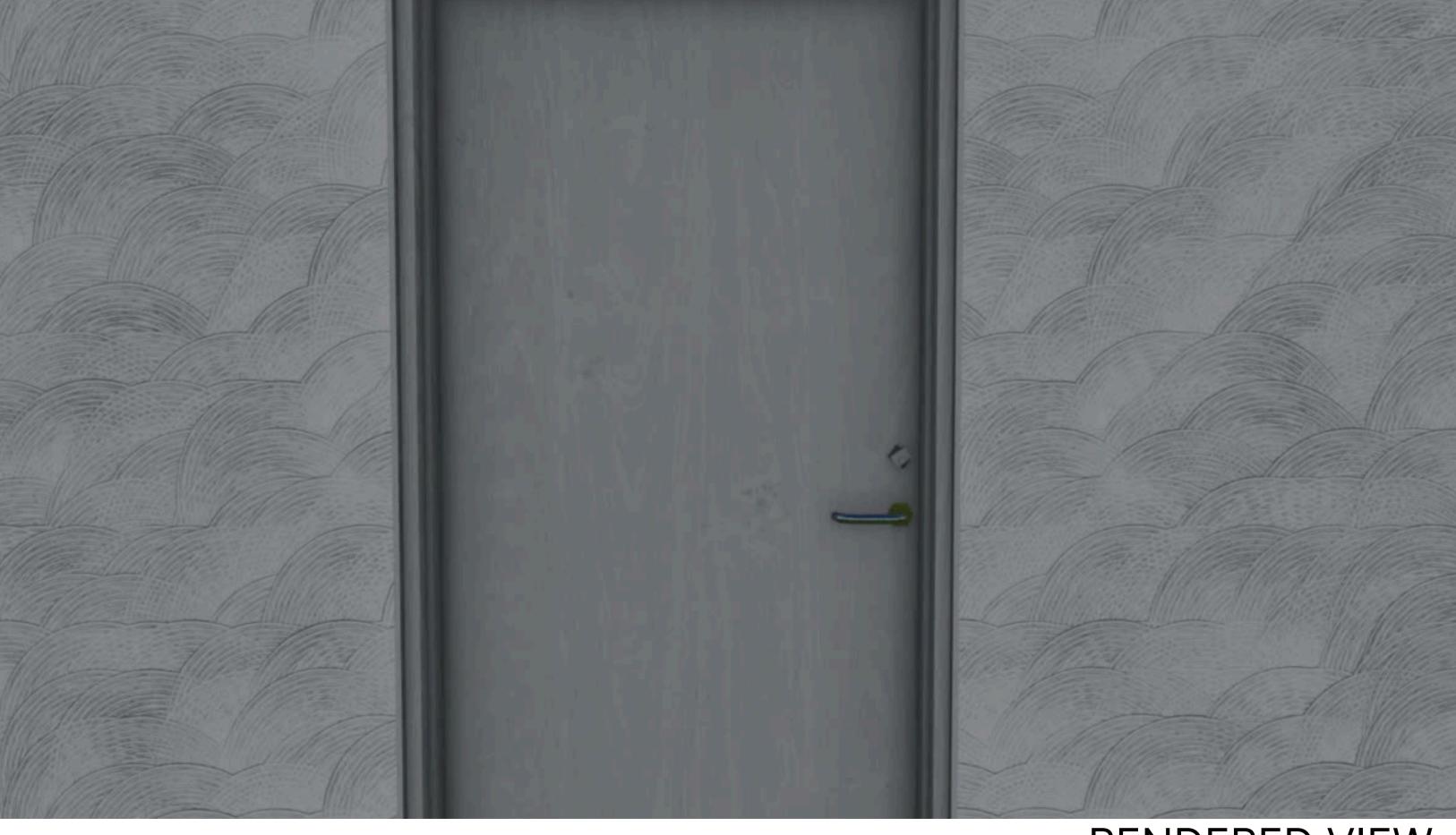
*DOOR IN SHOWER IS MEANT TO SLIDE

RENDERED VIEW

RENOVATED UNIT: **STUDIO A3**





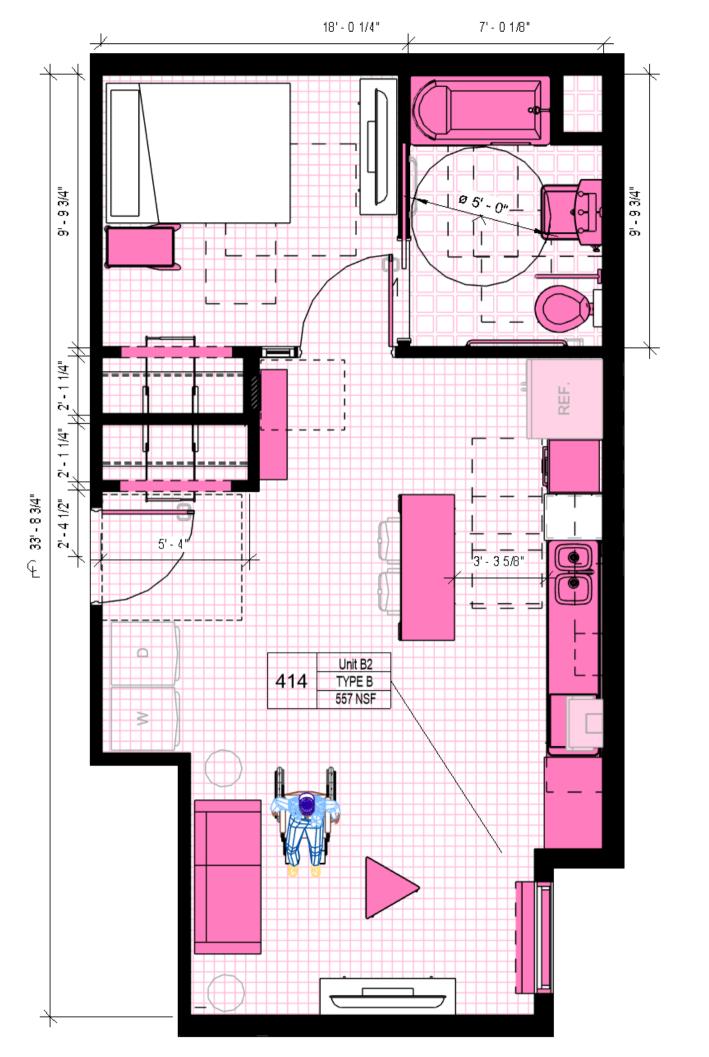


*DOOR IN SHOWER IS MEANT TO SLIDE

*SPECIALIZED LIGHTING DESIGN REMOVES STERILITY THAT IS OFTEN ASSOCIATED WITH DESIGNS FOR PEOPLE WITH DISABILITIES

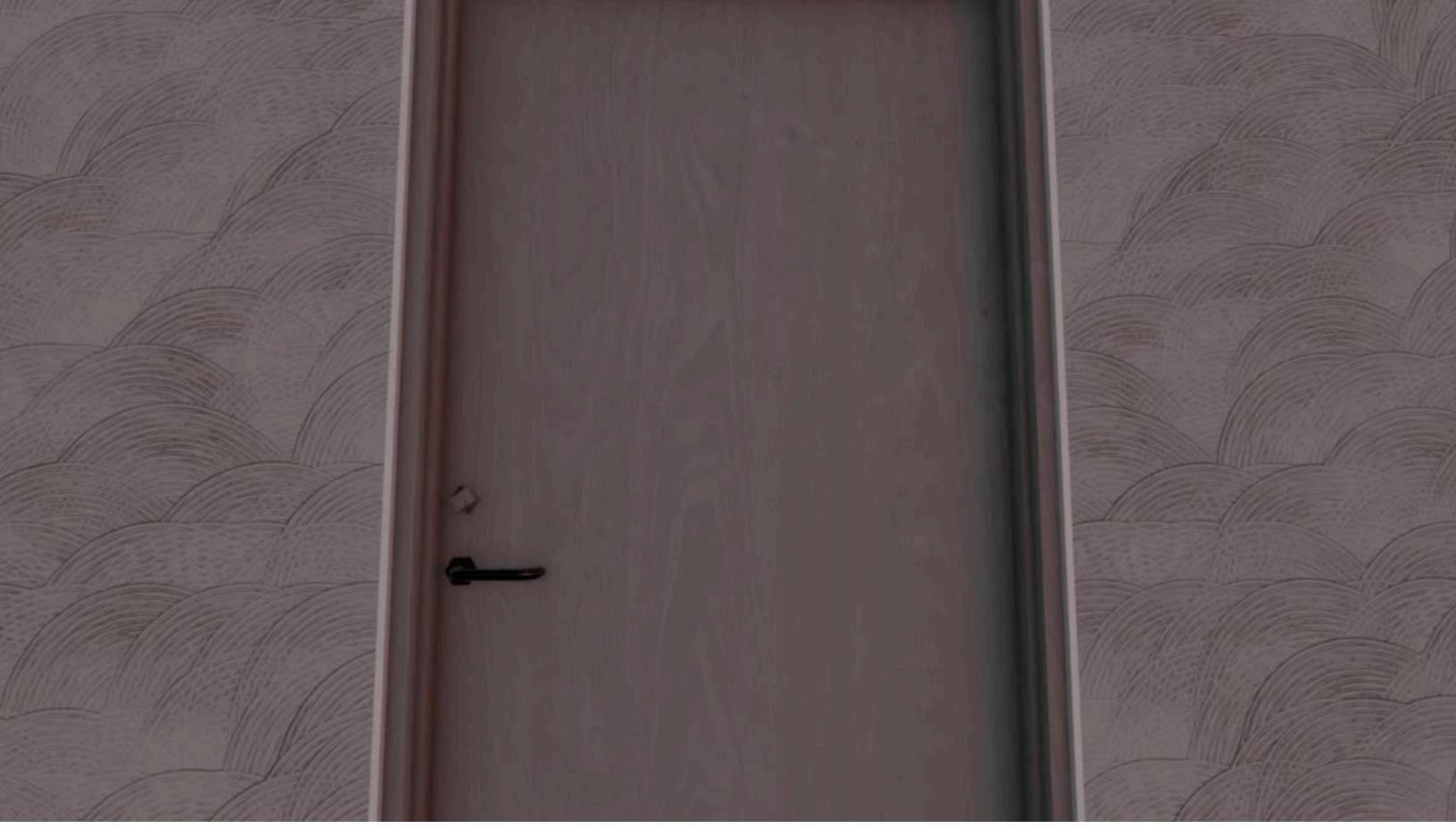
RENDERED VIEW

RENOVATED UNIT: **1 BEDROOM B2**

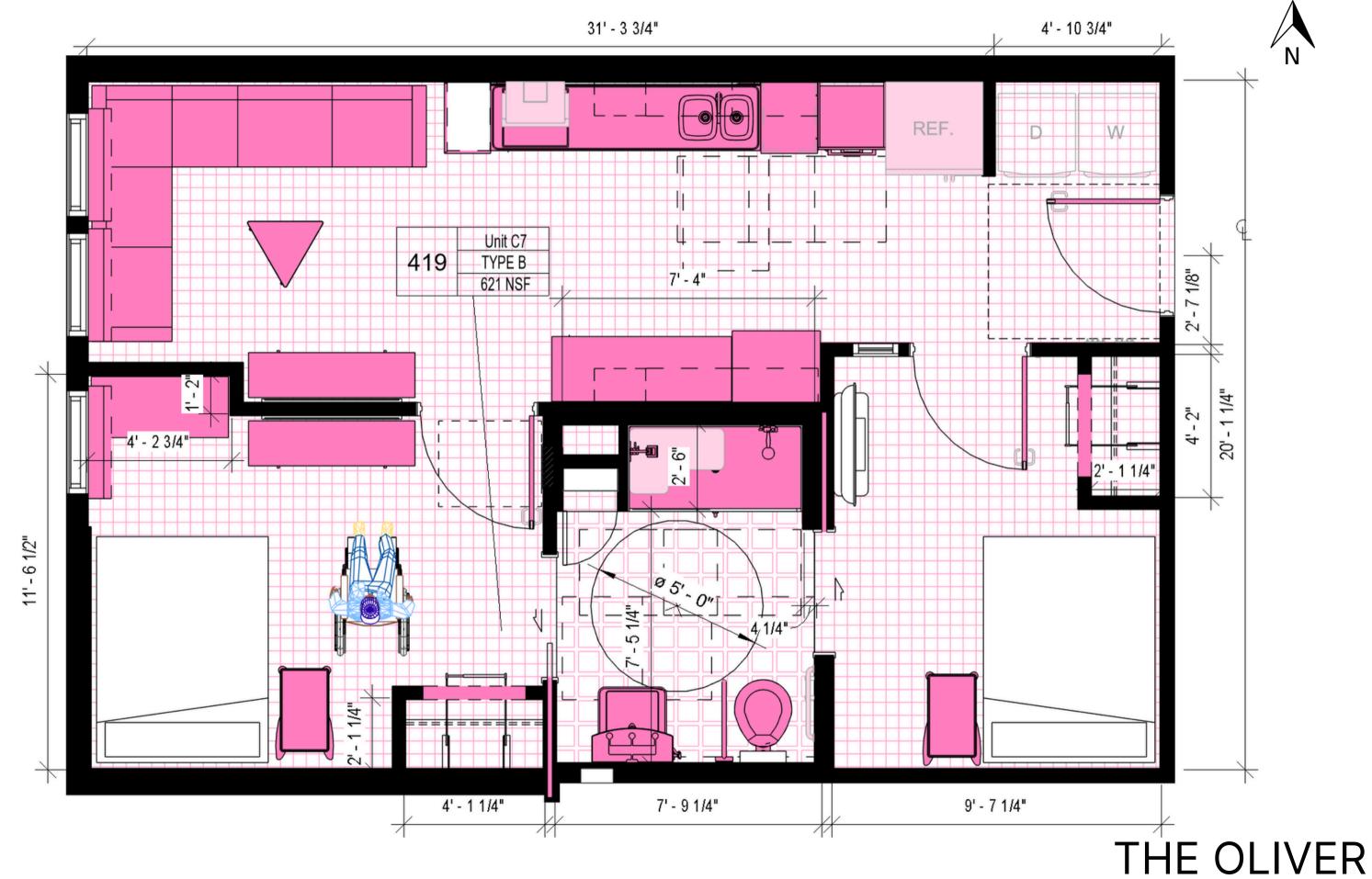




RENOVATED UNIT PLAN: **STUDIO A3**

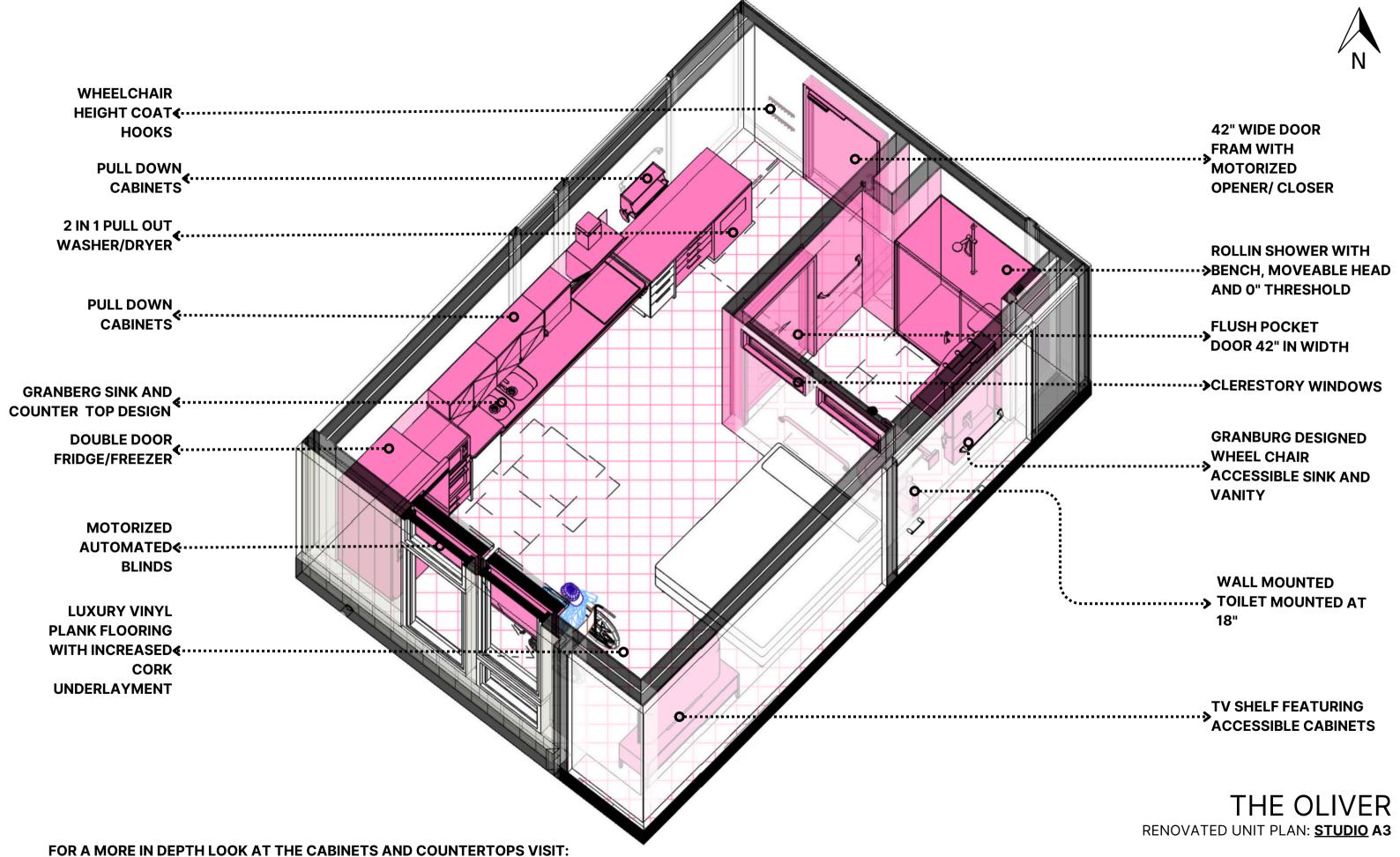


*DOOR IN SHOWER IS MEANT TO SLIDE *DAYLIGHTING STRATEGIES IMPLEMENTED RENOVATED UNIT: 2 BEDROOM C7



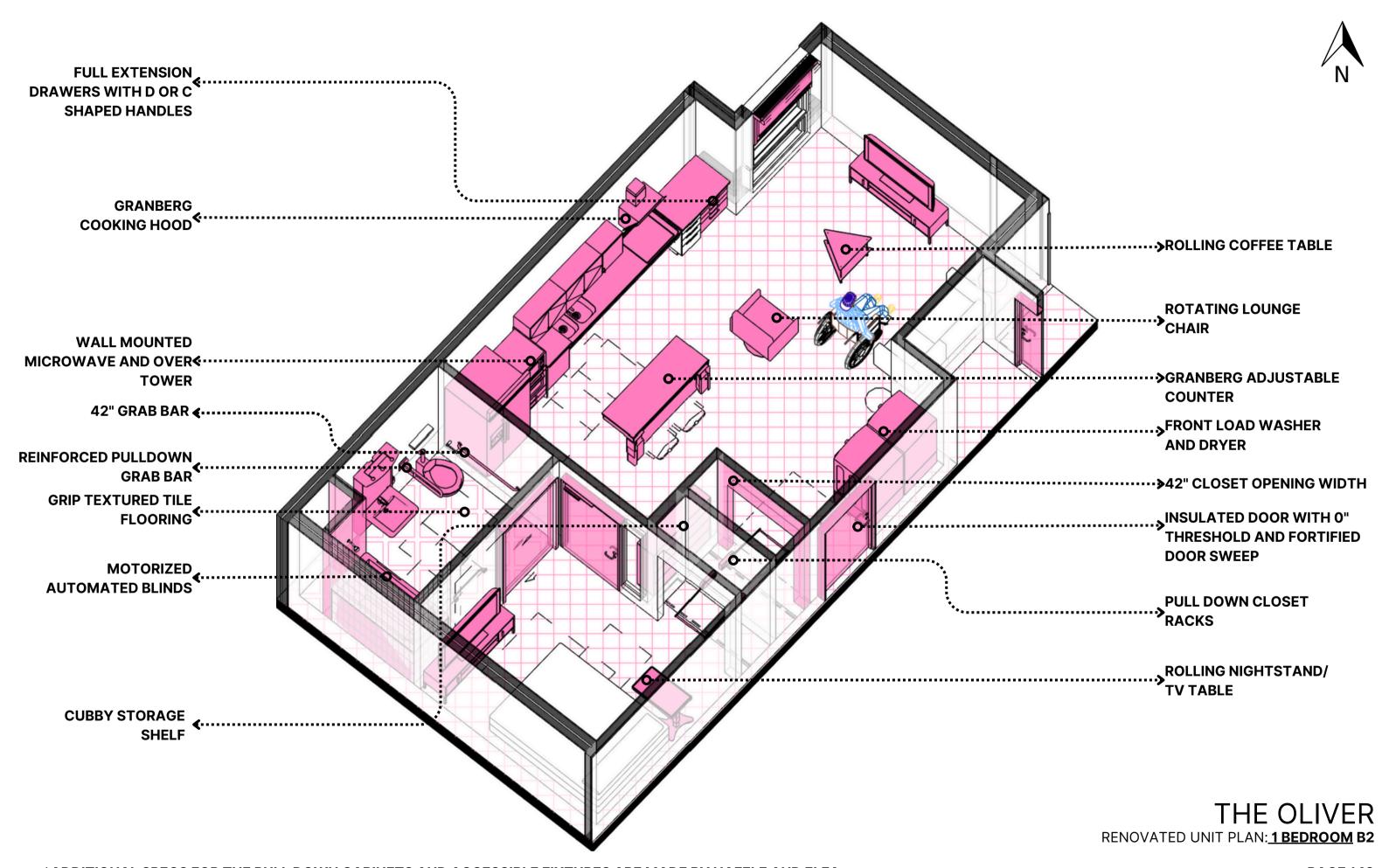
RENOVATED UNIT PLAN: **STUDIO A3**



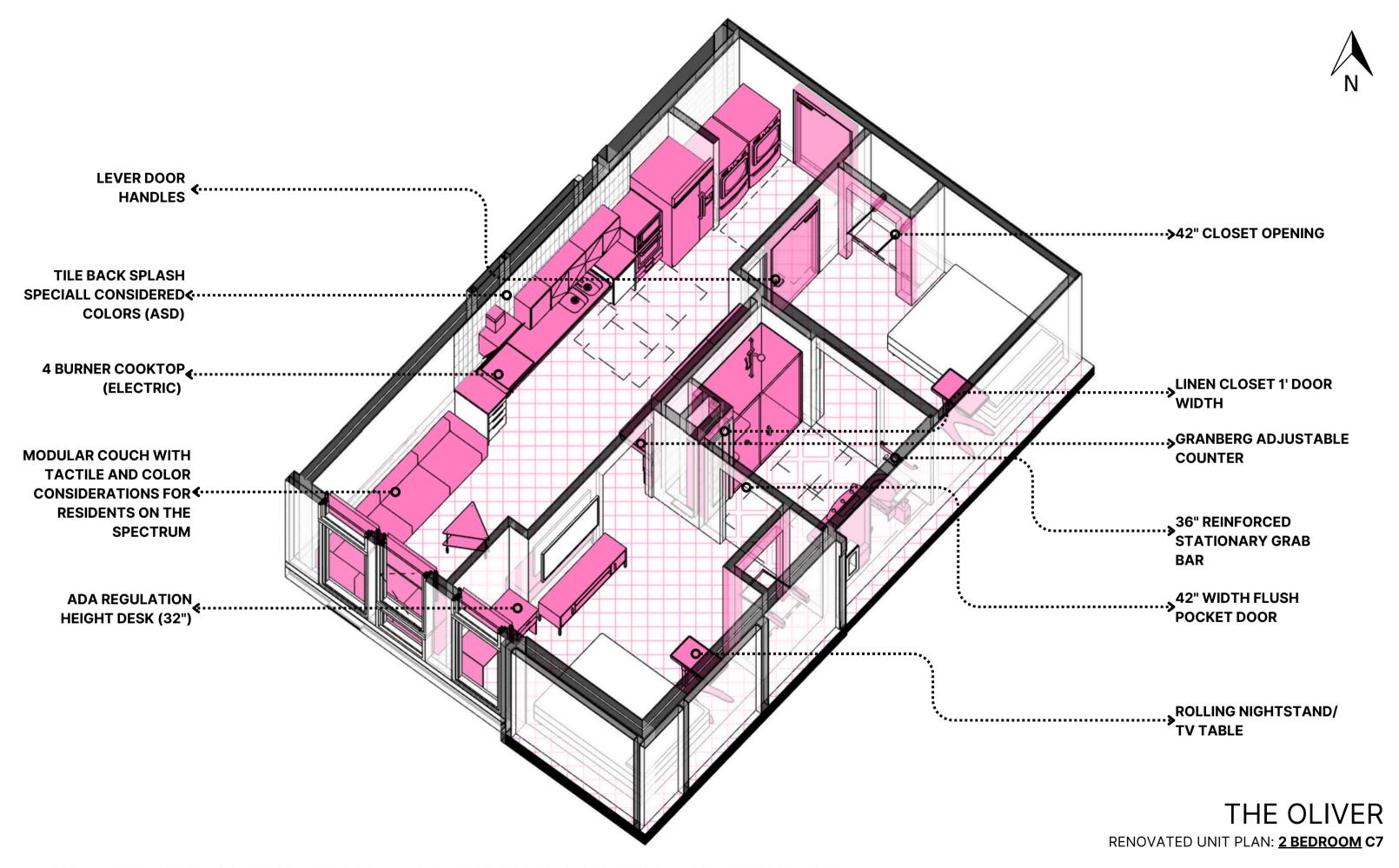


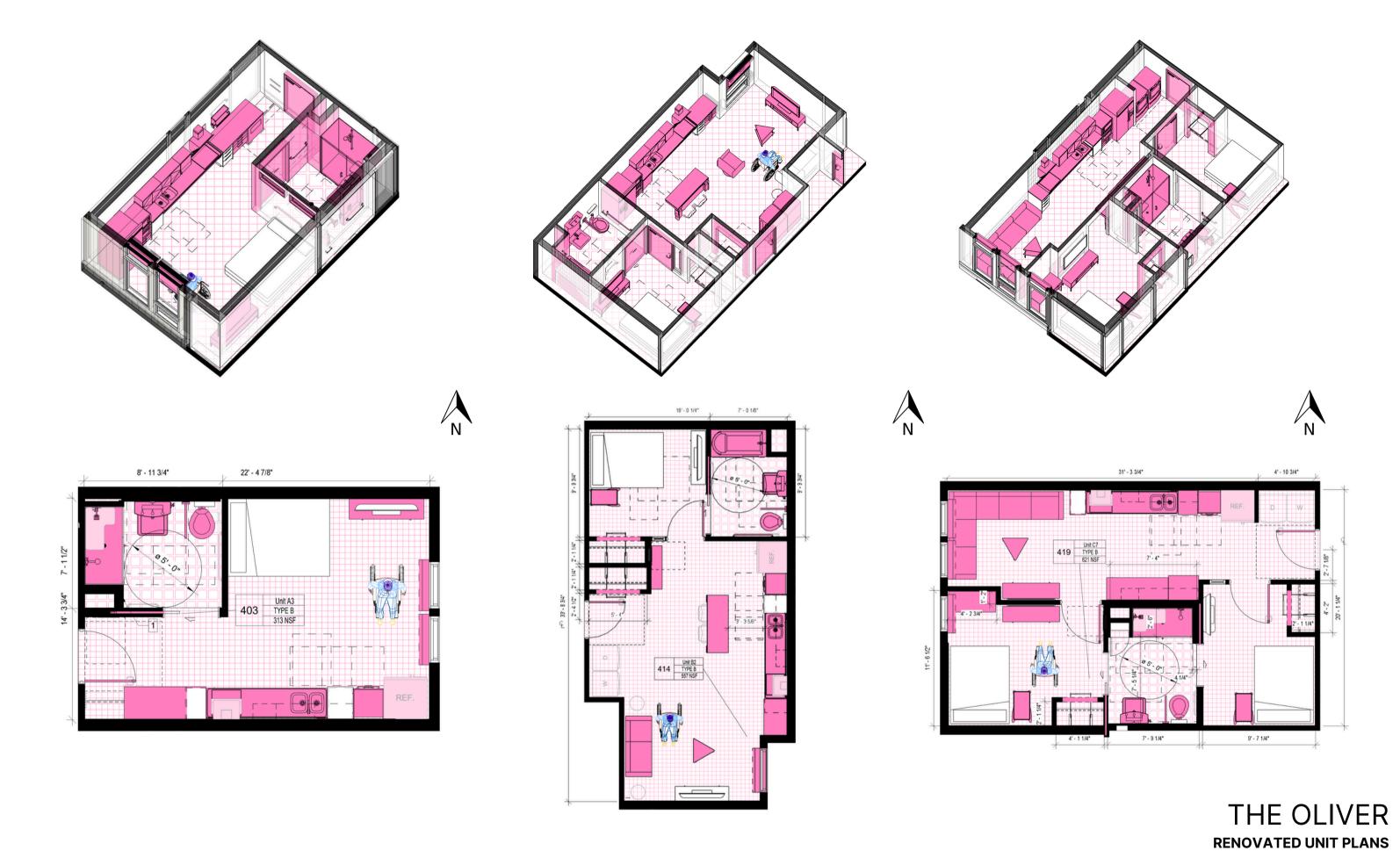
HTTPS://WWW.GRANBERGUSA.COM/OUR-PRODUCTS/ACCESSIBLE-KITCHENS/LIFTS-FOR-WALL-CABINET/WALL-CABINET-LIFT-DIAGO/ERGUSA.COM/

PAGE 148



^{*}ADDITIONAL SPECS FOR THE PULL DOWN CABINETS AND ACCESSIBLE FIXTURES ARE MADE BY HAFELE AND ELFA

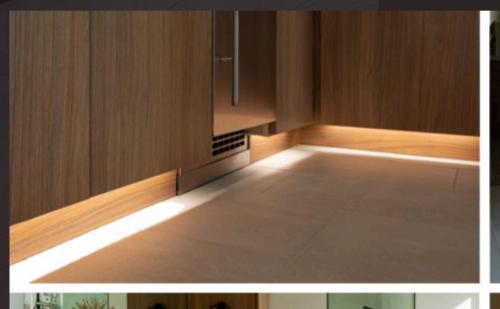






LIGHTING:

The ability of an occupant to control their own interior aesthetics is extremely important. Features like dimmable switches add dignity to a space, and allow somebody who might be light sensitive to make their dwelling more **comfortable**.









CONSIDERED IN RENOVATION:

- TINTED GLASS IN FENESTRATIONS
- DAYLIGHTING
- COVE LIGHTING AND TRAYS CEILING
- THE IMPORTANCE OF DARKNESS CONTROL
- SPECULAR GLARE
- REFLECTIVE SURFACES FOR PEOPLE AGING IN PLACE
- CONTROLLING LIGHT FROM THE CORRIDOR (DOOR HARDWARE)
- TASK VS AMBIENT LIGHT
- WAYFINDING WITH LIGHT
- INDIRECT VS DIRECT LIGHTING

EXCERCISE IN LIGHT TEMPERATURE TO DEMONSTRATE THE IMPORTANCE OF LIGHTING CONTROL:

https://www.cookelectric.biz/lighting-concepts-to-aid-the-physically-challenged/ https://www.archdaily.com/964876/textured-fiber-cement-a-more-sensory-architectural-experience



COOL LIGHT TEMP

STUDIO: UNIT A3
PAGE 154



MED. LIGHT TEMP

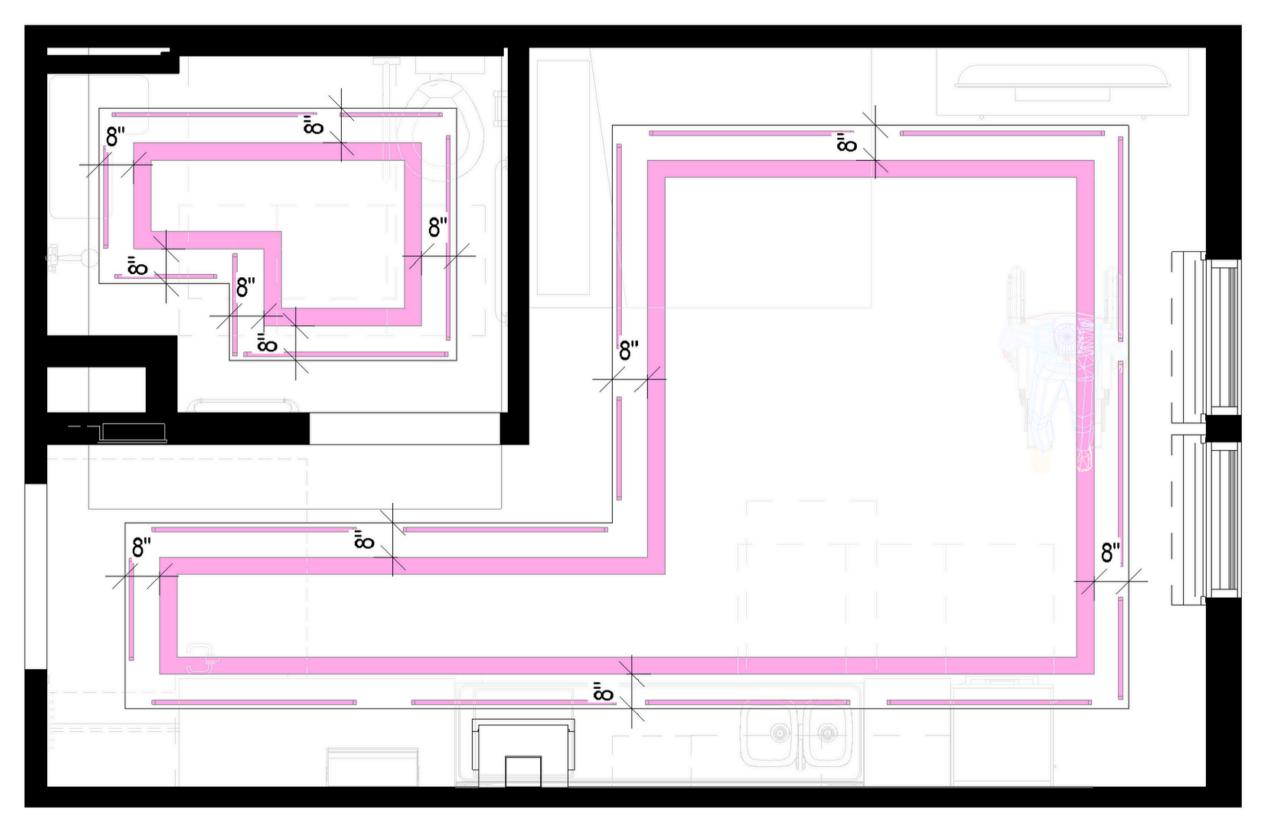
STUDIO: UNIT A3
PAGE 155



WARM LIGHT TEMP

STUDIO: UNIT A3 PAGE 156





REFLECTED CEILING PLAN

RENOVATED: **STUDIO** A3

HARDWARE:

In an ADA accessible home, attention to details such as handles, door jams, closers, door weights, cabinet handles, buttons, voice-activated systems, motorized blinds and windows, storage, and closets is crucial. These elements enhance occupant dignity, ease of use, and comfort, enabling a higher level of independence and convenience.



CONSIDERED IN RENOVATION

- HANDLES
- DOOR JAMS
- CLOSERS
- DOOR WEIGHTS
- CABINET HANDLES
- BUTTONS
- VOICE ACTIVATED SYSTEMS
- MOTORIZED BLINDS AND WINDOWS
- STORAGE AND CLOSETS
- AUXILIARY POWER GENERATORS OR SOLAR PANELS
- OUTLET HEIGHTS AND PLACEMENT

https://www.cookelectric.biz/lighting-concepts-to-aid-the-physically-challenged/ https://www.archdaily.com/964876/textured-fiber-cement-a-more-sensory-architectural-experience

MATERIAL TEXTURE:

Choosing surface materials for a project is a complex process that impacts both <u>aesthetics</u> and construction considerations. It also plays a crucial role in creating an accessible environment for people with disabilities. Beyond <u>functionality</u>, surface materials have the power to evoke emotions and memories, as touch integrates our experience with our individuality.



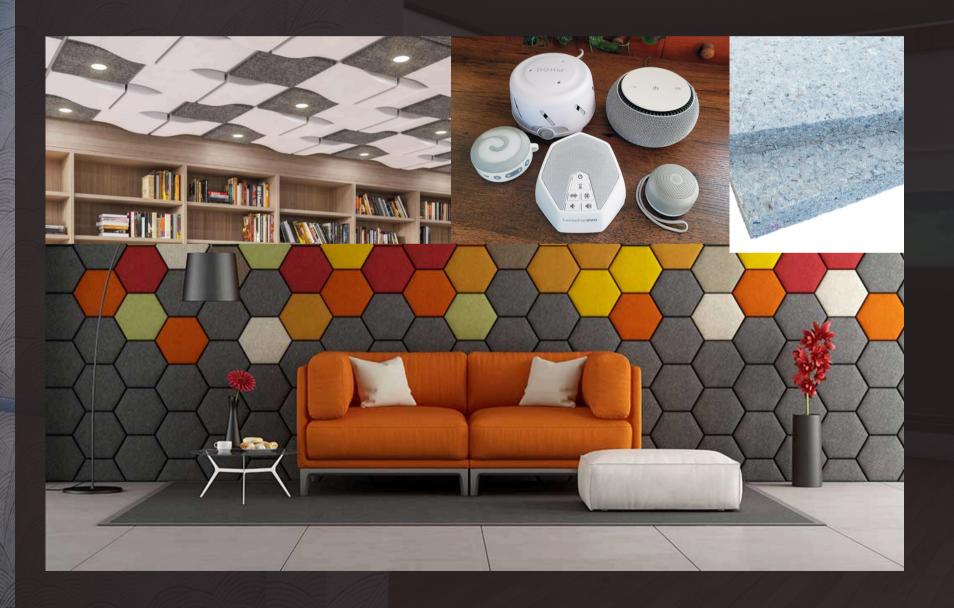
CONSIDERED IN RENOVATION

- WALL TEXTURES
- HANDLE TEXTURES
- COUCHES AND FABRICS
- COUNTERTOPS
- GRAB BARS
- TILING
- THE SANITIZATION CAPACITY
- COMMONLY TOUCHED SURFACES
- COLOR
- GROUT
- CEILINGS
- FLOORING
- NONSLIP SURFACES

https://www.cookelectric.biz/lighting-concepts-to-aid-the-physically-challenged/https://www.archdaily.com/964876/textured-fiber-cement-a-more-sensory-architectural-experience

SOUNDS:

Noise control is crucial for people with audio-based sensitivities, who can experience discomfort, anxiety, and pain from certain sounds. Pink/white noise makers, smart speakers, acoustical paneling, and insulation can help control noise in homes, workplaces, and public spaces, creating a more inclusive and accessible environment.



CONSIDERED IN RENOVATION

- NOISE MAKERS
- PINK NOISE
- WHITE NOISE
- INSULATION AND ACOUSTICAL CONTROL
- SURROUND SOUND
- IMPACT ON PERSONS WITH SENSORY DISABILITIES

https://acousticgeometry.com/products/acoustic-insulation

WET ROOMS: KITCHENS

Accessible kitchens are essential for individuals with disabilities, older adults, and anyone who may face mobility or sensory challenges. An accessible kitchen can make a significant difference in the quality of life and independence of those who use it. It allows them to cook, bake, and prepare meals with ease and dignity, improving their overall health and well-being.



CONSIDERED IN RENOVATION

- WORK SURFACE (KITCHEN COUNTERS)
- KITCHEN SINKS
- KITCHEN WALL CABINETS
- DOORWAYS & HALLWAYS
- APPLIANCES
- TILING AND CLEANABLE SURFACES
- NO SLIP RUGS AND FLOORING
- DRAWERS

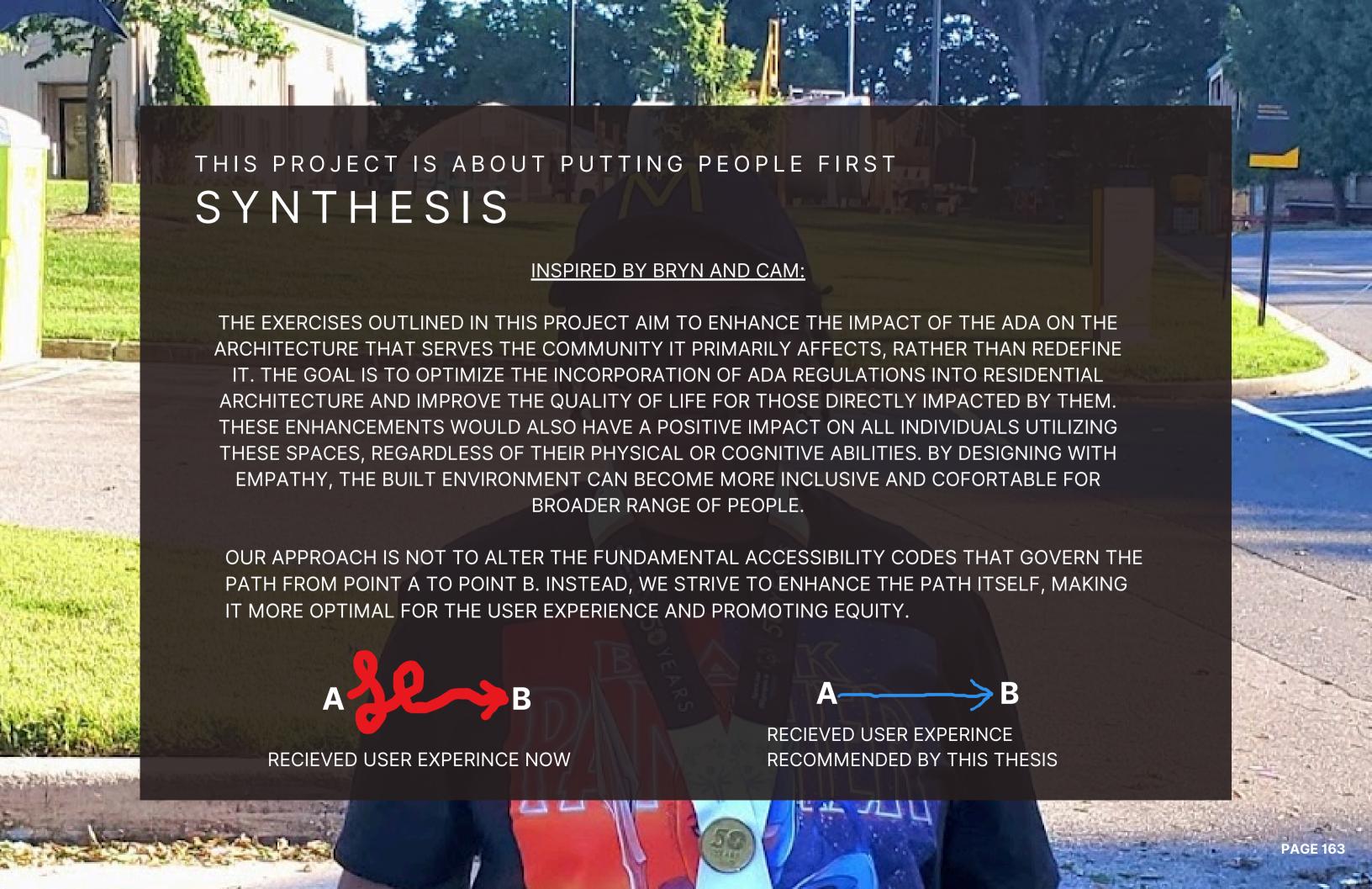
https://www.archdaily.com/920447/how-to-design-an-accessible-kitchen-adjustable-and-multifunctional-furniture
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WET ROOMS: KITCHENS

Features such as lower countertops, pull-out shelves, and lever handles on cabinets and drawers can make a kitchen more accessible. Additionally, ensuring that appliances, such as stovetops and ovens, are at a safe height and have easy-to-use controls can reduce the risk of accidents. Overall, investing in an accessible kitchen is not only practical but also crucial in creating an inclusive and equitable environment for all individuals to thrive.



https://www.archdaily.com/920447/how-to-design-an-accessible-kitchen-adjustable-and-multifunctional-furniture



DESIGN PROCESSES LIKE THIS SHOULD BE THE NORM

CONCLUSION

BRYN AND CAM'S CLIENT-CENTERED DESIGN PRIORITIZES INDIVIDUAL NEEDS AND YIELDS EFFECTIVE RESULTS. BY EMBRACING INCLUSIVITY AND ACCESSIBILITY GUIDELINES, DESIGNERS CAN REVOLUTIONIZE THE IMPACT OF THEIR PROJECTS AND CREATE COMMUNITY-ORIENTED SPACES THAT SERVE A BROAD RANGE OF PEOPLE WITH VARYING ABILITIES. THIS APPROACH ALLOWS DESIGNERS TO ACTIVELY MAKE GENERALIZED APPROACHES AND PROMOTES INCLUSIVITY, AS SHOWN IN THE OLIVER'S UNITS.

DESIGN THAT PRIORITIZES THE ACCESSIBILITY AND COMFORT OF ALL INDIVIDUALS, REGARDLESS OF ABILITY, WOULD FOSTER INCLUSIVITY AND EQUITY IN OUR COMMUNITIES. BY INTEGRATING UNIVERSAL DESIGN PRINCIPLES, WE CAN ELIMINATE THE NEED FOR SPECIALIZED UNITS AND ESTABLISH A NEW NORM THAT VALUES AND ACCOMMODATES EVERYONE EQUALLY. THROUGH MINOR ADJUSTMENTS SUCH AS RENOVATIONS AND FIXTURES, WE CAN CREATE AN ACCOMMODATING ENVIRONMENT WHERE EVERYONE CAN LIVE COMFORTABLY AND WITH DIGNITY. THIS COMMITMENT TO INCLUSIVITY REFLECTS A MORE WELCOMING AND EQUITABLE COMMUNITY.



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INDEX PAGE: PROCESS

CONSIDERED IN RENOVATION:

• RENOVATIONS WILL BE DERVIVED FROM STUDYING DEVELOPMENTAL DISABILITIES TO BALANCE DIRECT ARCHITECTURAL CHANGES, AND SOFT RESPONSES

SPATIAL CONFIGURATION

ORDERLY AND DEFINED SPACES ARE EASIER FOR INDIVIDUALS ON THE SPECTRUM TO PROCESS. SEQUENTIAL CIRCULATION, STORAGE FOR NON-ESSENTIAL ITEMS, SUB-DIVIDED ROOMS, AND RECONFIGURABLE SPACES AID IN FOCUS. DESIGNING FOR ASD BENEFITS ALL BY CREATING TIMELESS, ENJOYABLE, AND MULTIFUNCTIONAL SPACES. PRIORITIZING ACCOMMODATION OVER STANDARDIZATION, ACOUSTICS, LIGHTING, SPATIAL CONFIGURATION, AND MATERIALS ARE KEY IN QUALITY DESIGN. BETTER SPACES CAN BE CREATED FOR ALL BY UNDERSTANDING HUMAN EXPERIENCE THROUGH RESEARCH.

INDEX PAGE: SOURCES AND ADDITIONAL TEXT

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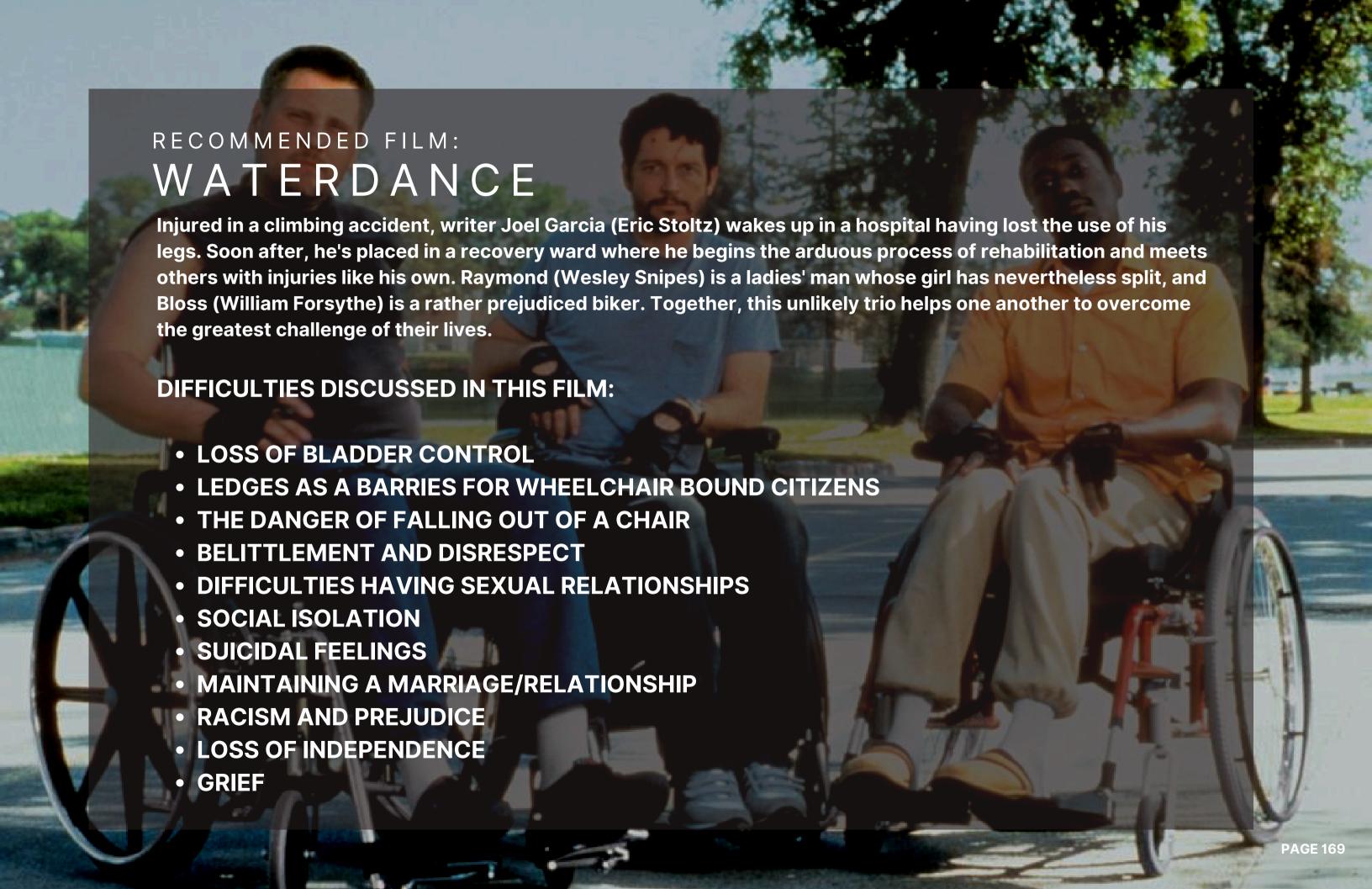
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DIFFERENTIATION:

THIS PROJECT DEALS WITH DISABILITY AS SEPRATE FROM DISORDER

THIS IS NOT A DISCUSSION OF MENTAL ILLNESS

THIS PROJECT EMPHASIZES A CALL FOR JUSTICE AND SOCIAL SPOTLIGHT TO "MECHANISTIC DISABILITIES"

THIS PROJECT IS NOT MEANT TO DISCOUNT MENTAL ILLNESS, WHICH CAN COME AND GO, BUT SEEKS TO RESPOND TO THE PERMENANCE OF DISABILITY, AND HOW IT DISTORTRS SOMEONE'S CONNECTION TO SOCIETY.

THE REPRESSION OF BODIES IS A MULTIFACETED ISSUE.

EXCEPTIONALITY-THE QUALITY OF A BODY TO EXIST OUTSIDE OF THE STADARDLY PERCIEVED SOCIETYAL NORM-IS A CONCEPT RECIEVED IN BOTH NEGATIVE AND OVERLY POSITIVE FASHIONS.

AS WE EXAMINE THE SPECTRUM OF POTENTIAL DEVIANCE OF BODIES, WE FIND THAT THE BODIES OF SOMEONE LIKE STEPHEN HAWKING, AND THE BODY OF SOMEONE LIKE KAREEM ABDUL-JABAR ARE EQUALLY AS DEVIANT FROM THE PERCIEVED NORM, BUT ARE RECIEVED ENTIRELY DIFFERENT IN SOCIETY. BOTH OF THESE BODIES HAVE VALUE, BUT BECASUE OF SOCIETY'S PRECONCIEVED NOTIONS OF SUCCESS AND RESPECTAILITY, WE VIEW THEM DIFFERENTLY. BOTH BODIES BELONGED TO PEOPLE WHO HAVE DONE AMAZING THINGS AND CONTRIBUTED TO SOCIETY, BUT SOCIETY EXHAULTS ONE OVER THE OTHER, WHILE BEING TRULY ACCOMODATING OF NEITHER. JABAR'S GIGANTISM AND HAWKING'S PHYSICAL LIMITATIONS ARE ALMOST EQUALLY DEVIANT IN TERMS OF WHAT SOCIETY CONSIDERS A DIMENSIONALLY "NORMAL" PHYSIQUE.

IN OUR SOICETY, DEVIANCE CAN BE ALIENTATING. PEOPLES' CONDITIONS CAN BE ALIENTATING AS THEY PRESENT A SET OF DEVIANCES . IN

THIS THESIS RESPONDS TO THAT DEVIANCE ON A CASE-BY-CASE BASIS, BUT ALSO CALLS FOR A REVISION TO THE STANDARDS WE CONSIDER "NORMAL" WITH THE INTENT TO MAKE THEM MORE ACCOMMODATING AT A BASELINE.

THE CULTURAL NORMS SUSRROUNDING ARHCITECTURE AND HOW IT RESPONDS TO NEW WORLD ORDER IT

PERSONAL NOTES: ACKNOWLEDGMENT OF DISABILITY

THEORETICAL DISCUSSION WITH TAYLOR