



UNIVERSAL DESIGN TOOLKIT



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A NOTE ABOUT THE TOOLKIT

The creation of this Universal Design Toolkit was financed in part by a grant from the Fairview Trust in 2022—administered by Oregon Community Foundation. Our Home, Inclusive Community Collaborative (OHICC) received this grant from the Fairview Trust to, “support the application of Universal Design Principles in the design of Our Home - Cathedral Park, and the production of a written Universal Design Tool Kit.” In keeping with the grant agreement, Oregon Community Foundation, the Fairview Trust Board, and its contractors and grantees have been granted perpetual right to use, reproduce, or adapt the Universal Design Toolkit, in whole or in part. In the spirit of its creation and the open nature of the research upon which it is based, this Toolkit is made freely available to all to use, reproduce, or adapt, in service of furthering accessibility, community inclusivity, and disability equity and justice goals in housing.

Over the course of 2022, OHICC conducted a series of meetings with people that will be the future members of Cathedral Park Cohousing (formerly known as Our Home - Cathedral Park) to inform the design and accessibility features of their community. These meetings were facilitated by Kim Olson of Mahlum Architects, working closely with The Kelsey Design Standards to expand upon basic, current ADA code compliance. Meeting attendees were people with and without disabilities as well as family members, support providers, and advocates of people with disabilities. Their design

preferences, reactions to various design elements and concepts, and overall desires regarding the architecture and design of the physical space were recorded and utilized to inform this toolkit.

Additional insights were gained from attending community listening sessions, which included a wide variety of people who experience disability, hosted by accessibility expert and consultant Karen Braitmayer. Other information regarding accessible design was pulled from the extensive research conducted by The Kelsey, The Center for Excellence in Universal Design, Community Vision, and Enterprise Green Communities—see sources and resources for more information about these sources and the resources from which we drew information and inspiration.

This Universal Design Toolkit is meant to serve as an introduction to basic Universal Design principles and processes and is by-design an incomplete resource. It is meant as a gateway and general primer for architects, designers, developers, housing advocates, community builders, disability justice folk, and anyone else interested in learning more about the why, what, and how of Universal Design. Universal Design is evolving as a concept and in implementation, as are goals around inclusivity, equity, and accessibility for people of all abilities. For more information, and potentially more-current, information, please refer to the Sources and Resources section at the end of this Toolkit.

Our Home, Inclusive Community Collaborative created this Universal Design Toolkit as a part of the ongoing development of its first inclusive and diverse community, Cathedral Park Cohousing—breaking ground in 2023. The creation of this toolkit and the design process that informed it represent OHICC’s commitment to programming that supports the creation of communities like Cathedral Park Cohousing throughout the state of Oregon and beyond, as well as creation and distribution of tools to facilitate bringing together diverse communities, inclusive of all regardless of ability, age, or income. Our Home, ICC’s mission is to promote, support, and develop inclusive and diverse communities.

Housing options for people with intellectual and developmental disabilities (I/DD)—especially inclusive, community-integrated options—are extremely limited. Our Home, Inclusive Community Collaborative (OHICC) believes that removing people from the natural support of family, friends, and community increases their risk of isolation, abuse, and neglect. Removing people from community and grouping them together in housing based on perceived deficits incurs costs, not just for underserved populations, but for the health and wellbeing of society as a whole.



INTRODUCTION

Universal Design has generally been accepted to be defined as, “the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.”¹ Applying this general definition to commercial and residential real estate projects requires the anticipation of a greater than typical consideration of a wide variety of people’s abilities and needs—at the time of design, through construction, and throughout the potential life of the built environment. Effective application of universal design principles in the design and construction of housing and commercial environments has the greatest potential for, “supporting and facilitating safety, independence, and connectedness for all residents, including older adults, children, and individuals who have mobility, visual, cognitive, or other impairments.”²

According to the research conducted by U.S. Department of Housing and Urban Development, twenty-six percent of people in the US have a disability of some kind, and less than six percent of our current national housing supply is designed to be accessible.³ Furthermore, while building codes and other compliance measures enacted by states, municipalities, and other regional governments across the US are beginning to require specific features that foster accessibility, “no holistic set of guidelines and standards define an implementable, progressive approach to design truly accessible and inclusive housing communities.”

There are resources however for architects, designers, builders, and developers that are

interested in creating a more accessible, inclusive, and equitable present in service of working toward a future in which our built environments embrace everyone, regardless of ability, as well as those simply interested in “future-proofing” their designs to meet changing building codes and community expectations of accessibility and inclusion.

THE UNIVERSAL DESIGN TOOLKIT

This Universal Design Toolkit endeavors to serve as an introduction to a set of principles and strategies that can be applied to the design of built environments in service of making them more usable and accessible to as wide a range of people as possible, including those with disabilities, without additional need for adaptation. While not intended to be comprehensive in nature, it is intended to speak directly to the promise of building environments that welcome, support, and accommodate people with disabilities in specific—including people who experience intellectual and developmental disabilities (I/DD).

THE GENERAL PRINCIPLES OF UNIVERSAL DESIGN

A generally accepted definition of Universal Design is, “the design and composition of an environment so that it can be accessed, understood, and used to the greatest extent possible by all people regardless of their age, size, ability, or disability.”⁴ From this definition comes a set of general principles that can be used to aid in and guide the design of built environments so that they meet the needs of any and all people who wish to live in, work in, or otherwise access and benefit from these environments.

Additionally, the following seven principles can be employed to evaluate existing designs and retrofit existing buildings and spaces to make them as accessible as possible to the greatest number of people. Furthermore, these principles can be employed to educate end users, designers, builders, developers, and architects toward the development of more generally usable environments.

By considering the diversity of needs present in the entire population and employing these principles in designing and constructing buildings and other spaces to meet everyone’s needs, design of built environments can be elevated to embrace the abilities of the entire population. This is of benefit to everyone.⁵ The seven key principles of universal design that can be applied to the design process are:

1. **Equitable use:** The design should be useful and marketable to people with diverse abilities.
2. **Flexibility in use:** The design should accommodate a wide range of individual preferences and abilities.
3. **Simple and intuitive use:** Use of the design should be easy to understand, regardless of the user’s experience, knowledge, language skills, or current focus of attention.
4. **Perceptible information:** The design should communicate necessary information effectively to the user, regardless of ambient conditions or the user’s sensory abilities.

1 NC State University, The Center for Universal Design, 1997. Principles of universal design for space and building design. Retrieved from [https://in.nau.edu/cdad/commission-on-disability-access-and-design/universal-design/#:~:text=Universal%20Design%20\(UD\)%20is%20the,for%20adaptation%20or%20specialized%20design](https://in.nau.edu/cdad/commission-on-disability-access-and-design/universal-design/#:~:text=Universal%20Design%20(UD)%20is%20the,for%20adaptation%20or%20specialized%20design).

2 Enterprise Community Partners, Inc. 2023. Green Communities Criteria & Certification. Retrieved from <https://www.greencommunitiesonline.org/healthy-living-environment>

3 The Kelsey. Housing Design Standards for Accessibility and Inclusion. Retrieved from https://thekelsey.org/wp-content/uploads/2022/08/TKHousingDesignStandards_070522.pdf

4 National Disability Authority, Centre for Excellence in Universal Design, 2020. What is Universal Design. Taken from <http://www.universaldesign.ie/What-is-Universal-Design/>

5 North Carolina State University, Raleigh Center for Universal Design, 1998. The Universal Design File: Designing for People of All Ages and Abilities. Taken from https://projects.ncsu.edu/ncsu/design/cud/about_ud/udprinciplestext.htm

5. **Tolerance for error:** The design should minimize hazards and the adverse consequences of accidental or unintended actions.
6. **Low physical effort:** The design should be usable with a minimum of fatigue.
7. **Size and space for approach and use:** Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.

THE HISTORY OF ACCESSIBLE DESIGN

Universal Design, as it is currently defined, traces its origins to an October, 1961 publication by the American Standards Association titled Making Buildings Accessible to and Usable by the Physically Handicapped, that marked the first attempt to publish an accessibility standard. While these standards were not enforceable, their publication did help to usher in the first legal statewide accessibility standards across the US throughout the 1960s.⁶ And, in 1968 congress passed the Architectural Barriers Act, which identified accessibility requirements for federal funding.

Further legislation, including hallmark federal laws like the 1964 Civil Rights Act, and the 1990 Americans with Disabilities act helped to codify minimum standards of access and accommodations for people with disabilities, focused primarily on public facilities such as parks, recreation centers, schools, and other government buildings. However, federal accessibility-focused legislation, focused as it is on public spaces, does not drive accessibility at the local level for single and multifamily housing.⁷

DESIGNING FOR AN ACCESSIBLE, EQUITABLE FUTURE

Currently, standards for accessibility are not consistent across the US. Housing accessibility is largely driven by a combination of federal, state, and local codes—and if publicly funded, by requirements attached to that funding. Accessibility requirements are often limited to questions of physical accessibility, though in some contexts, addressing sensory-related access needs are also beginning to be considered. Unfortunately, basic accessibility as a function of code compliance is usually seen as enough to clear the hurdle of physical accessibility, without further questions surrounding the diverse needs of people with disabilities, and true universal access being considered as a part of the design process.

Housing Design Standards for Accessibility and Inclusion, as laid out in The Kelsey Housing Design standards, have been established to complement existing building codes across the US, and to define, “a set of guidelines for the diverse community of people with disabilities that is applicable and aspirational, creating implementable tools to be used for multifamily housing of all sizes and locations while serving as a springboard for housing success and increased creativity in inclusive building design.”⁸ And while the design standards that inform this toolkit are currently aspirational in nature, they represent an attainable standard that can be employed to bring contemporary design into an equitable, accessible future for all, helping to usher in a new era where inclusivity for people with I/DD and other disabilities is such an accepted norm that it is taken for granted.

THE GOALS OF UNIVERSAL DESIGN

The Design Standards codified by The Kelsey define multiple design contexts in which Universal Design principles can be applied and a great many design elements that address accessibility needs and define appropriate design approaches to everything from the layout of physical spaces, to the supports, amenities, and support needs of people experiencing I/DD and a range of other disabilities, utilizing a cross-disability approach. Additionally, these design elements have been evaluated for intersectional benefits, affordability, impact on other housing justice and equity considerations, and livability concerns for all residents. This has resulted in the following identified Universal Design Standard goals:

1. **Cross-Disability**—Support access and inclusion for the broad and diverse needs of people with disabilities.
2. **Multi-Dimensional**—Address the many elements of housing development, design, and operations that impact accessibility and inclusion.
3. **Implementable and Expandable**—Provide standards that can be clearly and swiftly adopted into projects and policies while evolving and expanding over time.
4. **Value Creation**—Disability-forward design supports better, more efficient, equitable, building development.⁹

6 North Carolina State University, Raleigh Center for Universal Design, 1998. The Universal Design File: Designing for People of All Ages and Abilities. Taken from https://projects.ncsu.edu/ncsu/design/cud/about_ud/udprinciplestext.htm

7 The Kelsey. Housing Design Standards for Accessibility and Inclusion. Retrieved from https://thekelsey.org/wp-content/uploads/2022/08/TKHousingDesignStandards_070522.pdf

8 ibid

9 The Kelsey. Housing Design Standards for Accessibility and Inclusion. Retrieved from https://thekelsey.org/wp-content/uploads/2022/08/TKHousingDesignStandards_070522.pdf

UNIVERSAL DESIGN CONTEXTS

Universal Design concepts and principles have not enjoyed wide adoption to date. This represents a tremendous missed opportunity to design spaces that are truly accessible to everyone regardless of ability. Twenty-six percent of the population of the US experiences some type of I/DD or other disability. The needs of this significant percentage of the population are not generally being met by those in the development, design, and construction professions currently.

If accommodations for people experiencing disability are taken into account in the design of built spaces, including housing, they are largely considered as an afterthought to the design itself and often only at the urging of prospective or current tenants. However, if Universal Design concepts and principles could be more widely adopted in the design and construction of housing and other built environments, the significant percentage of our population that regularly encounters barriers to access, decreased livability, decreased community connection, and potentially unsafe environments, might be better served by the built environments they access and rely upon through the course of living their lives. Additionally, Universal Design has the potential to benefit all people, regardless of ability—both through the richness of coexisting with people of all abilities and through inherent ease of mobility and access that comes with designing for all.

Universal Design increases the potential for developing a better quality of life for a wide range of individuals. It is a design process that enables and empowers a diverse population by improving human performance, health, and wellness, and social participation.¹⁰

HEALING-CENTERED DESIGN, ACTIVE DESIGN, AND UNIVERSAL DESIGN

Universal Design concepts and principles can be employed alongside other contemporary design concepts that strive to drive the design of our built environments to insure more functionality and potential health benefits for those that use them. These modalities include, Sustainable Design, Active Design, and Healing-Centered Design. While the considerations involved in designing for sustainability (green design) can have potential health and functional benefits for people who experience I/DD and other disabilities, Healing-Centered Design and Active Design have the greatest potential to augment the benefits of Universal Design across diverse groups of users.

Active Design, at first glance, with its focus on including either opportunities or the necessity for compulsory physical activity into the design of the built environment in service of promoting a healthy level of activity, may seem at odds with Universal Design. However, Active Design elements can coexist with Universal Design elements, provided that design considerations that positively influence the potential for healthful physical activity for everyone, regardless of their ability. Opportunities for increased physical activity that do not compel, and thereby restrict or inhibit access by their nature are a welcome part of an integrated Active and Universal Design.¹¹

Incorporating **Healing-Centered Design** principles and elements in the design of built environments can amplify the benefits of Universal Design for people who experience I/DD and other disabilities.

“Physical environments affect people’s sense of worth and dignity. They can lift people up and contribute to healing from various historic, community, or life traumas.”¹² The incorporation of Healing-Centered Design elements and principles in conjunction with Universal Design elements, can provide people who experience I/DD and other disabilities with a healing environment that includes access as well.

Intersectionality also plays a role in Universal Design. Social isolation for people who experience disability remains a serious public health issue. Social isolation can exacerbate or cause other physical and mental health issues, strain family dynamics and harm other relationships. Social isolation also affects people who are aging, people with lower incomes, and people from other underserved populations. Disability intersects with all of these populations, often exacerbating social isolation and the issues that come with it for people within these groups.

This social isolation can be exacerbated by built environments that are not designed to welcome, accommodate, or provide access to people of all abilities. But, through the application of Universal Design principles, physical environments can help to build trust and participation across intersecting populations while enhancing opportunities for familiarity and connection between varied groups of users. Designing for all works to, “combat spatial inequities, and help to build cultural resilience and improve physical and mental health outcomes.”¹³

10 Community Vision, 2020. Universal Design Toolkit: Ideas for Enhancing Housing Accessibility to Benefit All. Taken from <https://bit.ly/UDToolkit>

11 Enterprise Community Partners, Inc. 2023. Green Communities Criteria & Certification. Retrieved from <https://www.greencommunitiesonline.org/healthy-living-environment>

12 ibid

13 ibid

UNIVERSAL DESIGN STRATEGIES FOR HOUSING

In the Universal Design Toolkit compiled by Community Vision, a basic framework of four levels of Universal Design application for housing are identified in service of “creating an environment that can be accessed by everyone without encountering barriers,” and meets “the needs of all the people who wish to use it.”¹⁴ These levels are:

Level Zero: Legal Requirements

Level One: Visitable Homes

Level Two: Fully Accessible Homes

Level Three: Smart Homes

LEVEL ZERO - LEGAL REQUIREMENTS

As mentioned above, meeting current federal requirements, as well as state and local building codes around disability—often as an afterthought to the design process—and with a eye on how accessibility requirements can be most cost-effectively met, represents the current level of Universal Design application across most of the contemporary design, development, and construction landscape in the state of Oregon.

LEVEL ONE - VISITABLE HOMES

While not truly Universal in their accessibility, the design of visitable homes takes into account the needs of people with disabilities and accommodates those needs through the removal of potential barriers to access. According to the National Council on Independent Living, “Visitability is a growing trend nationwide. The term refers to single-family or owner-occupied housing

designed in such a way that it can be lived in or visited by people who have trouble with steps or who use wheelchairs or walkers,”¹⁵ and meets three basic requirements:

- One zero-step entrance
- Wider doors with clear passage space
- One bathroom on the main floor you can get into in a wheelchair.”

LEVEL TWO - FULLY ACCESSIBLE

The leap from visitability to full accessibility in the Community Vision UD Toolkit framework, primarily has to do with modifications to a home’s bathroom and kitchen to allow a wider range of physical access. Through the modification of sinks, showers, countertops, appliances, and other fixtures, greater accessibility for most people who experience physical disability.¹⁶ For people with disabilities, the importance of accessibility is often most readily felt in these two rooms of the home, and the difference between a bathroom and kitchen design that accommodates people with disabilities can decide a person’s capacity for independent living in many cases.

LEVEL THREE - SMART HOMES

The technology behind the Internet of Things is rapidly advancing and providing greater accessibility for many people who experience disability through the use of smart home devices and other appliances that can be adjusted to accommodate a wide range of abilities. “These devices can significantly improve home access for people with disabilities.”¹⁷ Smart home devices are generally applied to a home after the design process is complete as a way to make a home more accessible and represent an opportunity to drive

accessibility and a temptation to try to fix accessibility issues that may have been more appropriately addressed during the design process.

14 Community Vision, 2020. Universal Design Toolkit: Ideas for Enhancing Housing Accessibility to Benefit All. Taken from <https://bit.ly/UDToolkit>

15 Visitability, 2023. Basic Access to Homes. Taken from visitability.org

16 Community Vision, 2020. Universal Design Toolkit: Ideas for Enhancing Housing Accessibility to Benefit All. Taken from <https://bit.ly/UDToolkit>

17 Community Vision, 2020. Universal Design Toolkit: Ideas for Enhancing Housing Accessibility to Benefit All. Taken from <https://bit.ly/UDToolkit>

UNIVERSAL DESIGN AND IMPLEMENTATION

The Kelsey began the process that led to the Housing Design Standards for Accessibility and Inclusion by, “defining key terms and element categories, researching existing standards and design strategies, soliciting expert and lived-experience feedback and compiling the standards into a usable format,” that is freely shared with the world at large. “The entire process broke down design choices, development processes, and operation strategies into elements. Elements were then categorized by Design Categories, Impact Areas, and Additional Benefits.”¹⁸

DESIGN ELEMENTS

The list of design elements that were identified by The Kelsey as having potential impact on accessibility and inclusion is relatively exhaustive. This set of design elements and their relationship to various design categories and impact areas (see below), and potential UD certification(s) is set down in *The Kelsey Housing Standards for Accessibility and Inclusion* pp26-312, as well as in their sortable database of design elements at thekelsey.org/design. They are organized into the following elements:

- Design Process
- Site Considerations
- Building Components
- Interior Spaces
- Dwelling Units
- Operations and Amenities

DESIGN CATEGORIES

Access and inclusion are heavily impacted by choices made throughout the development, design, construction,

and operation of any built environment. To aid designers, developers, and builders to understand how and where in the process a design element can be best implemented for greatest impact, The Kelsey has outlined the following Design Categories:¹⁹

Design Process: Elements that the project team will utilize to support comprehensive access and inclusion goals for residents; everything from building the team to community outreach-strategies to processes that provide access and define an inclusive building program.

Site: The location of the community related to retail, transit, parks, employment and educational opportunities, and other amenities and the physical characteristics of the site itself that allow easy access from the Public Way to the front door, accessible walkways through buildings or amenities, and opportunities for usable outdoor spaces like gardens, playgrounds, or gathering spots.

Building Components: Physical features that might occur both on the site and in the building, or in various types of interior spaces. They span multiple categories and are grouped together to support team implementation.

Interior Spaces: Interior features of the building, excluding the dwelling units. This includes spaces like the lobby, corridors, and special rooms like mailrooms, and gyms, as well as broader ideas about overall design approaches and program elements for the building.

Dwelling Units: Specific room-by-room features that improve the interior of the

dwelling units for residents. Features provide guidance to the project team for design of the overall dwelling unit.

Operations and Amenities: Operations guidelines, building staffing, on-site services, and resident experiences. Services that create connections between residents and the community that feel natural to the resident, and are centered on the resident’s housing goals.

IMPACT AREAS

Within The Kelsey’s UD framework, the design elements that support accessibility across all disabilities each do so by supporting one or multiple impact areas.²⁰ These are comprehensive in nature and intentionally unlinked to specific diagnoses. They include:

Mobility and Height—Individuals who have limited use of their limbs, limited range of motion or dexterity, who use mobility supports (i.e., wheelchairs - manual and motorized; scooters; walkers; canes; grab bars), who are of short stature, and/or who use assistive tools (i.e., reachers, step ladders, stools, etc.) to access spaces.

Hearing and Acoustics—Individuals who are hard of hearing (HOH), use hearing supports and devices to engage in surrounding environments (i.e., voice amplification devices, hearing aids, video relay services, cochlear implants, ASL, etc.), and/or who have auditory sensory sensitivities.

Vision—Individuals who are blind, who have low vision, and/or who use visual supports and devices to engage in surrounding

18 The Kelsey. Housing Design Standards for Accessibility and Inclusion. Retrieved from https://thekelsey.org/wp-content/uploads/2022/08/TKHousingDesignStandards_070522.pdf

19 ibid

20 ibid

environments (i.e., Braille, screen readers, magnifiers, lightboxes, etc.). This can also include people with high sensitivity to glare, or rapid changes in light levels.

Health and Wellness—Individuals who have chronic health conditions, who have allergies and chemical sensitivities, are immunocompromised, and/or regularly utilize medical and/or therapeutic services. Aspects of the building that promote wellness for all, such as connection to nature and natural light, are also included.

Cognitive Access—Individuals who process information differently, who have alternative language reception and/or communication preferences and needs, who need items or materials presented in different ways or speeds of information, and/or who use supports in understanding and content retention, information processing, and decision making or choice selection. Includes wayfinding support for memory or orientation.

Support Needs—Individuals who use support services in their home and/or the community including but not limited to: direct support professionals, health aides, nursing support, behavioral supports, and individualized therapies. Can also include individuals using in-house family support for mobility or other assistance.

ADDITIONAL IMPACTS

The choices that developers, architects, designers, and builders make throughout the design and construction process have impacts that last as long as the built space does. If choices are made that support inclusivity and accessibility for everyone, including people who experience I/DD and other disabilities, those choices can result in benefits for everyone who uses the built space in question. All of the design

elements highlighted in The Kelsey's Design Standards, work toward advancing many varied benefits for everyone, but some design elements provide additional benefits specific to diverse populations, including:

Affordability—Individuals with disabilities are more likely to live in poverty, and those reliant on SSI as their primary source of income would have to pay, on average nationally, 131% of their entire income to afford rent. Elements that meet additional affordability goals support project feasibility and increased affordability goals.

Racial Equity—Centering on the most marginalized is essential to expanding inclusion and access. Elements address specific ways to increase anti-racist strategies in design and operation, broad equity goals, accessibility and inclusion for Black, Indigenous, and People of Color (BIPOC) individuals, and strategies to support the inclusion of individuals with intersectional identities.

Safety—Design strategies that support access and inclusion not only keep residents with disabilities safe, but support overall community safety for all people in and around the building. More navigable spaces, safe walking surfaces, good lighting, clear communication systems, robust staffing, and community-based programs all help keep people safe in their homes and communities.

Environmental Sustainability—Choices made to improve materials selection, climate reducing strategies, daylighting, site selection, space planning, and overall design; most often also achieving sustainability and environmental impact goals. Beyond providing direct impacts with healthier environments for all residents, environmental sustainability approaches even provide positive externalities to the

greater society, including community members with disabilities.

Beauty and Better Design—Inclusive and accessible design provides an opportunity for creativity, innovation, and rethinking spaces in a more identity-rich, resident-centered way. A focus on sensory related access creates spaces with increased harmony. Wayfinding strategies make for more graceful navigation. Cross-disability inclusion builds more interesting and meaningful communities. Elements support diverse definitions of artistic design, housing innovation, beauty in placemaking, and experiences that improve the lives of all residents.

EXPERT AND LIVED EXPERIENCE

The inclusion of accessibility elements is often an afterthought in the design process, resulting in reduced effectiveness of the elements themselves and other potential problems. In addition, failure to facilitate inclusion of the population that will eventually inhabit, visit, and use the built environment in the design process itself represents a missed opportunity. During the design process, input from people who experience I/DD and other disabilities, as well as their family members and caregivers, can help to define which elements are important to include in a design and which elements may not serve to provide accessibility and inclusion in the way they are intended.

Facilitated meetings and listening sessions with representatives of populations that experience disability and would potentially live in or otherwise use the built environment can be an indispensable tool in the design process. Drawing upon the experience and expertise of architects and other consultants who have worked through the design process with people



who experience a variety of disabilities can also yield insights that will eventually lead to greater usability of the designed space.

Input solicited by The Kelsey from leaders in the building development industry, future potential residents of their developments and other communities across the country, and intersectional partners in the creation of their Design Standards, have informed the creation of this toolkit as well the design process of Cathedral Park Cohousing (see below). Additionally, members of the Our Home, Inclusive Community Collaborative team attended Open Doors for Multicultural Families meetings facilitated by architect and accessibility consultant Karen Braitmayer of Seattle, WA, where various community members who experience a variety of disabilities met with facilitators regarding what they would want in a built community environment. The content and spirit of these meetings also impacted the content of this toolkit.

Specific needs and wants among people with disabilities, regarding the perfect mix of elements to make environments accessible and inclusive for them are as varied as there are people with disabilities—there is no singular blanket answer that guarantees that the built environment will be accessible for everyone. In order to promote individual accessibility, general principles of

universal design need to be implemented. Additionally, having end users at the design table is encouraged for understanding accessibility from the perspective(s) of people who experience disability.

CASE STUDY: CATHEDRAL PARK COHOUSING

Our Home, ICC's flagship inclusive and diverse community, Cathedral Park Cohousing, will include a percentage of residents who experience I/DD in keeping with the percentage in the overall population. Inclusion of these residents, their families, caregivers, as well as the other members of the community throughout the design process has informed the project in many ways that will contribute to greater inclusivity and accessibility for all who live in or visit the community.

Through a series of facilitated meetings between designers, developers, Our Home, ICC staff and community members, design elements were identified for implementation in a variety of contexts in service of impacting accessibility, community connection, and inclusion for all members.

The following pages are a case study of process and tools which informed the design resolution of Cathedral Park Cohousing in support of a more inclusive environment.

"I noticed that during our design process something happened between us as a community. By listening to each others' priorities, wants, and needs, we got to know each other better and developed a new awareness of each other, our dreams, hopes and fears. Sharing the experience of being involved as participants in designing the spaces that we are going to be living in, built compassion and understanding between us as community members. Sharing our needs not only will have an effect on the choices that we make on our build (surface materials, counter top heights, room layouts and such), but it also built community connections, better understanding, and a culture of listening that will last into the future. What we needed in our homes to support our disabilities became more accepted rather than the exception.

Being a person who experiences a disability (or a family member of) and being asked to give input is incredibly empowering. We aren't used to being asked, listened to, and having a community wide impact by sharing what works and doesn't work for us. Usually we just adapt to what's already there. This process made a BIG difference and will not only make CPC better to live in for us, but for all our neighbors as well."

- Cathedral Park Cohousing Case Study Participant



CASE STUDY: CATHEDRAL PARK COHOUSING

Cathedral Park Cohousing will be a unique cohousing community and the flagship development of Our Home, ICC. The project will champion a groundbreaking approach to the building community, combining innovative design and thoughtful management to host a variety of home ownership opportunities for individuals and families of diverse abilities, ages, and income levels.

OUR WHY

Throughout history, those who experience disability have been separated from those who don't. Housing for those who experience disability has taken the form of institutions, group homes, adult foster care, or with family, who may not have the appropriate training, financial ability, or support to be a full time caregiver. Cathedral Park Cohousing takes a different approach, believing that communities that are built with the values of inclusion and diversity at the forefront create stronger communities. With this in mind, we strove to design inviting, thoughtfully designed places where all sorts of people, including a representative population of those who experience disability, who want to age in

place, or who are below the medium income can come together and enjoy the mutual benefits of caring, trusted neighbors.

HOW DO WE DO IT?

When the design team first began work, they combed through design guides, articles, and relied on past work with content experts to consider how to design the built environment in a way that supported as many people as possible. Along with Universal Design principles, the following were considered:

Neurodiversity: Designing for neurodiversity considers the variation of cognitive functioning within our communities, allowing users control over sensory stimulation providing organizational clarity.

DeafSpace Guidelines: DeafSpace design is an architectural approach to the built environment that responds to the way people who are deaf or hard of hearing perceive and inhabit space.

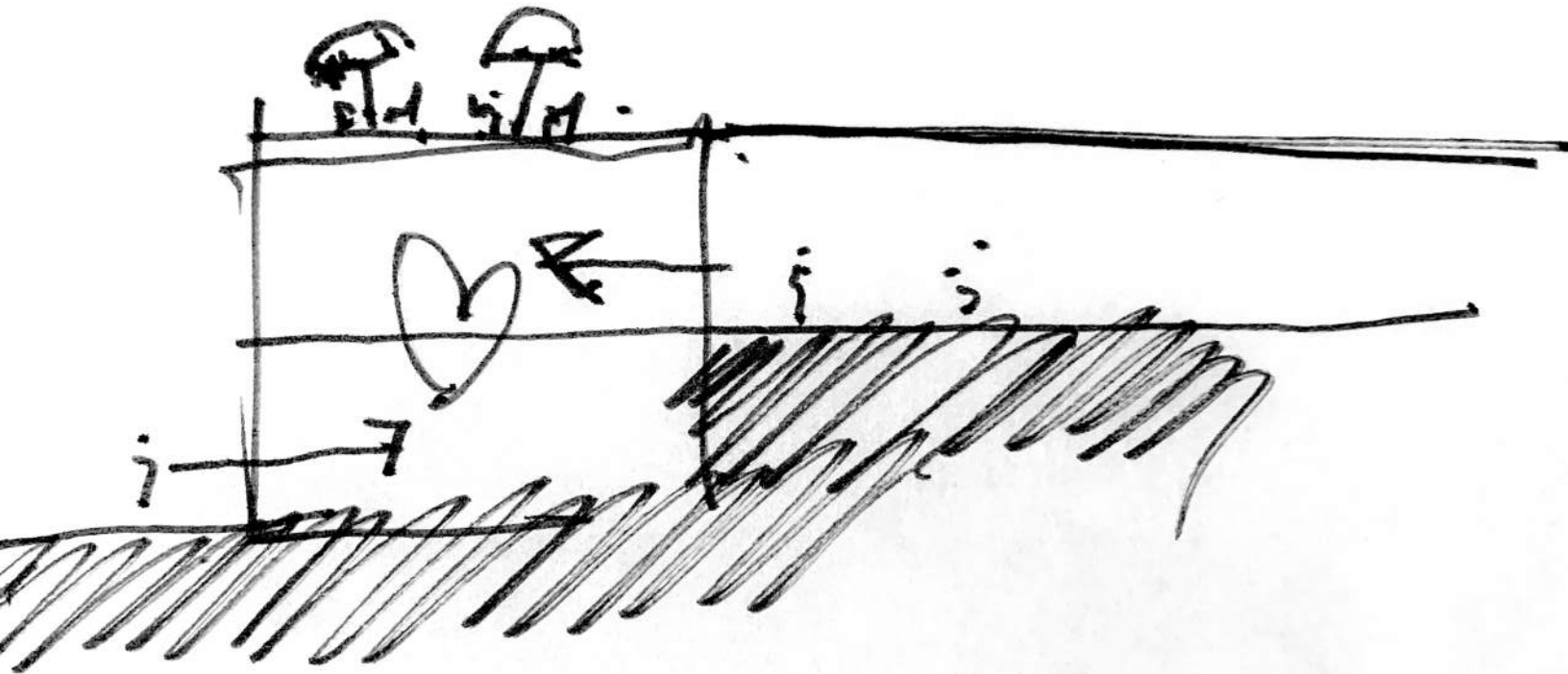
Blind and Low Vision: Design for blind and low vision demands sensory-rich

experiences. Sensory design enhances health and well-being, links senses with memory, and embraces inclusivity and human diversity.

Aging (Staying) in Place: Aging in place is the flexibility to accommodate economic or health challenges in order to live comfortably in one's own home and community. We've adapted the idea of "Aging" in place to be "Staying" in place - as one never knows how their life circumstances might change how they interact with the built environment over the course of their life.

As design progressed, so did the development of the The Kelsey Housing Design Standards for Accessibility and Inclusion. After its release in December of 2021, it quickly became the reference guide our design team relied on most heavily. A link to the The Kelsey and other design guides can be found in the Sources and Resources section of this toolkit.

In addition to the guides referenced, the design team also thought about how the built environment can support the building



of a community. Loneliness and isolation is as important a risk factor for early death as a sedentary lifestyle or a 2-pack a day smoking habit. Cathedral Park Cohousing's design resolution seeks to combat this reality with thoughtful spatial planning.

ENGAGING WITH THE CATHEDRAL PARK COHOUSING COMMUNITY

The voice of those most impacted by the design work done should be centered in any design process. Throughout the development of the project, the design team was able to engage at key intervals with potential future residents and where applicable, their caregivers. Key discussions that informed the design resolution include:

Goal Ranking: Cathedral Park Cohousing came to the table with a well defined vision, based on goals they set. This set the design team up for success.

Foundational Questions: At the beginning of design, a team knows very little about the community and any of the specific issues that may arise later. A foundational question, such as "What are your hopes and fears?" can get at a community's needs and aspirations.

A Day in the Life: An activity to talk about how an individual user might experience a space or series of spaces.

DESIGN RESOLUTION

Equipped with resources from experts in design for disability, knowledge in community building, and the vision and input of the Cathedral Park Cohousing Community, the team was able to move forward with a design resolution that supports diverse and inclusive communities.

At a high level, the building wraps around an outdoor gathering space and common house that form the heart of the community on the main entry level. A variety of spaces, with varying amenities and spacial qualities promote interaction at multiple scales, while the open and airy common house greets the neighborhood with large windows and a rooftop terrace. This original design concept has endured throughout continuing iterations of the project.

Personal space at each unit's front door aids wayfinding for residents and guests. Once inside, each unit provides an open and adaptable layout that allows for personal choice and an abundance of natural light. Kitchen windows face the outdoor commons areas, creating an authentic sense of belonging.

On the following page, we share some specific examples of inclusive design strategies utilized at Cathedral Park Cohousing.



1

Options for small, medium, or large group gatherings in the courtyard allows residents to control sensory stimulation. These varied levels of interaction support neurodiversity.

2

In alignment with DeafSpace design guidelines, Wide views into and out of the common room improves awareness of surroundings and comfort during events.

3

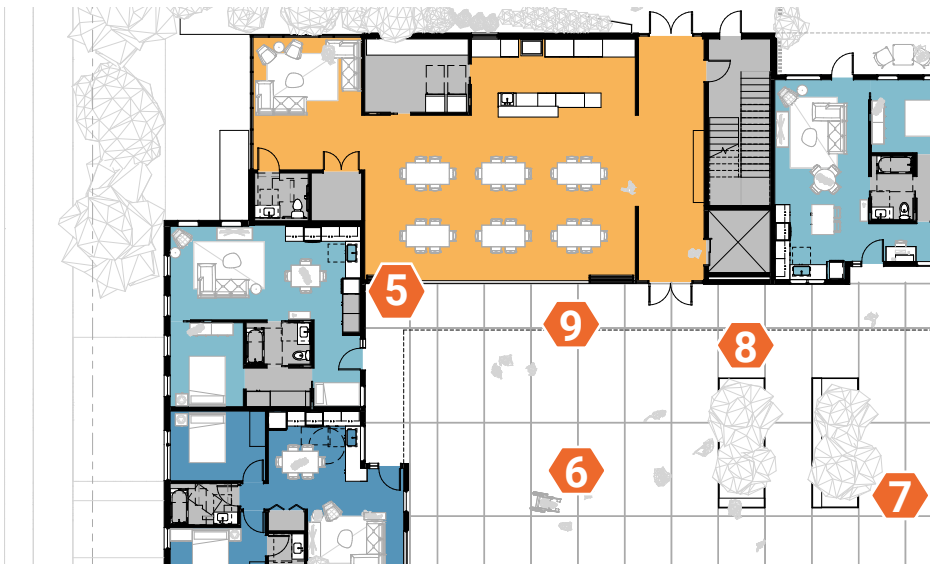
Universal design principles speak to the idea of adequate space. Appropriately sized spaces in the courtyard provide for all mobility needs.

4

Outdoor spaces outside ones' door allows those with low-mobility to feel connected - a key component for aging in place.

5

The common house is a key component in cohousing - a place for the community to gather. At Cathedral Park, we offer not only the typical large community room, but have included a smaller living room area. This gives residents the ability to be adjacent the activity, but not in the center of it.



6

Acoustic, textural, and lighting transitions define spaces, improving awareness of surroundings for blind & low vision residents.

7

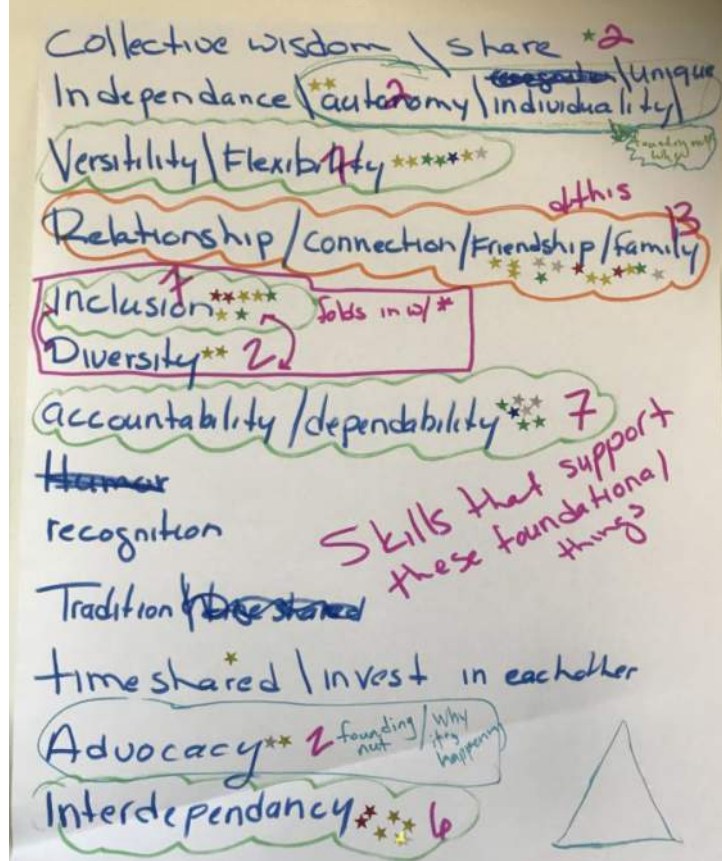
Moments of rest at unit entries provide opportunities to set down groceries while unlocking doors, and the opportunity to socialize with neighbors. Both strategies are recommended in universal design and aging in place.

8

Locating shared and social spaces off of key circulations routes facilitates interaction and the building of community.

9

The community spaces provide a variety of seating options to allow conversations to continue when residents need to sit and rest.



GOAL RANKING

WHAT IS IT?

Goal setting is a complex process. Often times, there are so many dreams from the community that you feel overwhelmed with how to organize them. This exercise aims to prioritize and refine project goals, setting the team up to craft a vision.

WHY USE IT?

Use this tool to understand what are the priorities of the community.

WHEN TO USE IT

Use this tool after you've had some initial meetings as group and are ready to start narrowing the focus. The beginning of the process should be open for dreaming, expanding, and collecting ideas. Starting to rank and prioritize means you are turning a corner and push some ideas to the top.

FACILITATION

Group Size: whole group

Time: varies - give people enough time to read into and understand each goal

Materials:

- Index Cards
- Large notepads
- Sharpies
- Stickers/Dots for voting

Start by writing each idea on an index card in bold text so they can be easily read. Depending on the size of the group, there may be 20 ideas, or there could be 200! There will be at least a few rounds for prioritization in different ways.

After all ideas are on the table, similar concepts should be combined. For large groups, you can break up into groups of 10 to begin to prioritize the ideas. Depending on the numbers of ideas collected, you can ask groups to pick out their top 20 ideas using voting dots, and then their top 10. One each group has their top 10, combine those ideas and prioritize as a whole group to the top 10 ideas overall.

OUTCOMES

Artifacts: A list of thoroughly vetted top 10 list of goals for the project.

CATHEDRAL PARK COHOUSING

Prior to the design team joining the table, Cathedral Park Cohousing had defined their goals and values as follows:

- Growing together as a community and as individuals
- Inclusion and Diversity
- Creating an authentic sense of belonging
- Making decisions cooperatively
- Sharing resources
- Respecting and embracing differences
- Giving and receiving
- Respectful privacy while creating easy ways of connecting
- Learning from each other
- Enjoying each other's company
- Connecting with our surrounding neighborhood, city, and region

With this foundation, the design team was set to overlay these goals onto the design of the built environment.

Hopes



Fears



FOUNDATIONAL QUESTIONS

WHAT IS IT?

At the beginning of the design process, we know very little about the community and any specific issues which may arise later. That's why we need big juicy questions that get at their needs and aspirations.

WHY USE IT?

Use this tool to understand what the community cares about; stick your toes in the water - see what are the sticky ideas.

WHEN TO USE IT

When you are just getting started trying to translate goals into a project design.

FACILITATION

Group Size: whole group

Time: varies - based on group size. For example, 60 minutes for a group of 20 people allows for a good balance of getting things on the table without mental burnout.

Materials:

- Good Questions!
- A way to capture ideas from someone who isn't willing to be vocal or raise their hand
- Note cards
- Flip charts to track responses

Start with asking the foundational question, and give 2-3 minutes for individuals to sit with the question.

Provide note cards to the group to list their responses, or be ready to work your way around the room to each individual, and track their responses on a flip chart.

OUTCOMES

Artifacts: comments, productive tensions, nuggets of ideas

Synthesis: Broad questions like these tend to be aimed at understanding how different people bring different definitions of the same word or concept. We're trying to capture how there are many perspectives on the same topic. Try to illustrate this diversity, or conversely, point out its homogeneity.

CATHEDRAL PARK COHOUSING

The foundational question we posed to the Cathedral Park CoHousing community was "What are your hopes and fears for the project?"

Asking this question underscored for us the importance of several things in the group. For example:

- Lack of accessibility, or ability to function within units were a large concern
- A balance between community and privacy was both a hope and a fear
- Daylighting was a strong hope for the community
- Spaces needed to be efficient - wasted space was a fear!

Understanding these types of feelings were critical as the design team was planning the space, and considering the best resolution. Having this conversation allowed the design team to create a place that lives up to the communities hopeful aspirations, and alleviates their fears.

FOOD PREPARATION (in unit)



DAY IN THE LIFE

WHAT IS IT?

A Day in the Life is an activity to talk about how an individual user might experience a space or series of spaces. You can change the context parameters to imagine what a person encounters each day - an especially important point when designing for those who experience disability.

WHY USE IT?

Use this tool to understand how people move from the beginning of the day to the end, and what they are doing along the way. What challenges them? What supports them?

WHEN TO USE IT

At the beginning of design, when you are expanding and unpacking concepts such as “learning”, “lifestyle”, “living”, and what they mean to your community. This exercise can also be helpful when designing flow in specific spaces.

FACILITATION

Group Size: 4 per group

Time: 20 minute working, 20 minute shareback

Materials:

- Worksheet or board

Start by setting up a worksheet or board that tracks an individual through their day. In housing, we look at an individuals experience from the moment they wake up, through getting ready for the day, meal preparation, etc. This worksheet will vary based on your client type and project.

OUTCOMES

Artifacts: Completed worksheet/board tracking information, notes from shareback

CATHEDRAL PARK COHOUSING

One moment where we used this exercise in Cathedral Park Cohousing was in the design of the unit kitchens. We walked through how each member cooks, focusing on feedback from those who experience disability. For example, one resident struggled to bring water in a pot from the sink to a stove top. The only way it would be possible would be if they could slide the pot along the counter, and not actually have to lift it. Feedback such as this drove the layout of the kitchen spaces to be in alignment with varying needs.

Understanding what individuals are faced with each day allowed the design team to create a space that was supportive for future residents, instead of a barrier.

THE FUTURE OF UNIVERSAL DESIGN IN OREGON

Universal Design is still in its relative infancy. The need to design products and environments to be usable by all people may seem like an obvious one that only needs a bit of incentive to bring to fruition. Though it is an obvious good to facilitate accessibility and inclusion for all through the design and construction of our built environments, anyone who works in disability justice, or disability rights advocacy can tell you there is an often maddening discontent between what we know is right for people with disabilities and what is deemed “possible” or “cost-effective.”²¹

The Fairview Trust was created in 1999 from proceeds from the State of Oregon’s sale of Fairview Training Center. An institution that was “Oregon’s primary facility for those with intellectual and developmental disabilities,” and “a living nightmare,” for many. The creation of this toolkit was funded in part by a grant from the Fairview Trust. At the date of the compilation of this toolkit, we are only a couple of decades removed from institutionalization for people with I/DD in the state of Oregon.

Universal Design is one component of an overarching effort that is decades in the making—trying to make opportunities for true inclusivity and accessibility available for everyone regardless of ability. Universal Design is not just for a specific population, it is for us all and makes accessibility and inclusion more available to everyone throughout various times of life. This Universal Design Toolkit is meant to serve as an introduction to basic Universal Design principles and processes and is by-design an incomplete resource. As Universal Design concepts are put into

further application throughout the state of Oregon, both in the design of new buildings and in the retro-fitting of existing ones, our current best thinking about its application will evolve. Truly “future-proofing” buildings may not be possible. But, designing for inclusion and accessibility is always the right choice, regardless.

True universal design requires the use of UD principles to provide accessibility to those who experience I/DD, alongside efforts to design spaces that provides accessibility for the blind and hearing impaired, as well as development that utilizes trauma informed design, and designing for the elderly to age in place. Thoughtfully designing individual units is a positive step. However, designing communities in a way that fosters connection, relationships, and the opportunity for natural supports among people of all abilities is necessary to promote true inclusion and diversity.

Look for updated versions of this Universal Design Toolkit in the years to come.

21 Oregon Public Broadcasting, 2023. New OPB documentary examines the troubling history of Fairview, Oregon’s primary institution for those with developmental disabilities.
Taken from <https://www.opb.org/pressroom/new-opb-documentary-examines-the-troubling-history-of-fairview/>

SOURCES AND RESOURCES

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- Visitability, 2023. Basic Access to Homes. Taken from visitability.org
- Oregon Public Broadcasting, 2023. New OPB documentary examines the troubling history of Fairview, Oregon's primary institution for those with developmental disabilities. Taken from <https://www.opb.org/pressroom/new-opb-documentary-examines-the-troubling-history-of-fairview/>

RESOURCES

- Our Home: Inclusive Community Collaborative: <https://www.ourhomeicc.org/>
- Cathedral Park Cohousing: <http://www.cathedralparkcohousing.com>
- The Kelsey: Housing Design Standards: https://thekelsey.org/wp-content/uploads/2022/08/TKHousingDesignStandards_070522.pdf
- Studio Pacific and Karen Braitmayer <https://studiopacificseattle.com/firm/>
- Mahlum Architects <https://mahlum.com>
- The Kelsey: Beyond Code: Taking a Progressive Approach to Disability Accessibility & Inclusion <https://thekelsey.org/learn-center/beyond-code-taking-a-progressive-approach-to-disability-accessibility-inclusion/>
- Community Vision <https://cvision.org>
- Disability Rights Oregon: Fair Housing Handbook: Reasonable Accommodations & Modifications <https://static1.squarespace.com/static/5d645da3cf8e4c000158e55a/t/5daea75645e76364d77bedf3/1571727192234/DRO-Fair-Housing-Handbook-2008-English.pdf>
- Target Design for All Documentary <https://www.youtube.com/watch?v=3SSydJA0kbQ>