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INTRODUCTION

Inter-generational living is a multi-faceted lifestyle centered on the ideas of cooperation, interaction, and exchange. The sharing of responsibilities, regular social interaction, and the exchange of knowledge between members of multiple generations are imperative to a successful inter-generational lifestyle.

CHANGING DEMOGRAPHICS: THE AGING POPULATION

The world over, populations of those aged 65 and older are increasing dramatically. The US is no exception, with its elderly population expected to more than double by 2030. Data from the 2010 US Census Bureau suggests that senior populations are growing faster than younger populations, and for the first time in history there will be more elderly persons than children. A significant factor in this demographic change is the generation commonly known as the 'Baby Boomers'. This group of approximately 77 million Americans, born from 1946 - 1964, is beginning to reach retirement, while at the same time redefining the retirement lifestyle. According to a survey conducted by Del Web, 50 percent of participants planned to work at least part time during retirement. Advances in health care and declining mortality rates for 8 of the 15 leading causes of death have significantly increased life expectancy, now projected to be around 78. This means that 20 - 25 percent of our lives are now spent in 'Active Retirement'.

PROJECT GOALS

In order to achieve a successful, inter-generational living environment, several criteria must be met. The project must enhance and promote the physical, mental, and social well-being of its residents. The use of outdoor space as a gathering place, a sanctuary, as well as an everyday utilitarian space will impact residents as well as the neighborhood positively.

RESEARCH

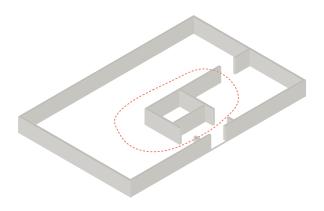
SOCIAL INTERACTION + THE OUTDOORS

Outdoor space has been linked to many benefits seen in a person's physical, mental, and social health, therefore, residential settings must include well designed outdoor spaces to support and promote the well-being of its occupants. The social relationships necessary to sustain inter-generational communities can be greatly enhanced through the addition of outdoor space.

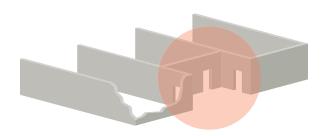
Studies in the realm of healthcare have shown that visual and physical access to a natural habitat reduces stress and improves patients' recovery (Ulrich, 1999) and that interaction with the younger population improves elders' perceived quality of life (Taylor + Repetti + Seeman, 1997). Both the aging population and members of younger generations have shown to benefit from social interactions fostered by the addition of outdoor space to living environments (Marcus, 2000), proving access to outdoor space can greatly impact social health within inter-generational living. It is suggested that physical and visual access to shared outdoor space can increase familiarity with ones neighbors and promotes the feeling of ownership towards said outdoor space (Regnier, 1985). This study is intended to explore the integration of a variety of outdoor spaces at various levels of scale in the design of inter-generational living in order to support social interaction between residents. It is hoped that through the implementation of design criteria discovered through research, a socially integrated, inter-generational population can be promoted.

INTER-GENERATIONAL DESIGN GUIDELINES

|] | PROVIDE FOR A CIRCULAR OR CONTINUOUS PATHWAY WITHIN THE UNIT |
|----|---|
| 2 | PROVIDE FOR DAY LIGHTING FROM AT LEAST TWO SIDES |
| 3 | UNITS SHOULD BE EASILY ADAPTABLE TO FIT THE NEEDS OF CURRENT AND FUTURE OCCUPANTS, AND PROVIDE FOR AGING IN PLACE |
| 4 | SOCIAL GATHERING SPACES SHOULD BE LOCATED WHERE THEY CAN BE EASILY ACCESSED BY ALL OCCUPANTS, I.E. CENTRALLY LOCATED |
| 5 | UNIT ENTRANCES SHOULD BE CLUSTERED TOGETHER |
| 6 | INTEGRATE SPATIAL LAYERING AND PROVIDE FOR BUFFER ZONES BETWEEN PRIVATE, SHARED, AND PUBLIC SPACE |
| 7 | BRING THE WORLD INTO THE BUILDING |
| 8 | PROVIDE FOR 'THIRD PLACES' |
| S | GATHERING SPACE SHOULD BE LOCATED ADJACENT CIRCULATION SPACE, WHERE IT IS EASILY ACCESSIBLE, BOTH PHYSICALLY AND VISUALLY |
| 10 | INCLUDE A VARIETY OF SHARED ACTIVITY SPACES |



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DESIGN DIRECTIVES FOR OUTDOOR SPACE

SUNLIGHT MUST BE CONTROLLED, ESPECIALLY ON THE WEST AND SOUTH

Constructing an overhead trellis configured to provide the maximum amount of protection for seating below is a popular and effective approach to the problem because it maximizes the opportunities for view.

An arcade or solid overhang to control sun, carefully designed to reinforce the aesthetic and expressive goals of the project can often create an excellent outdoor space while aiding aesthetic expression

Ad-hoc solutions such as umbrella tables and awnings can provide control which residents or management can adjust during different times of the day and different seasons of the year

Planting trees and creating vertical screens of plant material can be a highly satisfactory solution which also complements the aesthetic nature of landscape design. Tree shade and density should be carefully considered in these solutions.

The use of non-reflective off-white paving materials will help to reduce problems with glare. The use of dark paving materials, such as brick can be an excellent solution provided sun exposure does not lead to overheating

Balancing soft landscape materials with hard surfaces can provide positive benefits as long as the proposed functions for these outdoor spaces is not impaired by too little hard paving

Space should be able to accommodate unplanned use

Link closely coupled outdoor spaces that are adjacent to entry or side doors with glass so that opportunities for recruiting residents for informal social interaction are enhanced

Specify swing doors rather than sliding glass doors for linking outdoor and indoor space. Sliding glass doors can be difficult to open and are often impediment to use

If possible, specify movable chairs in combination with fixed seating in order to provide residents with the maximum amount of flexibility in relating to one another and the surrounding environmental context

Plan informal spaces adjacent to entry and side door access points by laying out typical furniture placements and anticipating these spaces may be used in this way

Be careful to create a sense of enclosure and protection when designing spaces for informal use. For example, an inside corner location may be preferred because the two walls of the building will provide an added sense of security. Avoid seating placements that require residents to have their backs toward an unsecured open space.

Seating and activity areas should be placed near circulation space

Fixed seating should be physically linked to a pathway, making it convenient and easy to use. Fixed seating parallel to a pathway is often the simplest and most convenient solution

Fixed seating should be in full view of the pathway in order to enhance its safety and security Seating should be covered or landscaped to be protected from the sun, comfortably designed and generally enticing

Locations along pedestrian pathways that include the added protection of a nearby wall or vertical surface and that are in full view of any nearby street activity can increase the user's sense of security and control. Locating seating in several places along a pathway leading to the parking lot or neighborhood provides residents with limited mobility ample opportunity to rest. Seating should be located no more than 50' apart

Seating should be located at the top and bottom of stairs and ramps and where major changes in topography take place.

These experiences can be physically draining for the older person with limited mobility

Provide for views out (to the neighborhood)

Locate and position seating with an unencumbered view of the surrounding activity Select locations which frame off-site viewing destinations that involve complex activities. The greater the probability that novel patterns will emerge, the more interesting and provocative the view will be considered. For example, a view overlooking an athletic field, where baseball is played, can be a particularly attractive view when a game is in session

Make certain the seating location is not so close to the street that it becomes captured by pedestrians in the neighborhood. Some seating locations in good neighborhoods can benefit both the project residents and neighborhood pedestrians. However, in projects where transients cause security problems, locations too near the street are taken over by other groups.

Consider security when planning seating that overlooks the neighborhood. A setting located near the front door, adjacent to a heavily traveled on-site pedestrian pathway or next to a vertical wall surface (preferably the side of the building) can increase the sense of security, making the seating location attractive

Consider the use of plant materials or semi-permeable fence design as a screen to separate areas physically close to the edge of the property

 $\mathbf{5}$ Management practices must support and encourage use of outdoor space

Plan at the program development stage the types of activities to be considered and enlist management/sponsor participation and support for these ideas

Develop various strategies to involve residents in outdoor activities with which they may not have experience

Experiment with co-optation strategies which use staff involvement to encourage resident use. For example, organizing team sports with staff members as team leaders can legitimize and create enthusiasm for various activities. Hiring a program director on a full-time basis or a consultant on a part-time basis can be an excellent catalyst for involving residents

Individual tenant enthusiasm for a sport or activity can also provide the momentum for sustaining interest and participation of other project residents in a particular activity. When this develops it should be nurtured and encouraged

Consider planning activities that involve a considerable amount of money after residents have moved into the project. At that point residents can express their desires and preferences for various out door spaces and activities. Deciding on how to develop outdoor spaces creates enthusiasm for the final decision, often increasing the tenant's commitment to using a space

Program spaces appropriately for target clientele

Select activities, programs, and spaces which meet the anticipated preferences and desires of residents. If the user group is over age 75 then program activities that are related to the general competencies, compatibilities, and interests of this age group

Select locations that make the activity visible, convenient, and enticing

Increase management enthusiasm and commitment to the success of planned activities

Plan for the storage of equipment in a convenient location that is secure, but yet easily accessible to residents

Design the activity to meet the needs of residents. Commit design energies toward the development of a supportive and "professionally" designed activity. Nothing is more discouraging than an effort at creating outdoor activities that is half-hearted. Developing "sub-standard" activities and features may insult those residents who might desire to use the equipment most

Solidly roofed overhangs and wind screens can protect outdoor spaces from prevailing winds.

Trees and plant materials located to buffer prevailing winds and downdraft conditions can help to make spaces more attractive as well as more habitable

Courtyard designs which encourage the flow of air during the summer will help to make these spaces more pleasant and enjoyable. One project which included openings on three sides of the court was a pleasant and well utilized space during hot summer afternoons

Wind tunnel analyses at the design stage can anticipate potential problems which a building form or massing configuration may inadvertently create. This type of analysis can be helpful in avoiding the planned use of a certain area of the site, or in developing mitigation measures which ensure the habitability of the space given the inevitable nature of a problem

Ensure that space is secure from public

Plan early for security by deciding in the programming and design development stage which doors will be locked and which spaces will be accessible to encourage resident use of outdoor space

Make certain public spaces are designed with "defensible space" principles and are as secure as possible so that door locking policies need not be instituted. Designing vulnerable spaces may be the easiest way to ensure that in the future they will be placed off-limits. When a door is licked for security reasons, make certain a system is developed which facilitates ease of entry and exit. This could involve keying the door to the main entry lock to make it as convenient as possible for residents to leave the building and return

Do not always assume that locking a door is the best solution to a potential security problem. Constructing a fence or planting dense foliage and hedge material can mitigate and resolve some minor problems, allowing a space to stay accessible

When there is little other choice but to secure a space which receives entry and exit traffic, then make certain visual access is maintained from the inside to outside

Avoid awkward seating configurations, where occupants are forced to confront one another

Avoid the use of these contrived patterns in designing outdoor seating

If they are used then make certain to provide other seating choices on-site for those who would desire to sit by themselves or to sit in a location where one does not feel the obligation to enter into a conversation or discussion with another

If a sociopetal bench arrangement is utilized then make certain to assure that the design meets all other positive criteria for success. For example, it should be comfortable, have a view to the surrounding area, allow for pleasant breezes to flow through, be shaded in the afternoon, and configured so as not to trap the person socially when they enter the space

Custom designs of this nature are often developed out of materials like concrete which can be formed in curved designs, but is not always a satisfactory material for bench seating

These designs are generally costly to construct because they rely on custom designed furnishings and may not pay-off in terms of use

1 \(\text{Provide for seating on the site edge} \)

Select a good location which provides unencumbered views of neighborhood activities and street traffic but which is also close enough to the building entry that it capitalizes on the sense of security provided there

The seating location and orientation should be in full view and within easy walking distance of the most convenient on-site drop-off or curb-side drop-off space to encourage its use

The interior lobby near the front entry should be designed to accommodate residents waiting for someone to pick them up. During inclement weather the option of providing an interior space within full view of the drop-off can facilitate this important activity. An interior location with ready access to the front door, but yet located away from the lobby is an ideal solution. Howell (1980) describes an interior lobby design that resolves this problem

Provide for comfortable seating, both fixed and portable -

The following design requirements have been identified by industrial design researchers as being relevant to the special physiological conditions of the older person (Koncelik, 1976)

The height of the seat should be slightly higher than normal from the ground plane (17" is suggested). this will make it easier for the older person to successfully exit the chair.

Lower back support and upper back support are both extremely important considerations in achieving comfort during long periods of sitting.

Arm rests can be helpful for the older person who uses upper body strength to exit a chair Some amount of flexibility or "give" in the seat cushion helps to increase comfort

Activate space with frequent planned events

12

Program and plan outdoor spaces to accommodate various type of activities. These Activities might include food service and musical events, such as dances and concerts. Therefore, storage should be provided for tables and chairs and possibly portable stages. Electrical outlets and public address system jacks should all be pre-wired at strategic locations in order to avoid stringing cables that might cause a safety problem.

Lighting should be designed to complement and support the planned events

The staging of events in plaza areas can be controlled by management. This gives management a pro-active opportunity to simulate the use of various spaces





THE CONTEXT

As the original downtown of the settlement that became Seattle, Washington, Pioneer Square District is rich in history. From its industrial beginnings as the home of Henry Yesler's saw mill, through the dark days when brothels and dope houses were on every corner, and even reconstruction after the Great Seattle Fire of 1889, Pioneer Square District played a distinct role in shaping the city around it. Designated as an Historic District and listed in the National Registry of Historic Places in 1970, the area has much to offer tourists and locals alike. Today, Pioneer Square District is home to a wide variety of boutique shops, restaurants and bars and offers visitors a chance to see a part of the historic city via the Seattle Underground tour. The location of the sports complexes immediately to the south and downtown to the north has made the area extremely popular. The presence of several shelters and soup kitchens in the area play host to a large vagrant population, who often seek refuge in the urban parks of the area. Though very little residential currently exists several projects are currently in progress.











Location: 200 Occidental Avenue South

Seattle, Washington

Size: 112'0" x 240'0"

26,880 square feet











PIONEER SQUARE DESIGN GUIDELINES

Refer to Pioneer Preservation Board Document PSB 149/03 for full information

The property line is the line of the building mass. Street facades are uniformly located at the front property lines, thus there is a strong street edge definition. Building cornices, bay windows and ornament project beyond the main wall surface of some facades.

New construction must be visually compatible with the predominant architectural styles, building materials, and inherent historic character of the District. (7/99) Although new projects need not attempt to duplicate original facades, the design process ought to involve serious consideration of the typical historic building character and detail within the District.

The most common facing materials are brick masonry and cut or rusticated sandstone, with limited use of terra cotta and tile. Wooden window sash, ornamental sheet metal, carved stone and wooden or cast iron storefronts are also typically used throughout the District. Synthetic stucco siding materials are generally not permitted. (7/99)

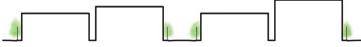
Building facades are primarily composed of varied tones of red brick masonry or gray sandstone. Unfinished brick, stone, or concrete masonry unit surfaces may not be painted. Painted color is typically applied to wooden window sash, sheet metal ornament and wooden or cast iron storefronts. Paint colors shall be appropriate to ensure compatibility within the District. (7/99)

CODES + ZONING

The site is located at 200 Occidental Avenue South and is subject to PSM 100/100-120, as specified in the Seattle Municipal Code, Chapter 23

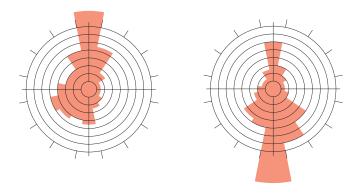
Maximum Building Height is 120 ft when all requirements are met with zero required setback from the property line

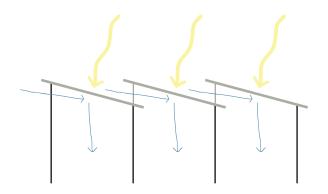




CONTINUITY OF URBAN FABRIC



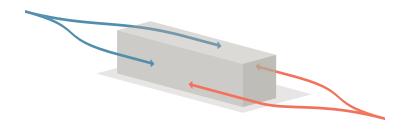


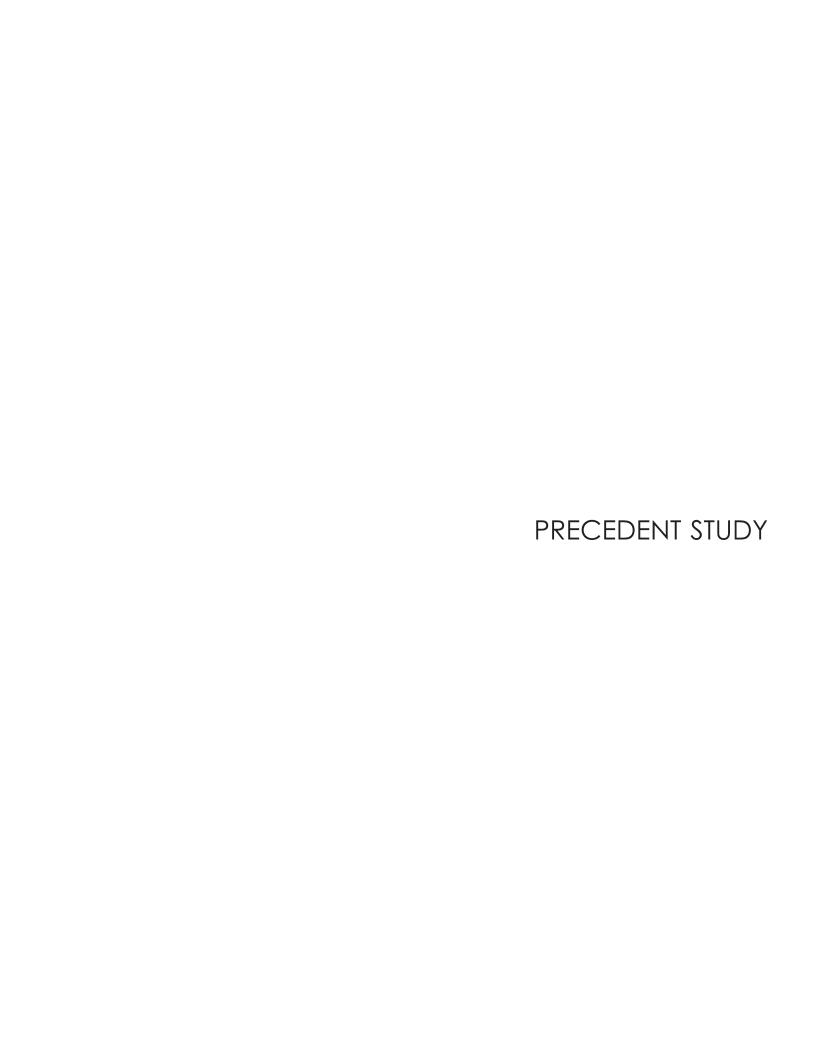


CLIMATIC CONDITIONS

Seattle is located in a temperate costal climate where temperatures seldom reach below freezing and rarely spike out of the comfort zone. Prevailing winds in the summer are from the north bringing cooling winds through the site. In the winter, prevailing winds hail from the south, providing warm drafts. Both wind currents correspond with the orientation of the site to perfectly take advantage of natural ventilation.

To combat excessive solar heating gains, the roofs of the project will face the sun, providing protection from direct sunlight and providing an opportunity to install photovoltaic panels on the roof. This orientation also creates an opportunity to capture indirect northern light.







SENIORENRESIDENZ SPIRGARTEN

Zurich, Switzerland Miller + Maranta



WOHNFABRIK SOLINSIEME

St. Gallen, Switzerland Archplan AG



MFO PARK

Zurich, Switzerland Burckhardt + Partner, Landshaftsarchitekten AG



SENIORENRESIDENZ SPIRGARTEN

Zurich, Switzerland Miller + Maranta

ASPECTS OF INTER-GENERATIONAL LIVING

The orientation of the building to surrounding public spaces encourages interaction between residents and the public. Shared common space is located on the first floor, where residents are served meals and spend time in a cafe and "living room that are accessible to the public.

AMENITY

The integration of an on-site restaurant, cafe, and both public and private courtyard spaces provides residents a variety of amenities without having to venture into the city.

BUILDING LAYOUT

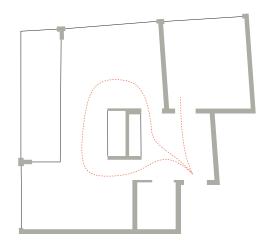
The building footprint was made to resemble an hour glass in order to minimize its impact on the urban fabric of the neighbor hood while also maximizing the amount of space with direct access to day-lighting.



UNIT INTERIOR



UNIT CIRCULATION PATHWAY









TOP: Exterior Photo

MIDDLE: Arial Photo

LEFT:

Arial View of Veritical Garden

WOHNFABRIK SOLINSIEME

St. Gallen, Switzerland Archplan AG

ASPECTS OF INTER-GENERATIONAL LIVING

There are shared common spaces for eating, working, and celebrating, while still allowing the residents the option of doing all those activities privately as well. An accessible shared roof terrace and a large courtyard that houses a "vertical garden" provide shared outdoor spaces.

AMENITY

Personalization of individual condominiums and private balconies, loggias, or outdoor courts allow the residents to make their private spaces their own and separated from the communal spaces

BUILDING LAYOUT

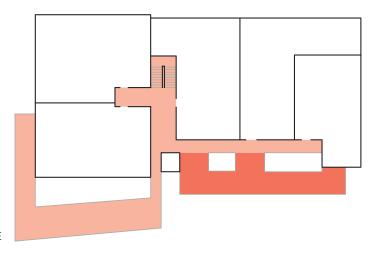
The vertical garden faces south, which in the cold climate of Switzerland enables longer periods of use of the exterior space and allows controlled sunlight into the interior spaces.

CIRCULATION

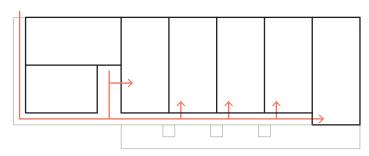
Interior circulation is primarily vertical. There are some units that are accessed from the interior, while other units are accessed by the exterior [covered] horizontal circulation. There are two central stairs, one interior and one exterior, with the elevator tucked at the back by the exterior stair, but it is still easily accessible.

OUTDOOR SPACE

Encloses the garden for additional privacy for the residents. Each unit also has at least one private outdoor space in addition to the shared vertical garden and roof terrace, all of which are wheelchair accessible.



CIRCULATION AS BUFFER ZONE



CIRCULATION



VERTICAL GARDEN







MFO PARK

Zurich Switzerland
Burckhardt + Partner, Landshaftsarchitekten AG

The large "park house" is a double-walled construction covered with wire mesh, a "latticework" in the old ornamental gardening style, enveloped by sumptuously sprawling plants and open on three sides.

The spacious hall is interrupted by four wire chalices at the rear, a copse in a forest of climbing plants. Four pools of water embedded in the moss carpet reflect the incident light. The double walls' intermediate spaces are traversed by flights of steps, covered walkways and projecting balconies. At the very top, on the roof, is the sun deck. A precise architectural body emerges, formed by delicate foliage, filled with green light-play and fleeting fragrances, free of purpose and open to all senses.

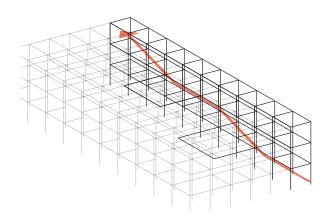
The residential and service buildings in the center of northern Zurich are enhanced by the numerous possible uses of the plaza and "park house". The facility is suitable for sport and games, for meetings of all kinds, or events such as film screenings, concerts and theatrical performances – all with a baroque backdrop of hedges. The MFO Park, measuring 100 meters long, 34 meters wide and 18 meters high, is the largest pergola in the world.

TOP: Exterior Photo

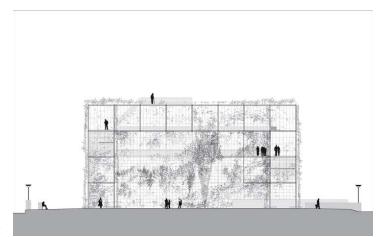
MIDDLE: Stairway

LEFT: Interior

CIRCULATION



SECTION



BELOW: INTERIOR



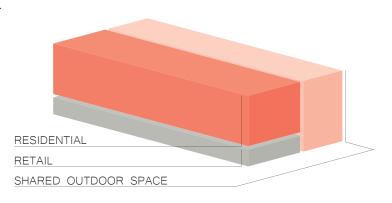




USER TYPOLOGY

A specific focus will be given to the overlapping needs of Baby Boomers and families in which both parents are working professionals. Both children and recent retirees are faced with filling a considerable amount of free time each day. Integrating private and shared outdoor space provides secure activity and observation space for both children and adults.

The unique approach this project will take in addressing outdoor living space will attract families and individuals looking to enjoy a richer urban living experience.



PROGRAMMATIC SPACES

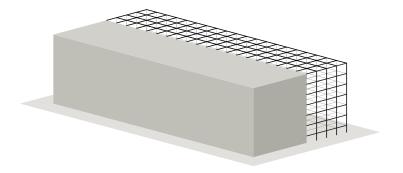
The ground floor will be primarily retail including a restaurant, cafe, and boutique shops like those typical to the neighborhood.

The ground floor will also house all entrances to residential areas and a public plaza.

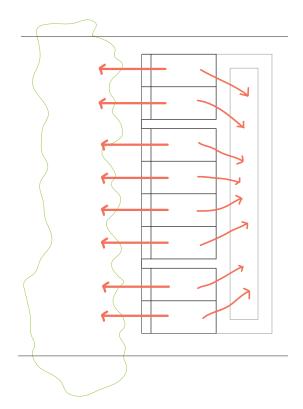
The second through fifth floors are designated as living space and include apartments, private outdoor space, and shared outdoor space. Approximately 32 units will occupy these floors, each with a private balcony and access to the vertical garden on the east side of the site.

Parking for residents will be located under the interior bar of the building with space for daytime parking available.

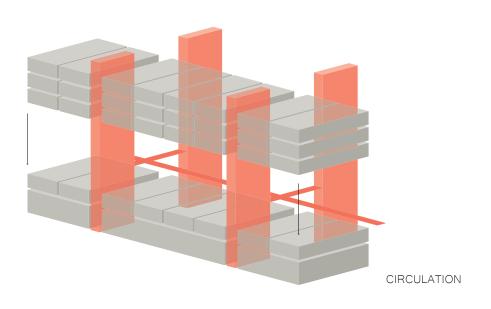
| 61,500 | RESIDENTIAL |
|--------|----------------------|
| | |
| 23,000 | SHARED OUTDOOR SPACE |
| | |
| 15,000 | RETAIL |
| 15,000 | PARKING |
| 10,000 | CIRCULATION |
| | CII (COL) (TION |

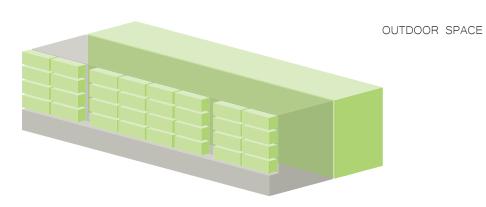


PARTI



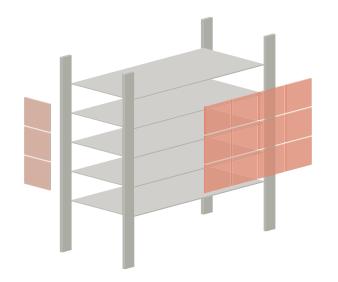
VIEWS TO OUTDOORS







PROGRAM STACK



STRUCTURE

CONSTRUCTION + MATERIALITY

In order to contribute to the continuity and historic nature of Pioneer Square District, materials similar to those presently existing will be used. Terra cotta, steel, and weather resistant hardwood will be used to clad the building. Primary construction will be a heavy timber column and beam structure in-filled with cross laminated timber. This combination allows greater flexibility and is also a sustainable means of construction, using mostly renewable resources.

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