

### MULTI-FAMILY AFFORDABLE HOUSING RALEIGH WAREHOUSE DISTRICT



This project looks to consider the individual in the urban context by creating an environment which provides opportunities for interaction between residents and the community. It aims to become a part of the place and not just a housing block. It was inspired by Mies van der Rohe's residential and workplace designs in which he optimized the space for life to unfold and spirit to play wherever the opportunity presented itself. To create an "order for unfolding" is the primary drive behind this project. The focus is on the world of the individual with an aim to blend the functions of living and working. Thus this project provides design considerations applied to both environments with the goal of creating opportunities for both privacy & connection while making a place that adds value to the community.

The design is built around two courtyards – one where the larger community is invited to enjoy an elevated view of the city and the other to serve the residents as a more internalized space. The elements of circulation serve as the threshold between the two.

With the aim to create opportunity for interaction, the units are blended between studio, one bedroom, and two bedrooms to accommodate a range of residents. Unit placement maximizes the three open sides of the site, taking advantage of the ideal solar orientation, while maintaining consideration for future developments to the north of the property.

The construction system utilizes a concrete podium with platform wood construction above and affordability is further addressed through the use of a limited, repeating palette of elements with the aim to take advantage of economies of scale to bring down the overall cost.

Including a market on the lower level addresses a deficiency in the area which is considered a food desert by providing residents local access to healthy food. The **deli** can serve the growing number of workers in the area (especially with Citrix opening next door). The **co-work business incubator** space adds opportunity for residents to live and work in close proximity. These two public elements work to connect the site to the larger community.



WAREHOUSE DISTRICT SITE PLAN (SITE IS 0.49 ACRES) SCALE 1/64"= 1'





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PARTI

# SCALE 1/8" = 1'

Studio:12









## **TYPICAL UNIT PLANS**

One Bedroom: 10 Two Bedroom: 25 Total Units: 47



**ONE BEDROOM** (696 SF)







TWO BEDROOM LOWER LEVEL - INTERIOR VIEW INTO PRIVATE COURTYARD

Single depth units provide exposure to natural light from both sides, views and airflow while maintaining a sense of connection to exterior community.



TWO BEDROOM LOWER LEVEL - INTERIOR VIEW TOWARD THE CITY





VIEW ALONG HARGETT ST. FACING WEST





DETAILS OF WINDOW FRAME & CONSTRUCTION SYSTEM.

**ELEMENTS OF DESIGN** Inspired by the historic warehouse district, the project makes use of a limited selection of operable windows — and doors along with Hardie panel and corrugated metal as enclosure materials. The aim is to reach an economy of scale by utilizing a limited palette.



EXAMPLE TWO-STORY FACADE ASSEMBLY



VIEW FROM PUBLIC COURTYARD TOWARD PRIVATE COURTYARD



SOUTHERN ELEVATION ALONG HARGETT STREET (SCALE 1/16"= 1')

#### INTEGRATED SUSTAINABILITY

This project aims to address the issues of cultural, social and economic sustainability by integrating the many layers that contribute to housing design. The design uses single-depth units to take advantage of the idea solar orientation of the site. This allows for light to be brought in on two sides and provides natural ventilation through the use of operable windows. The recess of the balcony acts as a shade to mitigate the effects of the summer sun. Along with these passive systems, a <mark>solar hot water array</mark> is installed on the flat roofs to benefit from the southern exposure.

SOLAR HOT WATER PANELS

OPERABLE WINDOWS FOR NATURAL VENTILATION

ARRANGEMENT OF ONE STORY & TWO STORY UNITS ALLOWS FOR ONLY TWO LEVELS OF CIRCULATION & A SINGLE ELEVATOR Not having enclosed circulation saves costs that would otherwise be used to condition the space.

HIGH R-24 VALUE WALL ASSEMBLY \_\_\_\_\_ An efficient building envelope contributes to lower utility bills for residents addressing economic sustainability and hopefully contributing to a better quality of life.

ADJACENCY OF COMMUNITY CENTER TO PUBLIC COURTYARD CONTRIBUTES TO SOCIAL SUSTAINABILITY The location facilitates the opportunity for interaction between residents and the larger community.

DEFENSIBLE SPACE CREATED THROUGH ADJACENCY OF LAUNDRY & KITCHENS FACING COURTYARD This awareness by residents can reduce unwanted activity within the development.

POTENTIAL FOR INTEGRATION OF WORKING & LIVING IN THE SAME LOCATION

### DESIGN

The vernacular buildings around the site have a clear solid/void relationship which is - - - - - easily discernible and understood. These context aesthetics influenced the design of this project with the goal of creating a place that merges with its context and contributes to making the warehouse district a more lively, livable place.

> Facades for units were based on a 40% Window-To-Wall ratio to maintain an efficient building envelope.

Plan efficiency allowed for maximization of the number of units in the architecture resulting in high-density housing – close to 100 units per acre – with generous public space.



TRANSVERSE SECTION AA FACING WEST (SCALE 1/8"= 1')