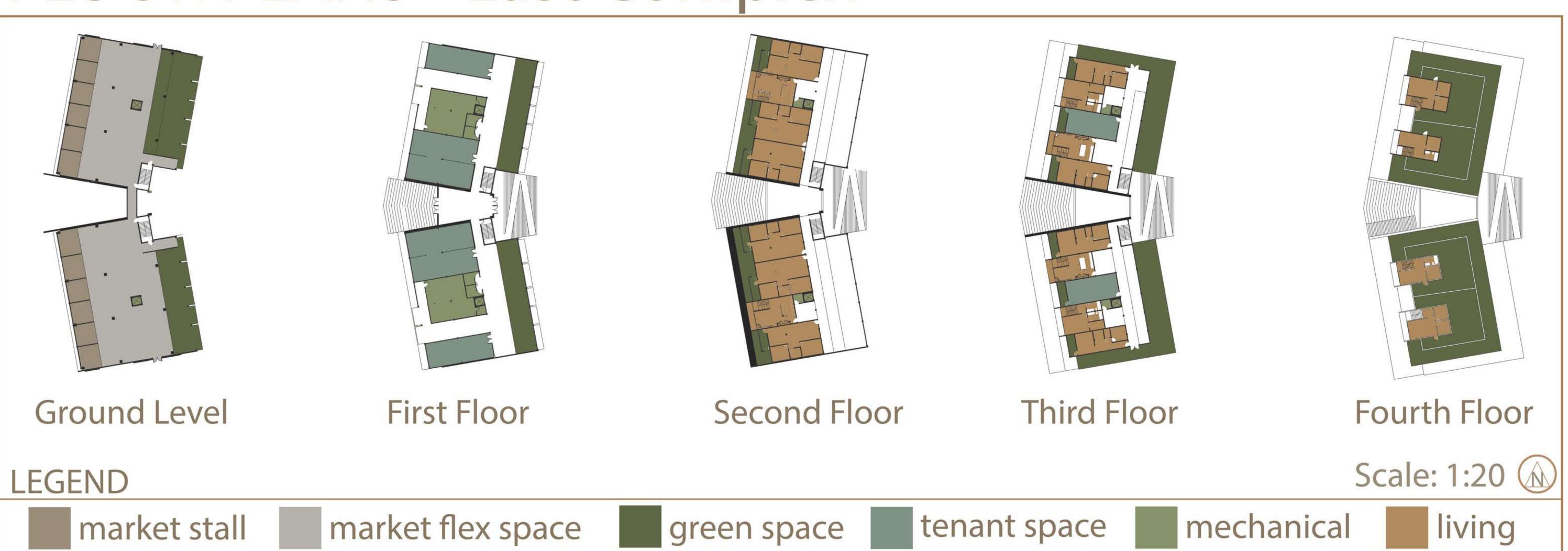


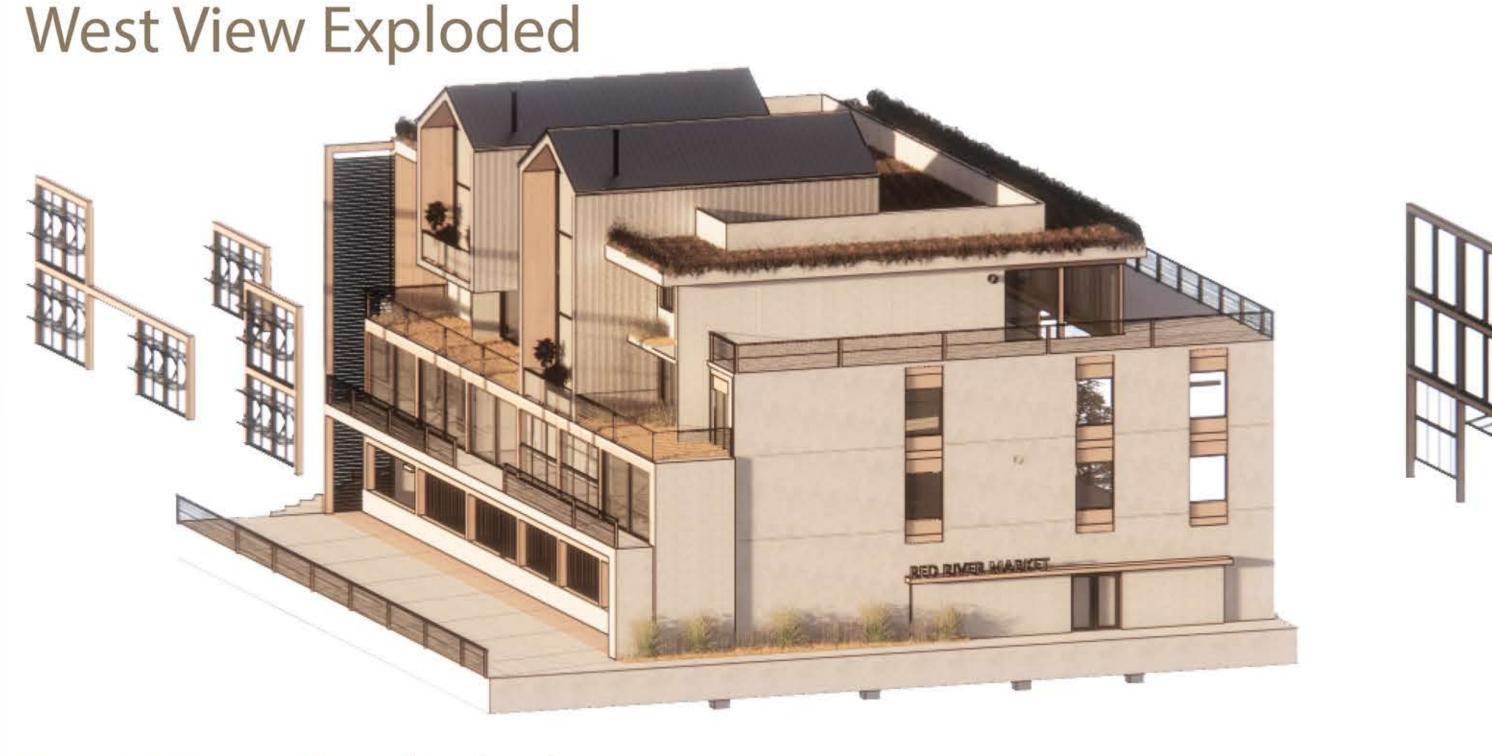
FLOOR PLANS - East Complex



'GREENHOUSE'

BIA Building Integrated Agriculture

Building integrated agriculture is a response to the growing scarcity of arable land and integrates food production into the overall building design. This project provides modern methods of BIA combined with traditional crop producing techniques to create an effective, energy efficient solution to increased demand for agricultural land and food production. Modern methods such as vertical farming have been successful at producing large amounts of food throughout the year but at the cost of extensive energy use through constant need of artificial light. My design incorporates indoor growing, however, it incorporates natural sunlight to greatly reduce the need for any artificial light. This is done through operable glazing on the exterior of the building that encloses traditional public and private gardens, as well as balconies to create a 'greenhouse' effect and lengthen the growing season. The operable design allows for the residents to adjust the glazing based on the season and comfort level they desire.









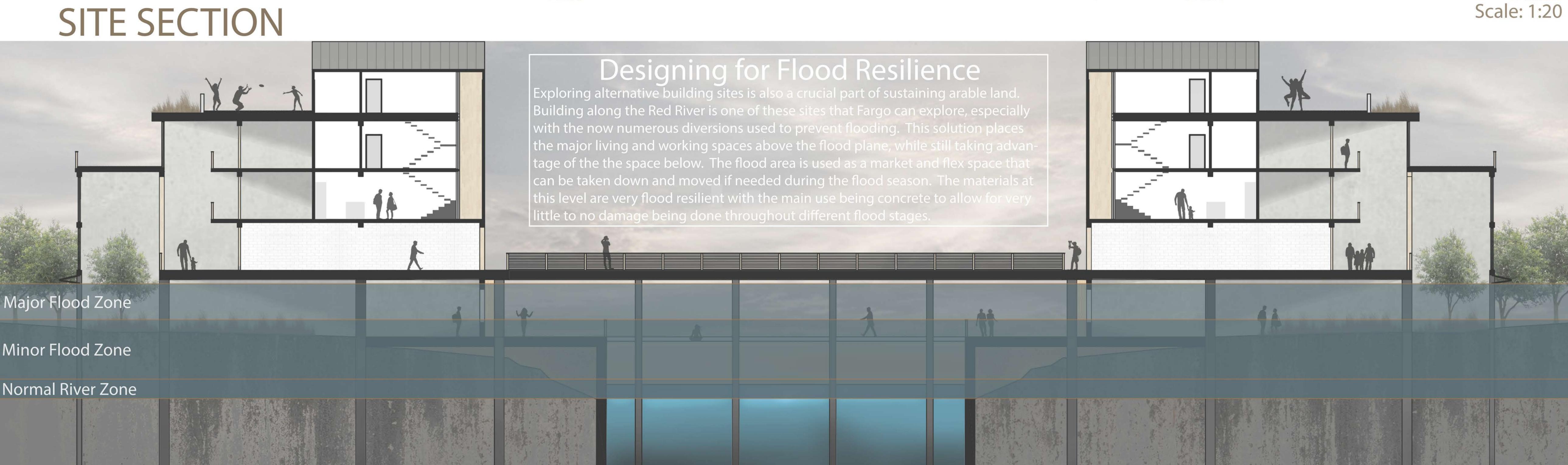




South

Scale: 1:6

West



PROBLEM STATEMENT

Rapid population growth and expanding cities continue to take a toll on land used for sustenance. As it stands right now, we currently do not produce enough food to feed the near 8 billion people on this planet and with the population expected to keep growing at this rate, arable land will only decrease, thus worsening the issue. This provokes the question, "How do we offset the increase in population growth and the decrease in amount of agricultural land?"

DESIGN SOLUTION

SUSTAIN

Sustain arable land by incorporating food production areas within the building, as well as on the exterior. The public gardens would donate portions of the food produced while the residents with the private gardens would have the option to sell, donate or use the food for consumption.

SUPPORT

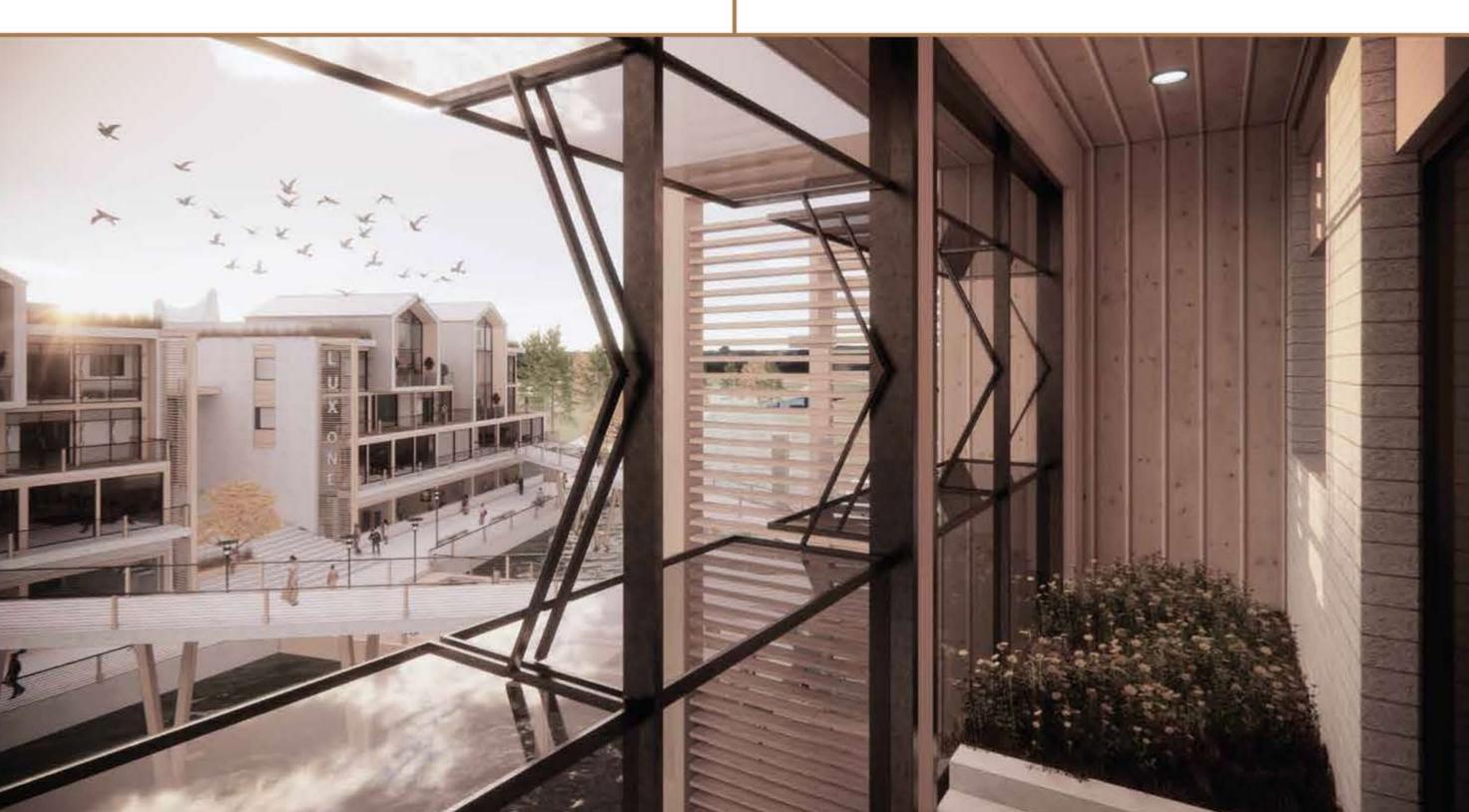
Support the local economy by reimagining the Red River Market and making it a more prominent part of Fargo culture. This would be done by creating a more permanent space for use and the opportunity for more operating hours throughout the week.

EMBRACE

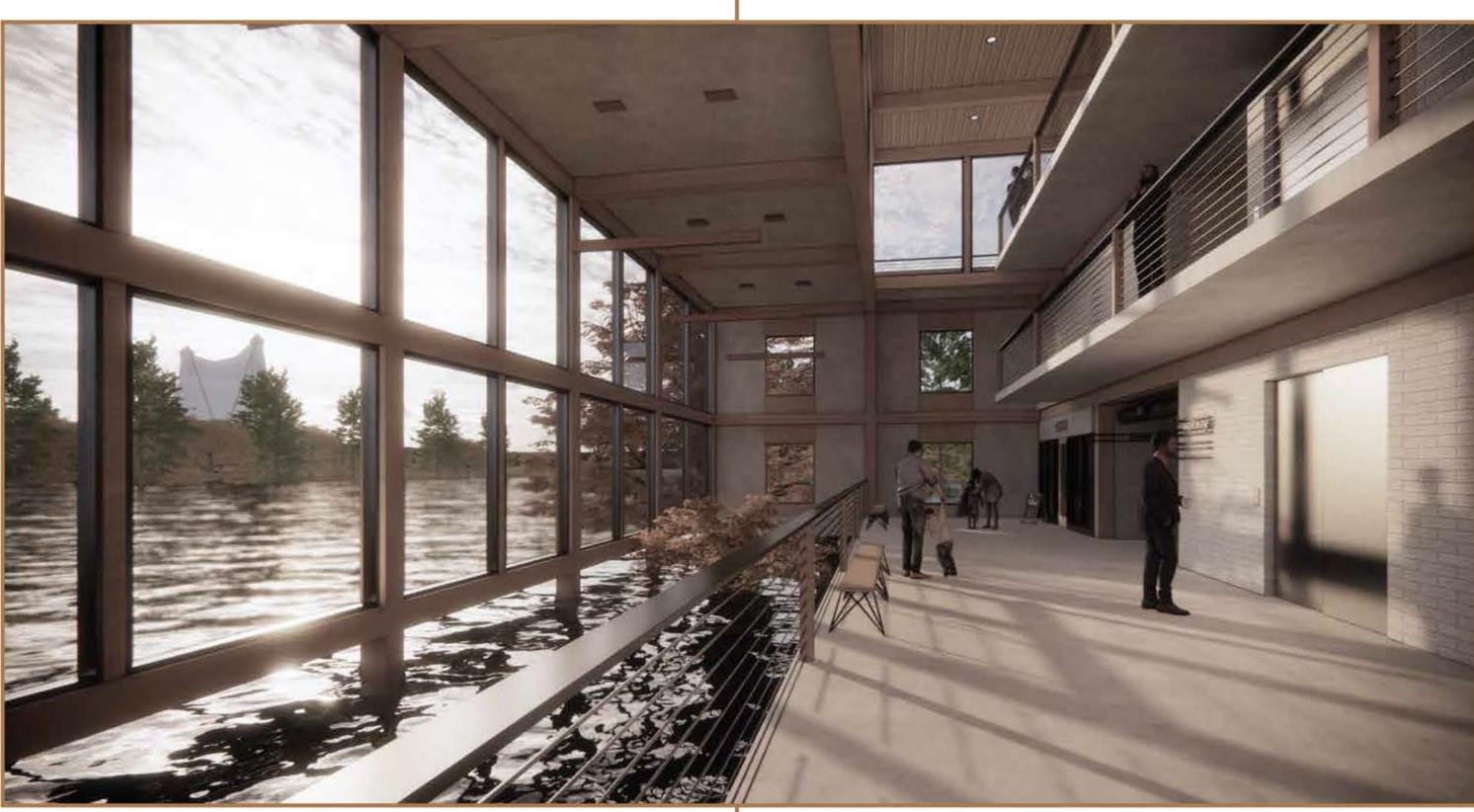
Embrace the Red River and the building opportunities it presents, as well as the challenges such as designing a building for flood resilience. Exploring these new challenges allows for growth in areas that do not take up arable land.

Create a high-dense community that maintains and promotes health and wellness through private gardens and COMMUNITY green spaces for every unit, as well as amenities such as fitness centers and office space. This community also utilizes multiple property types such as apartment rental units, ownership condos and ownership homes.

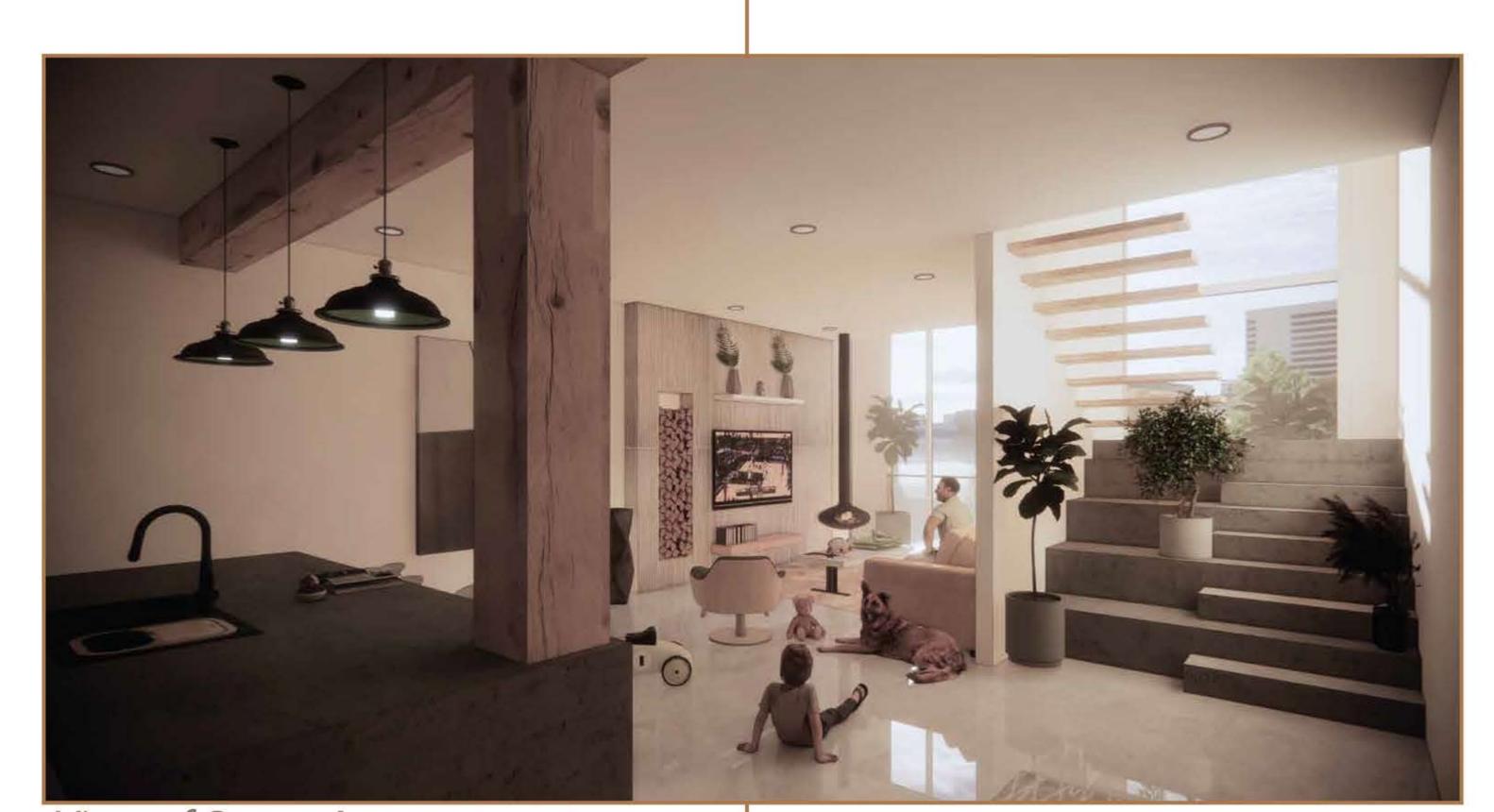
Video Link https://www.youtube.com/watch?v=WeaAgAlvsug



Mini Garden for Apartment Units



River Becomes 'Within' the **Building While Flooded**



View of Space Arrangement Found Within the Home Designs



Southeast Perspective Emphasizing the Large Inner Gardens as well as the Bifold Doors