Thesis Project: Reforming the Bond

Architecture is designed in response to a variety of ideas, issues, history, and perceptions. The role of the Architect is to create spaces and solutions within this net of broad ideas.

The goal of this thesis is to connect people back to their community and environment, dealing with the issue of separation between people and their context. The design will revolve around sustainable solutions to water consumption and local agriculture as well as how people experience the space around them, regardless of if it is built or organic. The scale of the project will delve into the intimate perceptions by people in their surroundings and discuss how individuals interact within a community.

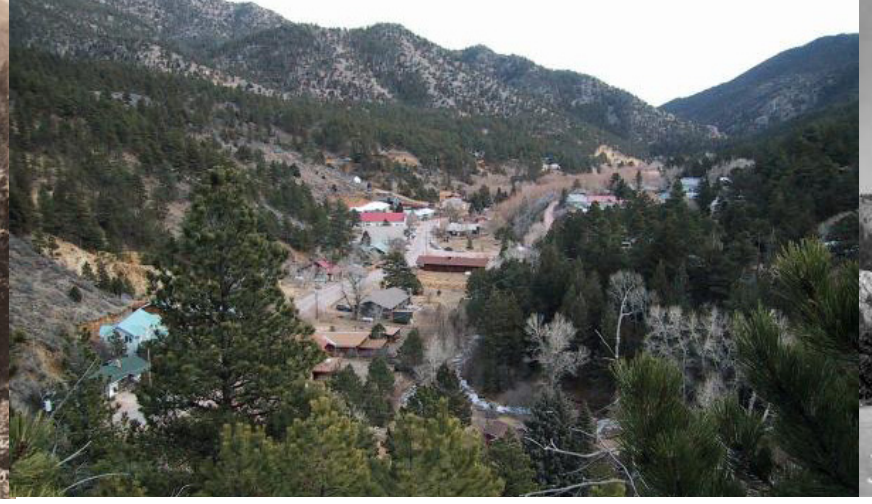
The project is located in Jamestown, Colorado, a rural frontier mountain town of 300 inhabitants. These people deal daily with issues of water shortage in relation to potable water as well as irrigation. Settled in 1864, the town maintains their culture and historical heritage through the preservation of the frontier architecture.



Professor Tricia Stuth
Jamestown, Colorado
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This thesis is located within a rural mountain town called Jamestown, Colorado. The people who live in this town are hardy, self-reliant individuals.

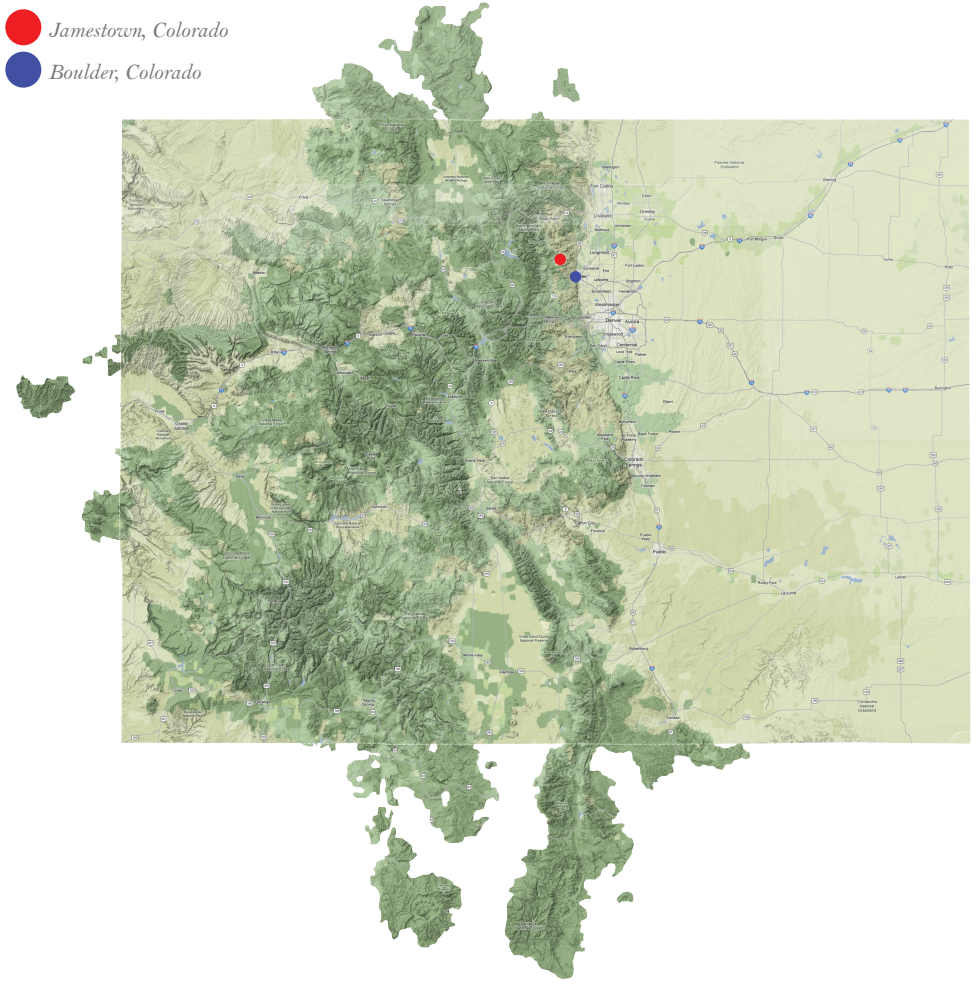






Jamestown, Colorado

Historic Jamestown, located deep in the mountains, is one of the oldest mining camps in Colorado. At its peak about 400 miners lived here. Gold and copper ore were mined and one claim produced more than $5 million. However, the boom lasted only a few years before the town was deserted for a decade. Remnants of the mining town's hotels, dance halls and parlor houses are still present, but the town's most visible historical elements are a series of restored cabins that now function as year-round residences.





Present-day Jamestown is a quiet mountain community. The surrounding canyon walls and thick forests limit its growth. Local residents consist of a mix of independent thinkers and artists. There is a steady flow of tourism from neighboring towns that are drawn to Jamestown's attractions: trail heads lining nearby Lefthand and James canyons, and the steep, paved roads popular with road bikers. Nearby, Brainard Lake has hiking trails winding through the mountains as well as fishing and picnicking areas. Construction consists of local materials such as wood and stone. Life for the Jamestown inhabitants continues in a frontier style and most of townspeople maintain their own individual gardens and plots that they plant, tend, and harvest.

Jamestown has recently begun to see an influx of families and individuals (3rd and 4th generations of the original Jamestown inhabitants) wishing to live and experience the place that their great-great-grandmothers and fathers grew up in. The population has swelled from a population of about 205 people (according to the 2000 census) to 300 living within the town.

1 *United States Post Office*



2 *Jamestown Community Church (left)*
3 *Jamestown Town Hall (middle)*
4 *Jamestown Mercantile (right)*



5 *Jamestown Fire Department*



6 *Jamestown Elementary*







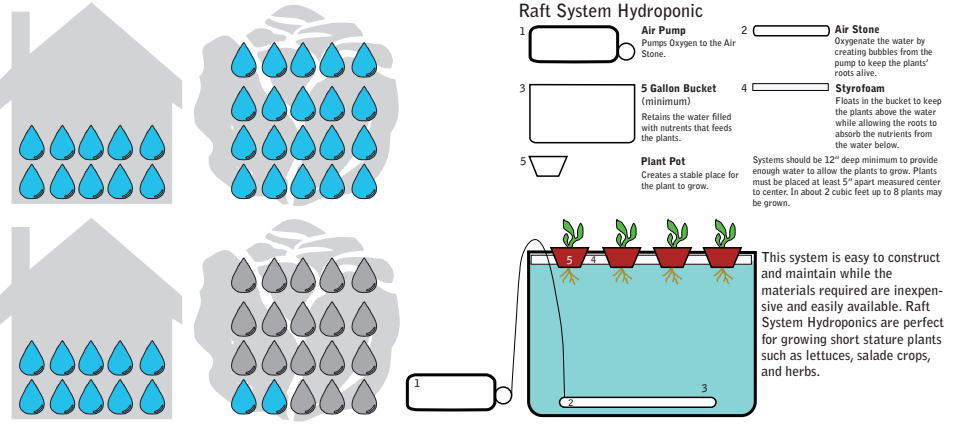


Jamestown has a small water treatment plant that helps to control the turbidity of the town's water supply, which provides them an independent water treatment facility from the city of Boulder. Occasionally there is a need to institute a "boil order". This is a strategy the town people implement when it is necessary to boil their drinking water. Accompanying the boil order is likely a watering plan (ex: odd street numbers can water on odd numbered days, and even numbers water on even numbered days).[1]

The treatment plant is capable of producing good quality domestic-use water, even from runoff water. It is not capable of producing large quantities of irrigation water at drinking water standards, especially during runoff. In the past, the town's irrigation water usage represented 2/3rds of the water produced (25,000 gallons/day domestic vs. 50,000 gallons/day irrigation).

This thesis will be utilizing water-saving techniques such as hydroponics and aquaponics for the community garden. Hydroponics can save the town up to 90% of their irrigation water usage, reducing the typical irrigation from 50,000 gallons/day to 5,000 gallons/day. [2]

For hydroponic systems the water is in tanks or tubs and hydroponic tanks (made out of solid walls lined with pond liner or plastic tubs) will not leak. Water is saved because the used water does not sink straight into the ground and flow away on the first use. It is used repeatedly for growing food. [2]



Left to right: Colorado's growing season diagram, Raft-system hydroponics photo courtesy of J. Wynia, Raft-system hydroponics photo courtesy of Geoff Wilson, Aquaponics Network Australia

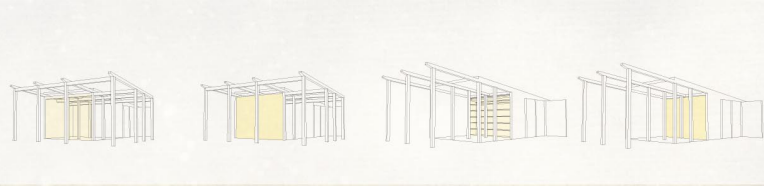
1"Jamestown Water Operations." Jamestown. N.p., n.d. Web. 06 Jan. 2013.
2Appleton, Charlotte. "Use Aquaponics To Save Water When Growing Food." Aquaponics Global. N.p., July-Aug. 2012. Web. 06 Jan. 2013.

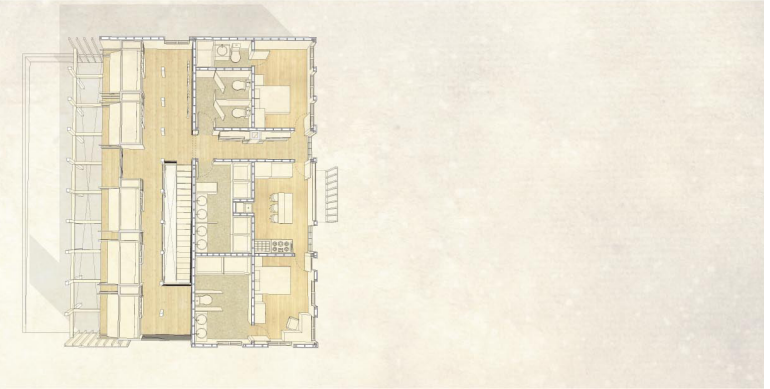


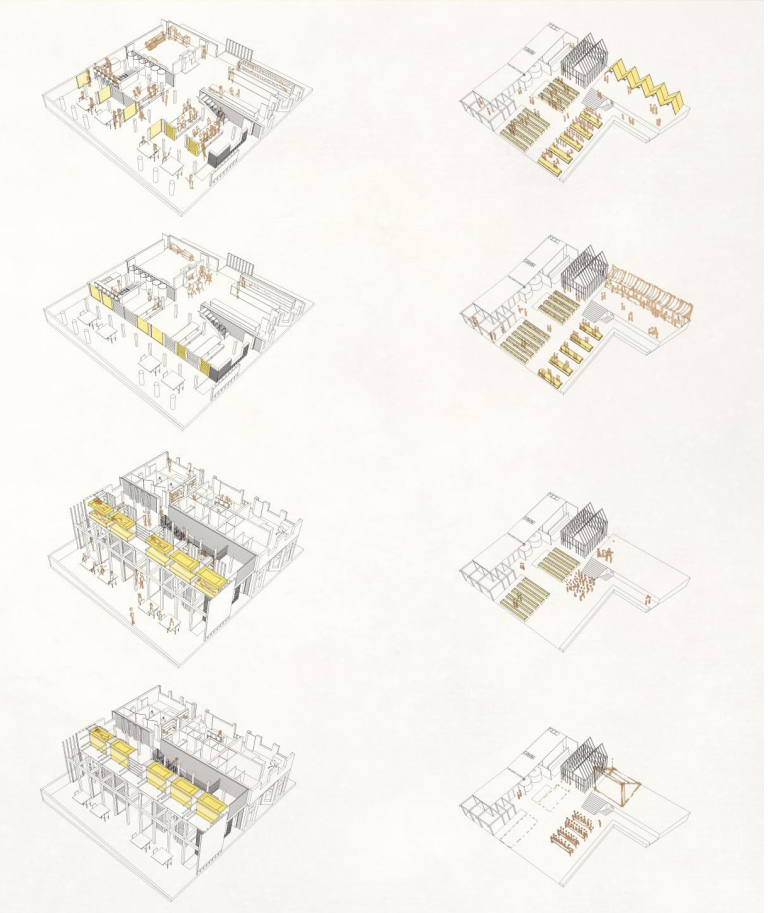
Because of the seasonal changes is the program detailed within this project must remain flexible. Depending on the time of year some designed spaces change program and function. These spaces consists of a year-round hostel, a community eating area, outdoor kitchen, greenhouse, hydroponic community garden, a storage/canning facility/road side café, and sleeping porches.

Image: Full final thesis presentation
Top left to right: Concept Board, Village Perspective, Site Plan, Second Floor Plan, Breakfast Perspective, Bunk Space Perspective, Green Bar Perspective, (below) Town Square Harvest Festival Perspective, Town Square Cinema Perspective. Bottom left to right: Elevation, Transverse Hostel Section, Longitudinal Hostel Section, Sleeping Porch Section.





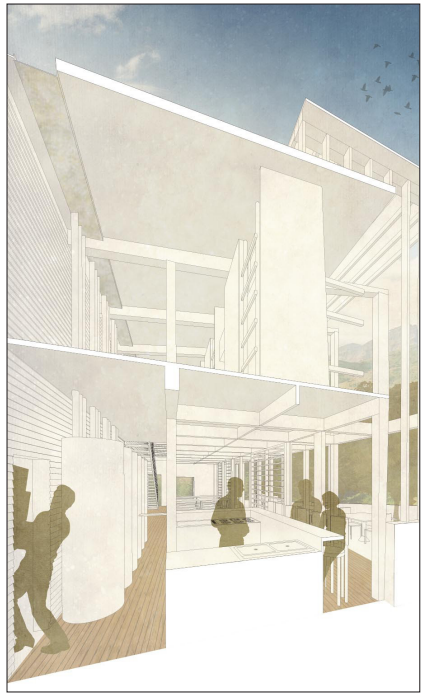




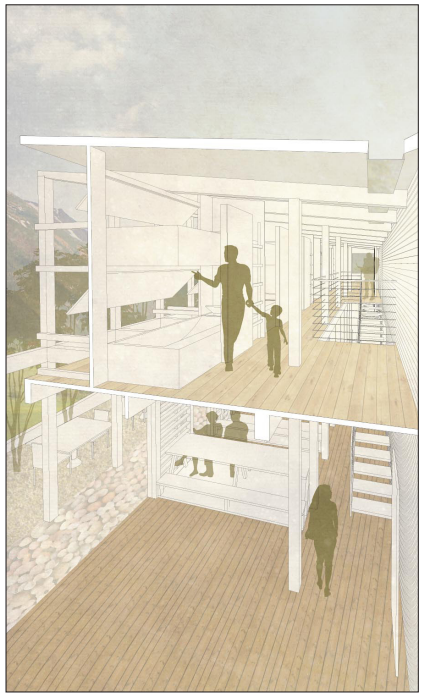
Left: Site Plan of Hostel and Town Square displaying integration into community.

Right: Second floor plan and diagrams displaying versatility in structured spaces and elements.

The Hostel is located between Jamestown's Mercantile Store and the Town Hall. This area serves as the town's community center. By placing the Hostel here the individuals traveling through will be able to experience as much of the town's community and atmosphere as possible within their stay.



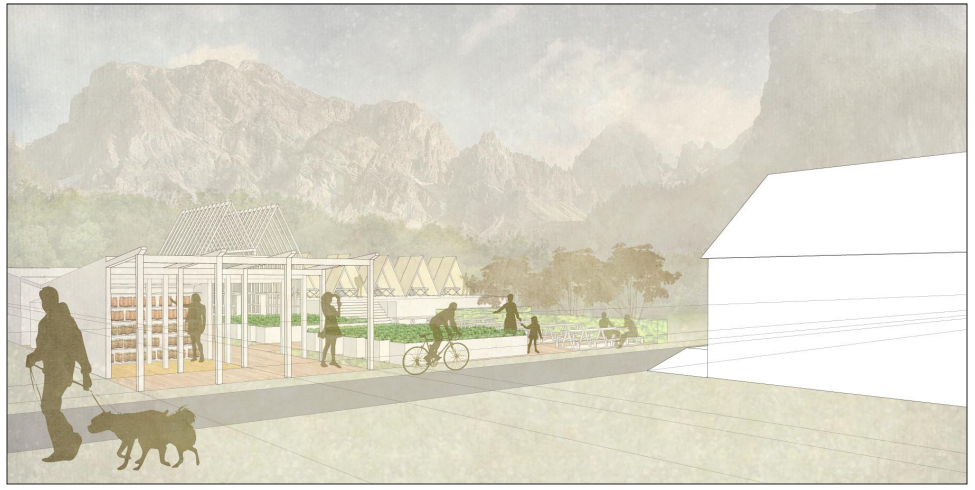




Top left to right: Breakfast Perspective displaying porosity into garden cafe, Green Bar Perspective illustrating transparency throughout garden, hostel, and mercantile store, Bunk Space Perspective displaying versatility of enclosure systems.
Bottom left: Main Street Elevation
Bottom Right: Main Street Section through Hostel and Mercantile Store.









Top left: Town Square Harvest Festival Perspective showing various potential activities.
Top right: Town Square Cinema Perspective displaying alternative use of community spaces.
Bottom left: Longitudinal Section through hostel bunk space as well as Town Square community elements such as roadside cafe/storage, community kitchen and community restrooms.
Bottom right: Longitudinal Section through Town Square sleeping porch and gathering space.



