

# Great Green Neighborhoods



During the 2013-14 academic year, Growing Up Boulder (GUB) worked with children, youth and undergraduates to explore design options for dense, affordable, child and youth-friendly housing. This project called “Great, Green Neighborhoods was initiated in response to the city’s call for a comprehensive housing strategy focusing on affordable and moderately priced housing.

GUB chose a University of Colorado family and graduate housing site, Athen’s Court, as the study area for design. The project involved the following participants:

- GUB staff: two part-time GUB coordinators, four undergraduate interns, and two visiting master’s students
- 52 3rd graders at Whittier International Elementary School
- 16 9th graders in a Boulder High School Advancement Via Individual Determination (AVID) class
- 30 University of Colorado Environmental Design (ENVD) undergraduate students and two ENVD instructors

Not only did GUB staff work directly with elementary and middle school students, but the work transitioned into an undergraduate praxis semester focused on green neighborhood design. ENVD students produced master plans and design details for the site after engaging in numerous dialogues with the project’s children and youth.

Below is a summary of their combined recommendations:

## Building Typology

- Offer a variety of housing types
- Distinguish housing through materials and colors
- Build homes between 2-4 stories tall
- Arrange housing to provide community engagement opportunities

## Transportation

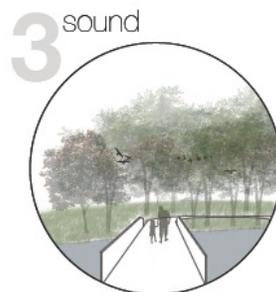
- Keep cars out of sight - underground parking / alleys
- Separate pedestrian and bike paths - painted lines / materials
- Wind paths through neighborhoods and nature
- Provide uninhibited access from housing to open space and recreational areas

## Open Space / Nature

- Allow direct engagement with nature through access to wildlife and unmanicured open space
- Design Boulder Creek to be the primary recreational space for children through ease of access to the creek and a variety of activities within the riparian corridor
- Add flex fields for games and recreation that are partially shaded and close to housing
- Build hills and berms for flood mitigation and recreation

## Site Amenities

- Create mixed use buildings with inexpensive restaurants for eating and gathering
- Add water features such as pools, fountains and creek play
- Provide urban agriculture opportunities in the form of community gardens plots with active learning and social opportunities
- Design playgrounds with structured and semi-structured play spaces for climbing, swinging, and spinning that are clearly separated from automobile traffic



# Building Typology

“We recommend different colored buildings so we know which house is ours and our friend’s.”

## Recommendations by age

### Elementary Students

- Variety of housing types (e.g., apartments, townhomes, single family)
- Mixed use buildings with coffee and ice cream shops
- Variety of building materials and colors

### High School Students

- Limit housing to 2-4 stories
- Colorful buildings with front and back yards
- Underground parking and alleys

### ENVD Students

- Create unique identities for housing typologies
- Implement a strong use of passive solar design and best management practices
- Balance density and aesthetic desires of the residents along with mixed use design



Rendering by Jungwha Yuh



Photo by 3rd grade student

# Transportation

“There should be places for only children to play away from the bike path.”

## Recommendations by age

### Elementary Students

- Clear separation of bikes & cars
- Safety from cars and personal safety
- Safe access to open space

### High School Students

- Clear separation of bikes & cars
- Personal safety (lighting and emergency call boxes)

### ENVD Students

- Clear separation of bikes, cars, and pedestrians
- Uninhibited access from housing to open space and recreational areas
- Clear motorized and non-motorized zones



Photo by Lynn Lickteig



Rendering by Cam Lebleu

# Open Space / Nature

“We want a place we can feel safe to run and play!”

## Recommendations by age

### Elementary Students

- Community gardens with fruit trees and abundant vegetation
- Animals (wild and pets)
- Gathering areas to eat and play near nature and water

### High School Students

- Community gardens with fruit trees and abundant vegetation
- Wild zones and open space
- Hang out spaces along the creek and within natural spaces

### ENVD Students

- Allowing Boulder Creek to serve as a primary unstructured play area
- Intelligently meshing stormwater management practices with urban agriculture and play spaces
- Housing adjacent to recreation/open spaces



Photo by Lynn Lickteig



Rendering by Grayson O’Roark

# Site Amenities

“We would like a place to make forts and build rafts that we can take down to the river!”

## Recommendations by age

### Elementary Students

- Sustainable features, such as solar panels and green roofs
- Water features and playful flood mitigation
- A mix of unstructured and structured recreation areas

### High School Students

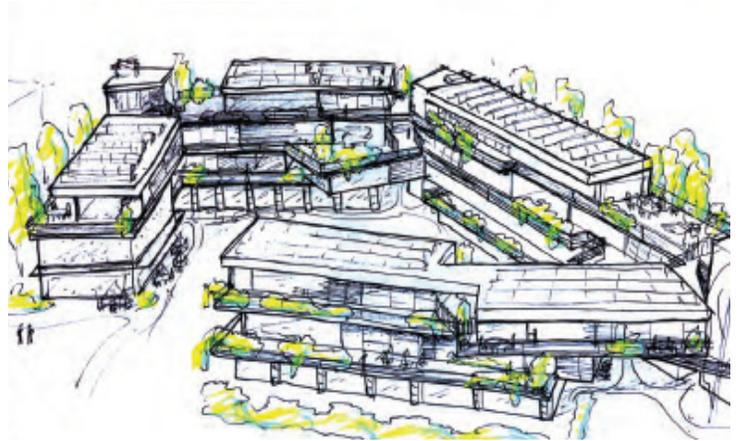
- Sustainable features, such as solar panels and green roofs
- Water features and playful flood mitigation
- A mix of unstructured and structured recreation areas

### ENVD Students

- Courtyards with green plaza spaces
- Community gardens and orchards
- Play spaces for active play and sensory exploration



Rendering by Kelsey Roybal



Rendering by Shane Powers

# Methods

Growing Up Boulder used a variety of techniques to engage young people in the design of child and youth-friendly dense, affordable housing for sustainability. Children and youth visited award-winning dense housing developments, examined exemplary cases from around the world, and identified needs and interests of different members of the community. They also explored meanings and examples of child-friendly cities as well as floodplain mitigation along Boulder Creek.

They represented their ideas through:

- Digital Presentations
- Drawings
- Three-Dimensional Models
- Persuasive Essays
- Reflection Writing
- Photovoice



Photo by Lynn Lickteig

# Results

Elementary and high school students provided recommendations in their models, essays, and presentations with a great deal of overlap. Both groups most frequently requested diverse natural areas integrated into play and recreation spaces.

“Children and youth repeatedly requested an integration of features rather than discrete zones of use for different ages.”

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They also wanted to see nature and natural features woven through the development, through plantings, gardens, and wild zones. These features were all within the housing site and in a short walking distance and so would allow for independent mobility. Students also requested that the play areas be accessible from housing areas without the crossing of roads.

A common elementary student recommendation for flood mitigation was the use of hills and berms to create a natural rise in topography to keep waters away from the housing site. This feature was of particular interest to children because it also had the potential to be used for sledding, biking, rolling and other active play during low-water periods.

Students expressed an awareness of the importance of maintenance and stewardship as represented by this 3rd grader: “Everyone who eats from our

# Assessment and Evaluation

Growing Up Boulder evaluated the Great, Green Neighborhoods curriculum using sections of the United Nation’s Child-Friendly City Assessment; analysis of design element frequencies in students’ work; and reflection questions of teachers and students. Overall findings about the project have been very positive. Thirty-eight percent of elementary school students said that teamwork and cooperation were their favorite parts of the project. One student stated, “My challenge was thinking of our design because everybody disagreed. I overcame this challenge by civil discourse.”

Interactions between age groups proved to be meaningful. When reflecting upon his interaction with the CU undergraduate students, one ninth grader said, “I saw many of the same ideas as ours, but one different one that stood out is putting a Boulder High School-themed restaurant where the old pizza place is. I love this idea!” Equally impor-

tant was the impact on undergraduates from working with children and youth. One Environmental Design student captured a feeling shared by many of his peers when he wrote,

“The praxis semester has changed how I think about things. At first I thought, ‘what are we going to be able to learn from 3rd graders building toilet-paper-tube models?’, but it was so cool seeing through their eyes what this all means. I could tell they care a lot about their community and the future of it. It was really cool getting their perspective on things. They changed the way we were thinking about designing. It is hard to break away from the norms of how we’ve been designing. Working with the kids has helped us to do this.”

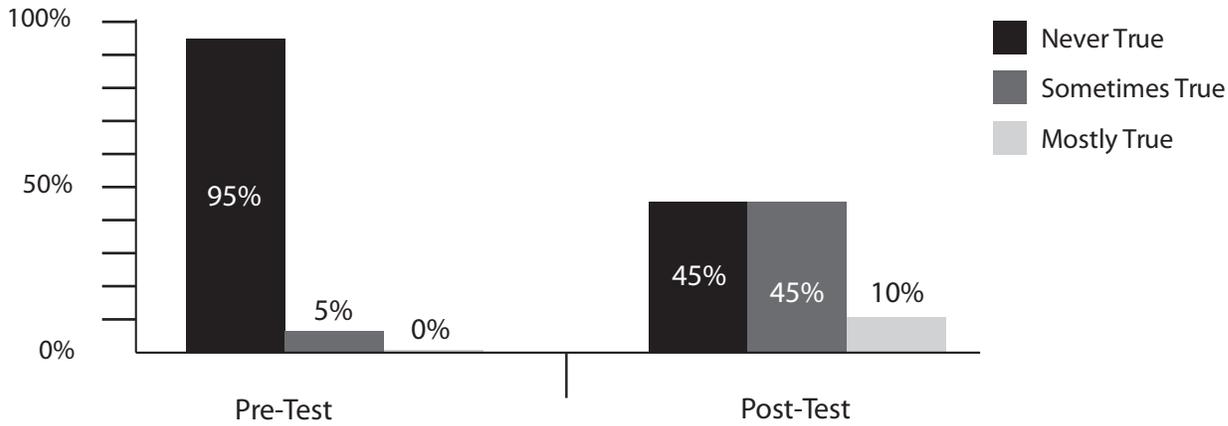
“My challenge was thinking of our design because everybody disagreed. I overcame this challenge by civil discourse.”

An interesting finding from the Child-Friendly City Assessments is the response to the question, “The government (city council, mayor, etc.) asks me my opinion about my life or my community.” Comparing their opinions from the beginning of the year (pre-test) to the end of the year (post-test), a statistically significant number of students went from feeling that this statement was never true to feeling like it was sometimes or mostly true. This, compared with other similar results, suggests that the Great, Green Neighborhoods project truly changed young people’s view of their ability to affect decision-making within their community.

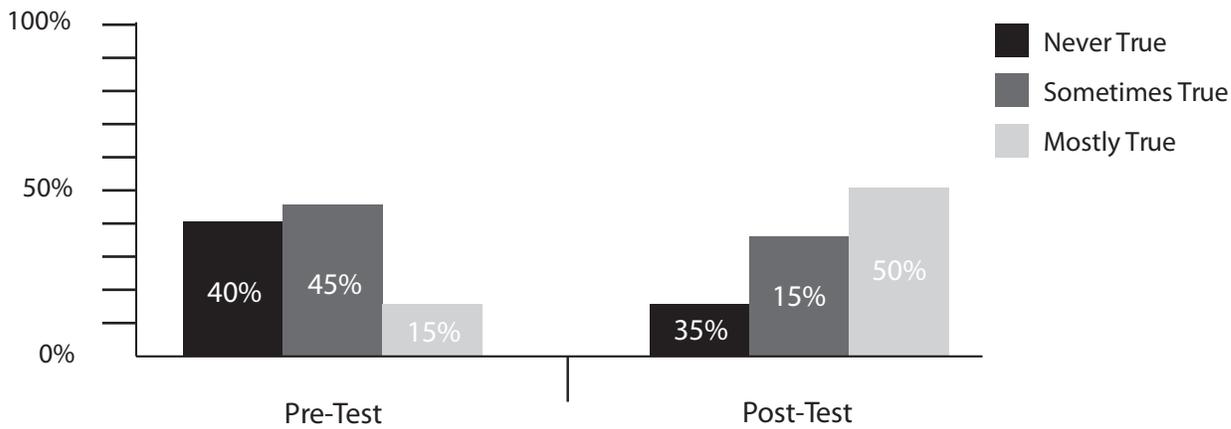
“At first I thought, ‘what are we going to be able to learn from 3rd graders building toilet-paper tube models?’, but it was so cool seeing through their eyes what all this means. . . They changed the way we were thinking about designing.”

# “The government asks me my opinion about my life or community.”

Boulder High School, 9th grade AVID class



Whittier International Elementary School, 3rd grade classes



## Dissemination of findings

Growing Up Boulder’s goal is to share the process and results of this project with as many interested parties as possible. Methods for dissemination include:

- The creation of this summary document to serve as a guide to city planners and CU architects as they design dense, affordable, and child-friendly housing for sustainability
- Elementary and high school presentations to large groups including undergraduate environmental design students, city planners, city council members, school board members, CU professors, CU architects, and community members
- An evaluation of the impacts of the project on ENVD praxis students, faculty, and community members
- Papers that frame and analyze the results of the project for urban planning and planning education journals
- Presentations at the Environmental Design Research Association’s annual conference in May 2014, and at the Child in the City conference in Odense, Denmark in September

Special thanks to: GUB coordinators Mara Mintzer and Tori Derr, 3rd grade teachers Cathy Hill, Lisa O’Brien, and Tamar van Vliet, 9th grade teacher Jennifer Douglas-Larsson, ENVD instructors Michael Tavel and David Kahn, ENVD interns Nathalie Doyle, Anna Reynosa, Nathan Brien, and Grayson O’Roark, GUB visiting master’s students Flaminia Martufi and Ildiko Kovacs, CU architect Thomas Good-hew, City of Boulder Executive Director of Community Planning and Sustainability David Driskell

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