

Burke Park Design-Build: Constructing Community and Educational Space

At Burke Park in Boulder, Colorado, a studio of CU Environmental Design (ENVD) students worked with City Parks and Recreation staff to lead a collaborative Design-Build project, uniting multiple community groups to conceive of an outdoor classroom space, to be used by an adjacent K-8 school. The City provided a budget of \$30,000 and a time frame between January and April 2013, to design and execute the project. With these constraints, there were two main questions. How could the class build community consensus within this short time period? Also, how might the design team assist in creating stewards of the facility? This paper explains the resulting process from a studio that attempted to answer these questions.

The class used a multi-faceted community engagement strategy to involve a diverse and constantly emerging constituency of park users. Consensus building and creative momentum was sustained through engagement techniques involving elementary school students, participatory installations, material prototyping, web-based community communications, and interpretation of natural, cultural, and oral histories. The process resulted in an expansion of the project concept, an “outdoor classroom,” to produce unexpected architectural and educational landscapes. It also facilitated new relationships of collaboration and enfranchisement between neighbors and stakeholders.

INITIAL ENGAGEMENT: GUB, HORIZONS K-8, AND PARKS AND REC

In the fall of 2012, the Boulder Parks and Recreation Department began engaging surrounding neighbors in the process of re-designing Burke Park. To facilitate interaction and information gathering, the Parks Department partnered with Growing Up Boulder (GUB), a collaborative initiative within ENVD focused on empowering youth to in local planning and design issues.¹ During that semester, CU students led by GUB worked with the K-8 students to make drawings, maps, and models that represented their ideas for the park.

The Horizons students introduced the idea of an ‘outdoor classroom’ near Thunderbird Lake, an icon within Burke Park (Figure 1). There, they could investigate topics of ecology, wildlife, habitat, biology, and other themes within the sciences. Their proposals included fantastic visions for tree houses, woven willow nests, amorphous objects and play areas, rock piles, climbing structures, giant mounds, and other interesting environments. This collection of creative suggestions served as the perfect mediating tool for engaging another park neighbor, the Frasier Meadows

BRIAN COOK

University of Georgia

DAVID KAHN

University of Colorado Boulder



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Figure 1: Aerial view of the site

Retirement Community. It would also help overcome a dispute about the lake. Water levels were changing, creating new dynamics and a transitional ecological regime. This issue caused a rift between neighborhood groups, one that was difficult to move beyond in any former meetings.

BRAINSTORMING BETWEEN GENERATIONS

In the spring of 2013, a CU Design-Build studio, led by two ENVD instructors, began work on the design and eventual construction of the outdoor classroom. They began by hosting a large public brainstorming meeting held at the retirement community. At the meeting, the K-8 students were allowed to present their ideas, hopes, and dreams for the park. This gave the ‘seniors’ insight into how the youth perceived the park. It also revealed the students’ desire to use park facilities in ways not yet considered by the other group. The Frasier Meadows community was asked to withhold comment on the student’s ideas. Instead, they were asked to speak about their life and relationship with the park. This created a different type of dialogue, and a more amicable environment, from which to proceed.

Also in attendance were members of the surrounding community such as the pastor of the adjacent church, who spoke of the parks’ potential for his congregation, and nearby residents in the neighborhood who used the park daily. Ralph Burke, nephew of Admiral Arleigh A. Burke, for whom the park is named, was also there. Each shared insights into their experience and history with the site. Ralph Burke explained the origin of Thunderbird Lake, and how he grew up on the land when it was still a rural farm.

The team organized discussion groups, each with a mix of Horizons students, seniors, neighbors, and ENVD students. They were asked to provide individualized stories and to locate their experiences geographically, on maps that were provided. By sharing stories instead of solving problems, the project’s potentials expanded. The group’s vision became more inclusive, and each community began to identify with how others used the site. It was an imaginative process, very successful in bringing the groups together and forming a more cohesive vision for design. The Principal at Horizons K-8 school, said, “The first couple of meetings where people agreed to take a balcony view and take time to ask, ‘What inspires you about this project?’, I felt compelled by the possibility of this partnership... Rather than people having their myopic self-interest, they were willing to think together about what it could look like.”²

Many unique qualities of the park were discovered. For example, the seniors enjoyed the slow pace and quietness around the lake, and seating was needed. The older population also identified that the youth needed more play options, and that they wanted be able to sit in proximity to the younger user group, to watch and listen to their creativity. This empowered the youth. They were recognized in a different hierarchical position, as able to teach or to provide enjoyment. They also found that they shared emotion toward the well being of the park.

A landscape architect with Boulder Parks and Recreation said later, “The key was a slow introduction. In the form vs. function battle, we were going after function. We [responded] to experience, not form.”³ In the end, the focus on finding what functions needed to occur, in total, led to an interesting form and an inclusive while expanded project.

UNIVERSAL SPACE

From this, the CU Design-Build studio chose to view the project through the lens of “Universal Space” - the idea of an inclusionary landscape that is accessible and

usable to every group or individual. An initial assignment involved building study models to explore relationships between specific types of activities and surface, structure, and space. Students developed tectonic concepts to facilitate different uses such as education, contemplation, performance, and play. Then students representing different 'activity' groups formed teams to begin the process of designing an inclusive, multivalent outdoor classroom.

HAY BALES

The CU studio used hay bales as an investigative tool to further explore social, programmatic, and experiential aspects of the site. A group of students brought bales to the site while the others worked with varying methods of site inventory (Figure 2). By manipulating the location and configuration of hay bales, they could understand the spatial and relational implications of their design ideas. This activity combined prototyping and 'sketching' efforts into one. Similar to sketching, it allowed students to slow their pace of interaction with the site and to become familiar with details and its inner workings.

The activity and curiosity of the hay bales at the park also provoked new conversations between the CU students and the community. By being on site, and by making change in the park, the students were subject to the scrutiny of park visitors. They were often approached and developed conversations about the project, the park, and the neighborhood. These encounters evoked 'stories of use', which greatly expanded students' appreciation for the myriad ways in which park users interpret and value different aspects of the site. This strategy allowed park visitors to have a more casual entry into critique of the project, and to explain their personal history, knowledge, and sense of the place. It also allowed our 'engaged group' of citizens to be expanded. Those that were not at meetings would come and participate in more passive discussions at the park.

The hay bales also provided other vehicles for community interaction and understanding. Parents and/or kids would stack or move the bales at different times of day. The bales became building blocks for playing at the site. They would move great distances or be stacked into structures. Or they would be picked apart; the Canadian Geese seemed to enjoy them as much as the people. The students discovered park uses that they were not yet aware of. By temporarily occupying different spaces, the hay bale constructions lured out anybody or anything that had a regular presence at the site. In some cases programmatic conflicts would result from park users moving and reforming the bales into another users territory. In order to resume their preferred activity in its preferred location, the bales would move again. Although the process was somewhat disruptive, it was temporary and provided a substantial amount of information about park space and programming.

ORAL HISTORIES

The hay bale experiment prompted more curiosity for the design students; they felt they should create a deeper inventory of site factors. Different groups studied empirical data like circulation patterns, human history, geology, ecology, and overlooked elements of the site. In addition, two students went into the community to record interviews with people deeply connected to the park, who had unique perspectives to offer. The interviewees were asked to share their stories and geographically mark locations on a map.

The responses documented differences in point of view, both physically and audibly. The nephew of Admiral Burke saw the pond as a place to skinny dip, ice skate and duck hunt. It was a farm, as he knew it, full of hay and dairy cows. He claims



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Figure 2: Hay bale constructions. Photo by ENVd student

ownership of the lake, saying it was his help in damming irrigation runoff from nearby hayfields that created its beginnings, a fact not known to any of the others interviewed. He hunted rabbit and pheasant on the property, piled hay and watched first-hand the battles over land ownership, between his uncle and Mr. Frasier, for whom Frasier Meadows is named.⁴

Alternatively, an educator at Horizons described at length how the park now affords opportunities for K-8 students to act out natural processes and foreign concepts; also to read poetry, and to explore curricular opportunities. “I can’t imagine teaching in a school that doesn’t have access to natural space,” she says. That same ‘space’ is an important draw for the retirement community, as a place for seniors to look out onto, and watch birds, or to walk around the lake. A neighbor from the retirement community, in her interview, explains how she chose Frasier Meadows as her retirement home: “I liked this one so well I didn’t even look at the other ones.” She describes the lake and park as the main attractions. A member of the residential housing community, who lives across the street from the park, describes the effects of the pond’s changing water levels. Her sons often fished on the pond, and they would tell her about a turtle that would bump into their raft. It was a favorite ‘pet’ of theirs, but she had never seen it. “When the lake started going, down,” she said, “[the turtle] had died.”

Another neighborhood resident, who is a high ranking official within the Colorado Field Ornithologists, describes his affinity for the park as being equally connected to elements of the lake. “At dusk, if I get the urge ... to go out and take a walk, its just a natural magnet to move in that direction and take a quick walk around to see what birds are singing.” He understands the ecology well. “The pond is what makes it different,” he says. “The presence of having just a little pond like that probably doubles the bird life diversity.” In his recording, he describes the different species of birds that can be found at the park, where to see them, the various habitats, influential tree species, and the ‘one that got away’. He has seen 385 species of birds in Colorado but missed a rare one, a brant, which was spotted in his neighborhood park.

The interviews allowed the students to learn about the place through personal histories that conveyed a deeper understanding about the site, and illuminated the fact that park users were part of a larger community, with history in common. The stories also reveal an extended network of memories and circumstances that frame often misunderstood opinions. For example, many of the newer members of the community considered pumping water into the pond to be wasteful, and this became a contentious subject that inhibited progress for other aspects of the park. But as the stories indicate, the pond, with its depth of water, is the backdrop of many meaningful events and experiences. The interviews helped the CU students to understand reasons behind differing community thoughts and decisions. The stories filled in details, helped complete storylines, and fostered an appreciation for the array of opinions about the future of the park.

THE BLOG

One student created a website and blog to reciprocate - to share information back to the community about the design process, and maintain updates throughout the semester.⁵ This served as a good tracking tool for the students, to look back at the decision-making and construction process. The blog as a tool for a communicative design process has the potential to provide people with a public and accessible forum to comment on public works. However, during the semester the blog was

not significantly employed by the public as an engagement tool. There was only one 'reply' and it came at the end of the project, expressing "Thanks for a job well done!"

THE CROSSROADS - STRANDS AND THE KNOT

Concurrent with the community engagement and fieldwork, five CU student design teams produced proposals for the outdoor classroom. After a community feedback presentation at the senior community, one plan was chosen to build upon, called "The Crossroads" (Figure 3). It emphasized five path-like strands emanating from the sides of the surrounding neighborhood into a central gathering space near Thunderbird Lake.

Each design team was tasked with developing one of the strands that would tie like a knot by the pond. Initial concepts showed a series of linear walkways that connected the different areas into the heart of the park at a deck-like multi-purpose structure. But because of their interactions with the community, the teams began engaging the dynamic distinctions that came from the different edges of the park, the things that happened there, and the people that lived, worked, or played there.

THE WHOLE PARK AS AN OUTDOOR CLASSROOM

As students developed each connecting strand they sought to incorporate what they had learned from the community, and to provide site-specific functions and educational opportunities. During this process the studio's goal became to create a larger educational environment for the park, rather than a single space. The community's enthusiasm to use and learn from the park in multiple ways led to the idea of interpreting the multiple personalities of the park. Hence, the Design-Build project's program transformed from a singular outdoor classroom to a constellation of interactive, educational landscape and architectural features rooted in the fundamental qualities of the site.

The design of each strand built upon its physical and social context. The western strand would connect a residential neighborhood through a space that provided an edge to a soccer/baseball field. It includes a disorganized grove of botanically different trees. The eastern strand would reach out to the church and the senior center. From the south, the strand would connect to the Horizons K-8 schoolyard. To the north, it would connect to the pond. Each would emanate from a central deck that would offer multiple modes of inhabitation.

PERMITS AND CONSTRUCTION

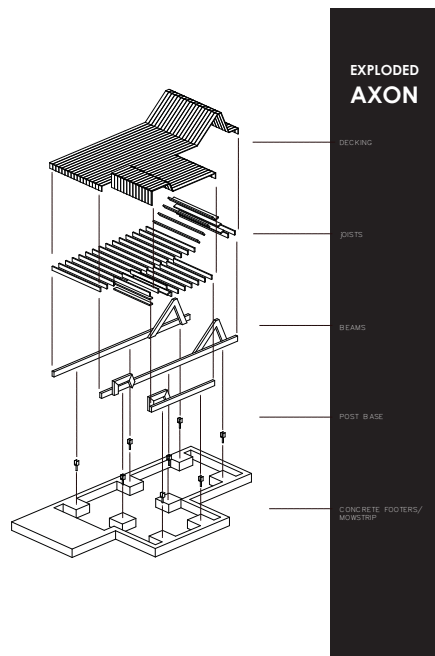
The design of each strand involved scrutinizing its build-ability within a limited budget and time frame. Each team was challenged by Boulder Parks and Recreation staff to be efficient and affordable. Students created full-scale mock-ups to test design ideas and construction techniques, and they created options for integrating educational information about the park. Several strands would require structural engineering and permitting by the city.

In March, construction began on the western strand, which evolved into a field of five landform mounds interspersed with tree plantings. The mounds were shaped and planted with native grasses by the students. The hills offered seating for the soccer field, provide space dividers for classes, terrain enhancement for exploration, and an educational example of diverse flora and fauna. The tree plantings supplemented the haphazard pattern of existing trees to form an arboretum collection of ideal species for the Colorado Front Range environment. It is now a focus of educational opportunities for Horizons K-8, and provides practical horticultural information for surrounding neighborhood gardeners and naturalists.



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Figure 3: Concept design drawing



In April, students began construction of the other strands. From the south schoolyard, a series of three pocket biomes or “mini ecosystems” formed a linkage to the center. The biomes represent the montane, foothills, and grassland/wetland ecologies native to the Front Range. These environments are composed of native boulders and surrounding trees indigenous to each biome, providing for nature play and learning for students at Horizons K-8. The grassland/wetland biome also functions as part of the northern strand, with its’ rock steps and informal pathway leading through a willow thicket to the pond edge.

The eastern strand was conceived as a community garden space to be used cooperatively between the school, church, and the retirement community. This is now included in the park master plan and is awaiting future funding. It will also feature a pathway leading to the deck structure.

Also in April, during a spite of weekly snowstorms, the students built a central folded gathering deck that punctuates the design (Figures 4 and 5). It was designed to hold a class of students, so they may study and explore nearby Thunderbird Lake, while also creating a fun and multivalent structure for people to occupy. Its form and folds provide surfaces that can be inhabited in a variety of ways, and allows kids of all ages to climb and slide. It attracts them to a space with the capacity to reveal ecology, geology, and weather patterns. One fold faces iconic Bear Peak, while the other orients to the wetland lake edge.

Into one of the mounds near the deck, students built an “L”-shaped concrete seat-wall that provides additional seating near the deck for larger classes or gatherings. The space can be used for outdoor teaching, as well as reading, relaxing, picnics, get-togethers, concerts, weddings, and other community events.

Teachers have explained that the deck doesn’t work for a typical classroom setting. This is an issue when holding the project accountable to its original purpose. But because it is a play structure, it brings children into a learning situation through different circumstances, an outcome that could be studied on its own.

THE 10 WALKS OF BURKE PARK

The CU students also produced a document called ‘The 10 Walks of Burke Park’, an interpretive guide that makes visible different layers of the park. It includes sections on bird watching, a guide to the arboretum, a time-line of human use of the site, geological and ecological histories, and oral histories from community members who have seen the park transform over time. The document is available on the City of Boulder Parks and Recreation website, where students, teachers, and neighbors can download it as a personal guide and teaching tool for the park.⁶ The oral histories are digitally archived at the Boulder History Museum, and available online. QR code access to the ‘10 Walks’ from signs located around the park will be installed in the near future. While sitting on the deck or walking around the lake, visitors will be able to listen to Bill Kaempfer discuss the different birds that visit the pond, or hear Ralph Burke describe the park as the farm of his youth.

REFLECTIONS

To Learn

It is typical for an architecture studio to begin a project by assembling information about a site, including physical, biologic and cultural attributes. This helps establish a foundation for decision-making, and a basis for site planning and design. During the process of inventory, site analysis, and public engagement, the design studio gains a unique perspective about a community and a place. This was especially true

Figure 4: Sheet from construction drawing set



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for the CU studio. The nature of a Design-Build studio put students in direct contact with community members during their work. Because of this, they felt the need to become extremely informed before creating a disturbance to the community.

To Teach

Through site research and community engagement, the studio became a repository for information about the park. Students quickly realized they were in a position to teach about the unique features of the park. The information they had gathered to inform themselves about the site was valuable information for the public, and could serve as educational content for the entire park.

To Connect

The studio's inventory process included a synthesis of cultural factors. The findings revealed that while a 'community' frequented the park, this singular concept of community was actually composed of many different and disparate communities. Some were not aware of each other, or of their mannerisms, programmatic activities, or uses of the park. These discrepancies forged ideational disconnects, which inserted themselves between groups and at times created animosities or distrust. Without anyone or anything to bridge these missing connections, ambiguities and divisions remained within the community.

The CU studio, by sharing their research, was able to help fill in some of these gaps. The studio was able to assemble the different communities and facilitate discussions around issues and commonalities. By showcasing the commonalities, and as people found like interest in each other, the ENVD students helped initiate new relationships.

The ability to connect different neighborhood groups has proved to be one of the most powerful aspects of Burke Park project. These changes began to occur even after the first brainstorming meeting. The Outreach Coordinator at Frasier Meadows Retirement Community explained that it "was a turning point... Issues of animosity started to change. After this, Frasier Meadows wanted to do more activities in the park, including events for the community." They wanted to "remind residents that

Figure 5: Children playing on completed structure.
Photo by Lynn Lickteig

the park is theirs too, that it is for them with their families, their grandchildren and great-grandchildren.”⁷

These community connections have endured. During a recent historic storm, when water was pouring into Frasier Meadows during the flood, people from the neighborhood came out to help them, as a result of the better community relations they had developed during the project. “The relationships we started to build, there is a whole lot more of wanting to take care of each other,” she said.⁸

CONCLUSION

The Design-Build experience produced opportunities to reflect upon the architecture studio as fulfilling a role within community, not just as producer of helpful architectural objects. The community engagement component created a shift in the neighborhood dynamic which will assist future cooperative decision-making by park users. The project also helped establish a sense of agency and ownership for members of multiple generations. Since the youth were invited to participate repeatedly in the design process, neighbors and school children came to realize the power they can have to change their community via the landscape.

The ‘10 Walks of Burke Park’ was an unexpected consequence that illuminates another role for the design studio. By leveraging their research, architects are in a position to facilitate, educate and coordinate. The synthesis of information accomplished by architects can be used for a different purpose than for strictly making structures. They can forge new strategic relationships, empower the public through education and help communities, as a whole, to make better decisions. James Corner, in his essay ‘Operational Eidetics’, suggests, “A critical return to complex and larger scale landscape concerns will depend more on organizational and strategic skills and practices, rather than on the techniques of formal composition per se.”⁹ The project at Burke Park may serve as a case study for how that might be accomplished

ENDNOTES

1. Growing Up Boulder [GUB] (2014), ‘Youth and community participation in planning Burke Park’, available at <http://www.growingupboulder.org/burke-park-planning.html> (accessed 30 September 2014).
2. Rigolon, A., V. Derr, L. Chawla. “Green Grounds for Play and Learning: An Intergenerational Model for Joint Design and Use of School and Park Systems.” D. Sinnett, S. Burgess, and N. Smith (Eds.), *Handbook on Green Infrastructure: Planning, design and implementation*. Edward Edgar Publishing Limited. In press.
3. Interview by Tori Derr and Alessandro Rigolon at Boulder Parks and Recreation Department on April 8, 2014.
4. Oral histories from interview participants conducted by Dane Shigley throughout the spring semester of 2013 and can be found at (accessed 30 September 2014):

<https://soundcloud.com/burkeparkaudio/ralph-burkes-stories>

<https://soundcloud.com/burkeparkaudio/mary-lymberopolis-stories>

<https://soundcloud.com/burkeparkaudio/irma-and-bobs-stories>

<https://soundcloud.com/burkeparkaudio/william-kaempfers-stories>

<https://soundcloud.com/burkeparkaudio/cece-schehls-stories>
5. University of Colorado (2013), ‘Burke Park Design-Build, University of Colorado Boulder, Program in Environmental Design’ available at <http://burkeparkdesignbuild.wordpress.com/> (accessed 30 September 2014).
6. University of Colorado (2013), ‘10 Walks of Burke Park’ available at https://www-static.bouldercolorado.gov/docs/10_Walks_05_05_13Sm-1-201311271400.pdf (accessed 30 September 2014).
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8. Ibid.
9. James Corner, “Operational Eidetics: Forging New Landscapes,” *Harvard Design Magazine*. Fall, 1998, 25.