

Boulder's Teen-Friendly City Map Report

Supporting Boulder's Initiative to Be a Youth-Friendly City
Through Participatory Map-Making

Fall 2018 - Fall 2019

Published December 2019 by the University of Colorado's
Masters of the Environment Growing Up Boulder Student Team:

Grace Carlin | Jing Liu | Hunter Meldman



Table of Contents

Table of Contents	1
Glossary: Acronyms and Definitions	2
Executive Summary	3
Overview of the TFC Map	4
Creating the Map: By the Numbers	4
Snapshot: Image of the TFC Map	4
Background	5
Organizational Context: GUB and MENV	5
The Teen-Friendly City Map: Precedent and Purpose	5
Literature and Precedent Research	6
Theoretical Frameworks	6
Child- and Teen-Friendly Cities	7
The Growing Up Boulder Model: Youth Engagement Methodologies	7
Project Description and Methods	9
Goals and Outcomes	9
Procedural Overview	9
Stakeholders	10
Methods	11
Gathering Data and Feedback	11
Boulder Valley School District (BVSD) Survey	12
Building the TFC Map	12
Timeline	14
Data and Findings	15
The TFC Map	15
Barriers	16
Team Reflection: Lessons Learned	17
Engaging Youth Through Participatory Planning: Recommended Steps to Take	18
Next Steps	19
Conclusion	19
Appreciation	20
Appendices	21

Glossary: Acronyms and Definitions

Acronym	Definition
BPL	Boulder Public Library
BVSD	Boulder Valley School District
CEDaR	Community Engagement Design and Research
CFC	Child-Friendly City
CFCI	Child-Friendly City Initiative
CU	The University of Colorado
GUB	Growing Up Boulder
MENV	Masters of the Environment
TFC	Teen-Friendly City
UNCRC	United Nations Convention on the Rights of the Child
UNICEF	United Nations Children's Fund

Executive Summary

This report describes a collaborative project designed to give teenagers in Boulder, Colorado a free resource with which to explore the city. From 2018 to 2019, students from the **University of Colorado (CU) Boulder's Masters of the Environment (MENV)** graduate program - Grace Carlin, Jing Liu, and Hunter Meldman - conducted a project in partnership with **Growing Up Boulder (GUB)**. GUB is a nonprofit based out of the University of Colorado's **Community Engagement Design and Research (CEDaR)** Center, which provides young people the opportunity to contribute meaningful input and feedback on city decisions which affect their lives. GUB is an industry leader in youth and community engagement methodology centered around participatory planning and decision-making: since 2009, GUB has completed 95 engagements with 5,500 children and youth in Boulder. Their most recent project is the nation's first physical **Child-Friendly City (CFC)** Map. The success of the CFC Map provided the MENV team a way to research and practice GUB's youth engagement methodologies by building and releasing a **Teen-Friendly City (TFC)** Map of Boulder.

Over twelve months, the MENV team conducted 33 outreach sessions with 14 youth-serving organizations ranging from city programs and non-profits to schools and extracurriculars. The MENV team made a deliberate effort to include teens from different socio-economic backgrounds and receive input from teens with distinct areas of interest. Throughout these outreach sessions, the MENV team encouraged teens to lead an exploration of life in Boulder, specifically regarding what places they like visiting, what makes a place teen-friendly, and what they would change about Boulder if they could. Accordingly, teen's favorite spaces include restaurants, outdoor spaces, and areas for shopping and social interaction, while barriers to fully engaging with Boulder include transportation, cost-prohibitive activities, and general safety. This comprehensive collaborative process allowed the MENV team to research, implement, and expand upon successful methods of youth engagement in participatory processes while ultimately creating a finished product that teens can use: an attractive, functional, and authentic TFC Digital Map.

As GUB has demonstrated since its founding, youth are current and future citizens and thus deserve to be engaged in decision-making processes to exercise their individual and collective voices. The MENV team found specifically that teens have a highly rational understanding of current community matters, and given sufficient time, resources, and authority, can help design more holistic, equitable solutions to social and environmental issues. The MENV team therefore recommends that cities across the country make strong commitments to engaging youth in community decision-making processes by institutionalizing participatory planning methodologies. Doing so will help to create a more cohesive community for all citizens and will empower the next generation of leaders to understand that their voices, needs, and rights matter.

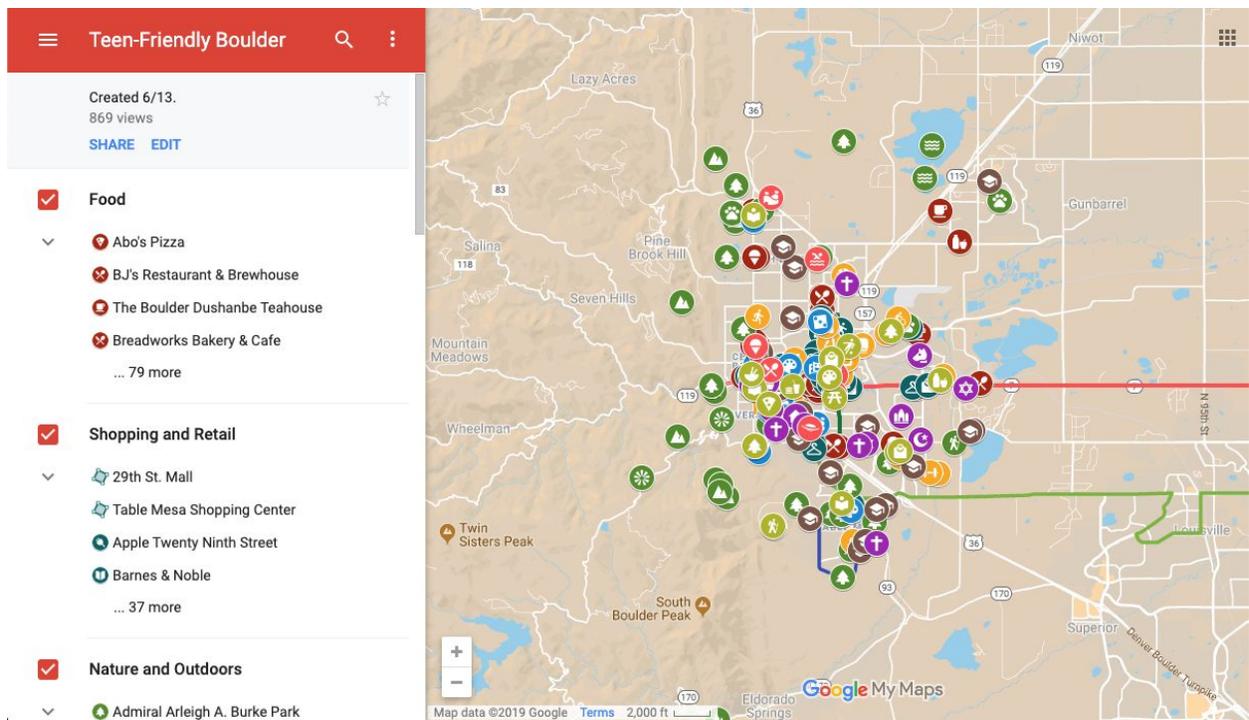
Overview of the TFC Map

Creating the Map: By the Numbers

What Did Our Outreach Process Look Like?

33 engagements
14 organizations
398 teen co-creators
40% of teen co-creators from underrepresented populations
> 180 engagement hours

Snapshot: Image of the TFC Map



Background

Organizational Context: GUB and MENV

Growing Up Boulder (GUB), a nonprofit based out of the University of Colorado’s **Community Engagement Design and Research (CEDaR)** Center, is Boulder’s child- and youth-friendly city initiative. An industry leader in youth and community engagement methodology centered around inclusive participatory decision-making, GUB seeks to improve youth experiences in and connections with Boulder by providing youth with the opportunity to produce meaningful input on various city issues that directly impact their lives. In their ten-year history, they have collaborated with Boulder citizens to facilitate 90 projects alongside 5,500 youth and 1,100 university students. GUB has developed many projects like redeveloping Boulder’s Civic Park West, making the HOP bus more child-friendly, and - most recently - developing the nation’s first printed **Child-Friendly City (CFC) Map**.



Currently in its fourth year, CU Boulder’s **Masters of the Environment (MENV)** graduate program focuses on the development of a 17-month professional master’s degree with an emphasis on outward-facing regional collaborations. It utilizes student-led capstone projects in which groups of degree seekers partner with an organization, collaboratively develop a project to assist the organization, and execute this project over the course of one year. The capstone project “[promotes] a community of learning” which helps students “advance sustainability solutions across a wide range of environmental careers and sectors.”¹

This project marks the first collaboration between CU Boulder’s MENV graduate program and GUB. MENV students Grace Carlin, Jing Liu, and Hunter Meldman chose to partner with GUB to develop their capstone project because they value the emphasis GUB places on youth welfare, particularly in terms of inclusion, equity, and access to resources. Urban planning and environmental solutions cannot be considered comprehensive or beneficial unless they actively seek input from all members of society.



The Teen-Friendly City Map: Precedent and Purpose

GUB’s CFC Map is the foundational work informing this project. The CFC Map is the result of nearly a year’s worth of participatory engagements with **Boulder Valley School District (BVSD)** children ages 0-10 and their families. Its purpose is “to educate and inspire children, families, and community organizations through the creation of a print and online, bilingual, child-friendly city maps that highlight favorite locations in Boulder.”² In 2018 and early 2019, GUB collaborated with more than 700 children and their families to find

¹ <https://www.colorado.edu/menv/about>

² <http://www.growingupboulder.org/child-friendly-city-maps.html>

Image: www.growingupboulder.org

out what their favorite places in Boulder were. The designing of the map was an iterative process. After synthesizing map survey and engagement data, the GUB team took map drafts back to groups of children to ensure that the final map design reflected the children's wishes accurately. GUB team interpreted and synthesized survey and activity data from these engagements and used them to inform multiple CFC Map drafts. The bilingual map was finalized in April 2019 and subsequently released to the general public: all Boulder-based BVSD elementary and preschool children received a physical copy of the map, and the digital version is available on GUB's website. This map features affordable recreation areas, green spaces, and accessible transportation as identified by children and their families.

The TFC Map was a logical next step to take given that the CFC Map process laid the groundwork for a successful model of participatory map making with youth. It builds upon GUB's prior successes in youth participatory planning by delving deeply into methods by which to engage teens in participatory planning processes. To accomplish this, we replicated GUB's CFC Map model and interacted directly with Boulder teens to design an authentic, functional, and attractive TFC Map.

Literature and Precedent Research

Theoretical Frameworks

Participatory planning is the foundation of our project. It:

- Is an approach to urban planning and community development
- Maximizes public engagement so the entire community has a voice
- Allows everyone who has a stake in the proposed project a chance to speak³
- Benefits community as a whole and encourages just, equitable solutions

Social equity is a guiding value for this project. It:

- Establishes that every member of society has a right to fair and just treatment⁴
- Places greater social responsibility on our political system and public policies
- Helps youth express their needs and voices which may otherwise go unheard

Transformative capacity is what we seek as an outcome of this project. It:

- Emphasizes the human ability to evolve their way of living when social, political, and environmental systems no longer function efficiently⁵
- Can occur naturally at the level of the individual, community, and social group
- Can be harnessed by teens when provided the proper structure, resources, and time

³ <https://ctb.ku.edu/en/table-of-contents/analyze/where-to-start/participatory-approaches/main>

⁴ <https://www.igi-global.com/chapter/digital-divide-social-equity/21255>

⁵ Nordstrom, M., & Wales, M. (2019). Enhancing urban transformative capacity through children's participation in planning. *Ambio*, n.p. doi:10.1007/s13280-019-01146-5

Image: www.growingupboulder.org

Child- and Teen-Friendly Cities

GUB is Boulder’s child- and youth-friendly city initiative. Its mission specifically aligns with that of the **United Nations Children’s Fund’s (UNICEF’s) Child-Friendly City Initiative (CFCI)** of 1996. The CFCI is based on the principle that when young people are allowed to participate in decision-making processes, they can dramatically improve the wellbeing of their communities. Accordingly, it provides governments with the resources necessary to improve the lives of children.

UNICEF’s CFCI is designed to actively support concepts laid out in the **United Nations Convention on the Rights of the Child (UNCRC)**, adopted by the UN General Assembly in 1989. This landmark document states that children are citizens with certain unalienable rights, including the right to life, nondiscrimination, and the ability to express their needs and opinions. The UNCRC further states that adults and government organizations are obligated to protect and uphold children’s rights. Since its introduction, the UNCRC has been ratified by 196 state parties around the world,⁶ making it the single most widely ratified human rights treaty in history.⁷ To date, the United States is the only country in the world that has abstained from ratifying the UNCRC.⁸



Teens at Boulder’s New Vista High School participate in a TFC Map drawing exercise.

In researching the UNCRC and CFCIs, the MENV team examined three existing CFC maps from various communities (linked below). These maps are proof that CFCIs are valuable and demonstrate that the concepts laid out in the UNCRC are gaining popularity in the United States. They served as guiding examples to determine the layout, appearance, and functionality of our TFC Map.

- [Family-Friendly Oakland Map](#) (Google Maps)
- [Edmonton Youth-Friendly City Map](#) (ArcGIS)
- [Boulder Child-Friendly City Map](#) (Google Maps)

There is currently no official definition for a TFC aimed to support youth ages 11-18 years old. The distinction between children and teens is significant because the needs of children tend to differ from those of teens: teens are generally afforded a higher degree of independence than children, have access to more varied resources, and require support in different areas of their lives as they grow closer to adulthood. Further, many teens think of themselves as different from children and wish to be identified separately from them. To acknowledge these differences, we thus define a TFC as a city in which *the voices, needs, priorities, and rights of teens are an integral part of public policies, programs, and decisions.*

The Growing Up Boulder Model: Youth Engagement Methodologies

Young people are rarely involved in urban planning and community development. Often, well-meaning adults view children as “little more than future receivers” of decisions made in urban planning

⁶ https://treaties.un.org/pages/ViewDetails.aspx?src=IND&mtdsg_no=IV-11&chapter=4&lang=en

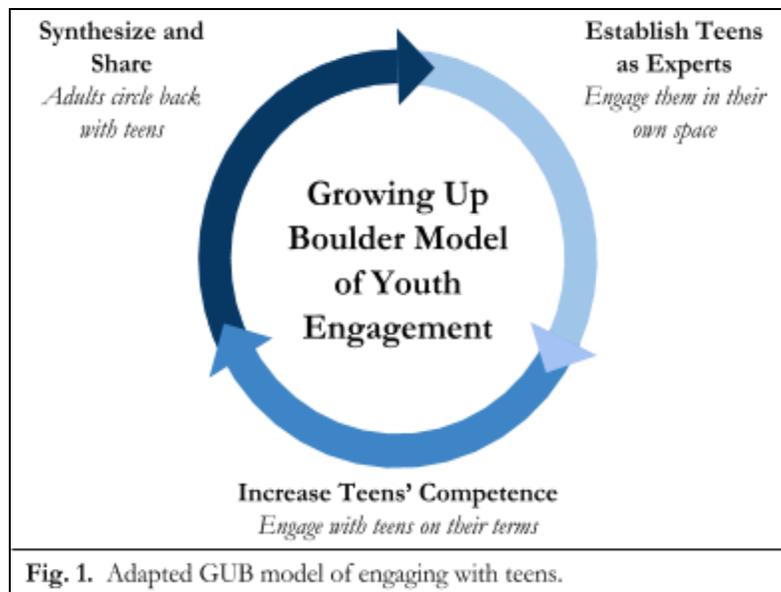
⁷ <https://www.unicef.org/child-rights-convention/what-is-the-convention>

⁸ <https://www.unicef.org/child-rights-convention/frequently-asked-questions>

processes, thus assuming that adults understand and can properly articulate youth needs.⁹ Youth are treated with the subconscious assumption that their experiences in society and connections with communities will start only when they are near legal adulthood. For this reason, adult leaders plan communities and cities *for* youth rather than *with* youth.¹⁰

GUB works to disrupt these patterns by providing youth opportunities to meaningfully share their ideas with adults so adults and youth can implement those ideas together. They do so with an emphasis on community building, youth leadership, and youth co-ownership of projects, as demonstrated by the GUB model of youth engagement displayed in **Fig. 1**. GUB’s process model has three primary goals. The first is to establish teens as experts by engaging with them where they are, be it in the classroom, in a play space, or outdoors. The second goal is to increase teens’ competence by interacting with teens in ways that are engaging and accessible to them. The third goal requires adults to show how they listened to teens’ feedback by synthesizing their ideas and sharing them once the project is nearing completion.

Young people desire to participate in community planning and decision-making. Since 2009, GUB has observed that youth frequently do not realize that it is possible for them to have a say in community decision-making. When young people are given the opportunity to add their voice, they participate enthusiastically because they feel strongly that it is important. This trend was demonstrated, for example, while GUB worked with a class of Boulder elementary school children to design the CFC Map. Participating children were asked to rank their level of agreement with several statements both prior to and after working with GUB, as detailed in **Fig. 2**.



⁹ <https://link.springer.com/content/pdf/10.1007%2Fs13280-019-01146-5.pdf>

¹⁰ Malone, K., and C. Hartung. 2010. Challenges of participatory practice with children. A handbook of children and young people’s participation: Perspectives from theory and practice, 24–38. London: Routledge.



Project Description and Methods

Goals and Outcomes

Through this project, the MENV team aimed to create a functional, attractive, and useful TFC Map by building upon GUB’s work on the CFC Map and thus completing a suite of free Boulder maps for children and youth ages 0-18. Through learning and expanding on GUB’s methodology for youth outreach and inclusivity, we developed this project to provide teens opportunities to:

- 1) Feel empowered and see that their voices, needs, and values matter via collective ownership of an authentic, teen-oriented project;
- 2) Gain experience in collaborative design via map making activities;
- 3) Be heard by adults in positions of power via full integration of individual and group feedback, and
- 4) Turn participatory map design into action and dialogue with adults and teens around Boulder.

Procedural Overview

GUB’s CFC Map creation process served as a “road map” for the MENV team’s development of the TFC Map. This map was constructed by:

- 1) Researching methods of engaging youth in participatory planning;
- 2) Implementing those methods by interacting directly with teens using broad curricula;
- 3) Actively engaging underrepresented voices by conducting outreach events with organizations supporting minority and disabled teens;

- 4) Building multiple drafts of the TFC Map alongside teens, and
- 5) Seeking feedback on our process and integrating that feedback along the way to ensure that we maintained direction and accuracy.

Stakeholders

To keep the TFC Map inclusive, we made a point of identifying a large number of stakeholder groups with whom we would be able to interface, giving priority to groups serving marginalized youth. We established initial connections with partner organizations by first contacting those groups with whom GUB had prior relationships. This provided us the opportunity to establish a core group of organizations with whom to lead engagements during the spring and gave us time to expand GUB’s network in the summer. These stakeholders are identified in **Table 1**.

Organization	Groups Served	Number of Teens Engaged	Engagement Timeframe
Youth Opportunities Advisory Board (YOAB)	Voluntary leadership extracurriculars for high school students	30	<i>Spring, Fall</i>
Casey Middle School	In-school leadership class	20	<i>Spring</i>
New Vista High School	Voluntary leadership class	15	<i>Spring</i>
CU Science Discovery Teen Science Cafe	Teens interested in STEM (Science, Technology, Engineering & Mathematics)	35	<i>Spring</i>
Boulder Public Library (BPL)	Voluntary core groups of teens interested in summer classes	11	<i>Summer</i>
Camp AMICO	Teens with cognitive disabilities	12	<i>Summer</i>
Boulder Farmers Market	Boulder families and youth	92	<i>Summer</i>
Fiske Planetarium	School groups and extracurricular organizations	87	<i>Summer</i>
EducationUSA Academy	International students	25	<i>Summer</i>
I Have A Dream (IHAD)	Teens from low-income communities	33	<i>Summer</i>
Imagine!	Teens with physical and cognitive disabilities	25	<i>Summer</i>
San Lazaro Mobile Home Community	Teens from Latinx community and low-income families	13	<i>Summer, Fall</i>
Table 1. Partner organizations, social groups served, number of teens engaged per group, and engagement timeframe.			

Methods

Gathering Data and Feedback



*Teens at Boulder Public Library
build the TFC Map.*

We interacted with 14 youth- and community-serving organizations throughout the duration of the project. As demonstrated in our table of stakeholders, each group serves a different purpose in the community and thus required different engagement procedures. For example, the groups with whom we interacted at Fiske Planetarium had limited time, so we engaged them with rapid activities like sticker voting and spinner wheel questions. Other groups like the teens at the San Lazaro Mobile Home Community had more time with which to engage with us, so with those groups we facilitated lengthier activities like drawing exercises and roundtable discussions. For more detailed descriptions of the activities conducted at each engagement, please refer to the artifact logs in **Appendix A**.

Each engagement was designed to satisfy three primary goals: to give teens experiences with collaborative design and decision-making, to amplify the voices of marginalized groups, and to demonstrate the impact of individual contributions. Below, we expand upon these goals:

1) Collaborative Design and Decision-Making

- Focus on experience of collaboration via placemaking activities and large- and small-group discussions.
- Encourage teens to find productive methods of interacting with each other to make choices regarding TFC Map content and design.
- Start with broad questions:
 - *Where* do teens like to go in Boulder?
 - What do they like to *do*?
 - What do they want to see on a *map* of Boulder?
 - What *barriers* exist that prevent Boulder teens from interacting with the built and natural environment?
- Narrow down to specific questions regarding map design and content:
 - What makes a place and associated information *good* or *bad* to include on the TFC Map?
 - Which elements must be *included* and which could be *eliminated* from the map?
 - How do we make sure *every* teen can use and understand this map?

2) Amplifying Voices of Teens from Marginalized Populations

- Intentionally identify partner groups with a special emphasis on groups that serve marginalized teens.
- Ask teens in these groups the same questions we are asking their other peers *and* develop questions specifically related to their experiences that other teens might not as readily identify.
- Be sensitive to the fact that they may experience Boulder differently than their peers, but do not single them out.

3) Show the Impact of Individual Contributions

- Show the impact of individuals how their contribution and feedback is structured into the final product.
- Reconnect with teens near TFC Map’s completion to ensure that they have a high level of control over the project from beginning to end.
- Identify how individual input was used in TFC Map and seek feedback regarding how they saw their ideas represented (or not) and how they reacted to the engagement process as a whole.



Teens at Teen Science Cafe construct their ideal place.

Boulder Valley School District (BVSD) Survey

In order to expand the teen and adult audiences we communicated with throughout the outreach process, we developed and distributed an online survey to all BVSD middle- and high-school students and their caregivers. This survey was distributed in English and in Spanish and was live from late June through mid-August 2019. The survey was designed to anonymously gather responses to core questions about teen and adult life in Boulder so that we might:

- 1) Reach more teens during the summer in an easily accessible, low-pressure manner in order to diversify responses, and
- 2) Directly compare how teens’ priorities, needs, and interests compare to those of adults.

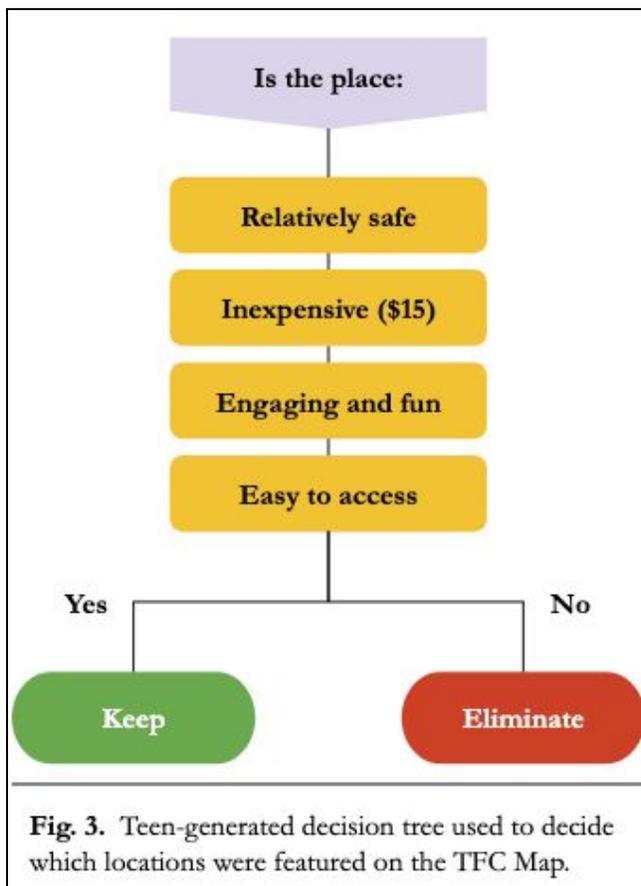


Fig. 3. Teen-generated decision tree used to decide which locations were featured on the TFC Map.

To view the survey in its entirety, please refer to **Appendix B.**

Building the TFC Map

We constructed the TFC Map alongside a voluntary “core group” of teens in the BoulderReads Laboratory at BPL. The core group consisted of four teens ranging in ages from 11 to 15 years. We conducted mapmaking activities with these teens every Tuesday and Thursday from 1-4 PM, during which time we led group discussions, voting activities, field trips, and games to explore what should go on a TFC Map, what makes a place teen-friendly, and how the map should function. Physical map creation took place daily as teens had access to individual computers. The majority of the map was built here with the core teen group.

The core teen group developed a set of parameters to dictate what would be included on the map so that it would remain authentic and

useful. These parameters took the form of a decision tree, with the basic guiding principle being that each participant's ideas should receive equal consideration in the hopes that the map would be as representative of teen interests and needs as possible. This decision tree is represented in **Fig. 3**.

Teens expressed that they saw no reason not to include any map location that met all four criteria: they felt strongly that each teen's ideas should be reflected in the map if possible. In their view, each additional location only enriches the map and increases its utility for various teen groups. They were very wary of including any locations that only adults suggested and ultimately chose not to do so. Including locations suggested only by adults would decrease the authenticity of the TFC Map.

Timeline



Background Research, Project Scoping, & Engagement Training

January - February 2019

- Youth engagement methodology research and contextual literature review
- Project scoping and engagement training



Project Initiation, Network Building, & First External Engagements

March - April 2019

- 5 engagements with 4 youth-serving organizations
- 3 presentations to greater graduate research community
- Project scoping and network building



GUB CFC Map Celebration & Summer Engagement Launch

May 2019

- 1 engagement with 1 community organization
- Project scope finalization; spring data synthesis
- Summer curriculum/advertising development; BVSD survey creation/translation
- CFC Map celebration



BPL Engagement Kickoff, Networking, & BVSD Survey Release

June 2019

- 6 engagements with 3 youth/community-serving organizations; started working with core group of teens at BPL
- Bilingual BVSD survey release
- Summer curriculum and advertising development



Intensive Map Drafting, Outreaches, & Procedural Reporting

July 2019

- 22 engagements with 7 youth/community-serving organizations
- Development of map design parameters and collaborative map drafting
- Summer curriculum redesign
- Initial design and data summarization



Summer Wrap-Up, Data Synthesis, & Outcomes Presentation

August 2019

- 2 engagements with 2 youth/community-serving organizations
- Summer survey and map editing conclusion
- Initial findings presentation to graduate research community



Engagement Wrap-Up, Report Drafting, & TFC Map Release

September - October 2019

- 1 engagement with 1 youth-serving organization
- Online map release; feedback collection; maintenance planning
- Final report drafting



Procedural Reflection, Final Presentation, & Report Release

November - December 2019

- Final report completion and distribution; map advertising
- Project presentation to graduate research community and GUB Steering Committee

Data and Findings

The TFC Map

The locations on the TFC Map reflect the interests and needs of nearly 400 Boulder teens. The most commonly mentioned locations throughout the outreach and design process fell under the categories of food and restaurants (32% of all map locations), shopping and retail outlets (16%), and natural and outdoor areas (14%). Other map filters that teens delineated included sports and play spots, entertainment venues, school campuses, and community spaces, as seen in **Fig. 4**.

In addition to these categories, teens requested that three additional filters be applied to the map. The first is a “Teen Favorites” filter, featuring a variety of locations preferred by Boulder teens and the core BPL group which combine to create a quintessential Boulder experience for youth. The second is a “Free and Low-Cost Favorites” filter, requested frequently as Boulder tends to be prohibitively expensive for teens who do not live in high-income families. The third filter features 6 regional bus routes that make stops in and around Boulder to ensure easy wayfinding for teens who cannot drive, bike, or walk to their destination.



Fig. 4. Breakdown of all location categories included in the TFC Map.



Fig. 5. Summary of 10 most commonly mentioned locations in Boulder during outreach and engagement process.

Ten locations in Boulder were mentioned by teens nearly 40% of the time during the engagement and outreach process. These locations are listed in **Fig. 5**. Locations tend to emphasize shopping and retail outlets (3/10), nature and outdoors (2/10), and areas for sports and play (2/10). When discussing the seemingly universal popularity of these ten locations, teens pointed out that they all shared the following four parameters required for a location’s inclusion on the TFC Map:

- 1) **Relative safety** - These areas are safe and all moderately to highly trafficked areas
- 2) **Inexpensive** - very few of these locations require that teens make purchases to use the space.
- 3) **Engaging and fun** - these locations are nearby other popular areas and offer a somewhat unstructured range of potential activities.
- 4) **Easy to access** - very few of these locations are remote or require membership or purchased entry.

In a similar vein, each TFC Map filter features three locations which were most commonly mentioned throughout the outreach and engagement process. These locations are detailed according to filter in **Fig. 6**. Teens repeatedly mentioned these locations due to their collective potential for:

- 1) Relatively inexpensive entertainment;
- 2) Diverse, low-pressure social opportunities, and
- 3) Creative interactions with peers and the environment in ways that are not strictly regulated by adult authorities.

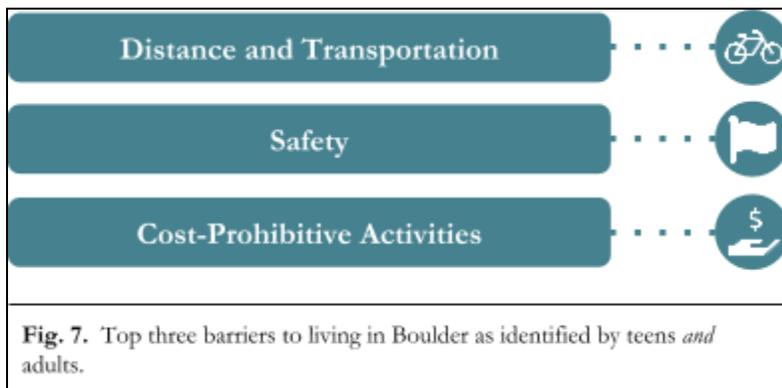


Fig. 6. The 3 most commonly mentioned locations in each TFC Map category.

Our team constructed data sets on how different teen groups respond to questions about life in Boulder. To be respectful of their experiences, we are very cautious about ascribing causality between the locations they preferred and the main reasons they did so. For more detailed information, please refer to the full data set in **Appendix C**.

Barriers

In addition to exploring those characteristics and locations that make Boulder a unique place to be a



teen, we also discussed Boulder with a focus on barriers with teens. To this end, one of the primary things we sought to understand is which barriers exist that prevent teens from engaging with Boulder at whatever level they would prefer. As shown in **Fig. 7**, teens *and* adults report the most concern with three primary barriers:

- 1) **Distance and transportation** (44% of barrier discussions) - for individuals without access to cars or bicycles, teens reported that Boulder can be extremely difficult to navigate. The city's widespread utilization of paid parking compounds this issue.

- 2) **Safety** (28% of barrier discussions) - just as adults fear for their children's wellbeing in urban centers, teens demonstrated concern for their own safety in the presence of unfamiliar and occasionally unwelcoming adults.
- 3) **Cost-prohibitive activities** (16% of barrier discussions) - Boulder is one of the wealthiest cities in the nation; it is also one of the most expensive. Many teens find it difficult to interact with Boulder in the ways that would best suit their needs as they are priced out of many activities. They generally defined affordable activities as those that cost \$15 or less.

Team Reflection: Lessons Learned

This is a reflection on the lessons the Masters of the Environment (MENV) team learned about engaging with teens over the course of the project. While these reflections are intended to provide direction to other leaders intending to facilitate participatory engagements with teens, they are also only representative of our own unique experiences and may not always align with what other leaders experience.

1. **Engaging with teens is easiest during the school year.** During the semester, teens are used to being in an academic setting with specific scheduling. During the summer, engaging teens is most effective when engagement sessions incorporate breaks and free time, move between different locations, and bring activities outdoors.
 - a. Field trips are a highly productive way of diversifying engagement activities and allowing teens to spend time outdoors.
 - b. Ensure that social and academic lessons get communicated while making room for creative, fun interactions with teens.
2. **Teens will feel compelled to repeatedly engage if they are offered incentives.** Teens are very busy - especially during the summer - and may not return for future outreach sessions unless they are offered incentives. Food and internship credit works very well to encourage repeat participation.
 - a. Know your audience and adapt incentives appropriately.
 - i. Certain groups, including teens from low-income families, appreciate snacks to enjoy during engagements, but many have a common-sense need for further incentives like a small stipend to account for paid work they could be doing elsewhere.
 - ii. Other groups like health-based organizations may actively discourage the use of food - particularly sweet treats - as a means of incentivizing teen participation. In such situations, other incentives like internship credits or community service hours are appropriate and attractive.
3. **Adults must be flexible.** While strict scheduling is often key to maintaining direction and meeting goals in numerous settings, teens are sensitive to the rigidity with which adults schedule their time.
 - a. Adapt an outreach session schedule based on how the day is going and make a point of developing alternative activities ahead of time.
 - b. Do not be overly strict in scheduling and be ready to pivot at a moment's notice depending on the collective energy of teen participants. If the day is moving slowly and you have the means, take a break and get outside - try not to force an agenda on students, particularly in the summer.
4. **Adults must demonstrate to teens that their ideas are being taken seriously.** This helps young people understand that their voices matter, experience the impact their contributions can have, and

recognize when they are being treated with respect, particularly by adult leaders. This also helps build rapport and community between teens and adults, particularly when repeat engagements are scheduled.

- a. Develop creative ways to display how you considered and integrated teens' feedback. Using tools like word clouds and simple data modeling has a positive impact on the attitudes of teen participants and are frequently well received.
5. **Adults must be willing to learn alongside teens.** Teens are not the only participants who stand to learn things from the participatory process. Adult leaders are co-learners in these processes and must be self-reflective before, during, and after any teen-focused project.
- a. Frequently seek teens' feedback regarding how they react to the participatory process. If you do not have teen feedback available, reflect on your own goals, biases, and assumptions regarding how the process is going, whether or not you are on track to meet goals, and how you can improve teens' experiences with the process.

Engaging Youth Through Participatory Planning: Recommended Steps to Take



Next Steps

Following the completion of our research and outreach process, we shared the TFC Map and details of our project with Boulder community leaders and individuals from GUB's Steering Committee on December 6, 2019. The TFC Map was well received with audience members voicing their interest in GUB's methods of youth outreach and engagement. The MENV team then released this report and the TFC Map to the public after December 13, 2019. We sent links to every youth-serving organization and individual with whom we worked throughout the project. GUB further publicized the TFC Map by sending it to individuals subscribed to their newsletter.

The TFC Map will be housed on the GUB website in perpetuity. For the first year of its public existence, it will be curated and updated by teens at the Boulder Public Library (BPL), after which time other youth-serving organizations will step in to assist in its maintenance. Teen map users can submit feedback, questions, and comments through the GUB website, each of which will be responded to by teens at BPL.

This report is also being shared with Boulder teens and with other adult change-makers. It will be sent to researchers at Virginia Polytechnic Institute and State University as a means of exchanging information and best

practices regarding youth-centered participatory projects. The MENV team will also share this report with individuals at the United Nations, specifically the United Nations Youth Envoy.¹¹



#YouthStats



Conclusion

Throughout the duration of this project, the MENV team has witnessed that collaboration across social spheres can produce positive outcomes for an entire community. The TFC Map is particularly diverse because it represents the needs, preferences, and opinions of a wide swath of Boulder's teen population. It is an example of the power teens have to make transformative change when adults afford them sufficient time, resources, and respect. The TFC Map demonstrates that teens are capable of creating beneficial change at the city level. It is our hope that cities across the country make strong commitments to engaging youth in community decision-making processes by institutionalizing participatory planning methodologies. Doing so will help to create a more cohesive community for all citizens and will empower the next generation of leaders to understand that their voices, needs, and rights matter.

¹¹ Image: www.un.org/youthenvoy

Appreciation

We would like to express the deepest appreciation to our partners at Growing Up Boulder, particularly Program Director Mara Mintzer and Education Coordinator Cathy Hill, for their patient guidance and strong support through this process. We were motivated and inspired by their spirit and determination in leading the organization moving forward to lead the industry in the youth engagement and participatory planning fields. Without their support and encouragement, this capstone project would not have been possible.

We would like to express our great gratitude to our capstone team advisor, Kimberly Kosmenko, who has rich experience in consultation and leadership. She offered great help to us in overcoming numerous challenges and was a strong supporter of our team through this process. Without her persistence, this project would not have developed so smoothly and successfully.

We would also like to say thank you to CU Boulder's Masters of Environment graduate program for allowing us to undertake such a unique project. This opportunity has renewed our commitment to environmental equity and social justice, particularly for the next generation of leaders. We appreciate all the help and guidance you provided to us throughout the project.

We offer a very special thank you to every teen participant and adult leader who helped us develop this project. Each of you were incredibly valuable as we built the TFC Map alongside you. It is for you that we have done this work, and we hope that the TFC Map proves a valuable tool as you experience Boulder for years to come.

Appendices

Appendix A

View the MENV team's artifact logs from each outreach session [here](#).

Appendix B

View the BVSD survey [here](#).

Appendix C

View all data from the TFC Map process [here](#).

Appendix D

In-Depth Reflection

Our initial strategy was to ask broad questions and get a feel for how our interactions would go. The goal was to not only learn about places participants enjoyed in Boulder, but also to see how teens responded to certain questions. Our goal was to be constantly learning. We started out asking the question “what are your favorite places in Boulder?” with the intention to not only learn about places teens like, but also to facilitate a healthy discussion as a group. To do this we often worked in small groups where an MENV student could sit with the students and help generate feedback, then we would reconvene as a large group to share out. This tactic of breaking from small to large was helpful as we were able to formulate a connection with students that is not usually formed through the standard lecture question and answer format.

Our initial engagements in the spring were all conducted in classrooms. We worked with a class of 6th graders at Casey Middle School twice. First we asked what places they liked in Boulder. During this outreach we were able to give a small presentation demonstrating the content of our project. The students were engaged and we were able to get information for our project. This outreach was as much of a learning experience for us as for the students as we had not conducted an outreach before and did not know what to expect. We were able to reflect on this and wrap our heads around what we were about to embark upon over the summer months.

Over the spring, we completed five public engagements in total with four different middle/high schools. The organizations we worked with were YOAB, Casey middle school, New Vista High School and Teen science cafe. The age of teen's group were diverse as well. So the feedback we received from each group were different. Our first engagement was working with YOAB teens. They were a group of teens with age between 16-17. They were really interested in our map project and had a lot of useful and creative input to our map. This group was very academically oriented and were sensitive to the needs of Boulder's minority groups and low-income families. Besides, they frequently mentioned and discussed their strong desire to see Boulder become both financially and physically more accessible in the future. They expressed their strong social awareness and it was very helpful for us to have an in-depth view of the city from the teens' perspective. As this was our first engagement, we kept the questions broad and general but the overall engagement was

pretty successful due to the students' high level of concentration and their high quality responses to the map-related questions.

The following two consecutive engagements were with Casey Middle School. This group was much younger than YOAB students so their major focuses on map locations were restaurants and natural outdoor places. This time we narrowed our question scope to be more specific than YOAB.. This allowed our team to gather data on locations and activities, giving us a look into how the students spend their free time. We also use Oakland child-friendly city map as a tool to guide the discussion in our second engagement with them. It turned out to be really helpful. They highlighted many locations that they found interesting. During these two engagements we learned how to work with a younger audience that was more energetic and how to work on focusing their attention. They contributed a lot of useful map items on our TFC map.

We were conscious to review the material from last class before we moved forward. This was a tactic introduced by GUB partner Cathy Hill who is herself a long time teacher. This presentation allowed us to review the project with terms such as “last class we reviewed (this) and today we are going to review (this).” It reminded the participants what was going on and got them in the headspace to be most helpful and engaged. We also generated a word cloud of our findings from the previous session. (As indicated below) We wanted to show them that we heard them. This component of social justice and giving a voice to the voiceless is a key pillar of our project so we wanted to be demonstrating that from day one. We put all the themes they wrote down last class into a word cloud and displayed it in front of everyone.



Working with a class of 26th 6th graders was definitely challenging from an attention standpoint but we believe it helped set the tone for a wonderful summer of engagements. We really learned to embrace the chaos. Rather than assert our authority into the classroom, we decided to become active participants in the process learning and flowing accordingly. It became clear that we should trust our instincts during these sessions. Sometimes we had curriculum we wanted to present or we had a set structure to the engagement that we would have to adapt early on if we saw the group was a bit restless or had their priorities on other

initiatives. We made a point to not be rigid in our approach but rather to feel the energy of the room and move forward with a plan the participants would embrace rather than force their minds into something they didn't want to engage with.

New Vista - The students were very engaged as they drew pictures of their favorite locations in Boulder and then became even more talkative when asked to voice their constructive feedback regarding life in the town. They came up with a comprehensive list of barriers which echoed themes we would encounter everytime we asked the questions. This list also lead us to understand that the older a teen becomes, the more aware of the surroundings she/he is, and the more critical that teen is willing to be. For instance, 6th grade participants as a group found very few barriers in Boulder and mostly reported being very happy here. 12th graders, on the other hand, reported quite a few barriers.

This group was highly concerned about the effect gentrification is having on their ability to experience Boulder. Much of their discussion was centered around low-cost opportunities. They provided us with the information on the low-cost activities and places that we can do or visit. And thanks to them, we added an individual map layer for free or low cost places.

Our team's last engagement for spring semester was Teen Science Cafe. In this engagement, we introduced our ice breaker activity the "marshmallow challenge" and another activity "Place It!" for the first time. The "marshmallow challenge" is adapted from Stanford University's "Spaghetti Marshmallow Challenge." Students were asked to use the materials of 20 uncooked spaghetti noodles, 1 jumbo marshmallow, 1 yard string and 1 yard tape to build the tallest freestanding structure. We divided the teens in groups of 5-6, and the time limits for each group was 10 minutes.

Another activity "Place It!" requires students to get a piece of paper. The paper is going to represent the land that they are going to build on. They are going to answer a question by taking some materials and building with them. The question was described as "*If you could design an ideal place where teens at your age can spend time, what would you build? What features would it have?*". Each of the student will have 5 minutes to build their own youth-friendly place. Teens were very actively engaged in the entire session and came up with lots of creative products that surprised us. This group mainly focused on designing spaces that are used for outdoors and recreation. The main concept of their design was to combine indoor and outdoor spaces together in order to allow the activities such as team sports while also having spaces available for indoor activities like reading or watching movies. The most common themes for the discussion were collaborative design and they also highly concerned about the city standards and specific requirements for Boulder's architectures. Their inputs were very valuable for us and also provided us with another path to develop our TFC map.

We started the project with a few general strategies. We sought multiple engagements with the same organization. We believed this would be a helpful tactic to grow our relationships and dive deeper into what makes a space teen friendly, thus generating the best results for our project. We designed a curriculum. As a subset of seeking multiple engagements with the same partner we decided to rent a room at the Boulder Public Library and host our sessions there on Tuesday and Thursdays from 1-4 pm. A follow up strategy meeting planned for a harsher schariono as if no one is going to show up all summer. Our main solution to this was to hit as many one off engagements as possible. As much as we like the idea of follow up engagements, we decided that now we need as many engagements as possible, regardless of follow up capabilities. We reached out to any organizations we could think of including Fiske Planetarium, the Farmers Market, Earth Guardians, San Lazaro, and more.

Fiske Planetarium hosted many activities this summer, and we were happy to take part in a few of them. The idea was to conduct activities that can be done very quickly and with little thought, and have candy or food at the table to thank them for their participation. The jolly ranchers proved to be vital in these interactions as they attracted students to the area. The brief activity we decided on was a dot activity. This was an activity where we had a question on a board - such as "how do you find out about events in the town?" and students could place a sticker on the answer that we had written on the board. Our options were social media, adults, the news, etc. We also asked "is boulder meeting your needs?" with a sticker being placed on either yes or no. An incredibly interesting finding during this period was the positivity of the teens through the Imagine! Program. Imagine is a special needs program set up to help teens with activities all summer. The group was incredibly positive about life in Boulder and believed to be a very accommodating space for them. This information is juxtaposed to the feedback we got from parents at the Farmers Market who had quite a bit of critical feedback regarding their time in Boulder.

Our team completed most of our public engagements during the summer. We started our first engagement in June and has completed 27 engagements between June and August. We cooperated with Boulder public library, fiske planetarium, Boulder Farmers market, San Lazaro mobile home community, Camp Amico and I Have a Dream foundation. These organizations brought us with new ideas and thoughts on making teen-friendly city, inspiring us with new ways to explore the city together with teens. We expand our diversities and starting to pay attention to those voices that are often underrepresented by the city government. When we did assessment to these summer public engagements, we found that there are some specific areas that we worked really well on, with some areas that we still need to further improve, as well as some specific procedural constraints that we came across during the engagements.

Boulder public library is the main location that we chose for teens to do their summer engagements with us. We booked a computer lab and did four consecutive weeks of engagements focusing on map-making with different groups of teens. We wanted classes to start early and run through the summer so we first had our classes schedule for June 11th and 13th and to continue until the first week of August. As we were developing our curriculum in May, we realized that we did not have anyone signed up. We thought the Junior Ranger would be a great group to incorporate since there were 80 of them and they were interested in current events in the town. We ended up learning that they much prefer outdoor time (as did all kids). With no Junior Rangers interested and no students currently signed up we decided to push our sessions to June 25th and 28th. Upon pushing the deadline back we sounded the alarms and pursued a plan b. We had been very optimistic in our assumptions teens would be interested in a mapping summer project. While we pursued plan b we did not give up hope. In fact, we advertised for the class even more diligently.

During these engagements, one of the problems we encountered was that teens don't like to take very academic class sessions like their regular school semesters. We designed a daily curriculum for them from our own adult perspectives but found that they weren't very engaged in our class activities. For teens, the map classes were their summer camp, it should be relaxing. Therefore, after we realized this problem, we made a few changes to the curriculum. We started to bring food and snacks to class, and we took them to Pearl Street after they were done with their map work. We also took them to teen space in the library to explore something interesting instead of staying in the lab and did the boring work all the time. After we made these adjustments to the schedule, we found that teens were much more engaged in the class sessions and became more effective and productive than before. They were genuinely engaged on the computers and love making this teen-friendly city map. Since this is our first time doing the engagements with teens, we explore this

process together with them. We were glad to see that our engagements were successful and useful for teens and we also felt so cool to be a part of it!

Our engagements at the library ended up being some of our most effective. After a bit of a worry and a few empty session early in the summer, we saw a large uptick in participation after the 4th of July week. Beginning on July 9th and continuing through our last session August 1st we had a very consistent group of teens who were very eager to participate and possessed tremendous skill in digital map making.

The team believe that we uncovered a large gap in representation during our IHAD and San Lazaro outreaches. Affordability has always been a significant barrier but we received critical feedback as to a specific example. Both groups voiced concerns over the Walmart being voted out of town by city council. Council’s reasoning stated that it was too corporate and took away from locally owned businesses. While the notion that Walmart hurts small businesses is valid, we believe this act uncovered a huge disparity of representation for the Latinx community at the city level. While we are sure that many of the more wealthy (white) citizens of Boulder can afford these local favorites, the Latinx community was clear that Walmart was one of the few places where they could afford the food and supplies needed to provide for their families. We think there is an opportunity to rectify this disparity by providing more support for the Latinx community and making sure that their input is heard by government officials. Since some of the teen groups were pretty busy, we decided to make our activities more cognitive and introspective than with other groups, and it seems pretty effective both for them and for us.

We conducted many outreaches at the Farmers Market. So for the second engagement, we decided to give out stickers for prizes and handed out candies or lollipops for the participants. We also borrowed a spinning wheel from GUB office for interaction purpose. Undoubtedly, this time a number of interactions were more in-depth than the previous one and lots of parents seemed genuinely interested in the TFC map project. For the third engagement, we had a lot more parents input on the locations in the city. But while we hand out our candies to the teens passing by, we found that parents did not want their kids eating it and we did not like creating a disturbance having the children asking parents if it was ok to have any chocolate. Then we realized at the farmers market people are more interested in vegetables and are generally more health conscious. In our last several other engagements in Farmers Market, we also received some good feedback from visitors who came to Boulder for trips. This was helpful for us to pinpoint what activities attracted people to Boulder. It is also worth noting that almost all of the visitors believed Boulder to be teen friendly. From the outside, it is good to know that Boulder appears to be one of the most teen friendly cities in the US.

Month	March, April & May	June	July
Achievement	Completed 6 engagements with 5 organizations	Completed 5 engagements with 3 organizations	Completed 19 engagements with 7 organizations
Feedback	The questions we asked teens and the activities that accompanied them were too broad.	Teens don’t want to be stuck in a classroom for hours during the summer.	Teens appreciate feeling welcome and being individually incentivized to participate in

			activities.
Change	We developed more specific questions to target potential map locations and encouraged participants to expand upon ideas regarding their experiences in Boulder.	We shortened the duration of activities where and moved some engagements beyond a formal classroom setting where possible so teens could fully express their ideas while still staying engaged.	We used food and field trips to maintain and increase teen participation, made teens feel more confident by communicating with them in Spanish and Chinese, and allowed teens to dictate activity pace and variety.

Social Sustainability

By facilitating the creation of a Teen Friendly Map we have demonstrated a commitment to these goals and align perfectly to the mission of Boulder’s Social Sustainability report. While we did not ground our project in this report, we believe it validates the necessity of using participatory planning to create better communities. It is clear that the research has been conducted and processes can be replicated in order to turn your town or city into a more youth-friendly and socially sustainable community.

In January of 2004, Boulder City Council identified a need for greater focus by the city on some aspects of life in Boulder relating to the social section. The Social Sustainability Strategic Plan, finished in May

Social Sustainability Mission Statement

To enhance community livability by providing outreach and developing policies that address the needs of the community, including under-served, under-represented and under participating residents so all who live in Boulder can feel a part of, and thrive in, our community.

of 2007, is the outcome of City Council’s desire to address the emerging social and community concerns in a proactive and integrated manner.

The plan identifies goals and strategies which are responsive to these concerns including:

- Promote community and city organization engagement,
- Expand and value diversity,
- Improve neighborhood and community livability
- Address the needs of children
- Address the needs of youth
- Address the needs of seniors
- Partner with schools
- Create a shared Vision of community sustainability

The youth engagement through participatory planning methodology will be an effective tool to apply especially aim to the goals that are stated above.