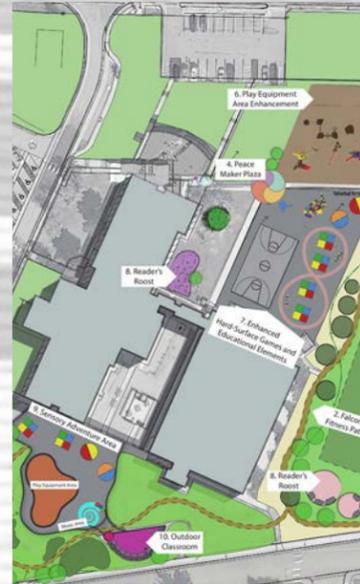


# Learning Landscapes

## Green Mountain Elementary School



## Schoolyard Master Plan 2013



# Green Mountain Elementary School

## Master Plan

for Elementary School Campus Improvements

**Prepared for:** Jeffco Public Schools  
1829 Denver West Drive #27  
Golden, Colorado 80401

**Approved:** \_\_\_\_\_ / \_\_\_\_\_  
<Organization or Name> Date

**Approved:** \_\_\_\_\_ / \_\_\_\_\_  
<Organization or Name> Date

**Approved:** \_\_\_\_\_ / \_\_\_\_\_  
<Design Manager> Date

### GMES Design Team

- MJ Jones - Physical Education teacher
- Sharon Ivie - Principal
- George Davenport - Facility Manager
- Beth Smiley - Art Teacher
- Tabitha Bartel - ASD teacher
- John Valdez - Parent
- Michelle Young - Parent
- Robb Berg - Parent
- Pat Barnes - Community Pastor
- Emily O'Winter - Healthy School Coordinator

### Anschutz Health and Wellness Center

- Cate Townley  
Program Manager  
Active Environments

### Faculty Advisor

Professor Lois Brink

### Graduate Students

- Wei Weixuan
- Yimeng Yang
- Yantomg Sun

# Contents

Project Introduction	1	Part 3: The Master Plan	17
Introduction	1	Final Site Plan	17
Jefferson County School District	1	Schoolyard Description	18
The Intent	2	Cost Estimate	21
Part 1: Assessing the Present Situation	3	Appendix	23
School Background	3	GOCO Applications	23
Location & History	3	Student Drawings	23
Existing Conditions	6		
Schoolyard Assessment	8		
Part 2: Design & Planning	11		
Design & Planning Process	11		
Defining the School's Vision	12		
Site Plan - Option A	15		
Site Plan - Option B	16		

# Green Mountain Elementary School

## Project Introduction

### Introduction

Schoolyards provide an opportunity for the built environment to promote physical activity for children and the surrounding community. Studies show that well-planned and equipped schoolyards increase physical activity while also enhancing the learning environment resulting in improved achievement. Such play areas provide physical and mental challenges that translate to improved health and learning attention. Furthermore, with proper design, these areas themselves become outdoor classrooms or learning landscapes and fulfill a secondary goal for many schools to become a positive focal point of the neighborhood and a place that enhances the community's appearance. Playgrounds lacking appropriate choices for children tend to become arenas for bullying and teasing. Schoolyards should be a positive environment that compliments academic development, a place where children develop their emotional, physical and social skills.

Improving schoolyards is a proactive way to benefit health at the community level. The surge in childhood obesity, in recent years, threatens the future health of Colorado. According to the Colorado Health Report Card, published by the Colorado Health Foundation, "Colorado ranks 23rd among the states in the category of childhood obesity dropping in rank from 3rd to 23rd in just four years. The current ranking signals a rapid increase in the prevalence of childhood obesity that negatively impacts the overall health and well-being of Colorado's children. Preventing and combating the childhood obesity epidemic will require a multi-faceted approach. "It means changing behaviors around food intake, physical activity and our residential community. It means addressing the environment in schools and rethinking our culture to emphasize good health" says James O. Hill Professor of Pediatrics and Medicine at the University of Colorado School of Medicine.

Learning Landscapes, part of the Active Environments program at the University of Colorado Denver Anschutz Health and Wellness Center seeks to strengthen elementary schools and their surrounding neighborhoods by designing playgrounds to promote physical activity and social interaction. Learning Landscapes and the Active Environments works with school districts around the state to strategically plan for schoolyard improvements and has designed and built over one hundred schoolyards in Colorado.

### Jefferson County School District

Founded in 1950, the Jefferson County school District (Jeffco) has been providing educational excellence for more than 60 years. Jeffco is the second largest school district in Colorado with an enrollment of over 85,000 students at 154 schools. (Jefferson County Schools Fact Sheet)

### Mission

“To provide a quality education that prepares all children for a successful future”

### Student Population

American Indian/Alaska Native	1%
Asian & Pacific Islander	3%
Black	1%
Hispanic	23%
White	68%
Multiple Races	4%

\* 2011/2012 Annual Report

Students Qualifying for Free and Reduced Meals	33%
--	-----

## District Wellness

“Healthy Kids Make Better Students; Better Students Make Healthy Communities”

The health and safety of students is linked to their academic success, and the academic success of students is linked with their health. Thus, helping students and staff stay healthy, happy, safe and secure is a fundamental part of the mission of schools. After all, schools cannot achieve their primary mission of education if students and staff are not healthy.

Jeffco Public Schools has continued to support creating a culture of healthy schools and requires all schools to develop annual goals addressing health and wellness, as a role of the accountability committee. In Colorado and in the district, the focus of accountability is at the school level. The accountability committees in Jeffco Public Schools have a significant role in the school, including developing an annual Culture and Climate section of the Call to Action (strategic plan). Currently, accountability committees develop goals addressing Coordinated School Health, Welcoming Environment, Safety, Parent Involvement and the Make Your Voice Heard Survey.

On an annual basis, schools develop and implement up to two goals that address components of the Coordinated School Health model as a part of the Culture and Climate Strategic Plan. This is a systematic approach within schools to coordinate the health-related components aimed at improving both health and educational outcomes of students.

## Existing Challenges

Jefferson County School District faces challenges common to other large school districts. The infrastructure is aging and maintenance funding is limited leaving little if any budget available to improve schoolyards and play areas. Replacing playground equipment, providing American with Disability Act [ADA] accessible surfacing, and providing an outdoor classroom learning environment are often low priorities for capital improvement funding.

## Planning Process

Every student at Green Mountain Elementary school participated in the master plan process. Planning took place from April 2013 to December 2013. During this time, students conducted research, created artwork and wrote about their dream schoolyard. Green Mountain also designated a schoolyard design committee to serve as liaisons between Learning Landscape staff and the Green Mountain community. The collaborative master planning process allowed the school to develop a plan to reflect the history, culture and curriculum unique to Green Mountain Elementary.

Learning Landscape staff collected and reviewed the student work, interviewed staff members and worked with the school design committee to develop a wish list for schoolyard improvements. The design team also discussed strategies for phasing, sustainable maintenance and funding for implementation. Learning Landscape staff worked with the design committee members to ensure the individual school master plan aligned with the overall vision for the school and the Jefferson County School District.

## The Intent

The intent of the master plan is to serve as a strategic roadmap to create an inviting, safe and active play area. The goal is to increase activity, provide opportunities for outdoor learning and improve the health of students and surrounding community members. The purpose of the master plan is for Green Mountain Elementary to be strategically poised to capture opportunities to improve the schoolyard as funding becomes available. The master plan is intended to be used as a tool for the staff, parents, and district administration to seek funding for future schoolyard renovations and wellness initiatives. A master plan is a written report that sets forth the structure for future campus improvements. The master plan illustrates the vision for Green Mountain Elementary school and surrounding community and provides a framework for fund raising and future construction.

# Green Mountain Elementary School

## Part 1

### Assessing the Present Situation

## School Background

### Location & History

Green Mountain Elementary School, located at 12250 W Kentucky Drive, Lakewood, CO 80228, is a neighborhood school providing quality education to City of Lakewood residents since 1963. Many Green Mountain Elementary alumni remain in the neighborhood and send their children and grandchildren to the school. A part of Jefferson County School District, the school serves 370 students from diverse backgrounds in kindergarten to sixth grade and is home to an expanding program for students on the autism spectrum.

The students at Green Mountain are achieving academically. The school has maintained a performance rating for several years and in 2011 Green Mountain received the Governor's Distinguished Improvement Award. The Mission at Green Mountain is to provide a safe, caring and collaborative environment where EVERY child has opportunities for success. The school is committed to developing the whole child – the educational, physical and social-emotional learning. The school's mascot is a Falcon and the school colors are green and white.

### School Mission and Motto

#### MISSION

We, the GMES community, will provide a safe, caring and collaborative environment where EVERY child has opportunities for success!

#### Our CORE VALUES are:

- **Culture and Trust** This creates a unified and secure community while working toward a common goal.
- **Systemic Practices** This helps build a collaborative school culture so our students can be better prepared for their next step in learning.
- **Inspiration** This is the heartbeat of classroom engagement. Students who are inspired are risk takers, driven and passionate learners. Inspiration is a building block to success.
- **Rigor** Rigor provides multiple opportunities for staff and students to be successful. (It also keeps expectations high!)

## School Demographics

The student population at (GMES) grew at nearly 6.3% from the 2012 to 2013 school year, far exceeding the district’s elementary school average growth rate of .1% The school’s free and reduced lunch rate is 56.3% with the majority of these students, 43.8%, qualifying for free lunch. Both of these measures are substantially higher than the average F&R rates in the Jefferson County School District of 36% and 29% respectively.

Enrollment	367
Male Students	190
Female Students	177

	<b>GMES</b>	<b>District</b>
Free and Reduced Lunch	56.3%	34.4 %
Free Lunch	43.8 %	26.9 %
ELL Rate	8.9%	

## Racial Makeup of GMES Students

American Indian	1.5 %
Asian	1.2%
Black	4.5%
Hispanic	29.5%
White	60.4%
Pacific Islander	0.0%
Multi	3.0%

## Grade Distribution of Students

Kindergarten	58
1st grade	64
2nd grade	51
3rd grade	46
4th grade	50
5th grade	52
6th grade	46

# Green Mountain Elementary School

## Part 1

### Assessing the Present Situation

#### Catchment Area

The rough boundaries of the catchment area for Green Mountain Elementary School include Alameda Avenue to the north and to the west; South Simms St. to the East and West Arizona Ave to the South.



#### Neighborhood Context

The area surrounding the school is primarily an urban neighborhood made up of medium sized single family homes and apartments. Approximately 30,000 residents live in the area surrounding the school. (2010 CENSUS) Currently, there are no registered neighborhood associations in the school neighborhood, but community members felt as though the schoolyard renovation could be a unifying factor that would spur community organizing and engagement.

The City of Lakewood is Colorado's fourth largest city located in the greater Denver metropolitan area at the foothills of the Rocky Mountains. (Lakewood Master Plan) According to the 2010 US Census, the City of Lakewood has a population of 143,000 people with 60,000 households and the median annual family income was \$54,918. The racial makeup of Lakewood is 83% white, 22% Hispanic or Latino, 3% Asian, 1.6% Black and 1.4% American Indian.

The city of Lakewood has over 7,190 acres of parkland and one of the highest ratios of parks and recreation facilities per capita in the country. (City website) That said, access to parkland is not evenly distributed and children in the neighborhood around Green Mountain do not have easy access to fields for informal recreation. In fact, the neighborhood around the school is considered a play desert (Kaboom). The closest public park is over a twenty minute walk from the school. (map) There is a community swimming pool located near the school but it only operates 3 months out of the year and is only available to children with memberships.

Neighbors and community members use the schoolyard after school and on weekends as a playground and recreation area. Local recreation leagues are in need of spaces to practice and currently use the gravel fields for practicing softball, baseball and soccer.

# Existing Conditions

## ADA Accessibility

The schoolyard paths to and from the building are ADA accessible. However, much of the schoolyard is not ADA accessible. ADA access to the schoolyard play area is virtually non-existent during out-of-school hours. Persons with limited mobility must access the schoolyard through a pedestrian gate adjacent to the parking lot on the northwest side of the building then travel 750 feet along a narrow sidewalk to the play area. Once in the schoolyard, ADA access is limited to the asphalt areas. The play equipment area has a pea gravel surface which is not an acceptable material by ADA standards. Increasing accessibility by improving the surface will be a major issue to address in the master plan. Surfaces such as decomposed granite, engineered wood fiber and poured-in-place rubber are more suitable to children with limited mobility.

## Drainage

The play equipment area collects a significant amount of water runoff during and after rain and snow events. The most impacted area is the east side of the gravel play area, where water collects and creates deep pools. Sheet flow drainage on the play field has created deep ruts along the east side of the gravel field. Small areas of the asphalt have indentations that collect water and become icy in freezing temperatures.



## Safety

The following issues of safety were identified by the design team:

- Gravel on the play field is painful to fall upon and leads to abrasions on a daily basis
- Pea gravel from play area travels onto sidewalks and asphalt creating slipping hazards
- Pea gravel from play area is ingested by students
- Play equipment area lacks drainage and floods to dangerous levels in storm events
- Inadequate drainage on play field has created deep ruts and tripping hazards
- Large rocks imbedded in play field are major tripping hazards
- Play equipment surfacing is inaccessible for students with mobility issues

## Parking

Green Mountain Elementary School has two parking lots with 70 parking spaces. At the front of the school on the north side of the property is a parking lot with 50 parking spaces including 4 designated as ADA spaces. The front lot serves as the school's drop-off and pick-up area with one-way traffic lanes with an entrance on Kentucky street and an exit onto Union Blvd. On the east side of the school is a parking lot with 20 spaces. The east parking lot has direct access to the schoolyard. Additional parking is available along the Kentucky to the north and South Van Gordon Ct. to the west of the school. The school staff and surrounding community did not indicate a need for additional parking.

# Green Mountain Elementary School

## Part 1

### Assessing the Present Situation

#### Site Access

During school hours all students and school visitors are instructed to enter the school at the main entrance and to check in at the main office before access any school property. After school and on weekends visitors can access the schoolyard through one of three pedestrian gates located on the east side of the property adjacent the parking lot, on the northwest side of the property adjacent to the parking lot or along South Van Gordon Ct.

(GMES) is located in the heart of the neighborhood at the intersection of South Union and Kentucky streets and is fully accessible to all forms of transportation. Users are anticipated to come from the surrounding, primarily residential, area located south and east of West Alameda Pkwy, north of Florida Ave and west of South Quail Way. Users are able to walk, ride bikes, skateboard and drive to the school from their homes. After school and on weekends visitors can access the schoolyard through one of three pedestrian gates located on the east side of the property adjacent the parking lot, on the northwest side of the property adjacent to the parking lot or along South Van Gordon Ct.

Users driving to the schoolyard can access two parking lots with a total of 70 parking spaces. On the north side of the property is a parking lot with 50 parking spaces including 4 designated as ADA spaces. On the east side of the school is a parking lot with 20 spaces. Both parking lots have direct access to the pedestrian gates to the schoolyard. Additional parking is available along the Kentucky to the north and South Van Gordon Ct. to the west of the school.



The school is well connected to the surrounding neighborhood through a network of sidewalks, bike lanes and bike paths. Along the exterior fence of the schoolyard are well maintained sidewalks located on South Van Gordon, South Union and Kentucky. Along these streets are multiple painted crosswalks with pedestrian crossing signs leading to the school and are located near access gates to the schoolyard. (SEE SITE PLAN) There is a painted bike lane on both sides of South Union Blvd bordering the east side of the school property. South of the school property, at West Mississippi Ave, towards the east is a painted bike lane on both sides of the street leading to the Weir Gulch Greenbelt. West Mississippi Ave to the west is a shared bike street. This street has a steep slope and travels northwest up to Alameda Ave, a main arterial through Lakewood, and towards the City of Lakewood skate park. Three fourths of a mile, to the south of the school, at West Florida Ave, is a dedicated bike path leading headed east to a soft surface trail at Main Reservoir.

#### Maintenance

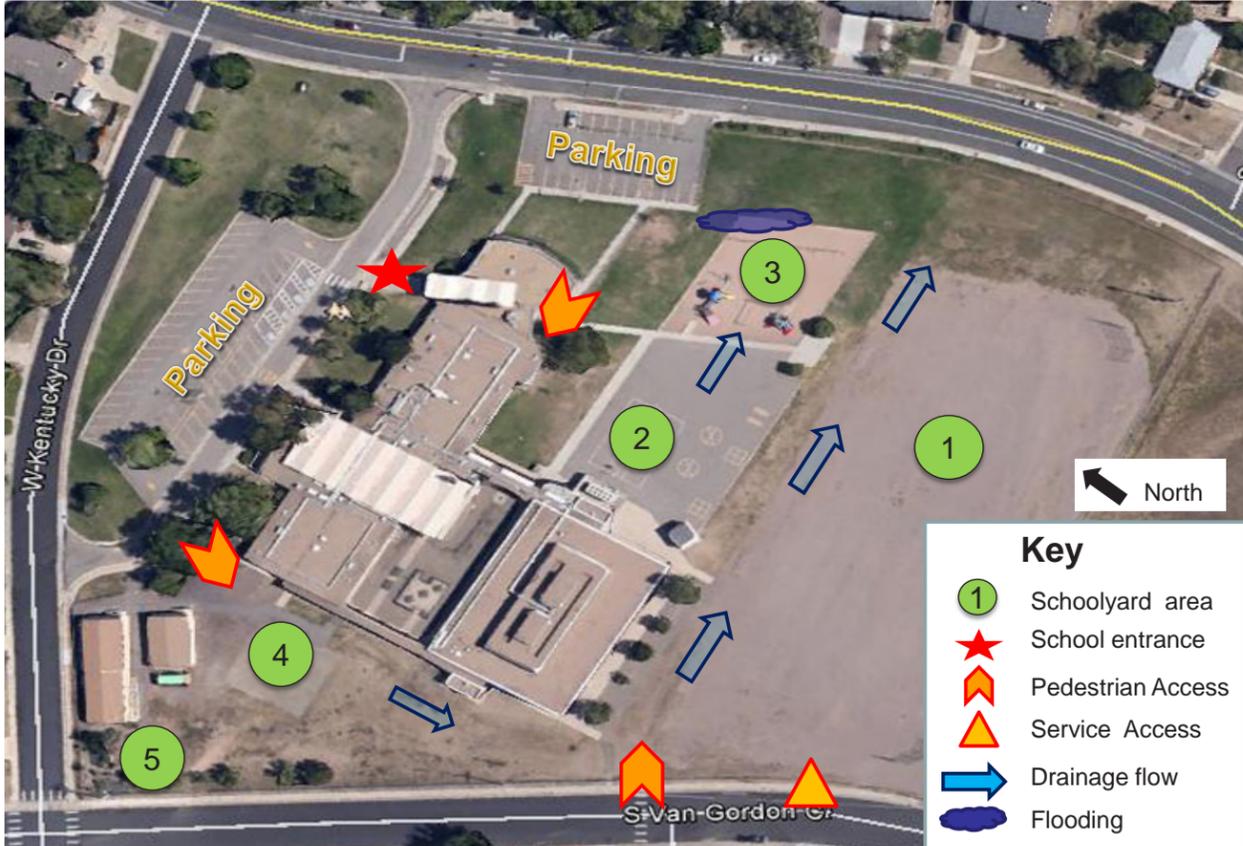
Maintenance at Green Mountain Elementary School is a combined effort between the school's Facility Manager and the District's Facilities Department.



# Schoolyard Assessment

The schoolyard at GMES is an adequate size for the number of students it serves but lacks appropriate surface types for physical activity. For the assessment the current layout was divided into five areas:

## Existing Conditions



- 1. Gravel Field
- 2. Asphalt/ Blacktop
- 3. Play equipment area,
- 4. West and Courtyard
- 5. Sara's garden

## 1. Gravel Field

A 59,400 square foot, multi-purpose, grass recreation field.

The existing field area is 1.9 acres of sterilized gravel. It is neither acceptable nor usable as a recreation field causing daily occurrences of scraped knees and ruined play equipment. The Physical Education teacher is unable to utilize the current field for instruction. Drainage on the existing field is inadequate causing large deep ruts to form and causing gravel to travel onto asphalt and sidewalks creating tripping and slipping hazards. The field is bordered by the exterior fence and has two backstops.



# Green Mountain Elementary School

## Part 1

### Assessing the Present Situation

#### 2. Asphalt/Blacktop Play Area

The 12,000 square feet of existing asphalt is in decent condition and is an adequate size for the population of students at the school. There are a few areas of the asphalt with drainage issues that ice over after snow events. The asphalt area has one very small basketball court with 6' goals, two small four-square games, two small tetherball courts, and two hopscotch courts. The asphalt area lacks color and students are not interested in participating in the limited amount of games currently offered in this area.



#### 3. Play Equipment Area

The existing 8,100 square foot play equipment area is not acceptable because it is not ADA accessible; it floods in storm events and is not appropriate for students with autism. The existing play equipment is high-quality and well maintained. It is approximately 15 years old and will be reaching its typical life cycle in 10 years. The existing play equipment area is not ADA accessible due to pea gravel surfacing underneath the equipment. There is an ADA ramp into the play pit and adequate transfer stations on the existing equipment but users with mobility issues are not able to cross the pea gravel to access the equipment. Pea gravel from the play equipment area travels onto the asphalt and sidewalks creating tripping and slipping hazards for students. In addition, the school has a high population of students with Pica, a condition where substances with no nutritive value, such as pea gravel, is consumed causing health risks to the students.

(<http://kidshealth.org/parent/emotions/behavior/pica.html>)



## 4. West and Courtyard

The west side of the school and inner-courtyard are underutilized and undeveloped areas of the schoolyard. The west side has a 2,500 square foot dilapidated asphalt areas surrounded by an 10,000 square foot non-irrigated native seed area. The west side lacks games and play equipment but is located near the ASD classroom and provides an ideal space for a new ADA and sensory play area. The 4,500 square foot asphalt courtyard has a 400 square foot elevated outdoor seating area with picnic tables. The seating area is underutilized because it does not have any shade and is not ADA accessible. The courtyard is utilized for students' bike storage. The courtyard is surrounded on three sides by the school building and could provide an ideal space for future outdoor learning spaces.



## 5. Sara's garden

A thriving school-based garden is located at the corner of the schoolyard at South Van Gordon and Kentucky. Sara's Garden is dedicated to a former student who passed away. Construction of the garden was an organic, grassroots effort to transform what was once a barren, unproductive patch of dirt and weeds into a rich foundation for organically grown vegetables and perennial flowers. (Frank Spatora - former teacher) Teachers currently utilize the garden for hands-on learning, but the garden needs room to grow and expand.



# Green Mountain Elementary School

## Part 2

### Design & Planning

## Design & Planning Process

The school's design committee met several times over the last 9 months to develop the schoolyard master plan and GOCO proposal. Initial meetings held in spring 2013 focused on student engagement and developing a student-driven design and planning process through an authentic learning process. Meetings fall 2013 focused on community engagement, fundraising, design development and phasing.

Each student at (GMES) participated in the schoolyard design process through writing, research, artwork, public speaking or fundraising. The students, as designers and planners, played an active role "shaping the environment" through a variety of meaningful and purposeful activities. The school's art teacher taught students about the design process and each grade level participated in a schoolyard design activity. Grades K-2 each developed different styles of three-dimensional construction paper models illustrating what they would like to see on their new schoolyard and then the students described the content of their models in writing. Third grade students developed crayon resist site plans from a "bird's-eye view" of their schoolyard. The students also developed a "key" and then wrote about the ideas proposed on the site plan. Fourth grade created pastel "pop-ups" illustrating what they would like to see on their new schoolyard.



Fifth and Sixth grade students created a collaborative three-dimensional freestanding model of their dream schoolyard landscape and then wrote about their creation.

Through this process the students were encouraged to use their imaginations and dream big. Through artwork, the students presented both practical and imaginative playscapes.

In addition to design the students participated in research, writing and public speaking. The school's Radical Writers, a group of male students working to improve their writing skills, worked collaboratively with the entire school. They prepared statements and then went classroom to classroom voicing their concerns about the current schoolyard and asking fellow students to imagine what they would like to see on their new schoolyard. Other students utilized the computers in the library to gather design ideas for natural play areas and outdoor learning. Finally, members of the Student Council have been developing public speaking skills by giving tours of the existing playground, attending design committee meetings and giving presentations at community meetings to the City of Lakewood City Council.

# Defining the School's Vision

## Green Mountain Schoolyard Vision

The Green Mountain schoolyard will be a welcoming environment for active play, authentic outdoor education and community gathering; designed to support the education of the whole child.

### Concerns

- ADA Accessibility – the existing play area does not have the proper surfacing for ADA access
- Pea gravel surfacing in play equipment area – student population with pica are ingesting gravel
- Gravel field is not safe for students and is not conducive to PE lesson plans
- The schoolyard has no shade
- Gravel from the field and the play area is traveling onto the asphalt and sidewalks creating tripping and slipping hazards
- The play equipment area does not have sufficient drainage and floods in storm events
- There is no place for outdoor education
- The perimeter of the schoolyard is fenced, but needs additional fencing for ASD and kinder students
- Students are bored and not being physically active

(GMES) School's collaborative student-driven, design process developed an innovative vision for the whole schoolyard. The students identified the need to get rid of gravel on the site as a top priority because of the number of classmates being injured when trying to play. Therefore, the grass field and play equipment surfacing to be the top priority for the schoolyard renovation. The students and design committee that construction of the field should be the top priority because it would provide a much needed resource and benefit to the greatest number of students and community members. They also felt the positive impact of the field on the community would serve as a catalyst to promote future schoolyard projects.

The schools design committee reviewed the student's designs and incorporated elements in to the master plan. LL Staff presented 2 design options to the committee – gathered feedback and then worked to refine final drawings and cost estimates.



# Green Mountain Elementary School

## Part 2

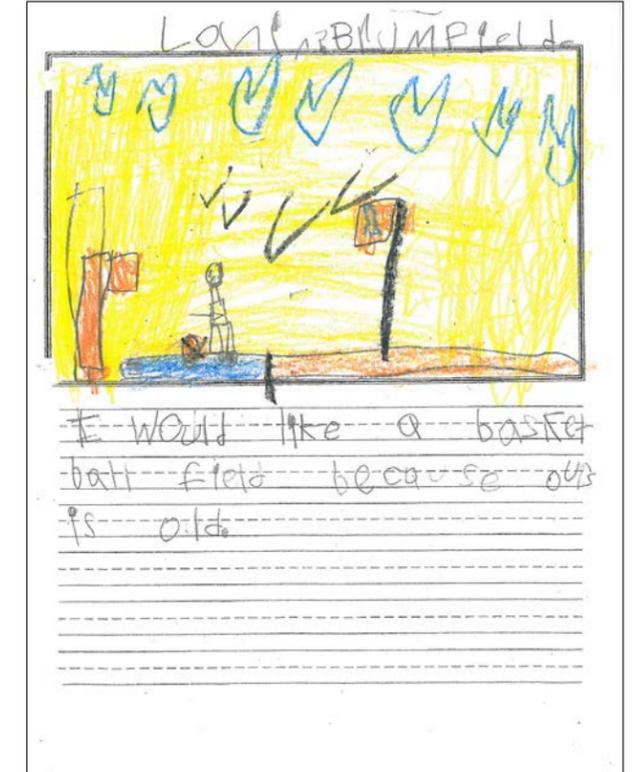
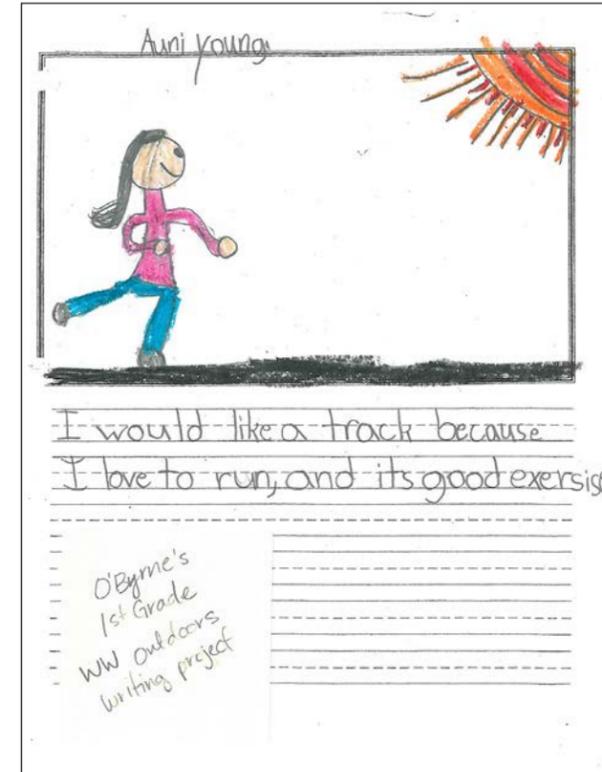
### Design & Planning

#### Goals

- Develop a school yard that supports the development of the whole child
- Create a safe and inviting schoolyard open to the surrounding community
- Increase physical activity and outdoor learning
- Create a fully ADA accessible play yard
- Incorporate natural playscapes to encourage a connection between students and the natural world
- Offer a variety of play equipment that is appropriate for all age groups
- Increase access to natural areas for students and the surrounding community
- Increase the amount of shade and gathering spaces to encourage positive social activity

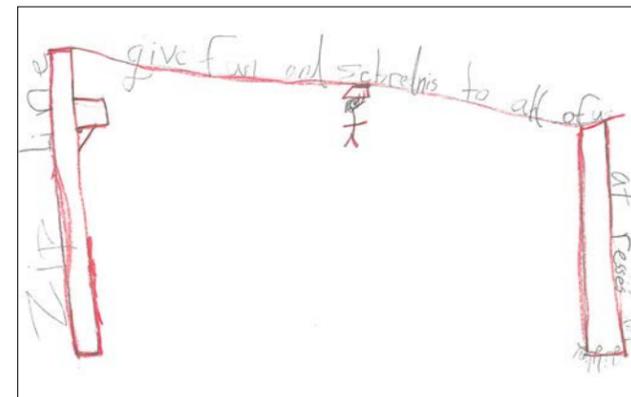
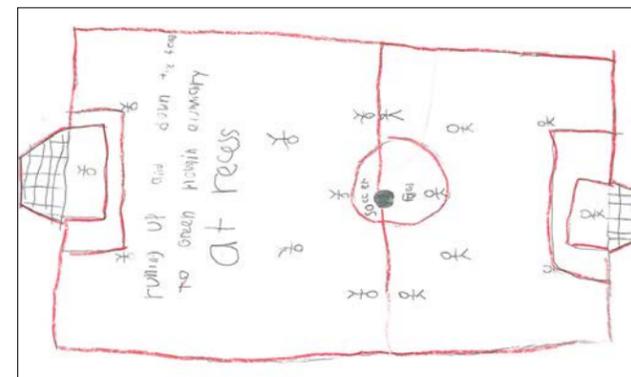
#### Wish List

- Multi-purpose grass field
- A measured walking track/ fitness path
- New fenced play equipment area specifically designed for Kindergarten and Autism students
- Climbing structure added to existing play equipment
- Expand basketball court
- Add games, maps, and color to asphalt area
- Shade!!!
- Seating areas
- Plants, flowers and trees
- Expand/ improve on the existing school garden – Sarah's Garden
- Space to accommodate a future greenhouse garden
- Space for the whole school to assemble outdoors
- Space for outdoor teaching and learning





The <sup>Aliah</sup> Levitating Rainbow  
 The Rainbowsesaw has soft handles  
 and bright colored seats. The reason  
 I made this was because there  
 is nothing new to play on in the  
 play ground and I made it very  
 comfortable material.

PLAY  
 Laugh  
 Advance  
 year  
 gift  
 respectful  
 obey  
 unashamed  
 nice!!!  
 display!

# Green Mountain Elementary School

## Part 2

### Design & Planning

## Site Plan - Option A



# Site Plan - Option B



# Green Mountain Elementary School

## Part 3

## Final Site Plan

## Master Plan



# Schoolyard Description

Green Mountain Elementary School's collaborative, student-driven, design process lead to innovative ideas for schoolyard improvements; including outdoor learning spaces, areas for safe physical activity and an inviting environment for the surrounding community. . Green Mountain is dedicated to educating the whole child with a focus on the social-emotional development of students in addition to academics. The schoolyard represents the connection between the students at school and the surrounding community. An improved schoolyard provides students a sense of pride in their environment, interaction with nature and an ideal setting for developing socialization and motor skills. Improvements to the (GMES) schoolyard will provide equal access to play equipment by all grade and mobility levels and authentic learning experiences through access to nature, ecosystems and plant life. The following list describes the proposed improvements to the schoolyard in an effort to fulfill the vision and goals developed by the design team:

## 1. Falcon Field

A multipurpose grass field at Green Mountain Elementary will replace the existing gravel field. For the first time in the 50 years since the school opened, students will be provided the opportunity to safely play field games. The existing field area will be re-graded, irrigation added and appropriate high-traffic drought-resistant sod or seed added.



## 2. Falcon Fitness Path

The fitness path with stabilized crusher fines surface will be used during recess, PE classes, and by the community. The path is a measured distance of 1/6th mile allowing users to easily calculate distance.



## 3. Riparian Habitat Education Area

The Riparian habitat education area will follow the natural drainage path to the south east corner of the schoolyard. The area will be planted with native species that will assist in storm water management and an interactive opportunity for students to learn about ecosystems, biology and ecology.



## 4. Peacemakers' Plaza

Peacemakers' Plaza will welcome students and community members to the schoolyard. Positive Behavior Interventions and Support (PBIS) is a cornerstone of Green Mountain Elementary curriculum and a pathway for a positive school environment. Peacemakers' Plaza will be a place to reinforce the PBIS curriculum and for students to go to resolve disputes by following a "path to peace". The plaza will also be a place for the school to recognize the donors who have contributed to the schoolyard project.



## 5. Shade Shelter

The shade shelter will serve as a visual focal point and central gathering area for the schoolyard. Underneath the shade canopy will be seating and educational elements. Students will be able to play and learn under the shade shelter. Teachers, staff and community members will be able to observe all areas of the schoolyard from the shade shelter.



# Green Mountain Elementary School

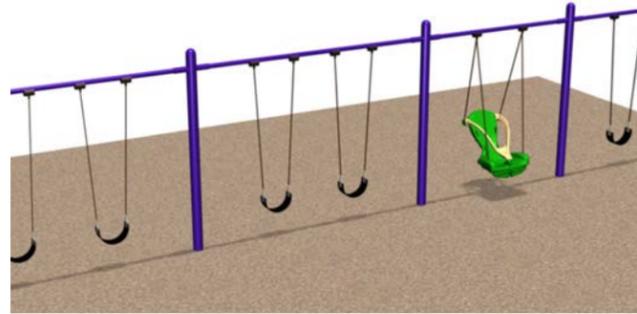
## Part 3

## Master Plan

### 6. Play Equipment Area Enhancement

The existing play equipment structures at Green Mountain Elementary are in good condition, but the area lacks accessible surfacing and climbing structures to challenge the oldest students at the school.

- **Safety Surfacing** - Remove existing pea gravel and replace with ADA accessible surfacing such as engineered wood fiber allowing the area to be accessed by all mobility levels.
- **Climbing** - Add a climbing structure to appeal to older students, provide activity to build upper-body strength and potentially provide additional area for PE.
- **Track-Ride approach** - Through surveys and drawings students indicated that they wanted a zip-line added to the playground. Interestingly, the play equipment area already has a track-ride which is very similar to a zip line, but the students are not able to reach the equipment. A simple fix is to add an "approach" or a piece of equipment that will allow students to reach the track-ride.



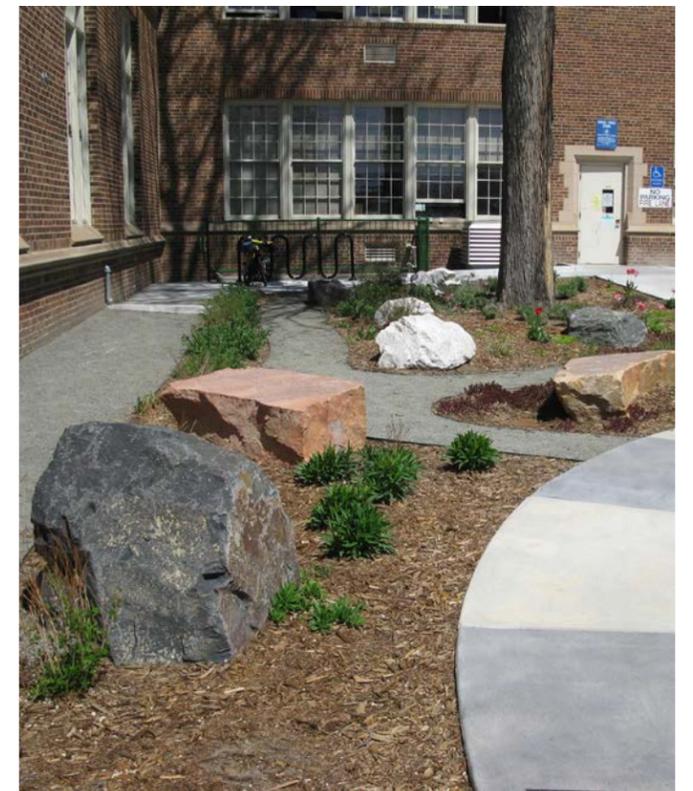
### 7. Enhanced Hard-Surface Games and Educational Elements

The existing asphalt play area is an adequate size to serve the needs of the school population. To enhance the play area the school the basketball court will be expanded and additional tetherball, four square and hopscotch courts will be added. All asphalt games will be enhanced with color and educational elements. In addition to games, colorful maps, number lines and other educational features will be added to the asphalt and hard surface areas.



### 8. Readers' Roosts

Readers' Roosts are activity nooks dispersed throughout the schoolyard. These areas will consist of natural features such as tree stumps, boulders and plant life and will serve a dual purpose as natural play areas and places of quiet reflection for 1-5 students. Students may seek out these areas for quiet time and teachers may use these areas for small group activities, reading and journaling.



### 9. Sensory Adventure Area

Green Mountain Elementary has an expanding ASD program for students with Autism. This existing play equipment and surfacing is not appropriately suited to meet the developmental needs of students with special needs or the school's youngest students. The Sensory Adventure Area will have developmentally appropriate play equipment, pour-in-place rubberized safety surfacing, and will be surrounded by a garden to encourage students' tactile interaction with plants and foster a stronger relationship with nature. The Sensory Adventure area will provide students a variety of textures, colors, and sounds. The area will include outdoor music equipment and small group areas for reading, writing and meditation. The area will be fenced for increased security and will be an asset to the students at the school as well as children from the surrounding community.



### 10. Outdoor Classroom

The outdoor classroom will provide an area for teachers to take a class outside for authentic experiential learning. The design of the outdoor classroom semi-circular arrangement of natural boulders and geologic elements stacked to provide each student visibility. The outdoor classroom will be surrounded by shade trees and habitat areas to enhance the outdoor experience provide shade and allow students immediate access to natural elements for observation.



# Green Mountain Elementary School

## Part 4

## Cost Estimate

## Full Cost Estimate

Category	Unit	Unit Cost	Quantities	Total Cost
<b>East side Play Equipment</b>				
Climbing Structure	LS	\$30,000.00	1 \$	30,000.00
Approach to Zip line	LS	\$5,000.00	1 \$	5,000.00
ADA Swing	LS	\$2,200.00	1 \$	2,200.00
<b>SUBTOTAL</b>				<b>\$ 37,200.00</b>
<b>East Side Play Surfacing (12" EWF Delivered/Installed)</b>				
Play Surfacing (12" EWF Delivered/Installed)				
Primary Play Area	SF	\$2.50	8,100 \$	20,250.00
<b>SUBTOTAL</b>				<b>\$ 20,250.00</b>
<b>West Side Play Equipment,</b>				
NEW Ramped Equipment	LS	\$90,000.00	1 \$	90,000.00
Climbing Structure	LS	\$20,000.00	1 \$	20,000.00
Outdoor Music Equipment	LS	\$10,000.00	1 \$	10,000.00
Installation	LS	\$25,000.00	1 \$	25,000.00
<b>SUBTOTAL</b>				<b>\$ 145,000.00</b>
<b>West-side Play Surfacing Pour-in-place surfacing</b>				
Play Surfacing (12" EWF Delivered/Installed)				
Primary Play Area	SF	\$12.00	2,500 \$	30,000.00
<b>SUBTOTAL</b>				<b>\$ 30,000.00</b>
<b>Falcon Field and Irrigation</b>				
Earthwork, Drainage, Irrigation, Soil Prep, Seed				
	LS	\$30,000.00	1 \$	30,000.00
<b>SUBTOTAL</b>				<b>\$ 30,000.00</b>
<b>Falcon Fitness Path Costs</b>				
Walking path: CONCRETE, 5' W X 4" D				
	SF	\$4.00	5,250 \$	21,000.00
<b>SUBTOTAL</b>				<b>\$ 21,000.00</b>
<b>Peace Makers Plaza</b>				
Concrete Flatwork- 4" depth				
	SF	\$4.00	1,000 \$	4,000.00
<b>SUBTOTAL</b>				<b>\$ 4,000.00</b>
<b>Shade Shelter</b>				
Shade shelter				
	EA	\$15,000.00	1 \$	15,000.00
Concrete plaza for shelter				
	SF	\$6.00	400 \$	2,400.00
<b>SUBTOTAL</b>				<b>\$ 17,400.00</b>
<b>Outdoor Classroom / Amphitheater</b>				
Outdoor Classroom				
	LS	\$15,000.00	1 \$	15,000.00
Earthwork and Drainage				
	LS	\$3,000.00	1 \$	3,000.00
<b>SUBTOTAL</b>				<b>\$18,000.00</b>
<b>Landscape Planting and Irrigation</b>				
<b>Native Planting Bed, "Riparian Area"</b>				
Soil Prep (4" Depth)	SF	\$0.55	1,500 \$	825.00
Irrigation	SF	\$0.55	0 \$	-
<b>Native Planting @ West Side sensory area</b>				
Soil Prep (4" Depth)	SF	\$0.55	7,500 \$	4,125.00
Irrigation	SF	\$0.55	2,500 \$	1,375.00
Plants, Shrubs, grasses				
	LS	\$25.00	500 \$	12,500.00
Shade Trees				
	LS	\$350.00	20 \$	7,000.00
<b>SUBTOTAL</b>				<b>\$ 27,175.00</b>

<b>West Nature Path Costs</b>				
Walking path: Crusher Fines, 5' W X 4" D				
	SF	\$1.50	1,750 \$	2,625.00
Crusher Fines Stabilizer				
	SF	\$1.20	1,750 \$	2,100.00
Steel Edging				
	LF	\$3.50	700 \$	2,450.00
<b>SUBTOTAL</b>				<b>\$ 7,175.00</b>

<b>Hard Surface Game Area EAST</b>				
Crack Seal Asphalt:				
	SF	\$0.90	12,000 \$	10,800.00
<b>SUBTOTAL</b>				<b>\$ 10,800.00</b>

<b>Hard Surface Game Area WEST</b>				
New Asphalt 4":				
	SF	\$2.20	5,000 \$	11,000.00
<b>SUBTOTAL</b>				<b>\$ 11,000.00</b>

<b>Metal Fencing</b>				
<b>4' Galvanized Fencing</b>				
	LF	\$20.00	250 \$	5,000.00
<b>SUBTOTAL</b>				<b>\$ 5,000.00</b>

<b>Hard Surface Game Striping &amp; Equipment EAST</b>				
Hard Surface Game Area Striping (B-ball, Tetherball, & 4-Square, US MAP)				
	EA	\$1,100.00	1 \$	1,100.00
Basketball Goals				
	EA	\$850.00	2 \$	1,700.00
Tetherball Poles				
	EA	\$350.00	3 \$	1,050.00
<b>SUBTOTAL</b>				<b>\$ 3,850.00</b>

<b>Hard Surface Game Striping &amp; Equipment WEST</b>				
Hard Surface Game Area Striping (B-ball, Tetherball, & 4-Square)				
	EA	\$1,500.00	1 \$	1,500.00
Funnel Ball				
	EA	\$1,200.00	1 \$	1,200.00
<b>SUBTOTAL</b>				<b>\$ 2,700.00</b>

<b>Site Furnishings</b>				
Trash Receptacle				
	EA	\$650.00	2 \$	1,300.00
Landscape Boulders				
	EA	\$200.00	15 \$	3,000.00
6' Bench				
	EA	\$850.00	2 \$	1,700.00
Banner poles				
	EA	\$600.00	5 \$	3,000.00
Entry Sign with hours available for public access				
	EA	\$2,000.00	1 \$	2,000.00
<b>SUBTOTAL</b>				<b>\$ 11,000.00</b>

**Site Improvements Total: \$428,725.00**

<b>PROJECT START-UP COSTS</b>	
Typical construction mobilization	\$10,000.00 \$10,000
<b>Demolition</b>	
Typical Demolition	\$10,000.00 \$10,000
<b>Architecture Engineering and Coordination</b>	
8% of construction cost	\$34,298.00 \$34,298.00
<b>Contingency Cost</b>	
10% of construction cost	\$42,872.50 \$42,872.50

**Project Start-Up Total: \$97,171**

### COST RECAP

Site Improvements Price:	\$428,725.00
Project Start Up Price:	\$97,170.50
<b>PROJECT GRAND TOTAL: \$525,895.50</b>	

# Phase 1 Cost Estimate

## Green Mountain Elementary School - School Play Yard Initiative

### PHASE 1 Schoolyard Redevelopment - Estimate of Probable Landscape Costs

This estimate includes phases 1 of schoolyard redevelopment for a potential GOCO Grant. Focus is on east side of schoolyard: traditional play equipment, field with walking path, shade structure to serve as outdoor classroom, colorful asphalt painting and improvements to Sara's garden.

Category	Unit	Unit Cost	Quantities	Total Cost
<b>East side Play Equipment</b>				
ADA Swing	LS	\$2,200.00	1 \$	2,200.00
Climbing Structure	LS	\$22,000.00	1 \$	22,000.00
Approach to Zip line	LS	\$6,000.00	1 \$	6,000.00
<b>SUBTOTAL</b>				<b>\$ 30,200.00</b>
<b>East Side Play Surfacing (12" EWF Delivered/Installed)</b>				
Play Surfacing (12" EWF Delivered/Installed)				
Primary Play Area	SF	\$2.50	8,100 \$	20,250.00
<b>SUBTOTAL</b>				<b>\$ 20,250.00</b>
<b>Falcon Field and Irrigation</b>				
Earthwork, Drainage, Irrigation, Soil Prep, Seed	LS	\$30,000.00	1 \$	30,000.00
<b>SUBTOTAL</b>				<b>\$ 30,000.00</b>
<b>Falcon Fitness Path Costs</b>				
Walking path: CONCRETE, 5' W X 4" D	SF	\$4.00	5,250 \$	21,000.00
<b>SUBTOTAL</b>				<b>\$ 21,000.00</b>
<b>Shade Shelter</b>				
Shade shelter	EA	\$15,000.00	1 \$	15,000.00
Concrete plaza for shelter	SF	\$6.00	400 \$	2,400.00
<b>SUBTOTAL</b>				<b>\$ 17,400.00</b>
<b>Landscape Planting and Irrigation</b>				
Sara's Garden raised beds, Irrigation improvements	LS	\$1,000.00	2 \$	2,000.00
Shade Trees	LS	\$350.00	9 \$	3,150.00
<b>SUBTOTAL</b>				<b>\$ 5,150.00</b>

<b>Hard Surface Game Striping &amp; Equipment EAST</b>				
Hard Surface Game Area Striping (B-ball, Tetherball, & 4-Square, US MAP)	EA	\$1,200.00	1 \$	1,200.00
Basketball Goals	EA	\$1,000.00	2 \$	2,000.00
<b>SUBTOTAL</b>				<b>\$ 3,200.00</b>

<b>Site Furnishings</b>				
Trash Receptacle	EA	\$650.00	1 \$	650.00
Landscape Boulders	EA	\$200.00	12 \$	2,400.00
6' Bench	EA	\$800.00	2 \$	1,600.00
Banner Poles	EA	\$600.00	3 \$	1,800.00
Entry Sign with hours available for public access	EA	\$1,000.00	2 \$	2,000.00
<b>SUBTOTAL</b>				<b>\$ 8,450.00</b>

**Site Improvements Total: \$135,650.00**

<b>PROJECT START-UP COSTS</b>	
Typical construction mobilization	\$6,000.00 \$6,000
<b>Demolition</b>	
Typical Demolition	\$8,000.00 \$8,000
<b>Architecture Engineering and Coordination</b>	
8% of construction cost	\$10,000.00 \$10,000.00
<b>Contingency Cost</b>	
10% of construction cost	\$10,000.00 \$10,000.00
<b>Project Start-Up Total: \$34,000</b>	

<b>COST RECAP</b>	
Site Improvements Price:	\$135,650.00
Project Start Up Price:	\$34,000.00
<b>PROJECT GRAND TOTAL: \$169,650.00</b>	

## Appendix **GOCO Applications**

# Student Drawings