Master Plan For
Ellis Elementary School

A DENVER PUBLIC SCHOOL-BASED
INTERNATIONAL COMMUNITY EDUCATIONAL EXPERIENCE

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Prepared For: Denver Public Schools
900 Grant St.
Denver, Colorado

Approved ______________________________, _____
Principal, Ellis Elementary date

Approved ______________________________, _____
CDM Representative date

Approved ______________________________, _____
P. M., DPS Facility Management date

Approved ______________________________, _____
Grounds Supervisor, DPS date
Facility Management

Ellis Master Plan
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PROJECT INTRODUCTION

The Challenge

Studies show that a well-planned and equipped exterior play area enhances the learning environment, resulting in improved learning and 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. A major secondary goal of all schools, including elementary schools, is to provide a focus for the community – a place to gather and to meet, a place to enjoy, a place that enhances the community’s appearance. Mayor Wellington Webb’s statement, “I have long recognized that we cannot have a great city and great neighborhoods without great schools,” is a reflection of this community value.

Denver Public Schools [DPS] is an urban school district with many of the same challenges as other urban districts. The infrastructure is aging – the average facility age is almost 50 years. The ongoing 1998 General Obligation Bond [GOB] will increase the number of schools to 130 but contains no funding for existing school playgrounds. Approximately 75 DPS elementary schools require moderate to extensive renovations or upgrades to meet adequate standards. These include replacing playground equipment, providing irrigation and sod [to eliminate gravel and dirt fields], providing American with Disability Act [ADA] accessibility, and providing an outdoor classroom learning environment. Approximately half of the 75 elementary schools are located within underserved neighborhoods. Transforming the schoolyards in these neighborhoods is most pressing. These schools have chronic disciplinary problems that are disruptive to a school’s academic environment. Playgrounds lacking appropriate choices for children become arenas to bully and tease. Recess should be a positive experience that compliments academic development; the playgrounds are a place where children develop their emotional, physical, and social skills.

The Solution

The “Learning Landscape” program is an entrepreneurial, community-minded alliance of public and private interests that seeks to strengthen Denver Public Schools and their surrounding neighborhoods by designing new multi-dimensional playgrounds and social gathering places. The success of this program is founded on a mutual respect of aesthetic, maintenance, safety, and recreational issues. The University of Colorado at Denver’s Landscape Architecture department offers a seminar course called FINDING COMMON GROUND—EXPLORING THE URBAN EXPERIENCE. Students of landscape architecture, architecture, and other disciplines come together with Professor Lois Brink to research current educational, sociological, and environmental thought regarding urban space in general and elementary school grounds in particular. Each student in the course selects a school from a predetermined pool and uses this knowledge to develop a vision and master plan for each school. The master plan approach suits a multi-faceted contemporary existence. It engages a child’s educational and recreational experience with that of the community at-large.
The Intent of the Master Plan

The master plan is a written report and plan that sets forth the structure for future campus improvements. Each school has a vision that embodies the desires of the school and surrounding community. The vision is further delineated into goals that identify the major components of implementation. The goals are defined through the use of text and imagery. A programmatic list of uses is also developed. Lastly, each master plan sets forth the aesthetic ordering system or systems that will be used in the design phase to organize the programmatic uses. This plan, once approved, will provide a framework for fund raising and future construction.
PART I: ASSESSING THE PRESENT SITUATION

The Location

Ellis Elementary School is located in the southeast area of Denver (Map 1), at 1651 South Dahlia Street. It is situated near the center of the Virginia Village Neighborhood. Children from the Goldsmith Neighborhood also attend Ellis. The two neighborhoods are separated by Evans Avenue, a very busy, four-lane, east-west arterial of Denver. The Virginia Village Neighborhood (Map 2), is bounded on the north by Mississippi Avenue and the City of Glendale, on the south by Evans Avenue, on the east by Quebec Avenue, and on the west by Colorado Boulevard. The Goldsmith Neighborhood (Map 3), is bordered on the north by Evans Avenue, on the south by Yale Avenue, on the east by Quebec Avenue, and on the west by Interstate 25. These neighborhoods are only a few minutes drive from downtown, which is easily accessed by Interstate 25. Ellis Elementary is just a few blocks from the Colorado Boulevard commercial district where many locally-owned specialty retail businesses and restaurants thrive. Just west of the school is Interstate I-25, a major arterial through the city of Denver and the state of Colorado.
History

Ellis Elementary was built in 1957. It was named in memory of Douglas B. Ellis, a teacher, boy’s advisor, and principal in DPS, from 1923-1955.

Community development prior to 1950 was minimal, with about half of the existing units occurring during the 1950’s. A less intense, but substantial rate of development of residential units occurred during the 1960’s and 1970’s. Since 1973, well over half of the development has been characterized by low buildings along curvilinear streets. More than half of the development is single-family residential use as well. Inspite of numerous re-zonings to other higher density uses, the neighborhood has remained stable because of its active and private market. (Copyright 1998 – The Piton Foundation)

Demographics

The residents of the Virginia Village and Goldsmith neighborhoods represent several ethnicities. Approximately 6.5% are African American; 0.6% Native American; 4.3% Asian/Pacific Islander; 18.6% Latino; and 66.4% non-Latino White. (source: The Piton Foundation). During the 2000-2001 school year, the Ellis student body was: 10.1% African American, 0.6%; American Indian; 7.2% Asian; 38.9% Hispanic; and 43.3% White (source: DPS website). The Ellis population represents students from thirty-four countries, speaking twenty-eight different languages.

The Constituents

As reported by the Piton Foundation, the combined population of these communities is 19,407, with 3,447 residents being under the age of 18. 556 of these minors attend Ellis Elementary. The school serves students in the Early Childhood Education (ECE) program through fifth grade. During the 2000-2001 school year, about 57.4% of Edison’s students qualified for free or reduced-price lunch (compared to a district average of 67.5% of elementary students). During this same year, the DPS also reported 32.2% of the students were English Language Learners (compared to a district average of 25.7%). 22.9% of the students spoke Spanish as their primary language (compared to a district average of 23.6%), and 9.4% of the students spoke a native language other than English or Spanish (compared to a district average of 2.1%). The diversity of the Ellis school community is unique, and is perceived as one of its greatest assets.

The school offers numerous opportunities, including a Transitional Native Language/English Language Acquisition Program, a Challenge Program, an Integrated Arts Program, an Optimists Super Citizenship Program, a Daily Physical Education program for students K-5, Kaleidoscope Corner, a licensed school-age child care program for before and after-school care, and Extracurricular activities and clubs for students both before and after school. (source: DPS website) The site design will take these needs into consideration.
Scores for the Colorado Student Assessment Program (CSAP) are outlined in the following table, providing a standardized assessment of student performance compared to previous years, other students in the DPS system, and other students throughout Colorado.

Table 1: Colorado Student Assessment Program (CSAP)

<table>
<thead>
<tr>
<th>2001 Totals (percent proficient)</th>
<th>Grade 3 Reading</th>
<th>Grade 4 Reading</th>
<th>Grade 4 Writing</th>
<th>Grade 5 Math</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ellis</td>
<td>48%</td>
<td>56%</td>
<td>19%</td>
<td>31%</td>
</tr>
<tr>
<td>Denver Public Schools</td>
<td>50%</td>
<td>35%</td>
<td>17%</td>
<td>27%</td>
</tr>
<tr>
<td>Colorado</td>
<td>72%</td>
<td>62%</td>
<td>38%</td>
<td>51%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CSAP Trend At Ellis (percent proficient)</th>
<th>Grade 3 Reading</th>
<th>Grade 4 Reading</th>
<th>Grade 4 Writing</th>
<th>Grade 5 Math</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>48%</td>
<td>56%</td>
<td>19%</td>
<td>31%</td>
</tr>
<tr>
<td>2000</td>
<td>57%</td>
<td>51%</td>
<td>30%</td>
<td>44%</td>
</tr>
<tr>
<td>1999</td>
<td>60%</td>
<td>53%</td>
<td>31%</td>
<td>***</td>
</tr>
<tr>
<td>1998</td>
<td>68%</td>
<td>65%</td>
<td>55%</td>
<td>***</td>
</tr>
<tr>
<td>1997</td>
<td>***</td>
<td>45%</td>
<td>43%</td>
<td>***</td>
</tr>
<tr>
<td>Change 1997 to 2001</td>
<td>-20%</td>
<td>11%</td>
<td>-24%</td>
<td>-13%</td>
</tr>
</tbody>
</table>

*** Test not given     **** Rank not applicable  
Source: DPS website on Ellis Elementary

Staff, Teachers, and Parents

Dr. Gary Funk is the current principal, and Cari Riedlin is the current Vice-Principal of Ellis elementary school. Dr. Funk has been the principal at Ellis for 2 years. Cari Riedlin is a new Vice-Principal at Ellis this school year. The Collaborative Decision Making (CDM) is comprised of the principal, four teachers, four parents, one classified school employee and one business representative. Faculty and staff are elected by their respective groups. Parents are elected by a majority of voting parents who have children attending Ellis School. Even though they are both encouraged and welcomed, only a few of the 556 students’ parents attend the Parent Teacher Association (PTA) meetings. Currently, there is a very strong emphasis at the school on literacy due to the recent declining trend in the school’s CSAP scores. (Source: DPS website)
SURVEY OF COMMUNITY DESIRES

Students, teachers, parents, school administration, and community members were surveyed to assess what their programmatic interests were for the playground.

Discussions were facilitated in the Parent – Teacher Association, Collaborative Decision Making, and Faculty meetings to gain verbal input regarding their vision and goals for their playground.

Participants were then asked to imagine their “ideal” playground. Additionally, 75 students from first, third and fifth grade classes created drawings and provided comments to represent their vision of the ideal playground. Drawings produced in these workshops are included in this master plan. The tabular results of this session are also included in Appendix II.

The purpose of this input was twofold: to generate a list of programmatic elements which people have identified as ones that they would like to use in the new playground, and to get the students, teachers, parents, and community members involved in the process of creating this community space, giving them a stake in its success. The results demonstrate a clear desire for new playground equipment (including swings), a shade pavilion, and a grass field. Additionally, the broad range of other responses indicates the need to provide a spectrum of other creative experiences for students.

“Play has many functions: it gives children a chance to be together, a chance to use their bodies, to build muscles, and to test new skills. But above all, play is a function of the imagination. A child’s play is his way of dealing with the issues of his growth, of relieving tensions and exploring the future.” (Source: Christopher Alexander, et al A Pattern Language, p.368, 1977)
Site Inventory and Safety Assessment

General Surface Areas

The Ellis playground is one of the largest in the DPS system. The K-5 playground consists of 127,876 sq. ft. of “soft surface” (pea gravel packed with dirt), and 38,333 sq. ft. of asphalt. The ECE playground consists of 34,366 sq. ft. of grass, and 2,706 sq. ft. of “soft-surface” pea gravel. A chain-link fence separates the K-5 play area and the ECE play area.

Playground Equipment

The play equipment is concentrated in two areas located in the southeast corner of the grounds. One metal slide and 12 swings are located in the ECE area. The play equipment for K-5 is just west of the ECE. Aside from one play structure in the K-5 area, Ellis’s playground equipment is old, outdated and, in some cases, unsafe. Most of the “soft surface” area of the playground is covered with pea gravel packed with dirt, which is not consistent with safety standards. The swings in both the ECE and the K-5 areas are 3 per bay and do not meet DPS standards.

Photo 1. View of the K-5 “soft surface” play area from the southwest area of the playground. 5 Sep 2002 by Nancy Ellwood
Playing Fields

Four overlapping baseball fields, each with a backstop, are located between the center and the west side of the play area. These fields are also “soft surface” (pea gravel packed with dirt.)

Asphalt Area

A large asphalted area is located adjacent to the school building. Designated on the asphalted area of the playground are two basketball courts, ten tetherball courts, six four-square courts, four two-square courts, three wall-ball courts, two dodge ball rings, four hopscotch games, and a colored map of the United States. The students enjoy these play opportunities, however the asphalt surface is cracked and sunken in areas and present a safety hazard.
Vegetation

The front entrance of the building is landscaped with grass, a few mature trees, and shrubs. Several mature deciduous trees are located along E. Mexico Ave. (on the southern edge, and along S. Dahlia St. (on the east eastern edge) of the grounds. New deciduous trees have been planted along the west side of the baseball fields, and between the south-facing classrooms and the playground. For the most part, however, the interior grounds are void of any vegetation, including grass. More trees could provide shelter from the sun and create small, informal play areas.

Photo 4. View of the Ellis School building main entrance on S. Dahlia St. 5 Sep 2002 by Nancy Ellwood

Denver Urban Garden (DUG) is building a community garden in the northwest corner of the school ground. In addition to the garden, the DUG site plan calls for re-landscaping the area along the western edge of the classrooms. Several existing mature trees are incorporated into the plan, along with the addition of benches, to create a shaded gathering place and picnic area for students and community members. The site plan for the DUG garden is included in Appendix XX.
Photo 5. View of the DUG garden which is being constructed in the northwest corner of the school grounds. 5 Sep 2002 by Nancy Ellwood

Photo 6. View of the area on the west side of the school, between the community garden and the baseball fields. 5 Sep 2002 by Nancy Ellwood
Pedestrian Access

Street entrances into the grounds are located on the north, east, and south. None of the entrances are currently gated, nor are they celebrated in any fashion. The entrance at E. Mexico Ave. has been identified by Dr. Gary Funk, the Ellis Principal, as a particular problem because “It is out of sight and unattended, and it frequently becomes an area for unsightly graffiti and/or broken bottles.” There are no paths or circulation elements organizing the playground.

Handicap Accessibility

The playground is accessible from both the east and the north sides of the grounds. Also, a ramp provides access from the building to the asphalt area. Access to play equipment and the ball fields is not up to requirements, due to the gravel used to surface these areas.

Vehicular Access/Parking

A parking lot is located immediately north of the school building along E. Iowa Ave. The lot has 88 spaces, including 5 handicapped spaces, which exceeds the requirement by DPS standards. Most of the vehicle drop-off/pick-up occurs along S. Dahlia St. near the main entrance to the building. This is a safety concern for three reasons: 1) There is no place to pull over away from the busy street traffic, 2) Both busses and personal vehicles drop children off along this curb area, and 3) Kids have to walk all the way around the school to get to the play areas.
Service/Maintenance

Service and maintenance access to the school is from the parking lot on the north side of the building. There is also an entrance to the kitchen on that side of the building. These access points are convenient and do not conflict with other uses.

Drainage

The Ellis playground is not adequately sloped and has low spots which collect water. The asphalt has cracks and sunken areas revealing low spots which collect water and/or ice, becoming a very dangerous safety hazard. There is a drain near the center of the play area, but it is inadequate and there are numerous areas of erosion throughout the play area, which are also dangerous safety hazards.

Another significant drainage concern is due to the cement walls which extend along the south and west sides of the playground. They were constructed to raise the grade for the large flat playground. These walls retain water from playground run-off and homes adjacent to the playground have experienced flooding and loss of electricity when excess water collects.

Ambience

Currently, the playground lacks any sort of character that would invite either children or community members to enter. There are no defining elements that draw attention to school or the playground, just gravel fields and out-of-date play equipment. The new playground will be a source of community pride that will attract both children and adults.

Adequacy of On-Site Uses

In addition to the “soft surface” being un-friendly and unsafe, the existing play equipment is not adequate for the number of students that use the playground. The current play structures and activities only afford play opportunities for 25% of the students. The one new play structure is not age appropriate for the third to fifth grade students. Also, there is very little shade, and it is not available near the areas of the playground that will be most used. There needs to be a drop-off/pick-up area in front of the school.

Surrounding Uses

Ellis is in a residential neighborhood. Most are single-family homes, 40% of which are owner-occupied. There are multi-unit, high-rise apartment buildings on the west side, located between the school and Colorado Blvd. There are also a few businesses located on streets between Colorado Blvd. and the school. Colorado Blvd. is a commercial district, with heavy vehicular and pedestrian activity, as well as offering access nearby to Interstate 25.
PART II-THE MASTER PLAN, CREATING THE FUTURE

Introduction

There are 5 components to this master plan that are intimately intertwined in the development of the playground:

- The vision and measures;
- The list of programmatic elements;
- The spatial concept;
- The organizational concept; and,
- The precedents.

The Vision and Measures speak directly to the needs and desires of the school and surrounding community for the playground. The Vision concisely states what the playground is intended to become. The Measures lay out more specifically how the vision is fulfilled, i.e. what the place will “feel” like, what will happen there. The list of programmatic elements specifically quantifies the physical things and spaces that make-up the playground. The spatial concept diagrammatically describes how the programmatic elements spatially relate to one another and to the surrounding context. The organizational concept sets up a method for organizing the programmatic elements on the grounds. Like the spatial concept, it is also diagrammatic in nature. Finally, the precedents speak to the visceral, experiential quality of the spaces and the elements within them. The precedents are not what the spaces will be, but rather what they might be like. They are metaphors.

Together, these five components become the driving force for the actual design of the playground. Since these components are derived from the initial research and analysis, they powerfully address the needs and concerns of the school and surrounding community. And, as such, they are the seeds and the soil from which a fruitful, thoughtful design grows.

Each of the first 4 components of the master plan is outlined or diagrammed in the following pages. The precedents are then used to illustrate a description of how the programmatic elements are organized spatially to fulfill the measures of the vision.
A Celebration of Diversity, Exploration and Imagination
A Vision for Ellis Elementary

Imagine Ellis Elementary a few years from now... Ellis’s landscape will be a unifying place that fosters learning and celebrates its community’s diversity. A place where diversity, exploration, and imagination are encouraged. It is a place where the community gathers for recreation, discussion, and education. Ellis provides opportunities for exploration and learning inside and outside its classrooms, acknowledging that each of us learns in our own way. Ellis is a safe, colorful gathering place “owned” by the community that accommodates the needs of a single child and a community at large.

This vision articulates the three main goals of Ellis Elementary School’s master plan. We will know that the master plan has been successful when these goals have been fulfilled. Ellis will fulfill the vision by achieving the following:

Goals

1) To create a multi-cultural setting that celebrates the diverse international population of the Ellis community.
2) To create a safe, inviting place in which the Virginia Village and Goldsmith communities can take pride.
3) To enhance the children’s outside learning experience through exploratory and imaginative play.
   • Engaging activities
   • Age appropriate
   • Physically challenging
   • Mentally challenging
4) To create a sustainable, low-maintenance landscape.
ELLIS ELEMENTARY
LIST OF PROGRAMMATIC ELEMENTS:

Multi-use grass field(s) (soccer, softball, football, Frisbee)
Circuit walk/run track
Hard surface
  Two basketball courts
  Ten to twelve tetherball poles
  Three wall ball areas
  Six four-square games
  Four two-square games
  Two dodge ball rings
  Four to six hopscotch games
Play equipment areas
  ECE
    Self-contained area with grass, shade and play equipment with a minimum of twelve swings, climbing, and hanging elements
  Primary
    Age appropriate play equipment with climbing and hanging elements
    10 swings
  Intermediate
    Age appropriate play equipment with climbing and hanging elements
    10 swings
    Zip line
Amphitheater/Stage
A shade structures
Outdoor classrooms
  Science
  Math
  Cultural Arts
Gateways/thresholds (3)
Drop-off/pick-up area
Intimate informal space
  Berms
  Benches
  Game tables
Trees
Art/science elements
  Weather monitoring station
  Compass
  World Map
  Solar system map
Gardens
  Water harvester-rain garden
  International garden (DUG)
Picture 2. Example of Amphitheater, compass and state map by EDAW, 2000

AN AMPHITHEATER, top, serves as a meeting space. It includes the pond overlook, above and left, which is decorated with a mosaic map of Missouri.

Picture 3. Example of Math Playground by EDAW, 2000
The most important part of this master plan is to create an outdoor learning environment that will be valued for its representation and celebration of the multicultural community in which it exists. Included in this design are many different elements of varying scales, materials, textures, and programmatic elements that will challenge the students—gateways celebrating diversity and education, fun equipment, quiet places for rest and shade, natural habitats that will promote knowledge of and respect for nature and ecology, and outdoor spaces for teaching and learning.