

A horizontal banner image featuring a close-up of several vibrant pink flowers in the foreground, with a soft-focus background of a field of similar flowers under a bright sky.

Design for Da Vinci

Flexible Site Design for a Charter Academy

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Design For Da Vinci

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[abstract]

As we face an ever more technical, fast paced world, we have seen the need for a change in the way we teach our young people to deal with issues they may face. Our traditional system emphasizes memorization and test-taking skills to increase your knowledge on subjects that provide a foundation for the types of problems a student might face in the real world.

In addition, more young people than ever are applying to colleges creating the most competitive academic climate we have ever seen. Admission rates at the best schools in the nation have dropped to below 7%. Out of this demand for a more competitive real world learning environment, we have seen the development of the charter academy, a school that promotes a diverse education experience where students are given more independence in their education. Da Vinci Charter High School in Davis, CA is a part of both the New Technology Network (NTN) and Project Based Learning (PBL) system, supporting 21st century knowledge while incorporating everyday techniques of critical thinking, group work, and self-motivation.

In this project, I will assess the current state of Da Vinci high school's campus in terms of meeting the needs of it's 21st century curriculum. I will then propose design improvements that work in conjunction with the charter school philosophy to not only improve the functionality, but also the educational value of the campus. In terms of implementing these designs, I will discuss how the community (students, staff, parents, and neighbors) can play a key role in creating a stronger educational environment through a few, hands-on changes to the landscape.

Charter Schools in California propose new diverse teaching methods that must be supported with a new type of campus design that challenges, stimulates, and supports the students learning experience.

[dedication]



I dedicate this project to my family and friends who have all been there for me throughout my life to pick me up and give me encouragement. Most especially, I would like to thank my Grandmother and Grandfather who have made every opportunity I have possible. They are both the strongest people who have endured amazing trials in order to make my life what it is today.

Oma and Opa, thank you.

[acknowledgements]

I would like to thank my advisors and mentors for advising and supporting me throughout this process:

To Gerrie...Thank you for your kindness and encouraging spirit. Meetings with you were always enjoyable and educational at the same time. This is a lesson I will take to teaching if I ever find myself in the profession.

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[Chapter 1]

About Charter Schools

Charter schools arose out of the clear need for an alternative form of education to compete with a global increase in technology. These types of schools were developed in the early 1990's to make up for the lack of diversity in public school education for young students. In 2004 there were nearly 500 charter schools in existence in California and the number continues to rise (Williams 4). In the beginning, charter schools were formed under very loose guidelines with lots of freedom for interpretation. This allowed school officials to create their own very unique learning style without being restricted by traditional education standards. Over time, skeptics of the charter academies began to notice faulty practices and the lack of oversight creating little direction for students. Lack of standardized testing and achievement ratings left many critics wondering whether charter academies were

providing students with an appropriate education that would prepare them for the next levels in the learning career.

These issues culminated with the passing of new legislation assigning the same regulation on Charter schools that exist for non-charter schools. Standardized testing and regulations occur at Charter schools and give district and policy makers a gauge as to how well they compare. In a study performed by the RAND Corporation, test scores of API, student math and reading scores, ethnicity, English Learner status, and parental education it was found that charter schools performed comparably and even slightly lower in some cases than traditional public schools. The results suggest that many schools are still working to fully develop their teaching curriculum to meet the standards of our traditional standardized testing system. In addition, because the styles of curriculum vary so much from one charter school to the next, it is hard to apply the same blanket testing systems that would apply to traditional schools.

Facility and funding issues

In addition to new regulation on curriculum performance, new legislation began enforcing equality when it comes to the facilities of charters compared to non- charter schools. When charter schools were first developed, it was assumed that they would either be housed on existing school facilities and just share space, or come up with the money on their own to create their campus (Brunner 35). As would be expected, this system has not worked out and many schools have had issues gaining adequate facilities for their students. In the beginning, since there was no legislation governing the distribution of facility space to charter schools, they would usually be housed somewhere on an existing campus in much less sufficient space compared to the non-charter schools. In 2000, California voters passed proposition 39 which gave much more support and required school districts to supply charter schools with facilities that were comparable to other schools in the district. It also required that the facilities were furnished and that the

charter school would be given sufficient time if they were asked to move (Williams 21).

In looking at the history of Da Vinci's experience with campus facilities, we can see the district could be doing a better job to ensure equality between the charter and non-charter campuses in Davis. Originally located in a few small temporary buildings at the Davis High School campus, Da Vinci was moved to the previous site of Valley Oak Elementary 3 years ago and has faced many challenges in getting renovations and repairs performed on the facility. This campus is over 50 years old and has some serious functionality and issues that I will address later in this document. Working with their diverse and interactive curriculum, a new campus design to support outdoor learning and work space could vastly improve the quality of education for these students.

[chapter 2]

Alternative Education Practices

Project-based Learning

In forming an honest assessment of the current campus at Da Vinci High school, we must first look at their curriculum, which emphasizes hands on projects requiring students to think independently and across many fields to achieve a final, undetermined goal. Project-based Learning is defined in the Project-based Learning Handbook as “a systematic teaching method that engages students in learning knowledge and skills through an extended inquiry process structured around complex, authentic questions and carefully designed products and tasks” (Markham, viii). The students at these schools are presented with specific problems developed by the teachers to challenge their critical thinking skills and promote an active investigation of a solution through research, practice, and community outreach.

As opposed to traditional education where the projects are a secondary aspect of the curriculum, for PBL schools, projects ARE the curriculum. The students are given the problem at the beginning and encouraged to explore any avenue as a solution, while the teacher acts as more of a facilitator guiding that students rather than taking them through a step by step process towards a pre-set solution (Markham, 6). This allows the students to take ownership of the project and promotes independent study rather than closely monitored classroom work. Some students may need closer guidance in the beginning but with the teachers help will usually find their path towards producing their own method.

New Technology Network

New Technology Network programs represent another facet of the evolving face of our high school curriculums that addresses the need for a stronger technical background to survive in the working world. New Technology Network was developed by local

community members and business leaders in Napa, CA who saw that traditional high school curriculum not preparing the students for the economy that was developing in that area. According to Napa New Tech's website, they proposed the development of a new kind of high school that emphasized computer work and learning to use the devices to solve problems and create presentations. Every student at a New Technology Network school has access to their OWN laptop, which they can work on anytime throughout the day . Class structure for these schools is much more free-form allowing the students time to develop their own ideas, work in teams, and prioritize events to make sure the final product is delivered on time. Once again, there is no step-by-step process created by the instructor, students are asked to create their own project from the problem that is given to them.

[chapter 3]

Da Vinci Charter Academy

Background

Da Vinci Charter Academy bases its curriculum around the fundamental values of project-based learning and the new technology network in order to provide a more stimulating, self-reliant education for the students who attend. Their campus is located in the north-east downtown core of Davis, CA. This small town is home to the University of California, Davis and has a population of a little more than 60,000 people (“cityofdavis.org”). Most students who attend the school commute by bicycle and live within a few miles of the campus.

The Students:

When I first met the students at Da Vinci High School, they struck me as confident, intelligent, and strong willed with very particular demands for their campus. Their ideas were wide-ranged but well thought out. They were

not afraid to propose ideas that some would label as preposterous -such as a playground for high school students- because they embrace the unique educational values that a more diverse campus would support. The staff at Da Vinci is also very unique and extremely passionate about the revolutionary education they are providing for their students. A wide range of teachers with unique backgrounds combined with a staff of administrators providing technical to psychological support for the students creates an stirring atmosphere of energy and promoting creativity. Students constantly approach the teachers with new ideas and the teachers must work to become facilitators rather than instructors. Instead of giving the student a standard “Yes or No” answer, they usually respond with another question, forcing the student to think more about their problem and come up with their own solution.

The Parents

The parents at Da Vinci share the same passion as both the staff and students and work hard to promote

a strong learning environment for their children. The parents attend meetings, volunteering their time, money and resources to ensure that the students are receiving the best opportunities possible for education. Sharing the philosophy of project-based learning and new technology network, the parents brainstorm and research alternative methods for achieving success solving the problems faced in developing a new curriculum. The parents support will play a key role in improving the sites of any charter school campus.

The Current State of Affairs:

According to the Single Plan for Student Achievement, it was accounted by the Davis Unified School District that Da Vinci High School’s campus “limits our ability to offer a more comprehensive and innovative program, which would improve student achievement.” Da Vince’s location on the previous site of Valley Oak Elementary School provides for some interesting challenges as well as opportunities. According to, Da Vinci moved to this site two years ago

from Davis High School's campus where they had only a few portable buildings and a small courtyard. This campus was an upgrade from the portables as they now have a space (mostly) to themselves. They share the campus with a preschool, an adult school, and a daycare but there are three large classroom buildings designated for their use only.

The physical structure of the facility creates challenges in that it was created to provide space for students of ages 5-12 and now has been occupied by students in the age group between 14-18. These students demand different usage for the space than the elementary school children did. For example, many of the walkways alongside the buildings are very narrow and have mainly right angle turns which would allow elementary school teachers to walk the students in controlled, single file lines. The high school students however, pack into these narrow walkways in order to avoid the muddy areas, uncovered areas between the overhands.



3.1 Narrow/linear walkways

In terms of functionality, the campus struggles to provide a consistent learning space, as there is now specified maintenance schedule to keep the campus looking trimmed. In the summer there will be times when there is plant growth exceeding several feet in height. In winter, drain inlets clog with debris leading to flooding and muddy surfaces where there is no pavement. If campus improvements are made, there must be some effort to create a regular maintenance plan with the district that they will agree to follow. Without this agreement, any effort for improvement

will be lost in just a short time due to lack of care. In addition, parents and other skilled volunteers must be continually kept involved to ensure proper maintenance of the campus.

A Charter School Landscape:

Based off these conditions, there are some improvements that can be made to improve the educational aspects of the landscape for both the short and long-term success of this charter school. Based off of their values and the fundamentals of their curriculum, a new campus promoting outdoor learning and group interaction can be created through increased paved surfaces and flexible seating. Increased accessibility for bicycles (the main mode of transportation), a new main entrance, and clear path's of travel will improve circulation and decrease confusion on the campus. Overall, an increase in plant diversity will add texture, structure, and aesthetic value to the campus that will encourage the students to spend more time in their landscape rather than avoiding it.

The following will assess examples of landscapes

that incorporate some of these elements in order to promote educational charter school environments. I will provide a more thorough analysis of the Da Vinci campus considering the success of these elements. In conclusion, I will propose solutions to the issues faced by the Da Vinci Campus in attempt to create a new charter school campus design standard.

[chapter 4]

New Tech In the Landscape

In coming up with the best design for Da Vinci, I used the following research methods to gain information about the site, its users, and the philosophy of the campus as a whole. Performing a case study analysis of Napa New Technology High School in Napa, CA was important because it was the original New Technology Network High School and serves as a campus model for schools joining this network. I spent a few hours touring the site both with a student guide and by myself to observe the usage, traffic patterns, and aesthetics of the different spaces of the site.

The following outlines this process in detail and concludes with findings on the effectiveness of implementing project-based learning and New Technology Network into a campus landscape.

Case Study Research: Napa New Tech



4.1 Front entry to Napa New Tech High

Napa New Tech High represents the model charter school for the up and coming New Technology Network schools in northern California. Currently, our education system is undertaking a large effort to make our students more competitive on a worldly basis. This means preparing students for all types of situations and problems they may face in the real world through group learning, self-motivation, and self-regulation. Students at New Tech High embrace all aspects of these ideologies.

Curriculum in the Landscape

Their campus facility provides a diverse array of spaces that promote outdoor learning, interaction between students, and some traditional high school campus features that serve as the glue holding things together.

Unlike other typical non-charter schools, Napa New Tech does not have an athletic program leading to very little programmed recreation spaces outdoors. Many of the spaces are open for interpretation of use by the students, whether it's a large grassy field or group seating spaces; the programming of the elements is left up for the students to interpret. The students build 3-d models, competition-level robotics equipment, and lots of other projects in these spaces because they provide work spaces that are not already defined by the designer. In cases where the programming becomes too rigid, the spaces lose purpose and the students are less likely to use the spaces.

Indoor Cyber Cafe

One of the spaces that was especially populated by students was not a part of the landscape but served as a good study, collaboration, work space for the students. The Cyber Café at Napa New Technology High School is a large, natural lit, open space with lots of movable seating where the students have free Wi-Fi Internet and large dry-erase boards to work out the issues of their projects.



4.2 Cyber-Cafe at Napa New Tech High

This space provides the following elements that contribute to its success:

- Open floor plan
- Flexible/diverse seating options
- Natural lighting
- Table-top work space
- Dry-erase boards for drawing/brainstorming project issues
- Wi-Fi internet

Weaknesses

Here I will outline a few features of the campus that had good intention, but do not provide the type of high level learning space that will excite students to leave their classrooms and enjoy their campus.

Group-Seating Circles

These group-seating circles were placed in a variety of places throughout the campus landscape. The original intention of the circles was to promote interaction in small groups for the students when they work on projects. When speaking to one of the students she emphasized the fact that although the seating space

seemed practical, the areas did not receive heavy usage for a couple of reasons:

1. Flexibility: the seats were permanently placed in the landscape not allowing the students to manipulate the way they were sitting according to the size or usage
2. Proximity: the seating space pictured below was one of the smaller group seating circles showing how hard it would be to have a conversation with someone across from you. Even talking to someone a few seats away from you would be difficult because of the angle of the seats.
3. Project Work Space: the students at project-based learning schools spend a lot of time building things with their hands and not having a workable space like a table top would severely hinder their ability to use a space.



4.3 Group seating circles at Napa New Tech

Garden Plots

These garden plots had been set up for a few years and they had yet to use them (they're the areas covered with the wood mulch). The original idea was to harvest crops and then donate them to a local restaurant to be used as fresh produce. However, the students said this system had not been set up, and therefore they were not growing the plants. Here are some of the issues I noted from having garden plots at a New Technology Network School:

1. Curriculum Support: the students noted that even though they have the area set aside to grow a garden, it had not been incorporated into any of their class work and therefore was not being used.
2. Functionality: These planters lack functionality in terms of their fluctuating shape, lack of border, and small size that would make it difficult to grow vegetables. Pests would become a major issue and protecting each small plot would become a major hassle.

3. Location: The garden plots are located adjacent to an outdoor basketball court and without any real defined borders the plots on the edge would receive a lot of damage from foot traffic and balls bouncing into them.



4.4 Un-used garden plots at Napa New Tech

[chapter 5]

The Design: Community Input

Designing for Da Vinci: PBL and NTN

I initially sat down with the people who use the site the most- the students. Understanding their goals for the site gave me a good starting point into not only understanding the type of campus they were imagining, but also the character of the students and how well they would be able to collaborate with me on the project. Following this meeting, I sat down with the staff and parents in several different scenarios to discuss budget, brainstorm possible implementation methods, and discuss general ideas for campus improvement. I took their input and applied it to my own observations and analysis of the site to see what solutions and design initiatives could be made in an effort to improve their campus.

Meet the Client(s)

Student Input

In the fall I met with a group of three students as part of a class project to help the Da Vinci community to come up with some better designs for their campus. We put a lot of effort into achieving the goals that those students set forth for us as the main elements they desired. In the end, it was my hope to receive more feedback from the parents, staff, and neighboring communities who would all represent a different opinion on how the site should be re-designed. In our final presentation, only a few parents and staff showed up, not allowing us to receive this feedback (the students still found the designs dazzling as we had given them every thing they desired).

At the onset of this project, it was my goal to go back and meet with these groups and obtain their feedback for the issues THEY saw as the most important for the site. Not to imply that the student feedback was unimportant or not relevant, but I saw them as being very biased and wanting very specific

things not only because they were all students. But, they were also all seniors and two had attended the school when the campus was an elementary school, making them especially opinionated when it came to the removal of any items reminded them of their childhood experience on the campus. It was important to go back and speak to the parents, the teachers, the staff, and the neighboring community members who would visit the site and have different usage of its features. And similarly, different complaints about its deficiencies.

Community Design Walkthrough

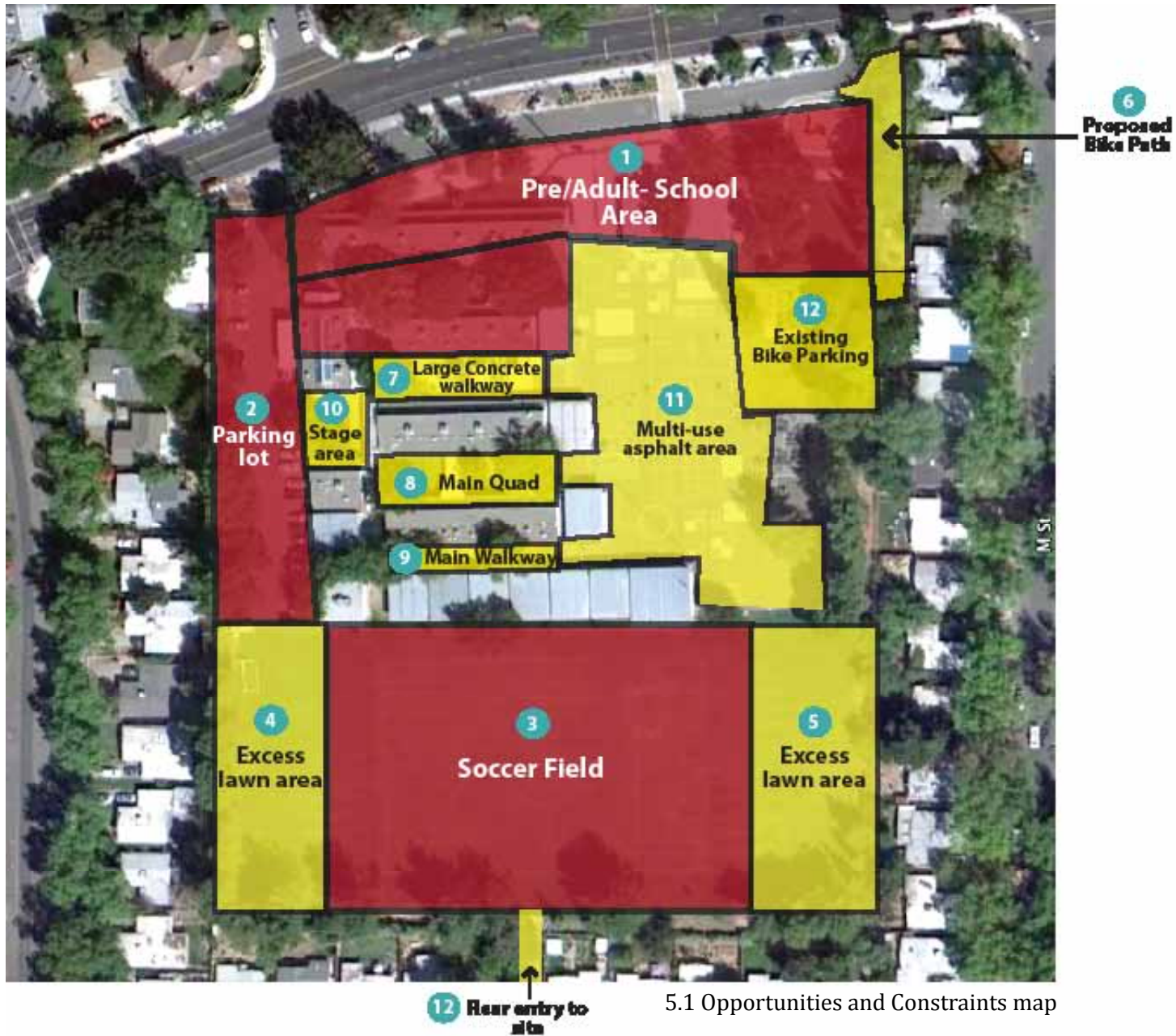
One of the first efforts of my project was to arrange design charrettes for these different members of the Da Vinci community to come out and let their voices be heard. I advertised this event with flyers, emails to list serve, and constant phone calls to parents and the main office of the campus. The original intent was to meet with the people and place them in groups to discuss the main opportunities and constraints of the site. From these lists, I would then highlight the most important issues and have the groups get back together and

propose solutions. This would then help me come up with the master plan for the site and address as many of the issues as possible.

On the date of the event, it turned out that only a few people showed up. This led to a “walk-through” approach where I took the group through each part of the site and asked them to bring up any issues they had along with recommendations for improvements. With such a small group, this informal approach worked out well and made up for the fact that only a small amount of people were in attendance. I held the event two days in a row in an attempt to gain as many inputs as possible. However, the same group of people ended up showing up on both days. The second day led to a brainstorming of solutions and possible outlets for more feedback and support from the campus officials- whom I had been struggling to communicate with up until this point.

From these events I learned something very critical when it comes to organizing community workshops in an attempt to allow the general public to

give feedback to a designer about how they would like to see a site developed. I found that there are very few people who are usually willing to put in the extra effort that is needed to make sure their voice is heard when it comes to their community. That is to say, that most people care very much about their community and the elements within it, but it takes a lot of effort from the designers standpoint to gain their input. In addition, I learned that scheduling is the most important part of setting up a workshop. If you schedule the event in the wrong part of the day or on a date when most people are unable to attend, you are guaranteed to have very low turnout. It is crucial to communicate with those who do the scheduling for the community to make sure that the times and dates chosen will work well for the majority of those who will be attending. Overall, walking throughout the site worked well as it allowed the group to really understand each site and they recognized the things that bothered them and saw the opportunities for improvement. Sitting down in a classroom and looking at base plans would not have been as effective as this.



5.1 Opportunities and Constraints map

Existing Conditions

Constraints:

1. Pre/Adult School Area: This area is undevelopable and only used by the pre-school and the adult school.
2. Parking Lot: This area will remain as there is already limited parking on the site that is restricted to staff and faculty
3. Soccer Field: The Davis Youth Soccer organization uses this field for their games on the weekends; therefore this area must remain as turf grass.

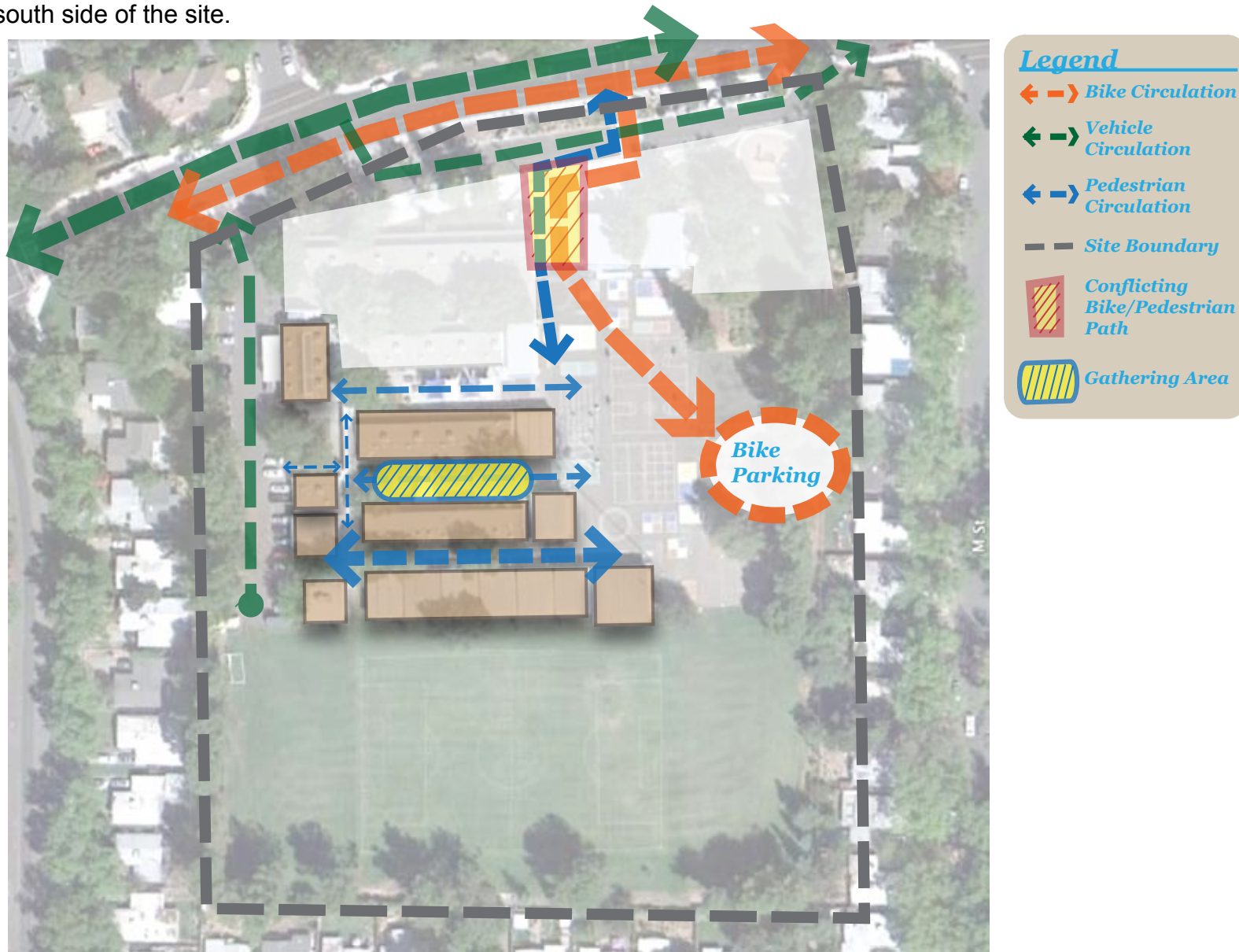
Opportunities

4. (And 5) Excess Lawn areas could be used for storm water runoff catchment.
6. Proposed Bike Path: This area will be constructed in the summer of 2011 by the district. The site also deals with major flooding issues in the winter and causes damage to neighboring properties. This will need to be addressed in the final design.
7. Large Concrete Walkway: This area is much in need of shade and color as the concrete is a bright

feature that needs to be toned down. Overall, a good large space to present projects and should be fully functional with a few small amendments.

8. Main Quad: The main quad serves as a socializing place for students as both bordering buildings have classrooms that open to this area. A more detailed analysis of this area is detailed in the next section.
9. Main Walkway: The main walkway has a large concrete walkway that serves as a main circulation route throughout the campus.
10. Stage Area: The stage area has a large raised concrete stage where plays and presentations are performed.
11. Multi-Use Asphalt Area: This large recreation space serves a wide variety of purposes whether it's for P.E. class or student demonstrations.
12. Existing Bike Parking: A displeasing wire fence surrounds this area and gate that keeps the bikes secure.
13. Rear Entry to Site: This pedestrian walkway on

the south side of the site.



5.2 Existing Circulation Diagram

[chapter 6]

Incorporating the Curriculum: The Alleys

The Alleys: Concept

The concept for both the main alley's of the campus and the master plan as a whole revolve around the ideals of 21st century education through collaborative learning and group work. According to the Milestones for Improving Learning and Education Handbook, successful education environments for 21st century learning will provide:

“physical and technology structures that are exible and adaptable, enable collaborative group work and encourage engagement with the surrounding community.”

Through these proposed designs, we can see the opportunity for callaboritive work spaces that will encourage the students to spend more time outdoors and engaging with the other students in their classes.

Alley 1

The first alley on the campus has been designated as their “Project Alley.” A place for the students to work on their projects in an outdoor setting and then display them during their presentations. The requirements for this space are that it be covered from the rain and have an “open” plan that allows for the construction and presentation of large-scale models. Seating and work spaces would be a benefit as well but are not required as the students would really like to keep the space as free form as possible.

This site faces the following opportunities/challenges:

Challenges:

- Brightly colored concrete makes the area very warm even on a mild day
 - The border is shared with a school for disabled students and is divided by an unsightly wire fence
 - The grading of the pavement is very uneven due to the fact that the entire area has been drained to one inlet in the middle of the walkway.
- in that it is entirely paved over with very bright concrete making the space very hot during the daytime.

Opportunities:

- Plenty of open space for activities
- Shade structures already provide an architectural feature and shade to the site
- Fenced area to the north presents opportunity to create a screen or mural in front

How does this space promote PBL and NTN?

Corridor #1 appeals more to the Project-based Learning aspect of Da Vinci. Providing space for artwork and murals is a vital part of the Da Vinci culture. In the time that I have worked with the school, they have created two new permanent murals on walls of buildings. At some point soon they will run out of walls and will have to start replacing old murals. This space presented a unique opportunity because it borders the pre/adult school area with an unpleasant fence, which could be covered by something more aesthetically pleasing.

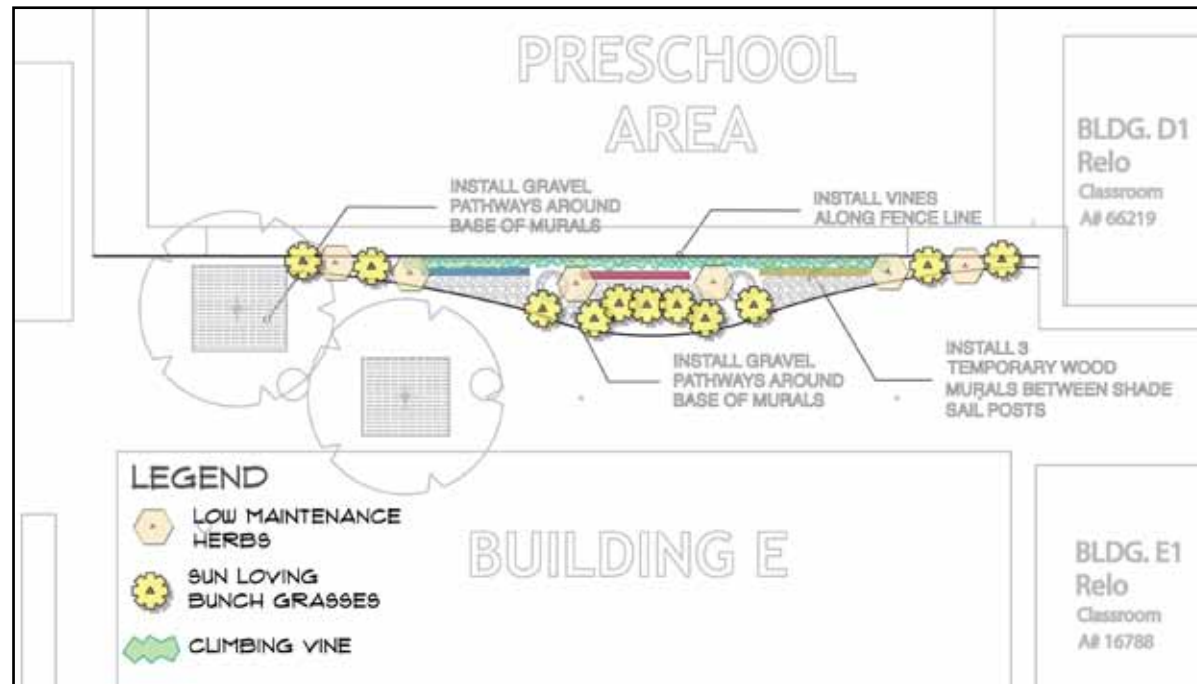
- Install temporary murals made of plywood and lumber that can be easily painted over or replaced when a new mural needs to be created allowing students to display their artwork, projects, and promote Da Vinci Pride.
- Around the temporary murals I decided to remove the concrete and also install planting which will also help cover the unsightly fence. This will also create a stronger border between Da Vinci and the other schools giving them a strong sense that this IS Da Vinci's campus (not just a shared facility).



6.1 Existing corridor



6.2 Proposed corridor



6.3 Plan view of proposed improvements

Alley 2

The largest corridor (here labeled as “The Quad”) serves as the main social space for the students due to the fact that all classroom doors open to this walkway. This area deals with drainage issues (as do all of the corridors) and turns into a mud pit during the rainy season. As a result of students not being able to use this central areas of the Quad, they tend to gravitate toward the walkways, which are paved with concrete. The only problems are the walkways were designed for elementary school students and are very narrow. During busy class change times, these walkways will be packed with students.

How does this space promote PBL and NTN?

This area currently deals with large flooding issues as discussed in the existing conditions section of this document. The suggested design will provide a variety of valuable improvements not only to the functionality but also provide aesthetic and educational opportunities in the space. Here are the improvements:

- Permeable brick paving will help to absorb rainwater while create sittable space (in the form of level hardscape) for the students to sit on and socialize or work on their projects.
- Retention swale will help slow the delivering of water to the storm water system and create educational opportunities about saving water and the importance of

native planting.

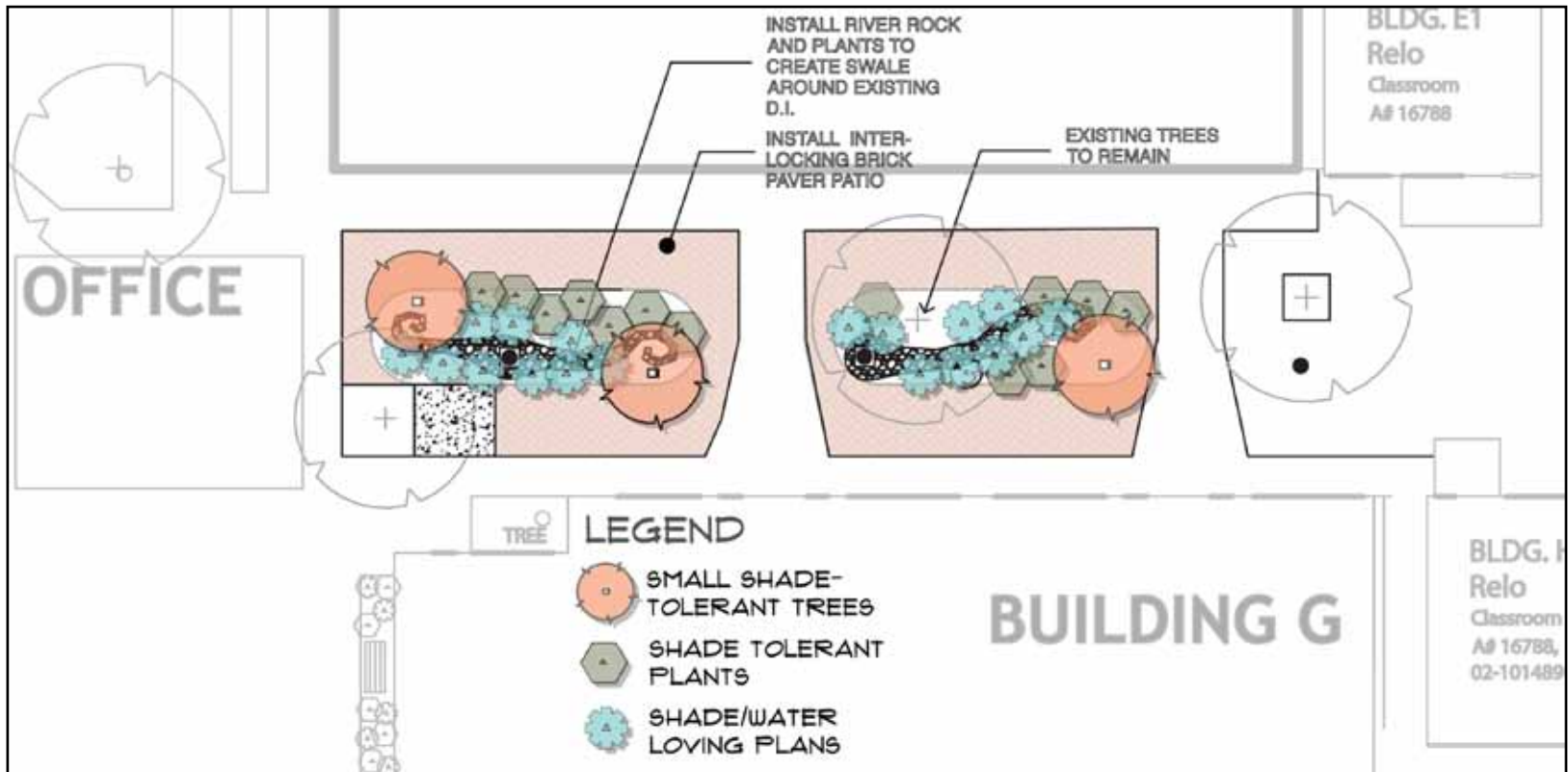
- From a functional standpoint, raising the drain inlet will also allow the water to percolate into the soil and plant roots before being delivered to the storm water system.



6.4 Existing corridor



6.5 Proposed corridor



6.6 Plan view of proposed improvements

Alley 3

The Second corridor is furthest to the south and currently has been named “The Path” because it is a heavily trafficked area for students walking to class. This walkway is backed by one main building and is open to the front of another building providing a good amount of foot traffic throughout the area.

This area creates a prime opportunity to create a small outdoor teaching/presentation space for the school to work with.

How does this space promote PBL and NTN?

Very much similar to Corridor #2, this design provides some aesthetic improves to a space that has become untended and a bit dull over time. Using existing trees to provide shade, creating a more curvilinear paving path and adding some planting will certainly improve this space on many levels:

- Providing more paving to a space that receives large volumes of traffic will add more space for other activities besides circulation. This space opens to quite a few classrooms that would benefit from the added space for seating and outdoor classroom activities or teaching.

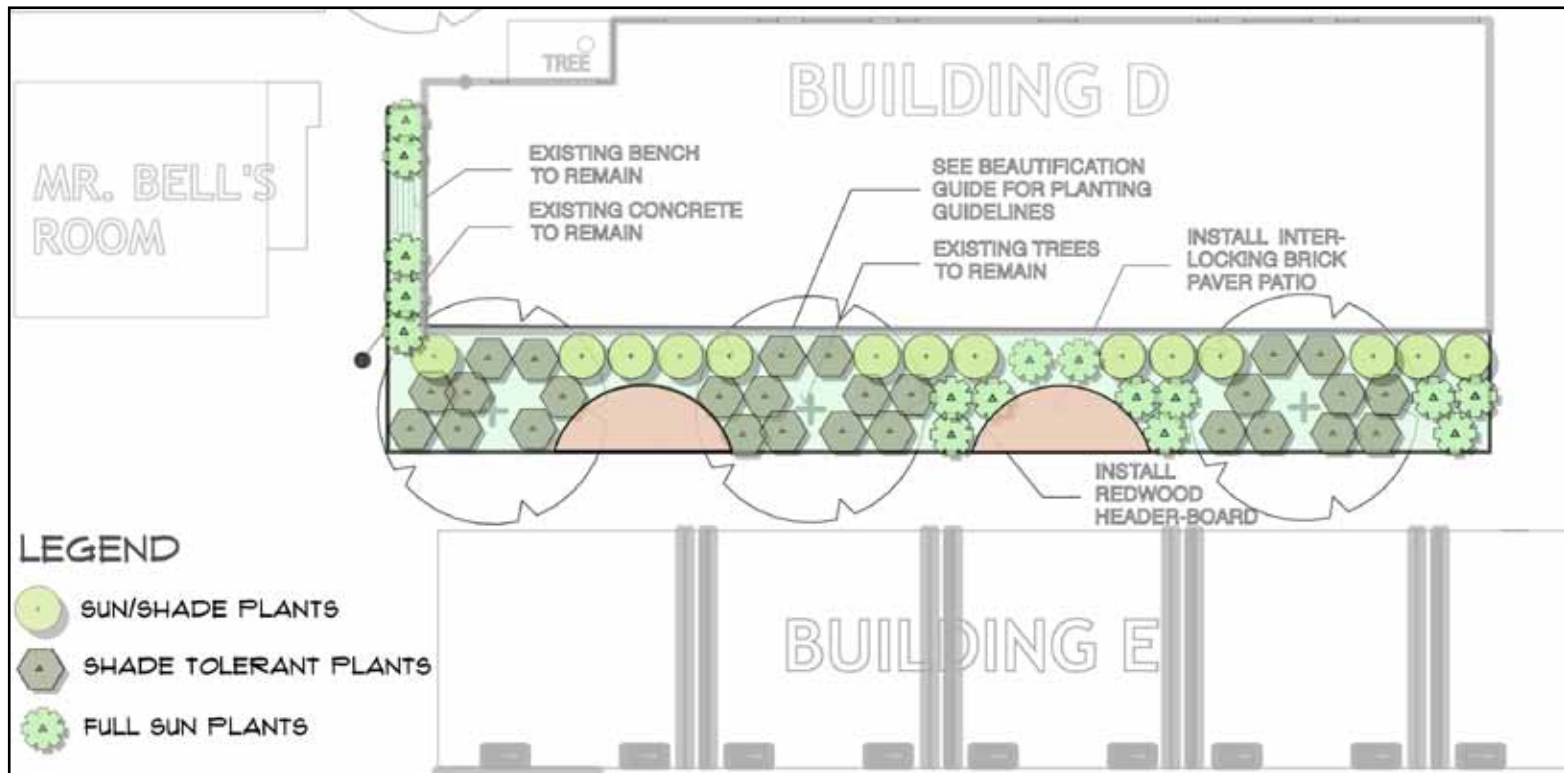
- Additional planting will cover up the foundation of the building and create a more aesthetically pleasing environment. This area also receives large amounts of sunlight and would provide great opportunity flowering plants that attract insects and hummingbirds.



6.7 Existing corridor



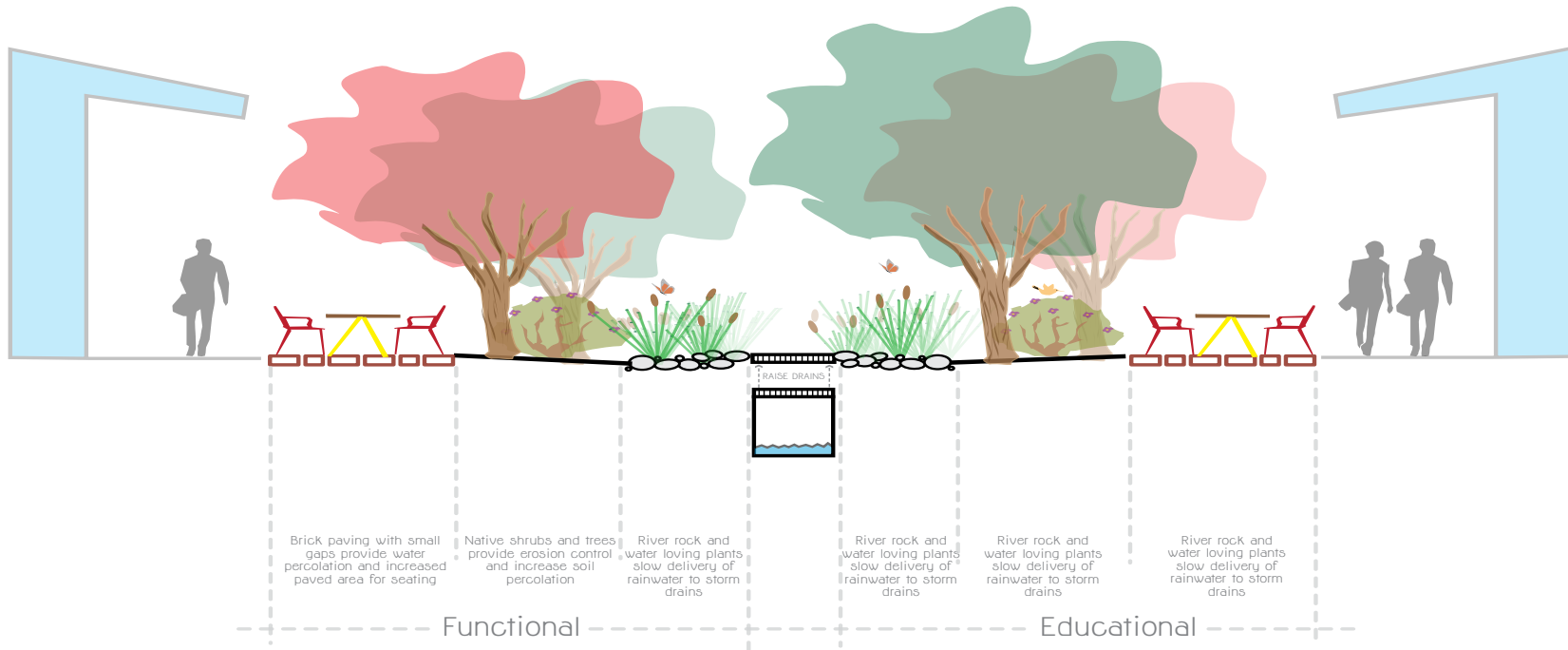
6.8 Proposed corridor



6.9 Plan view of proposed improvements

LEGEND

— PROPOSED SLOPE OF NEW PLANTER



6.10 Section view of quad corridor #2

The above diagram illustrates the functional and educational aspects of the 2nd corridor. This Quad serves as a model for the other spaces that are being designed because it serves as a social, work, and circulation space for the site.

[chapter 7]

The Master Plan

Design Concept

After my research, observation, and analysis of the site were completed, I began focusing on the final product for the Da Vinci campus. My overall idea was to create flexible open space with visually appealing, low maintenance planting to encourage outdoor interaction and learning for the entire Da Vinci community. The following master plan is meant to provide a long-term concept design and framework for those individuals who choose to pursue the improvement of the campus landscape. It could also serve as a model if the funding became available to do a large-scale re-design of the campus.

Concept

Ideas:

- Soften hard edges
- Create spaces or rooms with specific program

(i.e. “the quad”, and “the path”)

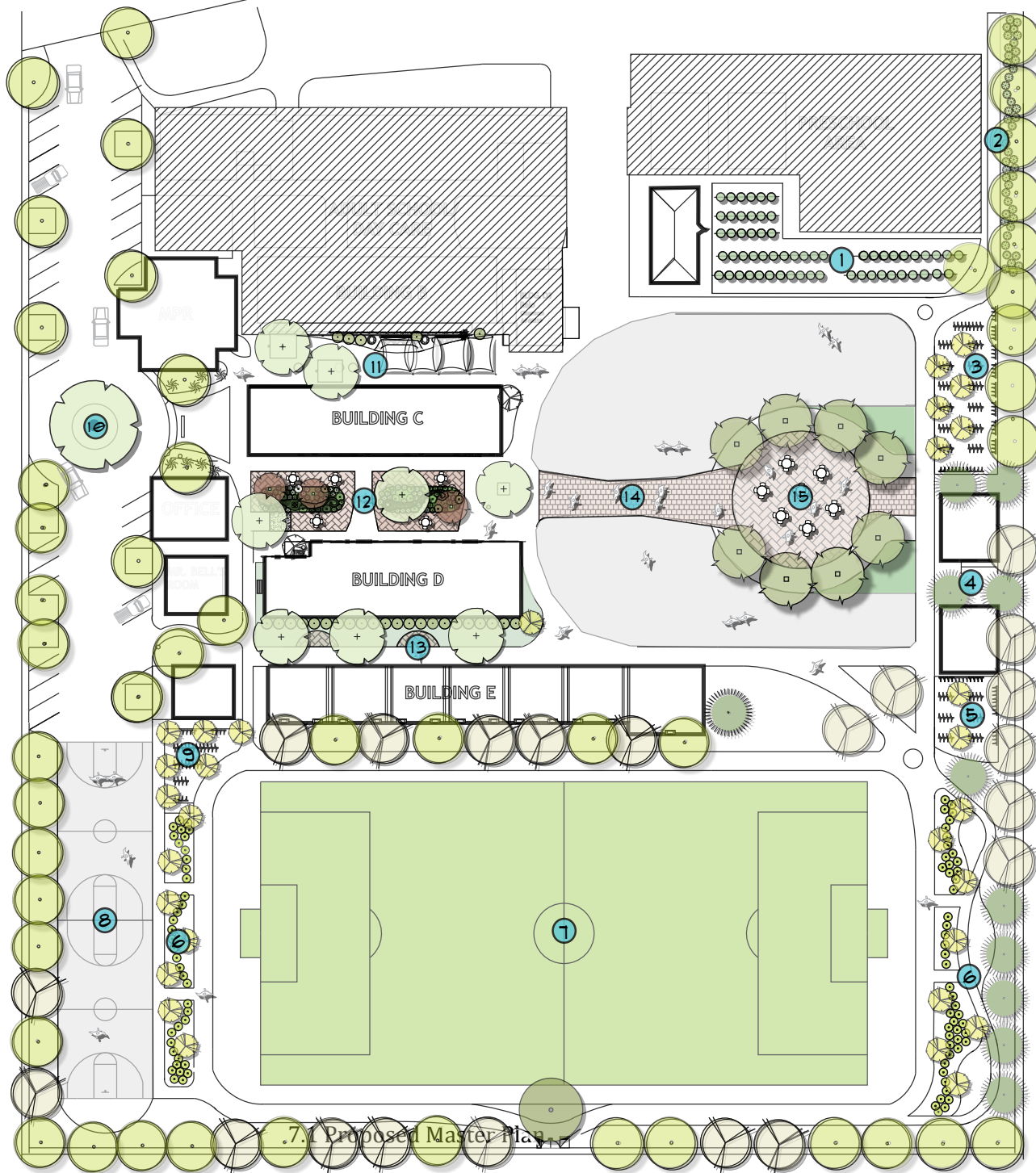
- Re-create community feel of Da Vinci’s ideals
- Add color and texture

Incorporating PBL and HTH:

- Create flexible spaces
- Create spaces that allow interaction
- Create spaces where students can build

Program Elements:

- Quad
- Amphitheatre
- Student Gardens
- Rugby Field
- Track
- Basketball Courts
- Project Alleyway
- Main Entrance
- Project Work Area
- Study Areas
- Covered or Shady areas
- Murals
- Softened Edges



LEGEND

- ① GREENHOUSE AND GARDEN
- ② BIKE PARKING
- ③ OUTDOOR CAFE
- ④ LOCKER ROOMS
- ⑤ BIKE PARKING
- ⑥ BIOSWALE/ARBORETUM WALKWAY
- ⑦ SOCCER FIELD
- ⑧ BASKETBALL COURT
- ⑨ BIKE PARKING
- ⑩ MAIN ENTRANCE/ TRAFFIC CIRCLE
- ⑪ ALLEY #1: PRESENTATION ALLEY
- ⑫ ALLEY #2: THE QUAD
- ⑬ ALLEY #3: THE PATH
- ⑭ THE DA VINCI WALK
- ⑮ OUTDOOR CAFE



MASTER PLAN

7. Proposed Master Plan

The main elements of the site work together to create a harmonious and flexible space for the students of Da Vinci to Interact, create, and communicate with each other without restriction. Elements such as the outdoor Cyber Cafe provide movable furniture, shaded work space with tables, and Wi-Fi internet to provide an enticing outdoor environment for the students to enjoy.

The site also works to entice the students to spend more time outdoors through the use of more aesthetically appealing and diverse planting and pathways. Areas such as those around the soccer field could provide recreation along the pathways along with educational space about the importance of on-site water filtration.

In general, circulation throughout the site is much improved with less conflicting intersections between bicycles, pedestrians, and motor vehicles. Small traffic circles can also promote safe interaction between multiple modes of travel. Additional bike parking along the exterior of the site will also encourage students to park their bikes and walk through campus rather than

trying to navigate through on their bike.

The student gardens along the northern border of the site provide a space for students to learn about the importance of organic gardening. With the greenhouse, the students can experience the full-circle process from propagation to composting the remains of the previous crop. Once again, this area is left up for interpretation so that the Da Vinci teacher can design the layout and structure to his/her needs.

Creating flexible, open-ended space is important in supporting the students self-reliant mentality and will give them the freedom they need while at the same time creating spaces they will enjoy working in.

[chapter 8]

Implementation

The Beautification Project

After a few of the first meetings I had with the Da Vinci staff, I realized the important role the parents would be playing in getting the campus looking better. In a perfect world, the district would be able to fund a new campus design and have it implemented. But unfortunately, there are not large amounts of funding currently available and therefore I have developed some small-scale designs that can be implemented over the next few years to improve the appeal of the campus without spending a lot of money. These designs can be implemented by volunteers and will make a large difference in the current aesthetic and function of the landscape. The Beautification Project will include the installation guide attached to the end of this document. It includes step-by-step instructions along with sketches that will instruct the volunteers what they need to

do in order to complete the corridor designs.

Boosters support

The Da Vinci Academy Boosters Organization along with the District has agreed to fund the first portion of the Beautification project by donating \$5,000. A small volunteer group of parents and students will work together, based off of the instruction guide, to complete these projects. The boosters were in support of completing more projects, but they were also experience a budget shortfall and could not support any more than their \$2,500 portion of the project.

District Support

In meeting with the district about this project, I learned very early that it would be very tough to get their support for any campus improvements. In my meeting with Mike Adell, Director of Facilities for the Davis Joint Unified School District, he informed me that the only way for the school to get funding for improvements would be to pass a Bond Measure during the next election. Unfortunately, he informed me that there had already been several increase in parcel tax over

the past few years making voter interest in passing such a large increase to be unlikely. Each school receives an allotted amount of money to pay for facility “improvements” throughout the year and these projects usually end up going towards repairs or maintenance rather than making any dramatic change in the campus or building structures.

The importance of Community Involvement

Working with parents throughout this project has given me a new perspective on the importance of education. Interacting with the parents through the campus walk through, one-on-one conversations, I have seen how much the parents truly care about their children’s learning environment. It is upsetting for them to see the neglect and lack of care that the district displays towards the places where their children spend a majority of their time learning, socializing, and becoming young adults. To them, even the smallest of improvements can make a huge difference and their willingness to roll up their sleeves and make it happen is remarkable. The parents of Da Vinci will be majorly responsible with whatever

improvements happen to the landscape over the next few years before any major bond measure is passed for larger amounts of funding. This means volunteering on Saturdays, seeking out donations from local businesses, and getting their kids up early to help them out. Going out of the way to make a difference on the campus is what the parents are all about.

[chapter 9]

Charter School Campuses for the Next Generation

From what I've seen working on this project is how much impact such small design efforts can make. It is amazing to imagine the campus completely redesigned with state of the art facilities and a campus that embraces the curriculum of the charter school ideology. However, after reality sets in, we realize that making small improvements step-by-step can truly make a difference for those who interact in the environment every day. In fact, most of the students will not know what the long-range plan is for their campus. But, when they see parents and other students come in and work together to make changes that are useful as well as aesthetically pleasing, that's what makes a difference. For the charter school system this is especially valuable as politicians battle it out to get funding and fight for equality within the system, it's important that charter schools are recognized and that their facilities

represent the high quality of education that is being delivered behind the closed doors.

Preparing our students for the 21st century is absolutely critical and creating environments that promote this work goes hand in hand. Working with the students to engage them in these improvements is also important. The one main message I got out of the case study visit to Napa New Technology campus was that involving students in the decision making as well as the actual building allows them to feel responsible for their education. This self-motivated learning is the fundamental teaching of Project Based Learning and the New Technology Network, and it will be the driving force behind the successful improvement of Charter School Campuses across America.

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