



GLADDEN FARMS ELEMENTARY SCHOOL

MARANA UNIFIED SCHOOL DISTRICT | MARANA, ARIZONA

2021 LE SOLUTIONS AWARDS
NEW LEARNING ENVIRONMENT

1

EXECUTIVE SUMMARY

Gladden Farms Elementary School is an aspirational project and unlike any other school in the Marana Unified School District! After site adapting the same prototype elementary school design more than 10 times over the last 20 years, the District and community, through a rigorous visioning process, decided to create a school specifically for how they wanted teaching and learning to happen. This new elementary school is a direct response to the District's recently adapted Gradual Release of Responsibility (GRR) framework and evolving educational program. Not only does the new school fully support the transference of the obligation for learning from the teacher to the student, it also acknowledges that not everyone learns in the same way. This amazing new facility provides a wide variety of educational settings, accommodates large groups, small groups and individuals alike, offers noisy spaces and quiet spaces, and provides places for collaborative, technology-infused, traditional academic, and project-based, hands-on activities. The flexible building design encourages innovative student and teacher interactions, but most importantly, the school design strives to make learning fun by incorporating exploration and discovery opportunities at every turn during the student's day.

Located in Arizona, where public school funding and teacher compensation rank at the bottom and where charter and private schools are flourishing, another important project goal was the creation of a facility to aid in the recruitment and retention of students and highly qualified school staff.



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SCOPE AND BUDGET

FACILITY TYPE
NEW CONSTRUCTION

GRADE LEVELS
PRE K-6

SIZE
80,000 SF BLDG
10 ACRE SITE

CONSTRUCTION COST
\$17.1 MILLION

DELIVERY
CM@RISK

POST OCCUPANCY
EVALUATION REPORT



“Our students have exceeded expectations in adapting to our new style of learning environment. With visibility in all areas, students are supervised even when leaving the classroom, and their behavior shows that they understand the higher bar for accountability of their actions. Overall, we have noticed, and tour groups have shared, that the openness has created a sense of calm. Students have more movement during learning, with groups meeting in flexible seating arrangements both within the classroom and the extended learning area”

NANCY PADDOCK PRINCIPAL
Gladden Farms Elementary School

3 SCHOOL AND COMMUNITY ENGAGEMENT

BOND PLANNING

- MASTER PLANNING
- PROJECT IDENTIFICATION
- BUDGETING

DISTRICT WIDE

- FACILITY VISITS
- NEEDS ASSESSMENTS

DESIGN CHARETTES

- STUDENTS
- FACULTY + STAFF
- COMMUNITY

- FAMILIES/PARENTS

SURVEY

QUESTIONNAIRES

- INCLUSIVE
- DIVERSE BASE OF INPUT
- COMMUNITY OUTREACH
- POLICE DEPARTMENT

VISIONING TOOLS

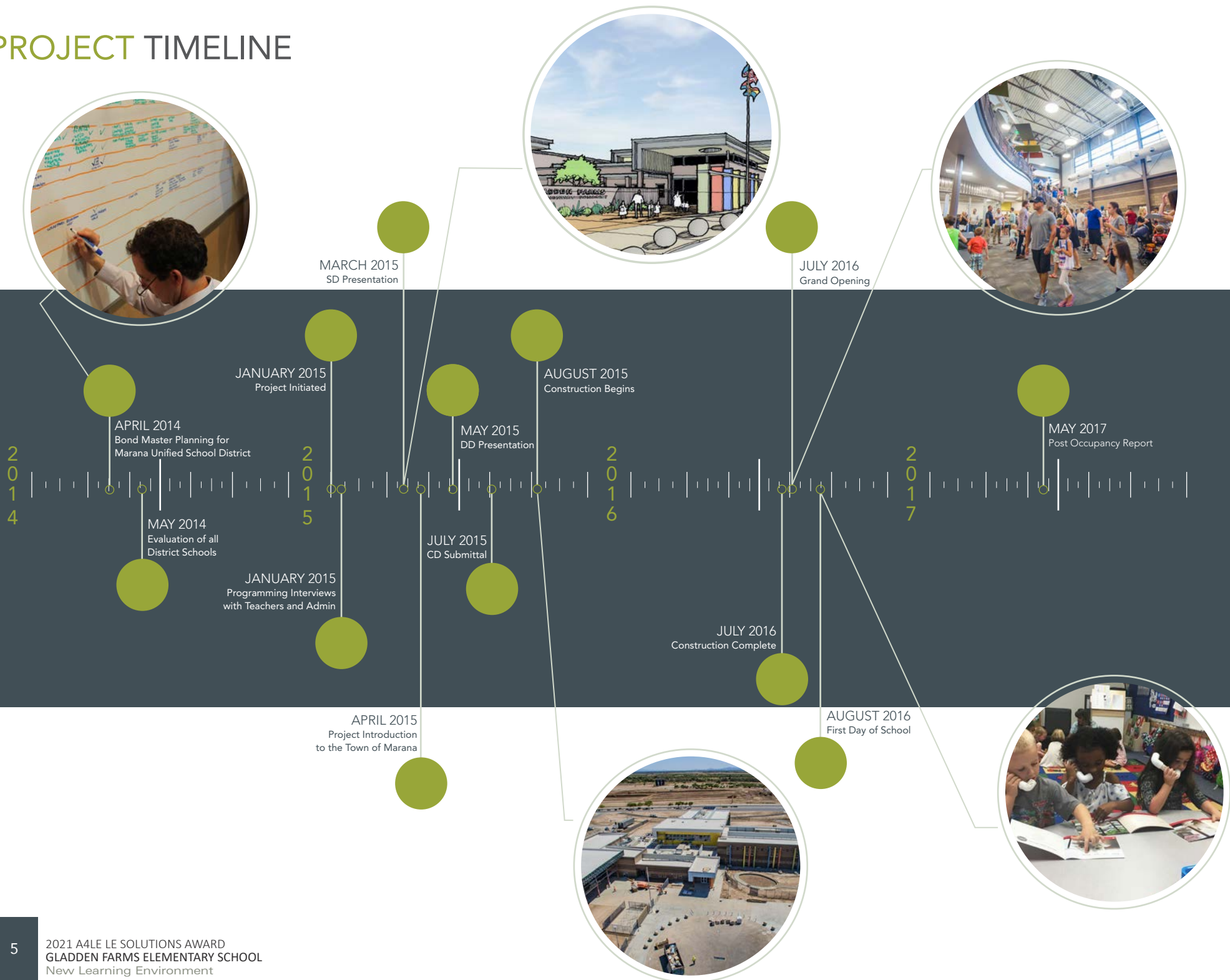
- DRAWINGS
- SKETCHES
- BLOCK DIAGRAMS / MODELS
- 3D VIEWERS

The extensive, inclusive design process for this school began during a bond planning project. The design team visited every facility in the District and met with administrators, teachers and staff at more than twenty school sites to understand the existing conditions, identify needs, and gain insight into the District's evolving approach to education. Focus groups and other types of meetings were held at various places throughout the District to solicit input from the many interested parties. Gladden Farms Elementary School was the first project funded by the bond, which was overwhelmingly supported by the voters, and a site had been acquired where rapid growth was anticipated. As programming began on the new school project, another series of concentrated charrettes was conducted. Questionnaires were circulated so that stakeholders would come to meetings prepared and workshop activities were tailored to inspire creativity and encourage participation.

Various meetings involved lively discussions, dot polling, diagramming and block / mass modeling. "Wishlists" and space requirements were documented. Based upon the data collected, design began. The design team worked with a building committee made up of representatives from all stakeholder groups, meeting every two weeks throughout the design and construction documents phases. Optional site, floor plan and image concepts were explored at key stages in the process, pros and cons evaluated, and preferred ideas were reached through the consensus-driven meetings. A series of community-wide updates were scheduled and given each month during the nine-month design and documentation period. Meeting dates and times were posted on the District website.



PROJECT TIMELINE





Stakeholder Involvement

Workshops included diagramming sessions in which the team explored adjacencies, circulation, security concepts, and other aspects of the design. Project goals, facts, needs and options were discovered together.

The Community

The Gladden Farms community is located within the rural fabric of Marana, a town with deep roots in farming and cattle. The new, growing neighborhood consists primarily of young families. Many children walk or ride their bikes to school. However, because the school is unique to the geographically enormous school district and the District offers open enrollment, many are dropped off or take the bus to school, too. Rapidly growing, the community consists of people newly arrived from other places and many influential “old-timers”.

Stakeholders

It was very important for the school district to maintain the relationship it had worked so hard to establish with the community over the years. Transparency, communication, and opportunities for involvement were critical. For this reason, a building committee was formed consisting of parents, teachers, staff, students, administrators, school board members, community partners, including the Gladden Farms housing developer, and the design team.

Challenges

Growth in the District and charter school competition were already understood to be concerns. However, as meetings progressed, District leadership, the Building Committee, and the design professionals addressed many other issues. The changing District educational philosophy and the break from teaching norms and traditions created discomfort for many staff involved in the design of Gladden Farms. The openness of and visibility into and out of the classroom spaces worried some that the students would be distracted and unable to focus on their learning. Security in such an open environment was also a concern for many. Law enforcement professionals were included in the design process to help the team develop the security concept

and explain it to the public. A secure lobby serves as a vestibule into the school, where anybody visiting has to be buzzed through a single door. Classroom “wings” can also be locked down and separated from the rest of the school by magnetic hold doors.

Another concern pertained to storage. As the District planned to shift to more technology-based teaching materials, storage space was largely eliminated from the program. There were to be no storage rooms near the classrooms and only minimal, movable storage units were to be provided as part of the furnishings.

There was also a great deal of discussion about grade level groupings and the incorporation of a media center. Eventually, it was decided that all grade levels would be grouped together so that same grade teachers could share resources and more easily collaborate. It was also decided that a traditional media center was not desirable and that smaller media / technology hubs centrally located on two levels with age appropriate materials in each would serve as a base for a more mobile approach to the dissemination of reading materials and educational resources.

Many initial concerns were resolved through the careful selection of teachers and staff members from within the District who embraced the educational philosophy and were accepting of the new approach. In the design team’s post-occupancy evaluation of the project, all feedback from teachers, staff, students, parents and administrators was extremely positive.



Making School Fun

Exploration and discovery opportunities occur at every turn during the student's day.

Available Assets

Making a change like this required, first and foremost, progressive District leadership. Teachers, staff and parents who were receptive, open and excited about the new approach were critical, too. The enthusiastic community has always supported this District, but their acceptance of the changes was also crucial to the project's success.

Value of Process and Project to Community at Large

A transparent and open process was considered important to maintaining the trust of the community and to the success of the project. Ample opportunity for discourse about the project was provided throughout the design phases. Opinions and concerns, although not always implemented, were always listened to and considered by the team. In the end, many in the community have a sense of ownership in the project because they had opportunity to participate and were kept apprised.

4 EDUCATIONAL ENVIRONMENT DESIGN



Gladden Farms Elementary School was designed in direct response to the Marana Unified School District's new educational program and philosophy. The intention was to create a variety of settings in which students and staff are encouraged to collaborate with one another, one on one, in small groups, and in large groups. The design provides opportunity for planned meet-ups and chance interactions. The potential to see and be seen is powerful and the responsibility to model positive behavior is ever present creating an educational community that empowers and transforms.

Educational Vision and Goals of the School

MUSD's Gradual Release of Responsibility (GRR) educational framework is focused on the transference of the learning process from the teacher to the student. The goal is for students to take ownership of their own learning. The District believes that engaging students in the most relevant learning opportunities will encourage them to respond to the high expectations of their teachers and peers. By creating a school environment where every child is inspired and excited to learn, students feel safe in risk-taking and are more comfortable with collaboration. The curriculum at Gladden Farms Elementary School is computer science immersion with an emphasis on coding and robotics activities, Chromebooks are integral.

Gradual Release of Responsibility

Marana classrooms utilize the Gradual Release of Responsibility Instructional Framework (GRR) which encompasses the theories that students learn best when they know why they are learning, what they are learning, as they work together to solve reality based problems in a supportive and engaging environment.



KINDERGARTEN Play Area



PROJECT-BASED Small Group Learning



MEDIA HUB



MAIN ENTRY
Secure, Friendly, Lobby



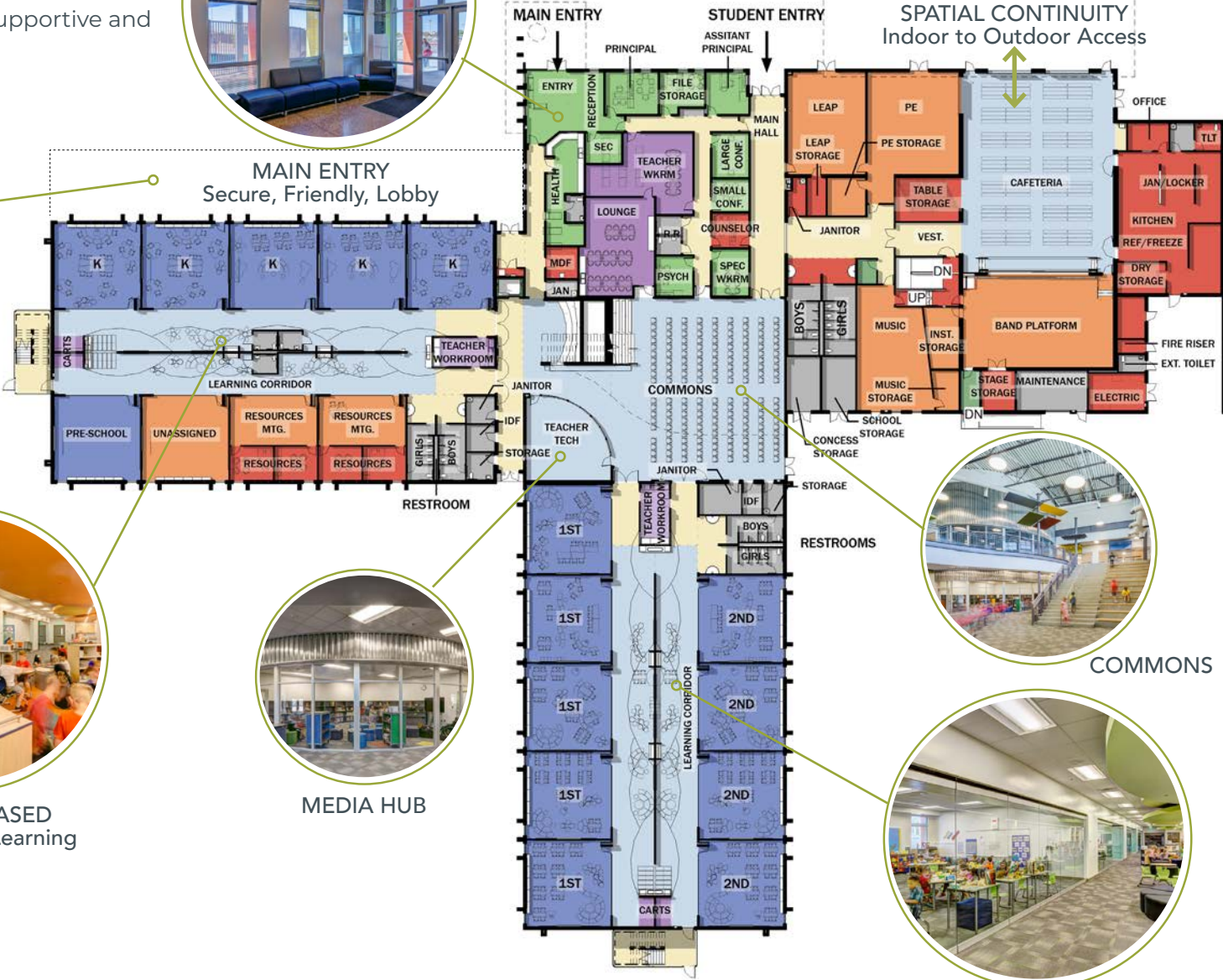
SPATIAL CONTINUITY
Indoor to Outdoor Access



COMMONS



TRANSPARENCY AND OPENNESS



FIRST FLOOR



The concept of transparency in the teaching and learning environment at Gladden Farms Elementary fuels the curiosity of the student.

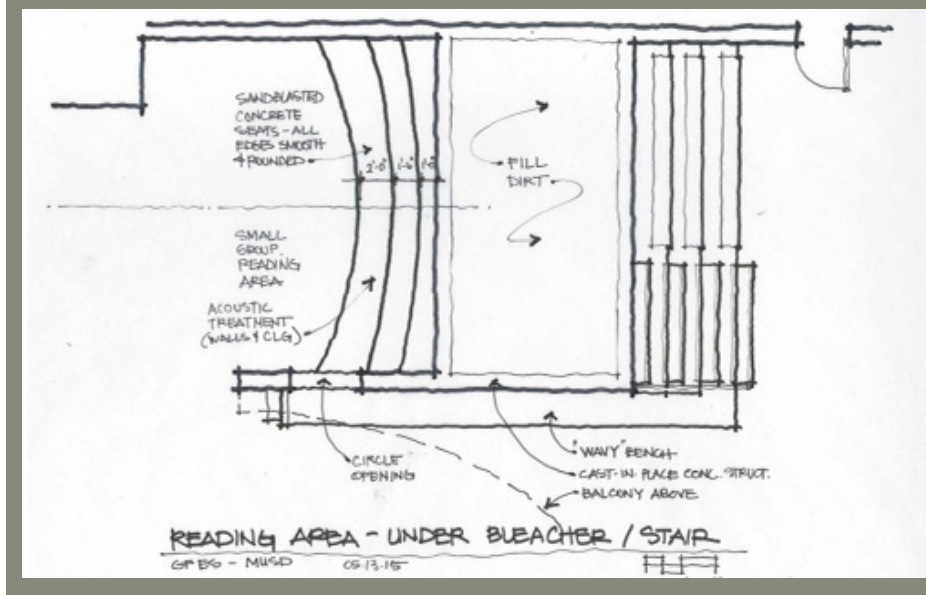
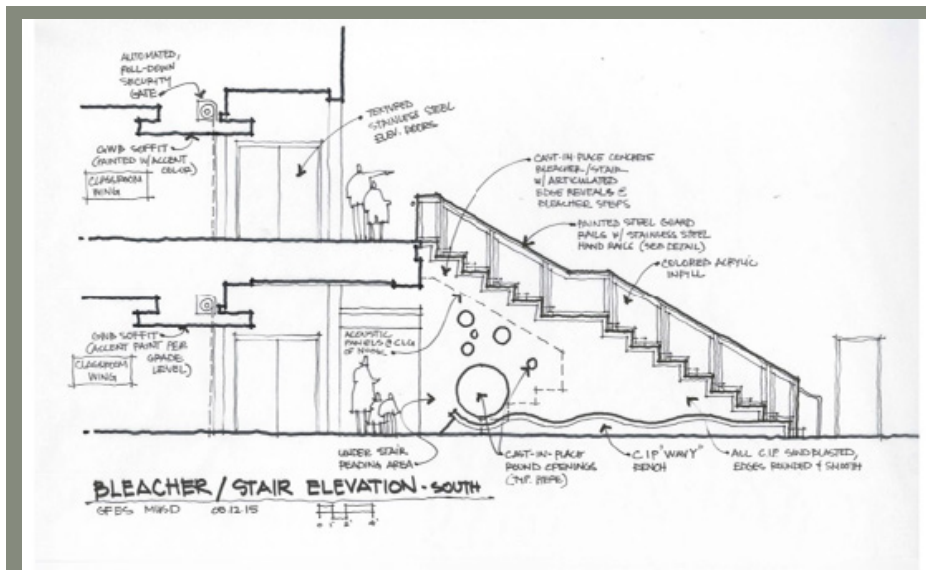
Building Environment Supports the Curriculum

The innovative classroom setting in this facility provides students and teachers the opportunity to work collaboratively both within their classroom as well as within flexible learning areas adjacent to the classrooms, the “learning corridors”. Each classroom consists of three permanent walls, providing for technology resources such as projection and writable walls. The classroom’s fourth wall is an operable, foldable, and lockable partition made of high-quality tempered safety glass. Installing flexible walls in every classroom provides teachers the option to use the space as they see fit, at times releasing responsibility to students to use that space while at other times closing the classroom as they engage in direct instruction or other more focused activities. The classrooms are 775 SF each, which is 125 SF less than the previously standard sized classrooms in the District. However, each classroom opens out to a 15’ wide “learning corridor”, making the actual overall learning space size 1,200 SF. Every classroom has windows that emit natural light and, importantly, provide views to the outside.

Circulating through the school, the student can see into classrooms other than his or her own and experience the activities of others in the “learning corridors”, extra wide hallways that serve as breakout learning spaces and provide area for arts, crafts and other hands-on projects.

The concept of transparency in the teaching and learning environment at Gladden Farms Elementary fuels the curiosity of the student. Circulating through the school, the student can see into classrooms other than his or her own and experience the activities of others in the “learning corridors”, extra wide hallways that serve as breakout learning spaces and provide area for arts, crafts and other hands-on projects. Even the teacher planning areas in each classroom wing are located out in the open, enclosed by glass on three sides, so students can see their teachers modeling collaborative behavior.

A large, naturally lighted, technology infused, two-story commons area serves as the place for all-school assemblies, movies, productions from the student green screen studio, science fairs, robotics competitions, visits from community partners, and many other activities. The stadium seating provides a place for spectators, break-out learning, and access to the upper level classrooms and balcony overlook above. The space under the stadium seating was designed as a “Secret Spot” story-telling / reading nook, complete with amphitheater style seating, cast-in-place concrete circle peek holes and an outer wavy bench for lounging, socializing and reading.



“Secret Spot” reading / storytelling nook - one of a variety of learning spaces located throughout the school & some of the early sketches shared with the Design Committee.



The Commons is a two-story space featuring stadium seating. It is used for movies, trainings, robotics competitions, science fairs, and all-school assemblies.



The first floor Media Hub is smaller than a traditional media center and serves as a base for a more mobile, flexible media sharing program visible to the left.



The second floor Media Hub, seen on the right, supports the distribution of age / grade appropriate reading materials on each level.

Gladden Farms Elementary School provides many opportunities for breakout learning and can accommodate groups of any size.



Building Environment Supports a Variety of Learning & Teaching Styles

The classrooms and the wide variety of other learning spaces are equipped with technology such as smart boards as well as interactive and document projection systems. COW (Computers On Wheels) carts are located in alcoves in the “learning corridors” and help teachers, staff and the librarian deliver laptop computers to the classrooms. The learning spaces also include writable wall and tack surfaces along with flexible furnishings for configuration on the fly as learning and teaching situations require. Acoustic treatments were designed to keep sound inside the classroom spaces, even when glass partitions are open. A voice amplification system was planned for, but not ultimately included in the project because the learning spaces performed so well without. The “learning corridors” are versatile, providing space for breakout learning, project-based activities, as well as wet and messy projects.

Building Environment is Adaptable and Flexible

The adaptability and flexibility of Gladden Farms Elementary School is discussed throughout this project narrative and includes many spaces that serve more than one function. Movable glass walls at each classroom allow activities to flow past traditional classroom boundaries. The school also incorporates many other types of spaces – large commons, storytelling nook, stadium seating, shaded outdoor areas, breakout spaces, and others – to accommodate various types of learners and group sizes.

The team also conducted extensive research into furnishing the school, studying the importance of flexible and ergonomic pieces, and providing testing labs in open classrooms within the District. Teachers and students tried out a variety of options before voting and selecting the furnishings to be ordered. Comfortable movable classroom furniture provides for easy reconfigurability and supports collaborative learning and instruction. The high-performance ceiling tile and floor coverings consist of noise reduction and sound controlling materials to greatly control acoustics and support a variety of activities.

5 PHYSICAL ENVIRONMENT DESIGN



PHYSICAL ENVIRONMENT

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Physical Attributes of the Environment

This new school is designed to last 50 years or more. The facility incorporates materials and systems that are sustainable, durable, and easy to maintain. The school was designed to be expanded in the future but always seem complete. The Gladden Farms Elementary School building is sited prominently close to the nearest street intersection, easily seen by passers-by. The only non-residential structure within one mile, the building stands tall on the flat landscape and incorporates colors, materials, and forms that indicate it is a significant community amenity. Because safety is so important, all site circulation elements are separated – buses, parent drop-off and pick-up, staff and visitor parking, bicycle and pedestrian systems are all isolated from one another. Site access and queuing areas were devised with the input of a traffic engineer to minimize impact and improve safety on the adjacent roadways.

The building is a simple, integrally colored masonry structure that incorporates the use of colorful shade devices to protect south, east, and west-facing exposures. The continuously insulated, high-performance building envelope will save the district in energy costs over the lifespan of the school. The main entry to the school is easily recognizable and inviting. However, most children arriving before the first bell and leaving at the end of the day, use a secondary access from the playground.

SITE PLAN

Outdoor Features





The school is vibrant and colorful.
The north-facing main entry is easily recognizable and accessible to all modes of transportation. The District's goal was to have students to arrive at the same location.

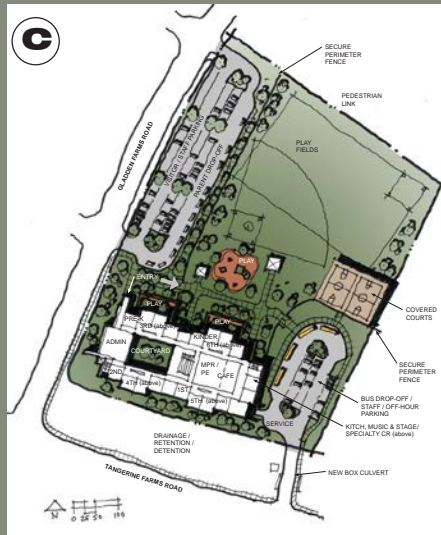


With full height, operable glass walls, classrooms open entirely to shared “learning corridors” where students complete art projects, conduct experiments, participate in break-out sessions, and collaborate with their peers. The classroom “wings” connect to a two-story “commons” area, with balconies, stadium seating and a story-telling nook, that offers opportunities for all-school assemblies, smaller group activities, and the display of student work. The school includes spaces for physical education, music, orchestra, band and, as described above, media hubs on each level that replace the traditional school library or media center. Students eat lunch in a cafeteria that includes a full-service kitchen and stage that doubles as an acoustically separated music classroom. The cafeteria opens, with large roll-up doors, to a covered basketball court that provide overflow space, an area for outdoor dining, as well as a shaded outdoor play area. An active garden, shade ramada and rainwater harvesting cistern are located off the commons area and serve as the place where students teach and learn about the history of their community and from where their food comes. The rest rooms, adjacent to the cafeteria, playground, and each bank of classrooms, have no doors – airport style. Hand-washing areas are in the open and shared by boys and girls.

Floor levels and classroom “wings” are color coded for way-finding and to reinforce the students’ sense of belonging to a place within the larger school. The colors used on the interior are expressed on the exterior, so as students pass by the school when traveling home, they can point out to their families and friends where their classroom is inside the building! Giving students this special sense of ownership increases their connection to the school and empowers their learning.



The cafeteria opens, with large roll-up doors, to a covered basketball court that provides overflow space, an area for outdoor dining, as well as a shaded outdoor play area.



The site includes plenty of outdoor activity spaces and shaded playground areas. Early sketches of the site, shared with the Design Committee, determined the configuration of the outdoor spaces.



Neighborhood

The immediate neighborhood consists of new, detached, single family homes. The distant and near mountain views are beautiful!

Fits within the Larger Context of the Community

As described above, the community was integral to the planning and design process from the beginning. Because of this, community members retained ownership of the project and became advocates during the broader public updates. In addition to the side benefit of increasing home values, the school was designed to be a community amenity in other ways. The cafeteria / MPR building was designed as a self-contained venue, secure from the rest of the school, that could be used after-hours for activities such as performances, homeowner association meetings, or scout meetings. Additionally, a trail from the neighborhood connects directly with a playground gate and offers after hours use of the covered basketball court, shaded amphitheater, playgrounds, and multi-use fields.



Student Guided Tour

It was during the student-led tours during the grand opening that the design team knew the project was a success. The student guiding us through the school said as we entered the commons area, **“This is my school. Isn’t it amazing?!?”**

Inspires and Motivates

The project was intended to provide opportunity to see and be seen, to offer a variety of settings for all kinds of learning, to encourage intentional collaboration and chance interaction, to observe and model good behavior, and to provide the potential for exploration and discovery at every turn! The building incorporates elements of transparency, exposed structure and mechanical systems, and varieties of vantage points and spatial qualities. The building itself is a teaching tool and a place where student’s abilities to handle varying levels of responsibility can be measured.

The reactions of people as they enter the commons area are those of awe. Our first walkthroughs with District administrators and board members elicited that excited response and our later post-occupancy evaluation visits with teachers and staff months later were the same.



The school creates a brand for the District and fosters a sense of pride for students who know this school was designed for them.

6 RESULTS OF THE PROCESS AND PROJECT



The inclusive, collaborative design process was engaging and fun. Many stakeholders were fully committed to developing a new school that truly reflected the new educational philosophy of the Marana Unified School District. Instead of a campus plan consisting of several classroom buildings, media center and multipurpose room organized around a courtyard with exterior circulation, the District has created a new, two-story school with interior circulation and some of the most innovative, adaptable, and flexible learning spaces in the state. This progressive community now has a 21st-century school where teachers feel inspired to engage students in lifelong learning and prepare to make meaningful contributions to the world. As the project has been open for two school years now, an unintended result has been not that there is a high demand from families who would like their children to attend school here, but that there is a waiting list of teachers from within the District who would like to teach here.

Educational Specifications

In order to design this new school, the Marana Unified School District worked very hard to articulate their vision for a new set of education specifications. Many have been referred to in the above project descriptions.

Educational Brief and/or Educational Visioning Documents

When the design team started the Gladden Farms Elementary School project, MUSD outlined the following aspirational educational goals:

- Help every child reach his or her potential
- Develop creative problem solvers
- Develop life-long learners
- Inspire excitement about learning
- Develop productive citizens
- Help teachers be the best they can be

These goals were at the heart of every decision made during the design process.

7 SUSTAINABILITY AND WELLNESS



Overview

Durable, easy to maintain materials, careful siting, abundant natural light and views, passive solar protection, a high-performance building envelope, energy efficient lighting and mechanical systems, photovoltaics, green materials, rainwater harvesting, low-water use landscape, and covered outdoor spaces help to create a highly sustainable and healthy environment for the students and staff of Gladden Farms Elementary School.

**Energy Efficiency**

25% of energy used is generated by PV panels on site. HVAC equip is extremely energy efficient. Only LED lighting is used. Building envelop is high-performance.

**Water Harvesting**

Water is collected from the roof to water the student garden and is utilized as a teaching tool.

**Daylighting**

All learning spaces include natural lighting and views. This strategy saves energy costs and allows students and staff to enjoy all of the associated health benefits.

**Building Envelope**

The continuously insulated, high-performance building envelope saves energy costs over the lifespan of the school and compared to other schools in the district.

**Site Efficiency**

The building was oriented to accommodate future growth, minimize energy usage, and maintain natural drainage flows.

Acoustics

Acoustic “trees” support the balcony and, along with the perforated metal sound soak panels above the Media Hub, help to control noise in the Commons.

**The Great Outdoors**

The MPR connects to a large covered basketball court for use as outdoor dining, assembly and recess space. Other exterior areas around the building serve a variety of educational purposes

**Health and Wellness Features**

Air quality measures, natural lighting and views, acoustic treatments, vibrant colors, green materials and other sustainability features contribute to a healthful environment.

**Sun Control**

All windows utilize high-performance glazing as well as vertical and horizontal shade screens. Even west-facing outdoor spaces are protected.

**Comfort**

Furniture is comfortable, configurable, and collaborative. HVAC controls are straightforward and easy to adjust.





Building Materials & Colors

