

# 1. Executive Summary

The district's goals and outcomes for this replacement project included:  
Provide a safe and healthy environment for school and community use. Develop on- and off -site improvements to accommodate and separate automobile, bus, service vehicles, and pedestrian circulation as appropriate to avoid unsafe conflicts. Provide high quality school facilities that utilize safe, durable construction and materials, reflect best practices for building construction and envelope design standards, and create a pleasant environment for users of the facility.





## 2. Scope of Work & Budget

56,840 sf with Covered Play



Met Construction Contract Value of \$27,122,450

Facility Serves 550 Students Pre-K through 5th Grade

### Did you know?

Boze Elementary School is Washington State's *first* Progressive Design-Build K-12 project

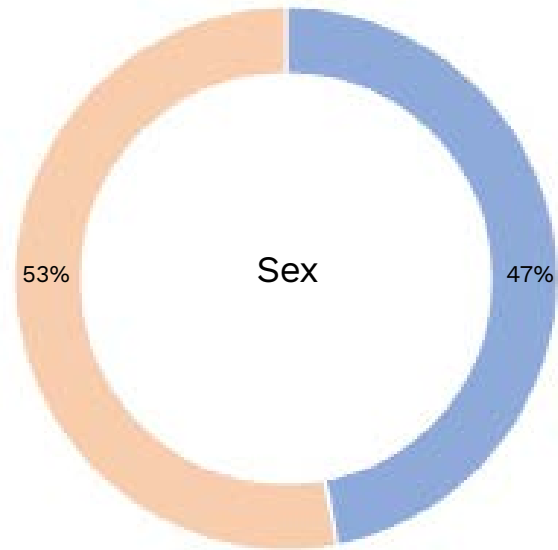
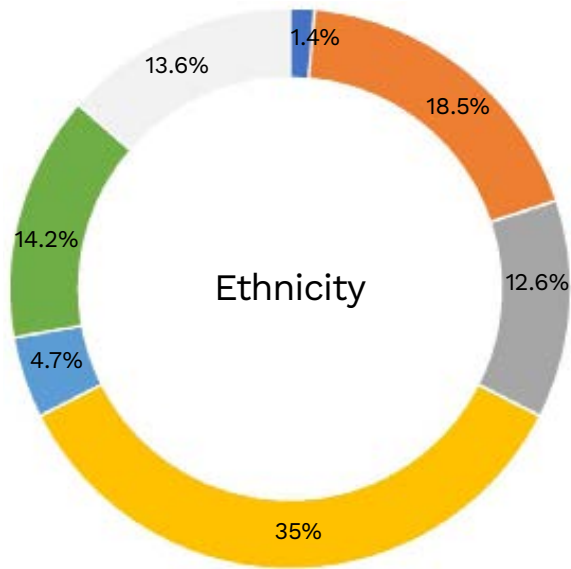
- Replaced + demolished existing school
- Included nearby community garden as part of the new design
- Construction of new school while previous school was operating





### 3. School & Community Engagement

#### a. Community + Student Demographic



- 1.4% American Indian or Alaska Native
- 18.5% Asian
- 12.6% Black or African American
- 35% Hispanic or Latino
- 4.7% Native Hawai'i'an or Other Pacific Islander
- 14.2% Two or more races
- 13.6% White

- 47% Female
- 53% Male

#### COMMUNITY ROOM

*Programming reflects the community's needs by accommodating not only students and staff effectively but also including dedicated spaces for community partners, such as social workers and healthcare providers. These flexible spaces are similar sizes to classrooms spaces which allows flexibility of programs needed in the future by the community or the school. A separate entrance to these community spaces allows for secure after-hours use.*

#### WOMEN, INFANTS, AND CHILDREN (WIC) SPACE

*This important community asset provides nutritious foods and other benefits free of charge to eligible families. Services offered at WIC sites include nutritional and breastfeeding support, including tips on keeping mothers and their families healthy. They also provide referrals to medical and dental providers, along with a variety of other community resources. A dedicated WIC space met a deep community need at this school.*



## b. Stakeholders

It was important to the design-build team that the stakeholder groups be carefully chosen and authentically involved, not a performative part of the process.

Three main stakeholder groups were identified, bringing district, teaching, learning, and community perspectives together. The Leadership Team (LT) consisted of district staff and members of the design-build team, whose purpose was to provide program requirements, information, and final design recommendations.

The Design Advisory Committee (DAC) consisted of district staff, parents, and community members who provided input on how the new building could meet the needs of students and staff. To maximize inclusion during the design process, a group of student/family stakeholders were also consulted.

## c. Engagement Process

Community engagement was a focus before and during design, with our team participating in many community events, including a *Hopes and Dreams* session, where families discussed what they wanted to see in the new school. Inside, the school community will be represented through a Family Wall and Welcome Wall, where photos, news, and celebration of culture are displayed. The words “Family” and “Welcome” are represented in numerous languages to welcome and reflect the diverse community.

The engagement process also included open conversations at the LT, DAC, and community stakeholder level on targeted topics. Honest dialogue and a clear hierarchy of decision making led to sensitive and vetted solutions for this school community, as well as a thoughtful vision and goals.



Boze Elementary students seeing a video rendering of their new school for the first time.



## 4. Education Environment

### a. Educational Vision + Goals



It is our mission to provide a safe, nurturing environment to help all children find the keys to their greatest learning potential.

Our mission is reflected in our school's motto:

*Learning is the key for tomorrow.*

- Boze Elementary School Mission Statement

Design solutions were meant to meet these overarching vision and goals through student-focused spaces that removed barriers to learning. More specifically, the programmatic goals embraced the school's emphasis on STEAM learning through an immersive environment where the building itself functions as a teaching tool in and out. Learning environments needed to embrace the varying aspects of the curriculum and learning styles while being flexible enough for future changes in pedagogy. Design needed to be "kid-centric," and put students first.

### b. Environment of Culture, Learning, + Curriculum

According to the Principal, the goal of this STEAM school is for students to become the drivers of their own education. And, to make STEM topics more accessible and culturally appropriate, students are queried about what interests them and what would they like to learn more about. This approach is central to making STEM topics relevant to their own life experiences, and therefore improving student engagement and minimizing exclusivity. Outside experts from the community are brought into the classroom to help facilitate the student's learning about real world problems, thus also making those careers more accessible to students. The design of the new school celebrates this unique style of learning through flexible, responsive classrooms and STEAM-inspired design elements. Spaces to learn through play in and out heighten these connections between classroom and real-world learning. Large gathering spaces, such as the cafeteria or gym, are large enough and flexible enough for schoolwide events that celebrate curriculum, including the school's annual STEAM showcase. Further, places for schoolwork to be highlighted and celebrated are integrated throughout.

The building is designed to function as a teaching tool, so learning opportunities are present throughout the space in a variety of ways. Because the school curriculum focuses on project-based learning, the "Maker Space" classroom is centrally located and includes relites that connect passersby to see activities that occur there. Each classroom has pops of color in the carpet with a signature accent wall and warm wood-tone finishes on the cabinetry. The spaces are filled with natural light and visual connections to nature, all subtle biophilic elements that enhance both the learning environment and user experience. Less emphasis was put on engaging corridors. Instead, design focused on maximized classrooms with adaptability and visibility prioritized within the learning spaces. Teachers were given their own spaces in the classrooms, as well.

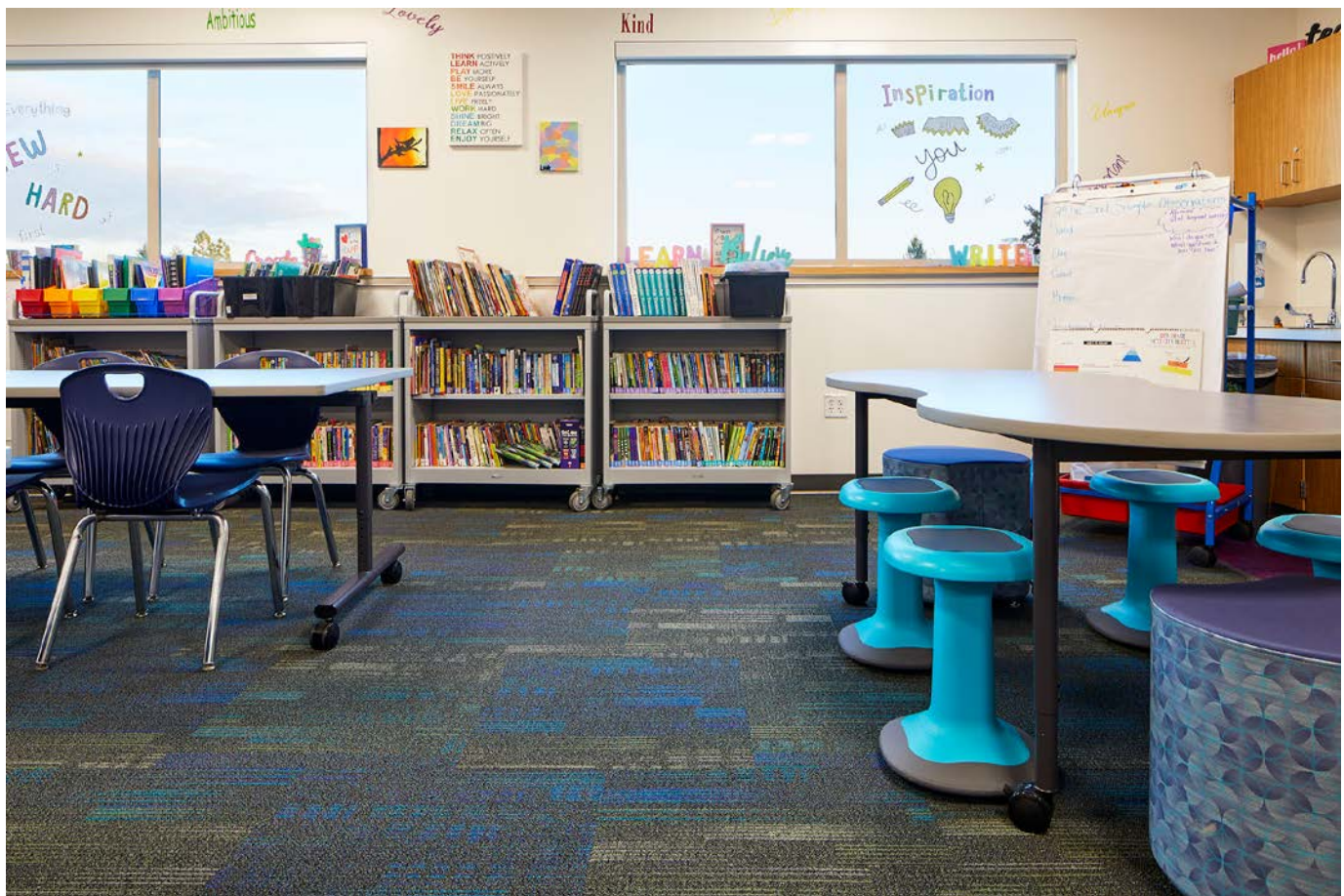
The main connection between the two floors functions as a "staircase of learning." The staircase was designed to be more than a place to move through and is instead a teaching tool on STEAM topics such as measurement, the solar system, and the alphabet. The stair is flanked by the Maker Space on the first floor and the library on the second floor, two important programming areas for the curriculum. In the library, students are given a visual connection to Mt. Rainier, as well as a group gathering space with carpeted risers for story time. The risers were made from wood salvaged from the old school.



## c. Environment Flexibility

Flexibility for changes in teaching and learning were achieved through movable furniture and minimal casework. Each classroom offers a dedicated, shared teacher office to provide opportunities for collaboration and focused planning time. To sensitively meet the needs of the student population, several smaller collaborative resource rooms are included. A maker space for STEAM learning and messy exploration was given utility sinks, space for a kiln, exposed ceiling, additional power outlets and easy-to-clean surfaces, creating a room that can accommodate a variety of programming over time.

The selected classroom furniture supports the learning environment with flexible seating options, group meeting spaces, as well as a subtle integration of color to provide an uplifting environment for the students and staff. Group learning and cooperation is reflected in the layout of classroom and programmed areas through reconfigurable furniture and variety of seating options for small group break outs.





# 5. Physical Environment

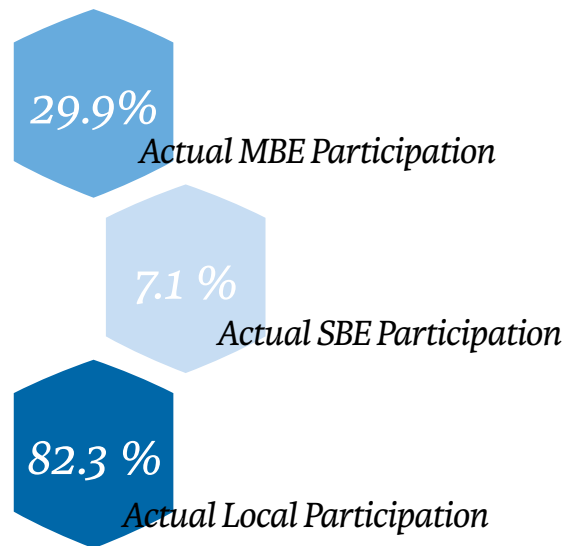
## a. Project Context + Role

Architecturally, the design vocabulary reflects the neighborhood and responds with sloped gable roof forms and siding materials like those found in surrounding buildings. The variation and arrangement of cladding styles and colors are designed to visually break-up the massing of the building and reduce the scale, which assures that the school building fits within its residential surroundings.

Programmatically, the school provides several community assets, such as the WIC clinic, which meets a critical need. The WIC program was given its own space and entrance in the new design, with clearly marked signage and wayfinding. Located in a traditionally transient neighborhood, this school has found that by providing spaces for these services, families are trending towards staying in the neighborhood longer, which in turn has created a stronger connection between the school and its students and families. A dedicated community meeting room is a safe space where users can gather, another important programming space for the school and surrounding community. A garden on the existing site was so celebrated that it was requested that it be saved and moved onto the new campus. The playfields that were included are the first community-use playfields on a school campus in the area, and a great source of pride for this school community.

## b. Inclusion + Belonging

As part of the design-build process for this replacement school, diversity and inclusion goals were set by the district. Inclusion and belonging started as part of the process and were carried into the project. The design-build team exceeded inclusion goals through robust diverse and disadvantaged business outreach during the earliest phases of teaming and design. Mentorship programs for disadvantaged businesses were put in place, as were apprenticeship programs in partnership with the district. The design-build team attended school functions to meet with families and solicit feedback, starting with the Hopes and Dreams exercise at the school's annual Family Fun Night. Involving families and students in the design process further added to the sense of belonging and ownership in the new school.



\*Compared to original district goal of: 10% MBE, 5% SBE, 30% Local



Students help solve site challenges (above)  
Drone footage provided by contractor.

As the project moved forward, the spirit of belonging continued. This has always been a school that welcomed everyone. A diverse student body brings many cultures together in one place centered around the concepts of belonging and a collective community. To make the school feel welcoming and accessible, safe walking routes were identified and included as part of site design. The school's main entrance is now highly visible from the street, with clear sightlines throughout the campus for safety and security. A generous main courtyard with benches and landscaping promotes gathering. A unique STEAM-inspired entry canopy celebrates a local landmark, the 509 bridge, and draws a connection between the school community and the larger Tacoma community. Signage inside celebrates the 27 languages spoken at the school.

Messaging about community and family are included in the entry with signage that reflects the diverse cultural composition of the students as well as a wall that welcomes students and visitors with information about families, resources, and events. These customizable areas were identified as important goals to meet for inclusion and belonging. This school also promotes project-based learning, a strategy for student-led learning, so the design provided the necessary infrastructure for the development of hands-on learning projects. Supporting student-led learning environments further fosters inclusion and belonging.

## c. Sustainability Goals

To meet aggressive Washington State energy requirements, the HVAC system decouples ventilation and heating and cooling for increased operational efficiencies. The ventilation system is served from dedicated high-efficiency outside air units with heat recovery, and the building heating and cooling system is served by variable refrigerant flow (VRF) technology. Ventilation system units are centralized to serve large portions of the facility and reduce equipment count, and units are located in centralized mechanical attics for easy access for maintenance staff. The VRF system uses the outdoor air as a free energy source/sink and modulates the speed of the systems compressors to precisely match the energy needs in the facility. In addition, when simultaneous heating and cooling is needed in various portions of the facility, the spaces can “trade” the energy between spaces achieving peak operating efficiency capability and energy transfer for thermal comfort. A building automation system provides automatically controlled sequences of operation and energy monitoring so the facility operators can meet the sustainably designed operational expectations.

For the interior, finishes were selected based on durability and maintainability, giving them a longer life. Low VOC paints, adhesives, and sealants were also specified. All materials support the district's maintenance protocols, including medium density fiberboard (MDF) wainscots and sustainable linoleum floor tiles.

Other sustainable elements include a community garden and community playfields separate from the school's secured playfields. The community playfields and a portion of the school playfields consist of synthetic fields that are more sustainable and do not require irrigation and fertilizers.





## 6. Results of the Process & Project

### a. School, District, + Community Goals

The achievement of goals and objectives comes down to two factors: maximizing the benefits of the progressive design-build delivery method and authentic collaboration. By working with the school, district, and community, the design-build team was able to identify and prioritize varying needs – and come up with a plan to deliver them.

For the district and design-build team, the following goals were met:

- **Satisfied 100 percent programming requirements from the school district.** This school and surrounding community were given everything they needed and more, our greatest measure of success as a team. The stated district goals of providing a safe and healthy environment for school and community use were all met by working closely with the contractor to optimize efficiency of materials and construction process.
- **Project completed ahead of schedule and within budget.** Big wins for the district at the end of their bond cycle! The ongoing, honest collaboration and the tools employed by the PDB team allowed budget and schedule goals to be met despite adversity. By utilizing the benefits of design build, we were able to accelerate the construction schedule by accelerating design and permitting of the site and foundations. Additionally, uniformity of design and layout of stud walls allowed the wall framing to be panelized and built on-site while the foundation was being installed, which helped to further accelerate the construction schedule. Due to this acceleration of schedule, we were to reduce planned overtime summer labor which afforded the ability to add in an upgrade to the surface of the community playfields. The success of this project was not only instrumental for strengthening the community, but also helping to develop trust with the taxpayers to help pass a subsequent bond right after the completion of this project.
- **Diversity and inclusion results were over three times higher than recent similar school projects.** An important measure of success that allowed local and disadvantaged businesses opportunities for growth. The design-build team included a diversity and inclusion champion, as well as a written plan for inclusion. Followed by active and intentional outreach, diversity goals were met and exceeded for both design and construction.

“

From challenging beginnings, [this project] rose to become one of the most successful projects in recent district history...The entire design-build team—from the builder to the architect to the engineers—understood the cost challenges we faced, as well as our refusal to provide anything but the best for [the] students. We could not be happier.

*All project goals for community, program, function, quality, cost, and schedule were met without any sacrifice to student learning and safety...*

I cannot express our thoughts better than to say that due to our extraordinary experience using progressive design-build on [this school], we're planning only progressive design-build projects in the future.”

- District's Executive Director of Planning + Construction

### b. Justice, Equity, Diversity, + Inclusion

Diversity and inclusion in the process and project have been explored in earlier areas of this dossier. Justice and equity were met in different ways during this replacement project, starting with meeting the stated goal of the Design Advisory Committee:

*“An authentic, community-woven environment where students explore their curiosity to engage in lifelong learning.”*

“Community-woven” is a term that supports justice and equity, as well as diversity and inclusion. “Woven” suggests separate pieces coming together; an analogy of the inclusive process undertaken during this project. By further approaching the new school's design with the diverse community in mind, knowing many students and cultures would be coming together in this one place, outcomes are also rooted in justice, equity, diversity, and inclusion.



Social justice is an idea that everyone deserves equal rights and opportunities and to be treated without prejudice. For elementary school communities, that might mean practicing kindness or welcoming behavior. The built environment can support a social justice mindset by providing accessible spaces with no barriers to belonging or learning. Areas of the school dedicated to **celebrating differences** change the narrative and allow for meaningful educational opportunities that go beyond classroom learning. At this replacement elementary school, the welcome and family walls support this exact purpose. Students are encouraged to showcase their families and culture, thereby educating others and creating a deeper sense of connection. The Family Wall sent a clear message of inclusion by encouraging students to post pictures of their families, as this school community provided services and spaces for the student's family unit, as well. The Welcome Wall displays pictures of activities, events, and students for visitors at the school.

Equity was a big topic of conversation during this project. The district had reached the end of its bond cycle. Since several previous projects had finished over budget, this project started from a budget deficit. However, the school environment needed to be on par with the other replacements districtwide, regardless of tighter budget constraints. The design-build team had to get creative within the fixed budget to assure equity in quality learning spaces for the students at this school. We achieved equity in quality by focusing on classrooms that celebrated students. Design of corridors remained lean and simple. Experiential graphic design, an economical design option with big impact, was integrated through STEAM elements in the "Learning Staircase," empowering messaging on cafeteria windows, and other elements in places where students interact with the environment. The experiential design was meant to spark curiosity and draw connections to lifelong learning.

## c. Unintended Results + Achievements

- An interesting piece of anecdotal information from district leadership is that the new replacement school has reported zero incidents of vandalism since the new building opened, where vandalism had been frequent and prevalent in the old facility. We like to think the students and community appreciate their responsive new facility that much!
- Since this new replacement elementary school, the first PDB school in the state, successfully delivered on schedule, budget, programming, and inclusion goals, the district has decided to utilize the progressive design-build delivery method moving forward.



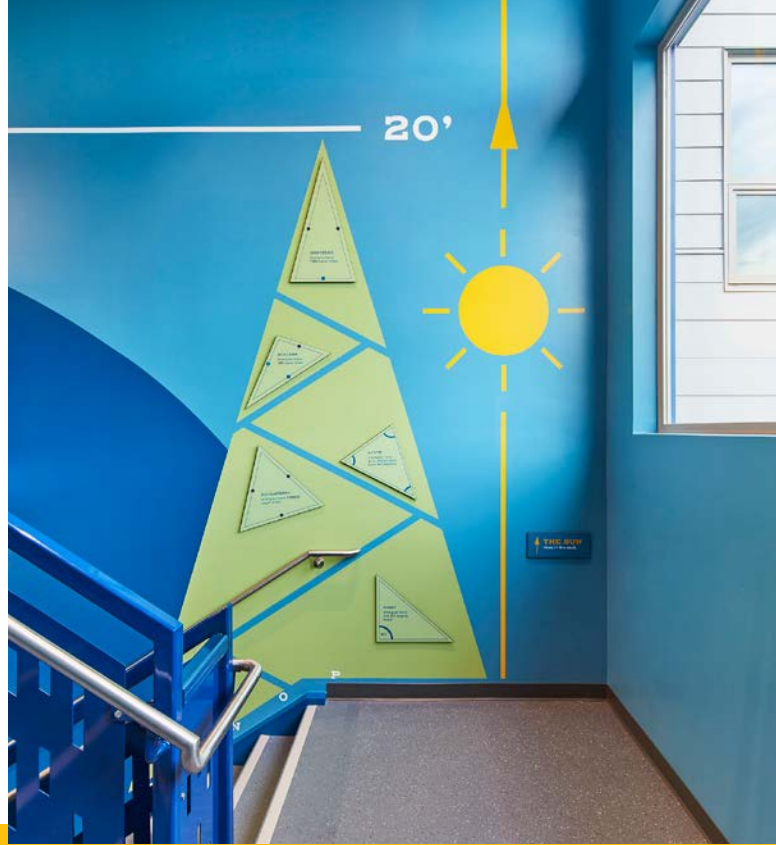
## Boze STEM Day

Boze is a STEAM school, with curriculum based in Science, Tech, Engineering, Art, and Math. Design goals included using the building as a teaching tool to introduce real-world learning in unexpected ways. The design-build team took that learning a step further by hosting a STEM Day for district students. Starting at the design team's office, students worked with interior designers to lay out a classroom, landscape architects to solve site challenges, and building envelope specialists to learn about air and water barriers. The architects created 3D videos and provided tech that allowed the students to tour the new Boze virtually before taking a tour of the construction site with the contractor team later in the day.

STEM Day provided an elevated, immersive learning experience focused on inclusion. The design-build team was inspired by the level of student engagement and plans to implement on-site learning with school communities moving forward.







District owned photo

