





Radical Empathy

three transformative projects in underserved communities

Metropolitan Family Services | Chicago, IL

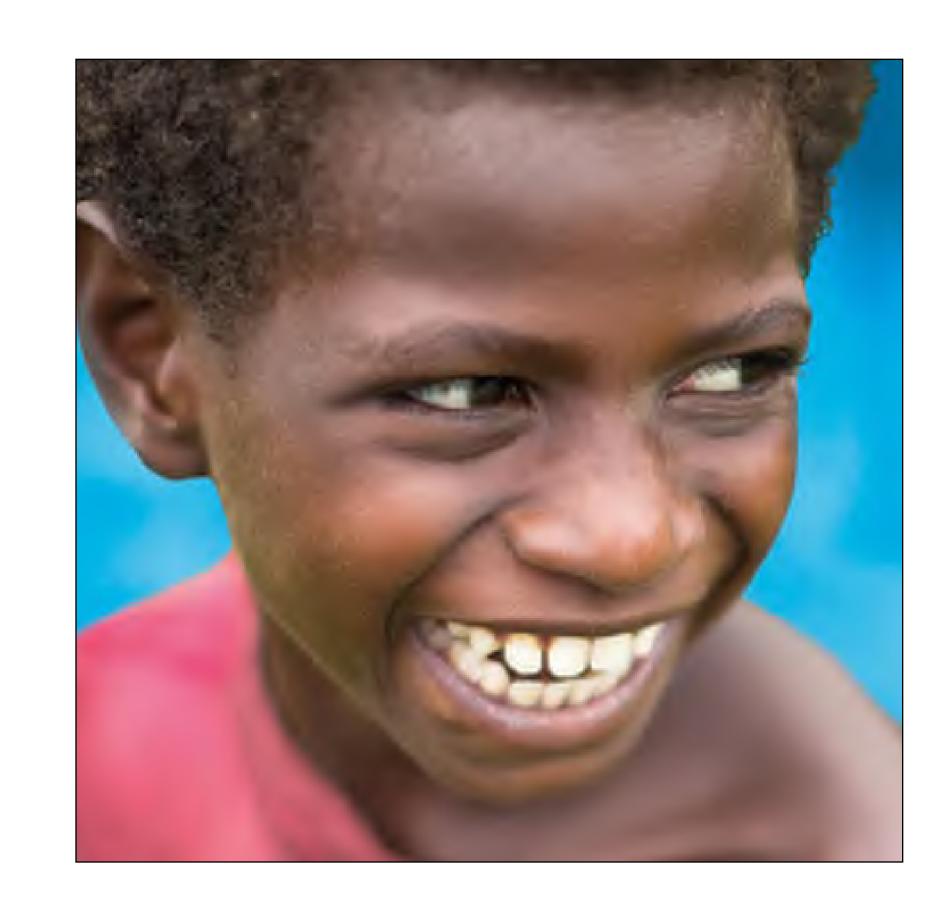
learning underfoot: vibrant installations bolster early learning in underprivileged neighborhoods

A Global Priority

Part I | Beginnings & Boundaries

Critical Needs

- Today, 55% of the world's population lives in urban areas. This proportion is expected to rise to 68% by 2050.
- By 2030, over 70% of the world's children will be living in urban areas.
- Most of these children-- projected to be over 825 million-- will reach adulthood without basic secondary skills needed for the workplace.
- Children from under-resourced communities regularly enter formal schooling already lagging behind their peers.
- These deficits include areas such as language development, reading readiness, and even spatial skills that predict later mathematical knowledge, and can persist throughout one's life.
- "Many cities continue to ignore the needs of children and their caregivers as they relate to early education." | *The Brooking Institution.*



Playful Learning Landscapes

Part I | Beginnings & Boundaries

Kathy Hirsh-Pasek

Kathy is the Stanley and Debra Lefkowitz Faculty Fellow in the Department of Psychology at Temple University, and is a Senior Fellow at the Brookings Institution. She is a pioneer in research related to the development of early language and literacy, as well as the role of play in learning. With the Brookings Institute, Kathy helped create the Playful Learning Landscapes model.

- Playful Learning Landscapes is an education tool that lies at the intersection of the global cities movement and the push to optimize early education.
- The goal of the program is to reinvent everyday experiences as fun learning opportunities that organically prompt the kinds of interactions that help children thrive.
- By infusing cities with playful learning opportunities, the hope is that we can enhance children's cognitive and social development to better prepare them for success in the 21st century.



Urban Thinkscape in Philadelphia



learningSCAPES 2022
A CALL TO ACTION

LEGATARCHITECTS

Playful Learning comes to Chicago

Subtitle Text: Neue Haas Grotesk Display Pro 55 Roman @ 28pt font

Process

- Metropolitan Family Services (MFS) is Chicago's oldest charity organization, founded in 1857 as the Chicago Relief and Aid Society.
 MFS focuses on on helping underprivileged families connect to muchneeded assistance and social services within their communities, including affordable childcare and legal aid.
- In early 2017, representative from MFS toured Kathy Hirsh-Pasek's Urban Thinkscape project, and began to explore ways to bring a similar project to under-served neighborhoods in Chicago.
- In late 2017, MFS identified three under-served areas to target and hired Legat Architects to help develop new concepts for playful learning installations that would be tailored to these neighborhoods.
- Simultaneously, Metropolitan began the search process to find community anchors (right) who would help locate installation sites, provide direct access to parents and stakeholders in the community, and work with local aldermen to champion these projects.



















learningSCAPES 2022

A CALL TO ACTION

LEGATA R C H I T E C T S

Constraints

Part II | Process & Partnerships

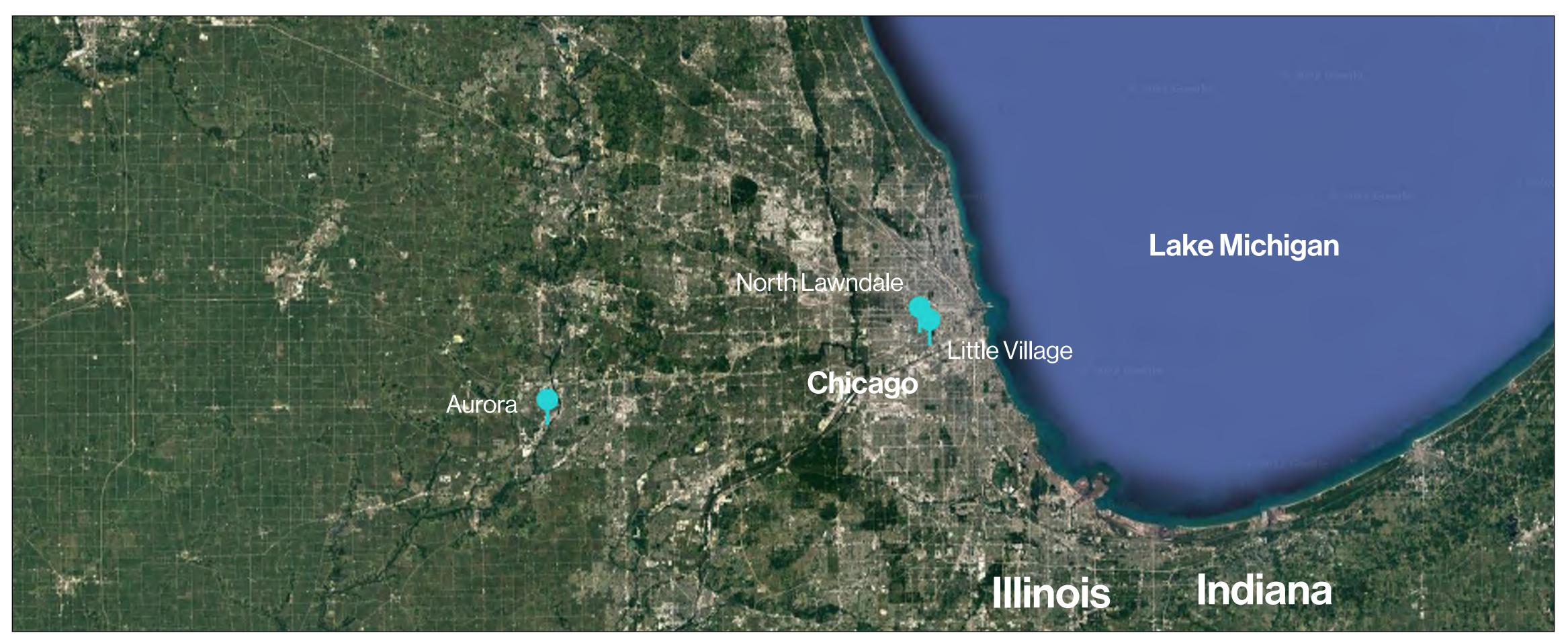
Three neighborhoods, one goal.

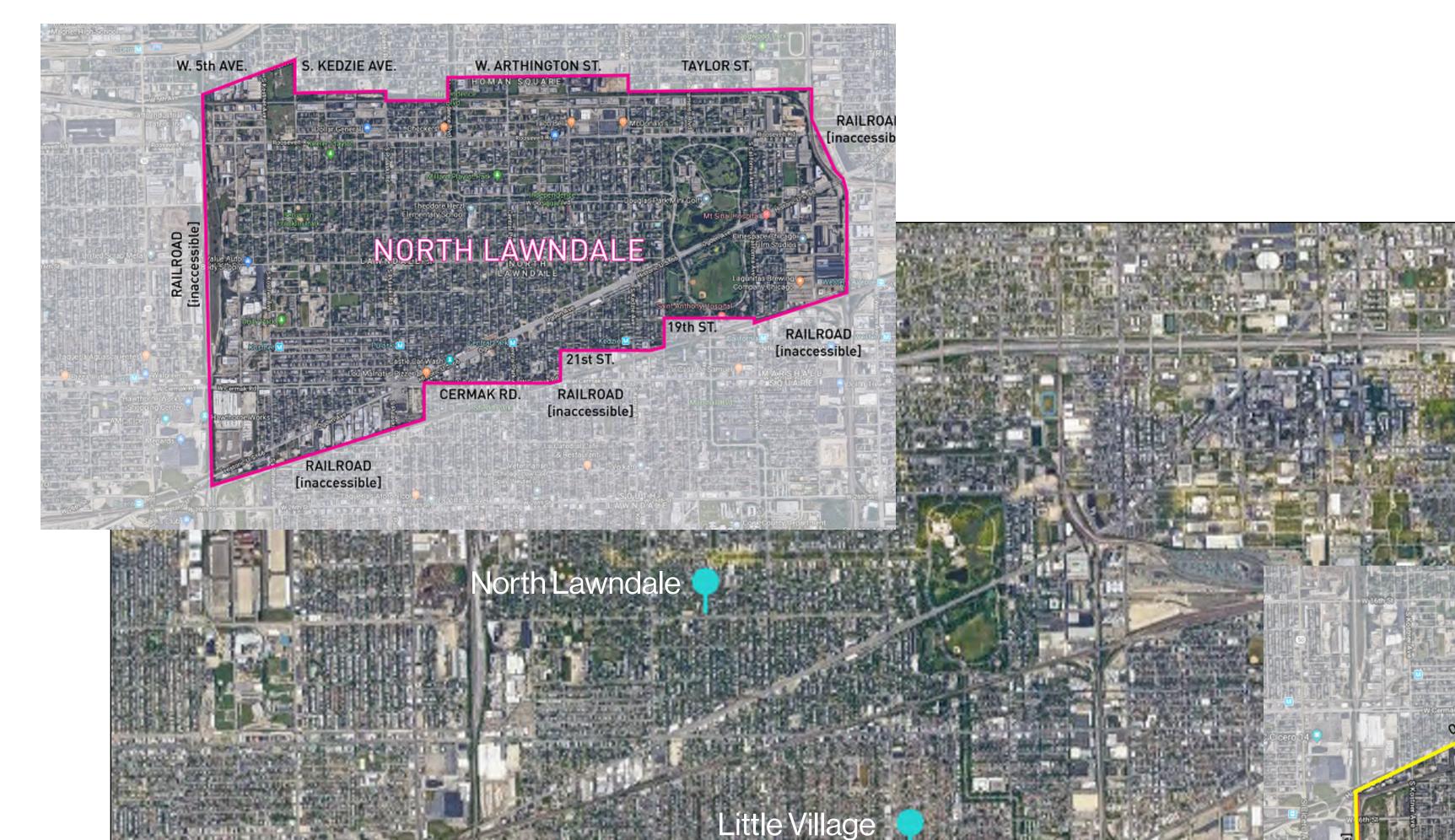
While the original Urban Thinkscape project completed in Philadelphia by the Brookings Institute used actual physical installations, MFS was working with a shoestring budget. To complicate matters, their chosen partner organizations each wanted installations in their home neighborhoods, splintering the already-small budget into thirds. The decision was made to only proceed with installations that could be done using paint. Meanwhile, three communities were targeted.

- Little Village: Known as the "Mexico of the Midwest," this community is a colorful enclave of low-income, first-generation immigrants.
- North Lawndale: A predominantly low-income African American neighborhood, this community became famous in the 1960s when the Rev. Dr. Martin Luther King Jr. stayed in an apartment here to highlight the area's dire conditions.
- **Aurora:** The only site not located within the city of Chicago, Aurora is the second-largest city in Illinois, and is a former manufacturing city built along the banks of the Fox River.



Project Context



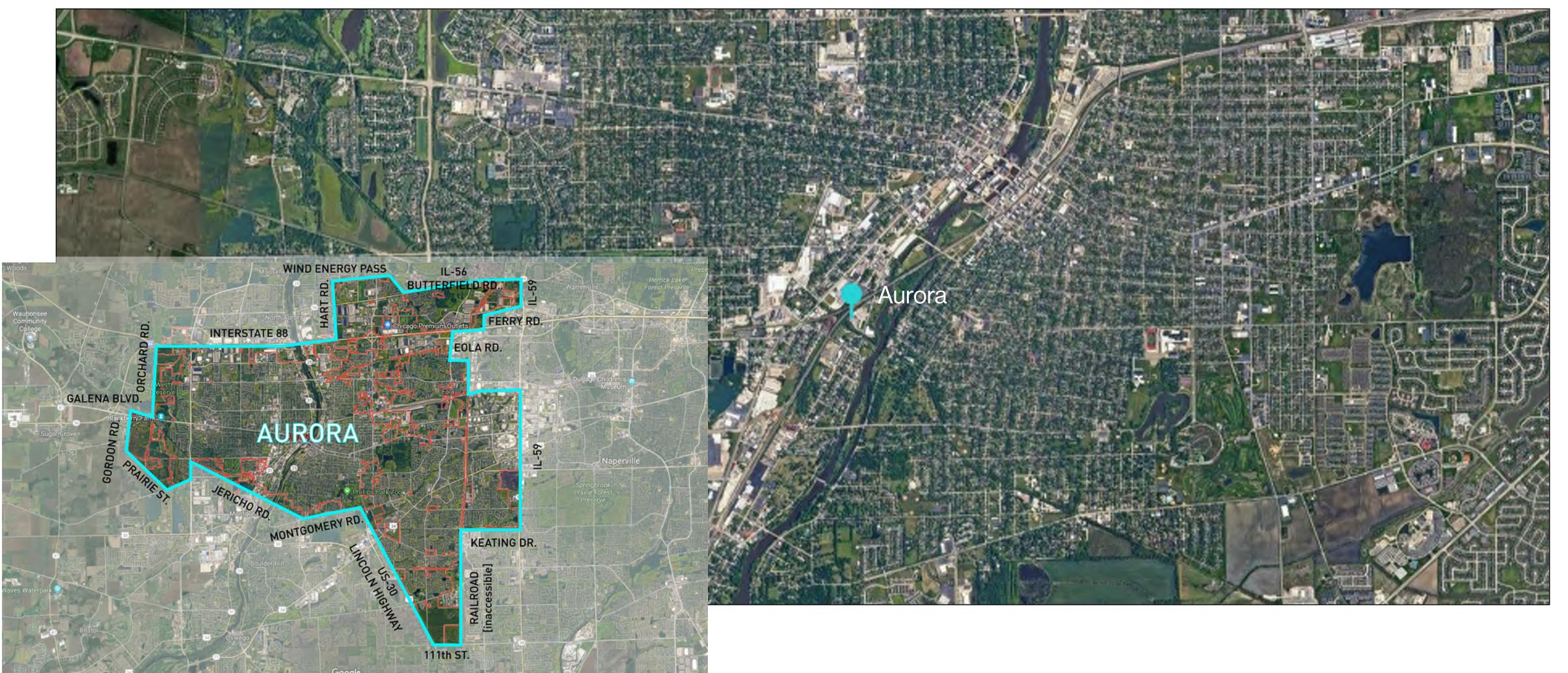


Sites & Locations



Sites & Locations

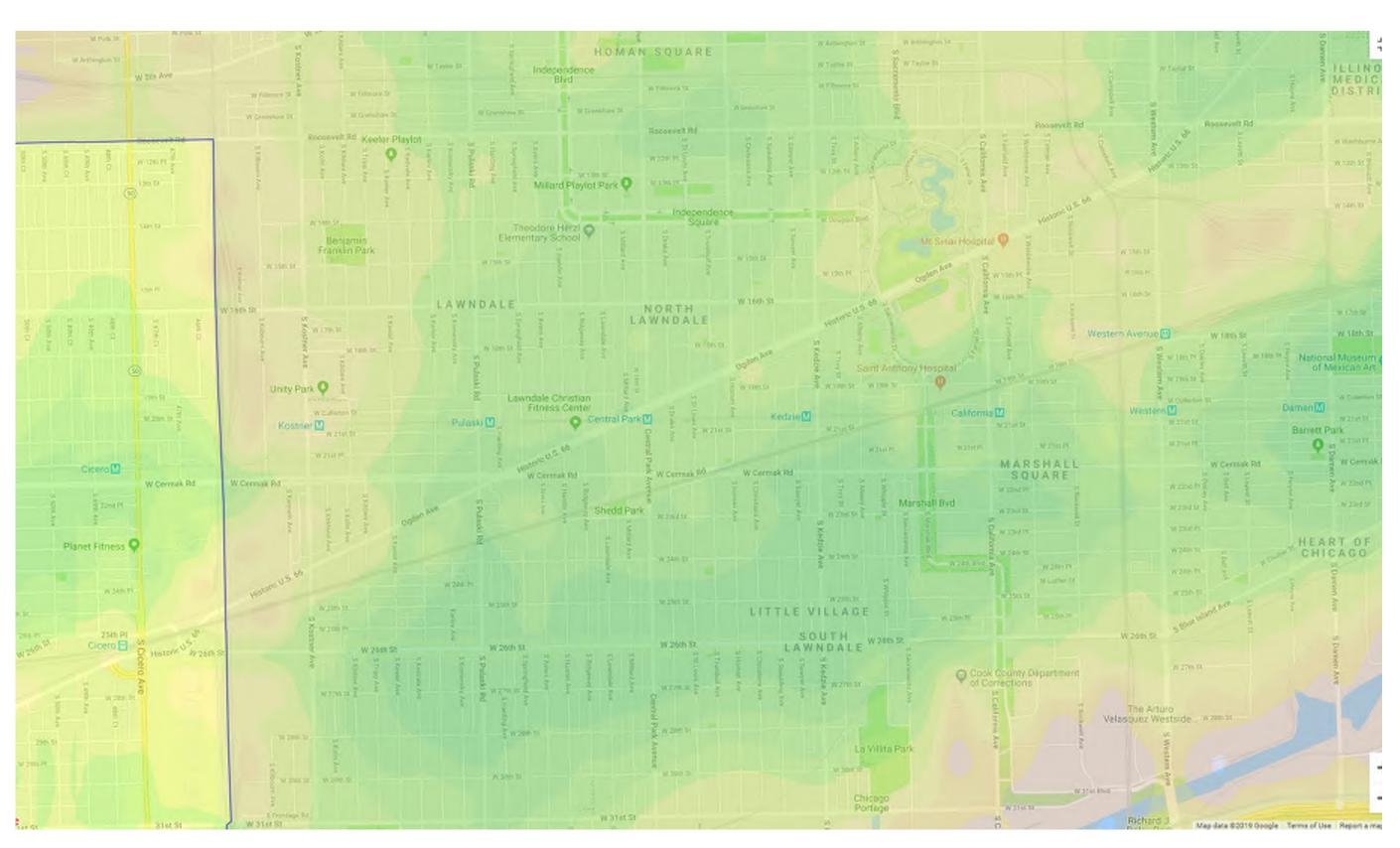
Part II | Process & Partnerships

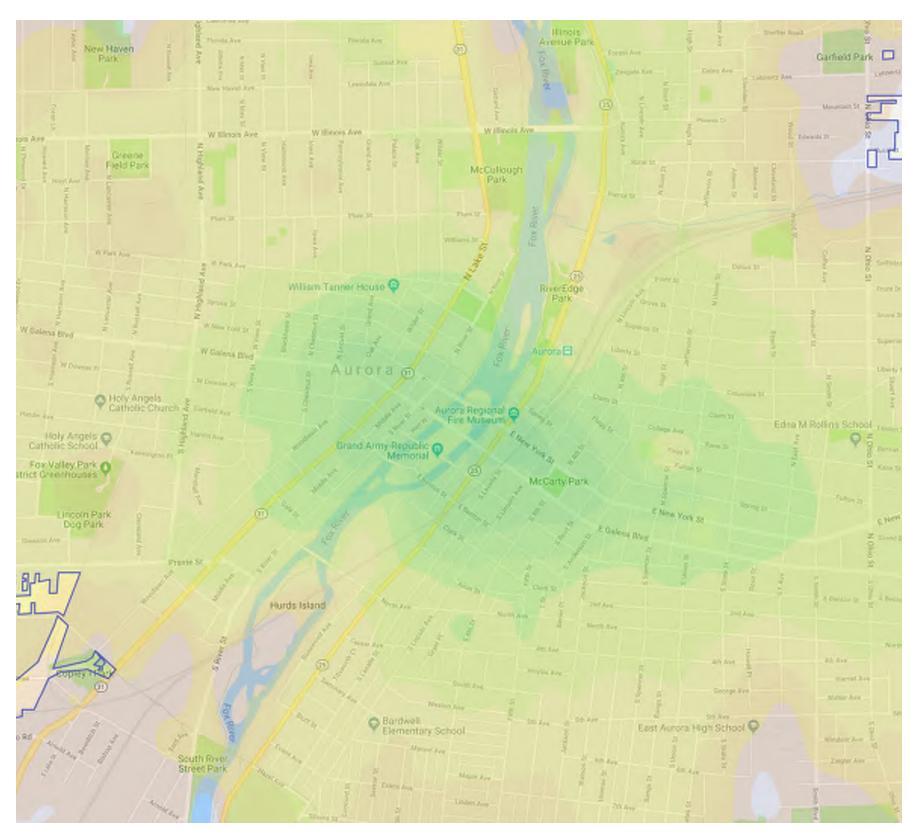


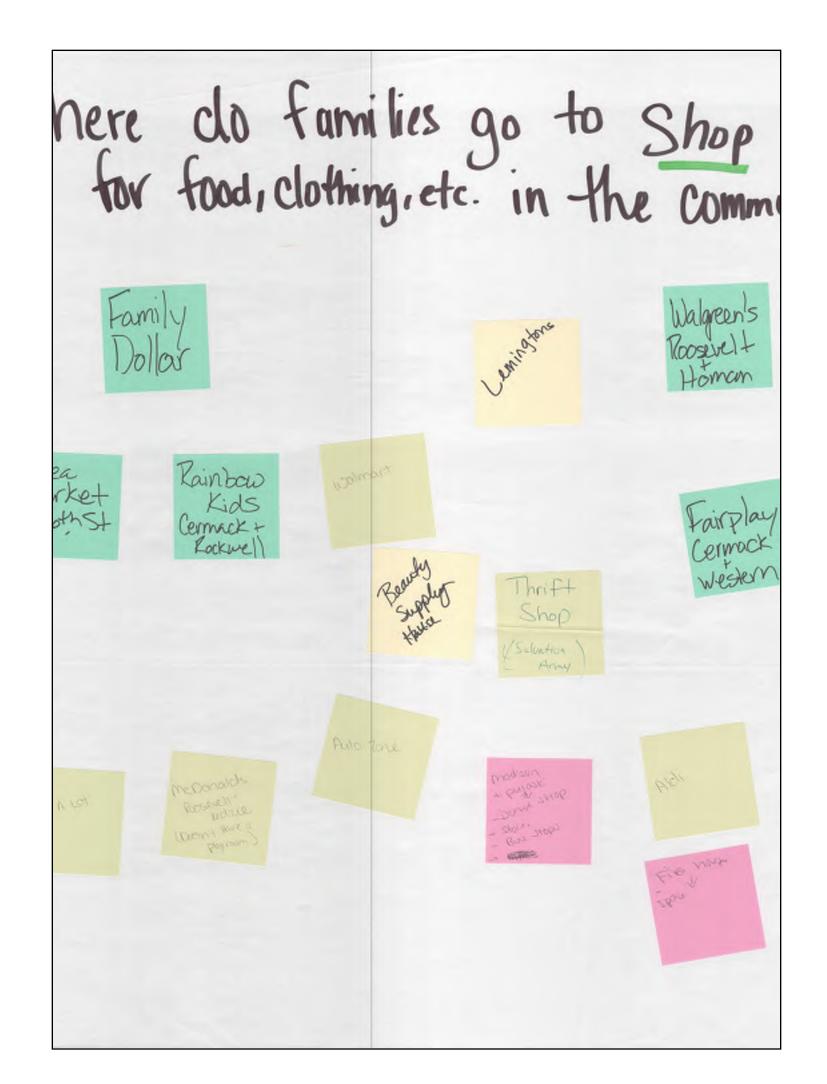
learningSCAPES 2022

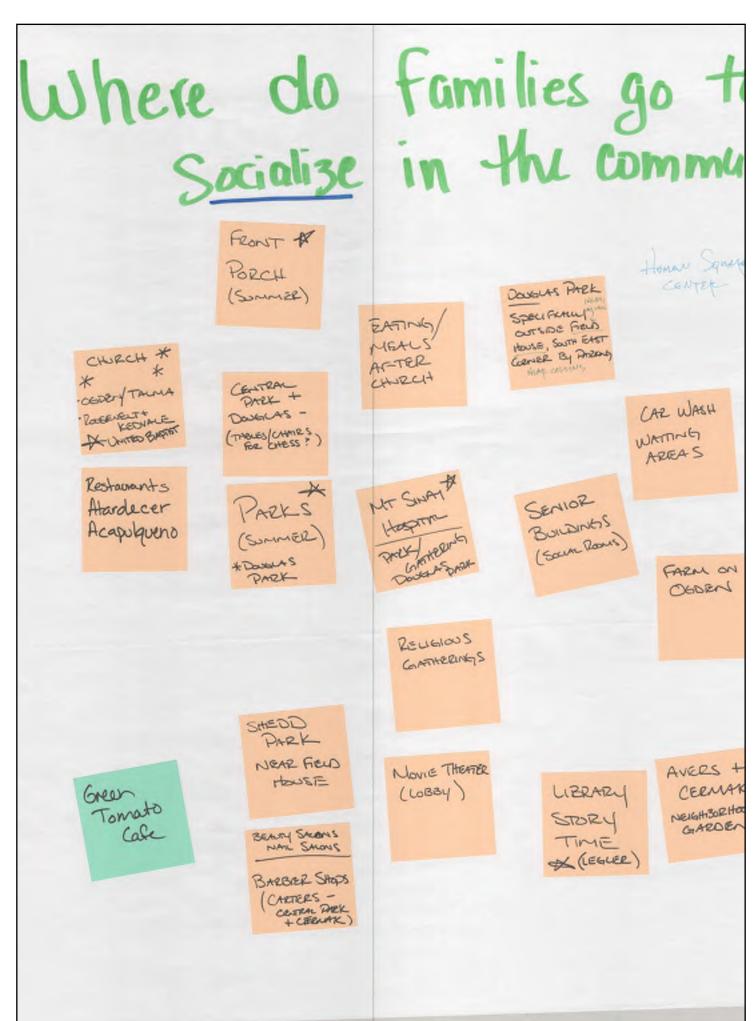
A CALL TO ACTION

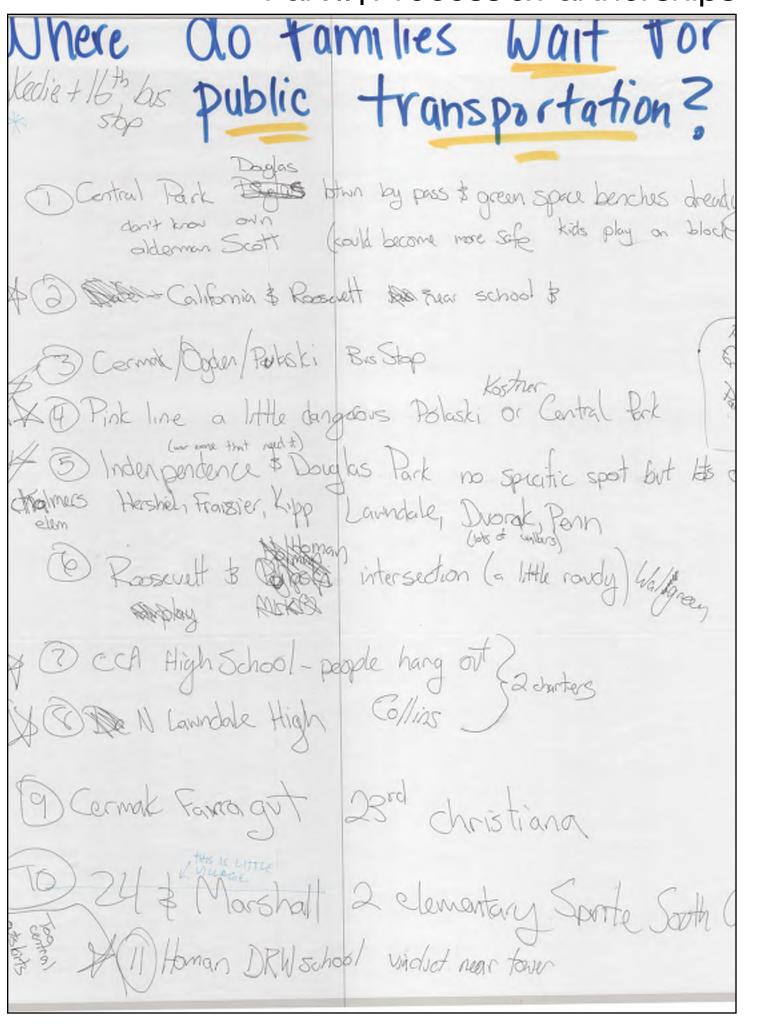
LEGATARCHITECTS



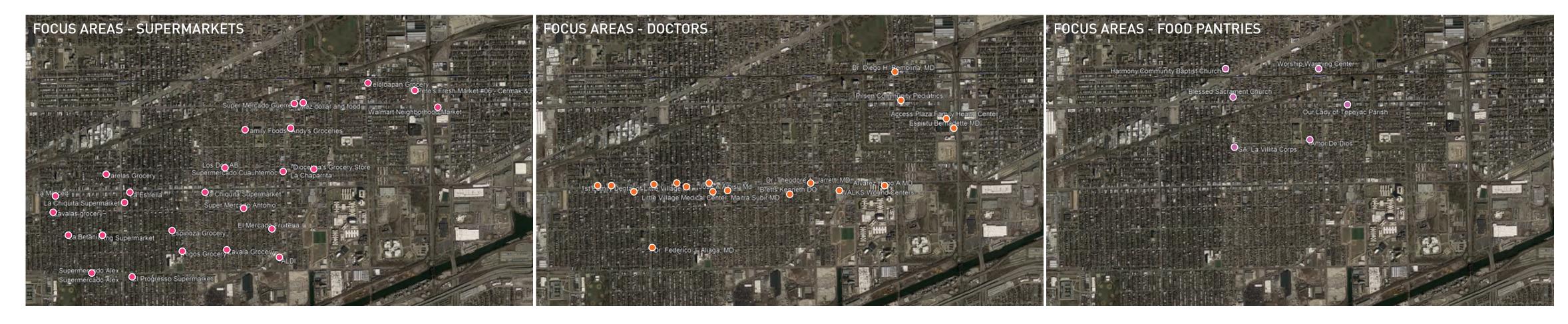


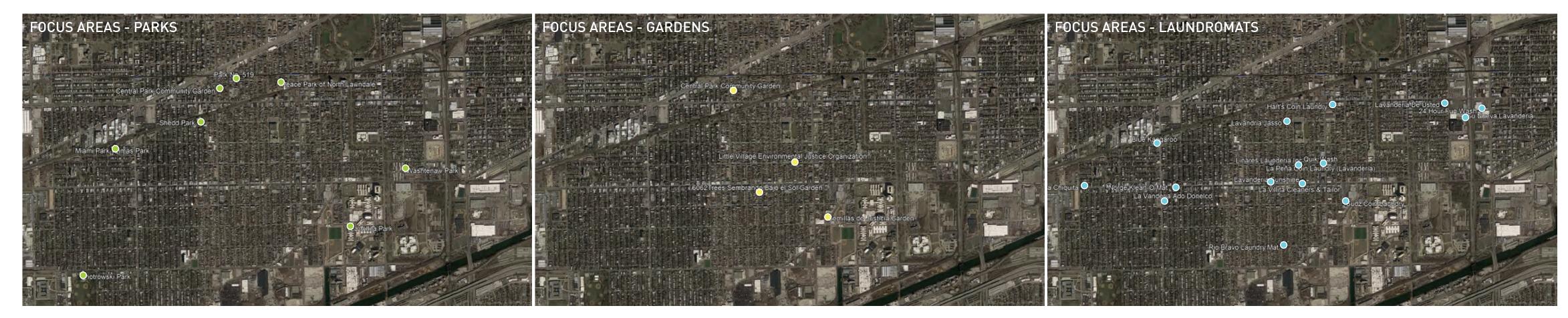






Part II | Process & Partnerships

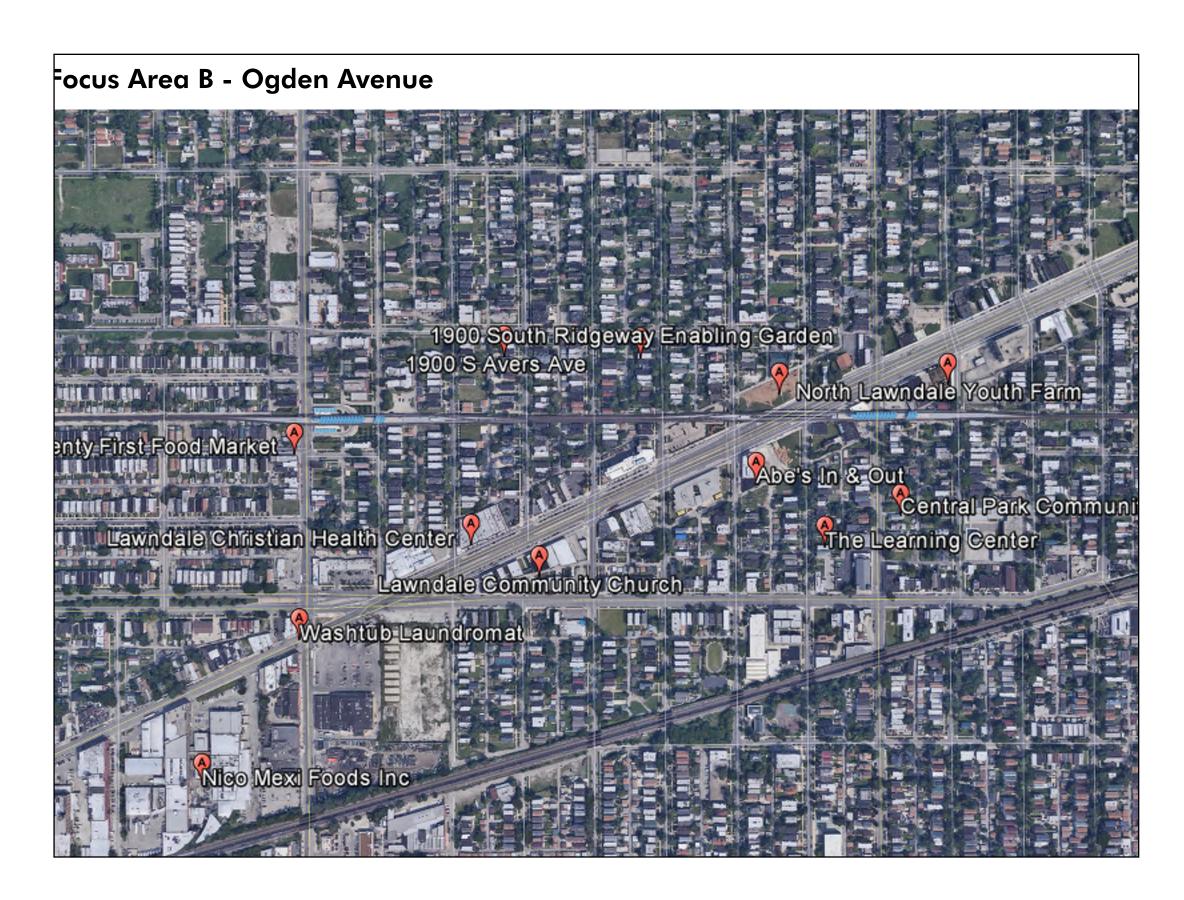


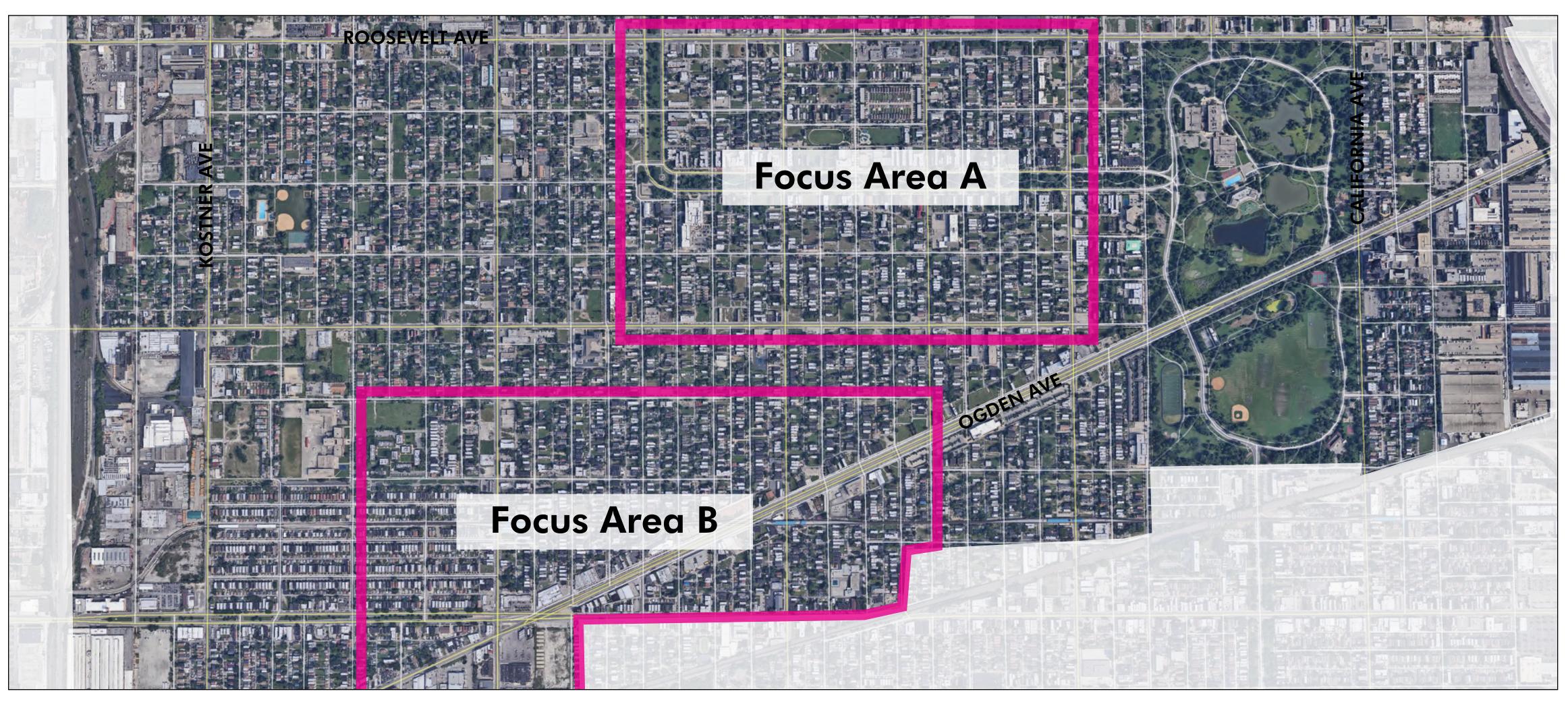


learningSCAPES 2022
A CALL TO ACTION

LEGATARCHITECTS



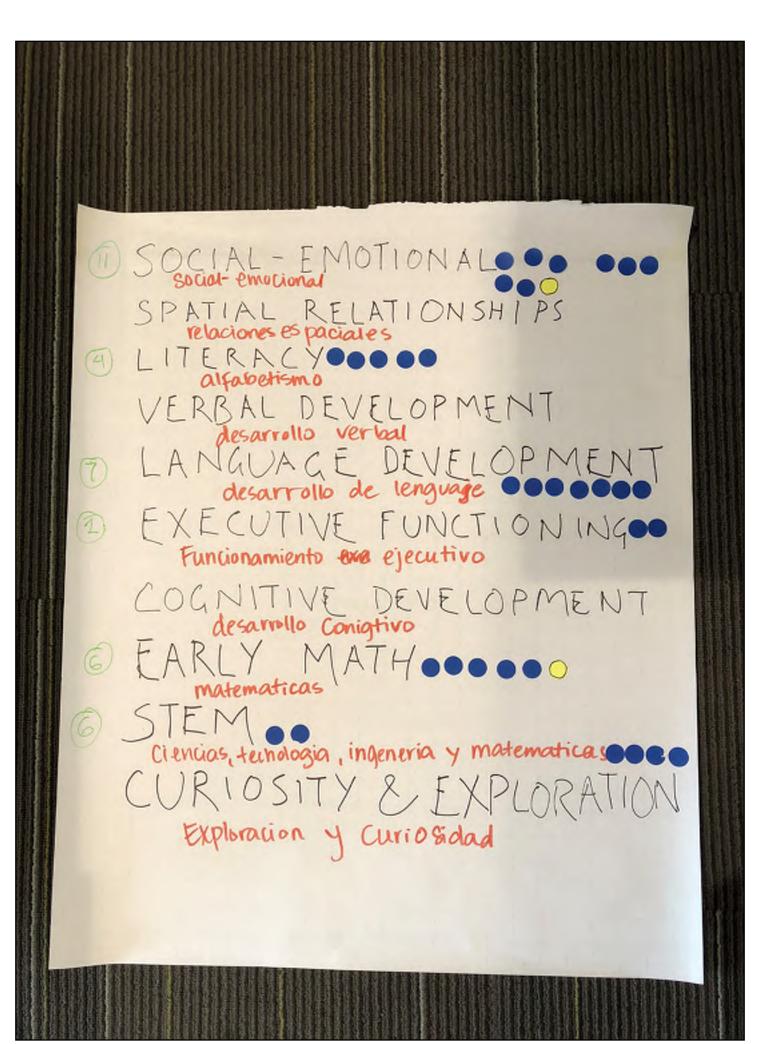


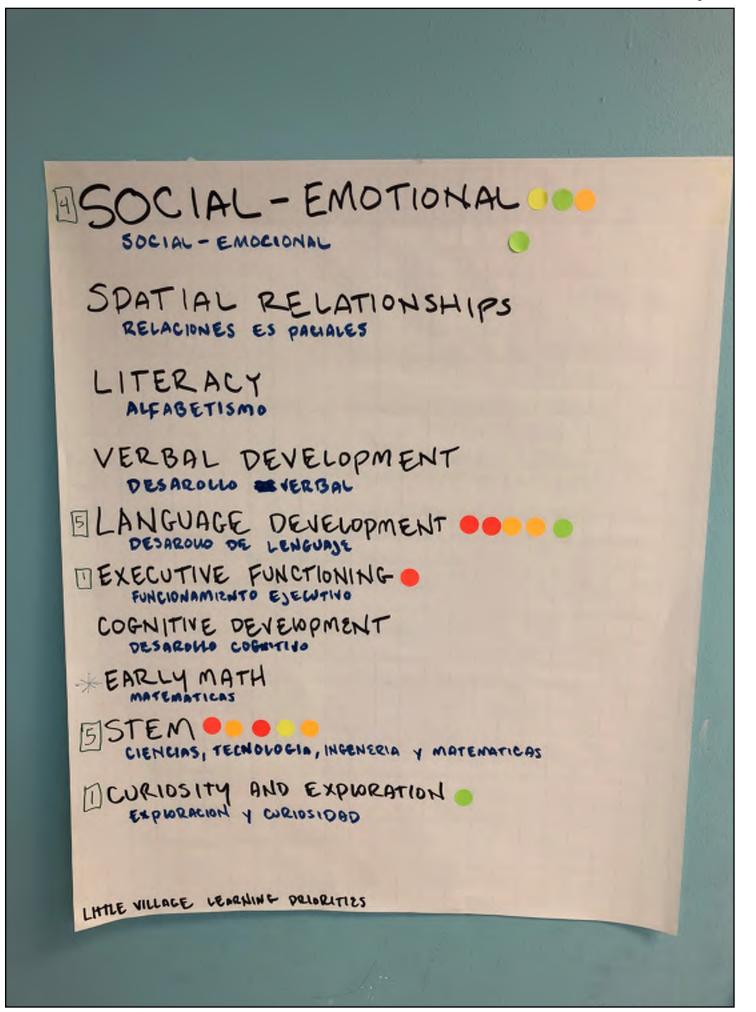










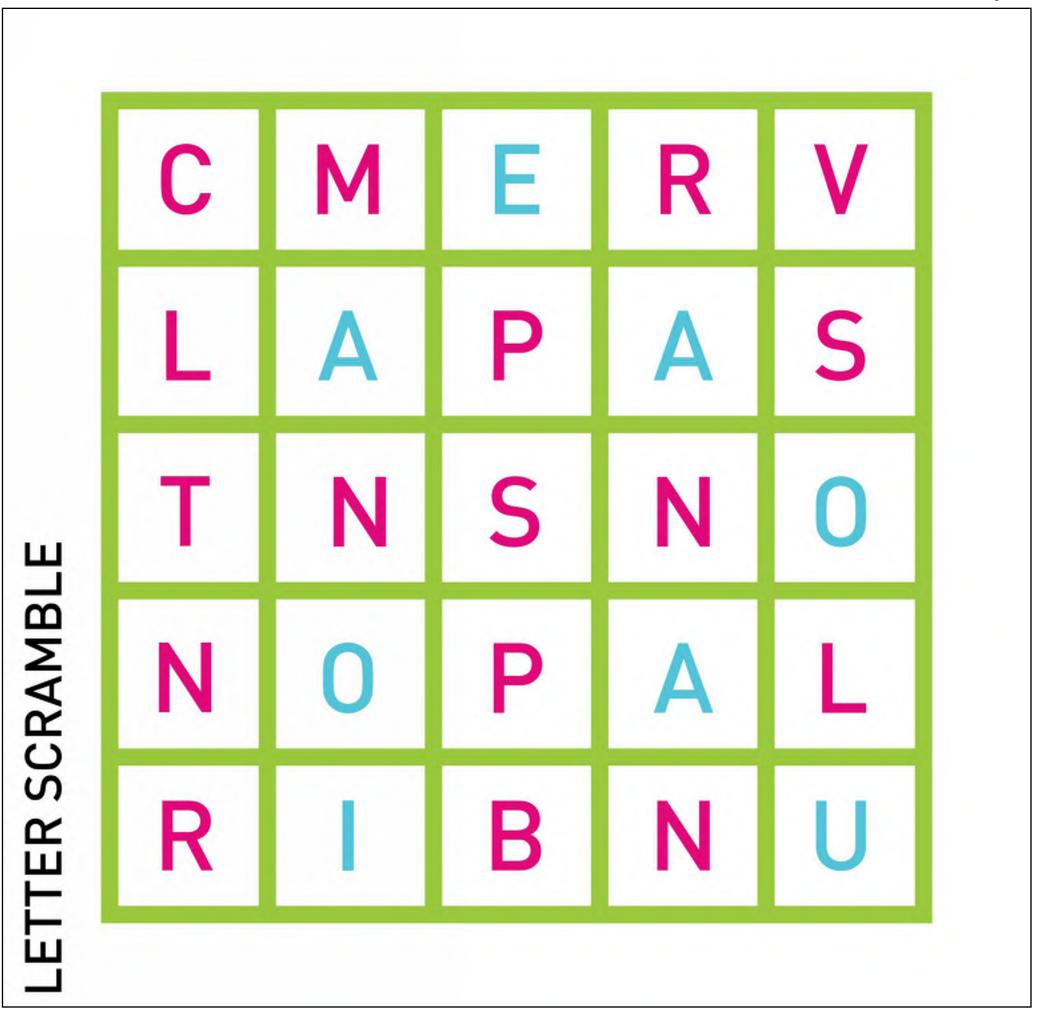


SNAKE

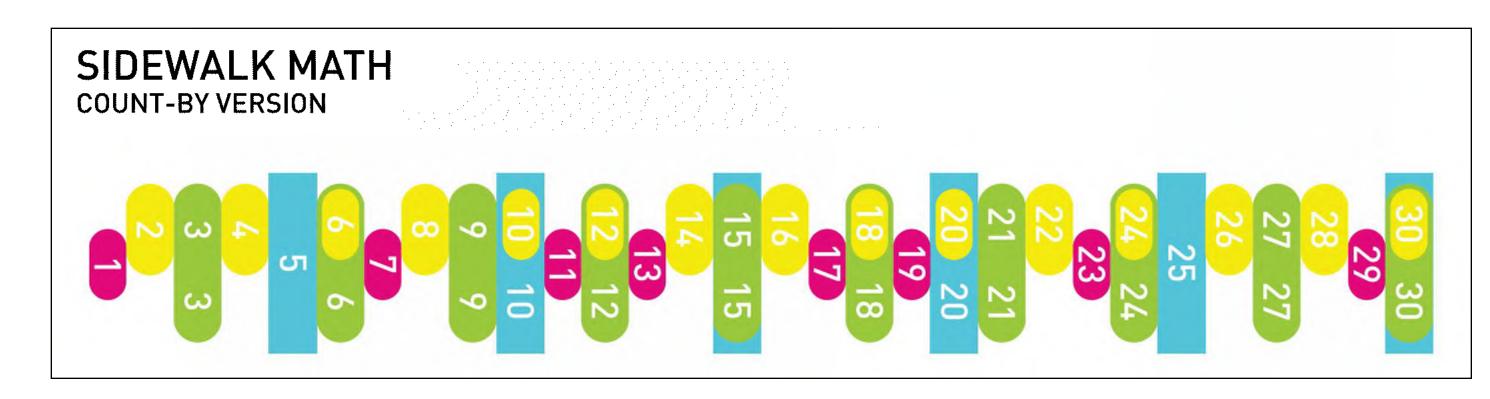
learningSCAPES 2022 A CALL TO ACTION

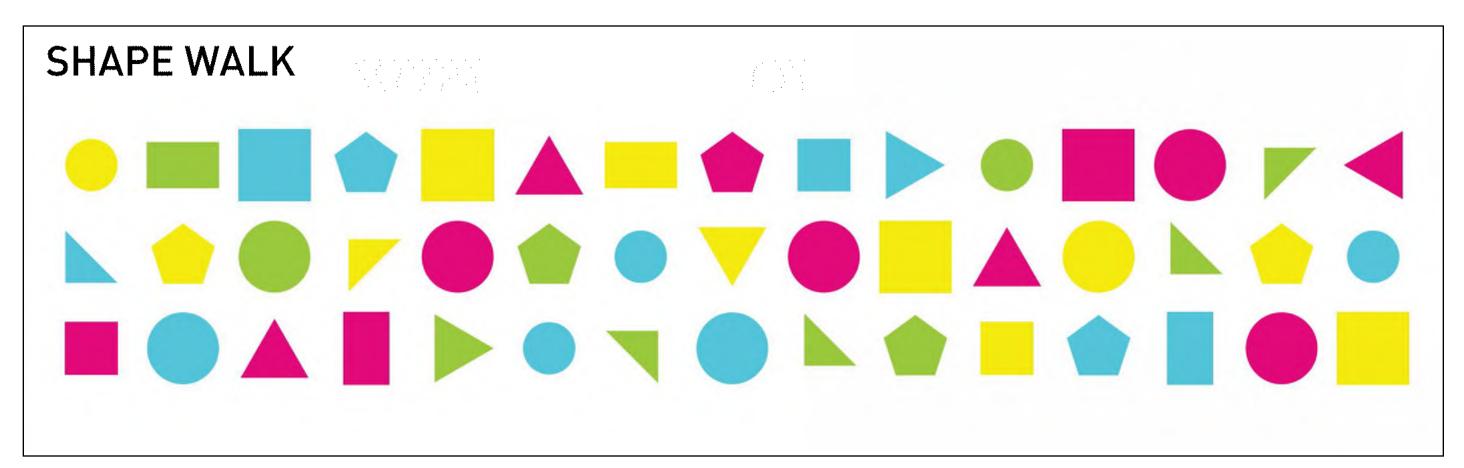
Development & Prototyping

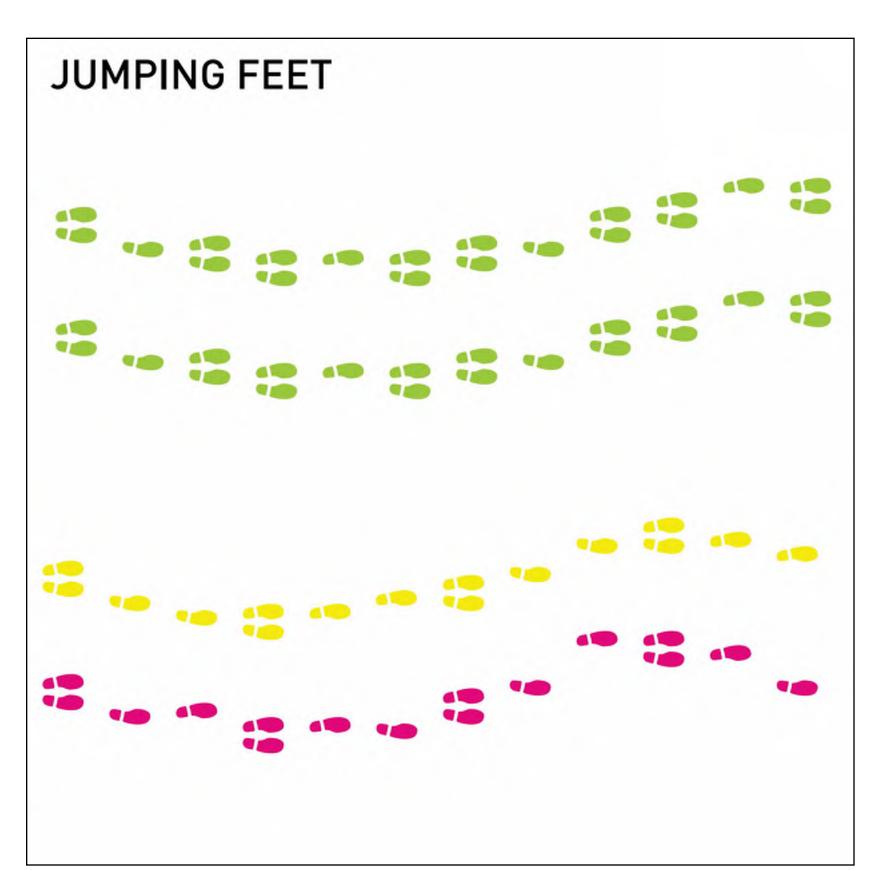
Part II | Process & Partnerships

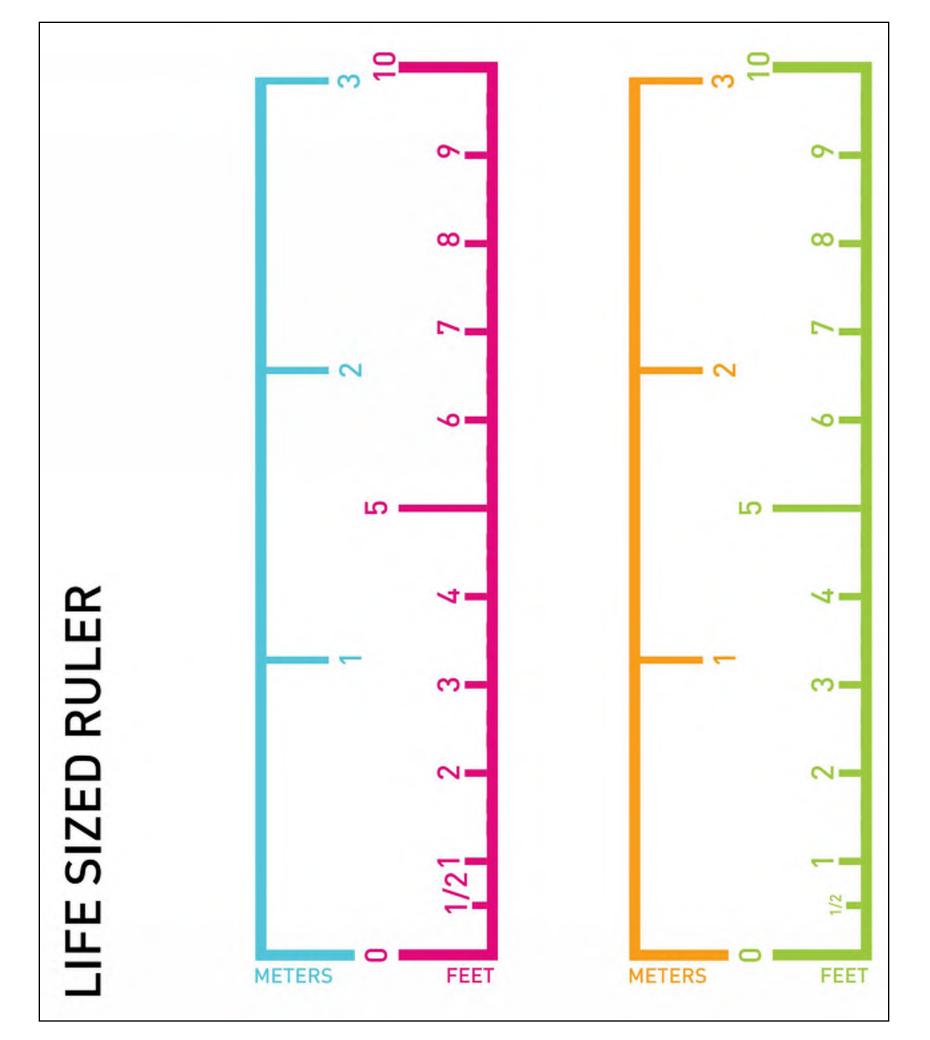


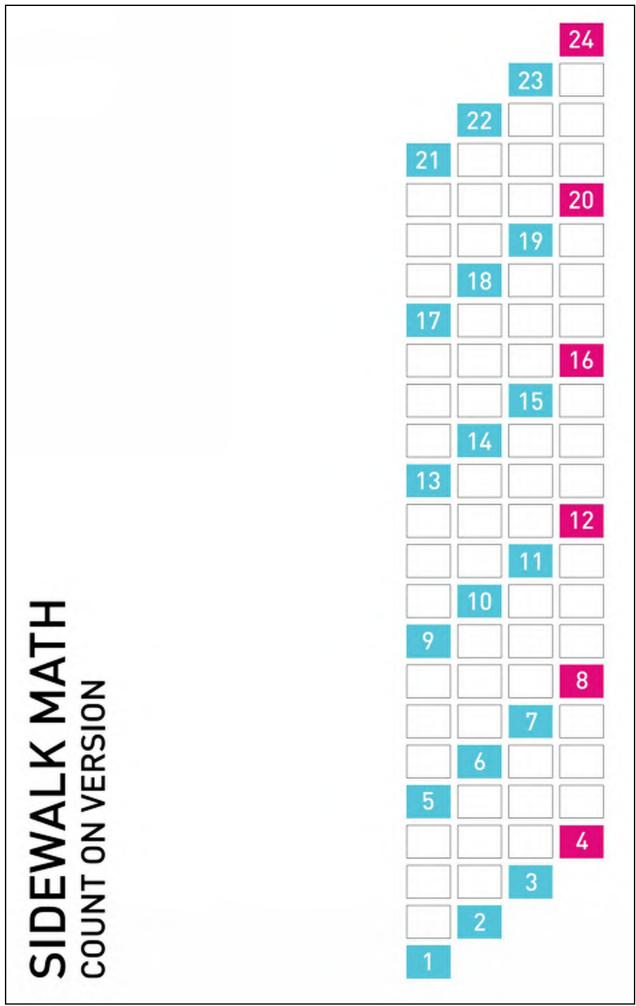
LEGATARCHITECTS















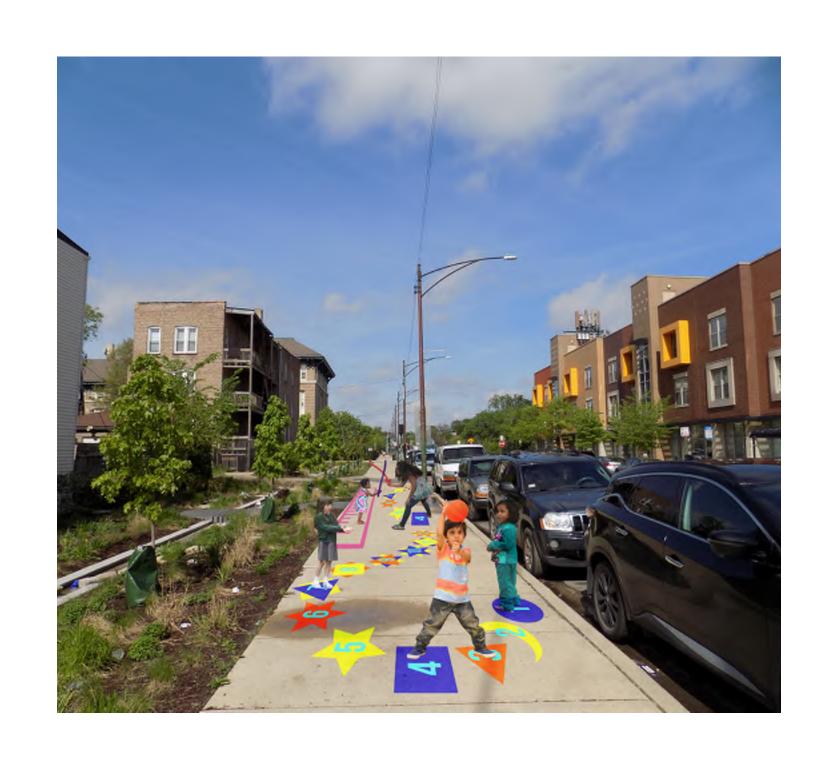


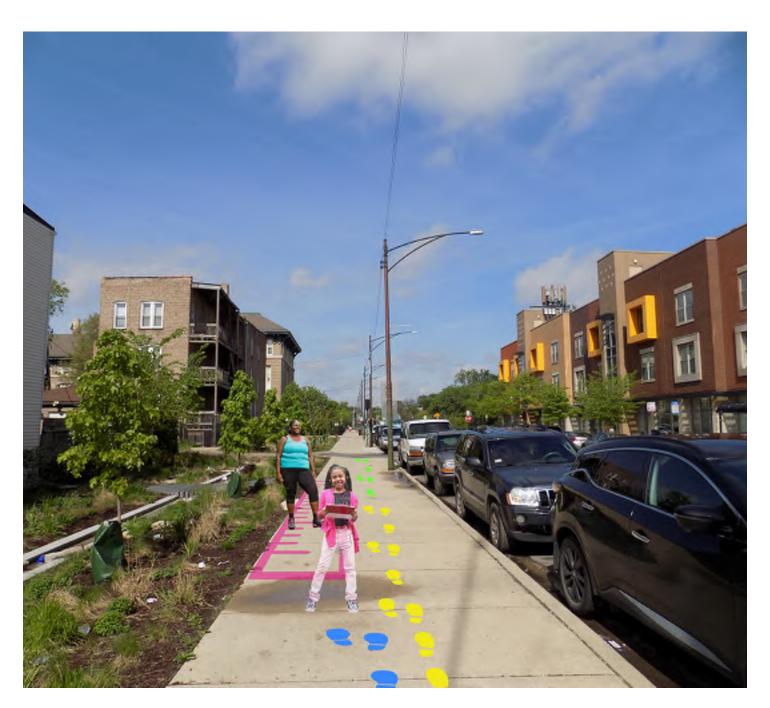


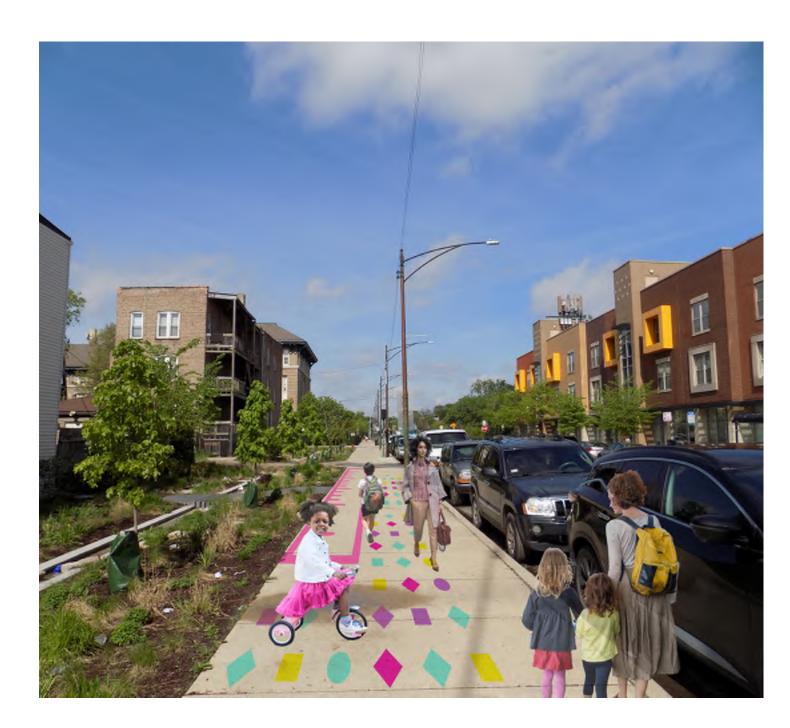








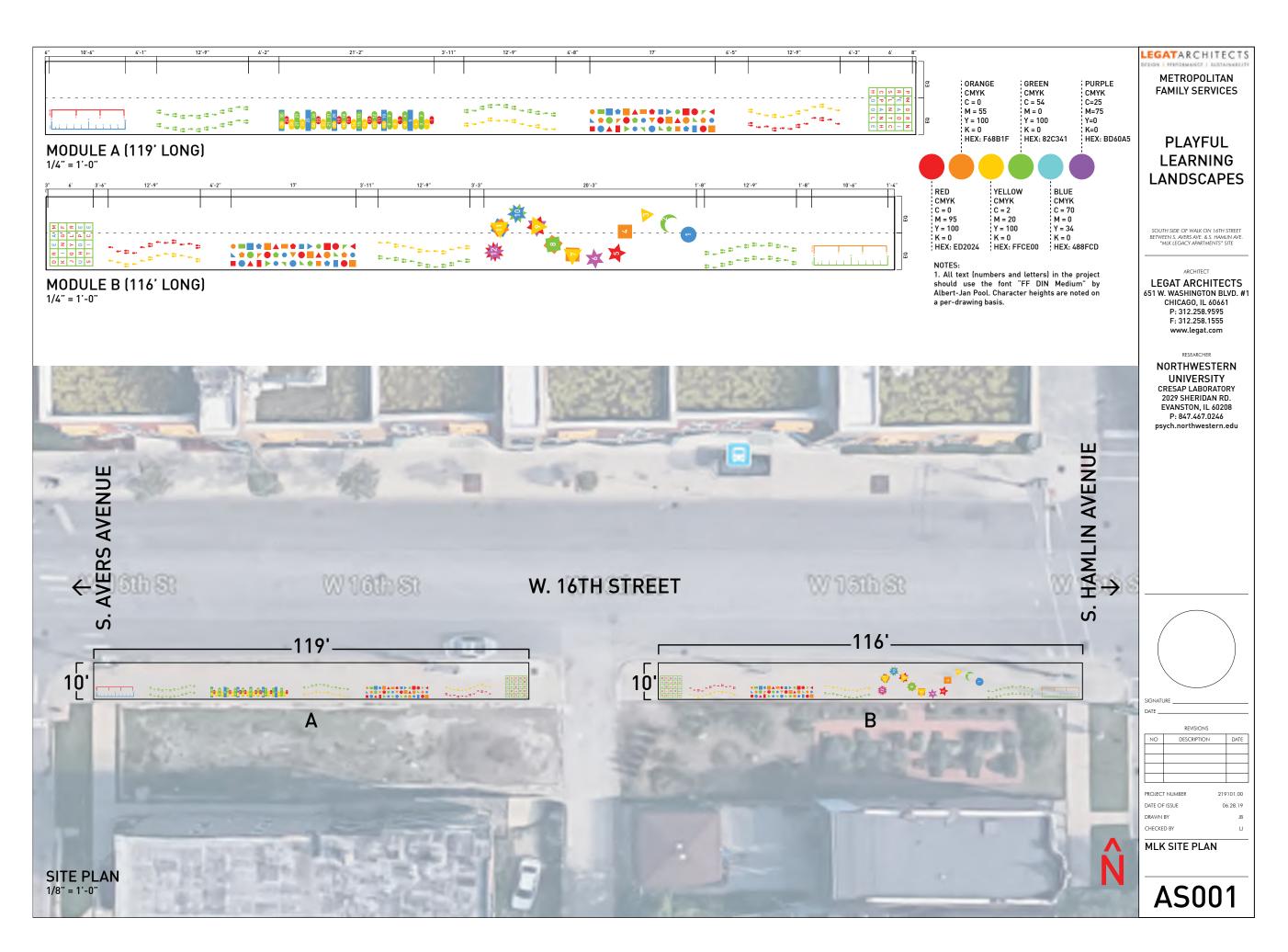


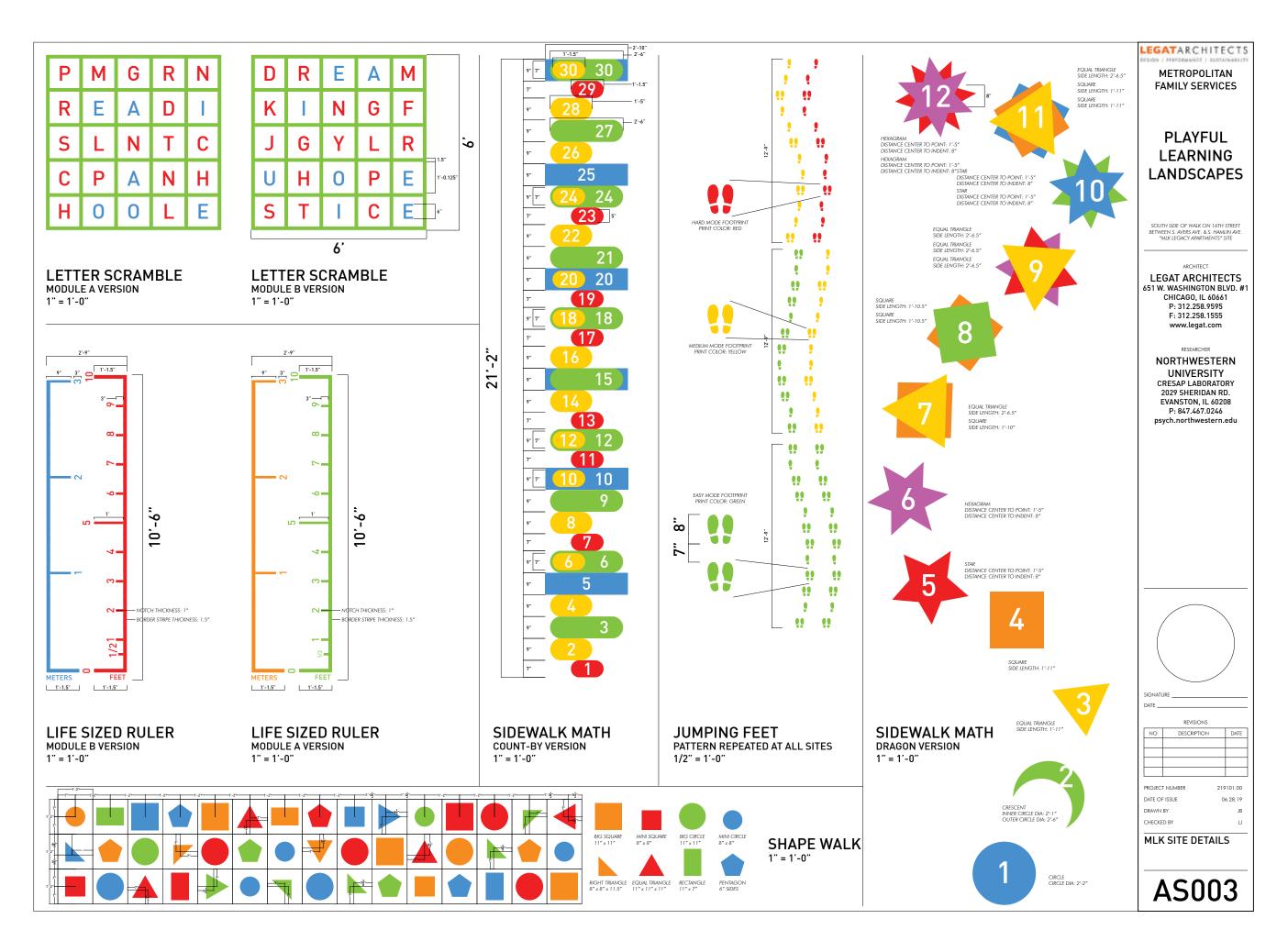


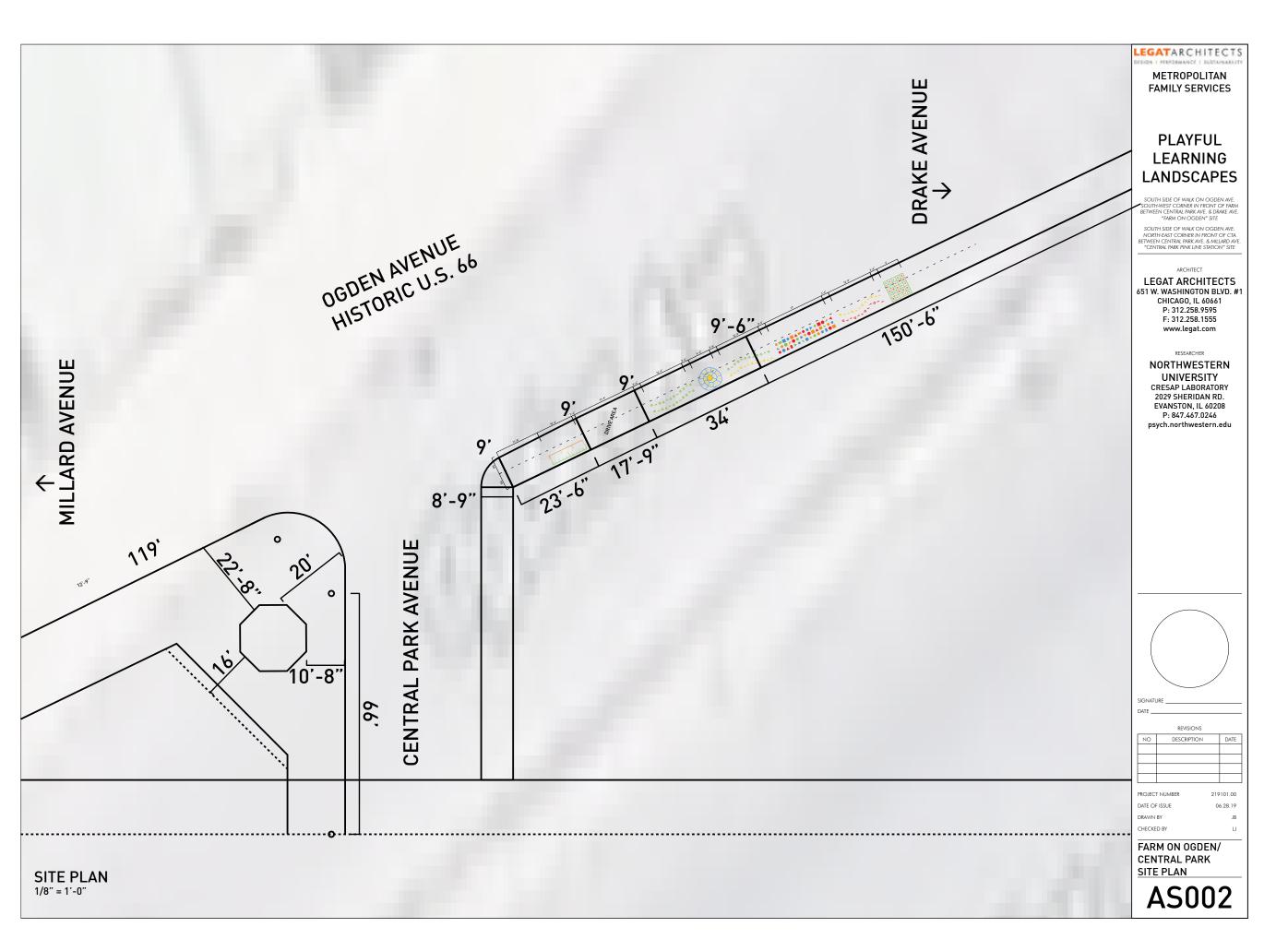


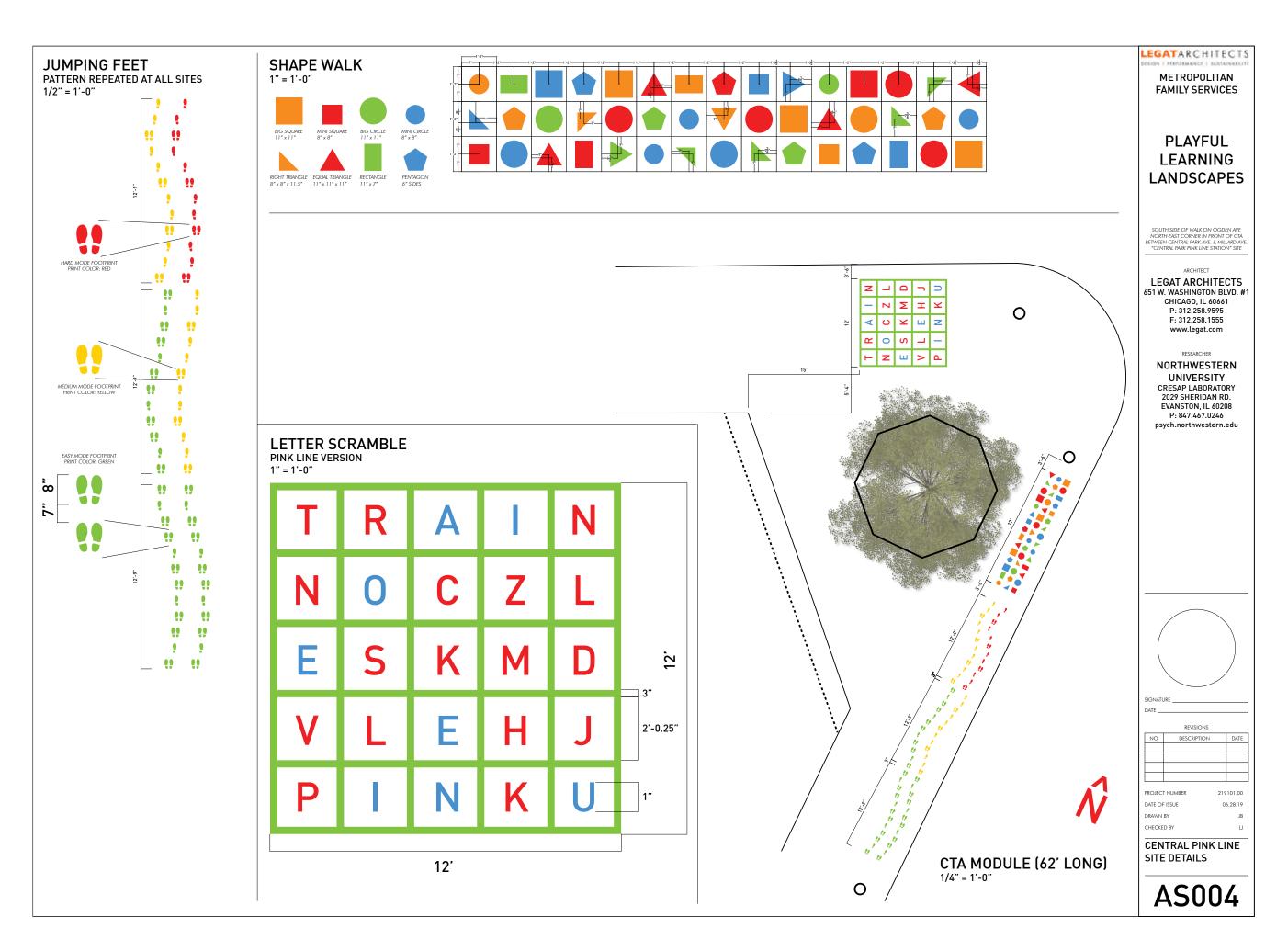










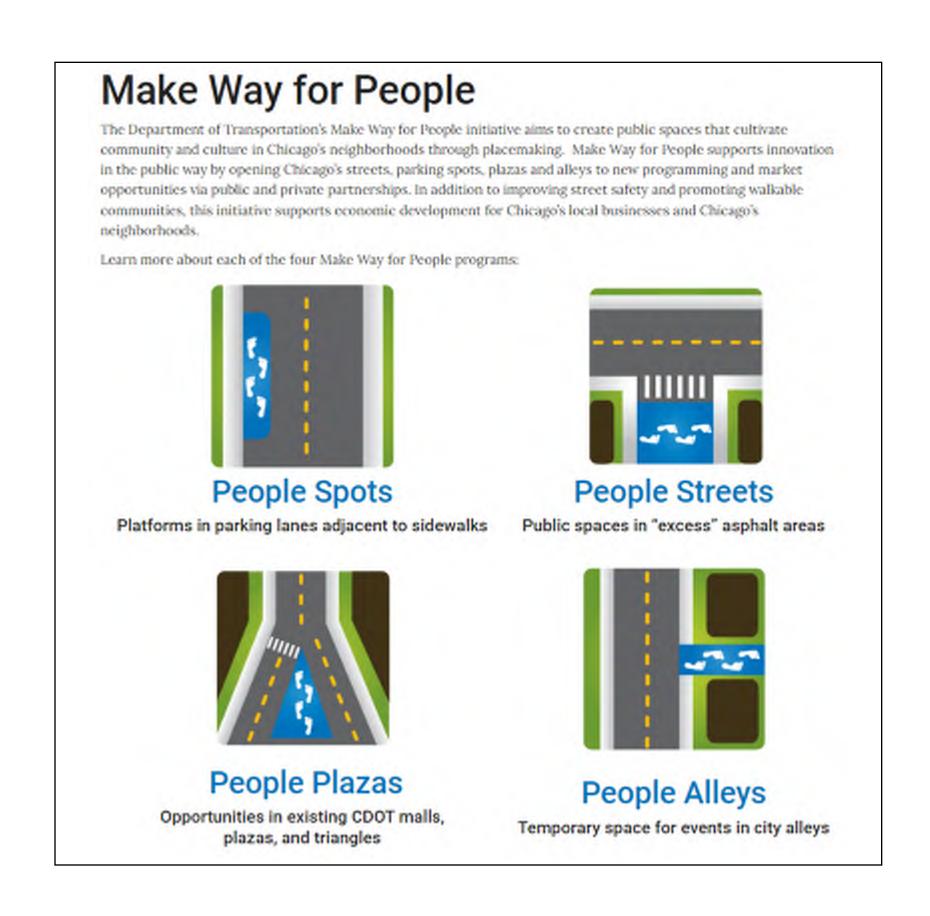


Part II | Process & Partnerships

A pioneering permit process.

The "Make Way for People" program is a Chicago Department of Transportation initiative intended to strengthen communities. By converting neighborhood streets, sidewalks, plazas, and alleys into places for people to sit, eat, and play, the program helps create safe, walkable neighborhoods that support local business and strengthen the sense of place.

- The program encourages the use of lighter, less expensive materials such as removable decks, paint, and flower pots to quickly convert underutilized or small sections of the public right-of-way into people-centric spaces.
- The program consists of four steps: 1) Identifying a location, 2) filling out an application, 3) CDOT review, and 4) implementation, including obtaining construction permits if applicable.



Part II | Process & Partnerships

Challenges

- **Designs:** Since each community wanted to leave their own unique touch on the designs in their neighborhoods, MFS requested more community meetings than we had originally budgeted for, and extended the length of the design time.
- **Permitting:** As early adopters of the Make Way for People (MWFP) permit, we had to deal with a Department of Transportation (CDOT) that was itself unclear what was required to fulfill the requirements of the application, and required major back-and-forth.
- **Bidding:** This project went out for bids twice and received no bidders due to the unusual scope and difficulty related to bidding a CDOT project. Eventually, we reached out to general contractors we had worked with before and asked for a list of their painting subcontractors to reach out to directly. Meeting with various subs and explaining the scope of work added time and hours to the project.



Part II | Process & Partnerships

Challenges

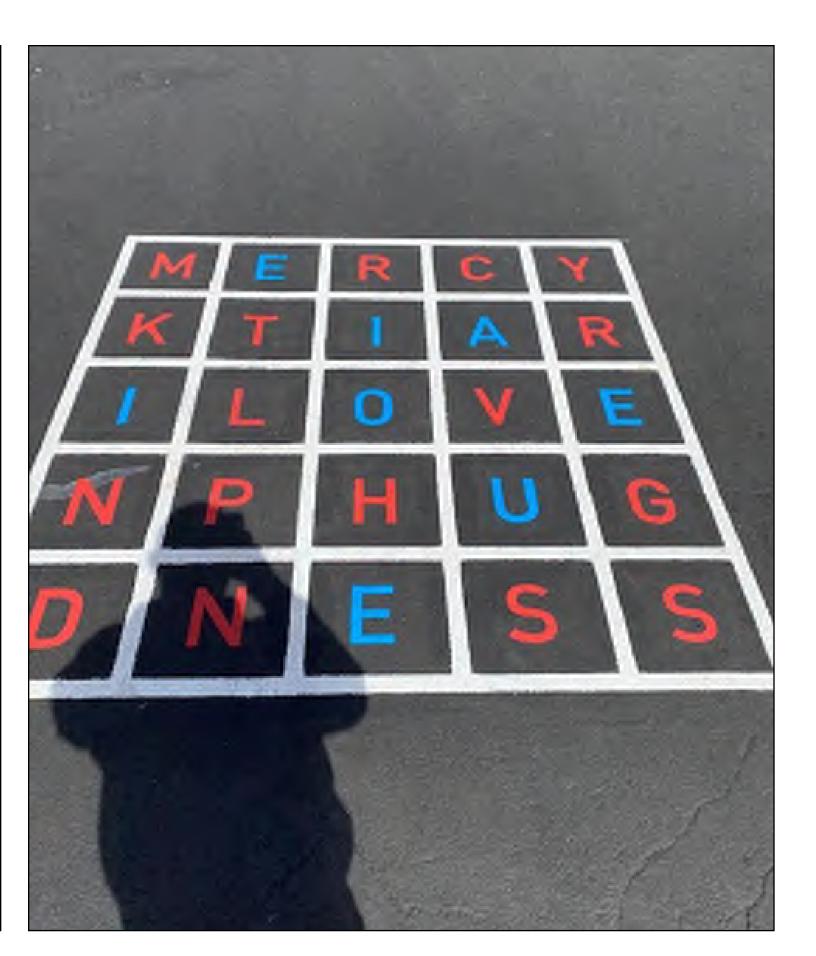
- **Timeline:** By the time the client and Northwestern were happy with the sidewalk designs and a contractor was onboarded, it was October, and MFS still wanted the work to be completed before the end of the year. However, the specific street paint used required consistent daily temperatures above 40 degrees Fahrenheit, and by the time work was ready to begin, the weather had already begun to turn cold.
- Contractor Errors: As shown on the right, the contractor selected for the Little Village and North Lawndale installations made many errors during the first phase of work that required us to call him back in and powerwash away and redo the work in its entirety. This extended the length of the project.
- **Personnel Changes:** From the time of the project's inception in November 2017 to its eventual completion in June of 2021, Metropolitan had 3 different project managers come and go over the course of the work. This left the responsibility of onboarding and recapping to us.



Part III | Results & Recommendations

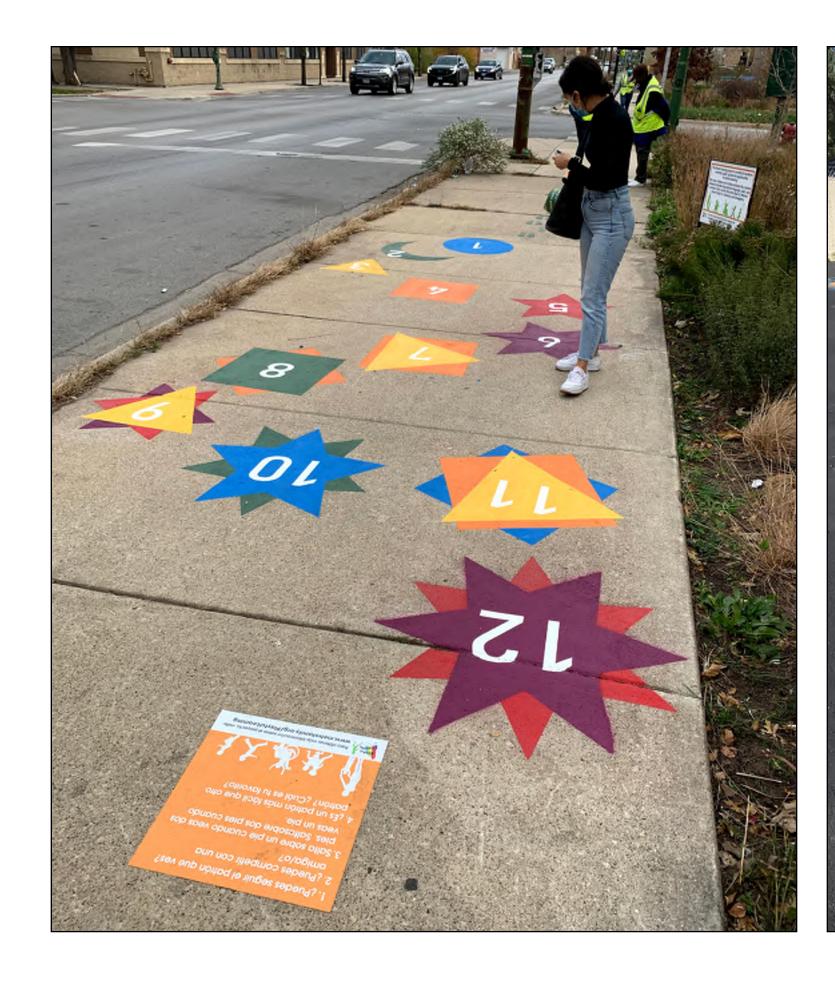






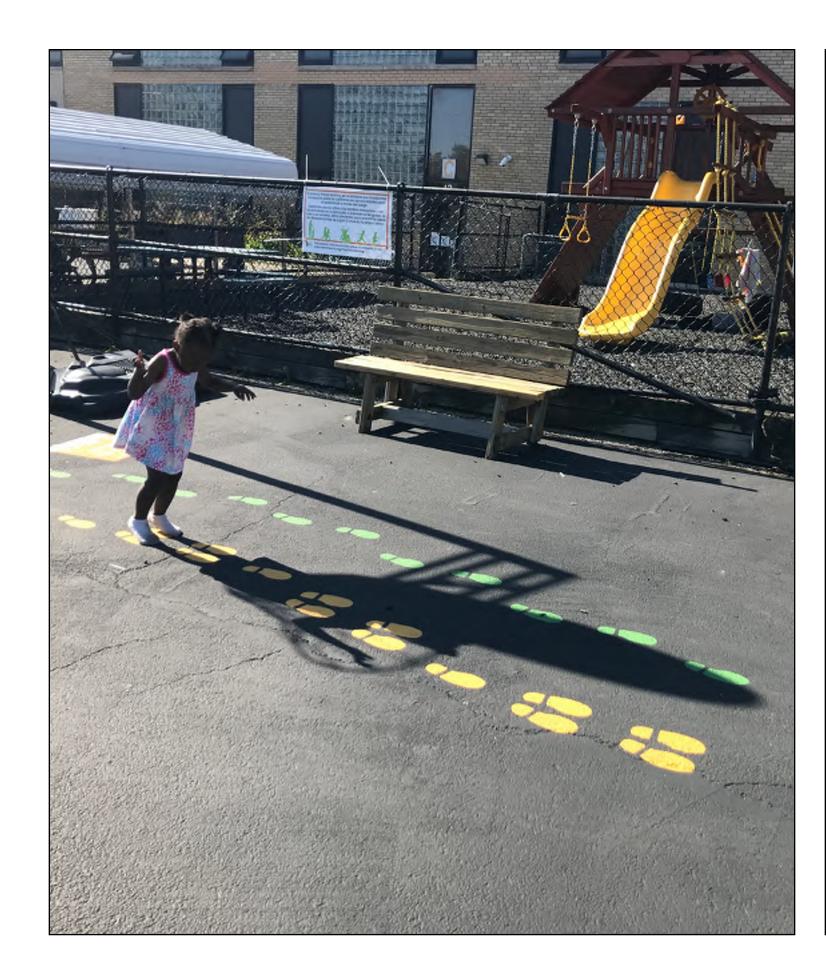
learningSCAPES 2022
A CALL TO ACTION

LEGATARCHITECTS

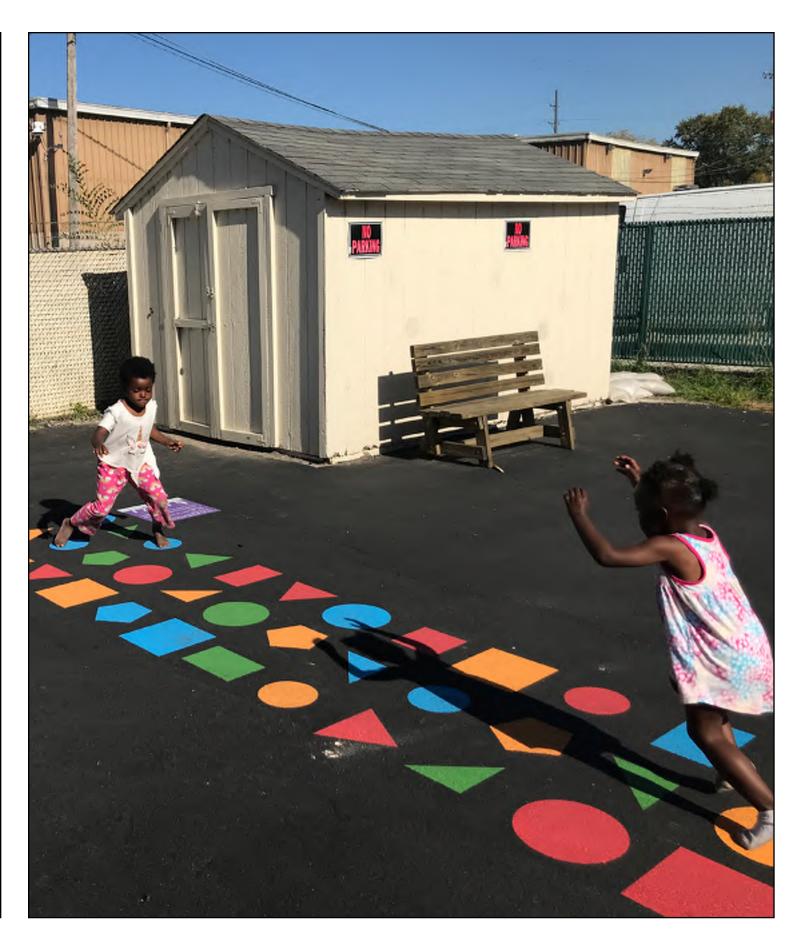


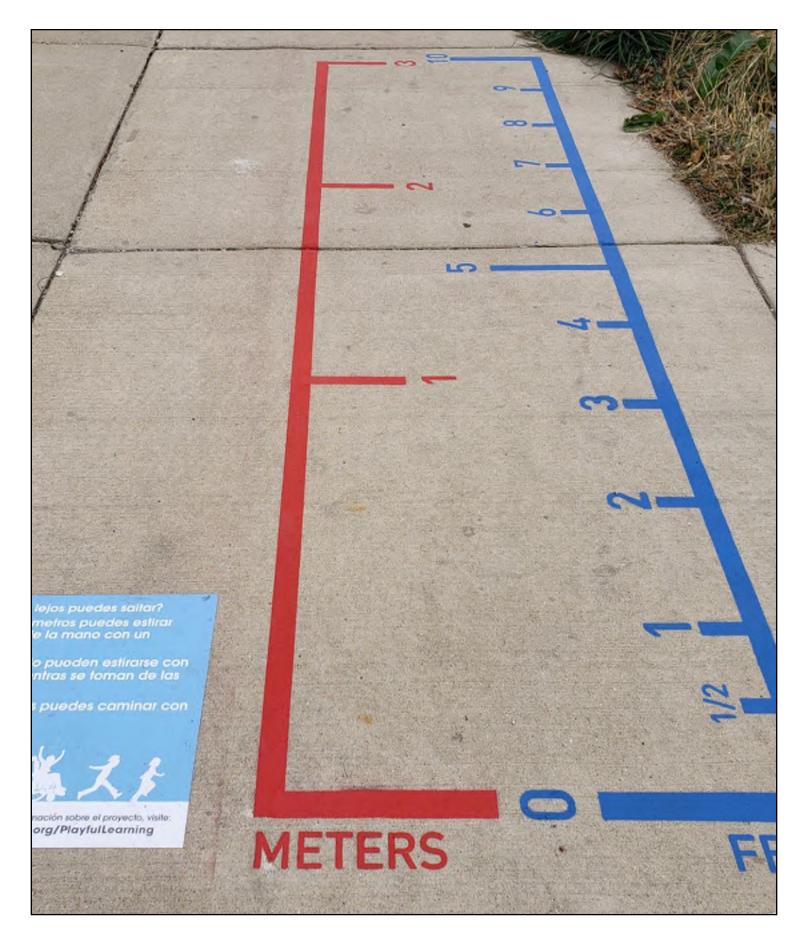


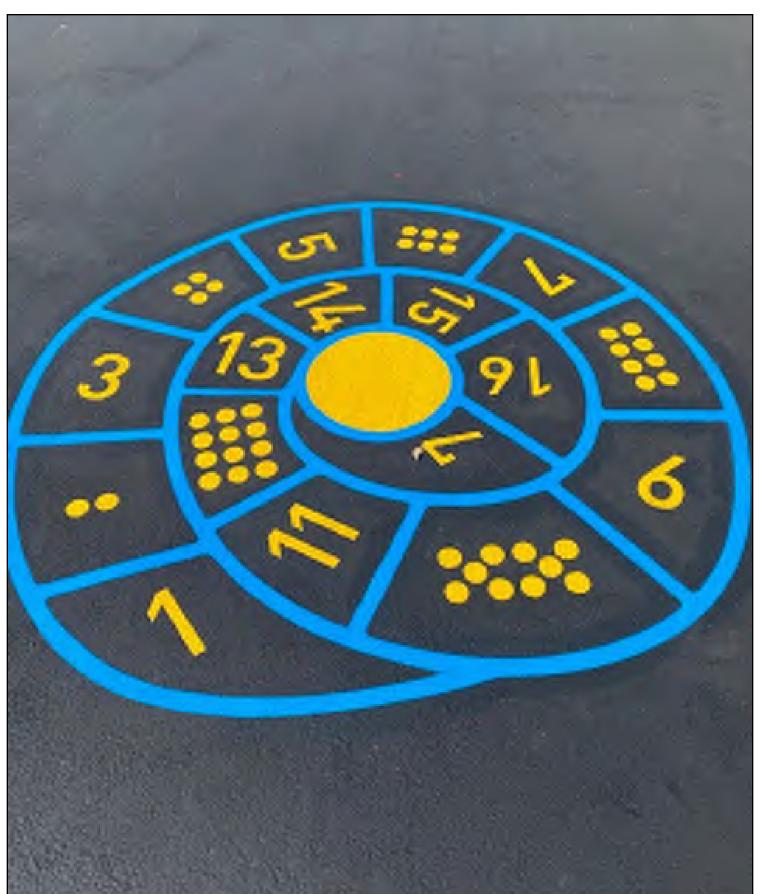


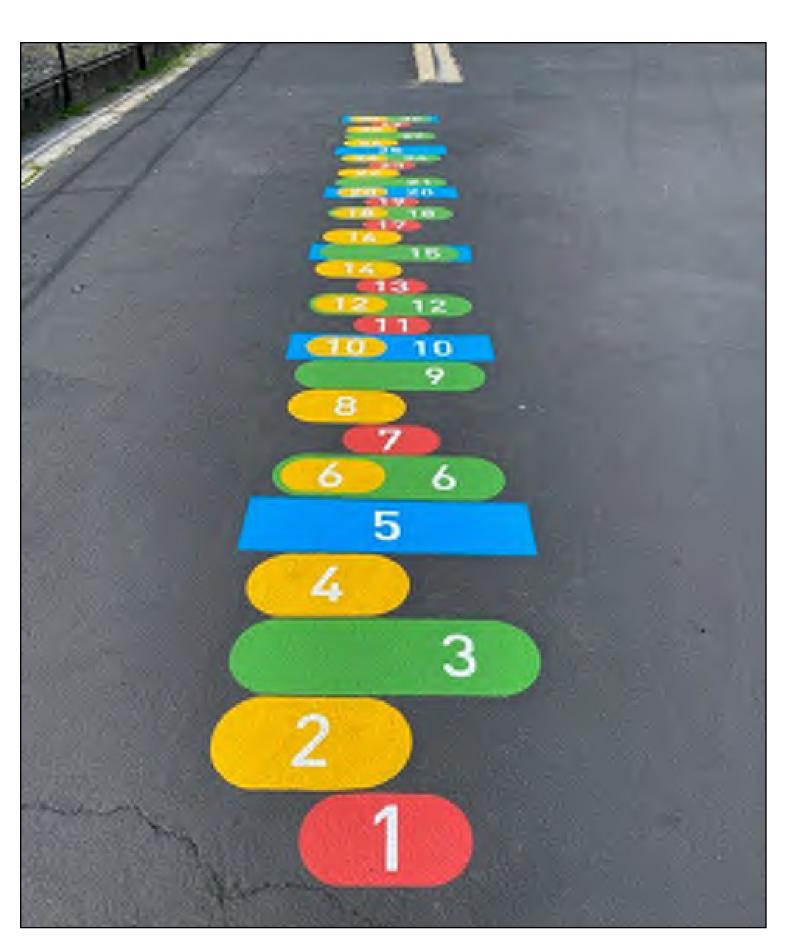




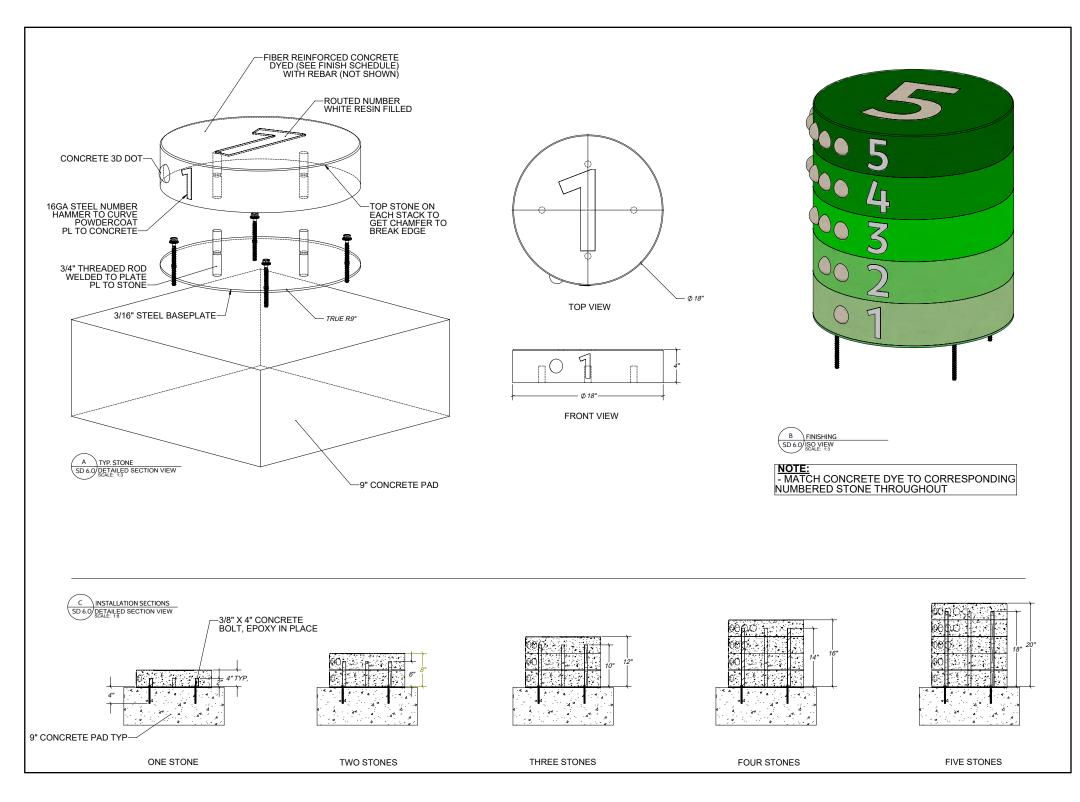


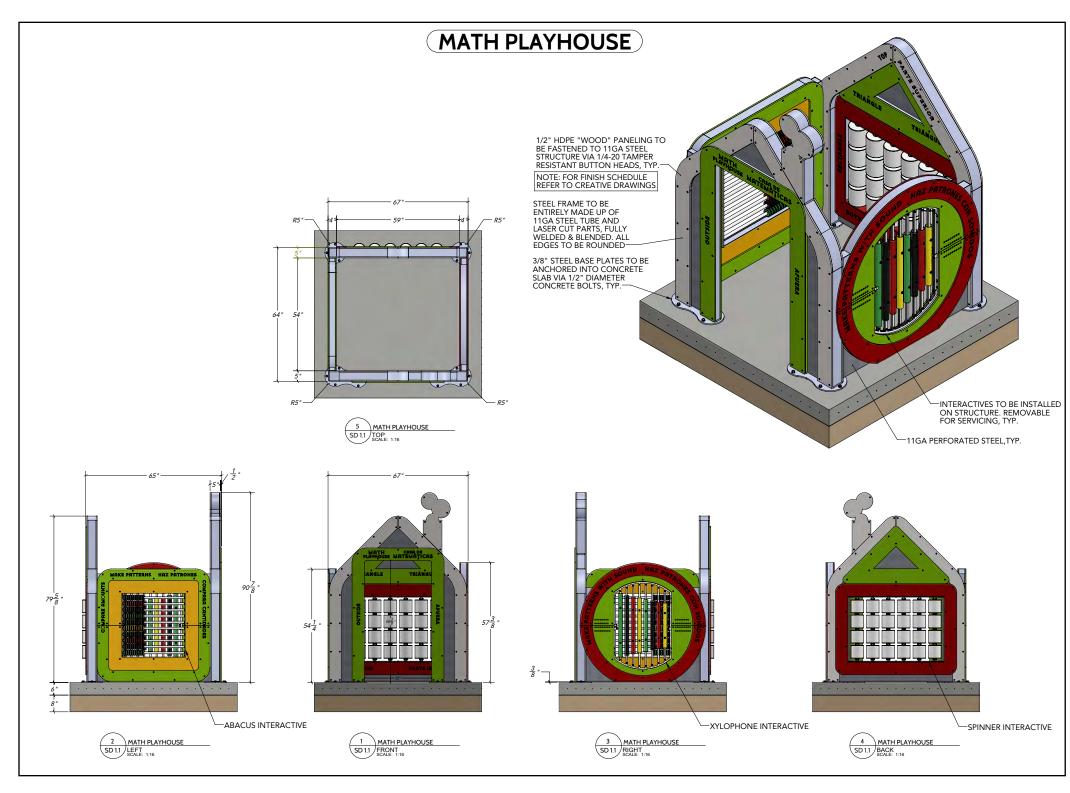






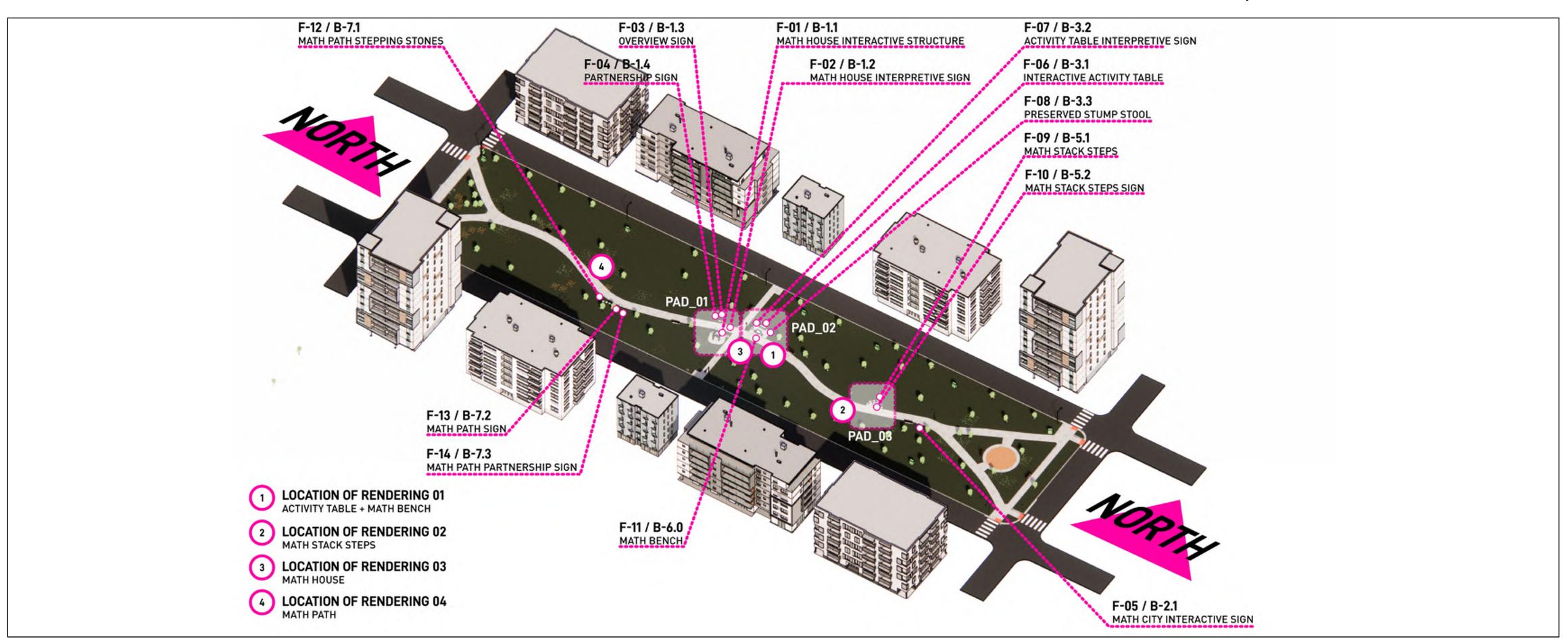
Future Projects





Future Projects

Part III | Results & Recommendations



Future Projects

Part III | Results & Recommendations









Benefits of Playful Learning

Part IV | Impact & Ingress

Research shows that when kids have fun, they learn more.

- "Play is a natural way to develop motor, cognitive, social, and emotional skills. The challenge for educators is to design comprehensive teaching practices that can create spaces for students' agency, curiosity, and enjoyment to flourish. | Marc Fuster Rabella, OECD Directorate for Education & Skills
- "Playful learning that allows students to experiment helps them understand concepts and interact with peers. Such experiences are an essential component to leapfrogging in education because without them, young people will not be able to develop the full breadth of competencies and skills they need to thrive." | Dr. Rebecca Winthrop, The Brookings Institution
- "Children learn best when education is active via an approach that supports inquiry and reflection; engaging; meaningful, so children can connect new information to prior knowledge; socially interactive with adult-facilitated peer collaboration; iterative, with opportunities to form, test, and revise hypotheses; and joyful. | *The Brookings Institution*
- "Play is not frivolous. It is brain-building." | The American Academy of Pediatrics



LEGATARCHITECTS

Conclusion

Part V | Conclusion & Call to Action

"The parallels between play and the conditions under which people naturally learn hold a key idea for education: we might take learning more seriously if it felt more like play."

Marc Fuster Rabella
Organisation for Economic Co-Operation and Developement
(OECD) Directorate for Education & Skills



Galesburg CUSD #205 | Galesburg, IL

Consolidating with Empathy and Fairness











Prospect Heights Pros/Cons of Grade Centers

Research Process

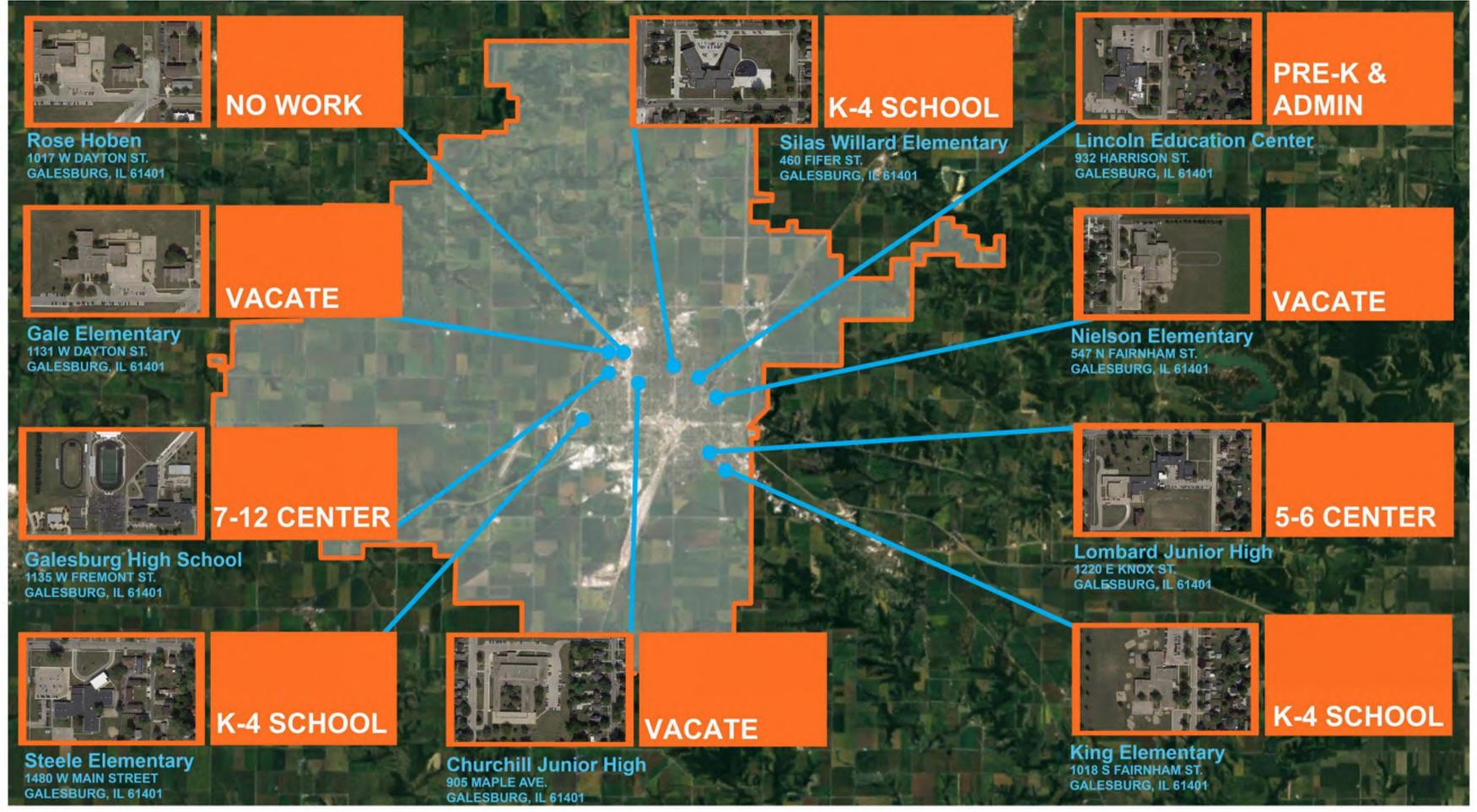
Advantages

- Each school more clearly focuses on educational/social needs of children.
- Curriculum/instruction focuses specifically on the grade level age group.
- Building facility design/usage accommodates a specific age group.
- Class size is better balanced.
- Demographics are better balanced.
- Curriculum, instruction and program are more consistent.
- May have fewer class sections within a grade, thus operational economies.
- Or, may have more class sections within a grade.
- Better mainstreaming of special education/ESL children.
- Reorganization cost savings allow real savings.
- Articulation across grade levels improves.
- Articulation across attendance centers may or may not improve.
- Eliminates competition and comparison between schools.

Disadvantages

- Children no longer attend their "neighborhood" schools.
- Parents/children don't have as much time to build loyalty for a school.
- Requires more busing.
- Longer bus rides for some children.
- Brothers and sisters may be in different schools.
- Parents may experience child-care difficulties with children arriving and departing at different times.
- Young children lose older role models.
- Primary and intermediate grade teachers' articulation may or may not be more difficult.
- Parents may have to choose between PTA/PTO meetings and participation at other events.
- Overlap in library materials increases costs.
- Changing centers every two years is disrupting to children and parents.
- Communities like to identify with their K-5 elementary school.
- Having all students of the same grade together gives the building a larger feel.





GALESBURG COMMUNITY UNIT SCHOOL DISTRICT #205

Consensus Option







Conceptual Design Process







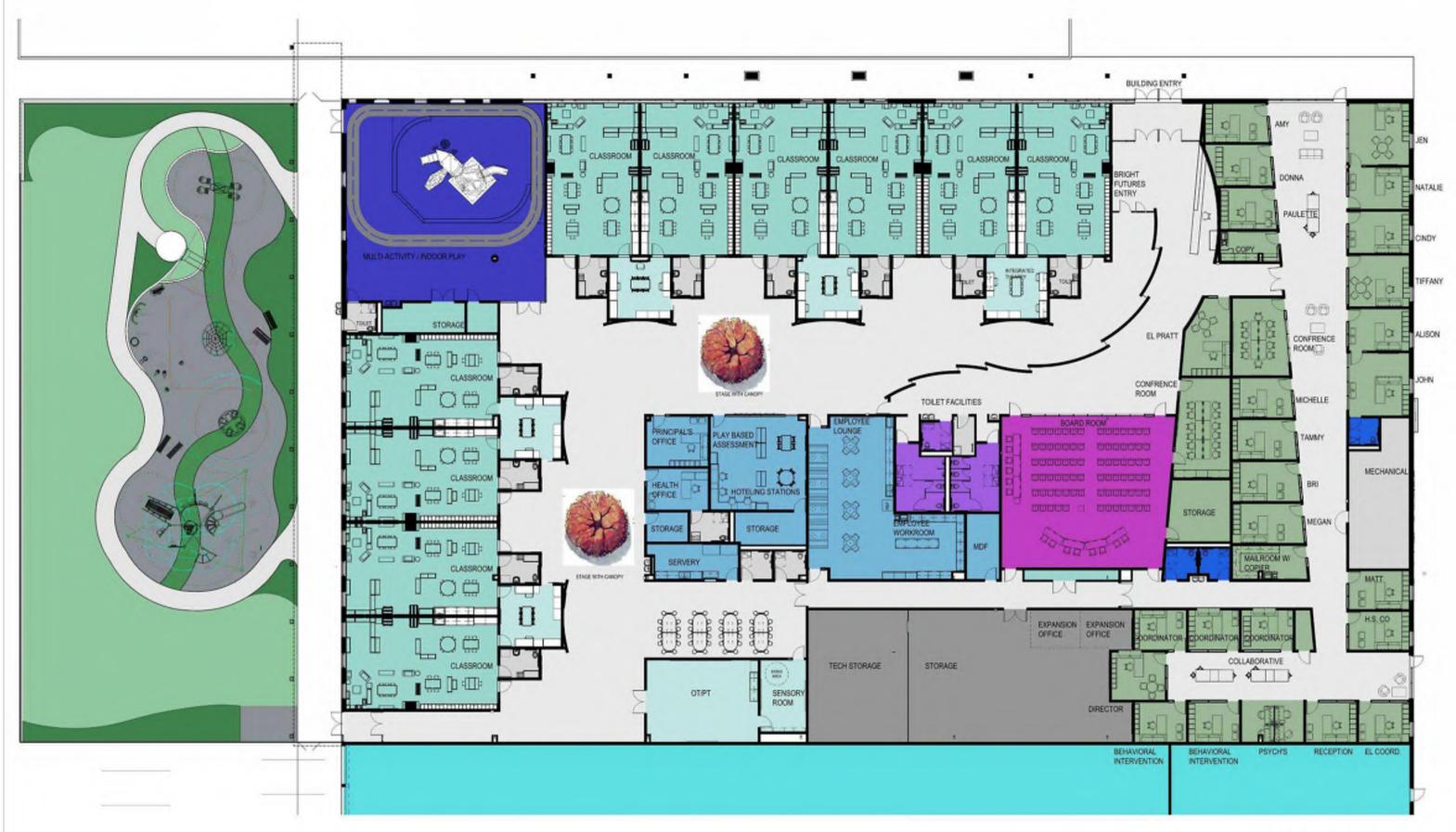


GALESBURG BRIGHT FUTURES AND DISTRICT OFFICE

LEGATARCHITECTS
DESIGN | PERFORMANCE | SUSTAINABILITY



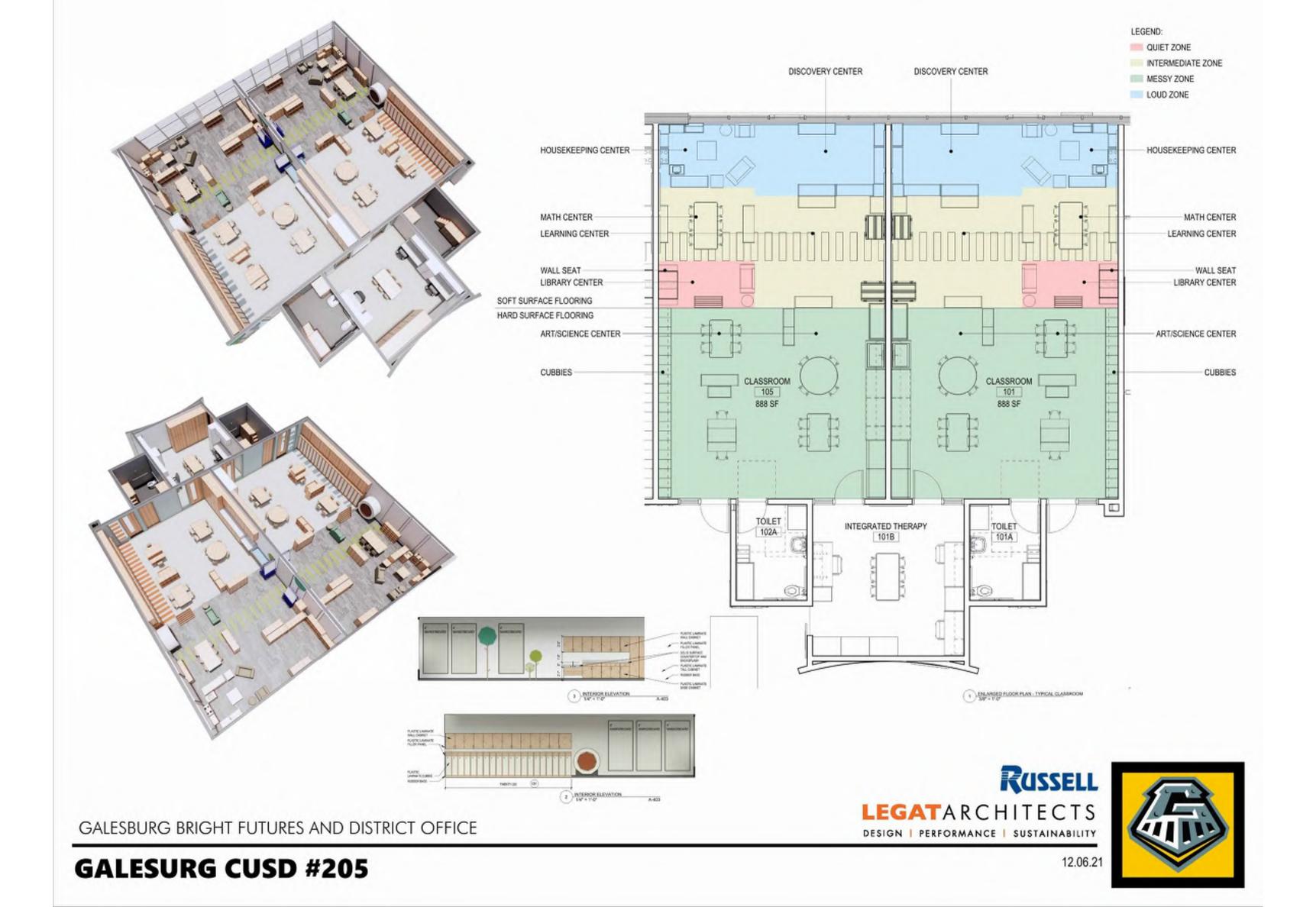
12.06.21



TRIST FLOOR CONCEPTUAL PLAN













1 FRST FLOOR CONCEPTUAL PLAN
1/10/ = 1/47 A-301

GALESBURG BRIGHT FUTURES AND DISTRICT OFFICE



GALESBURG CUSD #205 - KING ELEMENTARY SCHOOL ADDITIONS & RENOVATIONS



KINDERGARTEN





- ASSEMBLY
 ADMINISTRATION
 CIRCULATION
 CLASSROOM
- KITCHEN MEDIA CENTER
- MUSIC SUPPORT SERVICE



- 1 ADMINISTRATIVE OFFICES 2 FACULTY LOUNGE 3 KINDERGARTEN 4 CLASSROOM 5 MEDIA CENTER 6 ART 7 MUSIC 8 KITCHEN 9 GYM

- 9-GYM

MEDIA CENTER





EXTERIOR VIEW - GYM



EXTERIOR VIEW - MAIN ENTRANCE



LOBBY



TYPICAL CLASSROOM





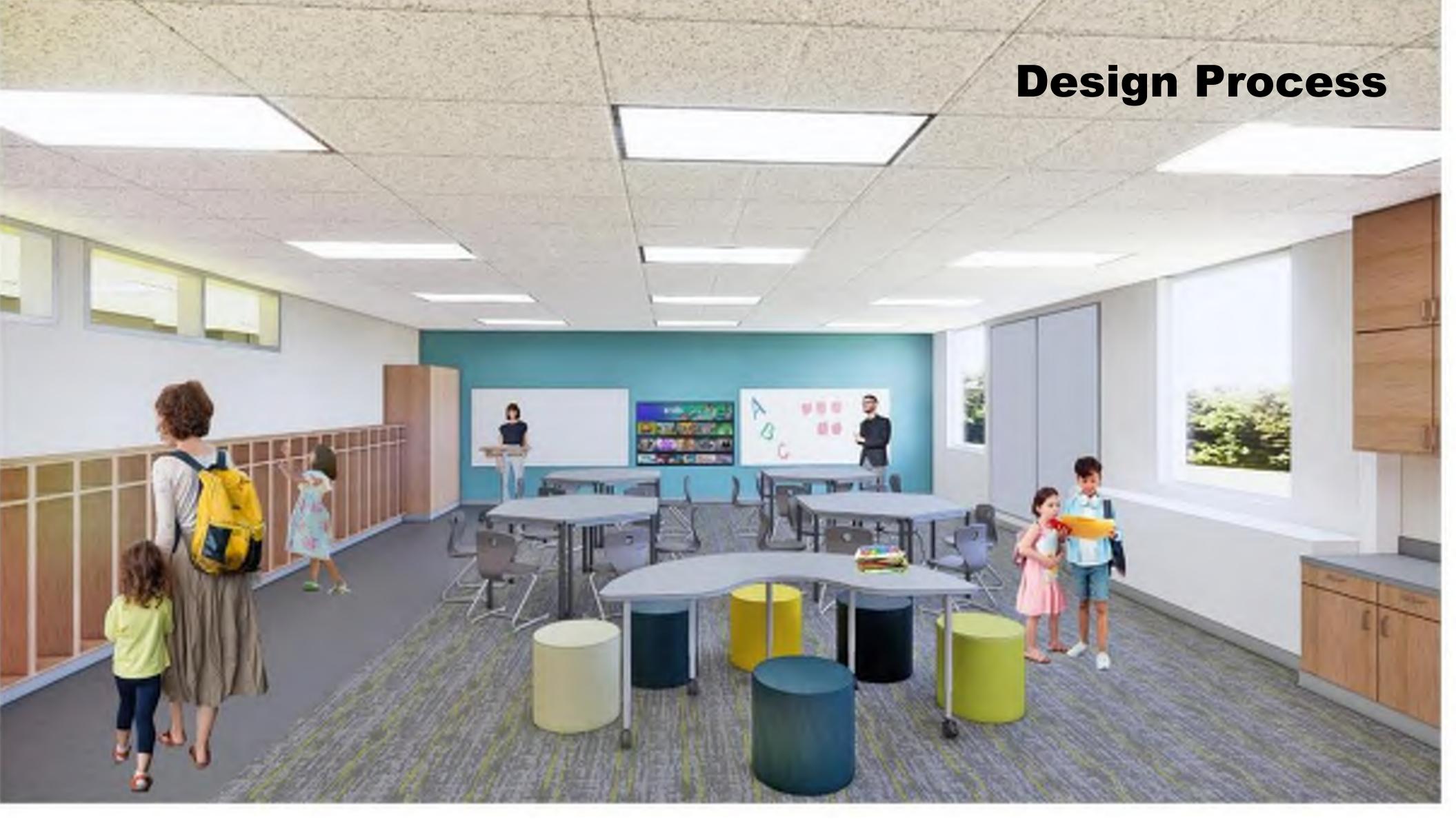
LEGATARCHITECTS DESIGN | PERFORMANCE | SUSTAINABILITY

Design Process







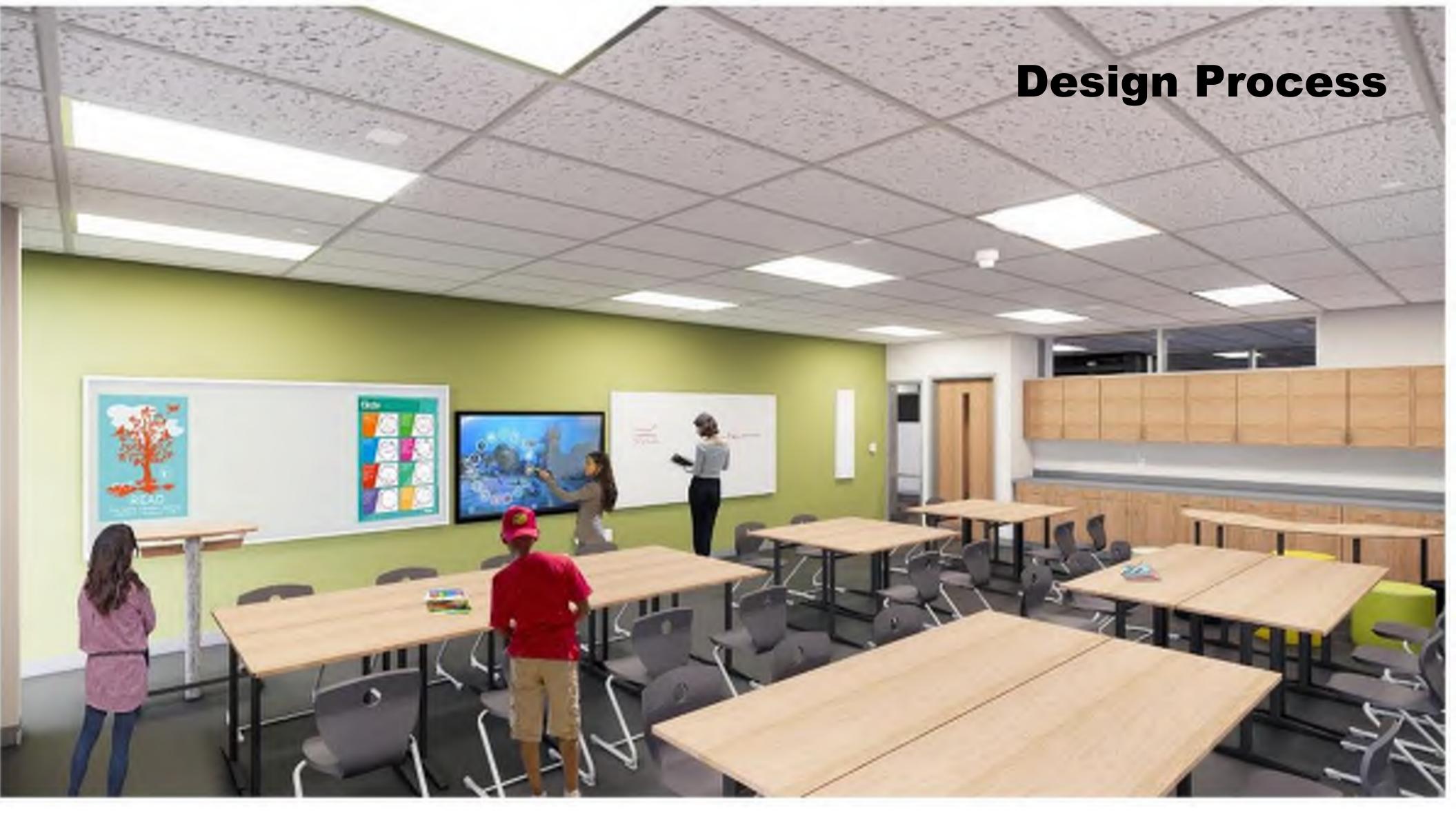




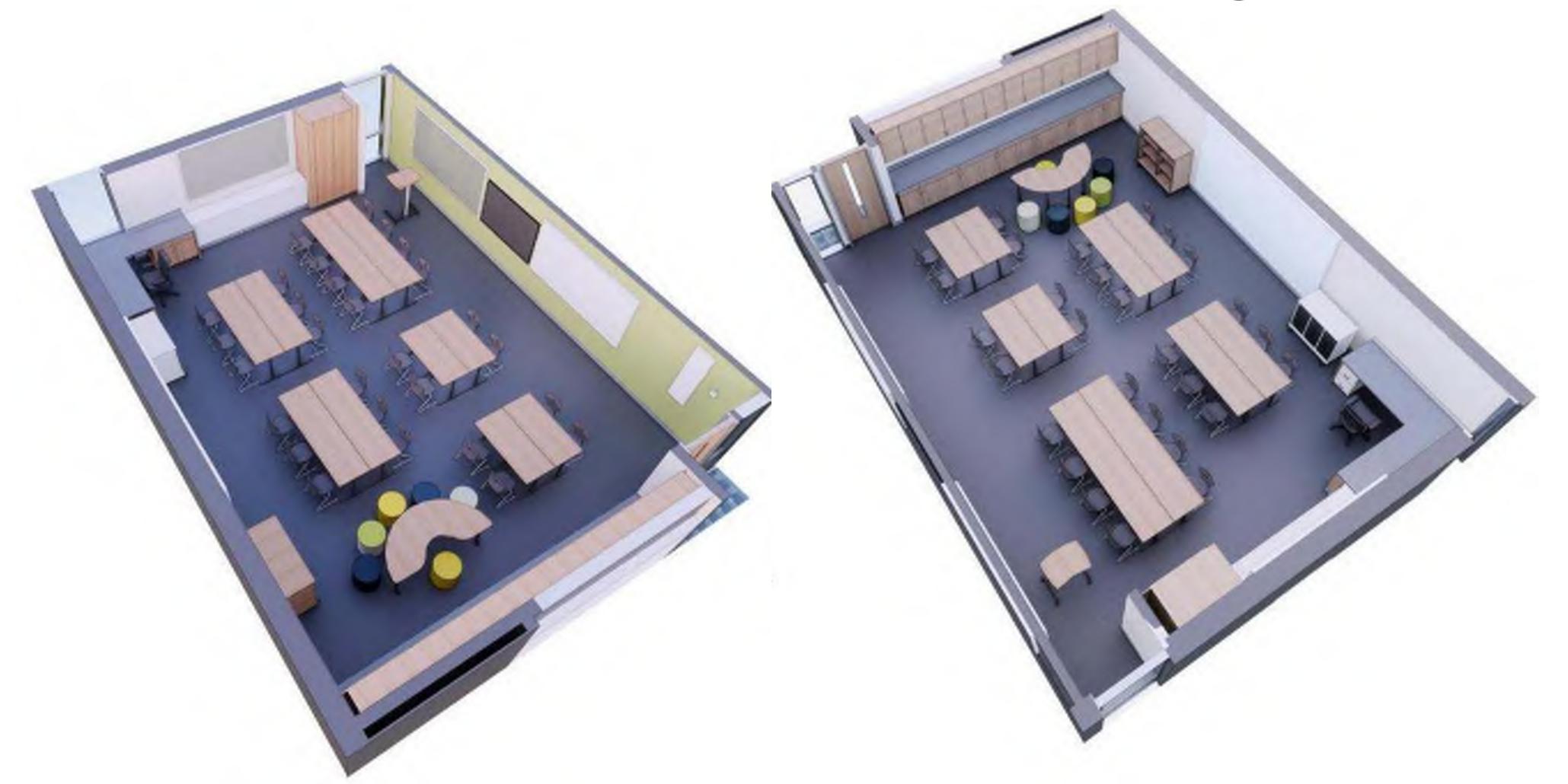


Design Process





Design Process

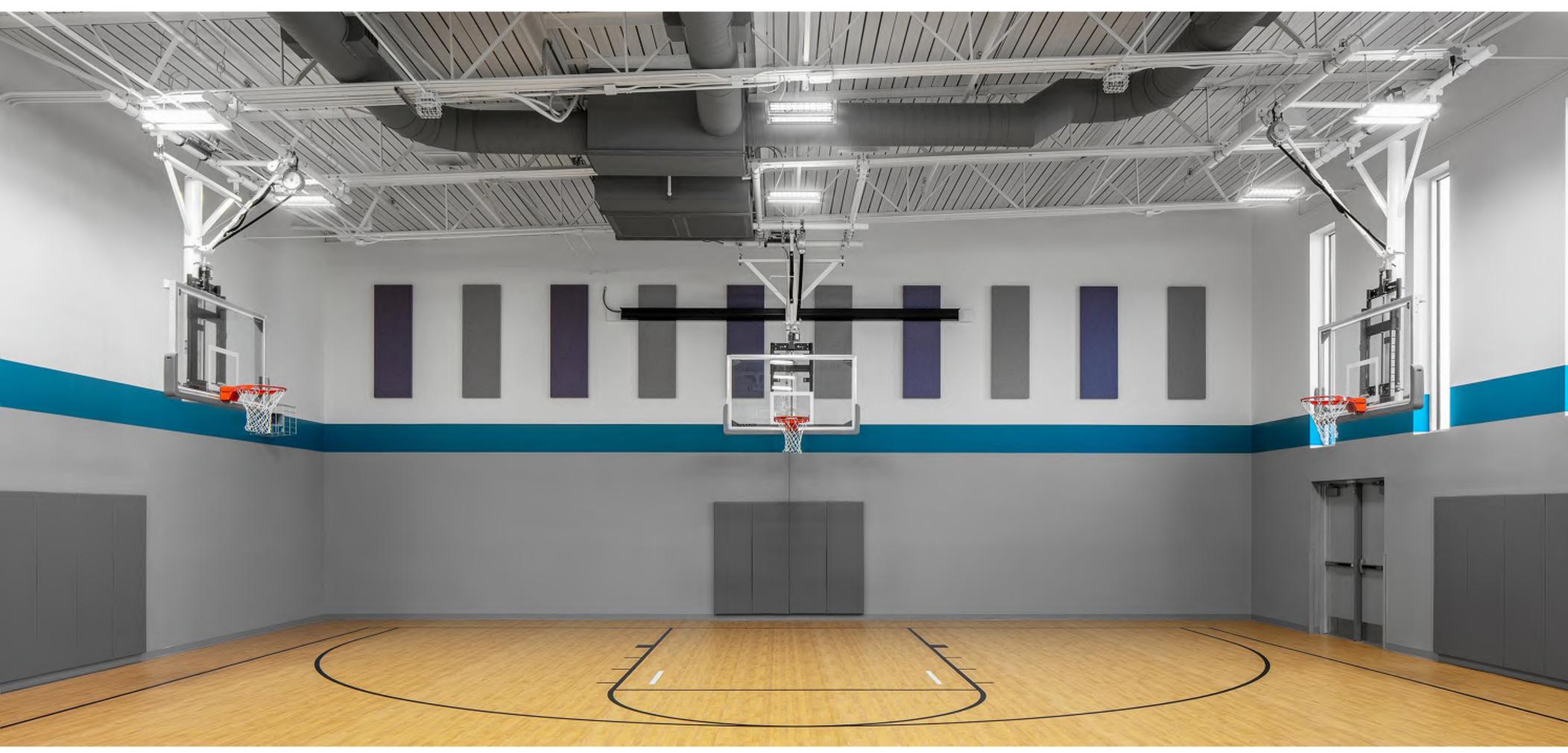
















STAGE CAFETERIA FIRST FLOOR PLAN SECOND FLOOR OPEN TO BELOW

Design Process

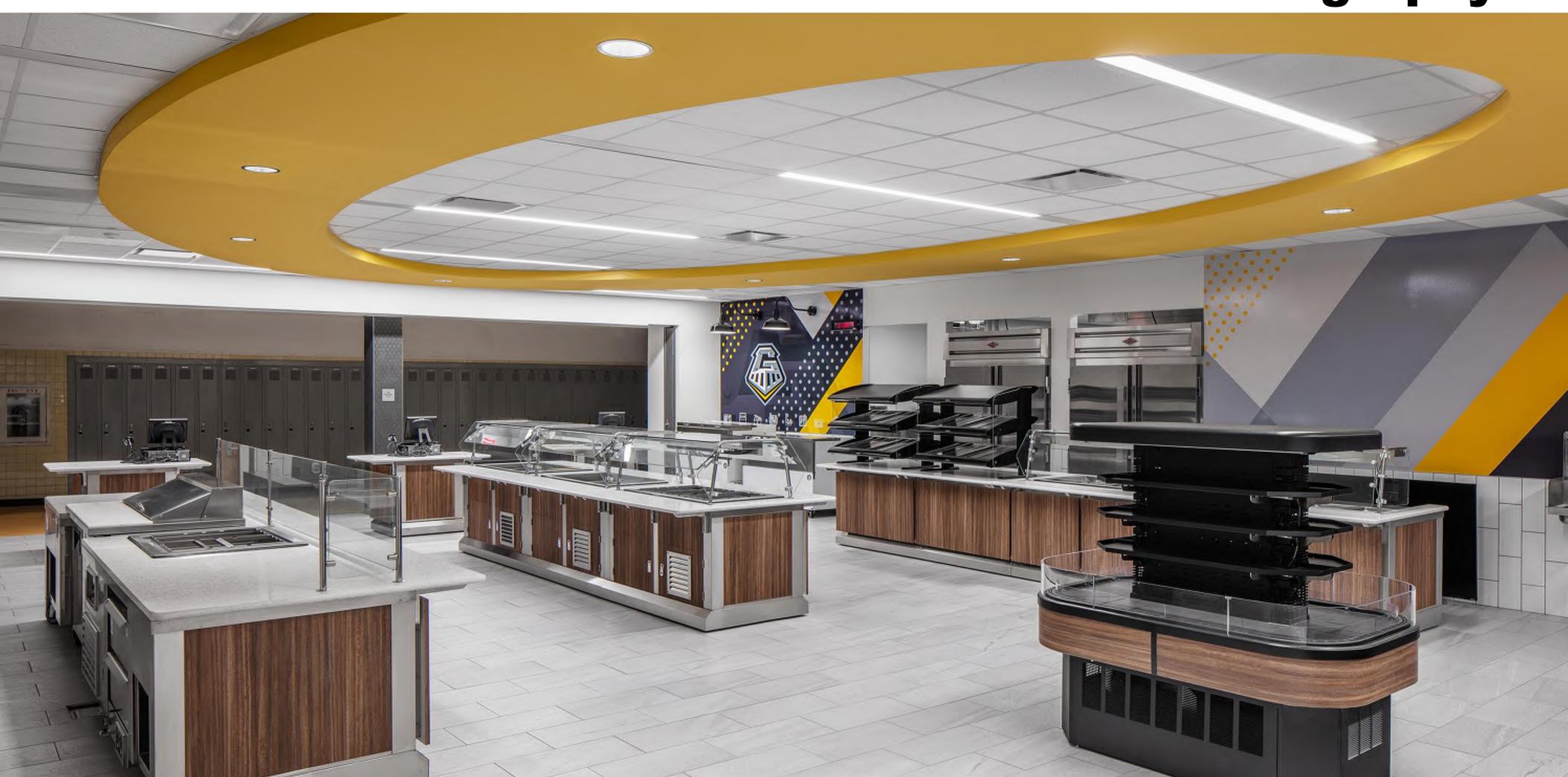
CAFETERIA PERSPECTIVE LOOKING SOUTH

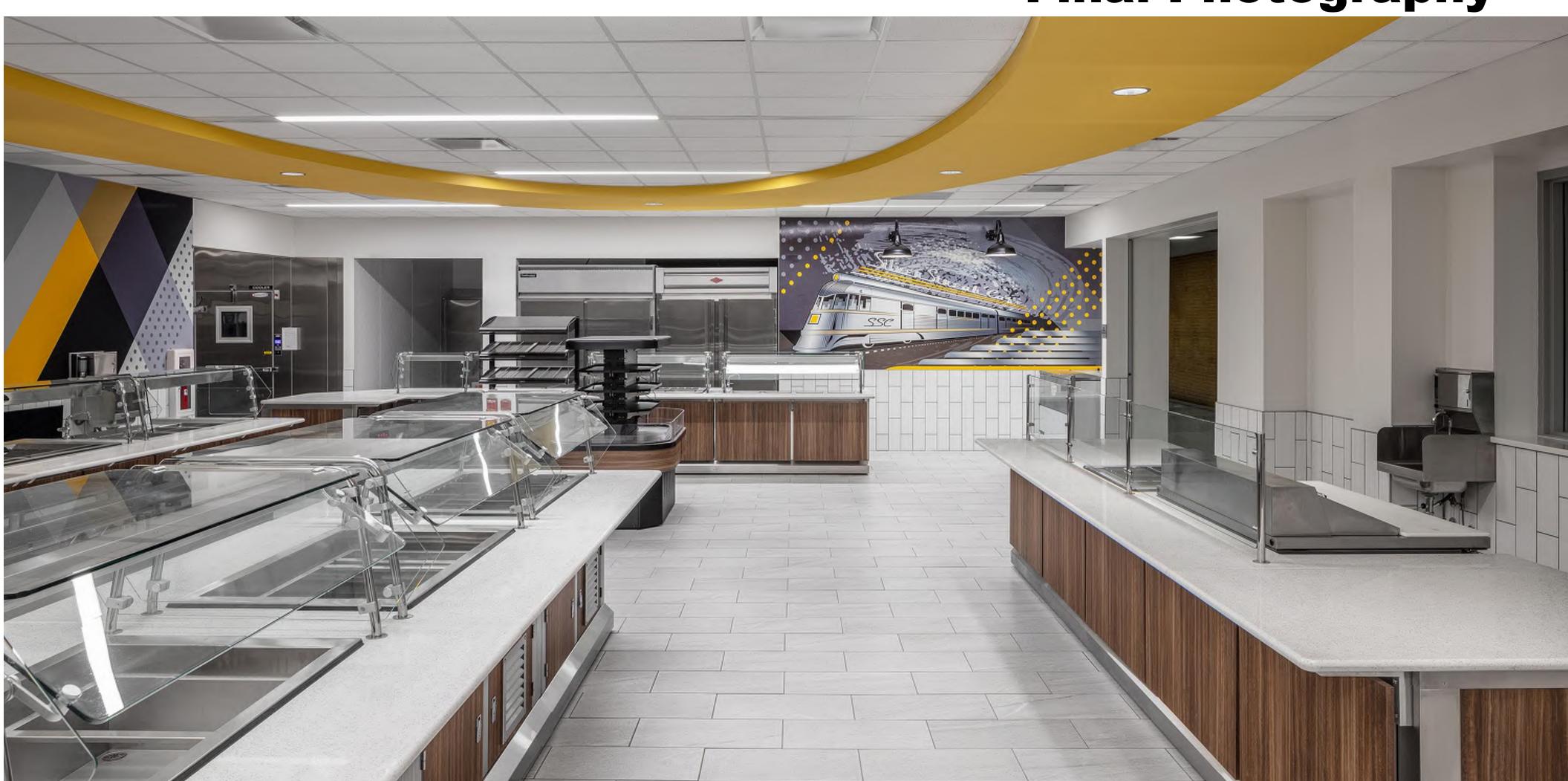


GALESBURG JR-SR HIGH SCHOOL



SECOND FLOOR PLAN





AERO Therapeutic Center | Burbank, IL

Equitable environments with access for all





A.E.R.O. Special Education Cooperative

HOME

WHO WE ARE

BOARD AND GOVERNANCE

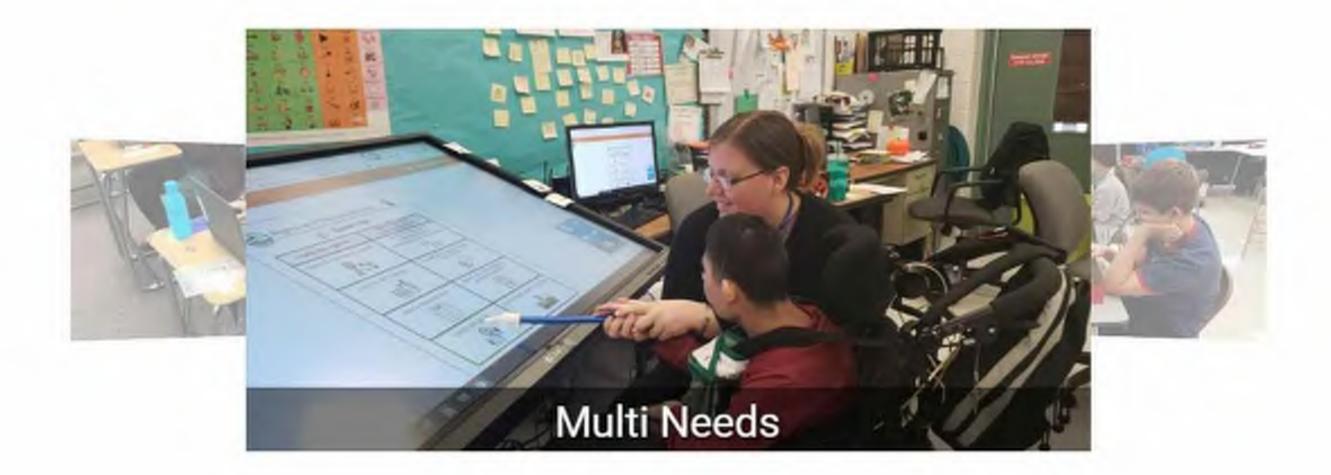
PROGRAMS

SERVICES

INFORMATION AND RESOURCES

Q

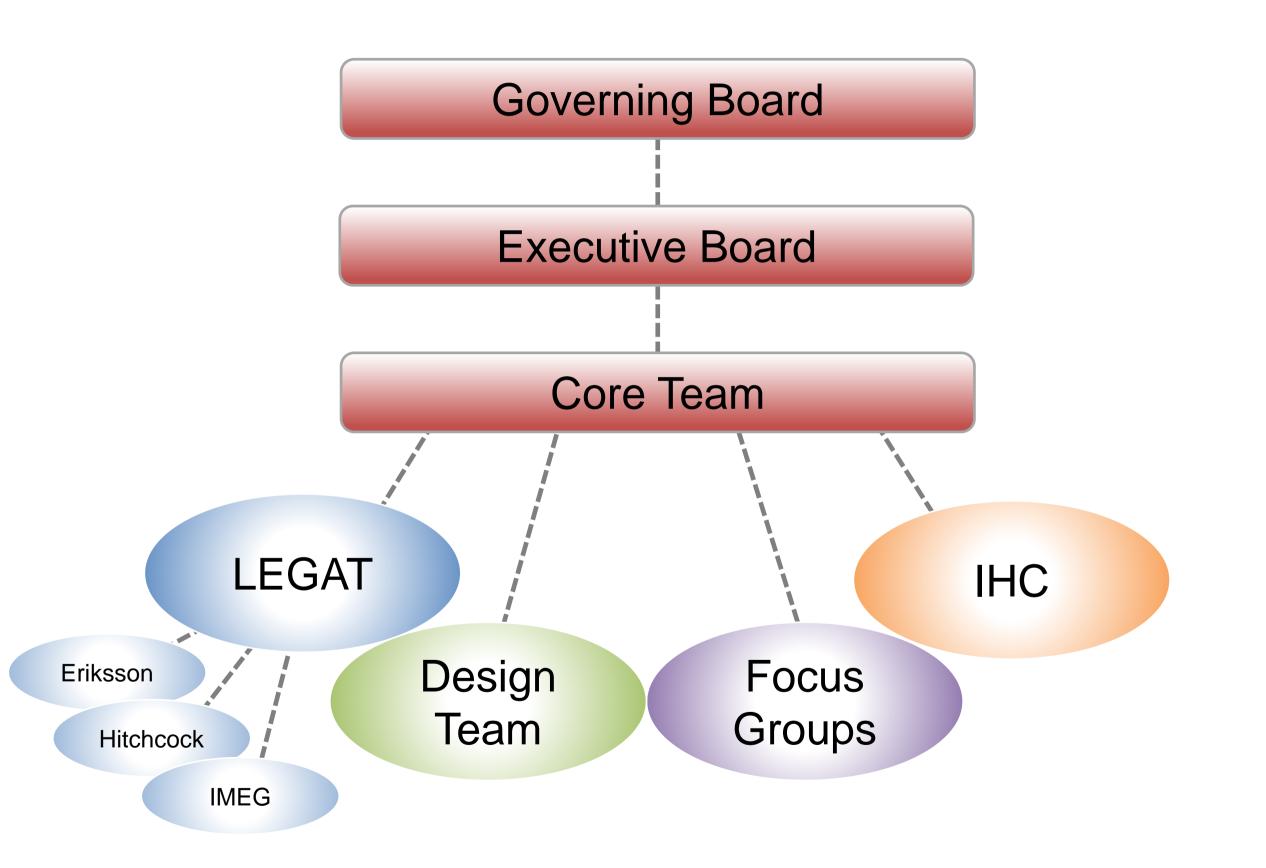
Learn more about A.E.R.O.'s comprehensive special education programs by selecting a program.



WE ARE CONNECTING AND PARTNERING



Special Education Cooperative









Research Process



SENSORY LOADING



TRANSITIONS



OVERLAPPING







CARE





Sensory Loading

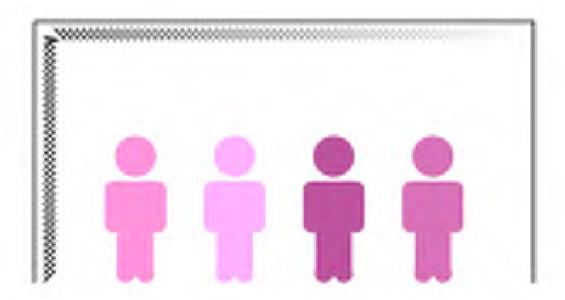
Concept:

- Neuro-typical approach: Immerse the neuroatypical students in normative environments in order to encourage adaptation and simulate realworld environments. This is the approach of the original AERO facility.
- Sensory design approach: favorably designing
 the sensory environment can be conducive
 to positive and constructive behavior. Uses a
 "graduated" approach of sensory spaces from the
 highly adapted to the typical to allow for gradual
 skill development. This is the approach of the new
 AERO Therapeutic Center.

Research Process



All environments are neuro-typical



SENSORY DESIGN APPROACH

Environments are on a graduated scale from highly adapted to neuro-typical





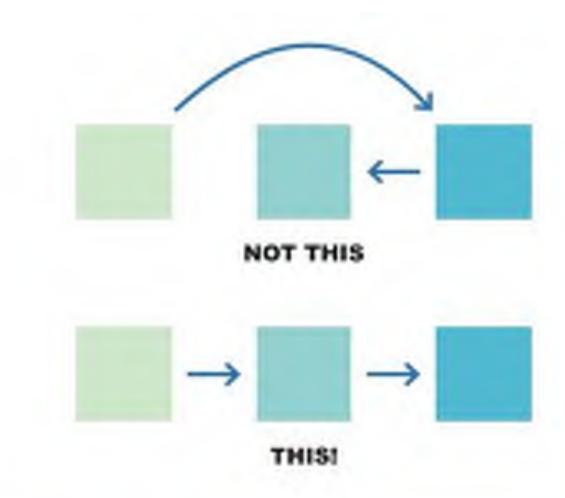
CONCEPT 2 Sequencing and Transitions

Concept:

To align the daily schedules of students and their affinity for routine with the spatial layout of the building. This can be employed to great effect when combined with effective way-finding and sensory zoning.

- Group functions for each age group in zones through which children move progressively throughout the day.
- Organize functions in a one-way circulation pattern, such that back-tracking or complex navigation is not required.
- Design these transitions such that students are not exposed to unnecessary distraction or sensory-rich environments.
- Circulation patterns should be logical and clear.
 Students should be able to "map" their schedules without much difficulty. Returning to central circulation "nodes" can be helpful.
- The architecture should recognize transition points, preferably in similar consistent ways.

Research Process







CONCEPT 3 Overlapping Approaches

Concept:

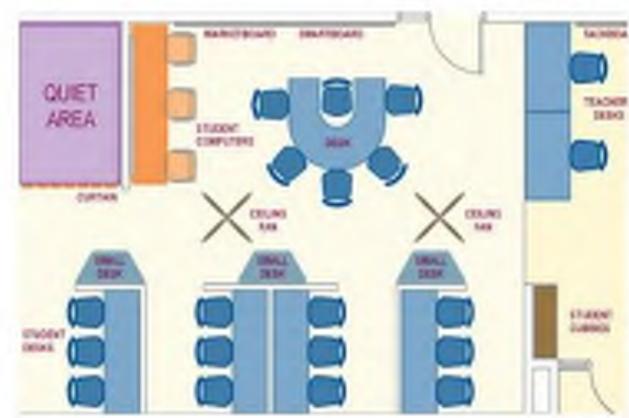
The following strategies benefit multiple user types.

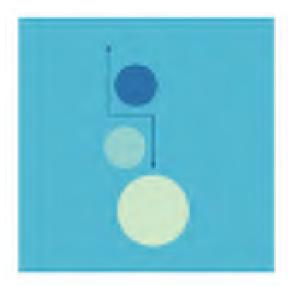
- Acoustics: reduce noise levels, echo, mechanical noise. (Benefits to neuro-typical, ADHD, and Autism-spectrum users)
- Spatial sequencing: affinity for routine, provide logical entry and access sequence based on scheduled use of spaces. One-way circulation where possible, minimal disruption and distraction.
- Escape space: respite from over-stimulation, small partitioned area or "crawl space."
- Conpartmentalization: provide distinct sensory cues for each type of activity, to clearly define functions and expectations.
- Transition zones: recalibration of senses
- Sensory zoning: see compartmentalization
- Safety: avoid sharp edges and corners, "fingertraps", pay more close attention to furniture, equipment, and danger points

Research Process



Figure 23





CONCEPT 4 Geographic Stressors

Concept:

Physical points in the school building may inherently cause stress in students.

- Drop off & pick-up: the transition from car/bus to the school entrance can be an intimidating and stressful experience. Break down to reduce scale and contrast of the entrance. Oppose "monumentality."
- Corridors: passing between classes is most often the noisiest and most sensory-rich time in a students day, so any effort to curtail this experience would be useful to maintaining focus.
 Offset passing periods, wider hallways, acoustic treatment in the area are strategies to consider.
- Classroom entrance: the classroom entrance may induce anxiety as a result of social concerns or performance anxiety.
- Cafeteria & gym: Dining rooms and other large spaces can be loud, sensory-overloading situations. There are multiple decision points and social interactions to navigate. This also applies to other large social gatherings like assemblies, beginning of day line-ups, and mass examinations.

Research Process

 Avoidance: For students with OCD or GAD, avoidance of locations of prior anxiety attacks may be common.



Figure 25



Biophilia

Concept:

Multiple user types will benefit from access to biophilic moments at strategic points.

- Biophilia is the idea that humans possess an innate tendency to seek connections with nature.
- Nature is therapeutic for humans.
- Nature in the space: sensory exposure/access to nature, non-rhythmic sensory stimuli, access to fresh air, access to water, dynamic lighting, natural forms/patterns/materials.
- Nature of the space: prospect (view), refuge (escape space), mystery, risk / peril (sense of adventure).

Research Process



Figure 26



Research Process



Care 6

Concept:

For the students and staff to benefit the most from any intervention there needs to be an effort to address their wellbeing.

- Engagement: When educators and staff feel appreciated, they perform better. When educators and staff are provided training on the latest topics and research, they perform better. When educators and staff are able to find time on stressful days to regain their equilibrium, they perform better. Any new facility has to take into account how to take care of their employees and provide flexible spaces.
- Stress reduction: Look for opportunities to create spaces and places that allow staff members and educators to be able to rejuvenate. You cannot care for others if you cannot take care of yourself. In combination with other strategies, such as biophilia, there is an opportunity to limit cortisol and norepinephrine reactions and give the ability to allow employees to center themselves.

 Communication: An essential part of any program should be messaging and communication. Effective engagement begins with a culture of open dialog grounded in the belief that everyone is working toward a common goal. Spaces should foster and host all forms of communication



Goals and Objectives

PROGRAMMING...

- Integrated environments (indoor/outdoor)
- Flexible spaces
- Social and emotional support
- Therapeutic center
- Build for students
- Sensory needs
- Student ownership
- Three buildings in one
- Transitions and crisis management
- Space for movement breaks
- Functional spaces to meet AERO needs

- Desirable facility reputation
- Future maintenance needs/costs
- Accommodate growth
- Aesthetically pleasing
- Community pride
- Students, staff and parents
- Accessibility for everyone
- Opportunities for everyone
- Enhanced opportunities for students
- Adaptive playground.



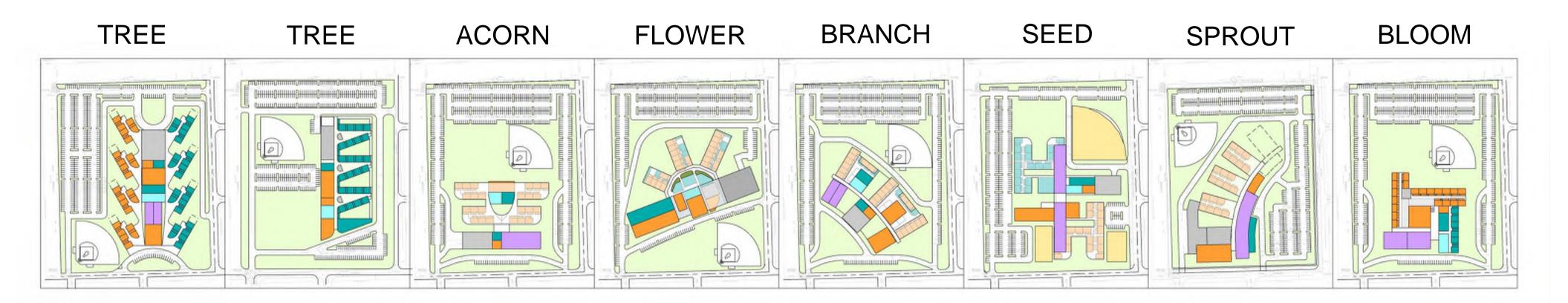
Conceptual Design Process







Conceptual Design Process





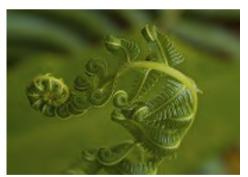






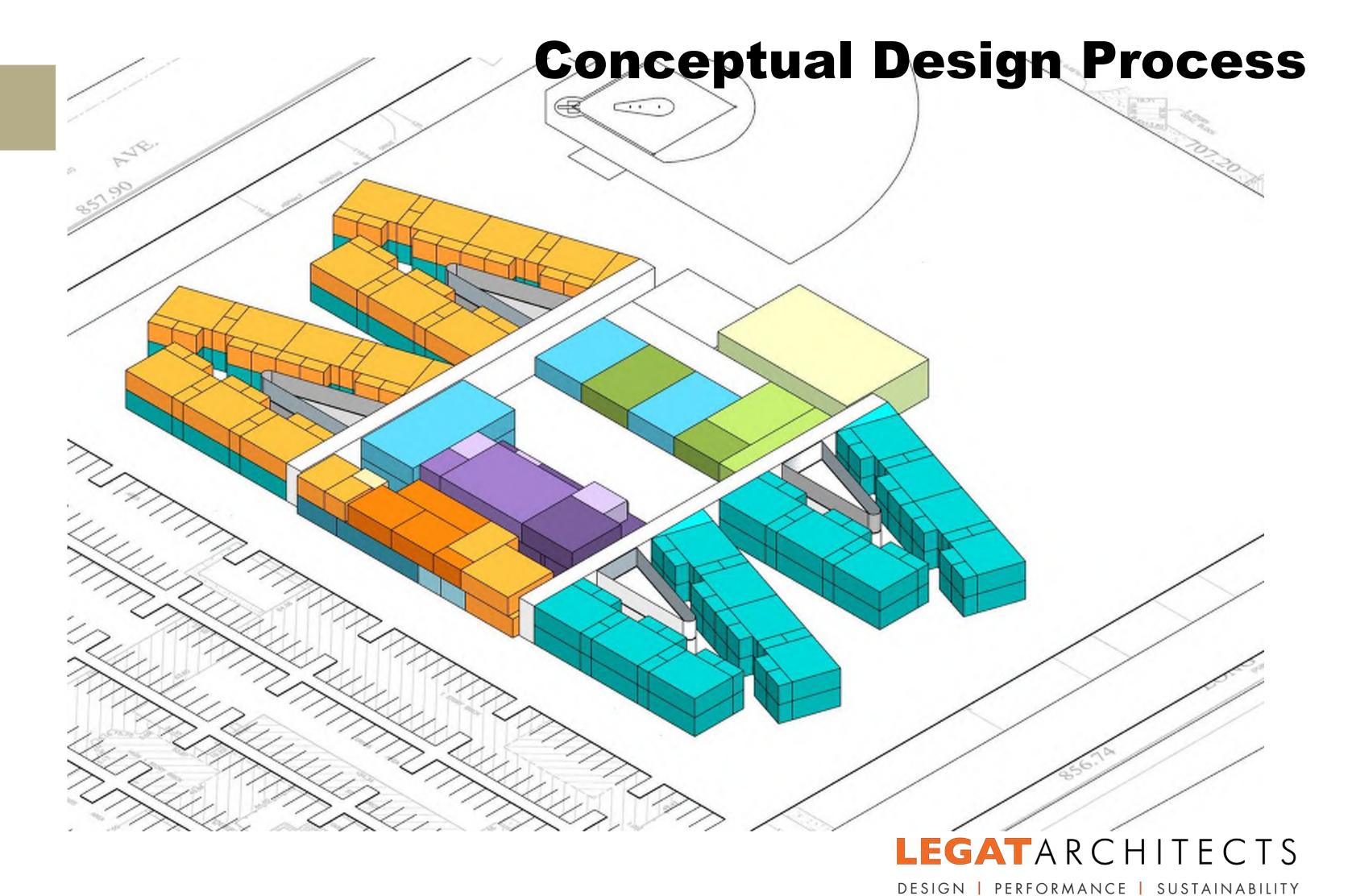


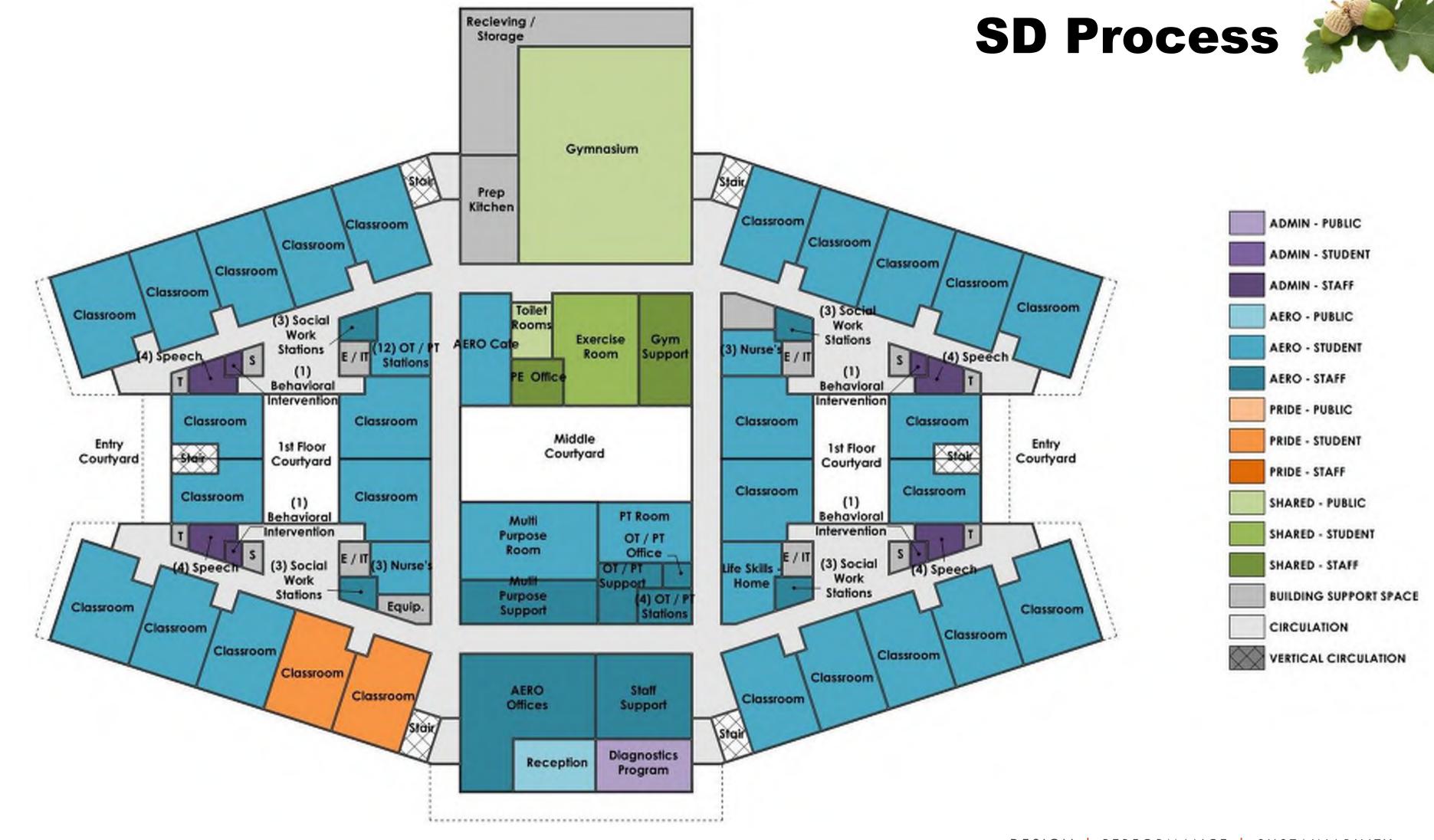


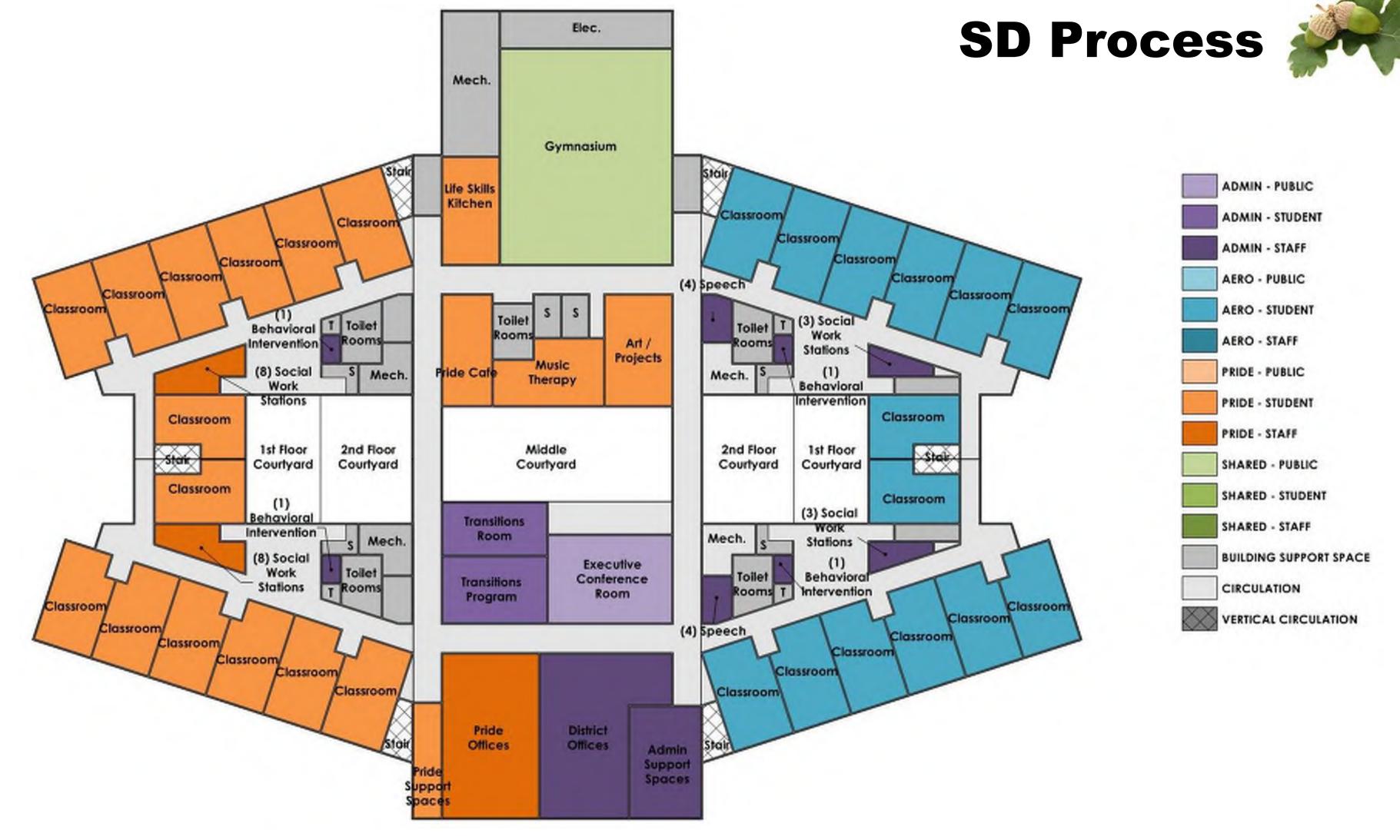


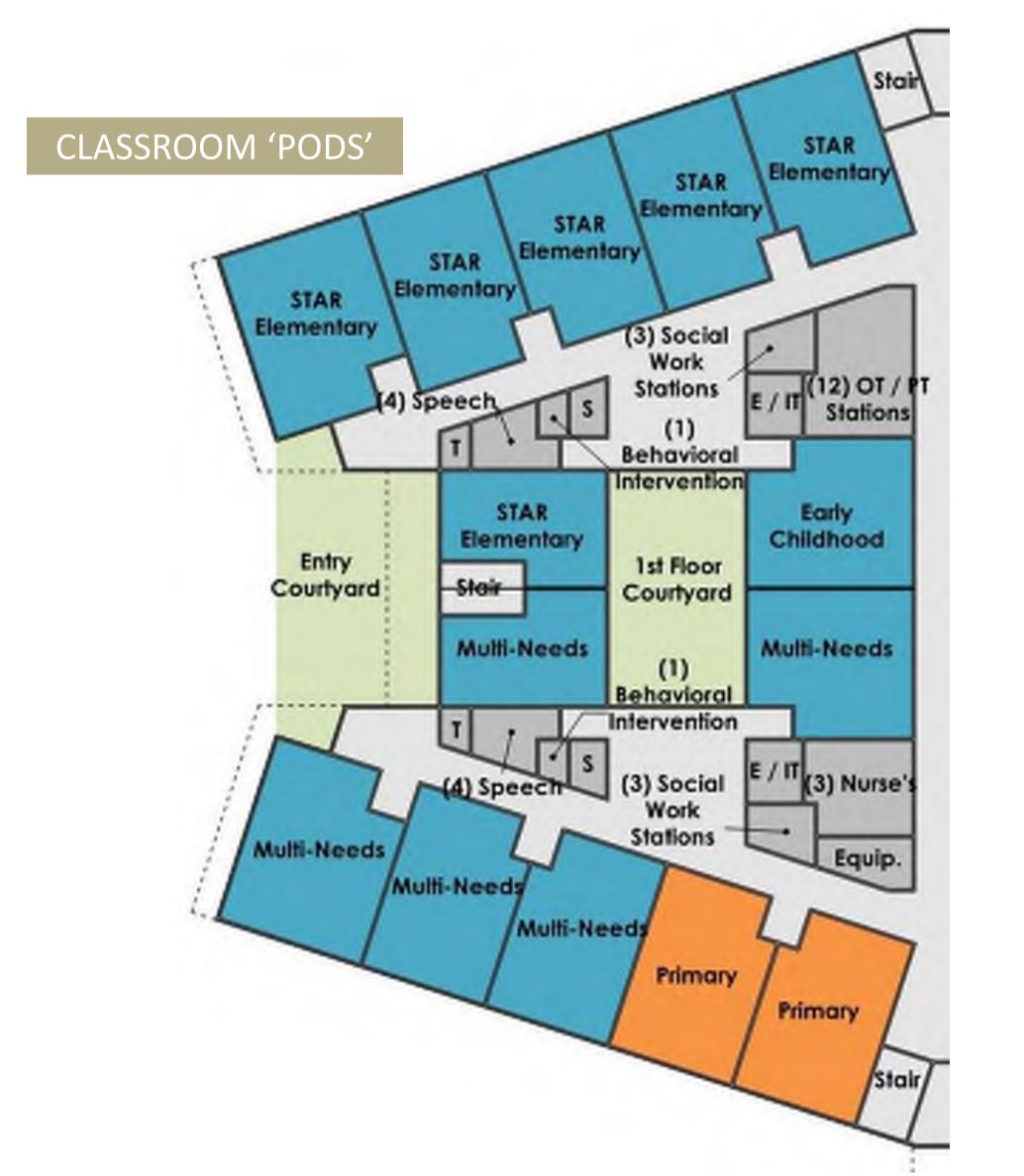


VIEW LOOKING NORTH-WEST

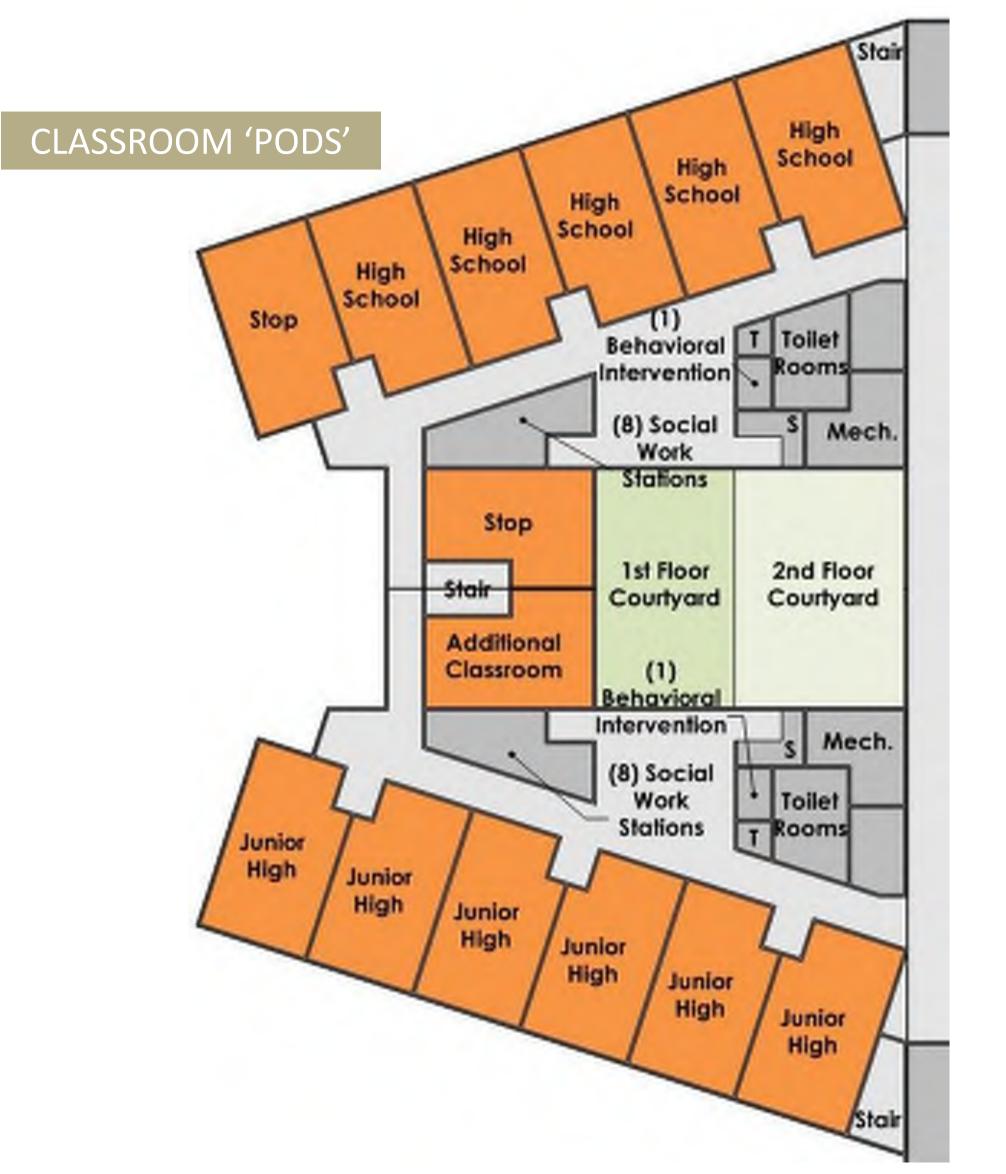


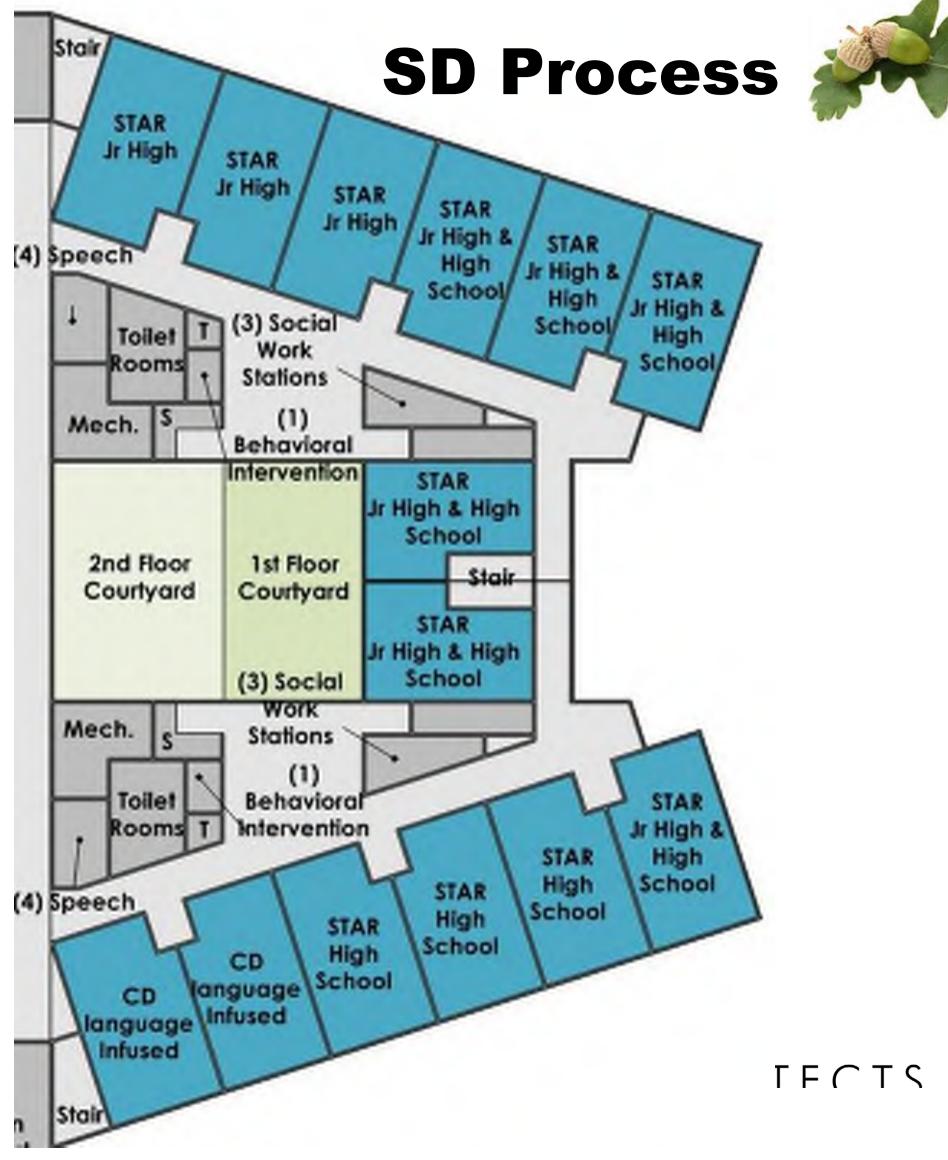


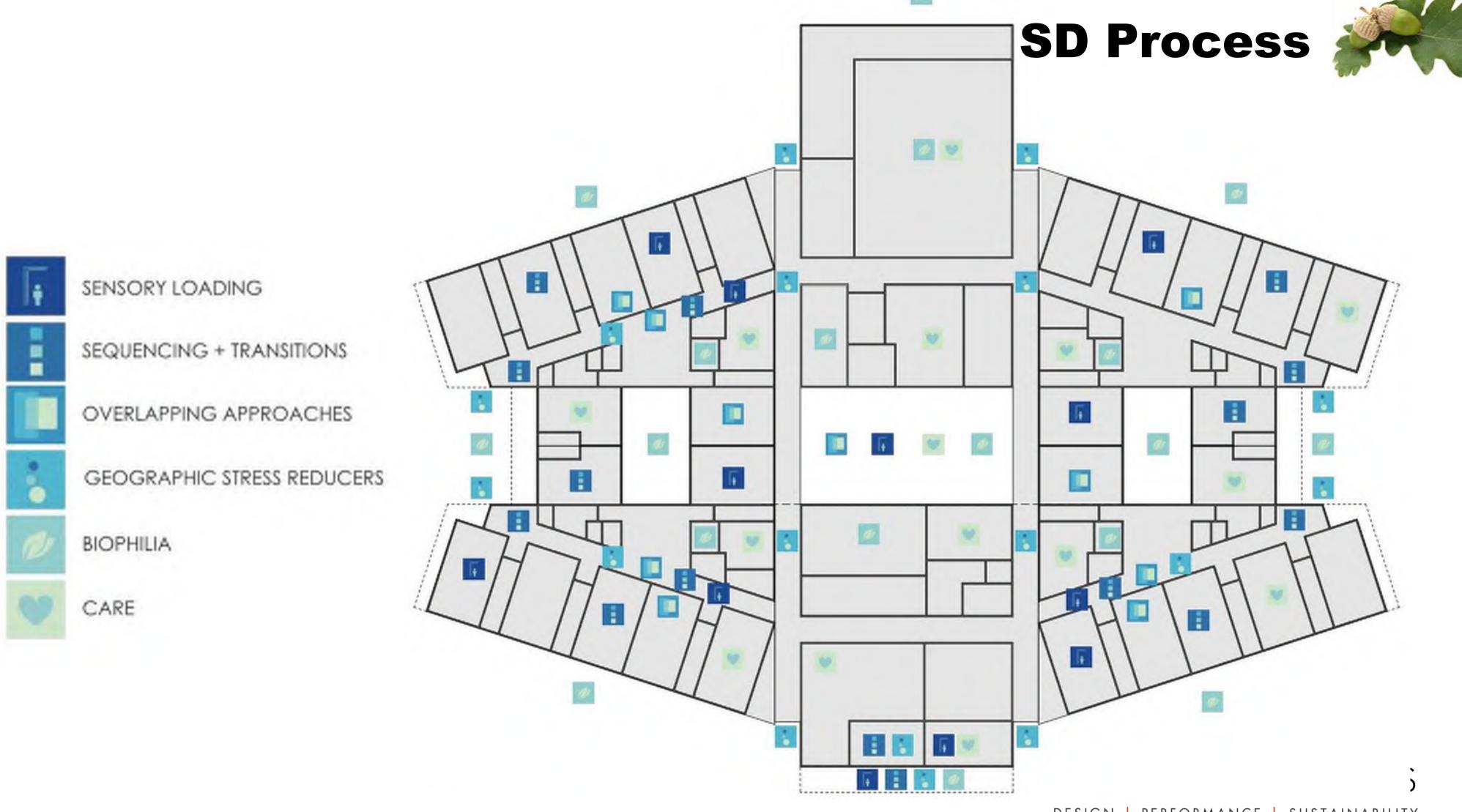










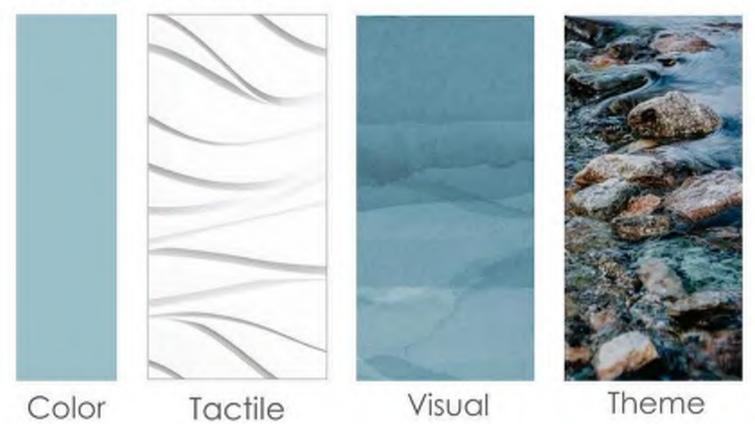




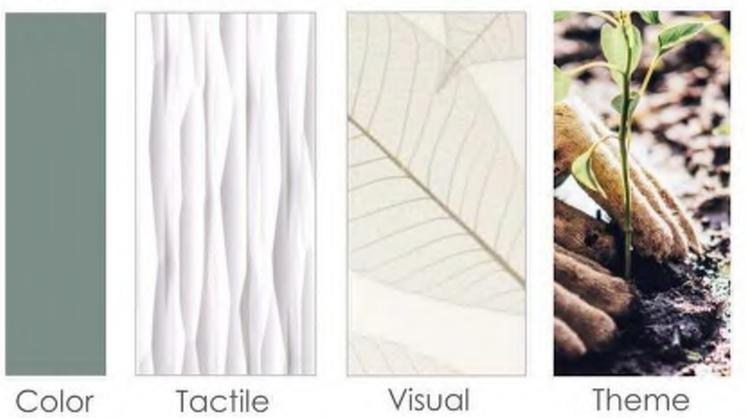


Interior Design

$W_{\text{ater}} \ W_{\text{ING}}$



 $E_{\text{arth}}\,W_{\text{ING}}$



 $A_{ir}\,W_{ING}$



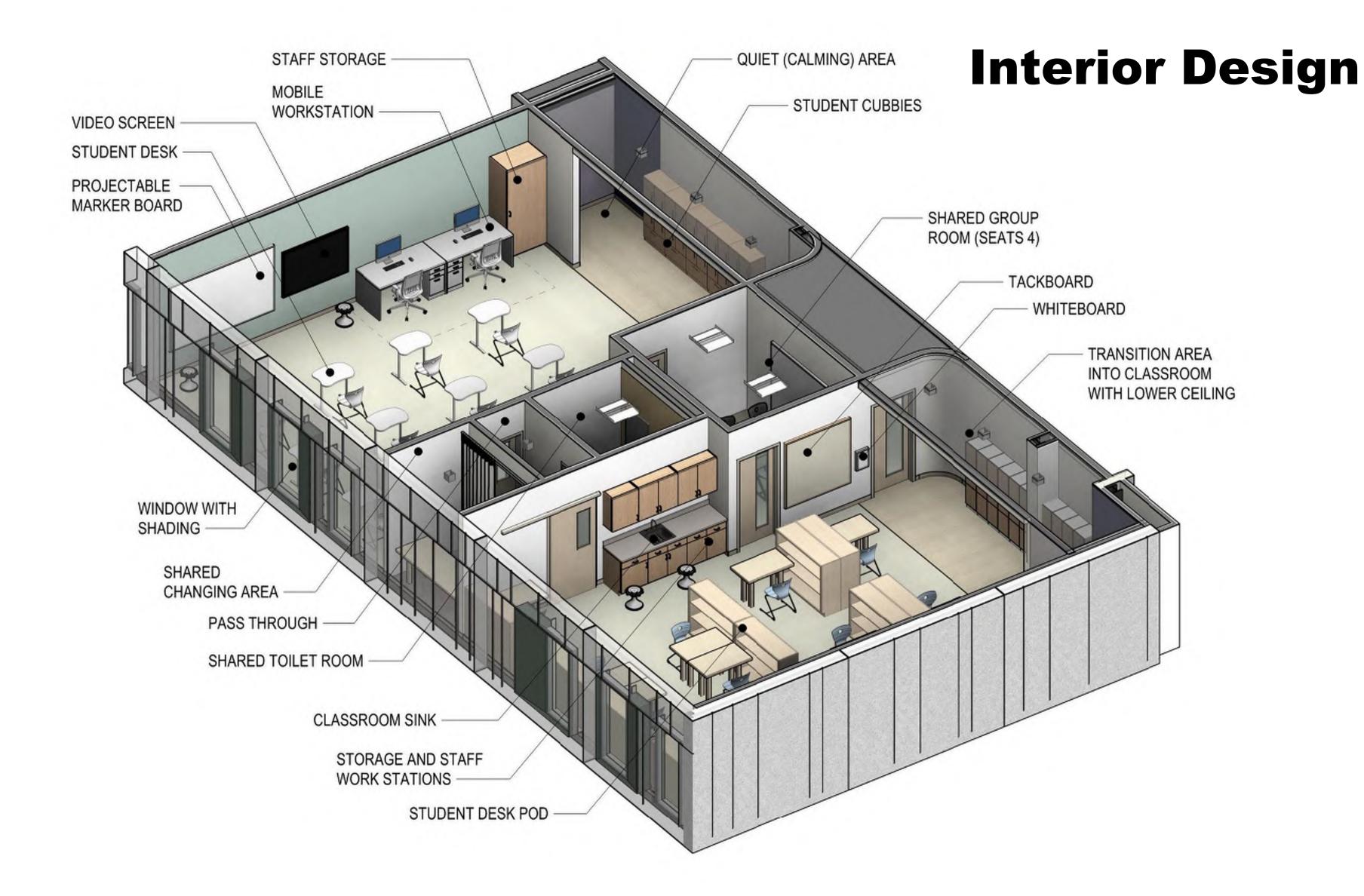
 $S_{\text{un}}\,W_{\text{ING}}$

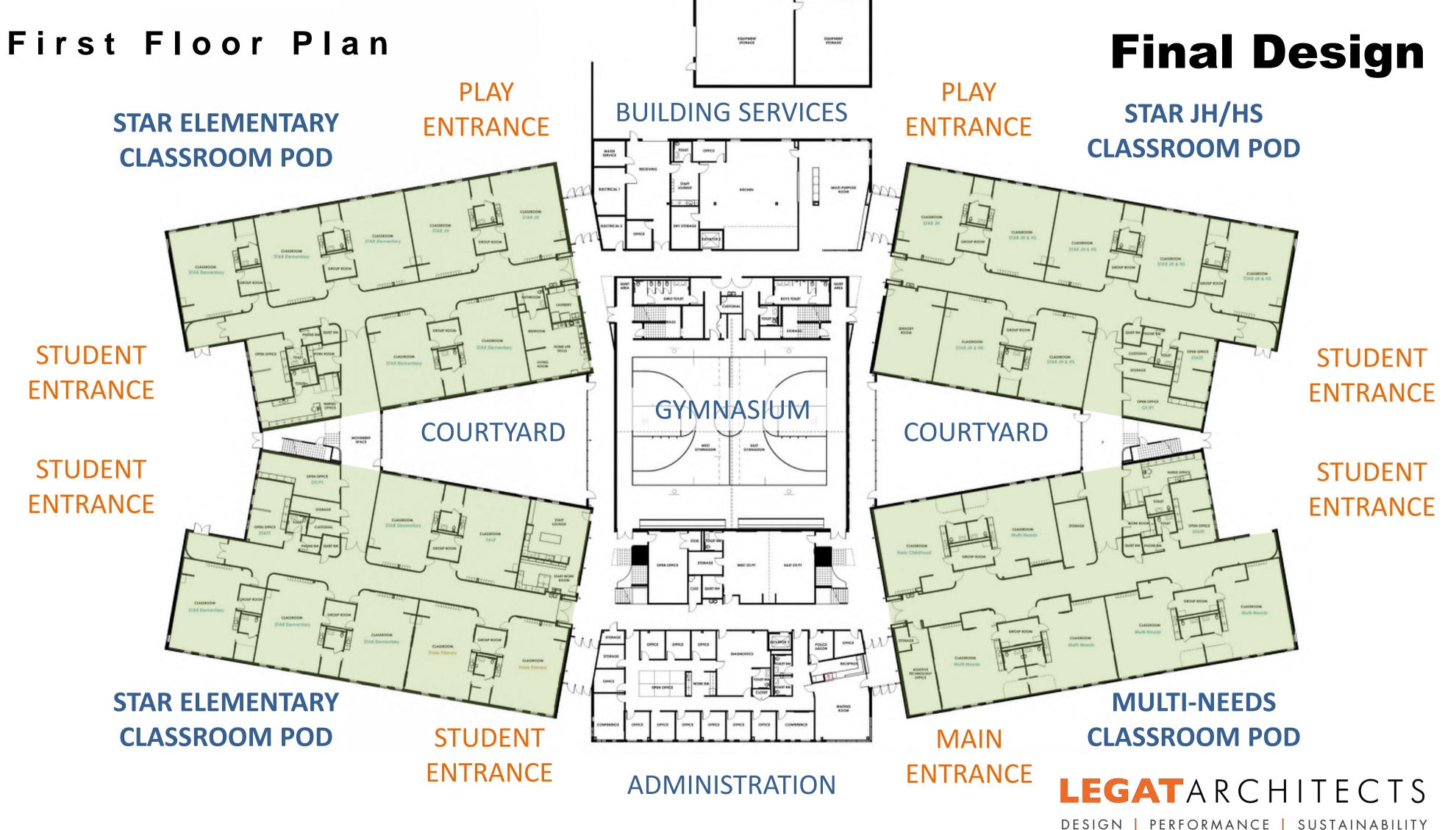


Color Board

Interior Design

















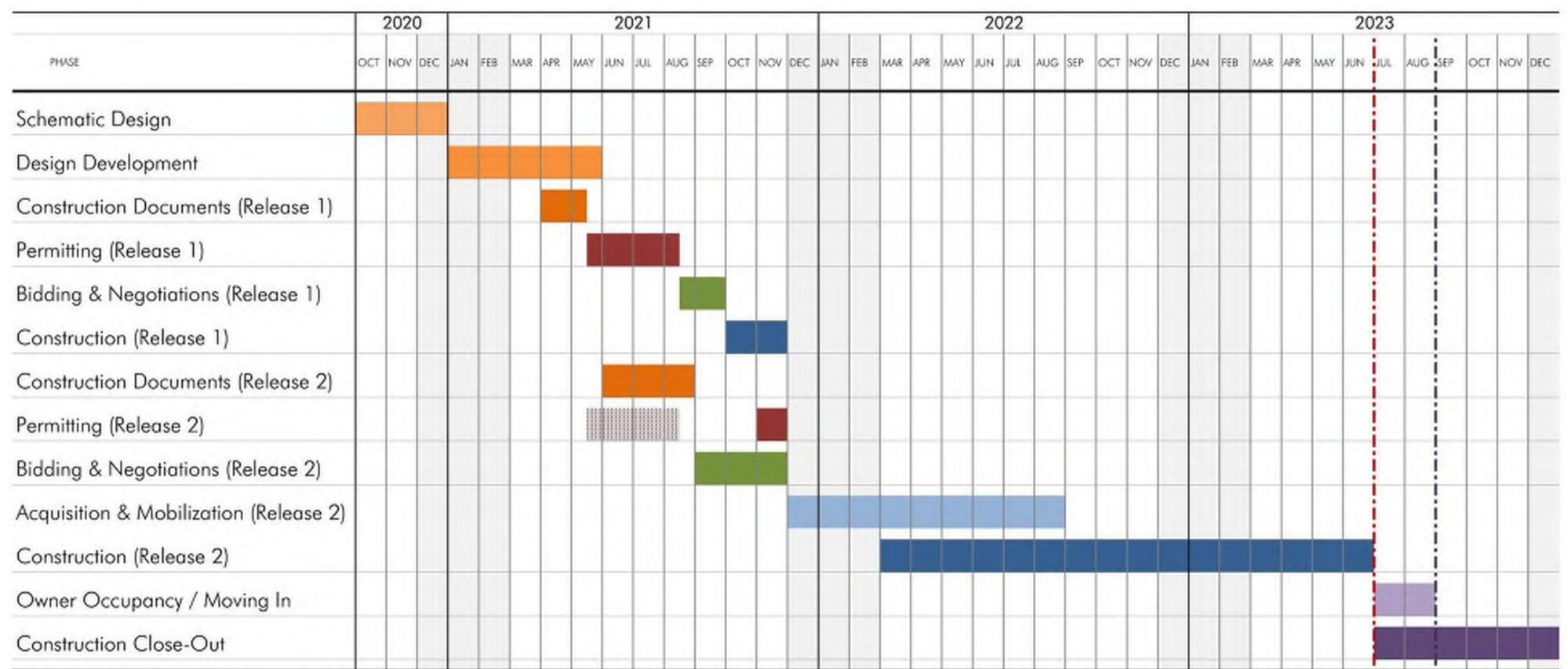


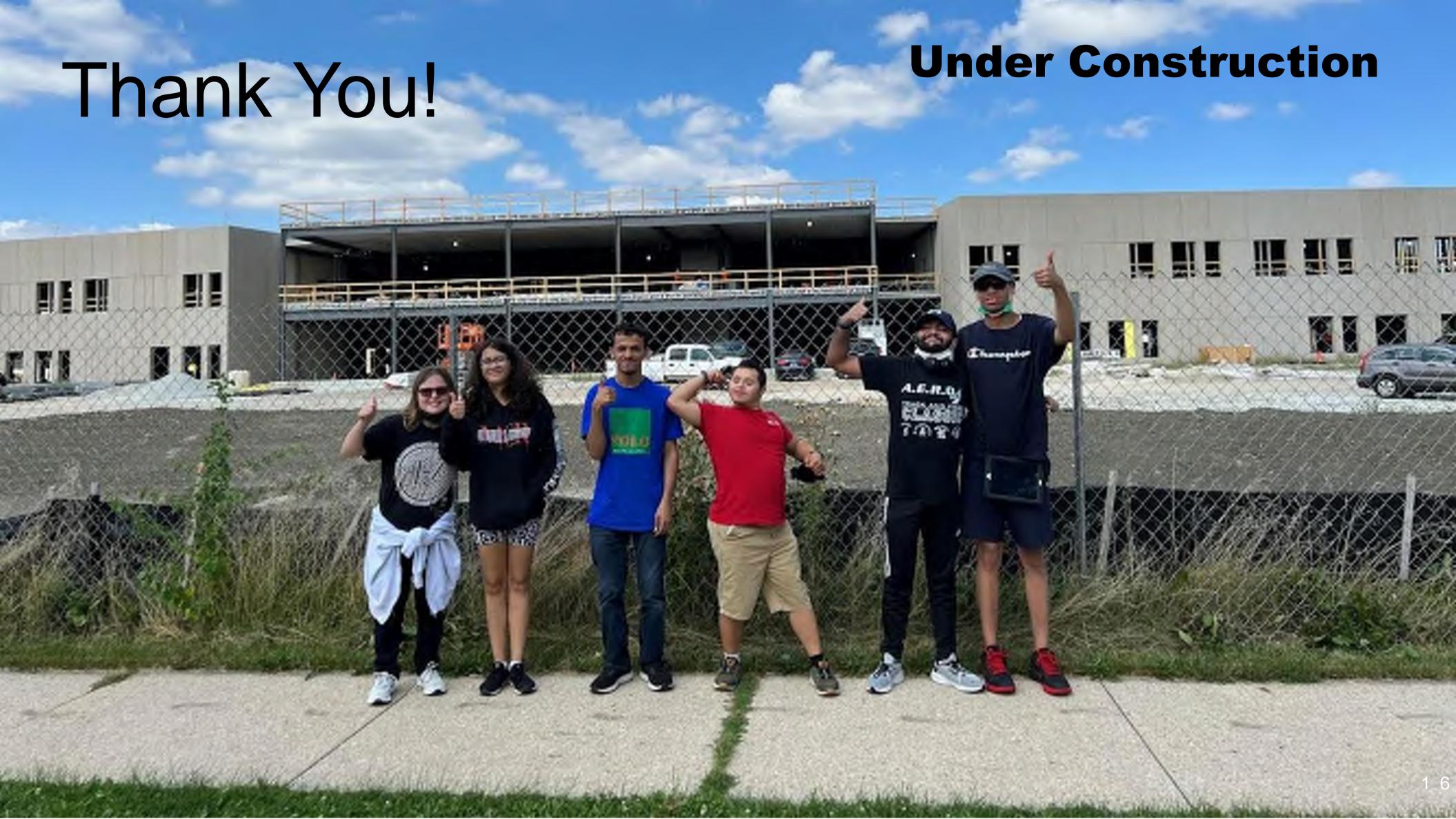






Schedule





Further Reading

References

- 1. Rabella, Mark Fuster. "Why Learning Should Be More Playful." OECD Education and Skills Today, June 18, 2019. https://oecdedutoday.com/playful-learning-school-student-education/.
- 2. Hirsh-Pasek, Kathy, Elias Blinkoff, Roberta Michnick Golinkoff, and Helen Shwe Hadani. "Playful Learning and 21st-Century Skills Line the Path to Education Reform: Our Responses to Your Questions." Brookings (blog), February 17, 2021. https://www.brookings.edu/blog/education-plus-development/2021/02/17/playful-learning-and-21st-century-skills-line-the-path-to-education-reform-our-responses-to-your-questions/.
- 3. Hirsh-Pasek, Kathy. "Playful Learning Landscapes." Accessed March 25, 2021. https://kathyhirshpasek.com/learning-landscapes/.
- 4. United Nations, Department of Economic and Social Affairs, Population Division (2019). World Urbanization Prospects: The 2018 Revision (ST/ESA/SER.A/420). New York: United Nations. https://population.un.org/wup/Publications/Files/WUP2018-Report.pdf
- 5. Hassinger-Das, Brenna, Bustamante, Andres S., Hirsh-Pasek, Kathy, and Michnick Golinkoff, Roberta. "Learning Landscapes: Playing the Way to Learning and Engagement in Public Spaces." Education Sciences Journal, May 23, 2018. https://kathyhirshpasek.com/wp-content/uploads/sites/9/2018/06/Learning-Landscapes-Playing-the-way-to-learning-and-engagement.pdf
- 6. Rice, Louis. "Playful Learning." Journal for Education in the Built Environment, 4:2, 94-108, DOI: 10.11120/jebe.2009.04020094. https://doi.org/10.11120/jebe.2009.04020094.

- 7. Butterfield, Timothy. "The Power of Playful Learning." Harvard Graduate School of Education (blog), October 22, 2019. https://www.gse.harvard.edu/news/19/10/power-playful-learning.
- 8. Hadani, Helen Shwe and Vey, Jennifer S. "Moving Forward Together to Build More Playful Cities: Introducing the Playful Learning Landscapes City Network." Brookings (blog), January 26, 2021. https://www.brookings.cdu/blog/education-plus-development/2021/01/26/moving-forward-together-to-build-more-playful-cities-introducing-the-playful-learning-landscapes-city-network/.
- 9. Hadani, Helen Shwe and Vey, Jennifer S. "The Urban Play Framework: An Approach for Understanding the Play Experience in Cities." Brookings (blog), January 27, 2021. https://www.brookings.edu/blog/the-avenue/2021/01/27/the-urban-play-framework-an-approach-for-understanding-the-play-experience-in-cities/.
- 10. Walker, EdD, Karen. "The Power of Playful Learning in Early Childhood Education." TEPSA (blog). Accessed March 25, 2021. https://www.tepsa.org/resource/the-power-of-playful-learning-in-early-childhood-education/.
- 11. Winthrop, Rebecca. "How Playful Learning Can Help Leapfrog Progress in Education." Brookings (blog), April 2, 2019. https://www.brookings.edu/research/how-playful-learning-can-help-leapfrog-progress-in-education/.
- 12. Banda, Justin. "Playing to Learn: Playful Learning Comes to Chicago." Legat Architects (blog), August 18, 2021. https://www.legat.com/playing-to-learn-the-benefits-of-playful-learning-part-1/, https://www.legat.com/playing-to-learn-the-benefits-of-playful-learning-part-1/, https://www.legat.com/playing-to-learn-the-benefits-of-playful-learning-part-1/, https://www.legat.com/playing-to-learn-the-benefits-of-playful-learning-part-1/, https://www.legat.com/playing-to-learn-the-benefits-of-playful-learning-part-1/, https://www.legat.com/playing-to-learn-playful-learning-comes-to-chicago-part-2/.



Thank you!

Justin Banda, jbanda@legat.com

Robin Randall, rrandall@legat.com

Kelsey Jordan, kjordan@legat.com

https://www.legat.com/

learningSCAPES 2022
A CALL TO ACTION

LEGATARCHITECTS