

EDspaces

Designing the Future of Education
Charlotte, NC | November 7-9, 2023

Closing the Loop at North Park School for Innovation

Wed 11/8 @ 9:30



Closing the Loop at North Park School for Innovation

2023 EdSpaces



Cunningham



Introductions



Jeff Cacek

Principal - North Park School for Innovation



Jen Garman

Architect - Cunningham



John Pfluger

Design Director - Cunningham

Learning Objectives

Fully integrated learning environments

How to connect the indoor to the outdoor and the world beyond through design and educational programming to positively affect the well-being of users, and provide equitable access to environmental education.

Radical Incrementalism

The power of doing one thing well, repeatedly, to power a path to net-zero. How long-term planning, educational programming and design intertwine to realize the higher goals of a school that positively affects the physical environment and the welfare of students, faculty, staff, and the larger community.

Net-zero on a public-school budget

Making partners, managing resources, and enabling staff to empower change directed towards your goals.

Empowering the most vulnerable

Programming that engages all students with the environment to build awareness, understanding, and agency in a changing environment.

Welcome to North Park

Fridley, MN

Student Demographics

39% Black

27% Hispanic

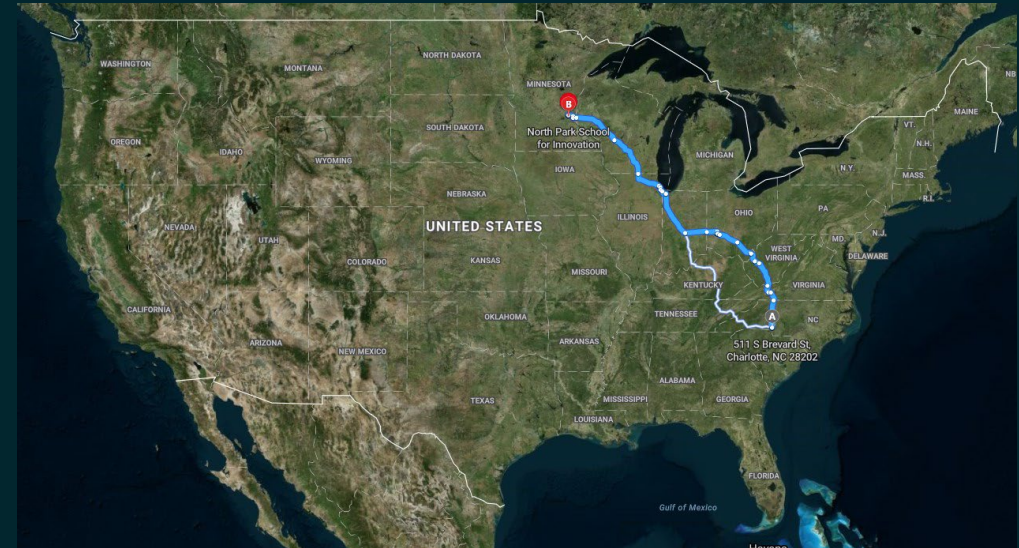
18% White

11% 2+ Races

4% Asian or Pacific Islander

1% Native American

80% Students from low-income families





1 of **5** Schools in School District

85-89 Students per Grade

K-5 Elementary Education



18%
White



39%
Black



27%
Hispanic



16%
Indian, Asian, other

32 Languages Spoken

80% of Students
Receive Free or
Reduced Lunch

35% Mobility Rate



A quest for equitable
learning opportunities

Radical Incrementalism

2012
Re-imagined
studio concept
for equitable
learning



2016
School Growth
(referendum
& active
learning)



2018
Learning
Landscapes



2021+
Zero Waste



**EXECUTE.
REVIEW + ADJUST.
REPEAT.
FOREVER!**

2012

The story
begins...

and the
Learning
Studio is
born.



90 -100
Students

Five
Full Time
Teachers

Three
Educational
Assistants

Four
Classrooms

"G" AMMA SPACE

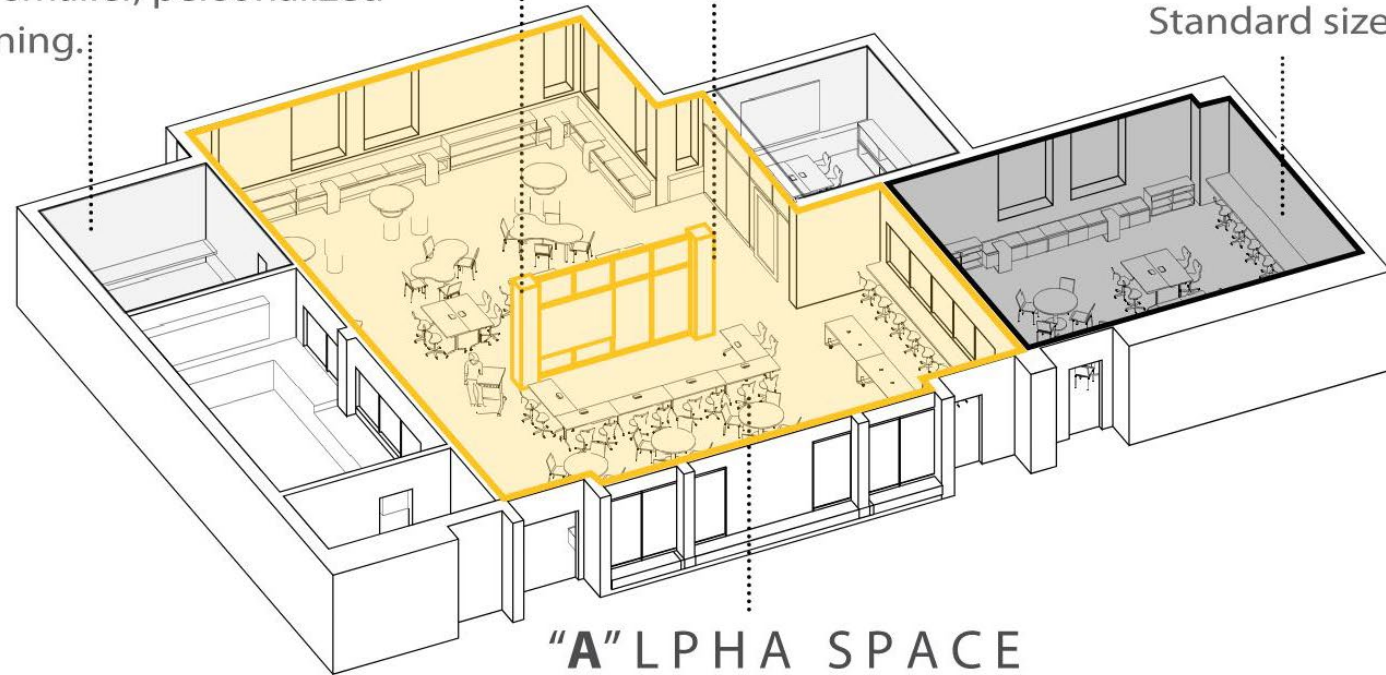
Periphery rooms designed
for breakout sessions
and smaller, personalized
learning.

DIRTT WALLS

Interior, technology infused walls

"B" ETA SPACE

Standard size rooms



"A" LPHA SPACE

Larger central rooms for big
groups and collaborative learning.



Student Outcomes

21st Century Learning Studio Evaluation - Wilder Research Institute

91% Increased Student Engagement

Parents reported that their child is excited about what they are learning

96% Increased Confidence

Students shared that they have learned things that make them feel good about themselves and are proud of the work they have done in school

Improved Peer Relationships

98% Students said they have learned how to get along better with others in learning studio environments

91% Improved Problem Solving Skills

Students reported that they learned a variety of ways to solve problems

87% Increased Future Orientation

Students said that what they have learned in school has helped them imagine their life as an adult



Teacher Outcomes

21st Century Learning Studio Evaluation - Wilder Research Institute

Philosophy Shift

Learning studio environment has changed teacher's approach to education

Student-Driven

Teachers are more comfortable giving their students choices and opportunities to take ownership over their learning, including open-ended learning activities

Flexibility

Learning studios have enhanced teacher's adaptability - classrooms are always changing, including teacher-student configurations, space, noise-levels, approaches to learning

Teacher Learning

Many teachers felt they, too, are learning in this environment! They are learning by collaborating with other teachers, trying new approaches and following what students are pursuing in their learning

Parent Satisfaction

21st Century Learning Studio Evaluation - Wilder Research Institute

My child wants me to know what she/he does in school

93%

My child is excited about what he/she is learning this year

91%

My child prefers learning in a Learning Studio

88%

I would like my child to continue to have a similar learning experience in the future

85%

I would recommend this type of learning experience to other parents

79%

2014

University of Minnesota

John Comazzi,
Director, B.S. Degree Program
Associate Professor of Architecture

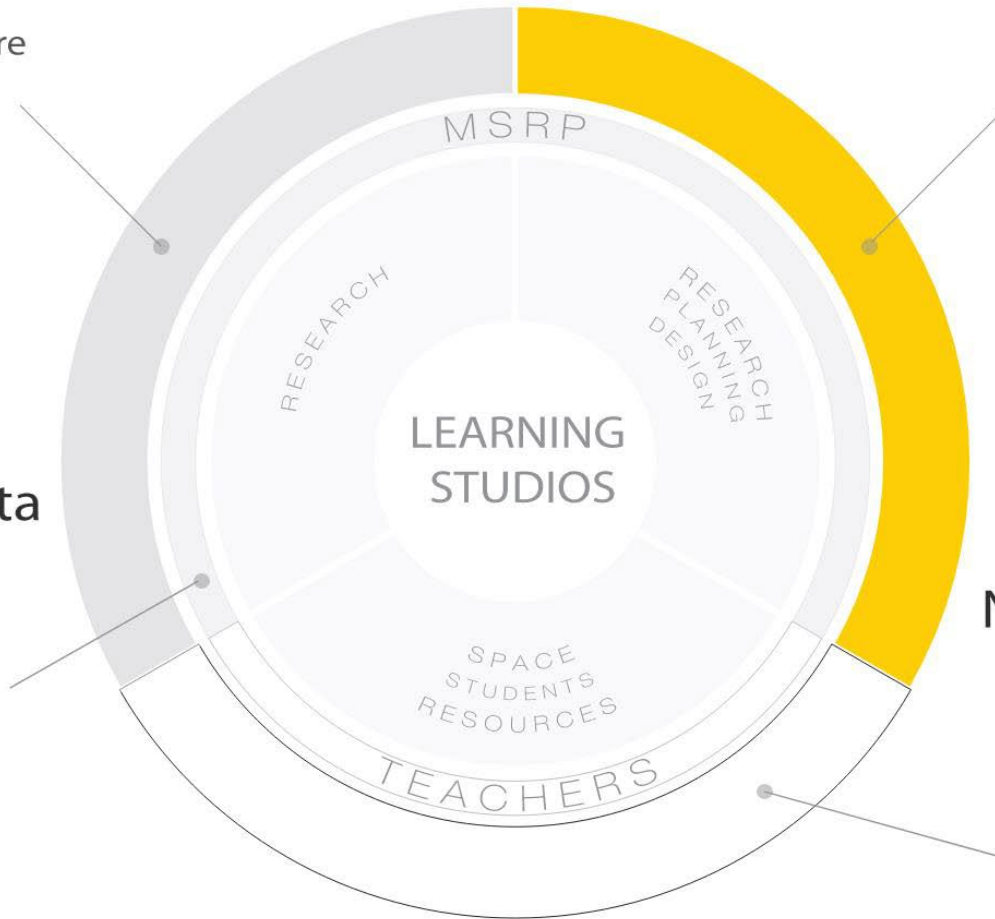
Renee Cheng, AIA
Associate Dean for Research,
Director of MSRP

University of Minnesota MSRP

Dan DeVeau, Researcher,
University of Minnesota School
of Architecture

Wendy Friedmeyer,
Researcher, Ph. D. Student

Matthew Tracey, Researcher,
Previous Project Intern
University of Minnesota School
of Architecture



Cunningham Group Architecture, Inc.

Margaret Parsons, AIA, REFP,
LEED® AP BD+C
Principal

John Pfluger, AIA, LEED® AP
Principal

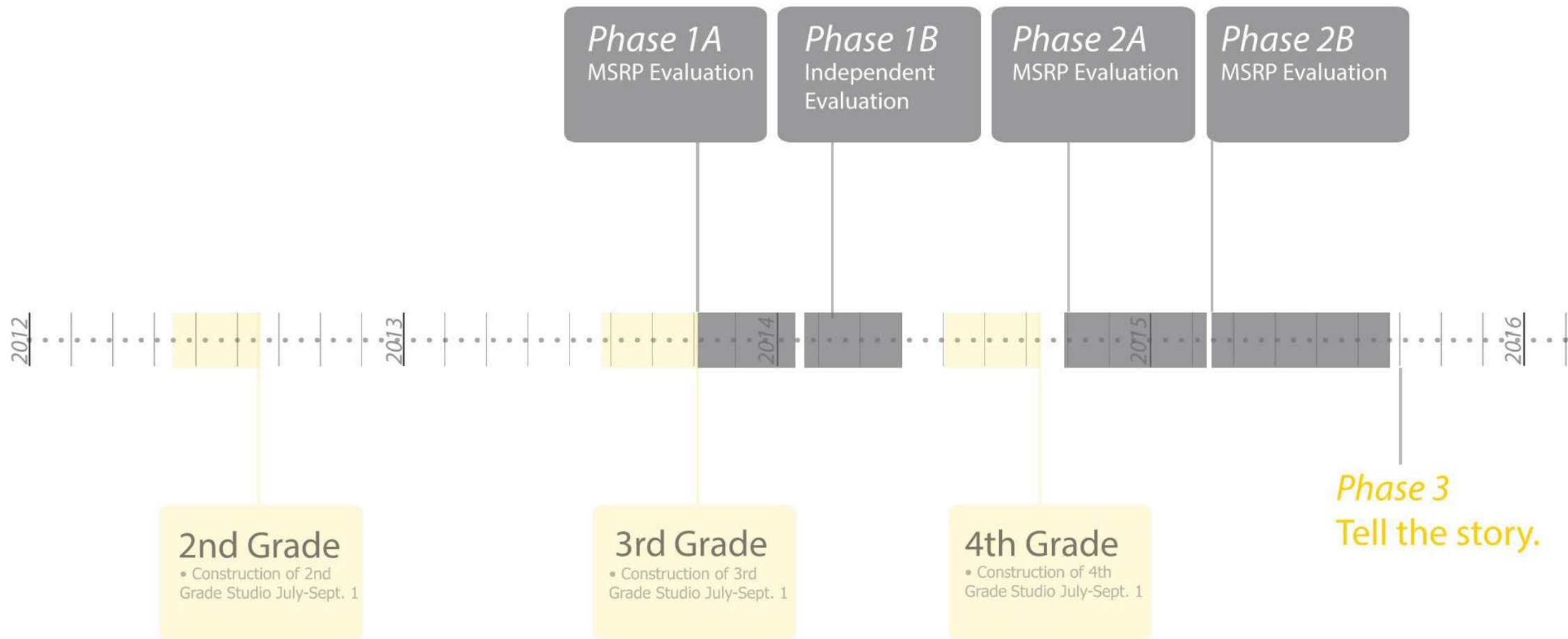
Judith Hoskens REFP, LEED® AP
Principal

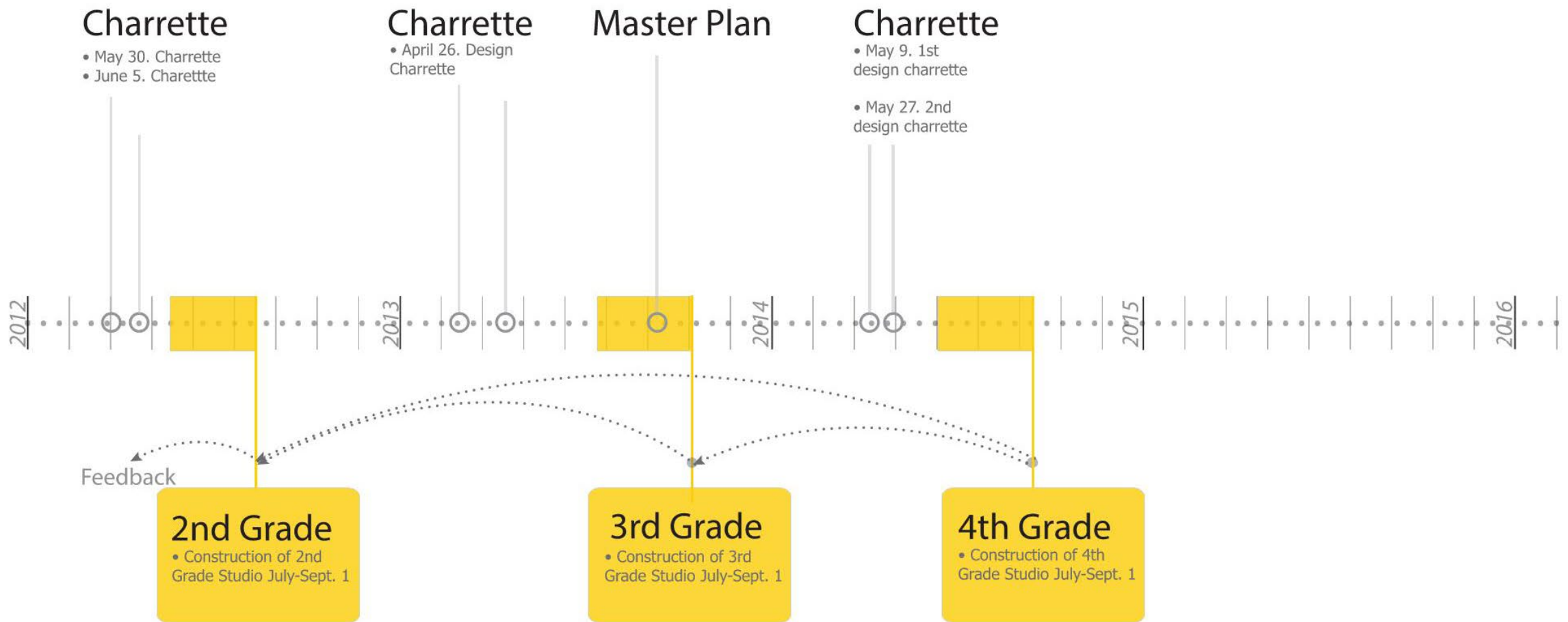
North Park Elementary

Jeff Cacek,
Principal, North Park

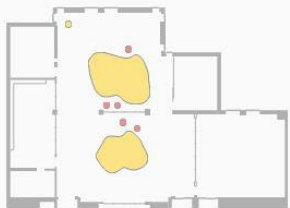
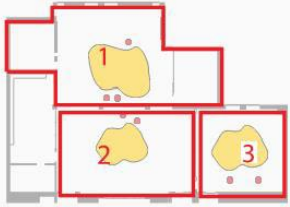
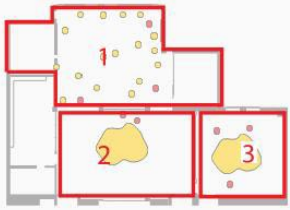
Tanya Sturm,
Dean of Students, North Park

Wilder Research Foundation
Prepared by: Kristin Dillon, June
2014





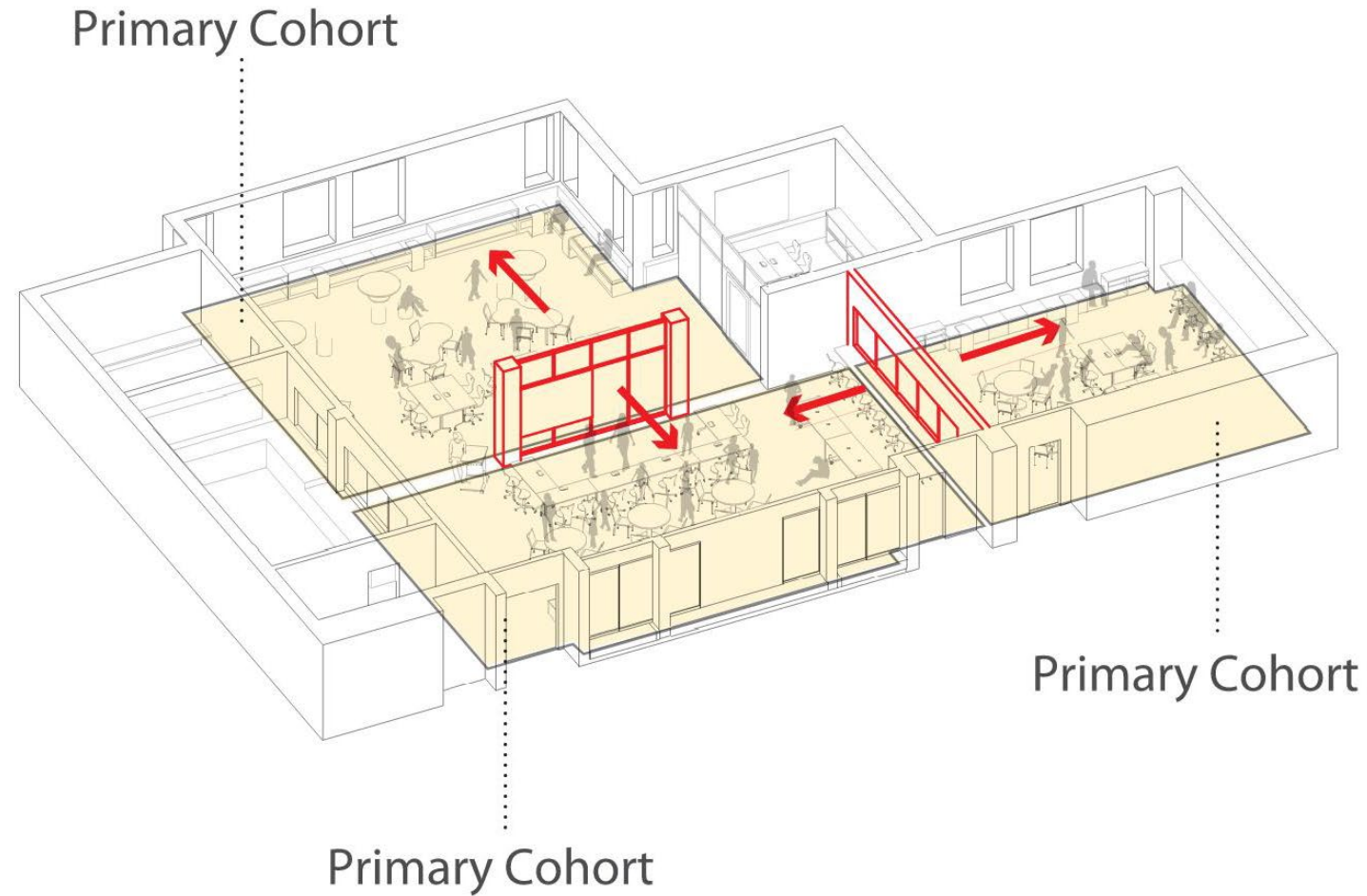
“ We envision a learning space that demands **innovation, collaboration, flexibility** and honors that we are all learners and teachers.”

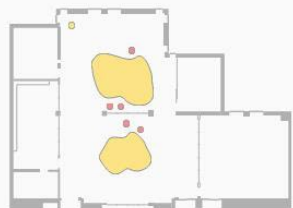
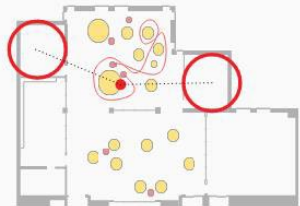


Recorded over two hours

COHORT SPACE

1. DIRT and Secondary Walls form primary cohort structure
2. Various learning types happen within cohorts

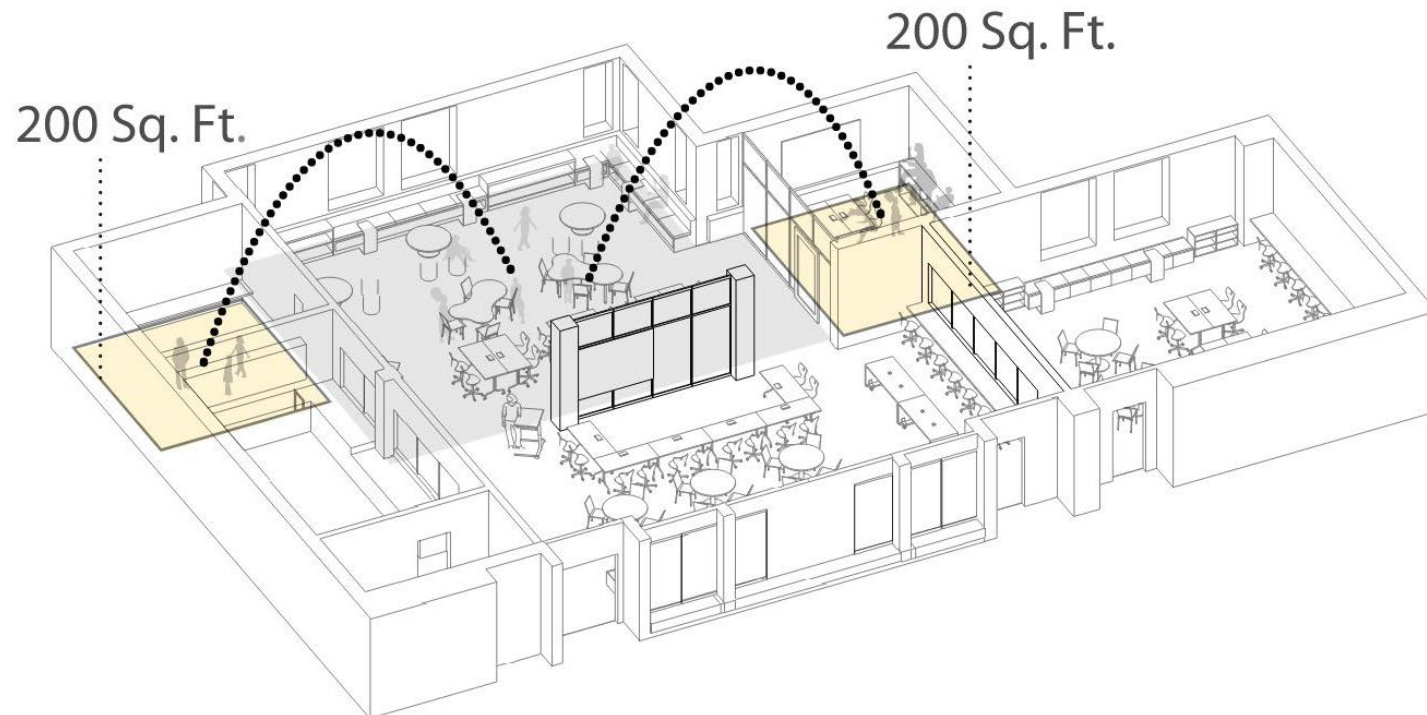


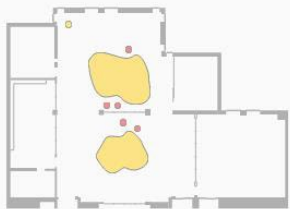


Recorded over two hours

"G" AMMA SPACE

1. Gamma spaces are used frequently
2. Physical adjacency important to usage of Gamma Space

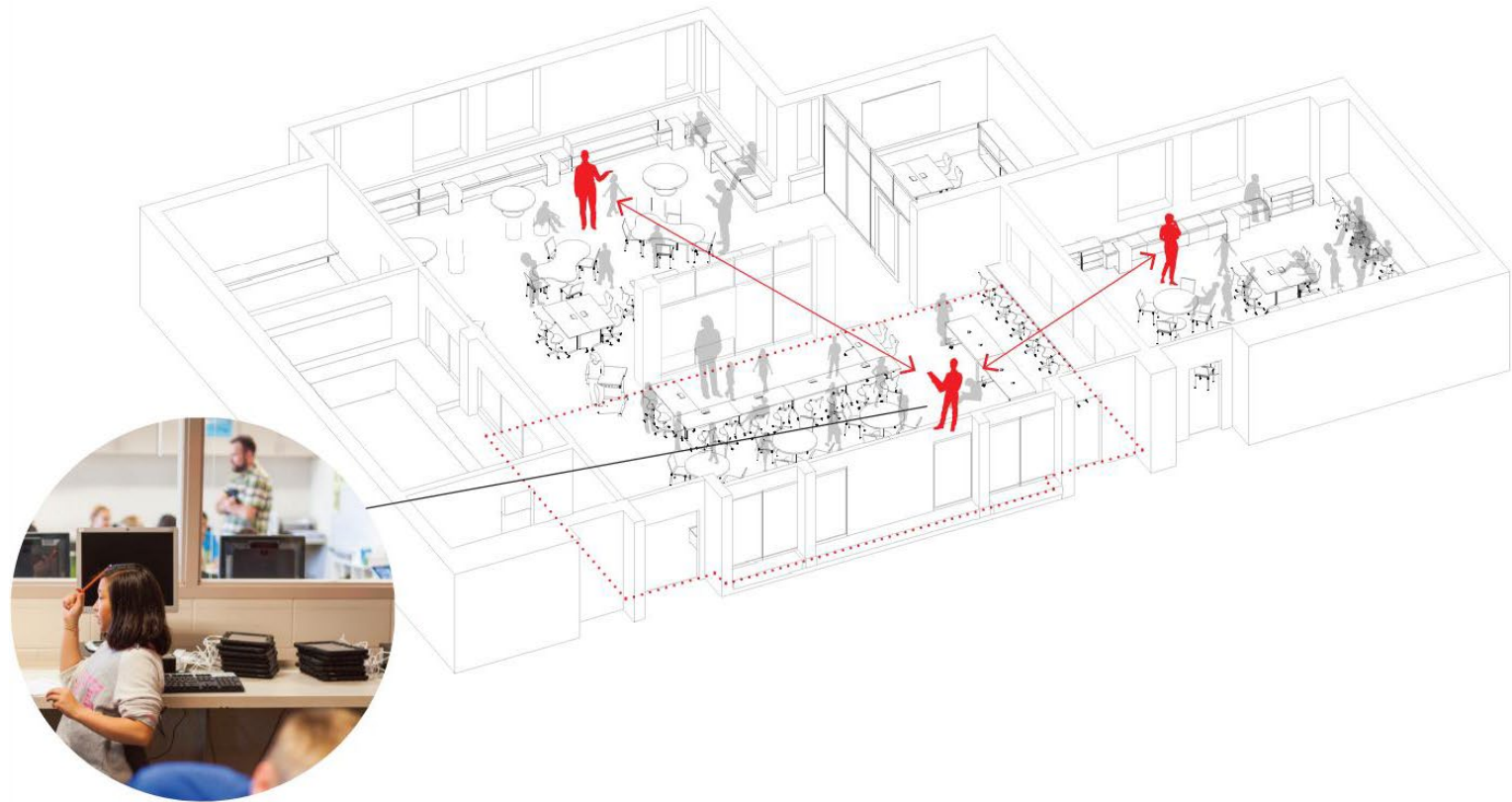




Recorded over two hours

VISUAL COLLABORATION

1. Walls are transparent
2. Immediate feedback in real-time
3. Physical adjacency



Fast Forward to 2016

School Growth - Master Plan

Previous Site Conditions

North Park Elementary

Building, 2016

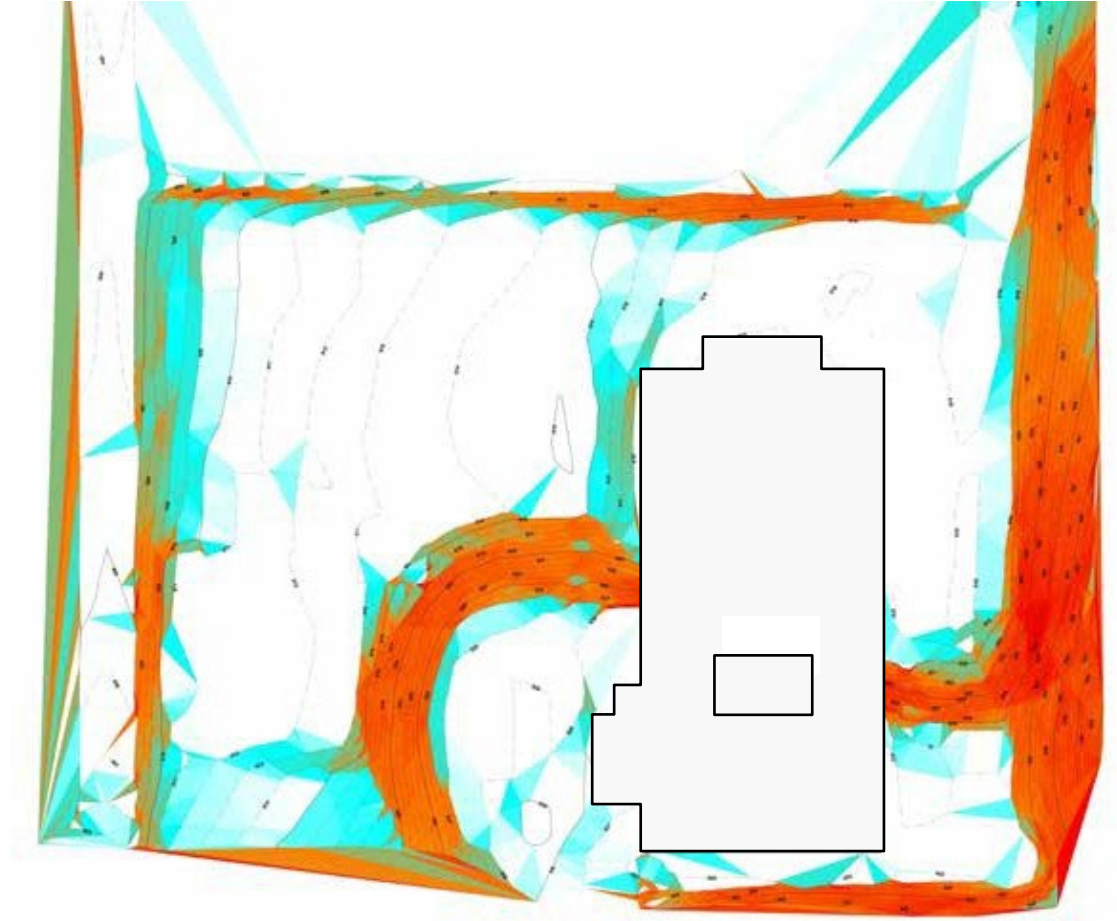
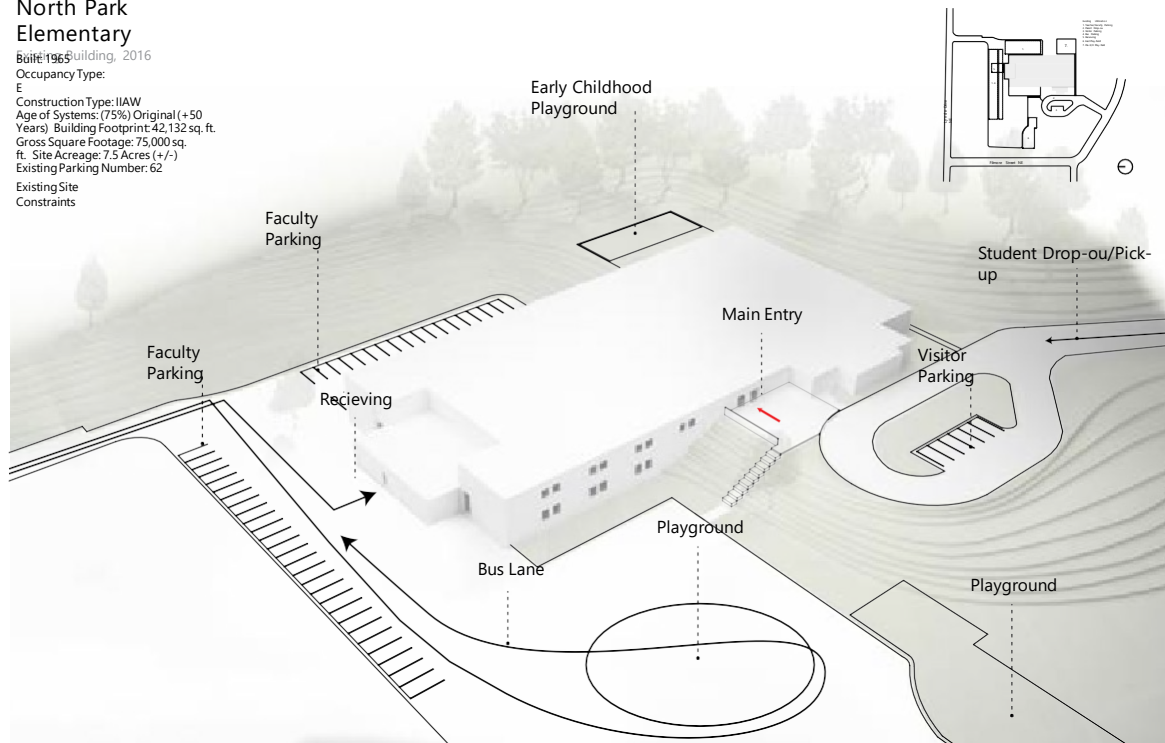
Occupancy Type:

E

Construction Type: II/AW

Age of Systems: (75%) Original (+50 Years) Building Footprint: 42,132 sq. ft.
Gross Square Footage: 75,000 sq. ft. Site Acreage: 7.5 Acres (+/-)
Existing Parking Number: 62

Existing Site Constraints







Proposed Site Conditions



Add 2018 plans



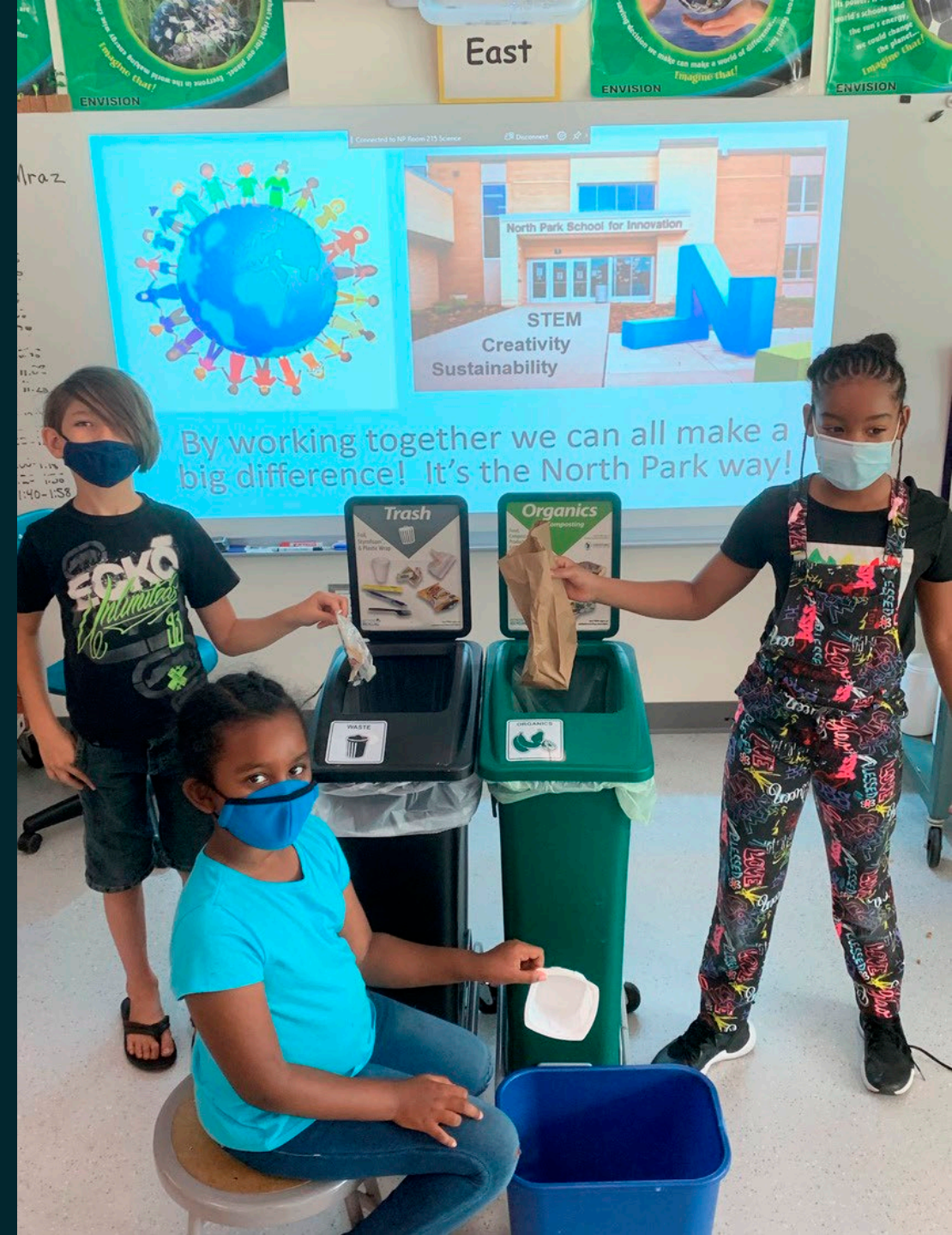
A. Cafeteria + Community Room Addition
B. 2-story Learning Studio Addition

Fast Forward to 2018

School Growth - Referendum

Regenerative Goals

- Equitable Learning Opportunities for all students.
- Daylighting and Views
- Weave Sustainability and Curriculum
- Learn with Nature
- Manage Stormwater On-Site
- Restore Bio-diversity
- Zero Waste
- Net Zero Carbon by 2025



Sustainability Milestones: 2018

1,200 sf

Edible Courtyard Gardens

10 years

Recycling + Composting

60 kW

Roof Top Solar

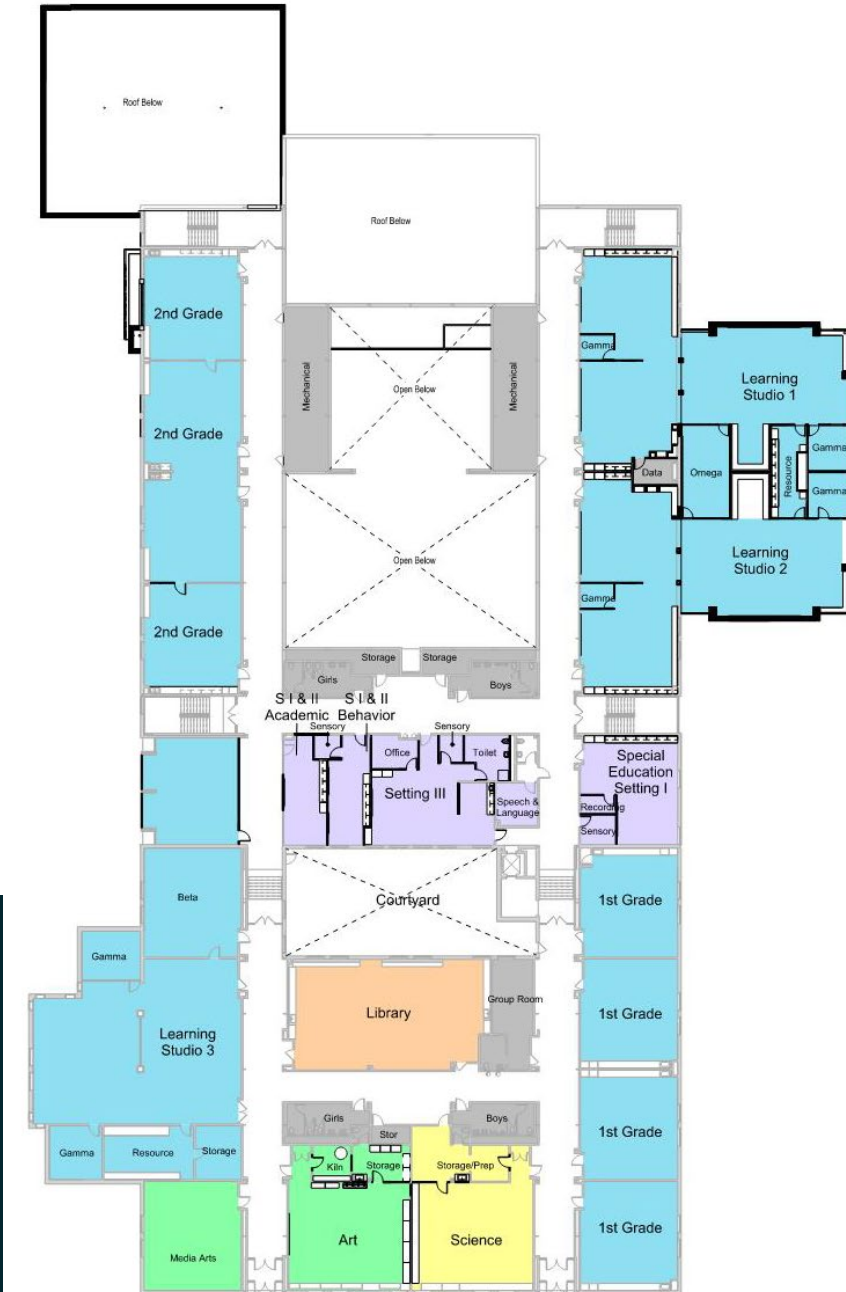


2018: Referendum passes on second attempt!

- Learning Studio Additions
- Cafeteria Addition
- Playground Upgrades
- Safe + Secure Main Entry
- Site Circulation + Drainage



Level 1



Level 2

Site I Outdoor Learning



Good drainage



Sensory/Interactive



Food Source



Dry/Wet



Full Sun

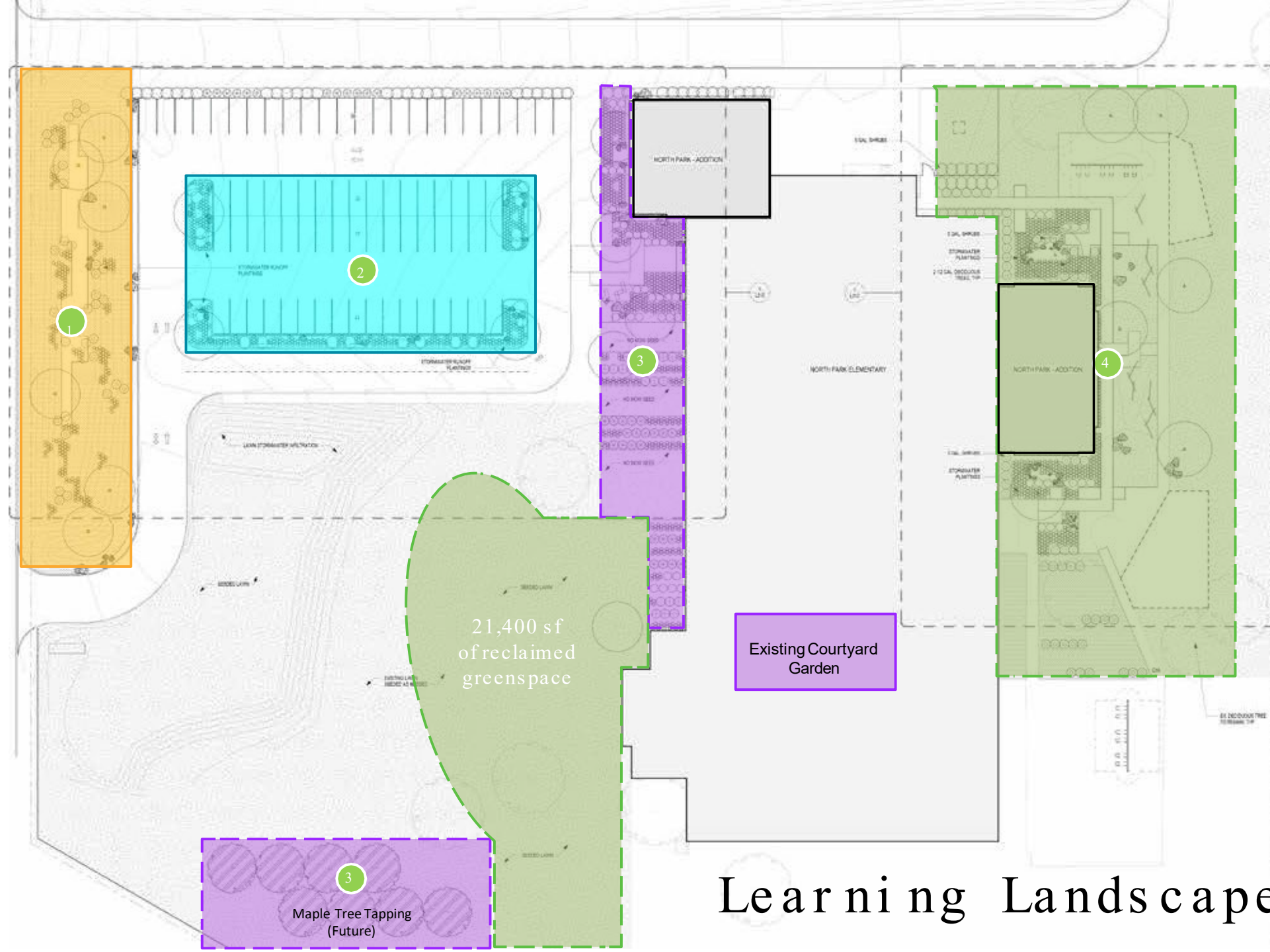
LEGEND

1 Infiltration/Pollinator Garden

2 Rainwater Gardens

3 Edible Gardens

4 Learning Garden



Learning Landscapes



1. Infiltration/Pollinator Garden



2. Rainwater Gardens



3. Edible Gardens





2. Learning Gardens



2. Learning Gardens





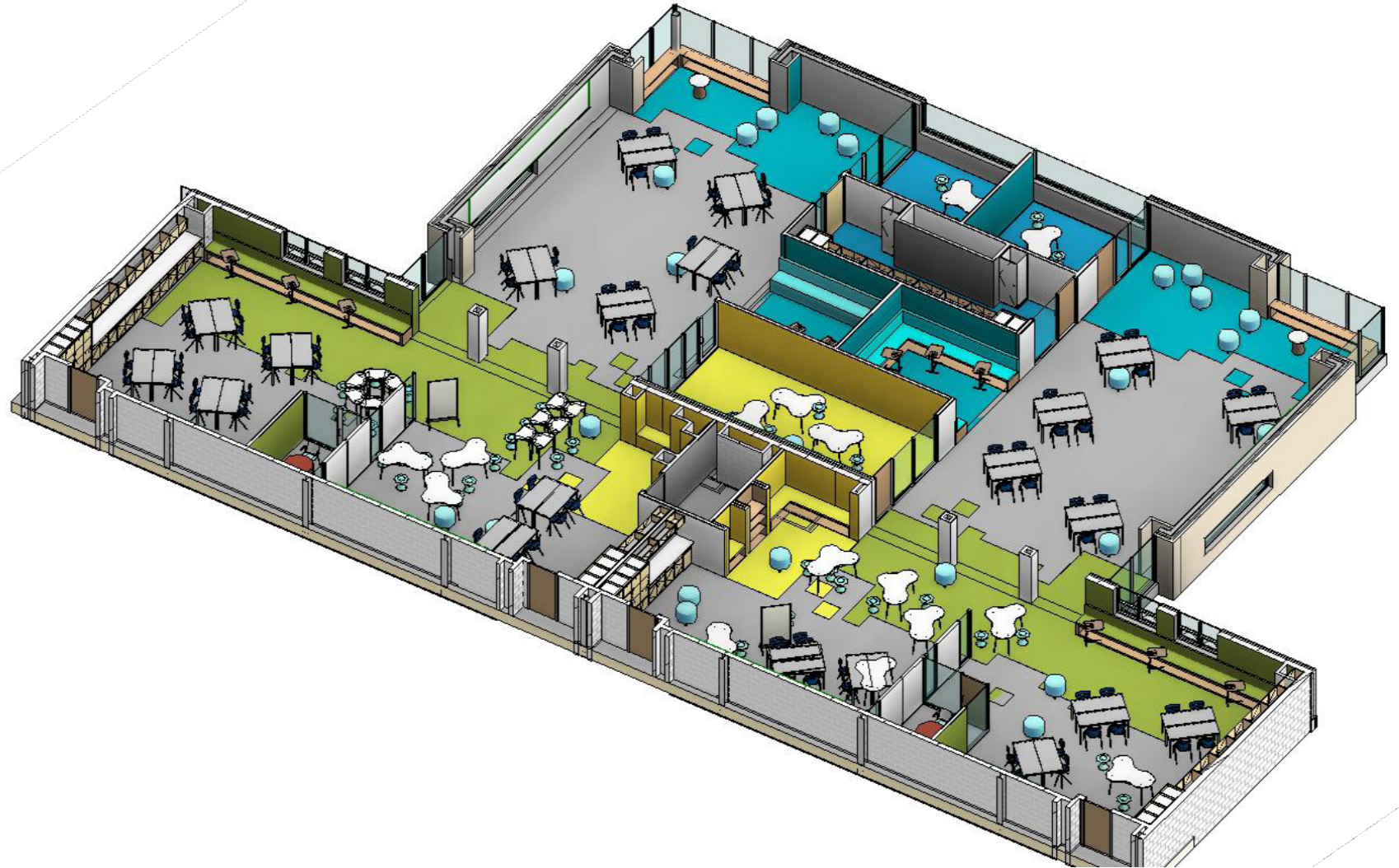
BEFORE



AFTER



2018:
The Learning
Studio evolves...



2018









MATH

×	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120



RESEARCH

Math Workshop
Expectations

- 1. Follow ALL math workshop rules.
- 2. Go to your assigned seat.
- 3. Do your best work.
- 4. Do your BEST on your daily assignments.
- 5. Help is there when it's needed.



The design of this classroom is guided by the six principles of Trauma Informed Design outlined by Design Resources for Homelessness:

Empowerment & Personal Control

Security, Privacy & Personal Space

Sense of Community

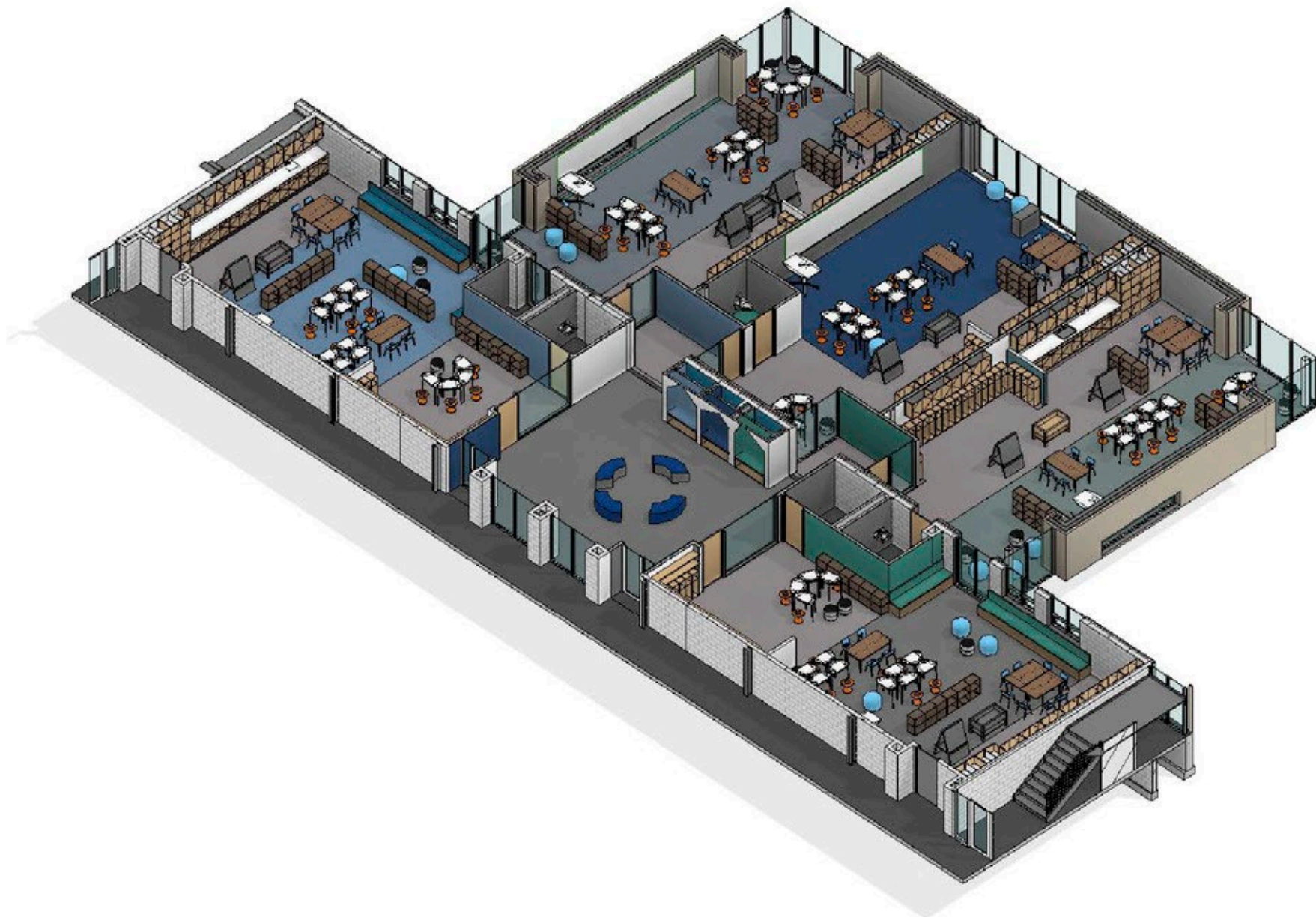
Beauty & Meaning

Dignity & Self Esteem

Stress Management

PreK/ K Learning Studios

2 Pre-K
3 K



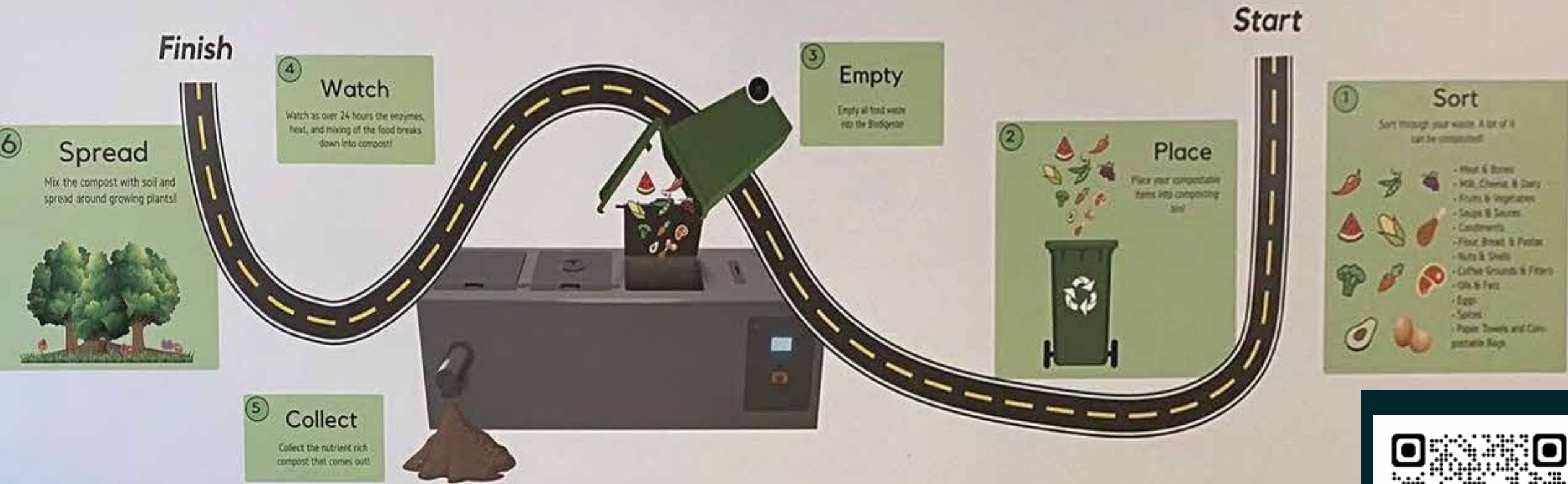






Bringing us to Today

Road Map to 24 Hour Composting



Scan this QR Code to learn more about biodigesters!





Sustainability Curriculum

Creating the Pollinator Garden

Students repurposed cardboard and biodigestate in creation process. Every student in the building participated.

Biodigestates at Home

Students repurposed milk cartons (cartoned milk instead of bulk due to supply chain issues) to use as containers for biodigestate which was given to all families at parent teacher conferences.

Green Team

Team's charge is to maintain our sustainability measures in the building. Tasks include:

- Retrieving gray water from STEM lab to use for building's plants
- Maintain the grow tower where garden plants grow from seed
- Assist with sorting waste at breakfast and lunch
- Help with landscape maintenance



Sustainability Curriculum

Vermicomposting with “Worm Hotels”

Learning about Microplastics

- Students create screens to filter microplastics out of our biodigestate before sending it to its final use.

Interacting with the Edible Gardens

- Students prep, plant, nourish, maintain, harvest, and winterize our edible gardens.



Steps to Net Zero:

LEARNING LANDSCAPES

- 44,000 sf of rain water treated on site (8,000 sf roofwater / 36,000 sf hardscape)
- 21,100 sf of native landscaping
- 21,400 sf of reclaimed greenspace
- 3,500 sf of edible gardens

CURRICULUM

- Courtyard garden was a 3rd grade legacy project
- Waste, sorting, recycling

WATER | ECOLOGY

- Prairie planting, trees, maple tapping
- Greywater Reclamation

ENERGY

- 100% heat for new addition by Biomass boiler
- 84 kW Solar Array
- School has achieved Net Zero during summer months

WASTE

- Garbage collections reduced from twice weekly to once a month
- Zero plastic and drastically reduced recycling

Sustainability Curriculum



Scan this QR Code to watch
“Helping Our Planet” - North
Parks Youtube Series featuring
their integrated curriculum



What are you
curious about?



The Team



Contact

Jeff Cacek, Principal
North Park School for Innovation
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John Pfluger, AIA, NCARB, LEED AP
Design Director, Cuningham
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jpfluger@cuningham.com



Hear more of the story

North Park School of Innovation

Columbia Heights School District
Cuningham - Architecture + Interior Design + Landscape Architecture
BKBM - Civil + Structural Engineering
Hallberg Engineering - MEP
Kraus-Anderson Construction Company - Contractor
Willdan The Weidt Group - Energy Design Assistance
Questions and Solutions Engineering - Commissioning
Flagship + Landscape Structures - Playground Equipment



Closing the Loop at North Park School for Innovation
2022 A4LE Midwest / Great Lakes Regional Conference

Cuningham

EDspaces

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Charlotte, NC | November 7-9, 2023

Thank You!

Please scan the QR code to
provide session feedback.



SCAN ME