Found Opportunities: Discovering a Sustainable Vision through Collaboration for the Learning Environment
We live for the most part in closed rooms. These form the environment from which our culture grows. Our culture is to a certain extent the product of our architecture. If we want our culture to rise to a higher level, we are obliged, for better or for worse, to change our architecture. And this only becomes possible if we take away the closed character from the rooms in which we live.

~Paul Scheerbart, 1914
MORNING HUMOR
FAVORITE SUPER HERO?
SUPER VILLIANS?
SCHOOL DISTRICT BACKGROUND
202,538 Students - 8th Largest School District in the Country

18,476 Active Employees
Including 8,700 Teachers

326 Schools District-Wide

<table>
<thead>
<tr>
<th>Schools</th>
<th>District</th>
<th>Charter</th>
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<tbody>
<tr>
<td>Elementary</td>
<td>49</td>
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<tr>
<td>Elementary - Middle</td>
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<td>Elementary-Middle - High</td>
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<tr>
<td>Middle</td>
<td>16</td>
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<td>Middle - High</td>
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<tr>
<td>High School</td>
<td>67</td>
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</table>
2003 – 2011
$1.8 BILLION IN CONSTRUCTION

New Construction for
4 New High Schools
4 New K-8 Facilities
1 New Elementary School (K-4)

Added Additions to
1 High School
1 Middle School
5 K-8 Facilities

Major Renovations to 5 schools
3 New Primary Education Centers
Classroom Modernizations to 27 K-8 Schools
Various life cycle and system replacements

2011 – 2018
CAPITAL PROGRAMS & DISTRICT ANALYSIS

Repair to building envelopes including roofs, windows, etc
Incorporation of additional Science and CTC Programs

School Relocations
School Closings (32 Programs, 24 Schools)
Overall District Reorganization

2018 – TODAY
$275 MILLION OF NEW BONDS

New Construction for
Solis-Cohen Elementary
Additions to
4 K-8 Facilities
Major Renovations to
2 High Schools
2 Middle Schools
1 K-8 Facility

Classroom Modernizations to 38 Schools
for Early Literacy in PK – 3rd Classrooms
Incorporation of additional Science Labs
System of Great Schools (SGS) – 6 Schools
“Our anchor goals are set to 100% because every child deserves a high-quality education. They underscore our belief that all students can achieve, and they focus our work to ensure that we are creating great schools in every neighborhood.”
SCHOOL PROGRESS REPORT

Data visualization of school progress to date, showing 50 percent fewer lower performing schools and two times the number of higher performing schools.
Our role in this work is ensuring that all children have the skills they need to be successful in school and beyond, so that one day, they will create opportunities to support future generations of children learning, growing, and thriving in our schools and city.
“This is the most important thing we can do in government. When all of our students succeed, Philadelphia will succeed. The investments and personal commitments that we’ve made in the past year reflect the kind of future that we dare to dream for this city.”
District-wide financial stability and local control of our schools are allowing us to make investments to improve the education our students receive. We’ve transformed classrooms across the city into modern learning spaces with state-of-the-art technology and the services that support students and families.
SUSTAINABLE VISION
A VISION FOR A SUSTAINABLE PHILADELPHIA

energy    environment    equity    economy    engagement
In 2009, the Office of Sustainability began a comprehensive vision for a sustainable Philadelphia. The Greenworks Plan has guided efforts by local government and partners throughout our community to develop plans, carry out programs and work together to make Philadelphia a more sustainable city.

**2016**

**RELEASE OF GREENWORKS 2016 PLAN**

**2017**

**LITTER PLAN**
Comprehensive strategy to reduce litter citywide

**ENERGY MASTER PLAN**
Analysis of municipal government energy management and citywide energy policies toward reducing carbon emissions 80 percent by 2050

**SHARED FOOD METRICS**
Establish a set of goals to assess progress of food system work in Philadelphia

**GREENWORKS EQUITY INDEX**
Data-driven interventions to help communities

**2018**

**TRANSPORTATION MASTER PLAN**
Citywide effort centered on transportation’s impacts on racial equity, climate and resilience, and community health

**2019+**

**LOOKING FORWARD**
OOS and city partners will continue to identify opportunities and develop strategies to meet the Greenworks visions
In 2014

22% of Philadelphians were food insecure.
Philadelphia buildings emitted **9.8 million metric tons of carbon pollution**.
53,138 sensitive Philadelphians lived in hotter than average neighborhoods.
37% of Philadelphians chose a low-carbon commute.
Philadelphians generated 2.5 million tons of waste.

In 2015 Philadelphia had **16 unhealthy Air Quality Index (AQI) days**.

As of June 2016, Philadelphians has installed green stormwater infrastructure that catches raining falling on 838 acres.
Residents from 92% of Philadelphia’s zip codes participated in updating Greenworks in 2016.
**THE CITY**

**Food and water** are basic human needs.

**Clean air** is fundamental to the health of our residents and city.

Using **cleaner energy** more efficiently will save money and **reduce urban carbon pollution**.

The usual weather conditions in Philadelphia are getting **warmer, wetter and more extreme**.

**Green, natural spaces improve our mental and physical health**, keep our air and water clean and contribute to safer and stronger communities.

A **robust transportation network is critical** for Philadelphia’s residents and businesses.

To eliminate all waste in Philadelphia we must significantly **reduce the amount of trash** we create and increase the amount we reuse and recycle.

Creating a sustainable city depends on our ability to educate and **engage both current leaders and next generation of sustainability stewards**.

**THE SCHOOL**

Design includes an **outdoor science classroom dedicated to growing food** and educating elementary students.

Anticipated **36% reduction in water use** beyond code standards.

Conducting **indoor air quality testing** during and after construction.

**236kW Solar Array** on roof and anticipated **46.5% reduction in energy usage** beyond code standards.

Use of **white TPO roof and concrete in lieu of black asphalt** to dramatically reduce heat-island effect.

**Green, natural spaces and play areas** incorporated on-site including outdoor learning areas.

The site includes **several walkways and bike paths** and easy access to nearby bus stops to encourage sustainable transportation and physical activity of students.

More than **75% of waste to be recycled during construction and District-wide recycling program implemented**.
For Solis-Cohen Elementary, education and community engagement occurred at all stages of design and the school was created to encourage and develop all aspects of sustainability into the daily life of the students.
GETTING FROM THERE TO HERE
EXISTING CONDITIONS

SOLOMON SOLIS COHEN ES
- Grades 1-5
- Approx. 97,000 sq.ft.
- Constructed between 1948-1954

PRIMARY EDUCATION CENTER
- Approx. 24,325 sq. ft.
- Grades K-1
- Enrollment 1300 students
- 30% English Speaking other Languages (ESOL) Students
- 12 acre site
CONNECTION TO LOCAL NEIGHBORHOOD - 2 STORY BUILDINGS

MIXTURE OF STONE & BRICK - 2 DOMINANT MATERIALS
EXISTING S. SOLIS-COHEN ELEMENTARY SCHOOL

97,000 SQUARE FEET
CONSTRUCTED 1948

34 ACTIVE CLASSROOMS
8 INACTIVE CLASSROOMS

LIMITED PREP CLASSROOMS & STORAGE

ONE STORY & LONG TRAVEL WITHIN SCHOOL

3 CONSTRUCTION PERIODS

NO CONNECTION TO PRIMARY EDUCATION CENTER
Our Mission

Our Solis-Cohen Learning Community is...

DEDICATED to achieving academic excellence.

DEVOTED to providing our culturally diverse community with a safe and supportive environment where student achievement is our focus.

COMMITTED to developing a community of life long learners who can thrive in an ever-changing global economy.
Sharp-eyed worker discovers Solis-Cohen Elementary is crumbling

by By Kristen A. Graham, Inquirer Staff Writer, Posted: September 2, 2015

Hundreds of students who attend Solis-Cohen Elementary in the Northeast will not be able to start their school year on time due to serious structural problems at the building.

The building at 7001 Horrocks St. was recently discovered to be structurally unsound, Philadelphia School District spokesman Fernando Gallard confirmed.

The emergency repairs are part of an ongoing problem in the city school system, where many of the 200-plus buildings are old and in poor condition.

One district estimate put the unmet capital needs of the system at $4 billion.
PROJECT GUIDING PRINCIPLES

• Reduce building footprint
• Provide a connection to PEC
• Improve site circulation
• Passive security design
• Improved site security
• Outdoor play space
• Increase cafeteria seating/service
• Daylighting and ventilation
• Proper site orientation
• Multi-story design
MAXIMIZING INVESTMENT
### FINANCIAL & PROGRAMMATIC CHALLENGE

**1,200-1,400 students**

#### Solis-Cohen Elementary

**Proposal Educational Program - Schematic Design**

<table>
<thead>
<tr>
<th>Proposed Educational Program - Schematic Design</th>
<th>Crabtree, Rohrbaugh &amp; Associates Architects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project No. 3066</td>
<td>5/30/2017 Update</td>
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<table>
<thead>
<tr>
<th>PO</th>
<th>EXISTING BUILDING</th>
<th>NOTES</th>
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<tbody>
<tr>
<td>PROPOSED BUILDING</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Gross SF:</th>
<th>140,000 SF</th>
<th>97,023 SF</th>
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<tbody>
<tr>
<td>Total Scheduled Area Net SF:</td>
<td>106,338 SF</td>
<td>62,995 SF</td>
</tr>
<tr>
<td>Net to Gross SF</td>
<td>1.32 SF</td>
<td>1.54 SF</td>
</tr>
<tr>
<td>PDE Standard Net to Gross SF =</td>
<td>1.58 SF</td>
<td>1.58 SF</td>
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</table>

**SCHEDULED AREA**

<table>
<thead>
<tr>
<th>Academic Core Program</th>
<th>54,910 SF</th>
<th>40,828 SF</th>
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<tbody>
<tr>
<td>SF Standard</td>
<td>No. Rooms</td>
<td>Total SF</td>
</tr>
<tr>
<td>General Education Classrooms</td>
<td>56</td>
<td>46,950 SF</td>
</tr>
<tr>
<td>English to Speakers of Other Languages (ESOL) Classrooms</td>
<td>900 SF</td>
<td>6</td>
</tr>
</tbody>
</table>

- **Minimize Grossing Factor**
- **Reduce Square Foot per Student**
  - **Solis-Cohen Elementary School**
  - **97-116 square feet/student**
**REGION 2 MEDIANS NEW SCHOOLS** *(NJ, NY, PA)*

<table>
<thead>
<tr>
<th></th>
<th>Elementary</th>
<th>Middle</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>$/sq. ft.</td>
<td>$235.36</td>
<td>$250.93</td>
<td>$333.33</td>
</tr>
<tr>
<td>$/student</td>
<td>$43,083</td>
<td>$57,940</td>
<td>$63,120</td>
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<tr>
<td>Sq. ft./student</td>
<td><strong>183.0</strong></td>
<td>239.7</td>
<td>174.2</td>
</tr>
<tr>
<td>Students</td>
<td>602</td>
<td>785</td>
<td>600</td>
</tr>
<tr>
<td>Size (sq. ft.)</td>
<td>95,368</td>
<td>183,500</td>
<td>90,000</td>
</tr>
<tr>
<td>Total cost ($000)</td>
<td>$21,000</td>
<td>$45,850</td>
<td>$58,000</td>
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</table>

The median elementary school in Region 2 spent $235.36 per student or just over $43,000 for each of the 602 students accommodated. The median middle school cost $45.85 million and housed 785 students. The median high school in the region cost $58 million.

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**REGION 3 MEDIANS NEW SCHOOLS** *(DC, DE, MD, VA, WV)*

<table>
<thead>
<tr>
<th></th>
<th>Elementary</th>
<th>Middle</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>$/sq. ft.</td>
<td>$236.67</td>
<td>$198.07</td>
<td>$224.47</td>
</tr>
<tr>
<td>$/student</td>
<td>$59,102</td>
<td>$46,879</td>
<td>$63,333</td>
</tr>
<tr>
<td>Sq. ft./student</td>
<td><strong>252.6</strong></td>
<td>233.7</td>
<td>200.0</td>
</tr>
<tr>
<td>Students</td>
<td>700</td>
<td>450</td>
<td>1,345</td>
</tr>
<tr>
<td>Size (sq. ft.)</td>
<td>79,500</td>
<td>92,500</td>
<td>300,000</td>
</tr>
<tr>
<td>Total cost ($000)</td>
<td>$25,000</td>
<td>$21,450</td>
<td>$80,000</td>
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</table>

The median elementary school in Region 3 cost $236.67 per square foot or $59,102 for each of the 700 students accommodated. The median high school with 1,345 students was 300,000 square foot and cost $80 million and provided 200 square foot per student.

---

**SCHOOL PLANNING AND MANAGEMENT**

**Solis-Cohen Elementary School**

97-116 square feet/student
I'm frustrated.
EVOLUTION OF BUILDING DESIGN WITH DESIGN TEAM, SDP AND S. SOLIS-COHEN ELEMENTARY
BUILDING CORE
MAIN ENTRANCE
CAFETERIA
STAGE
GYMNASIUM
ADMINISTRATION
STUDENT SERVICES
LEARNING STAIR
SCIENCE
MUSIC

FIRST FLOOR PLAN

GRADE 1
GRADE 2

EXISTING P.E.C.

ALL CLASSROOM WINGS
DIRECT ACCESS TO BUILDING CORE
S. Solis-Cohen Open Cafetorium
SECOND FLOOR PLAN

BUILDING CORE

LEARNING STAIR
MEDIA CENTER
ART CLASSROOMS
EXTERIOR GREEN
ROOF

GRADE 3

GRADE 4

GRADE 5
S. Solis-Cohen Open Large Group Instruction
5 GRADE HOUSES

Each Grade House Includes

• 9 classrooms (Allowing overall scale of school to be brought down to a group of 240-280 students)
• Open Small Group Breakout Instructional Area
• 1 English Speaking other Languages Classroom
• Dedicated Storage & Restrooms
• Ability to secure entire classroom wing in the event of an emergency
2 STORY CLASSROOM WING ALIGNED WITH TYSON STREET & NEIGHBORHOOD

ENTRANCE PLAZA (CLEAR SITE LINES & GATHERING SPACE)
BUS DROP-OFF & FACULTY PARKING FROM HORROCKS STREET
TALK ABOUT YOUR MISTAKES
TALK ABOUT YOUR LESSONS LEARNED

FOUR SCALES TO MIDDLEBURG ELEMENTARY SCHOOL
TALK ABOUT YOUR LESSONS LEARNED

FURNITURE
VISUAL
CONNECTION TO
CLASSROOMS
VARIATION OF
SCALE
TALK ABOUT YOUR LESSONS LEARNED
TALK ABOUT YOUR LESSONS LEARNED
DOCUMENT EVOLUTION
Final layout of shared student zones within each classroom wing. Square footage of final spaces were reduced while maintaining open areas between classrooms for interaction, variations in student groupings & visual connection to classrooms.
THE FOUR C'S OF 21ST CENTURY LEARNING

INDIVIDUAL STUDY (1-4 PEOPLE)
- Student-directed study area
- Open areas for ease of student use
- General rooms for individualized quiet study or mentoring
- Individual study area
- Supports student work
- Charging stations
- Directly adjacent to faculty planning room
- Opportunities to showcase student work

SMALL GROUP COLLABORATION (4-10 PEOPLE)
- Student and teacher-directed collaboration area
- Small group study area
- Supports student work
- Teacher stations for use
- Directly adjacent to scheduled classrooms

CLASSROOM COLLABORATION (10-25 PEOPLE)
- Teacher-directed teaching and collaboration area

LARGE GROUP COLLABORATION (25 PEOPLE+)
- Multiple classroom teaching and collaboration area
- Opportunities for group teaching
- Opportunities for debates and critical thinking

DOCUMENT EVOLUTION
COMMUNITY, FACULTY, PARENT, STUDENT PARTICIPATION
Join us for a project kickoff to introduce and present the design of the new school!

Monday, March 26, 2018 at 5:30 p.m.
7001 Horrocks St.
Philadelphia, PA 19149

For more information, please call 215-400-4730
EVOLUTION OF BUILDING DESIGN WITH DESIGN TEAM, SDP AND S. SOLIS-COHEN ELEMENTARY
CORE CONCEPT
SET OF CRITERIA WHICH ALL BUILDING DESIGN DECISIONS ARE BASED UPON

ADMINISTRATION

MUSIC

ART

CONNECTION BETWEEN SPACES

CENTRAL CORE

EDUCATIONAL SUPPORT SPACES

CLASSROOMS LEARNING COMMUNITIES

GYMNASIUM

CAFETERIA

AUDITORIUM
PROJECT PARADIGMS

- CAPETORIUM
  - DIRECT ACCESS TO PLAY AREA
  - DEDICATED SPACE (VS BEING IN ATRIUM)
- ADJACENCY OF KITCHEN TO CAFETERIUM
- ADJACENCY OF RECEIVING TO KITCHEN
  - LOCATION OF KITCHEN, RECEIVING & CAFETERIUM HAS TO BE CLOSE TO PEC RECEIVING (CENTRAL RECEIVING)
- CONNECTION TO PEC
  - DAILY USE BY STUDENTS/TEACHERS
  - SHARED USE OF SPACES
  - SHORT DISTANCE (PER SPP)
- PEC ACTS AS CLASSROOM WING
- DIRECT ACCESS TO ALL CLASSROOM WINGS FROM ASSEMBLY SPACES HUB (POINT WALK THROUGH CLASSROOM WING ETC.) - (PEC CIRCULATION)
- NO VEHICULAR ACCESS FROM TYSN & BOSTLTON

- CANNOT BUILD OVER EXISTING PLAY AREA
- SITE MITIGATION
- NO VEHICULAR ENTRY
- PHASING OF EXISTING BUILDING
- MINIMIZE BUILDING FOOTPRINT ON SITE TO MAXIMIZE GREEN SPACE/PARKING
Plan to Take Over the World:
# Design and Community Engagement

<table>
<thead>
<tr>
<th>TASKS</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
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</table>

## Educational Program
- Discovery
- Visioning
- Verification

## Design
- Schematic Design
- Design Development
- Construction
- Final

## Sustainability
- Site
- Energy
- Environmental
- Design Phase
Solomon Solis Cohen Elementary School

Design and Community Engagement

Regulatory Reviews & Approvals

<table>
<thead>
<tr>
<th>TASKS</th>
<th>2017</th>
<th>2018</th>
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<tr>
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<td>DESIGN</td>
<td>Streets 1</td>
<td>Landscape</td>
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<tr>
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<td>Discovery</td>
<td>Visioning</td>
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<td>Schematic Design</td>
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<td>ADA PERMITTING</td>
<td>Site</td>
<td>Energy</td>
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<tr>
<td>SRC APPROVAL</td>
<td>Environmental</td>
<td>Design Phase</td>
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</tbody>
</table>

August 2020
“Feeling safe at school translates into higher academic achievement, increased student well-being, and greater engagement. Children who don’t feel safe can’t concentrate on their studies, don’t connect with their classmates, or don’t go to school at all.”

Educating the whole Child, ASCD 2012
EFFECTS OF BULLYING

• 3.2+ Million Students / Year
• 160K Students Skip School Daily
• 1 in 10 students drop out
• 71% of students report bullying
SCHOOL CLIMATE ISSUES

- Bullying, intimidation, and isolation
- Harassment and prejudice
- Social cliques
- Theft and graffiti
- Lack of connectedness
- Disrespect between teachers/staff and students
- Lack of student reporting of crime
Positive school climate and atmosphere

Clear and high academic and disciplinary expectations of students

Strong student attachment to the school

High levels of both student participation and parent involvement

Values and practices that make everyone feel included; appreciation of diversity
Balance of Glass - Ability to shelter in place at the same time keeping hallways and breakout spaces viewable to reduce bullying and monitoring for staff
Involve law enforcement & first responders in discussion early
Alternative approach discussion
Example - ability to lock entire wing down and then encourage open 21st century educational spaces
Alternative to classroom and small group locations

Cafeterias, gymnasiums, auditoriums and other large gathering spaces should be able to quickly disperse
WHAT IS A CLASSROOM TODAY
Deeper Learning in the 21\textsuperscript{st} Century, 3 questions:

1. What skills do our students need to succeed?
2. What experiences are necessary to master those skills?
3. What types of spaces will support those experiences?
ENVIRONMENT TO ENHANCE SKILLS USED BY TODAY’S LEARNERS

1st TIER
• Collaboration and teamwork
• Creativity and imagination
• Critical thinking
• Problem solving

2nd TIER
• Flexibility and adaptability
• Global and cultural awareness
• Information literacy
• Leadership
- Similar classrooms close together
- Circulation around gym should be more efficient
- Drear y hallways, too small
- Auxiliary gym/indoor sports improved
- Intersections - cafeteria
- Auditorium - acoustics/capacity
- Collaborative space
- Music practice modules - too small
- Easier access to auditorium from music classrooms
- Courtyard use/exterior spaces
- Sports facilities
The industrial age factory model

- Information is rare
- Limited technology
- Teacher centric
- Learn in classroom
- Focus on 3 R’s
- Passive learning
- Conformity expected
- Assertive assessment
- Curriculum fragmented

21st Century Learning

2020’s
Alexa, What will Schools be in the future?
Alexa, What will Schools be in the future?
Alexa, What will Schools be in the future?

21st Century Learning
21st Century Learning

The innovation age model

- Information is a commodity
- Ubiquitous technology
- Student centric
- Learn anywhere
- Develop 4 C’s
- Active learning
- Individuality celebrated
- Demonstrative assessment
- Curriculum integrated
WHAT IS YOUR SCHOOL COMMUNITY COMFORTABLE ENGAGING?
COLLABORATIVE ENVIRONMENTS

- COMBINATION OF OPTION 1 AND 2
  - FULLY FLEXIBLE SPACE.
  - FIXED TEACHING WALL AT EXTERIOR WALL.
  - FULL DEPENDENCE ON MOBILE CASEWORK AND TEACHING WALLS TO ACCOMMODATE ALL GROUP SIZES.
  - NO TEACHER’S WORK AREA.
  - NO FIXED CASEWORK. LOW CASEWORK CAN BE ADDED IN LIEU OF FIXED SEATING SHOWN.
  - EXPOSED DOORS TO UTILITARIAN SPACES.
  - LOSS OF DIRECT VIEW OUT OF PARTIAL LENGTH OF EXTERIOR WALL. (HIGH GLASS ABOVE FIXED TEACHING WALL.)
5 GRADE HOUSES

Each Grade House Includes

- 9 classrooms (Allowing overall school to be brought down to 240-280 students)
- Open Small Group Breakout Instructional Area
- 1 English Speaking other Languages Classroom
- Dedicated Storage & Restrooms
- Ability to secure entire classroom wing in the event of an emergency
5 GRADE HOUSES

Each Grade House Includes
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PROPOSED SITE PLAN
OUTDOOR LEARNING SPACES ARE LOCATED BETWEEN EACH CLASSROOM WING TO PROVIDE INTIMATE EDUCATIONAL BREAKOUT SPACES FOR STUDENTS THROUGHOUT THE YEAR. THE OUTDOOR LEARNING SPACES ARE ACCESSSED FROM THE MAIN STREET AND ARE DESIGNED TO BE AN EXTENSION OF THE INTERIOR LEARNING ENVIRONMENT WITH AMPLE GLASS SEPARATING THE INTERIOR AND EXTERIOR SPACES. THIS CONCEPT IS FURTHER REINFORCED BY THE EXTERIOR MATERIALS CONTINUING THROUGHOUT THE INTERIOR OF THE BUILDING. SHADE TREES FRAME VIEWS OUT TO NATURE AND CREATE A NATURAL OVERHANG SHADY CANOPY. INDIGENOUS PLANTS WERE SPECIFICALLY PROPOSED AS AN EDUCATIONAL TOOL TO BE INTEGRATED WITHIN THE CURRICULUM.
MIXTURE OF VARIED PLAY AND GATHERING AREAS FOR STUDENTS ABLE TO HOLD STUDENT BODY
5 GRADE HOUSES

Each Grade House Includes

- 9 classrooms (Allowing overall scale of school to be brought down to a group of 240-280 students)
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- Ability to secure entire classroom wing in the event of an emergency
SHARE OUR EXPERIENCES
BEYOND THE EDUCATION DESIGN COMMUNITY

NSBA, PASBO, ASBO, AIA, USGBC
School Districts, Divisions, LEA’s
Community Members
Legislators (Local, State, Federal)
Anyone Willing to Listen
We live for the most part in closed rooms. These form the environment from which our culture grows. Our culture is to a certain extent the product of our architecture. If we want our culture to rise to a higher level, we are obliged, for better or for worse, to change our architecture. And this only becomes possible if we take away the closed character from the rooms in which we live.

~Paul Scheerbart, 1914
WE SPEND 87% OF OUR DAY INDOORS.

US Environmental Protection Agency
National Human Activity Pattern Survey (NHAPS)
ENVIRONMENT TO ENHANCE SKILLS USED BY TODAY’S LEARNERS

1st TIER
- Collaboration and teamwork
- Creativity and imagination
- Critical thinking
- Problem solving

2nd TIER
- Flexibility and adaptability
- Global and cultural awareness
- Information literacy
- Leadership
SUPER HEROES

I'M A CUB SCOUT LIKE MY FATHER BEFORE ME.
THE SCHOOL DISTRICT OF PHILADELPHIA

S. SOLIS COHEN ELEMENTARY SCHOOL

Crabtree, Rohrbaugh & Associates - Architects