“In partnership with parents and community, is to challenge and engage each child by providing quality educational programs and support services in a safe, nurturing and child-centered environment in order to prepare all students to be lifelong learners and contributing members of a global society.”

- The mission of Downers Grove Grade School District 58

Acknowledgements

Board of Education
Darren Hughes
Gregory Harris
Melissa Jerves
Kirat Doshi
Emily Hanus
Steve Olczyk
Jill Samonte
Tracy Weiner
Board President
Board Vice-President
Board Secretary
Board Member
Board Member
Board Member
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Board Member

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Assistant Director of Buildings & Grounds
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Assistant Superintendent for Personnel & Staff Development
Assistant Superintendent for Special Services

Facility Planning Council (FPC)
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“By failing to prepare, you are preparing to fail.”
- Benjamin Franklin
Long Range Facility Plan Process

Step 1 | Establish the Why?
Facility Planning Council
Visioning Meetings

Prior Steps
Facility Assessments
Building Maintenance
Repairs and Operations
Capital Planning
Strategic Planning

Step 2 | What do we Have?
Demographics
Physical Condition
Educational Alignment
Capacity | Utilization

Step 3 & 4 | What do we Want?
Gap Analysis
Priorities
Staff & Community Engagement | Evaluation

Step 6 | DRAFT Master Plan
Alternatives | Options
Evaluate Finances
Recommend to BOE
Implementation Strategies

Step 7 & 8 | Finalize Facility Plan
Community Education
Feedback
Community Endorsement
BOE Adoption

Step 9 & 10 | Initiate Implementation Plan
Action Timeline
Implementation

2018
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2019

Step 5 | Facility Master Plan
Alternatives | Options
Cost Estimates
Community Education
Feedback

2020
1 | INTRODUCTION

What is a Long-Range Facility Plan

Balancing the cost of maintaining building infrastructure components while improving the quality of the educational environment is a difficult challenge that school districts face on a continual basis. The complexity of maximizing the performance of a school building and optimizing taxpayer dollars is compounded by the facility age, fluctuating fuel costs, volatile economic conditions and evolving instructional trends, the latter of which has recently under-gone a dramatic paradigm shift. In this context, Downers Grove Grade School District 58 invited Wight & Company to conduct an independent, assessment of its fifteen (15) facilities back in 2012. Specifically, the District directed Wight to investigate and document the physical condition of the building and site components at all of its campuses and benchmark the performance characteristics of each facility against recognized 21st Century educational practices assist the District in preparing a Long-Range Facility Plan.

A Facility Assessment Report is often the first step in two-part Long-Range Facility Plan (LRFP) process. It is comprised of three areas of focus. The first area is Physical Condition Assessment (presented in a 2012 Comprehensive Facility Assessment Report). It is a vital part in understanding the physical needs in the buildings. Two other areas of focus, Building Capacity and Educational Alignment, present in previous report “Steps 1 & 2” issued in February 2019, focuses on buildings’ readiness to support future educational practices. Together, the study of all three components clarify the District’s needs. Once summarized, the needs may be prioritized to provide a foundation for evaluating options in the formation of a District Vision. This Vision will be expressed with in series of building planning diagrams, estimated budgets and phasing timelines to establish a LRFP. After adoption, the LRFP can be put into action and implemented in alignment with the District’s financial capital investment capability.

Through a series of strategic planning steps and engagement of the community, the District has identified Strategic Goal 3: Securing the Future as a key element of a strategic planning initiative. Goal 3 establishes a focus on providing safe and effective learning environments in fiscally-responsible ways. This Goal 3 has been further defined in Objective 3.1 to develop a focused and long-term facility improvement plan that ensures safe, modernized and effective learning environments for all students. Key priorities include the following central elements: safety/security; air conditioning; 6th-8th grade middle schools; class size and enrollment projections; and District facility use.

“A goal without a plan is just a wish.”

- Antoine de Saint-Exupery
Drivers of Changes

School facilities built in the 70’s, 60’s and 50’s or earlier in the century simply lack proper provision for the activities and curriculum now being taught. Physically they were designed for a static single style of teaching with limited flexibility for allowing changes in educational delivery, technology advancements, wellness, environmental stewardship and community access. For students to succeed in the future, they will need the advantage of modern and flexible school facilities that can adapt rapidly not only to the changing curriculum trends and styles of instruction but to the dynamically shifting world around them.

The average age of District 58 educational facilities is 65 years old with on average a minimum of 3 building additions per school. (see facility age chart)

Over the past few years, District 58, led by its Social-Emotional Learning (SEL) committee, has focused on incorporating SEL at the district, building and classroom levels. District 58’s goal is to create a learning environment where students show up eager to learn; feel a sense of connectedness to their school and teachers; feel safe from being treated poorly; perform to their fullest potential; treat all others with respect; and contribute to the well-being of the community.
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Through Visioning Workshops held with the Facility Planning Council (FPC), Faculty, and the Stakeholder Engagements, key priorities kept reemerging validating the original strategic goal 3.1 facilities objective. The following are the key priorities:

Concluding Core Guiding Principles from Stakeholder Engagements & FPC:

**people need**

**Safe & Healthy Environments**

**learning is enhanced with**

**Learning Environments for the 21\textsuperscript{st} Century**

**students benefit from**

**Enhanced Connectedness**

There are two approaches to accomplish necessary facilities projects to support the future of teaching and learning. The first is to continue to improve the facilities based on highest maintenance needs, one major project at a time. The other option is to take this opportunity to create a plan that transforms learning environments to support 21\textsuperscript{st} century educational practices across the District.

One way to achieve the latter in a fiscally-responsible manner is to consider moving 6\textsuperscript{th} grade into the middle schools. Moving 6\textsuperscript{th} grade to the middle schools will require major additions on both middle school buildings; however, doing so will not only offer improvements at the middle schools, it will also free up space in the elementary schools to provide select opportunities for modernization to promote 21\textsuperscript{st} century learning and to address space needs across the District without several smaller additions to the District’s elementary schools.
Key Ingredients of D58 Facility Master Plan

In conjunction of the maintenance and program needs of the facilities along with the core guiding principles we found distinct key component, or “ingredients” that became the focus in the development of this facility master plan. Each ingredient has a significant impact on all students, staff, and community and all ingredients should be considered collectively to develop Long-Range Facility Master Plan.

**Maintenance**

- Required health life safety items such as fire alarm, PA system, etc.
- Existing Infrastructure improvements including roofing, masonry walls, mechanical, electrical, plumbing, etc.
- Site enhancements including playgrounds, flatwork, drainage, etc.

*If only this piece is considered, buildings will be sustained longer BUT they will NOT be positioned for the future!*

**Safe & Healthy Environments**

- Safe for everyone
- Quality indoor environments with sufficient ventilation, temperature, and natural light

**21st Century Learning**

Focus on elementary schools when 6th grade shifts out and frees up space in buildings

- flexible space to move with future curriculum
- support space for group collaboration
- breakout spaces for learning opportunities
- additional classroom spaces

**Grade Reconfiguration plus 21st Century Learning**

Focus on middle school buildings when 6th grade shifts in - increasing building population

- additional classrooms to support increase school enrollment when shifting 6th grade
- flexible space to move with future curriculum
- support space for group collaboration
- breakout spaces for learning opportunities
A total budget estimate was developed based on a component-by-component analysis of each key ingredient, a broad understanding of each building area effected, and consideration of how all components are inter-related. Due to the conceptual nature and stage of the process, at this time initial budget estimates were calculated on a per square foot basis stemming from industry-standards. Overall, the initial total budget estimate represents a planned breakdown of program elements and will provide a guide (and serve as parameters) to how the final designs evolve. When full design efforts are complete, work will be put out to bid and awarded to the lowest responsible construction bidders through a competitive, public bidding process.

**Maintenance ($115.6M)**
- Site – playground/ field/ detention cleaning (approx. $6.4M)
- Roofing (approx. $26.1M)
- Misc. Building Envelope (approx. $5.8M)
- Electrical upgrades (approx. $31.6M)
- HVAC boilers, misc. repairs to equipment/ systems (approx. $3.4M)
  *most of the HVAC replacement needs across facilities will occur as part of the quality of indoor environments below*
- Plumbing (approx. $5.8M)
- Misc. interior improvements bathroom remodels, door hardware, ADA signage (approx. $36.5M)

**Safe & Healthy Environments ($60.6M)**
- Secure Vestibules (approx. $10.4M)
- Quality indoor environments with sufficient ventilation, temperature, and natural light (approx. $50.2M)

**21st Century Learning ($13.9M)**
Focus on elementary schools when 6th grade shifts out and frees up space in buildings
- flexible furniture in existing classrooms (approx. $6.1M)
- renovate approximately two classrooms (approx. $7.8M)

**Grade Reconfiguration plus 21st Century Learning ($54.7M)**
Focus on middle school buildings when 6th grade shifts in - increasing building population
- Site – detention/ stormwater control (approx. $2.9M)
- Addition (approx. $31.7M)
- Partial Renovation (approx. $20.1M)
Understanding it is inconceivable to complete all the improvements for each of the buildings at one time nor is it necessary. The chart below is the initial total budget estimate broken down over the next several years until anticipated completion of all outlined ingredients. This timeline is a preliminary suggestion based on how all components are inter-related; however, could be reevaluated based on further stakeholder priority input. Budget estimate may need to be re-examined and adjusted if program elements are deferred to another time. Additionally, projects may need to be phased over several years in order to limit disruption to educational programs while ensuring student and staff safety.

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SUMMARY

This section shows the initial preliminary planning high level concept diagrams specifically at two middle schools exploring the feasibility for the existing middle school buildings to support additional enrollment when shifting 6th grade over.

Each school will typically have 4 pages of information as illustrated below:

First two pages identify existing Building information:

- Site Acreage
- Site Plan
- Current Floor Plan Use
- School Photo
- Building Facts
- Location Map
- Learning Spaces Comparison Map
- Space utilization charts

Middle School Concept pages:

- Initial Building Budget Estimate
- Proposed Site Plan
- Proposed Floor Plans

Elementary school diagrams have also been provided in this section, identifying potential areas of opportunity that might be considered. Additionally, provided are examples of 21st century learning environment that could be considered for renovation of approximately two existing classrooms at each elementary building.

“The difference between something good and something great is attention to detail.”
- Charles R. Swindoll
3.1 | Herrick Middle School - Existing Building

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<td>323</td>
<td>4.5</td>
<td>42</td>
<td>116</td>
</tr>
</tbody>
</table>
Herrick Middle School
Address:  4435 Middaugh
Built:  1953
Site Area:  11.3 Acres
Current Building SQ. FT.:  92,196 SF
Current Enrollment:  655 students
Current Grade Levels:  7-8
Location Map:
Herrick Middle School - Concept 1

Herrick Middle School
Address: 4435 Middaugh
Built: 1953
Site Area: 11.3 Acres
Proposed Building SQ. FT.: 162,000 SF
Proposed Enrollment: 985 students
Proposed Grade Levels: 6-8
Location Map:
Total Initial Budget Estimate:
Herrick Middle School - **$57.7M**

**Maintenance**
- Site: **$0.0M**
- Roofing: **$2.1M**
- Misc. Building Envelope: **$0.3M**
- Electrical Upgrades: **$4.1M**
- HVAC: **$0.0M**
- Plumbing: **$1.2M**
- Misc. Interior Improvements: **$6.3M**

**Safe & Healthy Environments**
- **$7.7M**
  - Quality indoor environments (ventilation, temperature, and natural light)

**Grade Reconfiguration + 21st Century Learning**
- Site: **$2.5M**
- Addition: **$23.3M**
- Partial Renovation: **$10.2M**

**PROPOSED FIRST FLOOR**

**PROPOSED LOWER FLOOR**
Herrick Middle School - Concept 2

*If the District were to consider a boundary shift and roughly 60 kids slated to go Herrick would now go to O’Neill then this concept would yield approximately 150 sf/student*
## Total Initial Budget Estimate:

**Herrick Middle School - $51.0M**

### Maintenance
- **Site**: $0.0M
- **Roofing**: $2.1M
- **Misc. Building Envelope**: $0.3M
- **Electrical Upgrades**: $4.1M
- **HVAC**: $0.0M
- **Plumbing**: $1.2M
- **Misc. Interior Improvements**: $6.3M

### Safe & Healthy Environments
- **Quality indoor environments (ventilation, temperature, and natural light)**: $7.7M

### Grade Reconfiguration + 21st Century Learning
- **Site**: $1.9M
- **Addition**: $16.7M
- **Partial Renovation**: $10.7M

---

PROPOSED FIRST FLOOR

PROPOSED LOWER FLOOR
### Learning Spaces Comparison Matrix

<table>
<thead>
<tr>
<th></th>
<th>Enrollment 2018</th>
<th>Current Acreage</th>
<th>Classroom Area per Student</th>
<th>Gross Sq. Ft. per Student</th>
<th>Average Sq. Ft. Instruction Size</th>
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<td>116</td>
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</tr>
</tbody>
</table>

#### Site Plan

- **Campus Context**
- **Facility Configuration**

#### Learning Spaces Comparison Matrix

<table>
<thead>
<tr>
<th>Score</th>
<th>Condition</th>
<th>Core Learning Spaces</th>
<th>Library</th>
<th>Art</th>
<th>Music</th>
<th>Dining</th>
<th>Gymnasium</th>
<th>Student Support</th>
</tr>
</thead>
</table>

#### O’Neill School

- Core Learning Spaces: Excellent
- Library: Good
- Art: Good
- Music: Excellent
- Dining: Good
- Gymnasium: Good
- Student Support: Excellent
O’Neill Middle School
Address: 635 59th Street
Built: 1957
Site Area: 9.5 Acres
Current Building SQ. FT.: 99,047 SF
Current Enrollment: 439 students
Current Grade Levels: 7-8
Location Map:
O’Neill Middle School - Concept

O’Neill Middle School
Address: 635 59th Street
Built: 1957
Site Area: 9.5 Acres
Proposed Building SQ. FT.: 118,000 SF
Proposed Enrollment: 739 students
Proposed Grade Levels: 6-8
Location Map:

*if the District were to consider a boundary shift and roughly 60 kids slated to go Herrick would now go to O’Neill then this concept would yield approximately 150 sf/student. However, specialized programs would need to be hosted at another location.
<table>
<thead>
<tr>
<th>Category</th>
<th>Budget</th>
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<tbody>
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<td>HVAC</td>
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<td>Plumbing</td>
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<td>Misc. Interior Improvements</td>
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<td>Safe &amp; Healthy Environments</td>
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<td>Quality indoor environments</td>
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<tr>
<td>Grade Reconfiguration + 21st Century Learning</td>
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Total Initial Budget Estimate: O’Neill Middle School - $45.4M
# Learning Spaces Comparison Matrix

## Core Learning Spaces

<table>
<thead>
<tr>
<th>School</th>
<th>Enrollment</th>
<th>Current Acreage</th>
<th>Classroom Area</th>
<th>Gross Sq. Ft. Per Student</th>
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</table>

## Site Plan

- **Score**: Represents the overall condition of the campus.
- **Condition**: Indicates the overall quality of the facility configuration.

### Learning Spaces Comparison Matrix

#### Belle Aire Elementary School

- **Core Learning Spaces**: Includes Physical Qualities, Health and Comfort, Furniture and Equipment, Technology.
- **Library**: Focuses on Physical Qualities, Health and Comfort, Furniture and Equipment, Technology.
- **Art**: Considers Physical Qualities, Health and Comfort, Furniture and Equipment, Technology.
- **Music**: Examines Physical Qualities, Health and Comfort, Furniture and Equipment, Technology.
- **Dining**: Analyzes Physical Qualities, Health and Comfort, Furniture and Equipment, Technology.
- **Student Support**: Evaluates Physical Qualities, Health and Comfort, Furniture and Equipment, Technology.
Belle Aire Elementary School

Address: 3935 Belle Aire Lane

Built: 1969

Additions: 1998

Site Area: 9.5 Acres

Current Building SQ. FT.: 30,204 SF

Current Enrollment: 238 students

Current Grade Levels: K-6

Location Map:

Space Utilization:

First Floor:

- Educational
- Administrative
- Circulation
- Toilet
- Building Support
- Utility

Building Layout:

- GYM
- Library
- Art/Music
- Custodian Office
- Library
- Technology MDF
- PE Office
- Champions
- Fire Alarm Control Panel
- Gas Service

Building Support:

- Library
- Art/Music
- Custodian Office
- Technology MDF

Utility:

- Library
- Art/Music
- Custodian Office
- Technology MDF

Floor Plan:

- Belle Aire
- District Total
- Target
Belle Aire School - Areas of Opportunity

Classrooms
- Agile Classrooms w/ Flexible Furniture & Multi Zones

STEM/ Maker Spaces
- Spaces to Learn by Making & Doing (& Doing Over)

Daylight & Transparency
- Daylight, Engaging Space, Transparency, & Indoor Air Quality

Collaboration Spaces
- Spaces Beyond Classroom/Engage Others

Breakout Spaces
- Spaces Beyond Classroom/Engage Others

Belle Aire Elementary School
Address: 3935 Belle Aire Lane
Built: 1969
Additions: 1998
Site Area: 9.5 Acres
Proposed Building SQ. FT.: 30,204 SF
Proposed Grade Levels: K-5
Location Map:
Total Initial Budget Estimate
Belle Aire School - $8.8M

Maintenance
- Site $0.9M
- Roofing $1.4M
- Misc. Building Envelope $0.5M
- Electrical Upgrades $1.5M
- HVAC $1.5M
- Plumbing $0.0M
- Misc. Interior Improvements $0.8M

Safe & Healthy Environments
- Secure Vestibules $0.5M
- Quality indoor environments (ventilation, temperature, and natural light) $0.6M

21st Century Learning
- Flexible furniture in existing classrooms $0.4M
- Renovate approximately two classrooms $0.7M

FIRST FLOOR - Areas of Opportunity

POTENTIAL AREA OF RENOVATION

SECURE MAIN ENTRY

MAIN ENTRY
### LEARNING SPACES COMPARISON MATRIX

#### EL SIERRA SCHOOL

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<th>ENROLLMENT 2018</th>
<th>CURRENT ACREAGE</th>
<th>CLASSROOM AREA PER STUDENT</th>
<th>GROSS SQ. FT. PER STUDENT</th>
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#### SITE PLAN

- **Campus Context**
- **Facility Configuration**

#### LEARNING SPACES

- **Core Learning Spaces**
  - Physical Qualities
  - Health and Comfort
  - Furniture and Equipment
  - Technology

- **Library**
  - Physical Qualities
  - Health and Comfort
  - Furniture and Equipment
  - Technology

- **Art**
  - Physical Qualities
  - Health and Comfort
  - Furniture and Equipment
  - Technology

- **Music**
  - Physical Qualities
  - Health and Comfort
  - Furniture and Equipment
  - Technology

- **Dining**
  - Physical Qualities
  - Health and Comfort
  - Furniture and Equipment
  - Technology

- **Gymnasium**
  - Physical Qualities
  - Health and Comfort
  - Furniture and Equipment
  - Technology

- **Student Support**
  - Physical Qualities
  - Health and Comfort
  - Furniture and Equipment
  - Technology

#### Score and Condition

- 1: Poor
- 2: Fair
- 3: Good
- 4: Excellent

#### Current Acreage and Classroom Area Per Student

- Current Acreage
- Classroom Area Per Student

#### Enrollment and Gross Square Foot Per Student

- Enrollment 2018
- Gross Square Foot Per Student

#### Average Square Foot Instruction Size

- Average Square Foot Instruction Size
El Sierra Elementary School
Address: 6835 Fairmount Lane
Built: 1968
Site Area: 7.0 Acres
Current Building SQ. FT.: 33,695 SF
Current Enrollment: 214 students
Current Grade Levels: K-6
Location Map:
El Sierra Elementary School - Areas of Opportunity

Classrooms
- Agile Classrooms w/ Flexible Furniture & Multi Zones

STEM/ Maker Spaces
- Spaces to Learn by Making & Doing (& Doing Over)

Collaboration Spaces
- Spaces Beyond Classroom/Engage Others

Breakout Spaces
- Spaces Beyond Classroom/Engage Others

Daylight & Transparency
- Daylight, Engaging Space, Transparency, & Indoor Air Quality

El Sierra Elementary School
Address: 6835 Fairmount Lane
Built: 1968
Site Area: 7.0 Acres
Proposed Building SQ. FT.: 33,695 SF
Proposed Grade Levels: K-5
Location Map:
FIRST FLOOR - Areas of Opportunity

Total Initial Budget Estimate
El Sierra School - $9.8M

Maintenance
- Site: $0.3M
- Roofing: $1.6M
- Misc. Building Envelope: $0.8M
- Electrical Upgrades: $1.7M
- HVAC: $1.9M
- Plumbing: $0.0M
- Misc. Interior Improvements: $1.1M

Safe & Healthy Environments
- Secure Vestibules: $0.6M
- Quality indoor environments (ventilation, temperature, and natural light): $0.5M

21st Century Learning
- Flexible furniture in existing classrooms: $0.5M
- Renovate approximately two classrooms: $0.8M
### LEARNING SPACES COMPARISON MATRIX

#### Core Learning Spaces

<table>
<thead>
<tr>
<th>SCHOOL</th>
<th>PHYSICAL QUALITIES</th>
<th>HEALTH AND COMFORT</th>
<th>FURNITURE AND EQUIPMENT</th>
<th>TECHNOLOGY</th>
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<tbody>
<tr>
<td>Fairmount School</td>
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#### Library

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#### Art

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<th>TECHNOLOGY</th>
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#### Music

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#### Dining

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#### Student Support

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#### Site Plan

- Play field
- Play ground
- Paved play area
Fairmount Elementary School
Address: 6036 Blodgett Ave.
Built: 1959
Site Area: 8.5 Acres
Current Building SQ. FT.: 34,265 SF
Current Enrollment: 341 students
Current Grade Levels: K-6
Location Map:
Fairmount School - Areas of Opportunity

Classrooms

- Agile Classrooms w/ Flexible Furniture & Multi Zones

STEM/ Maker Spaces

- Spaces to Learn by Making & Doing (& Doing Over)

Collaboration Spaces

- Spaces Beyond Classroom/Engage Others

Breakout Spaces

- Spaces Beyond Classroom/Engage Others

Daylight & Transparency

- Daylight, Engaging Space, Transparency, & Indoor Air Quality

21ST CENTURY LEARNING EXAMPLES
Total Initial Budget Estimate
Fairmount School - $10.2M

Maintenance
- Site: $0.5M
- Roofing: $1.4M
- Misc. Building Envelope: $0.8M
- Electrical Upgrades: $0.7M
- HVAC: $0.0M
- Plumbing: $0.3M
- Misc. Interior Improvements: $1.6M

Safe & Healthy Environments
- Secure Vestibules: $0.8M
- Quality indoor environments (ventilation, temperature, and natural light): $2.9M

21st Century Learning
- Flexible furniture in existing classrooms: $0.5M
- Renovate approximately two classrooms: $0.7M

FIRST FLOOR - Areas of Opportunity
### LEARNING SPACES COMPARISON MATRIX

**HENRY PUFFER SCHOOL**

<table>
<thead>
<tr>
<th>ENROLLMENT 2018</th>
<th>CURRENT ACREAGE</th>
<th>CLASSROOM AREA PER STUDENT</th>
<th>GROSS SQ. FT. PER STUDENT</th>
<th>AVERAGE SQ. FT. INSTRUCTION SIZE</th>
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**SITE PLAN**

**LEARNING SPACES EVALUATION MATRIX**

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<th>CORE LEARNING SPACES</th>
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<th>MUSIC</th>
<th>DINING</th>
<th>GYMNASIUM</th>
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<td>HEALTH AND COMFORT</td>
<td>FURNITURE AND EQUIPMENT</td>
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**HENRY PUFFER SCHOOL**

**Wight**
Henry Puffer Elementary School
Address: 2220 Haddow Ave.
Built: 1936
Site Area: 11.3 Acres
Current Building SQ. FT.: 54,934 SF
Current Enrollment: 408 students
Current Grade Levels: PK-6
Location Map:
Henry Puffer School - Areas of Opportunity

Classrooms
Agile Classrooms w/ Flexible Furniture & Multi Zones

STEM/ Maker Spaces
Spaces to Learn by Making & Doing (& Doing Over)

Daylight & Transparency
Daylight, Engaging Space, Transparency, & Indoor Air Quality

Collaboration Spaces
Spaces Beyond Classroom/Engage Others

Breakout Spaces
Spaces Beyond Classroom/Engage Others

21ST CENTURY LEARNING EXAMPLES

Henry Puffer Elementary School
Address: 2220 Haddow Ave.
Built: 1936
Site Area: 11.3 Acres
Proposed Building SQ. FT.: 54,934 SF
Proposed Grade Levels: PK-5
Location Map:
**Total Initial Budget Estimate**

**Henry Puffer School - $16.8M**

### Maintenance
- **Site** $1.0M
- **Roofing** $2.1M
- **Misc. Building Envelope** $1.0M
- **Electrical Upgrades** $3.0M
- **HVAC** $0.0M
- **Plumbing** $0.7M
- **Misc. Interior Improvements** $2.6M

### Safe & Healthy Environments
- **Secure Vestibules** $0.7M
- **Quality indoor environments** (ventilation, temperature, and natural light) $4.4M

### 21st Century Learning
- Flexible furniture in existing classrooms $0.6M
- Renovate approximately two classrooms $0.7M

---

**FIRST FLOOR - Areas of Opportunity**
### LEARNING SPACES COMPARISON MATRIX

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<thead>
<tr>
<th>Score</th>
<th>Condition</th>
<th>Core Learning Spaces</th>
<th>Library</th>
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<th>Music</th>
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#### Campus Context
- Overall
- Facility
- Configuration

### Site Plan

#### Highland School

### Enrollment 2018

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<td>El Sierra</td>
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<tr>
<td>Henry Puffer</td>
<td>408</td>
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<tr>
<td>Highland</td>
<td>387</td>
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<tr>
<td>Hillcrest</td>
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<tr>
<td>Indian Trail</td>
<td>387</td>
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<tr>
<td>Kingsley</td>
<td>425</td>
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<tr>
<td>Lester</td>
<td>522</td>
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<tr>
<td>Pierce Downer</td>
<td>334</td>
</tr>
<tr>
<td>Whittier</td>
<td>323</td>
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</table>

### Site Plan Details

- Ground play area
- Main entry
- Highland Ave.
- Parking area
- Play field
Highland Elementary School

Address: 935 Highland Ave.
Built: 1952
Site Area: 6.2 Acres
Current Building SQ. FT.: 34,148 SF
Current Enrollment: 387 students
Current Grade Levels: K-6

Location Map:
Highland Elementary School
Address: 935 Highland Ave.
Built: 1952
Site Area: 6.2 Acres
Proposed Building SQ. FT.: 34,148 SF
Proposed Grade Levels: K-5
Location Map:

Highland School - Areas of Opportunity

Classrooms
Agile Classrooms w/ Flexible Furniture & Multi Zones

STEM/ Maker Spaces
Spaces to Learn by Making & Doing (& Doing Over)

Daylight & Transparency
Daylight, Engaging Space, Transparency, & Indoor Air Quality

Collaboration Spaces
Spaces Beyond Classroom/Engage Others

Breakout Spaces
Spaces Beyond Classroom/Engage Others

21ST CENTURY LEARNING EXAMPLES
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<tr>
<td>Electrical Upgrades</td>
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<td>HVAC</td>
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<td>Plumbing</td>
<td>$0.3M</td>
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<td>Misc. Interior Improvements</td>
<td>$1.8M</td>
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<td>Safe &amp; Healthy Environments</td>
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<td>Secure Vestibules</td>
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<td>Quality indoor environments</td>
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<tr>
<td>Renovate approximately two</td>
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<tr>
<td>classrooms</td>
<td>$0.6M</td>
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**FIRST FLOOR - Areas of Opportunity**

**Secure Main Entry**

**Potential Area of Renovation**
### Hillcrest Elementary School

#### LEARNING SPACES COMPARISON MATRIX

<table>
<thead>
<tr>
<th>Campus</th>
<th>Enrollment 2018</th>
<th>Current Acreage</th>
<th>Classroom Area per Student</th>
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<td>Lester</td>
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#### SITE PLAN

**LEARNING SPACES COMPARISON MATRIX**

<table>
<thead>
<tr>
<th>Score</th>
<th>Condition</th>
<th>Core Learning Spaces</th>
<th>Library</th>
<th>Art</th>
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<th>Student Support</th>
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**Hillcrest School**
Hillcrest Elementary School

Address: 1435 Jefferson Ave.
Built: 1952
Site Area: 9.9 Acres
Current Building SQ. FT.: 45,580 SF
Current Enrollment: 384 students
Current Grade Levels: K-6
Location Map:
Hillcrest Elementary School

Address: 1435 Jefferson Ave.
Built: 1952
Site Area: 9.9 Acres
Proposed Building SQ. FT.: 45,580 SF
Proposed Grade Levels: K-5
Location Map:

---

**Classrooms**

Agile Classrooms w/ Flexible Furniture & Multi Zones

---

**STEM/ Maker Spaces**

Spaces to Learn by Making & Doing (& Doing Over)

---

**Daylight & Transparency**

Daylight, Engaging Space, Transparency, & Indoor Air Quality

---

**Collaboration Spaces**

Spaces Beyond Classroom/Engage Others

---

**Breakout Spaces**

Spaces Beyond Classroom/Engage Others

---

21ST CENTURY LEARNING EXAMPLES
Total Initial Budget Estimate
Hillcrest School - $14.2M

Maintenance
- Site: $0.6M
- Roofing: $1.8M
- Misc. Building Envelope: $0.3M
- Electrical Upgrades: $2.4M
- HVAC: $0.0M
- Plumbing: $0.4M
- Misc. Interior Improvements: $2.2M

Safe & Healthy Environments
- Secure Vestibules: $1.4M
- Quality indoor environments (ventilation, temperature, and natural light): $3.8M

21st Century Learning
- Flexible furniture in existing classrooms: $0.6M
- Renovate approximately two classrooms: $0.7M

First Floor - Areas of Opportunity
- Main Entry
- Secure Main Entry
- Potential Area of Renovation
### LEARNING SPACES COMPARISON MATRIX

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<tr>
<th>Campus Context</th>
<th>Overall</th>
<th>Facility Configuration</th>
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<td>Pierce Downer</td>
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### LEARNING SPACES COMPARISON MATRIX

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<th>Music</th>
<th>Dining</th>
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**Indian Trail Elementary School**
Indian Trail Elementary School

Address: 6235 Stonewall
Built: 1967
Additions: 1989, 1993
Site Area: 8.3 Acres
Current Building SQ. FT.: 50,105 SF
Current Enrollment: 387 students
Current Grade Levels: PK-6

Location Map:
Indian Trail Elementary School

Address: 6235 Stonewall
Built: 1967
Additions: 1989, 1993
Site Area: 8.3 Acres
Proposed Building SQ. FT.: 50,105 SF
Proposed Grade Levels: PK-5
Location Map:

Indian Trail School - Areas of Opportunity

21ST CENTURY LEARNING EXAMPLES

Classrooms

- Agile Classrooms w/ Flexible Furniture & Multi Zones

STEM/ Maker Spaces

- Spaces to Learn by Making & Doing (& Doing Over)

Daylight & Transparency

- Daylight, Engaging Space, Transparency, & Indoor Air Quality

Collaboration Spaces

- Spaces Beyond Classroom/Engage Others

Breakout Spaces

- Spaces Beyond Classroom/Engage Others
Total Initial Budget Estimate
Indian Trail School - **$15.5M**

**Maintenance**
- Site: $0.7M
- Roofing: $2.3M
- Misc. Building Envelope: $0.0M
- Electrical Upgrades: $2.6M
- HVAC: $0.0M
- Plumbing: $0.4M
- Misc. Interior Improvements: $2.5M

**Safe & Healthy Environments**
- Secure Vestibules: $1.4M
- Quality indoor environments (ventilation, temperature, and natural light): $4.1M

**21st Century Learning**
- Flexible furniture in existing classrooms: $0.7M
- Renovate approximately two classrooms: $0.8M

---

**FIRST FLOOR - Areas of Opportunity**

- Secure Main Entry
- Potential Area of Renovation
### LEARNING SPACES COMPARISON MATRIX

<table>
<thead>
<tr>
<th>SCHOOL</th>
<th>ENROLLMENT 2018</th>
<th>CURRENT ACREAGE</th>
<th>CLASSROOM AREA PER STUDENT</th>
<th>GROSS SQ. FT. PER STUDENT</th>
<th>AVERAGE SQ. FT. INSTRUCTION SIZE</th>
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<tbody>
<tr>
<td>Herrick MS</td>
<td>655</td>
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### SITE PLAN

#### LEARNING SPACES COMPARISON MATRIX

<table>
<thead>
<tr>
<th>SCHOOL</th>
<th>CORE LEARNING SPACES</th>
<th>LIBRARY</th>
<th>ART</th>
<th>MUSIC</th>
<th>DINING</th>
<th>GYMNASIUM</th>
<th>STUDENT SUPPORT</th>
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<td>Kingsley School</td>
<td>EXCELLENT</td>
<td>GOOD</td>
<td>GOOD</td>
<td>FAIR</td>
<td>POOR</td>
<td>FAIR</td>
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Kingsley Elementary School
Address: 6509 Powell
Built: 1963
Additions: 1988, 1993
Site Area: 10.3 Acres
Current Building SQ. FT.: 59,685 SF
Current Enrollment: 425 students
Current Grade Levels: K-6
Location Map:
Kingsley School- Areas of Opportunity

Classrooms
- Agile Classrooms w/ Flexible Furniture & Multi Zones
- Spaces to Learn by Making & Doing (& Doing Over)

Collaboration Spaces
- Spaces Beyond Classroom/Engage Others

STEM/ Maker Spaces
- Spaces Beyond Classroom/Engage Others

Breakout Spaces
- Spaces Beyond Classroom/Engage Others

Daylight & Transparency
- Daylight, Engaging Space, Transparency, & Indoor Air Quality

21ST CENTURY LEARNING EXAMPLES

Kingsley Elementary School
Address: 6509 Powell
Built: 1963
Additions: 1988, 1993
Site Area: 10.3 Acres
Proposed Building SQ. FT.: 59,685 SF
Proposed Grade Levels: K-5
Location Map:
FIRST FLOOR - Areas of Opportunity

Total Initial Budget Estimate
Kingsley School - $18.3M

Maintenance
- Site: $0.7M
- Roofing: $2.8M
- Misc. Building Envelope: $0.5M
- Electrical Upgrades: $2.2M
- HVAC: $0.0M
- Plumbing: $0.5M
- Misc. Interior Improvements: $2.9M

Safe & Healthy Environments
- Secure Vestibules: $2.3M
- Quality indoor environments (ventilation, temperature, and natural light): $5.0M

21st Century Learning
- Flexible furniture in existing classrooms: $0.8M
- Renovate approximately two classrooms: $0.6M
### LEARNING SPACES COMPARISON MATRIX

#### CAMPUS CONTEXT

<table>
<thead>
<tr>
<th>School</th>
<th>Enrollment 2018</th>
<th>Current Acreage</th>
<th>Classroom Area (per student)</th>
<th>Gross Sq. Ft. (per student)</th>
<th>Average Sq. Ft. Instruction Size</th>
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<tbody>
<tr>
<td>HERRICK MS</td>
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<td>42</td>
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</table>

#### FACILITY CONFIGURATION

- [Site Plan Image]

#### Library

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<tr>
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<th>CONDITION</th>
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<td>2</td>
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<tr>
<td>3</td>
<td>GOOD</td>
</tr>
<tr>
<td>4</td>
<td>EXCELLENT</td>
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</table>

#### Learning Spaces Comparison

- **Core Learning Spaces**: Health and Comfort, Furniture and Equipment, Technology
- **Library**: Health and Comfort, Furniture and Equipment, Technology
- **Art**: Physical Qualities, Health and Comfort, Furniture and Equipment, Technology
- **Music**: Physical Qualities, Health and Comfort, Furniture and Equipment, Technology
- **Dining**: Physical Qualities, Health and Comfort, Furniture and Equipment, Technology
- **Gymnasium**: Physical Qualities, Health and Comfort, Furniture and Equipment, Technology
- **Student Support**: Physical Qualities, Health and Comfort, Furniture and Equipment, Technology

---

**Lester Elementary School**
Lester Elementary School
Address: 236 Indianapolis Ave
Built: 1956
Additions: 1959, 1990, 1993, 2018
Site Area: 6.7 Acres
Current Building SQ. FT.: 46,554 SF
Current Enrollment: 522 students
Current Grade Levels: K-6
Location Map:

SPACE UTILIZATION
EDUCATIONAL
ADMINISTRATIVE
CIRCULATION
TOILET
BUILDING SUPPORT
UTILITY

FIRST FLOOR

LESTER
ADMINISTRATION 7%
ASSEMBLY 4%

DISTRIBUTION
ASSEMBLY 12%
LIBRARY 5%
CIRCULATION 18%

TARGET
ASSEMBLY 10%
LIBRARY 7%
CIRCULATION 15%
CLASSROOM 30%
FINE ARTS 8%
SUPPORT 10%
Lester Elementary School - Areas of Opportunity

Lester Elementary School
Address: 236 Indianapolis Ave
Built: 1956
Additions: 1959, 1990, 1993, 2018
Site Area: 6.7 Acres
Proposed Building SQ. FT.: 46,554 SF
Proposed Grade Levels: K-5
Location Map:

Classrooms
Agile Classrooms w/ Flexible Furniture & Multi Zones

STEM/ Maker Spaces
Spaces to Learn by Making & Doing (& Doing Over)

Daylight & Transparency
Daylight, Engaging Space, Transparency, & Indoor Air Quality

Collaboration Spaces
Spaces Beyond Classroom/Engage Others

Breakout Spaces
Spaces Beyond Classroom/Engage Others

21ST CENTURY LEARNING EXAMPLES
### Total Initial Budget Estimate

**Lester School - $13.4M**

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<th>Budget Estimate</th>
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<td>Site</td>
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<td>Misc. Building Envelope</td>
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<tr>
<td>Electrical Upgrades</td>
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<td>HVAC</td>
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<tr>
<td>Plumbing</td>
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<tr>
<td><strong>Safe &amp; Healthy Environments</strong></td>
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<tr>
<td>Secure Vestibules</td>
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<tr>
<td>Quality indoor environments</td>
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<tr>
<td>natural light)</td>
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</table>

**FIRST FLOOR - Areas of Opportunity**

- **Potential Area of Renovation**
- **Secure Main Entry**
- **Main Entry**
# LEARNING SPACES COMPARISON MATRIX

## Concept: Campus Context

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<th>Overall</th>
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<th>Configuration</th>
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<table>
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<th>GROSS SQ. FT. PER STUDENT</th>
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<td>116</td>
<td>850</td>
</tr>
</tbody>
</table>

## SITE PLAN

![Site Plan Image](image-url)
Pierce Downer Elementary

Address: 1436 Grant Ave.
Built: 1951
Site Area: 5.2 Acres
Proposed Building SQ. FT.: 37,108 SF
Proposed Grade Levels: K-5
Location Map:

21ST CENTURY LEARNING EXAMPLES

Classrooms
- Agile Classrooms w/ Flexible Furniture & Multi Zones

STEM/ Maker Spaces
- Spaces to Learn by Making & Doing (& Doing Over)

Daylight & Transparency
- Daylight, Engaging Space, Transparency, & Indoor Air Quality

Collaboration Spaces
- Spaces Beyond Classroom/Engage Others

Breakout Spaces
- Spaces Beyond Classroom/Engage Others
FIRST FLOOR - Areas of Opportunity

Total Initial Budget Estimate
Pierce Downer School - $11.8M

Maintenance
- Site $0.3M
- Roofing $2.4M
- Misc. Building Envelope $0.3M
- Electrical Upgrades $1.9M
- HVAC $0.0M
- Plumbing $0.3M
- Misc. Interior Improvements $1.6M

Safe & Healthy Environments
- Secure Vestibules $0.7M
- Quality indoor environments (ventilation, temperature, and natural light) $3.0M

21st Century Learning
- flexible furniture in existing classrooms $0.5M
- renovate approximately two classrooms $0.8M
3.13 | Whittier Elementary School

### LEARNING SPACES COMPARISON MATRIX

<table>
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<tr>
<th>Score</th>
<th>Condition</th>
<th>Core Learning Spaces</th>
<th>Library</th>
<th>Art</th>
<th>Music</th>
<th>Dining</th>
<th>Gymnasium</th>
<th>Student Support</th>
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<tr>
<td>1</td>
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<td>PHYSICAL QUALITIES</td>
<td>HEALTH AND COMFORT</td>
<td>FURNITURE AND EQUIPMENT</td>
<td>TECHNOLOGY</td>
<td>PHYSICAL QUALITIES</td>
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#### WHITTIER SCHOOL

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<td>Current Acreage</td>
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<td>Classroom Area Per Student</td>
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<td>Gross Sq. Ft. Per Student</td>
<td>127</td>
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<tr>
<td>Average Sq. Ft. Instruction Size</td>
<td>800</td>
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#### WHITTIER SCHOOL SITE PLAN

- **Campus Context Overall**
- **Facility Configuration**

### WHITTIER SCHOOL INFORMATION

- **Score**: 3
- **Condition**: GOOD
- **Enrollment 2018**: 64
- **Current Acreage**: 3.13
- **Classroom Area Per Student**: 6.13
- **Gross Sq. Ft. Per Student**: 127
- **Average Sq. Ft. Instruction Size**: 800
Whittier Elementary School
Address: 536 Hill
Built: 1928
Site Area: 4.5 Acres
Current Building SQ. FT.: 37,435 SF
Current Enrollment: 323 students
Current Grade Levels: K-6
Location Map:
Whittier Elementary School

Address: 536 Hill
Built: 1928
Site Area: 4.5 Acres
Proposed Building SQ. FT.: 37,435 SF
Proposed Grade Levels: K-5
Location Map:

Classrooms

Agile Classrooms w/ Flexible Furniture & Multi Zones

STEM/ Maker Spaces

Spaces to Learn by Making & Doing (& Doing Over)

Daylight & Transparency

Daylight, Engaging Space, Transparency, & Indoor Air Quality

Collaboration Spaces

Spaces Beyond Classroom/Engage Others

Breakout Spaces

Spaces Beyond Classroom/Engage Others

21ST CENTURY LEARNING EXAMPLES
### Total Initial Budget Estimate

**Whittier School - $11.8M**

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<tr>
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<tbody>
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<td></td>
</tr>
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<td>natural light)</td>
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<tr>
<td><strong>21st Century Learning</strong></td>
<td>$1.1M</td>
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<tr>
<td>Flexible furniture in existing</td>
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<tr>
<td>classrooms</td>
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<tr>
<td>Renovate approximately two</td>
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<tr>
<td>classrooms</td>
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### FIRST FLOOR - Areas of Opportunity

- **Main Entry**
- **Secure Main Entry**
- **Potential Area of Renovation**
Appendix 4.1
Education Alignment Survey - District Summary

Appendix 4.2
Electrical Building Evaluations

Appendix 4.3
Initial Total Budget Estimate by School

Appendix 4.4
Administrative Buildings Scenarios

“Education is all a matter of building bridges”
- Ralph Ellison
4.1 | Education Alignment Survey - District Summary

The buildings were surveyed by a team of teachers, staff, FPC members led by the District. Wight & Company evaluated each survey questionnaire consolidating into recommendations for targeted improvements to support modern learning environments. These surveys were primarily performed in December 2018. Most of the district learning spaces are ‘fair’, meaning there is a good base to build on but there is much work to be done for the spaces to support “modern-learning”.

Data assessment points were combined into the final rating for each of the four major categories:

A vertical column of the same color typically indicates that the District has treated the type of in the same manner at all of the schools. For example, Core Learning Spaces are all green in Technology because the spaces have all been equipped with dispersed power, equipment for teaching/learning, data access, and have a good ability to share content.

Detail scoring information is located in appendices 4.4.
Suggested Goals

Reduce circulation space by converting to collaborative use.

Shift excess core classroom space to co-curricular shared space for “doing” and “making” project space.

Shift excess core classroom space to enhance fine arts and performance assembly space.
4.2 | Electrical Building Evaluations

Herrick Middle School

ELECTRICAL SYSTEMS

SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION

The existing building has one electrical service located in the main boiler room. It is served from pad mounted utility company transformers located just in a ComEd electrical vault adjacent to the boiler room. This existing service is rated at 1200 amps 208/120V, 3 phase 4 wire, Wye and Delta Services. It utilizes switch/fuse type distribution. It is in fair condition. The Delta service causes a high leg on the “B” phase. The delta switchboard is fair condition. It has a secondary isolation transformer located next to it to provide 208 Wye power to the building loads that require it. There is a small fused emergency service located in the mechanical room, it is not metered separately and doesn’t appear to be tapped ahead of the main breaker. It is rated at 208/120V, 3 phase 4 wire, 100 Amps. The building does have newer panelboards served off the isolation transformer. These panels have internal surge protection that is functioning properly.

Recommendation: Add a new transformer. Replace the existing Delta electrical service in its current locations with a new Wye Service. Provide circuit breaker type service entrance switchboard. The service should be increased in size to accommodate the addition of new cooling. (Excluding the small emergency service). It should be replaced by the generator listed below. New distribution panels and branch panels should be replaced and additional panels added to accommodate new circuiting in classrooms for future computer, printer, projector or smart-board loads. All panels serving computer equipment should have new Surge Protections Devices added to them.

This building does not have an emergency generator.

We recommend (1) 80KW natural gas emergency generator to serve life safety systems, emergency/exit lighting, IT equipment, refrigerators/freezers, boilers, hot water pumps, sump pumps and kitchen refrigeration equipment.

LIGHTING

- The existing general interior lighting thru-out the facility is T8 fluorescent lighting. The lighting is controlled by wall switches. Lighting levels were measured in most areas and met IES recommendations. There are wall mounted occupancy sensors that control the gang toilets however they are not located in the correct spots to minimize troublesome “offs” while occupied.

Recommendation: Replace all lighting with new dimmable LED type fixtures. Add daylight and occupancy sensors to control the lighting in classrooms, corridors, offices, cafeterias, storage rooms, toilet rooms, etc to meet the intent of the 2018 IECC.

The existing exit lighting has been retrofitted to LED.

The existing site and exterior lighting is HID, older and should be replaced. There are not sufficient fixtures for the parking lot and drop off area. The existing utilize flood style HID lamps. They should be replaced with new LED fixtures that are dark sky friendly and have full cut-off to avoid any light pollution violations. There are dark areas in the parking lot that need light for security and safety reasons, add new poles and fixtures.
GENERAL POWER - The existing classrooms have already had technology and power upgrades. The power here is sufficient. One new receptacle and new circuit to be added to each learning ceiling space ceiling for projector.

INFORMATION SYSTEM – This system needs to be evaluated by a technology consultant.

INTERCOM/PA- The existing intercom system is a Rualand system utilizes the phone system to make pages. Each teacher has the ability to call the front office or out of the building.

CLOCK SYSTEM - There is an existing hard wired master time clock system that is hard wired and abandoned. Many clocks have already failed and been replaced with battery operated clock atomic clocks.

A new master clock should be added in the main Office. New Wireless clocks should be added to the facility where required by the district.

FIRE ALARM - The existing fire alarm panel is a Gamewell zoned type panel located in the main boiler room. This panel and its devices are outdated and need to be replaced. The fire alarm annunciator panel located in the main office needs to be replaced and relocated to the main vestibule.

Recommendation: The new Fire Alarm System should include a new Voice/Mass Notification type addressable Fire Alarm Control Panel installed in the mechanical room. It shall accommodate initiating devices and initiating circuits. New addressable devices will be installed thru-out the entire facility, including but not limited to: speakers, strobes, pull stations, smoke detectors, heat detectors, CO detectors, valve supervisory switches, flow switches, magnetic hold-open devices NAC panels, etc. where required. ADA approved devices should be provided in all accessible spaces. Provide a new Voice/Mass Notification type alpha/numeric Fire Alarm Annunciator Panel located in the vestibule at the new main entrance.

SECURITY – These systems needs to be evaluated by a technology consultant. Card access system is a few years old.
O’Neill Middle School

ELECTRICAL SYSTEMS

SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION - The existing building has one electrical service located in the basement electrical room. It is served from (1) pad mounted utility company transformer located just outside the electrical room. This existing service is rated at 1600 amps 208/120V. 3 phase 4 wire, Wye and Delta Services. It utilizes switch/fuse type distribution. It is in poor condition. The Delta service causes a high leg on the “B” phase. The delta switchboard is poor condition. It has a secondary isolation transformer located next to it to provide 208 Wye power to the building loads that require it. There is a small fused emergency service located in the mechanical room, it is not metered separately and doesn’t appear to be tapped ahead of the main breaker. It is rated at 208/120V. 3 phase 4 wire, 100 Amps. The building does have newer panelboards served off the isolation transformer. These panels have internal surge protection that is functioning properly.

Recommendation: Add a new transformer. Replace the existing Delta electrical service in its current locations with a new Wye Service. Provide circuit breaker type service entrance switchboard. The service should be increased in size to accommodate the addition of new cooling. (Excluding the small emergency service). It should be replaced by the generator listed below. New distribution panels and branch panels should be replaced and additional panels added to accommodate new circuiting in classrooms for future computer, printer, projector or smart-board loads. All panels serving computer equipment should have new Surge Protections Devices added to them.

This building does not have an emergency generator.

We recommend (1) 80KW natural gas emergency generator to serve life safety systems, emergency/exit lighting, IT equipment, refrigerators/freezors, boilers, hot water pumps, and sump pumps.

LIGHTING - The existing general interior lighting thru-out the facility is T8 fluorescent lighting. The lighting is controlled by wall switches. Lighting levels were measured in most areas and met IES recommendations.

Recommendation: Replace all lighting with new dimmable LED type fixtures. Add daylight and occupancy sensors to control the lighting in classrooms, corridors, offices, cafeterias, storage rooms, toilet rooms, etc to meet the intent of the 2018 IECC.

The existing exit lighting has been retrofitted to LED.

The existing site and exterior lighting is HID, older and should be replaced. There are not sufficient fixtures for the parking lot and drop off area. The existing utilize flood style HID lamps. They should be replaced with new LED fixtures that are dark sky friendly and have full cut-off to avoid and any light pollution violations. There are dark areas in the parking lot that need light for security and safety reasons, add new poles and fixtures.
GENERAL POWER - The existing classrooms have already had technology and power upgrades. The power here is sufficient. One new receptacle and new circuit to be added to each learning ceiling space ceiling for projector.

INFORMATION SYSTEM – This system needs to be evaluated by a technology consultant.

INTERCOM/PA: The existing intercom system utilizes the phone system to make pages. Each teacher has the ability to call the front office or out of the building.

CLOCK SYSTEM - There is an existing hard wired Latham master time clock system located in the existing office area that is hard wired and outdated. Many clocks have already failed and been replaced with battery and operated clocks.

A new master clock should be added in the main Office. New Wireless clocks should be added to the facility where required by the district.

FIRE ALARM - The existing fire alarm panel is a Edwards GS zoned type panel located in a closet off the main corridor. This panel and its devices are outdated and need to be replaced. The fire alarm annunciator panel located in the main office needs to be replaced and relocated to the main vestibule.

Recommendation: The new Fire Alarm System should include a new Voice/Mass Notification type addressable Fire Alarm Control Panel installed in the mechanical room. It shall accommodate initiating devices and initiating circuits. New addressable devices will be installed thru-out the entire facility, including but not limited to: speakers, strobes, pull stations, smoke detectors, heat detectors, CO detectors, valve supervisory switches, flow switches, magnetic hold-open devices NAC panels, etc. where required. ADA approved devices should be provided in all accessible spaces. Provide a new Voice/Mass Notification type alpha/numeric Fire Alarm Annunciator Panel located in the vestibule at the new main entrance.

SECURITY – These systems needs to be evaluated by a technology consultant. Card access system is a few years old.
4.2 | Electrical Building Evaluations

**Belle Aire School**

**ELECTRICAL SYSTEMS**

**SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION** - The existing building has one electrical services located in the mechanical room. It is served from (1) pad mounted utility company transformer located just outside the mechanical room. This existing service is rated at 1200 amps 208/120V, 3 phase 4 wire, Wye service. This switchboard is old and original to the building. There is a small emergency service located adjacent to the above listed service, it is not metered separately and doesn’t appear to be tapped ahead of the main breaker. It is rated at 208/120V, 3 phase 4 wire, 100 Amps. The building does have newer panelboards served off the isolation transformer. These panels have internal surge protection that is no longer functioning.

Recommendation: Keep and modify existing service as required.

This building does not have an emergency generator.

We recommend (1) 80KW natural gas emergency generator to serve life safety systems, emergency/exit lighting, IT equipment, refrigerators/freezers, boilers, hot water pumps and sump pumps.

**LIGHTING** - The existing general interior lighting thru-out the facility is T8 fluorescent lighting. The lighting is controlled by wall switches. Lighting levels were measured in most areas and met IES recommendations.

Recommendation: Replace all lighting with new dimmable LED type fixtures. Add daylight and occupancy sensors to control the lighting in classrooms, corridors, offices, cafeterias, storage rooms, toilet rooms, etc to meet the intent of the 2018 IECC.

The existing site and exterior lighting is HID, older and should be replaced. There are sufficient fixtures for the parking lot and drop off area. They utilize flood style HID lamps. They should be replaced with new LED fixtures that are dark sky friendly and have full cut-off to avoid any light pollution violations. There are dark areas in the parking lot that need light for security and safety reasons, add new poles and fixtures.

**GENERAL POWER** - The existing classrooms are in an open room environment. There are multiple power poles serving each of the classroom areas for power/data cabling. There appears to be sufficient power but devices must be located near these power poles or the cables cross the floor creating possible trip hazards. This limits the location of electrical devices. One new receptacle and new circuit to be added to each learning ceiling space ceiling for projector.

**INFORMATION SYSTEM** – This system needs to be evaluated by a technology consultant.
**INTERCOM/PA** - The existing intercom system utilizes the phone system to make pages. Each teacher has the ability to call the front office or out of the building.

**CLOCK SYSTEM** - There is an existing hard wired Simplex master time clock system located in the existing office area that is hard wired and outdated. Many clocks have already failed and been replaced with battery operated clocks.

A new master clock should be added in the main Office. New Wireless clocks should be added to the facility where required by the district.

**FIRE ALARM** - The existing fire alarm panel is a Simplex 4005 zoned type panel located in a the mechanical room. This panel and it’d devices are outdated and need to be replaced. Needs a fire alarm annunciator panel near main entrance.

Recommendation: The new Fire Alarm System should include a new Voice/Mass Notification type addressable Fire Alarm Control Panel installed in the mechanical room. It shall accommodate initiating devices and initiating circuits. New addressable devices will be installed thru-out the entire facility, including but not limited to: speakers, strobes, pull stations, smoke detectors, heat detectors, CO detectors, valve supervisory switches, flow switches, magnetic hold-open devices NAC panels, etc. where required. ADA approved devices should be provided in all accessible spaces. Provide a new Voice/Mass Notification type alpha/numeric Fire Alarm Annunciator Panel located in the vestibule at the new main entrance.

**SECURITY** – These systems needs to be evaluated by a technology consultant. Card access system is a few years old.
**El Sierra School**

**ELECTRICAL SYSTEMS**

**SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION** - The existing building has one electrical service located in the mechanical room. It is served from (1) pad mounted utility company transformer located just outside the mechanical room. This existing service is rated at 1200 amps 208/120V, 3 phase 4 wire, Wye service. This switchboard is original to the building. There is a small emergency service located adjacent to the above listed service, it is not metered separately and doesn’t appear to be tapped ahead of the main breaker. It is rated at 208/120V, 3 phase 4 wire, 100 Amps. The buildings does have newer panelboards served off the isolation transformer. These panels have internal surge protection that is no longer functioning.

Recommendation: Keep the existing service and modify as required.

This building does not have an emergency generator.

We recommend (1) 80KW natural gas emergency generator to serve life safety systems, emergency/exit lighting, IT equipment, refrigerators/freezers, boilers, hot water pumps and sump pumps.

**LIGHTING** - The existing general interior lighting thru-out the facility is T8 fluorescent lighting. The lighting is controlled by wall switches. Lighting levels were measured in most areas and met IES recommendations.

Recommendation: Replace all lighting with new dimmable LED type fixtures. Add daylight and occupancy sensors to control the lighting in classrooms, corridors, offices, cafeterias, storage rooms, toilet rooms, etc to meet the intent of the 2018 IECC.

The existing exit lighting has been retrofitted with LED lamps.

The existing site and exterior lighting is HID, older and should be replaced. There are sufficient fixtures for the parking lot and drop off area. They utilize flood style HID lamps. They should be replaced with new LED fixtures that are dark sky friendly and have full cut-off to avoid any light pollution violations. There are dark areas in the parking lot that need light for security and safety reasons, add new poles and fixtures.

**GENERAL POWER** - The existing classrooms are in an open room environment. There are multiple power poles serving each of the classroom areas for power/data cabling. There appears to be sufficient power but devices must be located near these power poles or the cables cross the floor creating possible trip hazards. This limits the location of electrical devices. One new receptacle and new circuit to be added to each learning ceiling space ceiling for projector.

**INFORMATION SYSTEM** – This system needs to be evaluated by a technology consultant.
**INTERCOM/PA** - The existing intercom system utilizes the phone system to make pages. Each teacher has the ability to call the front office or out of the building.

**CLOCK SYSTEM** - There is an existing hard wired Simplex master time clock system located in the existing office area that is hard wired and outdated. Many clocks have already failed and been replaced with battery operated clocks. A new master clock should be added in the main Office. New Wireless clocks should be added to the facility where required by the district.

**FIRE ALARM** - The existing fire alarm panel is a Simplex 4005 zoned type panel located in the mechanical room. This panel and its devices are outdated and need to be replaced. Needs a fire alarm annunciatior panel near main entrance.

Recommendation: The new Fire Alarm System should include a new Voice/Mass Notification type addressable Fire Alarm Control Panel installed in the mechanical room. It shall accommodate initiating devices and initiating circuits. New addressable devices will be installed thru-out the entire facility, including but not limited to: speakers, strobes, pull stations, smoke detectors, heat detectors, CO detectors, valve supervisory switches, flow switches, magnetic hold-open devices NAC panels, etc. where required. ADA approved devices should be provided in all accessible spaces. Provide a new Voice/Mass Notification type alpha/numeric Fire Alarm Annunciator Panel located in the vestibule at the new main entrance.

**SECURITY** – These systems needs to be evaluated by a technology consultant. Card access system is a few years old.
4.2 | Electrical Building Evaluations

Fairmount School

**ELECTRICAL SYSTEMS**

**SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION** - The existing building has one electrical service located in the basement electrical room. It is served from (1) pad mounted utility company transformer located just outside the electrical room. This existing service is rated at 600 amps 208/120V. 3 phase 4 wire, Wye Services. It utilizes switch/fuse type distribution. It is in fair condition. The building does have newer panelboards served off the isolation transformer. These panels have internal surge protection that is functioning properly.

Recommendation: Add a new transformer. Provide circuit breaker type service entrance switchboard. The service should be increased in size to accommodate the addition of new cooling. (Excluding the small emergency service). It should be replaced by the generator listed below. New distribution panels and branch panels should be replaced and additional panels added to accommodate new circuiting in classrooms for future computer, printer, projector or smart-board loads. All panels serving computer equipment should have new Surge Protections Devices added to them.

This school has a new generator.

**LIGHTING** - The existing general interior lighting thru-out the facility is T8 fluorescent lighting. The lighting is controlled by wall switches. Lighting levels were measured in most areas and met IES recommendations.

Recommendation: Replace all lighting with new dimmable LED type fixtures. Add daylight and occupancy sensors to control the lighting in classrooms, corridors, offices, cafeterias, storage rooms, toilet rooms, etc to meet the intent of the 2018 IECC.

The existing exit lighting has been retrofitted to LED.

The existing site and exterior lighting is HID, older and should be replaced. There are not sufficient fixtures for the parking lot and drop off area. The existing utilize flood style HID lamps. They should be replaced with new LED fixtures that are dark sky friendly and have full cut-off to avoid any light pollution violations. There are dark areas in the parking lot that need light for security and safety reasons, add new poles and fixtures.

**GENERAL POWER** - The existing classrooms have already had technology and power upgrades. The power here is sufficient. One new receptacle and new circuit to be added to each learning ceiling space ceiling for projector.

**INFORMATION SYSTEM** – This system needs to be evaluated by a technology consultant.
INTERCOM/PA - The existing intercom system utilizes the phone system to make pages. Each teacher has the ability to call the front office or out of the building.

CLOCK SYSTEM - There is an existing hard wired Latham master time clock system located in the existing office area that is hard wired and outdated. Many clocks have already failed and been replaced with battery and operated clocks.
A new master clock should be added in the main Office. New Wireless clocks should be added to the facility where required by the district.

FIRE ALARM - The existing fire alarm panel is a Gamewell zoned type panel located in a closet off the main corridor. This panel and its devices are outdated and need to be replaced. The fire alarm annunciator panel located in the main office needs to be replaced and relocated to the main vestibule.
Recommendation: The new Fire Alarm System should include a new Voice/Mass Notification type addressable Fire Alarm Control Panel installed in the mechanical room. It shall accommodate initiating devices and initiating circuits. New addressable devices will be installed thru-out the entire facility, including but not limited to: horns, strobes, pull stations, smoke detectors, heat detectors, CO detectors valve supervisory switches, flow switches, magnetic hold-open devices NAC panels, etc. where required. ADA approved devices should be provided in all accessible spaces. Provide a new Voice/Mass Notification type alpha/numeric Fire Alarm Annunciator Panel located in the vestibule at the new main entrance.

SECURITY – These systems needs to be evaluated by a technology consultant. Card access system is a few years old.
4.2 | Electrical Building Evaluations

**Henry Puffer Elementary**

**ELECTRICAL SYSTEMS**

**SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION** - The existing building has three electrical services located in the lower levels. The first is located in a room next to the boiler room and is served from (1) pad mounted utility company transformer. This existing service is rated at 800 amps 208/120V, 3 phase 4 wire. This switchboard is old and original to the building and does not have a ground bus or ground wiring. The second service is a small emergency service located adjacent to the above listed service. It is rated at 208/120V, 3 phase 4 wire, 100 Amps. The third electrical service is located in the lower level of the west end of the building. This service is fed from a grade mounted utility company transformer and rated at 400 amps 208/120V, 3 phase 4 wire.

Recommendation: Replace the existing electrical services in their current locations and increase their sizes by 400 amps each to accommodate the future cooling and computer loads. (Excluding the small emergency service). It should be replaced by the generator listed below. New distribution panels and branch panels should be replaced and additional panels added to accommodate new circuiting in classrooms for future computer, printer, projector or smart-board loads. All panels serving computer equipment should have Surge Protections Devices added to them.

This building does not have an emergency generator.

We recommend (1) 80KW natural gas emergency generator to serve life safety systems, emergency/exit lighting, IT equipment, refrigerators/freezers, boilers, hot water pumps and sump pumps.

**LIGHTING** - The existing general interior lighting thru-out the facility has been retrofitted with T8 fluorescent lighting. The lighting is controlled by wall switches. Lighting levels were measured in most areas and met IES recommendations.

Recommendation: Replace all lighting with new dimmable LED type fixtures. Add daylight and occupancy sensors to control the lighting in classrooms, corridors, offices, cafeterias, storage rooms, toilet rooms, etc to meet the intent of the 2018 IECC.

The existing exit lighting has been retrofitted with LED lamps. The existing site and exterior lighting is HID, older and should be replaced. There is one fixture for the parking lot and drop off area. It has three metal halide flood lights. It should be replaced with new LED fixtures that are dark sky friendly and have full cut-off to avoid any light pollution violations. There are dark areas in the parking lot that need light for security and safety reasons, add new poles and fixtures.

**GENERAL POWER** - The existing classrooms have limited power available for new computer, printer, projector or smart-board loads. New receptacles shall be added to existing classrooms to provide flexibility and sufficient power for existing and future loads. Each room should have at least 3 dedicated 120V. branch circuits. One new receptacle and new circuit to be added to each learning ceiling space ceiling for projector.
INFORMATION SYSTEM – This system needs to be evaluated by a technology consultant.

INTERCOM - This system needs to be evaluated by a technology consultant.

A new intercom system should be added to in the main office. New speakers and call switches should be added to the facility as required. The system shall support Voice Over IP as redundancy.

CLOCK SYSTEM - There is an existing hard wired Simplex master time clock system located in the existing office area that is hard wired and outdated. Many clocks have already failed and been replaced with battery operated clocks.

A new master clock should be added in the main Office. New Wireless clocks should be added to the facility where required by the district.

FIRE ALARM - The existing fire alarm panel is a Simplex 4020 addressable panel located in a first floor storage room. This panel is fully expandable and adequate for it’s the current use but does not have current voice evac capabilities.

Recommendation: The new Fire Alarm System should include a new Voice/Mass Notification type addressable Fire Alarm Control Panel installed in the mechanical room. It shall accommodate initiating devices and initiating circuits. New addressable devices will be installed thru-out the entire facility, including but not limited to: speakers, strobos, pull stations, smoke detectors, heat detectors, CO detectors, valve supervisory switches, flow switches, magnetic hold-open devices NAC panels, etc. where required. ADA approved devices should be provided in all accessible spaces. Provide a new Voice/Mass Notification type alpha/numeric Fire Alarm Annunciator Panel located in the vestibule at the new main entrance.

SECURITY – These systems needs to be evaluated by a technology consultant. Card access system is a few years old.
Highland School

**ELECTRICAL SYSTEMS**

**SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION** - The existing building has one electrical service located in the mechanical room. It is served from (1) pad mounted utility company transformer located just outside the mechanical room. This existing service is rated at 600 amps 208/120V, 3 phase 4 wire, Wye and Delta Services. The Delta services causes a high leg on the “B” phase. The delta switchboard is old and original to the building. It has a secondary isolation transformer located next to it to provide 208 Wye power to the building loads that require it. There is a small fused emergency service located in the mechanical room, it is not metered separately and doesn’t appear to be tapped ahead of the main breaker. It is rated at 208/120V, 3 phase 4 wire, 100 Amps. The building does have newer panelboards served off the isolation transformer. These panels have internal surge protection that is functioning properly.

Recommendation: Add a new transformer. Replace the existing Delta electrical service in its current locations with a new Wye Service. The service should be increased in size to accommodate the addition of new cooling. (excluding the small emergency service). It should be replaced by the generator listed below. New distribution panels and branch panels should be replaced and additional panels added to accommodate new circuiting in classrooms for future computer, printer, projector or smart-board loads. All panels serving computer equipment should have new Surge Protections Devices added to them.

This building does not have an emergency generator.

We recommend (1) 80KW natural gas emergency generator to serve life safety systems, emergency/exit lighting, IT equipment, refrigerators/freezers, boilers, hot water pumps and sump pumps.

**LIGHTING** - The existing general interior lighting thru-out the facility is T8 fluorescent lighting. The lighting is controlled by wall switches. Lighting levels were measured in most areas and met IES recommendations.

Recommendation: Replace all lighting with new dimmable LED type fixtures. Add daylight and occupancy sensors to control the lighting in classrooms, corridors, offices, cafeterias, storage rooms, toilet rooms, etc to meet the intent of the 2018 IECC.

The existing exit lighting has been retrofitted to LED.

The existing site and exterior lighting is HID, older and should be replaced. There are not sufficient fixtures for the parking lot and drop off area. The existing utilizes flood style HID lamps. They should be replaced with new LED fixtures that are dark sky friendly and have full cut-off to avoid any light pollution violations. There are dark areas in the parking lot that need light for security and safety reasons, add new poles and fixtures.

**GENERAL POWER** - The existing classrooms have already had technology and power upgrades. The power here is sufficient. One new receptacle and new circuit to be added to each learning ceiling space ceiling for projector.
**INFORMATION SYSTEM** – This system needs to be evaluated by a technology consultant.

**INTERCOM/PA** - The existing intercom system utilizes the phone system to make pages. Each teacher has the ability to call the front office or out of the building.

**CLOCK SYSTEM** - There is an existing hard wired Simplex master time clock system located in the existing office area that is hard wired and outdated. Many clocks have already failed and been replaced with battery operated clocks.

A new master clock should be added in the main Office. New Wireless clocks should be added to the facility where required by the district.

**FIRE ALARM** - The existing fire alarm panel is a Simplex 4005 zoned type panel located in a the mechanical room. This panel and it’d devices are outdated and need to be replaced. The fire alarm annunciator panel near main entrance needs to be replaced.

Recommendation: The new Fire Alarm System should include a new Voice/Mass Notification type addressable Fire Alarm Control Panel installed in the mechanical room. It shall accommodate initiating devices and initiating circuits. New addressable devices will be installed thru-out the entire facility, including but not limited to: speakers, strobes, pull stations, smoke detectors, heat detectors, CO detectors, valve supervisory switches, flow switches, magnetic hold-open devices NAC panels, etc. where required. ADA approved devices should be provided in all accessible spaces. Provide a new Voice/Mass Notification type alpha/numeric Fire Alarm Annunciator Panel located in the vestibule at the new main entrance.

**SECURITY** – These systems needs to be evaluated by a technology consultant. Card access system is a few years old.
Hillcrest School

ELECTRICAL SYSTEMS

SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION - The existing building has one electrical service located in the electrical room. It is served from (1) pad mounted utility company transformer. This existing service is rated at 1000 amps 208/120V, 3 phase 4 wire, Wye and Delta Services. It utilizes switch/fuse type distribution. It is in fair condition. The Delta service causes a high leg on the “B” phase. The delta switchboard is fair condition. It has a secondary isolation transformer located next to it to provide 208 Wye power to the building loads that require it. There is a small fused emergency service located in the mechanical room, it is not metered separately and doesn’t appear to be tapped ahead of the main breaker. It is rated at 208/120V, 3 phase 4 wire, 100 Amps. The building does have newer panelboards served off the isolation transformer. These panels have internal surge protection that is functioning properly.

Recommendation: Add a new transformer. Replace the existing Delta electrical service in its current locations with a new Wye Service. Provide circuit breaker type service entrance switchboard. The service should be increased in size to accommodate the addition of new cooling. (Excluding the small emergency service). It should be replaced by the generator listed below. New distribution panels and branch panels should be replaced and additional panels added to accommodate new circuiting in classrooms for future computer, printer, projector or smart-board loads. All panels serving computer equipment should have new Surge Protections Devices added to them.

This building does not have an emergency generator.

We recommend (1) 80KW natural gas emergency generator to serve life safety systems, emergency/exit lighting, IT equipment, refrigerators/freezers, boilers, hot water pumps, and sump pumps.

LIGHTING - The existing general interior lighting thru-out the facility is T8 fluorescent lighting. The lighting is controlled by wall switches. Lighting levels were measured in most areas and met IES recommendations.

Recommendation: Replace all lighting with new dimmable LED type fixtures. Add daylight and occupancy sensors to control the lighting in classrooms, corridors, offices, cafeterias, storage rooms, toilet rooms, etc to meet the intent of the 2018 IECC.

The existing exit lighting has been retrofitted to LED.

The existing site and exterior lighting is HID, older and should be replaced. There are not sufficient fixtures for the parking lot and drop off area. The existing utilize flood style HID lamps. They should be replaced with new LED fixtures that are dark sky friendly and have full cut-off to avoid any light pollution violations. There are dark areas in the parking lot that need light for security and safety reasons, add new poles and fixtures.
**GENERAL POWER** - The existing classrooms have already had technology and power upgrades. The power here is sufficient. One new receptacle and new circuit to be added to each learning ceiling space ceiling for projector.

**INFORMATION SYSTEM** – This system needs to be evaluated by a technology consultant.

**INTERCOM/PA** - The existing intercom system utilizes the phone system to make pages. Each teacher has the ability to call the front office or out of the building.

**CLOCK SYSTEM** - There is an existing hard wired Simplex master time clock system located in the existing office area that is hard wired and outdated. Many clocks have already failed and been replaced with battery operated clocks.

A new master clock should be added in the main Office. New Wireless clocks should be added to the facility where required by the district.

**FIRE ALARM** - The existing fire alarm panel is a Simplex 4005 zoned type panel located in a closet off the main corridor. This panel and its devices are outdated and need to be replaced. The fire alarm annunciator panel located in the main office needs to be replaced and relocated to the main vestibule.

Recommendation: The new Fire Alarm System should include a new Voice/Mass Notification type addressable Fire Alarm Control Panel installed in the mechanical room. It shall accommodate initiating devices and initiating circuits. New addressable devices will be installed thru-out the entire facility, including but not limited to: speakers, strobes, pull stations, smoke detectors, heat detectors, CO detectors, valve supervisory switches, flow switches, magnetic hold-open devices NAC panels, etc. where required. ADA approved devices should be provided in all accessible spaces. Provide a new Voice/Mass Notification type alpha/numeric Fire Alarm Annunciator Panel located in the vestibule at the new main entrance.

**SECURITY** – These systems needs to be evaluated by a technology consultant. Card access system is a few years old.
Indian Trail School

**ELECTRICAL SYSTEMS**

**SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION** - The existing building has one electrical service located in the basement electrical room. It is served from (1) pad mounted utility company transformer located just outside the electrical room. This existing service is rated at 1200 amps 208/120V, 3 phase 4 wire, Wye and Delta Services. It utilizes switch/fuse type distribution. It is in fair condition. The Delta service causes a high leg on the “B” phase. The delta switchboard is fair condition. It has a secondary isolation transformer located next to it to provide 208 Wye power to the building loads that require it. There is a small fused emergency service located in the mechanical room, it is not metered separately and doesn’t appear to be tapped ahead of the main breaker. It is rated at 208/120V, 3 phase 4 wire, 100 Amps. The building does have newer panelboards served off the isolation transformer. These panels have internal surge protection that is functioning properly.

Recommendation: Add a new transformer. Replace the existing Delta electrical service in its current locations with a new Wye Service. Provide circuit breaker type service entrance switchboard. The service should be increased in size to accommodate the addition of new cooling. (Excluding the small emergency service). It should be replaced by the generator listed below. New distribution panels and branch panels should be replaced and additional panels added to accommodate new circuiting in classrooms for future computer, printer, projector or smart-board loads. All panels serving computer equipment should have new Surge Protections Devices added to them.

This building does not have an emergency generator.

We recommend (1) 80KW natural gas emergency generator to serve life safety systems, emergency/exit lighting, IT equipment, refrigerators/freezers, boilers, hot water pumps, and sump pumps.

**LIGHTING** - The existing general interior lighting thru-out the facility is T8 fluorescent lighting. The lighting is controlled by wall switches. Lighting levels were measured in most areas and met IES recommendations.

Recommendation: Replace all lighting with new dimmable LED type fixtures. Add daylight and occupancy sensors to control the lighting in classrooms, corridors, offices, cafeterias, storage rooms, toilet rooms, etc to meet the intent of the 2018 IECC.

The existing exit lighting has been retrofitted to LED.

The existing site and exterior lighting is HID, older and should be replaced. There are not sufficient fixtures for the parking lot and drop off area. The existing utilize flood style HID lamps. They should be replaced with new LED fixtures that are dark sky friendly and have full cut-off to avoid any light pollution violations. There are dark areas in the parking lot that need light for security and safety reasons, add new poles and fixtures.
GENERAL POWER - The existing classrooms have already had technology and power upgrades. The power here is sufficient. One new receptacle and new circuit to be added to each learning ceiling space ceiling for projector.

INFORMATION SYSTEM – This system needs to be evaluated by a technology consultant.

INTERCOM/PA - The existing intercom system utilizes the phone system to make pages. Each teacher has the ability to call the front office or out of the building.

CLOCK SYSTEM - There is an existing hard wired Simplex master time clock system located in the existing office area that is hard wired and outdated. Many clocks have already failed and been replaced with battery operated clocks. A new master clock should be added in the main Office. New Wireless clocks should be added to the facility where required by the district.

FIRE ALARM - The existing fire alarm panel is a Simplex 4002 zoned type panel located in a closet off the main corridor. This panel and its devices are outdated and need to be replaced. The fire alarm annunciator panel located in the main office needs to be replaced and relocated to the main vestibule.

Recommendation: The new Fire Alarm System should include a new Voice/Mass Notification type addressable Fire Alarm Control Panel installed in the mechanical room. It shall accommodate initiating devices and initiating circuits. New addressable devices will be installed thru-out the entire facility, including but not limited to: speakers, strobes, pull stations, smoke detectors, heat detectors, CO detectors, valve supervisory switches, flow switches, magnetic hold-open devices NAC panels, etc. where required. ADA approved devices should be provided in all accessible spaces. Provide a new Voice/Mass Notification type alpha/numeric Fire Alarm Annunciator Panel located in the vestibule at the new main entrance.

SECURITY – The systems needs to be evaluated by a technology consultant. Card access system is a few years old.
Kingsley School

ELECTRICAL SYSTEMS

SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION - The existing building has one electrical service located in the main boiler room. It is served from pad mounted utility company transformer. This existing service is rated at 1600 amps 480/277V, 3 phase 4 wire, Wye and Delta Services. It utilizes switch/fuse type distribution. It is in good condition. The delta switchboard is in good condition. It has a secondary isolation transformer located next to it to provide 208 Wye power to the building loads that require it. There is a small fused emergency service located in the mechanical room, it is not metered separately and doesn’t appear to be tapped ahead of the main breaker. It is rated at 208/120V, 3 phase 4 wire, 100 Amps. The building does have newer panelboards served off the isolation transformer. These panels have internal surge protection that is functioning properly.

Recommendation: Provide circuit breaker type service entrance switchboard. (Excluding the small emergency service). It should be replaced by the generator listed below. All panels serving computer equipment should have new Surge Protections Devices added to them.

This building does not have an emergency generator.

We recommend (1) 80KW natural gas emergency generator to serve life safety systems, emergency/exit lighting, IT equipment, refrigerators/freezers, boilers, hot water pumps, sump pumps and kitchen refrigeration equipment.

LIGHTING - The existing general interior lighting thru-out the facility is T8 fluorescent lighting. The lighting is controlled by wall switches. Lighting levels were measured in most areas and met IES recommendations. There are wall mounted occupancy sensors that control the gang toilets however they are not located in the correct spots to minimize troublesome “offs” while occupied.

Recommendation: Replace all lighting with new dimmable LED type fixtures. Add daylight and occupancy sensors to control the lighting in classrooms, corridors, offices, cafeterias, storage rooms, toilet rooms, etc to meet the intent of the 2018 IECC.

The existing exit lighting has been retrofitted to LED.

The existing site and exterior lighting is HID, older and should be replaced. There are not sufficient fixtures for the parking lot and drop off area. The existing utilize flood style HID lamps. They should be replaced with new LED fixtures that are dark sky friendly and have full cut-off to avoid any light pollution violations. There are dark areas in the parking lot that need light for security and safety reasons, add new poles and fixtures.

GENERAL POWER - The existing classrooms have already had technology and power upgrades. The power here is sufficient. One new receptacle and new circuit to be added to each learning ceiling space ceiling for projector.
INFORMATION SYSTEM – This system needs to be evaluated by a technology consultant.

INTERCOM/PA- The existing intercom system is a Rualand system utilizes the phone system to make pages. Each teacher has the ability to call the front office or out of the building.

CLOCK SYSTEM - There is an existing atomic clock system. Many clocks have already failed and been replaced with battery operated clock atomic clocks. A new master clock should be added in the main Office. New Wireless clocks should be added to the facility where required by the district.

FIRE ALARM – The fire alarm system here is new and meets all current codes.

SECURITY – These systems needs to be evaluated by a technology consultant. Card access system is a few years old.
Lester School

**ELECTRICAL SYSTEMS**

**SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION** - The existing building has one electrical service located in the electrical room. It is served from (1) pad mounted utility company transformer located just outside the electrical room. This existing service is rated at 1200 amps 208/120V, 3 phase 4 wire, Wye and Delta Services. It utilizes switch/fuse type distribution. It is in fair condition. The Delta service causes a high leg on the “B” phase. The delta switchboard is fair condition. It has a secondary isolation transformer located next to it to provide 208 Wye power to the building loads that require it. There is a small fused emergency service located in the mechanical room, it is not metered separately and doesn’t appear to be tapped ahead of the main breaker. It is rated at 208/120V, 3 phase 4 wire, 100 Amps. The building does have newer panelboards served off the isolation transformer. These panels have internal surge protection that is functioning properly.

Recommendation: Add a new transformer. Replace the existing Delta electrical service in its current locations with a new Wye Service. The service should be increased in size to accommodate the addition of new cooling. (excluding the small emergency service). It should be replaced by the generator listed below.

New distribution panels and branch panels should be replaced and additional panels added to accommodate new circuiting in classrooms for future computer, printer, projector or smart-board loads. All panels serving computer equipment should have new Surge Protections Devices added to them.

This building does not have an emergency generator.

We recommend (1) 80KW natural gas emergency generator to serve life safety systems, emergency/exit lighting, IT equipment, refrigerators/freezers, boilers, hot water pumps and sump pumps.

**LIGHTING** - The existing general interior lighting thru-out the facility is T8 fluorescent lighting. The lighting is controlled by wall switches. Lighting levels were measured in most areas and met IES recommendations.

Recommendation: Replace all lighting with new dimmable LED type fixtures. Add daylight and occupancy sensors to control the lighting in classrooms, corridors, offices, cafeterias, storage rooms, toilet rooms, etc to meet the intent of the 2018 IECC.

The existing exit lighting has been retrofitted to LED.

The existing site and exterior lighting is HID, older and should be replaced. There are not sufficient fixtures for the parking lot and drop off area. The existing utilizes flood style HID lamps. They should be replaced with new LED fixtures that are dark sky friendly and have full cut-off to avoid and any light pollution violations. There are dark areas in the parking lot that need light for security and safety reasons, add new poles and fixtures.
**GENERAL POWER** - The existing classrooms have already had technology and power upgrades. The power here is sufficient. One new receptacle and new circuit to be added to each learning ceiling space ceiling for projector.

**INFORMATION SYSTEM** – This system needs to be evaluated by a technology consultant.

**INTERCOM/PA** - The existing intercom system utilizes the phone system to make pages. Each teacher has the ability to call the front office or out of the building.

**CLOCK SYSTEM** - There is an existing hard wired Simplex master time clock system located in the existing office area that is hard wired and outdated. Many clocks have already failed and been replaced with battery operated clocks.

A new master clock should be added in the main Office. New Wireless clocks should be added to the facility where required by the district.

**FIRE ALARM** - The existing fire alarm panel is a Notifier zoned type panel located in a the mechanical room. This panel and it’d devices are outdated and need to be replaced. The fire alarm annunciator panel near main entrance needs to be replaced.

Recommendation: The new Fire Alarm System should include a new Voice/Mass Notification type addressable Fire Alarm Control Panel installed in the mechanical room. It shall accommodate initiating devices and initiating circuits. New addressable devices will be installed thru-out the entire facility, including but not limited to: speakers, strobes, pull stations, smoke detectors, heat detectors, CO detectors, valve supervisory switches, flow switches, magnetic hold-open devices NAC panels, etc. where required. ADA approved devices should be provided in all accessible spaces. Provide a new Voice/Mass Notification type alpha/numeric Fire Alarm Annunciator Panel located in the vestibule at the new main entrance.

**SECURITY** – These systems needs to be evaluated by a technology consultant. Card access system is a few years old.
4.2 | Electrical Building Evaluations

Pierce Downer School

ELECTRICAL SYSTEMS

SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION - The existing building has one electrical services located in the mechanical room. It is served from (1) pad mounted utility company transformer located just outside the mechanical room. This existing service is rated at 600 amps 208/120V. 3 phase 4 wire, Wye and Delta Services. The Delta service causes a high leg on the “B” phase. The delta switchboard is old and original to the building. It has a secondary isolation transformer located next to it to provide 208 Wye power to the building loads that require it. There is a fused emergency service located in the mechanical room, it is not metered separately and appears to be tapped ahead of the main breaker. It is rated at 208/120V. 3 phase 4 wire, 100 Amps. The building does have newer panelboards served off the isolation transformer. These panels have internal and external surge protection that is functioning properly.

Recommendation: Add a new transformer. Replace the existing Delta electrical service in its current locations with a new Wye Service. The service should be increased in size to accommodate the addition of new cooling. (excluding the small emergency service). It should be replaced by the generator listed below. New distribution panels and branch panels should be replaced and additional panels added to accommodate new circuiting in classrooms for future computer, printer, projector or smart-board loads. All panels serving computer equipment should have new Surge Protections Devices added to them.

This building does not have an emergency generator.

We recommend (1) 80KW natural gas emergency generator to serve life safety systems, emergency/exit lighting, IT equipment, refrigerators/freezers, boilers, hot water pumps and sump pumps.

LIGHTING - Recommendation: Replace all lighting with new dimmable LED type fixtures. Add daylight and occupancy sensors to control the lighting in classrooms, corridors, offices, cafeterias, storage rooms, toilet rooms, etc to meet the intent of the 2018 IECC.

Recommendation: Add occupancy sensors to control the lighting in classrooms, corridors, offices, cafeterias, storage rooms, toilet rooms, etc.

The existing exit lighting has been retrofitted to LED in some areas and is some areas use CFL. Both are acceptable.

The existing site and exterior lighting is HID, older and should be replaced. There are not sufficient fixtures for the parking lot and drop off area. The existing utilize flood style HID lamps. They should be replaced with new LED fixtures that are dark sky friendly and have full cut-off to avoid any light pollution violations. There are dark areas in the parking lot that need light for security and safety reasons, add new poles and fixtures.

GENERAL POWER - The existing classrooms have already had technology and power upgrades. The power here is sufficient. One new receptacle and new circuit to be added to each learning ceiling space ceiling for projector.

INFORMATION SYSTEM – This system needs to be evaluated by a technology consultant.
INTERCOM/PA - The existing intercom system utilizes the phone system to make pages. Each teacher has the ability to call the front office or out of the building.

CLOCK SYSTEM - There is an existing hard wired Simplex master time clock system located in the existing office area that is hard wired and outdated. Many clocks have already failed and been replaced with battery operated clocks.

A new master clock should be added in the main Office. New Wireless clocks should be added to the facility where required by the district.

FIRE ALARM - The existing fire alarm panel is a Simplex 4005 zoned type panel located in the mechanical room. This panel and it’s devices are outdated and need to be replaced. The fire alarm annunciator panel near main entrance needs to be replaced.

Recommendation: The new Fire Alarm System should include a new Voice/Mass Notification type addressable Fire Alarm Control Panel installed in the mechanical room. It shall accommodate initiating devices and initiating circuits. New addressable devices will be installed thru-out the entire facility, including but not limited to: speakers, strobes, pull stations, smoke detectors, heat detectors, CO detectors, valve supervisory switches, flow switches, magnetic hold-open devices NAC panels, etc. where required. ADA approved devices should be provided in all accessible spaces. Provide a new Voice/Mass Notification type alpha/numeric Fire Alarm Annunciator Panel located in the vestibule at the new main entrance.

SECURITY – These systems needs to be evaluated by a technology consultant. Card access system is a few years old.
**Whittier School**

**ELECTRICAL SYSTEMS**

**SERVICE ENTRANCE SWITCHBOARDS AND DISTRIBUTION** - The existing building has one electrical services located in the basement electrical room. It is served from (1) pad mounted utility company transformer located just outside the electrical room. This existing service is rated at 800 amps 208/120V. 3 phase 4 wire, Wye and Delta Services. It utilizes switch/fuse type distribution. It is in fair condition. The Delta service causes a high leg on the “B” phase. The delta switchboard is in fair condition. It has a secondary isolation transformer located next to it to provide 208 Wye power to the building loads that require it. There is a small fused emergency service located in the mechanical room, it is not metered separately and doesn’t appear to be tapped ahead of the main breaker. It is rated at 208/120V. 3 phase 4 wire, 100 Amps. The building does have newer panelboards served off the isolation transformer. These panels have internal surge protection that is functioning properly.

Recommendation: Add a new transformer. Replace the existing Delta electrical service in its current locations with a new Wye Service. Provide circuit breaker type service entrance switchboard. The service should be increased in size to accommodate the addition of new cooling. (Excluding the small emergency service). It should be replaced by the generator listed below. New distribution panels and branch panels should be replaced and additional panels added to accommodate new circuiting in classrooms for future computer, printer, projector or smart-board loads. All panels serving computer equipment should have new Surge Protections Devices added to them.

This building does not have an emergency generator.

We recommend (1) 80KW natural gas emergency generator to serve life safety systems, emergency/exit lighting, IT equipment, refrigerators/freezers, boilers, hot water pumps, and sump pumps.

**LIGHTING** - The existing general interior lighting thru-out the facility is T8 fluorescent lighting. The lighting is controlled by wall switches. Lighting levels were measured in most areas and met IES recommendations.

Recommendation: Replace all lighting with new dimmable LED type fixtures. Add daylight and occupancy sensors to control the lighting in classrooms, corridors, offices, cafeterias, storage rooms, toilet rooms, etc to meet the intent of the 2018 IECC.

The existing exit lighting has been retrofitted to LED.

The existing site and exterior lighting is HID, older and should be replaced. There are not sufficient fixtures for the parking lot and drop off area. The existing utilize flood style HID lamps. They should be replaced with new LED fixtures that are dark sky friendly and have full cut-off to avoid and any light pollution violations. There are dark areas in the parking lot that need light for security and safety reasons, add new poles and fixtures.
GENERAL POWER - The existing classrooms have already had technology and power upgrades. The power here is sufficient. One new receptacle and new circuit to be added to each learning ceiling space ceiling for projector.

INFORMATION SYSTEM – This system needs to be evaluated by a technology consultant.

INTERCOM/PA: The existing intercom system utilizes the phone system to make pages. Each teacher has the ability to call the front office or out of the building.

CLOCK SYSTEM - There is an existing hard wired Simplex master time clock system located in the existing office area that is hard wired and outdated. Many clocks have already failed and been replaced with battery operated clocks. A new master clock should be added in the main Office. New Wireless clocks should be added to the facility where required by the district.

FIRE ALARM - The existing fire alarm panel is a Simplex 4005 zoned type panel located in a closet off the main corridor. This panel and its devices are outdated and need to be replaced. The fire alarm annunciator panel located in the main office needs to be replaced and relocated to the main vestibule. Recommendation: The new Fire Alarm System should include a new Voice/Mass Notification type addressable Fire Alarm Control Panel installed in the mechanical room. It shall accommodate initiating devices and initiating circuits. New addressable devices will be installed thru-out the entire facility, including but not limited to: speakers, strobes, pull stations, smoke detectors, heat detectors, CO detectors, valve supervisory switches, flow switches, magnetic hold-open devices NAC panels, etc. where required. ADA approved devices should be provided in all accessible spaces. Provide a new Voice/Mass Notification type alpha/numeric Fire Alarm Annunciator Panel located in the vestibule at the new main entrance.

SECURITY – These systems needs to be evaluated by a technology consultant. Card access system is a few years old.
4.3 Initial Total Budget Estimate by School: $244.8M

An initial total budget estimate was developed based on a component-by-component analysis of each key ingredient, a broad understanding of each building area effected, and consideration of how all components are inter-related. Due to the conceptual nature and stage of the process, at this time initial budget estimates where calculated on a per square foot basis stemming from industry-standards. Overall, the initial total budget estimate represents a planned breakdown of program elements and will provide a guide (and serve as parameters) to how the final designs evolve. When full design efforts are complete, work will be put out to bid and awarded to the lowest responsible construction bidders through a competitive, public bidding process.

** Due to the conceptual level of this process, initial total budget estimate excluded any abatement that may be disturbed and require removal.

**Maintenance ($115.6M)**

- Site – playground/ field/ detention cleaning
- Roofing
- Misc. Building Envelope
- Electrical upgrades
- HVAC boilers, misc. repairs to equipment/ systems
  *most of the HVAC replacement needs across facilities will occur as part of the quality of indoor environments below
- Plumbing
- Misc. interior improvements bathroom remodels, door hardware, ADA signage

**Safe & Healthy Environments ($60.6M)**

- Secure Vestibules
- Quality indoor environments with sufficient ventilation, temperature, and natural light

**21st Century Learning ($13.9M)**

Focus on elementary schools when 6th grade shifts out and frees up space in buildings

- flexible furniture in existing classrooms
- renovate approximately two classrooms

**Grade Reconfiguration plus 21st Century Learning ($54.7M)**

Focus on middle school buildings when 6th grade shifts in - increasing building population

- Site – detention/ stormwater control
- Addition
- Partial Renovation
Overall, the District facilities are in fine condition and should remain so with regular maintenance and upkeep. The physical condition assessment identifies those items which should be paid close attention to in the near future. Additionally, these facilities have the potential to accommodate 21st century learning in the future. However, if the District were to tear-down and rebuild a new school building in Downers Grove similar in size to the proposed square footage of Herrick Middle School, in 2019 dollars, the project budget estimate would range between $450/sf - $500/sf project cost. Therefore, it could be presumed a new middle school project cost range to be between $72.9M - $81.0M. This initial study doesn’t take into consideration logistical phasing that will need to evaluate or specific site premiums that may be encountered for a new school to be constructed.
4.4 | Administrative Buildings Scenarios

**Administrative Service Center**

Address: 1860 63rd Street  
Built: 1975  
Additions: None  
Site Area: 8.3 Acres  
(Shares site with Indian Trail School)  
Current Building SQ. FT.: 6,435 SF

The District currently houses its administrative functions in the Administrative Service Center (ASC) and Longfellow Center. The ASC shares a site with Indian Trail Elementary School at the west end of the District. Build in 1975, the administrative offices are in this non-descript facility. While the ASC facility was originally intended as a temporary administration building solution it still today serves as office space for a portion of the District Administration staff. At approximately 6,500 sf, space is restricted to office functions for a portion of the District and little room is available for large group meetings. As a result, the remain administration staff, board meetings, and professional development seminars are conducted at the Longfellow Center where there is designated space for such activities.

**Longfellow Center**

Address: 1435 Prairie  
Built: 1928  
Additions: 1955  
Site Area: 3.2 Acres  
Current Building SQ. FT.: 14,813 SF  
Location Map:

Longfellow Center is positioned in the heart of the District. Built in 1928, Longfellow is the oldest facility in SD 58. Its decorative exterior masonry and interior woodwork are indicative of the quality craftsmanship of its era and exudes a charm and character not often found in more contemporary facilities. However, the age of this facility will require a substantial outlay of capital funds to keep it operational. At approximately 14,800 sf, Longfellow accommodates office space for administrative staff, a large group room, and central warehousing storage.
Understanding the disconnection between administrative staff yields inefficiencies within District resources along with the aging facilities, the following potential scenarios are being evaluated for your consideration:

**SCENARIO 1**

Lease 8,000 sf office space and renovate the existing 6,500 sf ASC building to accommodate the Buildings and Grounds department including warehouse space.

- Budget Range (Dollars/Square foot): $154/sf - $218/sf
- Total Project Budget Range: $2.2M - $3.2M

**SCENARIO 2**

Add a two-story 8,000 sf office addition on to the existing ASC and modify the existing 6,500 sf ASC building for operational use.

- Budget Range (Dollars/Square foot): $259/sf - $334/sf
- Total Project Budget Range: $3.8M - $4.8M

**SCENARIO 3**

Purchase and renovate existing storefront into 18,000 sf office space, 3,000 sf of warehouse space, with minimum of 75 parking spaces.

- Budget Range (Dollars/Square foot): $161/sf - $204/sf
- Total Project Budget Range: $3.4M - $4.3M

**Note for all scenarios:**

- Budget estimates associated with the sale or lease of Longfellow Center property are not included in these scenarios.
- Budget estimates do not include the purchase or lease of any property.
- All values are based on 2019 dollars and would require budget adjustment for actual timing.
- These values are preliminary high-level concept budgets more investigation on direct impacts of specific sites construction premiums will need to be evaluated and potentially added to the total project budget.