

A Framework for Decision Making

Norwalk Facilities Plan Study



March 2, 2021



Norwalk Public School District Attn: Dr. Alexandra Estrella, Superintendent 125 East Avenue Norwalk. CT 06851

RE: Norwalk Facilities Plan Study (DRAFT)

Dear Dr. Estrella & The Norwalk Public School Leadership Team:

"A Framework for Decision Making" for the Norwalk Facilities Plan Study was completed on June 4, 2021 to provide the district with a forward-facing summary of district enrollment projections, capacity, physical condition, and educational adequacy of the district buildings to support the educational vision and the funds needed to keep the district assets in good operating condition. The focus is framed by three key components:

Investing in You: Based on more than 50 meetings with district leadership, staff, business leaders, and community we have crafted scenarios for investment specific to your district culture and profile. "A Framework for Decision Making" is intended to serve as a living document that will guide the District in making the right decisions to support priorities in the years to come. Research, data, and community input informed this process. It was iterative, and proceeded by collecting data, posing questions, hosting co-lab workshops, developing ideas, and vetting those ideas with district leadership and the Board of Education, principals, teachers, students and community stakeholders. The process repeated to ultimately develop recommended scenarios to consider for advancement based on funding realities.

Research Informed Design: Based on DLR Groups primary research on student and teacher engagement, we have utilized criteria developed from that research to ensure that everything from being a community resource to being flexible and adaptable, to being thermally, visually and acoustically comfortable, to including sustainable strategies and technologies are included in the effort to noticeably improve student attendance and faculty engagement and therefore, outcomes. The dynamics of instructional space is undergoing significant changes; and our forward-thinking approach to 21st Century design embraces the diversity of student learners with project-based learning, technology-rich platforms and flexible learning environments to accommodate a variety of student engagement configurations.

Long-Term Maintenance and Operating Costs: Life cycle analysis balancing today's capital cost for investment versus long-term maintenance costs are shifting client decisions to maximize every dollar invested versus the return on that investment, allowing for more dollars to be focused on the classroom needs instead of building operations. The physical assessment of every school facilities was observed and analyzed as part of this overall process.

We have enjoyed working with the Norwalk Public Schools District and hope to continue the relationship for years to come.

Sincerely,

Brooks Fischer, AIA

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Acknowledgments

The work presented in this document reflects the dedication and investment made by many contributors to this process. Newman/DLR Group appreciates the continued focus and support of each contributor:

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Contents

I. INTRODUCTION

II. EXECUTIVE SUMMARY

Overview

Recommendations Funding Streams

III. A DATA DRIVEN PROCESS

A Description of Intent Meetings/Community Engagement/Partnerships

IV. VISIONING

An Intro to Visioning Workshop Teaching & Learning in 2020 Educational Adequacy Sustainability & Resiliency

Safety & Security

Technology

FFE

Special Programs

Pre-K

Outdoor Learning

CTE Programs

Virtual Tours

V. THE STRANDS

Enrollment Projections Demographics/Growth Capacity Diagrams Educational Adequacy Diagrams Facilities Assessment Summary Diagrams VI. GLOSSARY VII. COST SUMMARY APPENDIX

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I. INTRODUCTION

Introduction

Norwalk is a city located in southwestern Connecticut, in southern Fairfield County, on the northern shore of Long Island Sound. Norwalk lies within both the New York metropolitan area, as well as the Bridgeport metropolitan area. Norwalk was settled in 1649, and is the sixth most populous city in Connecticut. According to the 2010 United States Census, it has had a population of 85,603; with an estimated population of 88,816 in 2019.

It is a city that is blessed with multiple communities that run north to south and populate everything from the southern shores of Long Island Sound to the bucolic northern countryside communities located at Silvermine Dual Language Magnet School and Cranbury Elementary School. This has led to a wide variety of school cultures and contexts.

About Norwalk Public Schools

Norwalk Public School's mission is to create a student-focused culture that motivates, challenges and supports each individual student to his or her highest levels of achievement. There are over 1,000 dedicated professionals work closely with more than 11,000 students in 19 schools. The Norwalk Public Schools district is made up of one inclusive pre-school, 12 elementary schools, four middle schools, and four high schools made up of two comprehensive high schools and two specialty high schools which include the Center for Global Studies, an inter-district high school magnet program, and P-TECH Norwalk, a collaboration between NPS, Norwalk Community College and IBM.

The district's rich diversity is a key part of its strength. Norwalk students come from a variety of backgrounds, with more than 38% of students speaking a second language at home. The Norwalk Public School system delivers a learning experience that is rich in cultural diversity, as well as one that is reflective of the global society in which our graduates will work and live. The vision is that all students will graduate prepared to reach their highest potential for college, career and life-long success in a globally competitive society.







Educational Policy & Vision:

A quote from the 2016-19 Strategic Plan identified that: Norwalk Public Schools is [. . .] The most successful city school system in Connecticut. Norwalk students as a whole exceed state average achievement while high need students have the smallest achievement gap. Students' needs and interests are met through a wide range of school and program choices that promote diversity and broaden achievement. All students are taught by exemplary educators in nurturing, safe, and attractive schools. Students read on grade level by end of grade 3, 8 leave 8th grade equipped to do rigorous high school work and graduate from high school college and career ready.

With the appointment of Dr. Alexandra Estrella as Superintendent in July of 2020, Norwalk Public Schools embarked on a process to redefine their strategic plan. They defined the resources required to accomplish an aspirational vision for the future that weaves their educational vision with schools, fostering a vision where all students can succeed and stakeholders are embraced as core contributors to an equitable community. It is with that goal, that the Facilities Plan Study was initiated.





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II. EXECUTIVE SUMMARY

A New Framework for Education School as Ignitor

At this writing, we are 20 years into the 21st century. Yet, too many schools in the U.S. and its territories operate and teach consistent with antiquated (Industrial Age)¹ methodologies, and our spaces for learning are often designed to reflect these requirements.

In fact, recent archaeological digs (a 4,000 years old Sumatran dig) have uncovered row-by-column marble seating areas with a desk at the front of the rectangular area. These were so iconic, the archeologist^{2,3} labeled the find the classroom, as it represented the predictable layout for an educational setting. No other profession has remained so unchanged! But, change is on the horizon and some district schools are currently changing more rapidly than ever before!



State of the Schools: 2020 Annual Report to the Community NPS



Field advancements in technology have dramatically impacted the rate of change in the tools we use, the way we communicate, and the methods we might use for teaching and learning. Equally, advances in developmental brain research⁵ provide insights supporting the kinds of relationships and learning opportunities needed to promote children's well-being, healthy development, and transferable learning conditions. Research further extends knowledge that supporting the whole child,⁶ is critical for life-long learning to evolve. Engagement is also recognized as a high predictor of success⁷ both academically and professionally, and there is correlated evidence that the design of space impacts the ability for individuals to engage; from both the students' and educators' perspectives^{8,9}.

We know too that COVID-19 will further push the dialogue of generating an appropriate balance of human connections supporting social, emotional and behavioral development with virtual connections leveraging the availability of long-distance learning and resources.

Evidence relative to blended/flipped-learning opportunities has shown a high level of increased student engagement and supported personalized learning.¹⁰

Norwalk Public Schools have a unique moment in their development of the new Norwalk High School/P-TECH Norwalk, an expanded Columbus Magnet, a new Elementary School in South Norwalk to address both capacity, culture and curriculum in order to meet every student where they are.



Learning is experienced. Traditionally, these experiences have been housed in a box called a classroom with teachers owning that space. These types of facilities support passive learning experiences and remain constant or rigid. Instead, a more holistic, active learning approach has driven changes in the design of built educational environments that work to support improved learning outcomes by explicitly, and intentionally incorporating empirical evidence to support design decision making.

Evidence from some areas include: (a) sensory inputs,¹¹ (b) biophilic tenets (i.e., natural daylight¹²; views to the outdoors thus connecting humans to nature¹³), (c) indoor environmental qualities (e.g., appropriate effective ventilation that reduces CO2 levels¹⁴), (d) movement (e.g., activity permissible classrooms¹⁵) and brain science¹⁶, and more.

School as Ignitor



To fully enable the potential of human capital in Norwalk, school must become a place that ignites passion for lifelong learning to serve each child holistically.

School as Community



The schools must build community within each school and within Norwalk Public School District through an equitable use of resources grounded in the local context.

School as Nexus



Only then will schools become a nexus for an economic return using integrated best practices, improved

operations, and the use of technology to track impact. A nexus becomes a two-way connection between the school system and the broader community. The facilities plan process generated these important questions:

- How will all citizens of Norwalk be part of this conversation?
- How might this opportunity set a precedent both locally/ regionally and nationally to reinvent education and educational facilities that leverage both economic and social returns on those investments, supporting real learning?
- Can school be the "ignitor?"







A New Framework for Education School as Ignitor

School as Ignitor

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Research links high levels of engagement for both students and teachers as necessary to improved outcomes¹⁷. However, a Gallup¹⁸ poll found that across the United States, 70% of teachers work with some degree of active disengagement and high levels of stress. Miller, et al (2020)¹⁶ challenged the questions Gallup was asking. His team wondered if the results really were about active disengagement, or about caring too much resulting in burnout? In either case, taking care of teachers is important. But engagement levels change over time. Why?

We know students start with high degrees of engagement in early grades, however it slowly declines to 60% of 12th grade students becoming chronically disengaged¹⁹. Levels of student and teacher engagement must be improved.

Recognizing this challenge, DLR Group partnered with Dr. Lennie Scott-Webber (to act as a third-party researcher) on an engagement study. The goal was to develop post-occupancy survey tools to answer the research question:

Can we demonstrate that the design of the built environment for grades 6-12 impacts student academic engagement levels? *

This multi-year effort provided DLR Group with two proprietary instruments to be used post-occupancy:

- (1) Student Engagement Index[™] (SEI[™]), and
- (2) Teacher Engagement Index[™] (TEI[™]).

* It was important to understand this question from both student and teacher perspectives, and look at two distinct areas of the building. Area one was deemed, "the classroom/or primary learning space," and area two was the "overall' building.

A formal scientific research protocol was used. It included having the research design and research ethics reviewed by a third-party Institutional Review Board, and each survey developed was tested in three phases to ensure reliability and validity of each survey instrument.

Schools designed by DLR Group across the USA were used as convenience samples. The cohorts of study moved from grades 9-12 for phases 1-3, and to 6-8 for phase 4. Each effort was submitted for peer-review; now published in several journal articles^{20,21,22,23} along with numerous conference presentations sharing the findings.

The correlation that space impacts student academic engagement levels held a high rate of statistical significance (p>.0001). These studies now included nearly 7,000 students and 800 educators – no small study.

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Data has consistently shown the highest indicators of engagement correlate with the following key findings:

From the students' perspective...

The more students perceived that the school values creativity, collaboration, and critical thinking (the 4Cs), then they believed they would have higher levels of academic engagement – higher learning outcomes.

The more students see the design of their classrooms as supportive of mental focus and physical comfort and wellbeing, the higher their level of engagement was likely to be.

The students' comfort or discomfort was not always apparent to teachers; students may be unable to move seats, or change postures, or alter the temperature in the room when uncomfortable, but they still experience it internally as a distraction from learning.

The students realized they needed to move around physically to be actively engaged in their learning process. When that was possible, they indicated they would have higher engagement levels.

Student engagement was more strongly associated with satisfaction with the building's design than was the teachers'.

From the teachers' perspective...

Teachers also indicated that the design of the built space made a difference in their students' academic levels of engagement.

Teachers were asked about how the designs supported them in their work. Although they recognized design was important, they gave a higher priority to the need for a good work culture from the organization itself. The key here is that school is the place where teachers go to work, and therefore the culture is more meaningful to them.





A New Framework for Education School as Ignitor

A Changing Educational Vision

To support Norwalk Public School District initiative to better define their curricular vision, DLR Group scheduled a number of master planning workshops to focus on the needed alignment between curriculum and architecture.

During the facilities planning workshops, three priorities to align space and curriculum rose to the top. These included providing more:

- 1) Consistent implementation of inquiry-based learning³⁷
- 2) Special interest courses for improved student engagement, and
- 3) Applied learning opportunities supporting life and career successes.

Consistent implementation of inquiry-based learning:

Learning designed around inquiry is a more authentic form of learning that includes individual research, group collaboration, hands-on exploration, and culminates with clear evidence of learning.

These different activities require new spaces of varying sizes and qualities. These spaces will be implemented in new and renovated campuses organized in groups, called "learning suites", to enable positive relationship building.

Special interest courses for improved student engagement:

Additionally, the creation of the Center of Global Studies and P-TECH Norwalk High School/P-TECH Norwalk will supplement the comprehensive high schools by providing smaller scaled, applied learning experiences.

Learning is constant and there are multiple pathways to follow.







A New Framework for Education School as Ignitor

School as Community



Community is defined as "the people of a district considered collectively, especially in the context of social values and responsibilities."

It is a basic human right to have the opportunity to learn. However, when windows are no longer operable and block natural light and ventilation, furniture and technology are outdated or highly damaged, indoor air quality is poor due to stagnant air or the only teaching method offered is didactic, then effective learning is diminished, or at worst shut down³⁸.

The Engagement Indexes (SEI/TEI) findings helped generate the space curricula alignment indicator's ten tenets, which were used to evaluate Norwalk campuses. The evaluations of these have important implications and opportunities for future teaching and learning, as well as new design solutions for the built environment. Norwalk schools may become a community resource with shared facilities, with zoned public use in easily secured areas. New and renovated campuses will invoke a sense of pride and engage students with the promotion of strategic color palettes, light, and displays of learning.

Flexible and innovative learning environments will allow deep learning to happen in varying forms, settings, and groupings, and also be able to adapt to changing educational delivery methods and practices. Comfortable, healthy, and energy efficient facilities support user engagement and save money.

To reinforce the collective community, this master plan ensures there is a balance in the quality of resources between current schools and new schools.

This priority on equity is founded in the cultural, economic, and social framework of the Norwalk communities. Stakeholders were engaged in the dialogue to best understand current and future needs.

It was also deemed a priority that the built environment to respond appropriately to environmental concerns, and that the skills, expertise, and voices of local businesses are leveraged: The school will become the community's nexus.





School as Nexus



If schools are nexus points shaping our communities, which in-turn shape our schools, then the following methods should be implemented to propel the Norwalk Public School District to become future focused learning settings. First, the health, safety, and security of our students, teachers, and staff are a priority. Second, best practices require that Norwalk must right-size the amount of space and resources allocated to current and projected enrollments. This requirement means the team took a hard look at population movement, patterns, and needs.



New and modernized schools will employ integrated design, assessment, operation and management principles. The recommendations and strategies for sustainability and resiliency are being proposed within the context of the life span and relative ability of components of a building to change over time.

This concept is known as the Six Layers of Change defined as: Site, Structure, Skin, Systems, Space Plan and Stuff. Each layer will be planned with a long view to the future and an understanding that these school facilities will be subjected to natural hazard events such as storms with high winds and flooding.

Likewise, the design will support indoor-outdoor connections and the natural environment. The short-term layers will be able to adapt and change in response to the curriculum, learning needs, and encourage collaborations and connections between student-to-student, student-to-teacher, and teacher-to-teacher ones.

COVID-19 experiences also made educational entities realize a seamless, blended learning/flip program is also important to integrate. These changes will happen daily as well as change that may happen in 10-15 years as pedagogy or the student population changes. Technology will be used to implement ongoing assessments to provide factual and current data on the effectiveness and impact of practice.





A New Framework for Education School as Ignitor

Summary

In summary, the guiding principles of this Norwalk Public Schools Facilities Plan Study are:

- Our youth are pushing, and the workforce is pulling education and educational facilities **must change** to meet those needs
- Educational equity does not mean parity it means "meeting every student where they are"
- To balance these aspirations and the budget the Facilities Plan Study provides a framework for decision-making for the next 20 years

These were developed as a result of the integrated efforts of multiple initiatives that are engaging district stakeholders in tandem, such as the strategic operations planning and a demographic projections study, so that each can benefit from the collective efforts and engagement to generate more informed plans and recommendations. Newman/DLR Group's team will deliver on these principles by igniting a passion for learning for all, building community within the school and between schools, creating a nexus of economic return, and incorporating research evidence to inform design solutions.

This document provides an overall framework that can be phased over time to revitalize and provide future-facing educational facilities that match the aspirations of all Norwalk, CT.

In the following pages you will learn about the process that students, community members, government officials, teachers, principals, and district staff participated in to discover, develop, and define this framework.

The data-driven process started with campus walks with principals to assess the current facility inventory and each campus' appropriateness for the desired future-facing learning. Visioning workshops empowered participants to define goals for teaching and learning, technology, furniture, sustainability, and safety and security. Advancement opportunities synthesizes the information collected and applies solutions that provide the District with future-facing facilities that allow for projected growth rates over the next decade. Cost summary and schedule provide an overview of funding requirements in a phased sequence.





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A New Framework for Education Observations

From the start, the Norwalk School District Facilities Plan Study was aspirational. **How do you take multiple data points across enrollment projections, capacity, facilities conditions and educational adequacy assessments and create from them a robust framework for decision-making?** These data points were further informed by multiple initiatives - studying and updating the strategic plan, applying policies on equity, and engaging in workforce development and community engagement.

[I] hope when we go back to school there will be the same kind of flexibility I have at home online. If I can finish my work in a few hours, I should be able to chose what I do with the rest of my school time.

Middle School Student, Norwalk Public Schools

Bottom Co-Lab # 2 "Day in the Life" of Students



The first step for the Facilities Plan was to set up a series of meetings and Co-Labs (workshops) to develop and confirm the shared vision of all stakeholders. Six Co-Labs and additional topic focused meetings, which included over 250 people all told, were scheduled over the **12-week study period** to ensure all voices could be heard and aligned into a shared vision of how architecture and design can enable the District's educational vision. Key components included:

- Teaching + Learning in an Inquiry Based Curriculum
- Culture and Context that defines "a Day in the Life" of students and teachers
- Virtual Tours + Benchmarks that support a common architectural language
- Sustainability + Resilience VALUES Framework that integrates user experience with building performance to identify top priorities for stakeholders
- Safety + Security that looks at the interdependence of culture, environment, and technology to achieve a safe environment
- Technology as an integrated teaching tool
- Furniture, Fixtures + Equipment as key elements in flexibility and adaptability within any space
- **CTE/Academic Pathways** to engage for the future of students and the local economy



The second step was to set the parameters or "Strands" that are the focus of our data-driven process. Section III – Data Driven Process is the launching point that describes this process and the data points collected. Section IV - Visioning defines the parameters of future-facing learning. Finally, Section V – The Strands is a summary of the data collected and synthesized to inform the recommendations for the Norwalk Facilities Plan Study. An overview of these recommendations are as follows:

Enrollment Projections: The overall population in Norwalk communities continues to grow albeit at a reduced rate and at varying degrees in the diverse neighborhoods that make up the District. Long-term growth is anticipated within the South Norwalk neighborhoods as well as in the high school cohorts. The current population for ES students is 5014 with a peak enrollment of 5394 estimated in 2026. The current enrollment for MS is 2644, which is subsequently expected to peak in 2029 with a projected enrollment of 2665. The current enrollment for HS is 4023 with a projected growth to 4,233 in 2030. Construction of the new Norwalk HS/P-TECH Norwalk has been programmed to accommodate the long-term projected need for high school students.

Pre-K at Every Elementary: The District's vision for the future is to have at least one Pre-K classroom in every elementary school that currently has none. Consistent with the data that supports the long-term positive impacts of early childhood learning, the strategic decision to strive for universal Pre-K in Norwalk will have a significant impact on overall available capacity for grades K-5. Creating an additional 215 seats for Pre-K students in existing schools' classrooms will require the creation of additional K-5 seats elsewhere in the district to meet the projected future enrollment without over-crowding of classrooms.



Top Kearney Early Childhood and Education Center Kearney, MO

Bottom Norwalk Early Childhood Center



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Reallocation/Growth: Assuming an urban approach to development, there is adequate room on the Columbus Magnet site to add another Pre-K-8 that could benefit from shared resources such as the gymnasium, commons, and outdoor learning areas. This would alleviate the need for the City of identifying and purchasing additional land, while also providing seats where the need is the greatest. The District is progressing with a transportation analysis to understand the potential of a new South Norwalk school and how it could reduce the need for busing students outside their school zone.

It is the Newman/DLR Group team's recommendation that enrollment projections are considered both in terms of numbers, but also in terms of distribution. Students in South Norwalk are a growing population that need to be carefully considered. The Facility Plan process included looking at concept options that would provide a new Columbus Magnet School adjacent to the existing Columbus Magnet School site and expand and "renovate as new" the existing Columbus Magnet facilities to accommodate a new South Norwalk Pre-K-5 on the Columbus Magnet site. The options for the South Norwalk PK-5 ranged from 290 without additions to 550 with the largest proposed addition. The site for a combined Columbus Magnet and South Norwalk PK-5 are still under consideration by the city.

Capacity: Throughout the Facilities Plan Study, there was significant dialogue with the team at SLR as they progressed on a District Enrollment Study to facilitate the alignment of their findings and the recommendations proposed in this study. Based on calculated student capacities, which are based on both size of classrooms and maximum numbers of students by contract, the 17 Elementary and Middle Schools (the existing 16 + the identification of Lower Ponus as separate from Upper Ponus) are sized to accommodate enrollment projections for the foreseeable future if no changes are made to include Pre-Kindergarten at all elementary schools. Meeting the goals of the Pre-K initiative was identified as a District goal. The projected

increase in Pre-K-5 enrollment of 192 students would reduce capacity by approximately 9 classrooms district-wide if no additional classrooms are built. These reductions would be offset by creating the new Pre-K-5 school in South Norwalk. The high schools are sized to accommodate projected enrollments assuming forward-facing scheduling.

Key to our recommendations is the establishment of additional project-based learning break-out areas in all schools, as well as the expansion of potential pathway/CTE choices that support appropriate career and college decisions in Magnet, Middle, and High Schools.

Something that should come next is a little bit of creativity that goes along with experience. You should be creating whatever experience you are going into.

High School Student, Norwalk Public Schools

Bottom Capacity floor plan diagram









Educational Adequacy: The twenty schools, including the four high schools, were also evaluated for their ability to support the educational mission and curriculum of the district.

Key components that should be considered for short-term affect throughout the district are:



Secure vestibules



Furniture upgrades throughout that provide for flexibility/adaptability in learning activities throughout the day







Mecho shades throughout to improve indoor-outdoor connections



Collaborative project-based learning breakout spaces and maker spaces



Increased transparency







Indoor air quality



Improved lighting



II-15 of 23



Top Capacity design intervention floor plan diagram

Bottom Reading Across America, Image Courtesy of NPS Newsletter March 04, 2021





The analysis of the schools was based on ten key criteria developed by the Newman/DLR Group team in conjunction with research on the Student and Teacher Engagement Index that specifically correlates architecture with that engagement. The schools were each scored on the Educational Adequacy Index. The layout of the classrooms and the lack of variety in space size, use, and connectivity was generally consistent from school to school.

It is the Newman/DLR Group team's recommendation that capital projects to improve Educational Adequacy are combined with professional development that supports a hybrid model of teaching and learning to allow for a more efficient use of existing facilities that enables the inquiry-based learning model, which is emerging as part of the Strategic Plan.

We need a school that allows us to move and even use the outdoors for learning.

High School Student, Norwalk Public Schools

Bottom Flexible Indoor/Outdoor Learning Environment Pathfinder Kindergarten Center I Everett, WA

Bottom Right CREATE at Arizona Science Center









Career and College Preparation: Our conversations with the District regarding Career and College Readiness were centered on the recognized pull of industry (and local businesses) for a prepared and productive workforce versus the push of the Alpha Generation and their unique perspective on priorities.

It is Newman/DLR Group team's recommendation that a robust community process be put in place to further inform the types of programs best suited to support District, local and regional businesses, and community goals identified by the Labor Task Force.

Norwalk School District has a unique opportunity at this crossroads to leverage their resources by facing forward. The average age of NPS facilities is about 60 years old. They are currently supporting short-to-medium term enrollment projections and enabling District priorities for curriculum and student achievement. Choices will however need to be made as to how to best balance decisions related to deferred maintenance of the facilities with the potential to best align with the educational vision for the District, moving towards facilities that truly enable innovative and applied learning practices.



I feel like we just think of classes in a singular way, but in reality, we should be thinking about how math class connects to this other class. It would make us better learners.

High School Student, Norwalk Public Schools

We don't need as much time listening to lectures, we need to experience learning then present and reflect so we can make our project better and keep learning.

High School Student, Norwalk Public Schools

Bottom Left Missouri Innovation Campus I Lee's Summit, Missouri

Bottom Right Canyon View High School, Learning Stair







Facility Assessment: Assessments of the 16 elementary and middle school properties were performed in 2015. They had identified \$77.4 million of deferred maintenance that needed to be addressed within the next 10 years. The 18 locations included in the physical assessment were evaluated based on similar criteria to the 2015 study, but with a focus on being more thorough and newly including food service concerns. They were also updated to include associated soft and escalation costs which were not previously included and this has had a substantial impact on overall cost projections. The schools were each assessed by a consistent set of criteria from an Architectural, Building Systems, and Food Service perspective. Across the board, the schools were well-maintained and clean - the items the facilities conditions assessment focused on were for the large part items that are not obvious from a cursory visual inspection. From this perspective, a wide range of facilities conditions were found across the schools and there is a significant amount of deferred capital maintenance to be addressed in the coming years.

Systems and facilities upgrades that should be considered District-wide are:



Accessibility and Building Code Compliance – Provision of current standards of compliance at egress, circulation, toilet rooms, services, and educational and support spaces



Exteriors – Repairs and replacements at roofs, walls, doors, and windows



Interiors – Repairs and replacements of finishes nearing or past the end of their useful life

Food Service – Provision of architectural and equipment upgrades to support the District's operational goals

High Performance – Replacement of inefficient electrical, mechanical, and plumbing systems and equipment in addition to the targeted interventions at building envelopes included in the "Exteriors" item above





Bottom Reading Across America, Image Courtesy of NPS Newsletter March 04, 2021







We should learn through a cycle and our content and activities will change.

Middle School Student, Norwalk Public Schools

It is the Newman/DLR Group team's recommendation that the most pressing deferred maintenance items are prioritized for remediation followed by strategic capital projects to address intermediate and long-term items both comprehensively at the individual school level and batched across multiple schools for similar items. This work was also compared to the needs identified in the Educational Adequacy analysis to leverage dollars spent for outcomes achieved, as you will see in the "Integrated Recommendations" section below.

Integrated Recommendations: As part of the Facilities Study Plan process, we have identified multiple scenarios that can be followed, depending on the District's priorities on what will best serve and protect the existing assets of the Norwalk community. They should not be considered as strictly sequential, but rather driven by incremental need and by the potential for multiple funding sources. The District is currently exploring the development of a process and tools for regularly evaluating and prioritizing facilities conditions and educational adequacy needs as time passes and conditions change unexpectedly. The facilities were reviewed based on their educational adequacy and facilities conditions needs and put into four tiers by priority, with critical works and targeted multi-school projects pulled forward from the comprehensive needs of each school. Estimated sub-totals of costs are given for each tier in today's dollars. The detailed report contains information on both un-escalated and escalated estimated costs.



Top Silvermine Dual Language Magnet School Media Center

Bottom Naramake Elementary School Entrance



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Critical Maintenance and Improvements (Year 0-1):

- Repairs and replacement of damaged and critical condition architectural, mechanical, electrical, plumbing, and food service systems and equipment
- Furniture, Fixtures, and Equipment Upgrades Part 1
 - Tier 1 Schools
 - Provision of flexible and varied furnishings throughout
 - Provision of mecho shades at all habitable spaces
- Cost Sub-total: \$28-35M



Top Fox Run Elementary School Classroom

Bottom Wolfpit Elementary School



Our lunch time should also be a time to create.

Middle School Student, Norwalk Public Schools





Executive Summary

Tier 1 Facilities (Years 2-10)¹

- *Fox Run Elementary School
- *Naramake Elementary School
- *West Rocks Middle School
- *Columbus Magnet School + South Norwalk Pre-K-5 School
- Central Preparation Kitchen
- Nathan Hale Middle School
- Roton Middle School
- Wolfpit Elementary School
- Cost Sub-total: \$218-228M

Tier 1 Multi-School Projects (Years 2-10):

- Lighting Upgrades
 - Replacement of all fluorescent fixtures with LED
 - Provision of high performance control systems
- Fixtures, Furnishings, and Equipment Upgrades Part 2
 - Tier 2 and 3 schools
 - Provision of flexible and varied furnishings throughout
 - Provision of mecho shades at all habitable spaces
 - Replacement of existing millwork nearing or past end of useful life
 - Provision of ADA compliant and educationally adequate millwork
- Cost Sub-total: \$28-32M



Top Columbus Magnet School Classroom

Bottom Nathan Hale Middle School Science Classroom



NEWMAN + DLR Group

II-21 of 23

^{1 (*)} Denotes schools identified as having pressing HVAC needs and therefore prioritized within Tier 1

Tier 2 Facilities (Years 11-15):

- Marvin Elementary School
- Rowayton Elementary School
- Silvermine Dual Language Magnet School
- Tracey Magnet School
- Cost Sub-total: \$45-50M

Tier 2 Multi-School Projects (Years 11-15):

- Repairs and Replacements at Exteriors
 - Replacements at roofs, windows, doors nearing or past end of useful life
 - Repairs at walls, roofs, windows, and doors
- Safety and Security Upgrades
 - Provision of secure vestibules
 - Provision of recommended items from the 2016 Security Study
 - Provision of educational adequacy public access recommendations to support the goal of schools as "Community Centers"
 - Provision of current Accessibility and Building Code compliance
 - Provision of sprinklers
- Cost Sub-total: \$75-85M



Top Tracey Magnet School Classroom

Bottom Rowayton Elementary School Classroom







Executive Summary

Tier 3 Facilities (Years 16-20):

- Brien McMahon High School/Center for Global Studies
- Brookside Elementary School
- Kendall College and Career Academy
- Norwalk Early Childhood Center
- Upper Ponus Ridge STEAM Academy
- Cost Sub-total: \$55-65M

Tier 4 Facilities (Recent):

- Cranbury Elementary School
- Jefferson Elementary School
- Norwalk High School/P-TECH Norwalk
- Lower Ponus Ridge STEAM Academy
- No Costing Provided

Magnitude of Cost: Together, the long-term investments that address enrollment growth, educational adequacy, and facilities conditions needs and best serve and protect the existing assets of the Norwalk community represent approximately \$429-495 million of investments over the next 20 years (\$21-25 million per year).

One thing I think is important, is to have time for reflection at the end of your day. Because you need to think about what happened, and how you're going to move forward.

High School Student, Norwalk Public Schools



Image Kendall College and Career Academy Classroom

Image Norwalk Early Childhood Center







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III. A DATA DRIVEN PROCESS

A Description of Intent

A data-driven framework that is defensible, auditable, repeatable, and transparent.

The Foundation:

The foundation of any Master Plan is a data driven framework that is "defensible, auditable, repeatable and transparent" (DART). The Norwalk Public School District's Facilities is no exception to that rule. It weaves together 4 strands of content that are both quantitative and qualitative to create a composite picture of the District's priorities. These strands are:

Enrollment Projections:

Milone + MacBroom, Inc has identified enrollment growth for the District over short, medium and long-range periods of time that are also location specific to the respective neighborhoods. These projections are based on a combination of births, housing starts with families/students, and imports/exports of student from/to other districts that will assist in thinking about long-term capacity needs.

Facility Assessment:

The existing facilities were recently assessed in 2019. These reports identify both the deferred and preventive maintenance required to maintain the integrity of each of the 16 elementary and middle schools currently located in the District. These reports served as the start for generating the capital costs required to maintain each of the schools. Meetings were also held with each school's staff as well as with District staff to discuss District-wide initiatives.

Educational Adequacy:

Based on the District's educational policies and vision, the Facilities Plan identified priorities with architectural attributes that enables the implementation of these policies. The 21 schools were analyzed against these criteria to create an index of the quality of the learning environment.

Once this data is collected, compiled, and validated with the Master Plan, community meetings will be scheduled by the District. Potential scenarios for funding will also be considered through a series of community forums to address the shortmedium- and long-term needs of the District and how they should best be implemented. Based on this input, scenarios can be combined, modified or deleted to synthesize a common vision for the future growth and success of the District and its stakeholders.





Education is the passport to the future...

The Educational Facility Master Plan synthesizes multiple strands of content that are both quantitative and qualitative to create a composite picture of the Norwalk's priorities.

Supported at its core by the Norwalk guiding principles, the Educational Facility Master Plan is organized around futureready learning, the infrastructure, or condition of existing facilities, and right-sized capacity.

This organization is important because, in truth, there is no single set of data that is enough to inform the decision-making process about long-term capital investment.



For example, funding priorities based on facility condition alone do not necessarily account for existing physical limitations that may forever compromise a preferred 21st century learning environment. Building systems need to be designed to be energy efficient and affordable to maintain. Furniture, fixtures and equipment need to be purchased to support new modalities of learning. And, investments that create state-of-the-art schools but operate below capacity or serve dwindling populations need to be consolidated to create operating efficiencies that better serve the territory.

The framework for this data-driven approach is built on the following:

Educational Adequacy Index: Assessment of schools that have been identified as part of the modernization program for their ability to support future-facing education.

Educational Adequacy Assessment: A facilities assessment was completed to ascertain the physical condition of Norwalk school facilities that have been identified to be part of the modernization scope of work. Reference advancement opportunities for a description of modernization priorities for each school.

Enrollment Demographics: Number of students enrolled specific to the existing schools in Norwalk Public Schools for 2019/2020 plus assumptions on potential growth.

Capacity: Number and size of instructional spaces relative to enrollment.

Operating Costs: Operating efficiencies based on size, configuration, design, and location are a priority. Reference the summary of the sustainability workshops for further information.





Meetings/ Community Engagement/ Partnerships

January Work Sessions/ Meetings:

• The month of January included the kick-off for the Facilities Plan Study as well as Co-Lab #1 that focused on priorities for teaching and learning and a preliminary presentation at the Board Retreat as to the process and schedule anticipated for the Facilities Plan Study.



 Co-Lab #1 was a great introduction to Norwalk Public Schools priorities related to teaching and learning.



February Work Sessions/ Meetings:

 In February, the Newman/DLR Group team walked all but 3 schools (due to weather) to assess both their alignment with Norwalk's educational vision (educational adequacy) and the condition of their "brick and mortar". The remainder are scheduled to be walked the first week in March.







March Work Sessions/ Meetings:

- On March 2, 2021 the Newman/DLR Group Team presented 50% preliminary findings to the Board of Education. Throughout the month of March, various workshops and meetings were conducted, including a continuation of February's "Day in the Life" Co-Lab #2 with Students. Other meetings this month centered around Capacity & Enrollment, Educational Adequacy, Physical Assessments, Land Use, Technology, CTE / Pathways, Safety & Security and Costing. The meetings and corresponding dates as follows:
 - March 2: BOE Meeting: Newman/DLR Group presented general progress to the Board of Ed. Presentation included a review of the overall process, examples of Educational Assessments and Diagrams, and an overview of the Physical Conditions Assessments.
 - March 3: Security Infrastructure: Meeting with Norwalk Police Officers, School Security Personnel, Norwalk Public Schools Security Consultant, and other Student Interest Representatives, to review current security protocol and identify future security needs.
 - March 3: Land Use Committee: Present Newman/DLR Group progress to the Land Use Committee, including members of the City Council.
 - March 8: Co-Lab #2 (Students 5-8 & 9-12): Culture + Context Co-Lab centered around students. Two sessions were held (Grades 5-8 and 9-12) to discuss the current and future Day in the Life (outlined below).
 - March 10: Relational Safety & Security: A meeting with school counselors and safety personnel to take a deeper look at Safety beyond policy, to weave together transparency (active and passive) and human connection, as related to safety and security.
 - **March 11: Technology:** Review of current status and policies around technology, with discussions around the future vision for technology, including the development of curriculum and "Digital Promise".



- **March 11: CTE/ Pathways:** Discussion around CTE/ Pathways, including the development and vision for the Program.
- March 11 Leadership Workshop (Physical Assessments): A preliminary review of the approach for Architectural, MEP and Food Service assessments of select facilities to establish baseline, for moving forward and completing remainder of assessments.
- March 17: Norwalk HS Capacity: Review of Norwalk High School/P-TECH Norwalk and its potential for capacity, based on various efficiency factors, policy approaches and taking into account the integration and vision for P-TECH.
- March 22: Leadership Workshop (Educational Assessments): A status review of Educational Assessments for select facilities.
- March 22: Leadership Workshop (Initial Costing Review): A discussion around approach for capturing and presenting costing data





- March 23/25: Columbus Magnet: A review and feedback session with Leadership Group, related to Educational Assessments and Diagrams of Columbus Magnet School.
- March 25: Leadership Workshop (Physical Assessments II): A preliminary review of the approach for Architectural, MEP and Food Service assessments of select facilities to establish baseline, for moving forward and completing remainder of assessments.
- March 26: Elementary Review Session: A review and feedback session with Leadership Group, related to Educational Assessments and Diagrams of Elementary Schools.
- March 31: Middle School Review Session: A review and feedback session with Leadership Group, related to Educational Assessments and Diagrams of Elementary Schools.
- April 1: High School Review Session: A review and feedback session with Leadership Group, related to Educational Assessments and Diagrams of High Schools.



• Co-Lab #2 was divided into 3 parts that include the principals, teachers + staff and students as separate cohorts discussing what they felt was the current percentage of time spent on activities such as lecturing and assessment versus activities such as collaborating, reflecting, experimenting creating. Participants were then asked to think forecast the "Day in the Life" of Students and Teachers in 2030 in order to project the changes in infrastructure that might be needed to align "architecture that enables" with curriculum.







• Co-Lab #3 invited a broader group of stakeholders to participate in virtual tours and "image slams" to address what benchmarks reflected the consensus among community stakeholders on why, how and what architecture would best reflect Norwalk's aspirations for equitable, student-centric learning.



 Co-Lab#4 introduced a VALUES (Viewing Architecture through the Lens of Sustainability Experience) exercise to demonstrate that myriad of priorities that need to be balanced in order to provide value. This based decisions on how to fund the infrastructure of schools in such a way that the return on investment is always maximized for community stakeholders.

Co-Lab #4: Sustainability & Resiliency - VALUES



April Work Sessions/ Meetings:



• The month of April concluded the facilities master plan. On April 20, 2021 the Newman/DLR Group Team presented the report out of findings to the Board of Education. Following the presentation, the Newman/DLR Group team incorporated the feedback from both the Board of Education and Core Planning Group into the final report. The final report was delivered on April 23, 2021 and included the mater plan, facilities assessments and schedule of priorities/costing.







Top Board of Education Presentation April 20th, 2021

Bottom Board of Education Presentation April 20th, 2021



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Top Board of Education Presentation April 20th, 2021

Bottom Board of Education Presentation April 20th, 2021





- Education and educational facilities must change
- Educational equity is "meeting every student where they are"
- Framework for decisions for the next 20 years

report out major takeaways









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IV. VISIONING

An Introduction to the Visioning Workshops

Developing a Shared Vision for the Future

A series of visioning workshops explored creative thinking around educational place making in Norwalk Public Schools.

To inform the development of recommendations for educational adequacy, sustainability and return on investment and resilience, the Norwalk Public Schools and Newman/DLR Group facilitated a series of workshops and tours aimed at engaging a diverse audience and aligning the efforts of the Norwalk Facilities Plan Study with the interests, beliefs, and passions of the Norwalk Public Schools' community.

Following an initial community introduction, there were multiple sessions or co-labs in January, February, March and April 2021. The workshops focused on the following content areas: curriculum and instruction, sustainability, vernacular architecture, program development, and advancement opportunities/community sharing. The visioning workshops were organized to support the five focus areas of the visioning process, vision, success, agency, organization, and resilience, and to build upon each other.

The findings of the sustainability workshops informed the vernacular architecture workshops and the curriculum and instruction workshops directly informed the programming and applied learning workshops. An example of the relationships between the workshops is illustrated on the adjacent page. In the curriculum and instruction workshops, participants explored what Norwalk Public Schools value. Their discussions and findings then informed the day-in-the-life, space types, and learning suite exercises in the programming workshop.

Collectively, the creative visioning of all of the workshops informed the recommendations of this facilities plan study.

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The workshops attracted a diverse group of attendees, including Norwalk leadership, superintendents, principals, teacher union representatives, teachers, facilities staff, community members, stakeholders, and local government officials and public agency.

The following spreads summarize each workshop and outline key findings.

Note: Jefferson Terrace, Capps Middle School, and Agua Fria Canyon View High School were used consistently throughout the workshops as precedents to reference for innovative, future-facing facilities. Project imagery is incorporated in the Visioning spreads that follow. For detailed descriptions of the projects, see tours/ benchmarks at the end of the visioning section.

Note: Community engagement sessions continued between the months of March and June in the form of community presentations and concept reviews and tours were held at the conclusion of the visioning workshops in order to reinforce the ideas explored.

"...You can build a school, but without intentional planning of how you want to use that space and how you want to intentionally be innovative, it's not going to happen."

Lynn R., AP Educational Visioning Documents, Agua Fria Canyon View High School





Creating responsive school environments by establishing thoughtful connections between learning and educational facilities.

A Global Perspective

Learning is changing.

The evidence of dramatic change is all around us and it's happening at exponential speed. As technology changes our physical, digital, and biological worlds, teaching and learning are working to follow suit.

As the pull of an ever-changing economy connects with a push from students striving to create their own pathway toward advancement, school districts of all shapes and sizes are experiencing a cultural transformation. The one-size-fits-all mindset that once permeated our education system is steadily being replaced with personalized learning programs, allowing for a more student-centric approach that supports success and encourages engagement.

In a world where 65% of grade school students will end up in jobs that don't exist today, workers (students) need to self-direct their own learning.¹

A traditional education, based on the transfer of information, the rote memory of curriculum, strict schedules, and supreme focus on the educator does not empower students to self-direct their own learning. Current educational models have an opportunity, now more than ever, to enhance the Norwalk's ability to meet the needs of their students and to shape a new vision for teaching and learning in the future.

The World Economic Forum identifies eight critical characteristics in learning content and experiences that define high-quality learning right now, in what it has coined the *Fourth Industrial Revolution*. "These characteristics are global citizenship skills, innovation and creativity skills, technology skills, interpersonal skills, personalized and self-paced learning, accessible and inclusive learning, problem-based and collaborative learning, and lifelong and student-driven learning."²

"A transition to Education 4.0 will require implementing new national education policies that mainstream shifts in content and experiences across public education systems; supporting teachers in implementing a new vision through re-skilling and up-skilling; engaging in continuous global best practice exchange between schools and schooling systems; and building mechanisms for assessing progress against these goals."³

¹Jeff Selingo (Author, Futurist): The Future of Work and What It Means for Higher Education

 $^{2\text{-}4}\text{World}$ Economic Forum: Schools of the Future Defining New Models of Education for the Fourth Industrial Revolution





Shifting Learning Content

"Children must be prepared to become both productive contributors of future economies, and responsible and active citizens in future societies.

Image Credit: The World Economic Forum Education 4.0 Framework

Realizing this vision requires children to be equipped with four key skill sets: 1) Global citizenship; 2) Innovation and creativity; 3) Technology; and 4) Interpersonal skills."⁴



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In January and February 2021, Newman/DLR Group toured all of Norwalk's schools. The summary below is based on feedback from principals and staff during these campus visits.

The feedback was consistent and reinforces the Norwalk guiding principles.

1. Space was a concern for meeting the needs of active learning, inquiry learning, and collaborative groups. The need for flexible space along with flexible furniture to allow for a change in teaching and learning was imperative.

2. Teacher training was a concern to support teachers in effectively using technology, space, and furniture in the best possible manner for student-led learning.

3. Technology was a concern at all schools visited; concerns consisted of three parts:

a. The actual tool----the need for more one-to-one devices and working projection devices.

b. The need for working infrastructure to meet the needs of many devices working at one time.

c. The support of instructional technology training to use the one-to-one devices as tools for learning and not a substitution for worksheets.

It was mentioned that these changes would take time and a plan needed to be in place to implement and sustain the new practices.

Norwalk will support equity to ensure all students learn in new or modernized facilities.

To support and sustain the educational needs identified during the campus tours, Norwalk aspires to ensure equitable access to future-ready learning environments by aligning fiscal resources and adjusting school boundaries and/or consolidating facilities.

This Norwalk Facilities Plan Study aims to inspire Norwalk's standards that specify when resources, materials, and courses should be equal and when they must be equitable; fair, just, and in some cases, different.

Norwalk is committed to:

- **1. Equity of access to learning**
- 2. Equity of services
- 3. Equity of community ideology
- 4. Equity of facilities





Visioning

Following the learning continuum exercise, and to conclude the session, Dr. Denison led the group through an activity to explore process, learning, and teaching in Norwalk Public Schools.

Working in small groups, individuals were asked to review a large stack of VALUES cards, each with a different value. The cards were designed and organized with relation to five different categories: teaching, learning, spaces, tools, and safety.

After reviewing the cards, groups were asked to identify their top three priorities, in each of the five categories, that they felt are the most important to successful future-ready learning in Norwalk Public Schools.

Bottom: VALUES workshop



Bottom: VALUES workshop





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Learning Connections

What do Norwalk Public Schools value?

Why is this exercise impactful?

What teachers do and how they do it is critically important and has a profound impact on the quality of the educational experience for children. Building a common language and consistency in systems allows for high quality teaching and learning.

Dr. Marilyn Denison, Educator, Educational Planner at DLR Group

The priorities established from this activity were as follows:

- Inquiry-based learning
- Authentic/real-world learning
- Interactive technology devices
- Flexible technology
- Outdoor learning
- Easily adapted/changed spaces
- Cyber safety
- Health and wellness/sustainability











Teaching Priorities







WM WORKSHOP MODEL/ GUIDED TEACHING

A pedagogy that promotes student learning, growth, and reflection through collaboration and small group instruction.

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EDUR Group



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Learning Priorities



Students explore, discuss, and meaningfully construct concepts and relationships in contexts that involve real-world problems and projects that are relevant to the student.



Providing access to opportunities, resources, and classes for those who might otherwise be excluded.

DLR Group



EDLR Group

LEARNING



Tools Priorities



Instructional technology that allows for greater interactivity such as interactive white boards, mobile pads, educational apps, clickers.



Mobile technology that allows for use on different surfaces and in numerous ways.



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EDLR Group

LEARNING



Spaces Priorities





ACSPACES THAT CAN BE EASILY ADAPTED/CHANGED

Walls of classrooms that can be modified/moved to fit different sizes of learning environments.

ECARNING COMMETCIONE Manhcards

DLR Group





Safety Priorities





HWHEALTH AND WELLNESS/ SUSTAINABILITY

A focus on areas that promote health and wellbeing such as gardens, access to movement/ exercise, air quality, natural lighting, and sustainable options.

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Furniture Priorities





An Activity Approach to Programming

Newman/DLR Group facilitated a series of programming workshops to infuse innovation and research into Norwalk's educational adequacy assessment. The exercises were built on the findings of the curriculum and instruction workshops and the resultant priorities identified for learning, teaching, space types, furniture, technology and security.

The workshop was held on January 25, 2021. Attendees included a broad cross-section of stakeholders and end users, including the Norwalk leadership, superintendents, principals, union representatives, teachers, facilities staff, and community members.

In the session, participants were guided through a series of exercises to align space with activities, learning modalities, and curriculum.

Through interactive workshops, the district staff, educators, and students dialogued to better understand the relationship between the learning and the built environment in Norwalk Public Schools. There is an on-going shift from a teachercentered model to a student-centered model of education. This shift is precipitated by a fundamental belief that every child learns differently and that student engagement is predicated on the belief that learning suffers when students are bored, dispassionate, or disengaged.



A dynamic form of active learning that begins with inquiry, problems, or scenarios. Students then identify, investigate, and research issues and respond to challenges or complex problems.



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To understand the current status of the student's daily experience then followed by a preferred state of a student's daily experience, the "Day in the Life" activity was conducted. Three different work groups were involved in this activity: the district workgroup, an educator workgroup, and a student workgroup (grades 5-12). Much of the current status conversation from all three workgroups centered around instruction that was teachercentered and delivered in a more traditional format (lecture) in small classroom spaces with static furniture. While there is great effort in allowing for more collaboration time, the result was not performed within a strong learning cycle and did not allow for multiple ways to demonstrate mastery.

For the preferred future, all three workgroups supported inquirybased learning where students have more ownership of their learning. Within the inquiry cycle, student activities would include less lecture and more time for collaboration, creating, experiencing, and reflection. To develop strong communication skills, the opportunity to present findings and learning points was also important. All workgroups discussed the importance of process and impact evaluation instead of a test-driven or onetime assessment.

The student group was invested in sharing what they prefer future spaces to incorporate. Offering space that allows for movement to engage in their work and to connect to the outside was a common thread among all grades. Differing from the traditional methods of worksheets, essays, and reports, the students prefer active learning through projects that allow them to invest in their curiosity, interest, and passion. This learning method includes sharing their learning through a form of performance mastery. The theme of flexibility was shared among the students. A preference was shared towards spaces that meet the needs of the learning at the time for large group, small group, or individual practice that also meets the need of the activity spaces such as labs, maker spaces, or other creative work. Students also discussed how connections to nature and relationships with educators inspires a stronger sense of belonging and wellness for all.

Providing flexible spaces that allow for movement, collaboration, and work within various group sizes that also promote inquiry learning makes the environment a teaching tool that impacts teaching and learning in profound ways.



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Image Day-in-the-life activity cards with ES students



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Creating a Culture of Success:

The BOLD Process at Canyon View High School

Bridging Organization, Learning and Design

A School with Neither Cells nor Bells

There are no bells; everyone is treated as a young adult and expected to manage their own time. Teachers rotate learning labs, allowing for a variety of learning opportunities. Furniture is all on wheels to easily create the space needed for learning. Spaces can be used for more than one purpose and there is cross-collaboration between classes, large presentations, and small presentations.

A School that is Centered Around the Learner

Students can seek to work together in multiple spaces, but there are also quiet areas to work alone.

Teacher Faculty spaces are used to discuss learning, teachers no longer live in silos and can focus on students in teams.

Classrooms are open, light and airy with all learning on display and teachers are able to adapt and adjust for student needs.

A Place that is Safe for Failure and Fosters Success

Strong culture, climate, and sense of community.

The Jaguar Way: Innovation, diversity, character, community and pride

A Community of Engaged Teachers

Teachers are honored as professionals by being provided dedicated workspace for individual focus, group collaboration, and wellness regeneration.

The master schedule was developed intentionally to support cross-disciplinary professional learning communities that support risk-taking and a culture of continuous improvement.

Through visual transparency, shared ownership of spaces, and clear cultural and academic expectations, teachers are more connected and emotionally invested in Union High School District Agua Fria Canyon View High School.

In support of Dr. Denison's review and in contrast to the familiar classroom, modern case studies with a variety of spaces were reviewed in relation to supporting different learning activities.

The first case study was Canyon View High School.

The design has made a big impact.

I chose to go to this school; I could have gone anywhere.

I am super excited and want to learn everyday. Not only does the environment make us light up, it also makes the teachers light up. And the students can see that in the teachers, and it makes us want to do more.

> Jade, Freshman Canyon View Principal's Advisory Group

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Image Canyon View High School I Waddell, Arizona





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Following this discussion, the group transitioned to an exercise exploring a day-in-the-life of a Norwalk Public Schools student. Groups consisting of central office staff, principals, teachers and students were asked to outline a current day for students and then to forecast a day in the life of a 2036 student.

Activity cards guided the group's thinking. Activities included creating, presenting, experiencing, inquiring, small group, large group, collaborating, active, and evaluating.

Small groups developed a comparison between the current day-in-the-life of a Norwalk student and the future, preferred day in the year 2036. The majority of teams had a stark contrast in the current students' experience that is dominated by direct instruction or lecture-style learning to a future experience with a fluid variety of learning activities.

Participants described this future version to respond to different types of learners and their diverse needs.



Image Day-in-the-life activity cards



Above Virtual ed visioning



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Newman/DLR Group guided a discussion around the importance of indoor environmental quality, ergonomics and movement in relation to furnishings, and the value of dynamic furniture in flexible environments.

The stakeholders participated in a dot exercise to define how they want furniture to perform along a continuum with multiple variables. The three groups identified a gap between where they are currently and the desired future state. Participants identified a desired shift in the way the classrooms perform by introducing choices and variety in furnishings. This direction is consistent with the direction of the Facilities Plan for the Norwalk Public School District to promote a student-centered learning experience.

Furnishings in the classroom should encourage activity and discourage sedentary behavior. Movement, small 'squiggles' to large motor-mechanic movements are critical in supporting students' physiological as well as mental growth. Physical movement both increases well-being and encourages the physical and intellectual maturing process. Dynamic furniture is designed to foster children's natural physical movements. Furniture selections should allow for small scale movements such as leaning, rocking, turning, or swaying to encourage concentration and cognitive development. Many seating options included in the furniture specifications focus on independent movement and proper ergonomic positioning to accommodate such movement.

"Movement is the motor which drives child development. Children are born with an innate need to climb, jump, swing, balance, play ball or just to move about and not be able to sit still. The urge to move is therefore part of human nature, encouraging exercise in a natural and healthy way and ultimately promoting the development of the child."



Dr. Dieter Breithecker is a German Health and Kinetics Scientist, the head of the Federal Institute on the Development of Posture and Exercise in Germany, and an international expert on ergonomics for children.



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Newman/DLR Group facilitated a series of workshops to establish a vision of what learning will look like for each child in Norwalk as a critical start of a facilities master plan. This step allows all stakeholders and future design teams to understand the end goal and the supports necessary to achieve this goal.

A workshop was held on February 4, 2021. Attendees included a broad cross-section of stakeholders and end users, including Norwalk leadership, superintendents, principals, teachers, facilities staff, and community members.

Through the workshops, DLR Group led stakeholders in divergent thinking exercises to allow them to think beyond their current constraints and envision future-ready learning.



Image Day-in-the-life activity charts



GROUP 3: Jana



Image Day-in-the-life activity cards with HS students



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Empirical Evidence: School Design Influences Student Engagement

The District sought out a standards-based approach to the assessment of how well the build enables their educational vision and established a process methodology that will ensure objective and credible findings.

The Educational Adequacy Assessment indicator analysis included input from the Norwalk Public Schools and demonstrated consideration for other best practices from districts throughout the United States.

Research links high levels of engagement for both students and teachers are necessary to improved outcomes. However, a Gallup¹ poll found that across the United States, 70% of teachers work with some degree of active disengagement and high levels of stress. Miller, et al (2020) challenged the questions Gallup was asking. His team wondered if the results really were about active disengagement, or about caring too much resulting in burnout? In either case, taking care of teachers is important. But engagement levels change over time. Why?

We know students start with high degrees of engagement in early grades, however it slowly declines to 60% of 12th grade students becoming chronically disengaged². Levels of student and teacher engagement must be improved.

Recognizing this challenge, DLR Group partnered with Dr. Lennie Scott-Webber (to act as a third-party researcher) on an engagement study.

The goal was to develop survey tools measuring how the design of the built environment impacts academic levels of engagement from both student and teacher perspectives.

A formal scientific research protocol was used, and surveys design and developed were tested in three phases to ensure reliability and validity of each instrument. Schools designed by DLR Group across the U.S. were used as convenience samples. The cohorts of study moved from grades 9-12 for phases 1-3, and to 6-8 for phase 4. Each effort was submitted for peerreview; now published in several journal articles^{3,4,5,6} along with numerous conference presentations sharing the findings. These studies have included nearly 7,000 students and 800 educators.

The Tools

This multi-year effort provided DLR Group with two proprietary instruments to be used post-occupancy: (1) the Student Engagement Index[™], and (2) Teacher Engagement Index[™]. Data has consistently showed the highest indicators of engagement correlate with: (a) being able to move to be actively engaged, (b) having fluid access to technology, (c) connecting in collaborative opportunities, and (d) supporting the 4Cs as perceived by the students.

For example, if students believe that their school values creativity, collaboration, and critical thinking (the 4Cs) then they believed they would have higher levels of academic engagement – higher learning outcomes.





Visioning

Teachers also indicated their belief that the design of the built space made a difference in their students' academic levels of engagement. Although they found the designs supported them in their work, they gave a higher priority to the need for a good cultural work climate from the organization itself. The key is that school is the place where teachers go to work, and therefore the culture is more meaningful to them.

A Criteria for Connecting Space to Curricula

As a result of this primary research effort, DLR Group developed an assessment tool further defining gaps (real and perceived) between a known current state and a future-facing one for educational entities - Educational Adequacy Index. The team used this assessment tool to define future-facing educational facilities in Norwalk.

These referenced standards have been developed and evolved to support the need for new and modernized schools that ignite a passion for learning by being learner-focused, enabling students to experience self-directed, self-paced learning in a whole child condition. Providing integrated technology-rich spaces where authentic learning may occur ensures all students will receive forward-looking, high-quality, and world-class education regardless of where the student is based. This highquality need is not just reserved for the student, but it is well recognized that when there is an active teacher, active learning occurs. Therefore, making sure educators are well supported in their environment is every bit as important as getting it right for students.







Educational Adequacy Index

In January 2021, DLR Group toured 19 schools across Norwalk.

During these visits, the design team observed the campuses in operation and met with Principals and Vice Principals to get a better understanding of the needs of each school.





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Educational Adequacy

The space curricula alignment indicators analysis tool has ten (10) criteria. These criteria were used to collect specific data across multiple sites.

These criteria include the need to provide...

- **1.** A Community Resource⁷
- **2.** Stimulating Architecture: High Performance Schools Invoke a Sense of Pride in the Community
- 3. Safe and Secure Supervision, and Security
- 4. Innovative Learning Environments that Connect
- 5. Flexibility
- 6. Adaptability
- 7. Thermally, Visually and Acoustically Comfortable
- 8. Energy Efficiencies
- 9. Build Systems Easy to Maintain and Operate
- 10. Healthy Learning Environments







1. A Community Resource: spaces for the school's community and spaces for community use.

These are special spaces, or classrooms, that support specific curriculum offerings such as innovative learning, CTE, art, music and sports that also relate to the community. Involvement can be enhanced if schools are designed for public use/functions. Successful schools have a high level of parent and community involvement. Zoned access allows for safety/security and operational efficiencies.

2. Stimulating Architecture: high performance schools invoke a sense of pride in the community.

Stimulating architecture engages students with color (appropriately applied using color psychology), natural and artificial light, and celebrations of work on display. Primarily sized, the shape and feel of individual learning spaces can support and enable learning and teaching needs. Activitiesbased programming allowing for multiple activities throughout the day ranging from small- to medium- and large-group learning allow for efficient use of the square footage. The total area and aspect ratio impact the adequacy of a learning space. Furnishing, fixtures, equipment and finishes need to be selected from a research-guided knowledge base.

Linn-Mar High School Addition and Renovation I Marion, Iowa East Baton Rouge Lee High School I Baton Rouge, Louisiana



Springs Studio for Academic Excellence I Colorado Springs, Colorado Green Valley Ranch E12 Campus I Denver, Colorado



learning is inspiring

Engage students with Color, light and display.







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Educational Adequacy

3. Safe and Secure Supervision and Security: the extent to which physical configurations help or hinder student instruction and building operations in both typical and emergency situations is important.

These solutions include site buffers, secure zones, security fencing, sight lines, lighting, and obstructions in instructional spaces that make supervision difficult or impossible. Students and teachers feel safe anywhere in the building or on the grounds through:

Passive Strategies

Opportunities for natural surveillance are optimized (planning for transparency) The sense of community is reinforced. Access is controlled.

Active Strategies

Security technology is used to enhance, rather than substitute for the design features.



4. Innovative Learning Environments that Connect: learning happens in varying forms, settings and groupings.

A building is no longer driven by long corridors with single classrooms sized for groups of 30. Innovative learning environments (ILEs) should blur the lines between ages and abilities, foster authentic learning and curricular exploration by expanding the definition of what is a place-based school. Architecture needs to enable collaborative, creative, critical thinking that connects students to both theory and application through authentic, hands on learning teaching methods and strategies.

Examples include:

- Connect classrooms with maker spaces and labs.
- Provide adjacencies that promote cross-disciplinary learning.
- Provide areas for teacher collaboration.

Take out the cells and bells model.

students & teachers connecting

Positive student-student and student-teacher relationships help learners develop connectedness and a sense of belonging.





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5. Flexibility: adaptable infrastructure and affordances.

The presence of infrastructure, data distribution/storage, furnishings and equipment within classroom (i.e., primary learning space) and laboratory settings allowing for multiple activities to occur simultaneously.

Classrooms and break out spaces should be provided through the appropriate use of:

Movable Walls Lighting and Light Control

Writable Walls

Technologies

Furnishings, Temperature Control Fixtures, and Affordances

6. Adaptability: stay future-focused.

The ability of common facilities (i.e., restrooms and toilets, cafeterias, libraries, and administrative areas) to meet the needs of the student population in the future as well as be able to adapt to changing educational delivery methods.

Consideration should include the:

Agility through the planning of 5-, 10- and 20-year walls.

Utilities/infrastructure consolidated to minimize impact on future renovations.

Expandability of buildings and systems.

Beverly Hills High School: Existing & Renovation Scenario I Beverly Hills, California

Federal Way School District Panther Lake Elementary I Federal Way, Washington





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Educational Adequacy

7. Thermally, Visually and Acoustically Comfortable: indoor environmental qualities impact engagement.

Teachers, students, and administrators engage better when in a space that is environmentally comfortable, that integrates daylight and appropriate artificial lighting solutions, exhibits appropriate acoustic performance, and minimizes the amount of disruptive outdoor and indoor noise affecting the classroom.

Questions should be asked that include:

What indoor environmental factors impact thermal comfort?

What is the appropriate quantity and quality of light required to perform the primary activities in the facility

- How can thermal imbalance due to changes in the thermal environment be reduced?
- What acoustical distractions need to be controlled to allow concentration on the primary activities in the facility?

How do we reduce glare on presentation surfaces?

What local and natural materials can be used throughout the facility?

8. Energy Efficiencies: conserve energy and save money.

Include the provisions of high performance systems through:

Heating, ventilating, and air-conditioning systems.

LED lighting systems incorporating control devices.

Controls for all aspects of the building.

Left East Baton Rouge Lee High School I Baton Rouge, Louisiana Below Lake Stickney Elementary I Lynnwood, Washington









9. Build Systems Easy to Maintain and Operate: zone and control.

Zoned control over the temperature, airflow, acoustics, and lighting allow people to compensate for orientation and adjacencies.

Questions include:

How might staff be trained to effectively use systems?

What aspects and programs may reduce maintenance efforts for the life of the facility?

10. Healthy Learning Environments

There is a renewed focus on health, wellbeing, social and emotional needs, nutrition.

Items to consider:

- Emphasis on physical health/sports
- Provision of adequate ventilation and air filtration
- Connect with mindfulness and wellness research
- Use sustainable cleaning products.





Agua Fria Canyon View High School I Waddell, Arizona

Pathfinder Kindergarten Center I Everett, Washington





MP





Educational Adequacy

Dashboard Key

Dashboards are intended to help evaluate existing conditions and inform decision making.

In conjunction with facility assessments and capacity reviews, Norwalk Public School District schools were also evaluated on their spatial and environmental ability to support the educational mission and curriculum of the district.

The educational adequacy index indicator is based on 10 key criteria developed by DLR Group. These key criteria are founded in research focused on the relationship of architecture and student and teacher engagement. Six of the ten criteria were leveraged to inform space curricula alignment scores for each facility.

Throughout the week of January 20, 2021 DLR Group team members toured all but three of the campuses the rest to be completed by the end of February) in the Norwalk Public School District. Guided by school leadership, principals and vice principals, the team gathered information about the current conditions at each facility, observing and discussing teaching pedagogies and aspirations, to understand how the physical spaces did or did not align with desired teaching and learning practices.

A summary of the reflections gathered during these assessments is outlined in the following dashboards.

Note: Not all facilities have dashboards as dashboards were only developed for schools that were visited on this trip. Additional facilities have been identified as potential sites to visit. The following information is included on each dashboard:

Original Building year of construction

Grade Level lowest - highest Student Count snapshot of total student enrollment Actual Student Enrollment 2019/2020

GSF gross built square footage **SHUTTERED** overall percentage of buildings on campus **INDOOR/OUTDOOR** current buildings/outdoor space that could be utilized for outdoor learning *SF based on 2018/2019 Data provided by HHF

NPS provided enrollment data for the current academic year, 2019-2020. Figures were dated February 2020.

Gross square footage for each of the schools is based on 2019 data gathered as part of the physical assessment study, with additional measurements taken from Google Earth.





Educational Adequacy

Each facility received an overall score, within a range of 0-5.

The total score is the product of assessments in six subcategories, tied to the space curricula alignment indicators outlined at right and displayed on each of the dashboards.

Note: If a school was completely reliant on modulars, it automatically received a score of 0, as modulars do not provide future-facing solutions.





Community Resource: Culture, Community Connections & Wayfinding

Stimulating Architecture: Performance & Condition of Physical Space

Safe and Secure Supervision and Security: Safety, Security & Site Functionality

Learning Environments that Connect: **Real-World Experiential Learning**

Flexibility:

Flexible Space, Accommodations, Utilization & Adaptable Furniture for Day-to-Day Use and Over Time

Comfortable & Healthy:

Natural Day-Lighting, Adjustable Lighting, Appropriate Acoustics, Thermal Comfort, Well Being & Engagement



Curriculum Alignment Assessment Tool

Metric	Description	Score	
EDUCATIONAL E	NVIRONMENT	Consider overa	rall school for this category
Student Centere	d Sustainable Design™		If in portables, mark portables and move on
Stimulating Architecture	The school environment is welcoming and inspiring. The occupants are engaged		
Safe & Healthy	The school has good sight lines and connections between spaces & to places of vulnerability (stairs/restrooms) to support sense of community & create a safe environment		
Views	Views provided from classrooms/core learning spaces		
Daylighting	Windows maximizing daylighting provided with solar shades or overhangs where appropriate		
Acoustics	Space should have appropriate sound absorption materials to allow for conversations to be heard. Walls designed to minimize sound transfer		
Thermal Comfort/Air Quality	Spaces are not too hot or too cold. Spaces do not have too much heat gain from sun. The air is "fresh" w/o noticable odors/staleness/mustyness		
Movement & Exploration	Does the space allow for the different learning modalities to happen dynamically		
Adaptability & Flexible Space	How much can the space (walls) change shape or allow change in use by opening or combine with other spaces.		

Metric	Description	Score					
INSTRUCTIONAL S	INSTRUCTIONAL SPACES						
Classrooms (regul	ar instructional spaces) -#1		Identify grade level/use & location/orientation in building				
Size	Physical square footage of the room as compared to CT standards						
Technology	Access to technology in the classroom						
Storage for Student Materials	Space for student material storage including books, work projects, backpacks, coats						
Storage for Teacher Materials	Storage for teacher personal materials, classroom supplies						
Sink	In-room						
Views/Glazing	Views provided from classrooms/core learning spaces						
Daylighting	Extent to which natural daylight is in the room						
Whiteboard/Writ eable Surfaces & Tack Surfaces	Availability and quantity						
Lighting	Sufficiency (quantity/quality) & differentiation (provides choice/change)						
Accessibility	Degree to which the classroom is accessible						
Power & Data	Sufficiency & accessible to occupants						
Flexible furniture	Degree to which furniture is ergonomic, appropriately sized, easily rearraned, provides choice & variety (informal/formal); & allows individual movement.						





Metric	Description	Score	
Classrooms (regul	ar instructional spaces)- #2		Identify grade level/use & location/orientation in building
Size	Physical square footage of the room as compared to CT standards		
Technology	Access to technology in the classroom		
Storage for Student Materials	Space for student material storage including books, work projects, backpacks, coats		
Storage for Teacher Materials	Storage for teacher personal materials, classroom supplies		
Sink	In-room		
Views/Glazing	Views provided from classrooms/core learning spaces		
Daylighting	Extent to which natural daylight is in the room		
Whiteboard/Writ eable Surfaces & Tack Surfaces	Availability and quantity		
Lighting	Sufficiency (quantity/quality) & differentiation (provides choice/change)		
Accessibility	Degree to which the classroom is accessible		
Power & Data	Sufficiency & accessible to occupants		
Flexible furniture	Degree to which furniture is ergonomic, appropriately sized, easily rearraned, provides choice & variety (informal/formal); & allows individual movement.		

Metric	Description	Score	
Classrooms (regul	ar instructional spaces)- #3		Identify grade level/use & location/orientation in building
Size	Physical square footage of the room as compared to CT standards		
Technology	Access to technology in the classroom		
Storage for Student Materials	Space for student material storage including books, work projects, backpacks, coats		
Storage for Teacher Materials	Storage for teacher personal materials, classroom supplies		
Sink	In-room		
Views/Glazing	Views provided from classrooms/core learning spaces		
Daylighting	Extent to which natural daylight is in the room		
Whiteboard/Writ eable Surfaces & Tack Surfaces	Availability and quantity		
Lighting	Sufficiency (quantity/quality) & differentiation (provides choice/change)		
Accessibility	Degree to which the classroom is accessible		
Power & Data	Sufficiency & accessible to occupants		
Flexible furniture	Degree to which furniture is ergonomic, appropriately sized, easily rearraned, provides choice & variety (informal/formal); & allows individual movement.		





Metric	Description	Score	
Classrooms (regula	ar instructional spaces)- #4		Identify grade level/use & location/orientation in building
Size	Physical square footage of the room as compared to CT standards		
Technology	Access to technology in the classroom		
Storage for Student Materials	Space for student material storage including books, work projects, backpacks, coats		
Storage for Teacher Materials	Storage for teacher personal materials, classroom supplies		
Sink	In-room		
Views/Glazing	Views provided from classrooms/core learning spaces		
Daylighting	Extent to which natural daylight is in the room		
Whiteboard/Writ eable Surfaces & Tack Surfaces	Availability and quantity		
Lighting	Sufficiency (quantity/quality) & differentiation (provides choice/change)		
Accessibility	Degree to which the classroom is accessible		
Power & Data	Sufficiency & accessible to occupants		
Flexible furniture	Degree to which furniture is ergonomic, appropriately sized, easily rearraned, provides choice & variety (informal/formal); & allows individual movement.		

Metric	Description	Score	
Classrooms (regul	ar instructional spaces)- #5		Identify grade level/use & location/orientation in building
Size	Physical square footage of the room as compared to CT standards		
Technology	Access to technology in the classroom		
Storage for Student Materials	Space for student material storage including books, work projects, backpacks, coats		
Storage for Teacher Materials	Storage for teacher personal materials, classroom supplies		
Sink	In-room		
Views/Glazing	Views provided from classrooms/core learning spaces		
Daylighting	Extent to which natural daylight is in the room		
Whiteboard/Writ eable Surfaces & Tack Surfaces	Availability and quantity		
Lighting	Sufficiency (quantity/quality) & differentiation (provides choice/change)		
Accessibility	Degree to which the classroom is accessible		
Power & Data	Sufficiency & accessible to occupants		
Flexible furniture	Degree to which furniture is ergonomic, appropriately sized, easily rearraned, provides choice & variety (informal/formal); & allows individual movement.		





Metric	Description	Score	
Classrooms (regul	ar instructional spaces)- #6		Identify grade level/use & location/orientation in building
Size	Physical square footage of the room as compared to CT standards		
Technology	Access to technology in the classroom		
Storage for Student Materials	Space for student material storage including books, work projects, backpacks, coats		
Storage for Teacher Materials	Storage for teacher personal materials, classroom supplies		
Sink	In-room		
Views/Glazing	Views provided from classrooms/core learning spaces		
Daylighting	Extent to which natural daylight is in the room		
Whiteboard/Writ eable Surfaces & Tack Surfaces	Availability and quantity		
Lighting	Sufficiency (quantity/quality) & differentiation (provides choice/change)		
Accessibility	Degree to which the classroom is accessible		
Power & Data	Sufficiency & accessible to occupants		
Flexible furniture	Degree to which furniture is ergonomic, appropriately sized, easily rearraned, provides choice & variety (informal/formal); & allows individual movement.		

Metric	Description	Score	
Classrooms (Speci	alty spaces: SPED or CTE)- #1		Identify grade level/use & location/orientation in building
Size	Physical square footage of the room as compared to CT standards		
Technology	Access to technology in the classroom		
Storage for Student Materials	Space for student material storage including books, work projects, backpacks, coats		
Storage for Teacher Materials	Storage for teacher personal materials, classroom supplies		
Sink	In-room		
Views/Glazing	Views provided from classrooms/core learning spaces		
Daylighting	Extent to which natural daylight is in the room		
Whiteboard/Writ eable Surfaces & Tack Surfaces	Availability and quantity		
Lighting	Sufficiency (quantity/quality) & differentiation (provides choice/change)		
Accessibility	Degree to which the classroom is accessible		
Power & Data	Sufficiency & accessible to occupants		
Flexible furniture	Degree to which furniture is ergonomic, appropriately sized, easily rearraned, provides choice & variety (informal/formal); & allows individual movement.		





Metric	Description	Score	
Classrooms (Speci	alty spaces: SPED or CTE)- #2		Identify grade level/use & location/orientation in building
Size	Physical square footage of the room as compared to CT standards		
Technology	Access to technology in the classroom		
Storage for Student Materials	Space for student material storage including books, work projects, backpacks, coats		
Storage for Teacher Materials	Storage for teacher personal materials, classroom supplies		
Sink	In-room		
Views/Glazing	Views provided from classrooms/core learning spaces		
Daylighting	Extent to which natural daylight is in the room		
Whiteboard/Writ eable Surfaces & Tack Surfaces	Availability and quantity		
Lighting	Sufficiency (quantity/quality) & differentiation (provides choice/change)		
Accessibility	Degree to which the classroom is accessible		
Power & Data	Sufficiency & accessible to occupants		
Flexible furniture	Degree to which furniture is ergonomic, appropriately sized, easily rearraned, provides choice & variety (informal/formal); & allows individual movement.		

Metric	Description	Score	
Classrooms (Speci	alty spaces: SPED or CTE)- #3		Identify grade level/use & location/orientation in building
Size	Physical square footage of the room as compared to CT standards		
Technology	Access to technology in the classroom		
Storage for Student Materials	Space for student material storage including books, work projects, backpacks, coats		
Storage for Teacher Materials	Storage for teacher personal materials, classroom supplies		
Sink	In-room		
Views/Glazing	Views provided from classrooms/core learning spaces		
Daylighting	Extent to which natural daylight is in the room		
Whiteboard/Writ eable Surfaces & Tack Surfaces	Availability and quantity		
Lighting	Sufficiency (quantity/quality) & differentiation (provides choice/change)		
Accessibility	Degree to which the classroom is accessible		
Power & Data	Sufficiency & accessible to occupants		
Flexible furniture	Degree to which furniture is ergonomic, appropriately sized, easily rearraned, provides choice & variety (informal/formal); & allows individual movement.		





Metric	Description	Score	
Classrooms (Speci	alty spaces: SPED or CTE)- #4		Identify grade level/use & location/orientation in building
Size	Physical square footage of the room as compared to CT standards		
Technology	Access to technology in the classroom		
Storage for Student Materials	Space for student material storage including books, work projects, backpacks, coats		
Storage for Teacher Materials	Storage for teacher personal materials, classroom supplies		
Sink	In-room		
Views/Glazing	Views provided from classrooms/core learning spaces		
Daylighting	Extent to which natural daylight is in the room		
Whiteboard/Writ eable Surfaces & Tack Surfaces	Availability and quantity		
Lighting	Sufficiency (quantity/quality) & differentiation (provides choice/change)		
Accessibility	Degree to which the classroom is accessible		
Power & Data	Sufficiency & accessible to occupants		
Flexible furniture	Degree to which furniture is ergonomic, appropriately sized, easily rearraned, provides choice & variety (informal/formal); & allows individual movement.		

Metric	Description	Score	
Classrooms (Speci	alty spaces: SPED or CTE)- #5		Identify grade level/use & location/orientation in building
Size	Physical square footage of the room as compared to CT standards		
Technology	Access to technology in the classroom		
Storage for Student Materials	Space for student material storage including books, work projects, backpacks, coats		
Storage for Teacher Materials	Storage for teacher personal materials, classroom supplies		
Sink	In-room		
Views/Glazing	Views provided from classrooms/core learning spaces		
Daylighting	Extent to which natural daylight is in the room		
Whiteboard/Writ eable Surfaces & Tack Surfaces	Availability and quantity		
Lighting	Sufficiency (quantity/quality) & differentiation (provides choice/change)		
Accessibility	Degree to which the classroom is accessible		
Power & Data	Sufficiency & accessible to occupants		
Flexible furniture	Degree to which furniture is ergonomic, appropriately sized, easily rearraned, provides choice & variety (informal/formal); & allows individual movement.		





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Metric	Description	Score	
Classrooms (Speci	alty spaces: SPED or CTE)- #6		Identify grade level/use & location/orientation in building
Size	Physical square footage of the room as compared to CT standards		
Technology	Access to technology in the classroom		
Storage for Student Materials	Space for student material storage including books, work projects, backpacks, coats		
Storage for Teacher Materials	Storage for teacher personal materials, classroom supplies		
Sink	In-room		
Views/Glazing	Views provided from classrooms/core learning spaces		
Daylighting	Extent to which natural daylight is in the room		
Whiteboard/Writ eable Surfaces & Tack Surfaces	Availability and quantity		
Lighting	Sufficiency (quantity/quality) & differentiation (provides choice/change)		
Accessibility	Degree to which the classroom is accessible		
Power & Data	Sufficiency & accessible to occupants		
Flexible furniture	Degree to which furniture is ergonomic, appropriately sized, easily rearraned, provides choice & variety (informal/formal); & allows individual movement.		

Metric	Description	Score
Media Center		
Size	Physical square footage of the room as compared to CT standards	
Daylighting	Extent to which natural daylight is in the room	
Computer Research Area	Extent to which research area is provided	
Functional Layout	Flexible overall layout of the media center	
Ample and Comfortable Seating	Extent to which soft seating is provided	
Small Group Project Area	Extent to which research area is provided	
Office	Availability	
Media Workroom	Amount of AV storage	
Collection/ Stacks	Is there sufficient space to store the campus's book collection	
Maker Space/Idea Lab	Availability	
Storybook Reading Zone	Availability	





Metric	Description	Score
Student Services (Couseling, Career, OT/PT, Speech) - cros	s-out what is N/A
Size	Physical square footage of the room as compared to CT standards	
Storage for equipment	Space for the storage of specialized equipment to meet student needs	
Daylighting	Extent to which natural daylight is in the room	
Lighting	Sufficiency (quantity/quality) & differentiation (provides choice/change)	
Acoustics & Privacy	Do office, testing & conference rooms have proper acoustics & afford ability to achieve visual & auditory privacy to public when needed.	
Sink	In-room	
Ceiling mounted swing	In-room; works; has blocking in ceiling if it doesn't work	
Guidance & Counseling Offices	Exists/Adequacy	

Metric	Description	Score	
Decompression Room	Exists/Adequacy		
Career Center	Exists/Adequacy		
OT/PT	Exists/Adequacy		
Sensory room	Exists/Adequacy		
Speech	Exists/Adequacy		
Testing Rooms/Conf Rooms	Exists/Adequacy		
Privacy & Acoustics	Space should have appropriate sound absorption materials to allow for conversations to be heard. Walls designed to minimize sound transfer		





Metric	Description	Score
Art Room		
Size	Physical square footage of the room as compared to CT standards	
Daylighting	Extent to which natural daylight is in the room	
Whiteboard	Availability	
Sinks	Minimum of two functioning sinks	
Furniture	Furniture is appropriate and functional for the type of space	
Kiln Room	Availability	
Storage of Materials	Appropriate size	
Display Areas	Appropriate size	
Storage of Student Projects	Appropriate size	
Location	Centrally situated for easy access by all students	
Technology	Access to technology in the classroom	

Metric	Description	Score
Music Room		
Size	Physical square footage of the room as compared to CT standards	
White Board	Availability	
Acoustic Treatment	Degree to which room is acoustically isolated from outside noise; degree to which acoustic treatments appropriate for music	
Furniture	Furniture is appropriate and functional for the type of space	
Instrument Storage	Appropriate size	
Sheet Music Storage	Appropriate size	
Storage	Appropriate for storage equipment, supplies, and wardrobe	
Technology	Access to technology in the classroom	





Metric	Description	Score
Gymnasium		
Size	Physical square footage of the room as compared to CT standards	
Basketball Standards	Availability	
Desired floor/court markings	Availability	
Flooring Condition	Condition - excellent, good, poor	
Acoustic Treatments within Space	Appropriate for the space	
Acoustic Isolation	Sound transference to adjacent spaces	
Office	Appropriate for the space	
Storage	Appropriate for the space	
Bleachers	Appropriate for the space	
Lighting	Appropriate for the space	
Public Announcement System	Appropriate for the space	
Access to Outdoors	Direct access to outdoor play areas	

Metric	Description	Score	
Stage & Auditori	ium		
Size	Appropriate for the space and use		
Storage	Appropriate for the space		
Lighting	Appropriate for the space		
Accessibility	Can occupants get to stage; Can occupants get to adequate seating		
Condition	Floor/Curtains		
Acoustic Treatment	Degree to which room is acoustically isolated from outside noise; degree to which acoustic treatments appropriate for auditorium (where occurs)		



Metric	Description	Score	
Cafeteria			
Size	Physical square footage of the room compared to		
Furniture	Appropriate for the space		
Daylighting	Appropriate for the space		
Acoustics in Space	Appropriate for the space		
Acoustic Isolation	Sound transference to adjacent spaces		
Kitchen	Physical square footage of the room compared to campus needs		
Storage	Appropriate for the space		
After-school care/Extend-a-day	Dedicated storage space, office, and entrance		

Metric	Description	Score	
Administrative Of	fices		If in portables, mark portables and move on
Main Office is close to Main Entrance	Availability		
Visibility	Clear sightlines from the main office		
Welcome Area	Appropriate for the space		
Furniture	Appropriate for the space		
Conference Room (s)	Appropriate for the space and indicate how many exist		
Counselor's Office Offers Privacy	Appropriate for the space		
Record Storage	Appropriate for the space		
Staff Toilet	Appropriate for the space		
Secured Storage	Appropriate for the space		
Supply Storage	Appropriate for the space		
Acoustics & Privacy	Do office & conference rooms have proper acoustics & afford ability to achieve visual & auditory privacy to public when needed.		





Metric	Description	Score
Health Clinic		
Toilet Room	Availability & size	
Proximity to Main Office	Appropriate for the space	
Exam Room	Availability	
Cot Area	Availability	
Locked Med Storage	Availability	
Office	Availability	
Refrigerator	Availability	
Acoustics & Privacy	Do spaces have appropriate visual & auditory privacy while maintaining appropriate sightlines for observation.	

Metric	Description	Score		
Teachers' Lounge				
Size	Physical square footage of the room compared to CT standards			
Ample and Comfortable Seating	Appropriate for the space			
Table and Chairs	Appropriate for the space			
Kitchenette	Availability			
Toilet Room	Availability			
Storage	Appropriate for the space			





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Metric	Description	Score			
Outdoor Amenities					
Accessibility	Direct access from school				
Playground Structure	Appropriate for the space; condition of playground structure				
Playground Size and Surface	Appropriate size for student enrollment and type of surface - blacktop, grass, or kids carpet				
Learning Lab/Instructional Area	Appropriate for the space				
Multipurpose Field	Appropriate for the space				
Basketball Court	Appropriate for the space				
Shaded/Covered Play	Natural or man made shading for play				
Outdoor Gardens	Places for students to grow things, &/or places for community to grow things				





A VALUES Based Approach to Sustainability

To establish design guidelines that enhance healthy, sustainable, performance-driven environments for learning.

The global conversation on sustainability is evolving. It has moved beyond a resource conservation movement to include climate change, resilience, human health and well-being, regeneration, and eco-system integrity. Such a broadened definition of sustainability requires new approaches in processing competing design parameters to provide a holistic solution that values the health and experience of end users, local communities, and the environment. To achieve best return on investment aligned with Norwalk Public School's priorities, a framework for prioritization is required that will ensure healthy, sustainable, performance-driven environments for learning.

Newman + DLR Group utilized a framework to evaluate sustainability strategies for the facility plan recommendation that would best serve Norwalk Public Schools and the community. The sustainability workshop walked participants through the framework, called VALUES, and the many potential ideas that could improve the design and operations of the facilities and improve the user experience.

VALUES, which stands for Viewing Architecture through the Lens of User Experience for Sustainability, is an adaptable and scalable tool, developed by DLR Group, to evaluate sustainable design strategies and their impact on user experience. When implemented, sustainable and resilient strategies have a measurable positive impact on user experience in multiple ways:

- 1. Social and Cultural Impact
- Sustainable design features within the school facility influences the culture within the school while promoting the users to influence their lives.
- A healthy, comfortable environment promotes greater engagement among users, which in turn leads to better learning and a more connected community.
 - 2. Economic Impact
- Sustainable and resilient design strategies ensure that schools are better able to withstand or adapt in a disturbance or hazard event so that users are safe and able to continue to function within the school facilities with less loss of property, time and productivity.



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When engaged users focus on resource conservation and human health, they make wise investments in design strategies that work in tandem to ensure best first costs, maintenance costs and return on their investment in terms of dollars, user comfort and productivity.

3. Environmental Impact

Enhancing the user experience provides greater connections to nature and naturalness, which includes preserving and enhancing outdoor spaces on the school properties.

Engaged users will use the building more efficiently and maintain it so that it functions properly, which results in saving energy and water while reducing waste. Schools can be leaders in the community in resource conservation and the buildings can become a teaching tool for environmental stewardship.

& Resilience



The VALUES framework is utilized throughout a project and relies on an integrated design process that starts with the VALUES Co-Lab workshop to identify user values related to sustainability. User values are prioritized by workshop participants through conversations about their user experience and the impact on and from the built environment.



Fig. 1. Resilience as a component of sustainability. Proponents of this organization structure assert that systems that are more resilient can better achieve and maintain sustainable operation.²

²⁹ResearchGate: Resilience and Sustainability: Similarities and Differences in Environmental Management Applications https://www.researchgate.net/publication/320149863_ Resilience_and_sustainability_Similarities_and_differences_in_environmental_management_ applications

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Newman/DLR Group facilitated a VALUES Co-Lab workshop to explore values related to key sustainability aspects of building design, construction, and operation in Norwalk.

The VALUES Co-Lab workshop was held on February 17, 2021. Attendees included a broad cross-section of stakeholders and end users, including Norwalk leadership, superintendents, principals, teachers, facilities staff, community members and local government officials. The outcomes of the workshop informed the development of cost-effective sustainable solutions for Norwalk Public Schools.

The workshop started with an empathy exercise that identified what end-user groups where in attendance and who was missing from the conversation that should be considered. This was followed by a presentation that provided background on the Facilities Plan Study process and explained the inherent interconnection between the ten indicators of user engagement utilized in evaluating the educational adequacy of facilities and the process of evaluating the physical conditions of the facilities. Information from both are to be synthesized into appropriate and timely recommendations that would be further prioritized based on the outcomes of the VALUES Co-Lab. The design team explained our approach to sustainability and how it is rooted in creating resilient systems and looking at individual, community, regional and global scales. Next was an introduction to each of the overarching values or themes of sustainability and resiliency and why they are important to the user experience. For instances, stakeholders learned about how the quality of the indoor environment has a direct and tangible impact on a student's ability to learn. Indoor environmental quality (IEQ) can either promote or detract from focus, collaboration, emotional and cognitive development and functioning.



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IV-48 of 133

High Performance Design Indicators were established as:

Subjective Indicators

Thermal Comfort (Temperature and relative humidity)

- Acoustic Comfort S (Internal and external sources of noise)
- Indoor Air Quality JIC (CO2 levels, mold/mildew and materials off-gassing)
 - Visual Comfort (Quality/quantity of natural and artificial lighting)

Objective Indicators



- **Energy Demand**

 - Water Management and Usage

Planning for Learning **Resilience & Sustainability**

design for equitable



Top Excerpts from the sustainability workshop presentation focused on how thermal comfort, CO2 levels, and lighting impact learning outcomes.

Bottom Excerpts from the sustainability workshop presentation: Four, of ten key categories, informing design excellence.













VALUES Themes presented were:

Energy

Indoor Environmental Quality

Materials

Sustainable Sites

Water

Social Sustainability

Design Aspirations

Resiliency

Procurement and Operations

Community Exchange

Experience of Space



Following the presentation, attendees were split into four smaller groups and each group represented one of four major end user groups (teachers, students, administrators/facilities staff and community) during the VALUES activity.

Through the activity, each group was able to explore and prioritize key sustainability and resiliency aspects of building design, construction and operation. Facilitators from the project team guided them through 41 different topics that identify with one of the broader themes. The groups were able to select those topics that resonated the most and those that should be a priority when developing the Facility Plan recommendations and future projects. A multi-layered process of selection and elimination allowed each group to select their top ten most important topics, which in some cases highlighted an entire set of topics included within a theme. At the end, each group reported out on their conversations, and the topic selections were analyzed to find where there was consensus among the groups. Finally the full complement of stakeholders agreed to a set of priority topics that should guide recommendations and decision making when implementing the Facility Plan.

Viewing Architecture through the Lens of User Experience & Sustainability





Visioning

Complemented by a diversity in perspective, the following 7 topics rose to the forefront of importance:



Indoor Environmental Quality



Emotional Resilience



Access

Play



Equity, Diversity and Universal Accessibility



Beauty and Inspiration



XX XX

Supportive, Adaptable & Flexible



Right Canyon View High School I Waddell, Arizona







Top: Virtual workshop on VALUES

Bottom: Social Sustainability





Top: Resiliency

Bottom: Play







Indoor Environmental Quality:

At the time of this VALUES Co-Lab workshop, the U.S. was approaching the one year mark of living with the COVID-19 pandemic, so it is not surprising that Indoor Environmental Quality (IEQ) and more specifically Air Quality was at the top of the list of important topics for all four workshop groups. However, the advantages of fresh and clean air within work and learning environments goes beyond issues of stopping the spread of disease. It also helps to keep carbon dioxide and indoor pollutants at acceptable levels, which has a direct impact on students' ability to focus and learn.

Additional topics identified as very important that fall within the IEQ theme include Acoustic Comfort (hear and be heard comfortably), Thermal Comfort (not too hot/not too cold) and Visual Comfort (good quality, adjustable light fixtures and daylight without glare)

It will be important to prioritize facility projects which improve air quality and comfort within the schools, especially for those schools which currently do not have a ventilation system to provide fresh air to classrooms. Also, regular maintenance is also critical so that systems function as intended, otherwise they can contribute to poor air quality as well as poor thermal comfort and an increase in noise.



Common Vocabulary: VALUES framework Top ranked cards in relation to indoor environmental quality.





Emotional Resilience

All four groups also identified Emotional Resilience (the ability to adapt and cope in stressful situations) as a top priority for Norwalk Public Schools. This issue has always been important for students and teachers, but again the pandemic has brought this to the forefront as many, if not most, struggle with emotional strain as a result of the worry and isolation brought on by uncertainty and the need to stay home. It is important that schools are places of safety, engagement and belonging. The architecture can promote this by creating spaces that support connections between people, provide variety and choice to address multiple needs, and are welcoming, comfortable and inspiring. By further becoming places for community, a school facility can also contribute to community resilience, another topic identified by some stakeholders as important.



Common Vocabulary: VALUES framework Top ranked cards in relation to emotional resilience

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Access:

Access was a topic that was pulled from multiple themes by the four stakeholder groups. Three of the four groups identified community and parent access as a top priority. It was identified that some parents have difficulty accessing their child's school because it is far away and not accessible by public transportation. Stakeholders also spoke about the importance of schools being a community resource beyond the normal school day. Facility layouts and system designs should allow for the buildings to be zoned for public use while being able to limit access to the academic areas for improved security.

The student group and the admin/facilities group both identified access to nature, the outdoors and biophilic design (relating to natures; use of natural patterns, spatial relationships, colors and texture) as a means to improve health, well-being and ultimately educational outcomes. Studies have found that connecting to nature reduces stress, improves cognitive function and reduces symptoms associated with ADHD. The Facility Plan recommendations should include providing views to the outdoors, outdoor learning spaces that are secure and thoughtfully designed to accommodate multiple activities of learning, and finally, incorporate nature and naturalness withing the interior environment.

Lastly, the topic of Access also included access to experts and an exchange of ideas with others outside of the school. Access to the experts was valued because of the relevancy and real-world perspective it brings to learning. Again, the school architecture can promote this by creating spaces that can be easily accessed by industry partners, provide for presentations for various sizes of audiences and flexible spaces that support applied learning activities, both big and small.





Common Vocabulary: VALUES framework Top ranked cards in relation to access





Equity, Diversity and Universal Accessibility:

Almost all workshop participants spoke about the importance of equity and inclusion, and many stated that it should be the foundation for all other subsequent decisions; and yet it was important to reflect on the many definitions and perspectives for Equity, Diversity and Universal Accessibility that were part of the conversations.

For many, Equity, Diversity and Universal Accessibility mean everyone has access to a quality education regardless of location, socio-economic level, gender, race, learning style and ability (or disability), physical ability (or disability), or mental health. Collectively it was agreed that it meant equal access to opportunity.

In terms of the facilities plan, recommendations should try to distribute both buildings equitably to all neighborhoods and distribute programs so that students have opportunities that inspire and address many different learning styles. Some participants also expressed the need for equal access for all to useful learning spaces that allow them to explore a passion or career path, as well as the furniture, equipment/technology, goods and supplies necessary to support the educational curriculum being taught.

Additionally, the facility plan implementation should not only be adherence to American with Disabilities Act (ADA) requirements, but reach for universal design practices that can best meet the needs of all people.



Common Vocabulary: VALUES framework Top ranked cards in relation to equity, diversity and universal accessibility





Beauty and Inspiration:

Three of the groups identified Beauty and Inspiration as a top priority. A beautiful building as a source of pride for the community. It was identified that maintenance and durability is tied to beauty: taking care of the spaces so they stay beautiful is as important as the beauty experienced on the day they open. When a community invests in a quality school building that is as innovative and inspirational as it is functional, it sends the message that education is important, and they value creativity and innovation. Stakeholders spoke passionately about how the appearance of the building makes a huge difference in the morale of staff & students.



Common Vocabulary: VALUES framework Top ranked cards in relation to beauty & inspiration

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Play

Play was a topic that the majority of the four groups listed as a high priority; however, the definition of play was very broad and went beyond recess. They identified that many communities needed access to playgrounds and play structures so that they would have access to the outdoors and physical fitness for the broader community, not just students. This is especially true for those urban neighborhoods where many families reside in multifamily buildings and often have limited play areas for children.

Also important to this topic was the need for play to permeate the educational experience as well. When kids play there is a sense of freedom and there is no right or wrong way of participating or experiencing. It is ok to explore on your own and in groups. It is ok to fall down and get back up. It is full of whimsy, exuberance, and joy. These are all attributes that students, administrators and community members would like to see incorporated into the learning experience for students of all ages. Kids would be empowered to take risks and explore their passions, and in turn be vested in the process, knowledge attained and the outcomes. The facilities need to support this through stimulating, flexible and adaptable architecture that, as stated previously, provides for varied activities and student choice. This concept segues appropriately into the last priority theme.



Common Vocabulary: VALUES framework Top ranked cards in relation to play





Supportive, Adaptable & Flexible :

Last, but definitely not least, one additional theme that was identified as a top priority within all four groups was the need for varied, flexible and adaptable spaces that support evidencebased learning modalities (varied tasks and activities that are part of inquiry-based learning cycle). These include spaces that accommodate do-it-yourself projects, personal expression, varied learning styles and both collaboration and individual focus. Stakeholder groups identified the need for equitable investment in guality technology and flexible and ergonomic furniture that would also support inquiry-based learning. They included the need for transparent spaces that promote inspiration and connections between age groups and curriculum subjects while also improving relational security.



Common Vocabulary: VALUES framework Top ranked cards in relation to flexible & adaptive spaces

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Synthesis into Recommendations

Now that these 7 themes have been identified as top priorities, this will inform the educational adequacy and physical facilities assessment recommendations. It will be used as a lens to help evaluate intervention plan options and future projects priorities. The design team will consistently ask the question,

"

Are we remaining consistent with the educational vision and the values identified?

This process helps ensure that the Facilities Plan becomes a reliable road map to achieve the goals described by Norwalk Public Schools and the community it supports.









Return on Investment

Provide manageable building footprints that NPS can operate and maintain.

Particularly significant are climate change and operating/ maintenance costs. These forces combined with space curricula alignment are the foundation for the conversation on return on investment. At the root meaning of sustainability is the ability to maintain and the meaning of resiliency is the ability to bounce back in the face of adversity. Best learning outcomes will never be sustained if the facilities are not able to be affordably maintained and withstand hazard events to protect NPSD's capital investment and provide for essential community needs like education, community events and shelter.



The VALUES framework informed sustainable design strategies and their impact on user experience to develop a variety of cost effective sustainable solutions for Norwalk Public Schools.

See the executive summary for a description of sustainability, resilience and ROI as related to school as ignitor, community, and nexus. Reference advancement opportunities for proposed design solutions. To provide quality education to all PK-12 students both in the short term as well as in the long-term future, maintainability starts with first right-sizing Norwalk's facilities.

Secondly to get the most out of the investment in physical spaces, the facilities must be able to effectively and efficiently respond to the needs of the curriculum over time. Space in a facility is a resource that should be conserved like any other resource, and the first renovation or construction costs associated with space are only a small percentage of the overall operational and maintenance costs; therefore, it is important to plan and design facilities that are:

- Efficient in their planning in order to build and maintain less while making the best use of space now and in the future.
- Durable, cleanable and easily maintainable to minimize ongoing costs, with special attention given to those building components where ongoing maintenance is often neglected or difficult and for items that have a long lifespan.
- Adaptable so that future changes or updates to systems and space can be readily accomplished with minimal disruption.

Long-term maintenance and operating costs are shifting user expectations when it comes to capital cost for investment versus long-term maintenance costs. Building owners want to maximize every dollar invested with the best return on that investment. This allows more dollars to be focused on education and classroom needs instead of ongoing building operations and/or repair after hazard events.





Safety and Security

Relational Safety Framework

The development of a positive school culture is critical on many levels and is never a simple matter, because culture is powerful and dynamic.

Failure to make the school culture a priority has direct consequences for students, staff, and the community. School systems must constantly attend to the culture by establishing and developing relationships that provide security, protection, order, stability, and freedom from fear. These relationships allow students to feel safe at school, where they are free from harm, can interact with their teachers and peers, and are invited to take academic risks to extend their learning.

As our society continues to change, so do the roles and responsibilities of our schools. Educational organizations have the responsibility to cultivate the culture and establish systems to promote the safety and security by attending to the human connection, environment, and technology components, while still maintaining compliance with standards and policies.

Human Connection

The relationships between and among people establish and sustain a sense of security, trust, and belonging, eliciting different responses that help us grow and learn.

Environment

The natural desire in all humans is to have an environment that is predictable and orderly, which provides a sense of control and influences perceptions and behaviors.

Technology

The human interaction with technology is tracked and recorded and therefore must be secure.

Pathfinder Kindergarten Center I Everett, Washington

NEWMAN + DLR Group


Thoughtful and deliberate integration of all components can lead to the establishment and sense of trust and security, but does not guarantee safety. Proactive security is a complex process for addressing threats and preventing major incidents before they occur. By putting preventative measures in place, the possibility of organizations experiencing devastating events and major losses is greatly reduced. Just as important, reactive security responds to past or current situations rather than anticipating future events.

While no one solution fits all scenarios, establishing emergency action plans that are well informed and practiced expedites action in the event of a threat. Preparation promotes the best possible care, minimizes impact, and averts other devastating situations. Therefore, the relational interaction between human, environmental, and technological tenets is critical to the development of safer schools.

This relational safety framework is not a cookie cutter or quick fix solution for safety and security. Rather, the framework provides a foundation for organizations as they begin conversations, ask questions, and determine solutions. It takes an entire community working together to provide a safe and secure environment. This framework encourages thought and insight as Norwalk takes on this responsibility.

Beliefs

Everyone has the right to be safe and secure and to feel the sense of safety and security.

A sense of safety and security influences behaviors.

The sense of safety and security can be influenced and changed.

Human connections impact our relationships, health, and wellbeing.

Humans have a strong need for safety and security and look for those attributes in an environment.

Technology has the ability to change lives and create a safer environment.

Safety and security is a shared responsibility.





Safety and Security

Tenets of Relational Safety Human Connection

The social nature of humans plays a role in our happiness and success in life. Humans are wired to make connections with others. These social bonds can affect the health and wellbeing and actions of people. Understanding oneself and others requires thoughtful introspection and reflection.

Relationships: Positive relationships, where everyone is viewed as a contributing member to the learning environment, help to establish and develop connectedness and significance by building self-worth, a sense of belonging, and self-esteem. Meaningful relationships promote mental health and better educational outcomes.

Interpersonal -Relationships and connections between people

Development - Building deep and meaningful connections establishes relationships and sustains a sense of security, trust, and belonging.

Social conflict - Social conflict is a result when a clash between the beliefs and values of two or more people occurs. This can result in actions that can be disruptive and harmful. Resolving these conflicts requires further development of the relationships and reflections on one's mindset, attitude, and actions.

Disruptive actions - Behaviors can directly interfere with the teaching and learning environment.

Bullying - Bullying is a real or perceived imbalance of power used over time that controls or harms others.

Conflict resolution - The skill development that focuses on interactive dialogue-based methods of resolving conflict is used to work toward constructive outcomes through reflective and collaborative processes.

Listening skills - Authentic listening is done with curiosity, empathy, care, and non-autobiographical thinking.

Rational detachment - By managing personal behaviors and attitudes within conflict, people stop taking judgments personally.

Conversational dialogue - Mutually humanizing conversations are conducted so that all parties are valued and opinions matter.

Constructive feedback - Through specific and factual observations, constructive feedback empowers others to improve.

Forgiveness - An attitude of forgiveness is a conscious release of resentment or vengeance toward others.

Intrapersonal -

The relationship and awareness within a person requires thoughtful introspection and reflection, personal values and emotions.

Personal Conflict - Internal conflict involves the introspection of one's own feelings, values, principles, emotions, and decisions.





Health and Wellbeing: Individuals who have a well developed social emotional wellbeing possess and exhibit the following traits:

Establish positive relationships, recognize and manage their behaviors, develop care and concern for others, resolve conflicts, manage stress, make responsible decisions and safe choices, and maintain a positive outlook about themselves and the world around them.

Health/healthy choices - Health is the general condition of the body or mind with reference to soundness.

Wellbeing - Wellbeing is the state of being comfortable, healthy, or happy.

Cultural Responsiveness: Culture plays a vital role in shaping the way one thinks and acts. Living in a global society means that one must have the ability to respect and interact with people from their own culture as well as other cultures.



Mutual respect - It is essential to create an environment in which individuals are valued, accepted, and feel respected by and connected to one another.

Risk-free environment - Everyone should feel comfortable with sharing thoughts and exploring differences without the fear of being put down or judged.

Empathy - Possessing the ability to understand and share the thoughts of others allows one to have an interconnected world view and understand how different actions influence others.

Appreciation - Positive interactions occur with the recognition and celebration of the abilities, qualities, and accomplishments of others.

Cultural competence - A culturally supportive atmosphere is created when individual strengths and values are identified and nurtured.

Personal relevance - Experiences that are relevant to personal aspirations, interests and cultural experiences and connected to real-world issues improves awareness, identity, and develops talent.

Personalized learning - Learning becomes personal when experiences are tailored to address and celebrate cultures, meet individual needs, and further develop passions and interests.

Lake Stickney Elementary School I Lynnwood, Washington





Safety and Security

Tenets of Relational Safety Environment

A positive school environment has appropriate facilities, clear learning and instructional models, a positive climate demonstrating mutual respect, clear and consistent expectations, and a focus on school-based health supports.

Academic Environment: The setting in which a learner relates to the work at hand, including studying and acquiring necessary skills. As learners construct an understanding of the world around them, factors such as pedagogy and learning model influence the academic environment in which they are learning. These contributing factors have the ability to enhance or diminish the overall educational experience for all those who are a part of the academic environment. Pedagogy - Pedagogies are the instructional practices and strategies that influence learning. Pedagogy informs actions and strategies by taking into consideration evidence-based practices and student needs. The pedagogy should create a student-centered environment in which learners gradually construct their own meaning through various means, such as the ones listed below.

> Constructivist learning - Educators design authentic learning experiences where students are actively involved in constructing their own meaning and knowledge.

> Active learning - Educators take on the role of a facilitator while students are involved in doing, thinking, and reflecting about their learning.

> Collaborative learning - Knowledge is a social construct. Educators design instruction to focus on students as they work in groups to solve solutions to real-world problems.

Designing to learning styles and interests - Educators design experiences that match the learning styles and interest of students. Designing learning in this way deepens engagement and improves the willingness of students to spend time thinking, collaborating, and creating ideas in meaningful ways.

Pathfinder Kindergarten Center I Everett, Washington







Learning model - A learning model is an approach that creates authentic instructional experiences where high expectations hold students accountable as they learn content and develop skills. Many learning models have common design principles and patterns. The learning model, such as the ones listed below, should develop the student both academically and personally as they communicate and collaborate with others, think critically, and express their creativity while using the environment in ways that make sense to them.

Project-based learning - Educators use a systematic teaching method that engages students in learning through a collaborative inquiry process structured around complex, authentic questions. Students demonstrate their understanding through a final product.

Challenge--based learning - This learning model provides a framework for solving real-world challenges. This approach involves identifying big ideas, asking thoughtful questions, and identifying, investigating, and solving challenges.

Science Technology Engineering Mathematics (STEM) Educators use real-world applications to integrate and design lessons across four specific disciplines: science, technology, engineering, and mathematics.

International baccalaureate - An international baccalaureate program is designed to provide a challenging and comprehensive education to students as they develop skills in understanding and managing the complexities of our world and prepare to take responsible action in the future.

Pioneer Middle School I Dupont, Washington





Safety and Security

Tenets of Relational Safety Environment Cont.

Physical Environment: The use of space, technology, materials, and time all contribute to physical environment as a tangible location or area. Security is not something added to the physical environment, instead it is built into the culture of the school.

Passive security - Policies and procedures prepare those within a physical environment in the event of hazardous or emergency situations. These plans, systems, and design features become seamlessly integrated into the environment.

Policies and procedures - Specific methods or plans are used to influence decisions and actions such as the ones listed below.

Emergency operations plan Emergency reporting

Systems - Parts of a complex system work together to serve a common purpose. The parts, such as the ones listed below, each have their own purpose, but as a collective whole serve a greater purpose.

Parking Accessibility Ventilation Communication Egress and Refuge Visibility - The ability to see without obstruction allows one to clearly navigate an area without any hindrance. Design elements, such as the ones listed below, contribute to the visibility within a campus.

Clearly marked areas Natural surveillance Lighting Controllable visibility

Protection from hazards - Campuses operate within a natural environment where hazards may occur. The protection and prevention of the campus and its occupants from the dangers of these hazards can be achieved through various design elements, such as those listed below.

Fire safety Tornado shelters Shatterproof glass



Meeker Elementary School Remodel I Greeley, Colorado



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Active security - Some design features deter threats while remaining more readily visible. This is more in line with what most people think of as traditional security.

Safeguard - Measures, such as those listed below, can be taken in order to protect the occupants of a facility and prevent harmful actions from taking place.

Locks and hardware Gates Surveillance Human security Like SRO

Perimeter Security - Design elements, such as those listed below, act as obstacles in order to protect the occupants, as well as the building, from outside interference.

Access control Perimeter barrier Configuration - Different aspects of the environment can be arranged or set up in a particular form, figure, or combination in order to produce certain results and maintain visibility.

Flexible Spaces - The form and function of physical spaces can be configured differently based on need.

Adaptable spaces Multi-purpose spaces

Flexible furniture - Furniture can be altered to address needs, through ergonomics and mobility.

Moveable furniture Ergonomically appropriate furniture Dual-functioning furniture

Scheduling - The schedule can change or adapt by order, duration, and arrangement of groups.

House system Master schedule Non-structured schedule



Discover PBL High School I Camas, Washington





Safety and Security

Tenets of Relational Safety Environment Cont.

Sustainability- Sustainability requires one to exhibit the mindset and actions of being environmentally responsible.

Sustainable sites - The environment surrounding a facility influences the relationship between the ecosystem and the building.

Site development (includes natural habitat and open spaces) Water management Heat island Light pollution reduction

Energy and atmosphere - An efficient facility is designed to improve efficiency of energy consumption and sustainability of the building.

Efficient systems Renewable power sources

Materials and resources - Maximizing the use of renewable, recycled, and natural materials can positively impact the environment and the people within it.

Usage Life-cycle Environmental product transparency

Innovation and design process - The practices and processes used to design physical environments is constantly changing and improving due to advances in technology and research.

Design features Facilitation of process **Community:** The community is made up of a network of individuals that contribute to the function of an educational system. The reciprocal relationship between the educational system and community impacts the economic prosperity and social environment of society. The partnership between parents and schools should not be underestimated for the impact of improving the quality of the schools, strengthening family structures, building community support, and positively affecting student achievement.

Healthy community - A healthy community provides access to an environment that allows people to live life to the fullest potential.

Access to affordable healthy foods - Having access to healthy foods can reduce obesity, improve good health, and strengthen cognitive function.

Quality Environment - Developing and maintaining the physical environment through responsible practices, such as those listed below, allows members of the community to affect the social, emotional, and physical health of all.

Healthy air quality Healthy water quality Hazard free land Safe places to be active Sustainable practices





Economically vital community - The economic prosperity of a community affects the quality of life that may be improved by promoting and sustaining diversity, innovation, and economic well-being. Enriching the community can be achieved through developing a reciprocal partnership between the school and community. Community members can support the educational system as they share their talents and passions to strengthen the community-to-school bond.

> Efficient transportation system - An efficient transportation system can improve economic development, promote sustainable lifestyles, and provide a better quality of life for all members of the community.

Quality schools - The economic status of a community affects the quality of the school system.

Responsible local government - The local government within a community plans and makes decisions that can affect the school system both directly and indirectly.

Engaged citizens - Citizens can decide who makes the decisions for their community and influence how their community handles situations.

Supportive structures - Environments beyond the school environment, such as museums, banks, shopping centers, and post offices, are possible extensions of the learning environment.



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Discover PBL High School I Camas, Washington



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Safety and Security

Tenets of Relational Safety Technology

The evolution and advances in technology impacts how people interact with others and their environment. Digital learning enhances the educational experience by fostering innovation, engagement, collaboration, and critical thinking. As our lives have become immersed into this digital world, the focus on measures and systems for protection have become increasingly more important.

Digital Dossier: A digital dossier is the result of one's life being immersed in digital data. The accumulation of one's secure private records and public online identity begins before birth, continues throughout life, and extends beyond death. The line between a digital dossier and a personal identity is constantly shifting.

Digital leadership - Digital leaders exhibit the dynamic combination of mindset and actions that positively impact school culture through the use of technology. A digital leader improves the lives, wellbeing, and circumstances of others by establishing direction, influencing others, and initiating sustainable changes to the digital culture of a school.

Digital citizenship - Members of the digital community understand that they have a responsibility for improving their own life, wellbeing, and circumstances through their digital dossier. They are aware of their impact on the ecology of the digital community and self-monitor their habits, actions, and consumption patterns as they act safely, responsibly, and respectfully online. **System Security:** Educational institutions regularly attend to system security to ensure the integrity, confidentiality, and availability of information. Technology systems allow schools to protect its devices and resources.

Data security - Data is an important asset that must be safeguarded. The protection of digital data can be achieved through measures, such as those listed below, that prevent unauthorized access or destructive forces.

> Data encryption - The protection of personal information has become even more important as society is becoming more digitized. Organizations can use data encryption to protect information and allow only authorized individuals to view the information.

Data masking - In order for organizations to reduce the spread of sensitive data while simultaneously maintaining its usability, original data can be protected through a process using random characters to hide the data.

Data erasure - Data should be erased once it has reached the end of its usability and is no longer needed for its original purposes. Organizations can use specialized software that can override data that aims to destroy electronic data.

Data backup - It is wise to protect valuable information that is stored in computer systems from sudden or unexpected loss of data due to problems such as physical damage to the computer, hardware failure, viruses, and computer crashes. The data can be copied into an archival file that may be used to restore files after a loss.





Network security - Network security decreases the chance of unauthorized access or destructive forces that interfere with the function of an educational system. Organizations can use methods such as authentication, firewalls, and filters to minimize the probability of interference. Hardware, software, networks, data centers, and equipment may be used to manage and support protection.

> Authentication - Various methods can be used to compare one's credentials against those on file in a database to authorize users and allow them to safely interact with the system.

> Firewalls - An unsecure internet connection makes an organization vulnerable to hackers who want to unlawfully access data, such as financial records and personal information, or send viruses and worms that can corrupt data or hurt reputations. Organizations can use a system of software and hardware that acts as a filter between the internal network and internet to provide protection from unwanted intrusions.

> Filters - Some organizations want to control access to certain websites and block unwanted content. While these filters may prevent access to inappropriate information and provide security when unsupervised, this may also affect access to information that is needed, such contrasting viewpoints, historical time periods, or medical condition. A strong sense of digital citizenship is one type of filter that can be used within and outside of the educational system.

Infrastructure - Managing network security requires a complex system of hardware, software, networks, data centers, and equipment. An organization can use this system to manage and protect its users, equipment, and data.

Resource security - Schools are responsible for maintaining, managing, and organizing numerous devices and resources. These resources can be protected from theft through digital measures and systems.

> Organizational structure - Educational organizations provide many stakeholders with access to the resources, such as digital devices, instructional materials, and books. It is the responsibility of the educational system to efficiently and effectively organize and manage these resources.

Software - A systematic use of programs and operating information can be used to manage and organize resources. Digital systems allow for quick audits and location of resources, thus allowing the organization to function more efficiently.

Lake Stickney Elementary School I Lynnwood, Washington

NEWMAN + DLR Group



IV-73 of 133

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Technology

Technology is entwined in almost every part of our culture. It affects how we live, work, play, and most importantly, learn.

With mobile and wireless devices becoming an increasing requirement across industry today, it only makes sense that our schools are also effectively deploying mobile technology in the classroom. These devices and the applications they support will help prepare students for their future careers.

Mobile devices provide possibilities with inquiry-based learning and allow learning experiences to extend beyond the classroom. This allows for an effective way to connect with students of all learning styles, encourages collaboration, increases creativity, and inspires investigation and research.

The student gains an opportunity to develop ownership in their education, self government, and promotes a culture that is based on student choices, interests, passions, and ambitions. Technology create an environment whereby a "student voice" helps to elevate the student body and learning interactions.

Springs Studio for Academic Excellence I Colorado Springs, Colorado



To embrace the implementation of technology across NPS, important strategies and tips are as follows:

- Determine the device and equipment most appropriate for your educational strategy, objectives, and learning model.
- Prepare for the appropriate technology infrastructure to deploy and manage the devices. The wireless network must be robust and secure enough to manage and distribute a strong, reliable signal throughout each campus.
- Set policies for appropriate technology use.

Consider including:

Responsible use for technology resources

Digital use and safety

Device protection plan

Digital citizenship

Technology used both in and outside of the campus, including outside the traditional "school day hours"

Device and Operational System Agnostics

 \leq Identify personnel to support technology initiative.





Personnel needs:

District and campus infrastructure and device support,

Evaluate and update Intermediate Distribution Frames (IDF) or IT closets, where necessary, to accommodate both the increased network traffic and WiFi requirements throughout NPS campuses,

Campus instructional technology support,

Campus juice bar to help with items such as basic how to questions, damaged devices, or lost cords

Develop a sustainability plan.

- Consider including:
- When devices will be purchased.

Funding sources

If devices stay with students for the year or over several years.

Provide for different modality and plan for devices go home with students to continue learning outside of the classroom for everyday use not just in times of extreme circumstances.

If hot spots be available for home use.

When and how devices are returned.

A plan for devices at the end of their life cycle.

Determine the process for roll-out of technology.

An example:

Provide devices for educators prior to students so they become familiar with the devices and have time to attend professional development.

Roll out to high school first, the following year continue with middle school, the third year include elementary school.

- Establish an ongoing professional development program that is differentiated to meet the varying needs of educators and staff to utilize technology as an instructional tool to redefine learning experiences and not just a substitution for traditional learning. Develop educator support groups where teachers can exchange experiences, ideas, successes and learning from each other.
- Implement a learning management system for delivery of programs and courses, storing materials, organizing assessments, sharing reports, and so on.
- Create district library with appropriate apps and social networking systems for educator and student use.

Technology transforms the learning experience and provides educators and students with incredible new opportunities. The Center for Applied Research in Educational Technology found that technology impacts achievement in content area learning, promotes higher-order thinking and problem solving skills, and prepares students for the workforce. Technology matters.





Furniture

Furniture Design and Choice

Opportunities for the learner to create their own environment give them ownership of their learning experience.

Furniture specifications were made to promote learner personalization. Learners who have a variety of choice in their learning environments can increase their physical and psychological comfort. Furniture should have the ability to be easily rearranged into different zones that allow for a variety of activities. Tables and chairs with casters can be quickly rearranged to meet these needs with minimal disruption. A variety of shapes and sizes enhance creativity and provide the ability to meet the needs of individual focus work and larger groups in many different configurations. Furniture should be ergonomically sized to ft different ages and sizes of children for comfort.

Universal Design

Please consider all needs and kinds of people when it comes to selecting furniture. Think about everyone who will walk into the space.

Who is sitting on the chair?

Can they reach the work surface?

Does the chair need to move in a special way to support any learning behaviors?



Right Federal Way School District Sunnycrest Elementary I Kent, Washington Next Page Jordan Middle School I Jordan, Minnesota





Ergonomics

The only truly effective way to maintain a seated posture for extended durations is to continuously cycle through a range of natural, centered and healthful positions."

Dr. Tim Springer, HERO, Inc. Founder of the Human Environmental Research Organization

One-size-fits-all furniture can create many ergonomic issues. What works well for one child may not work for the next one. Children grow at varying rates and even through the course of a year, an individual's size can change drastically. Rigid and inappropriately sized furniture can cause problems such as poor blood flow, bad posture, tense shoulder neck and back muscles, constricted digestive organs and spinal cord pressure. These problems can cause constant fidgeting, lack of attention, poor concentration and information retention memory thus causing lower achievement levels.(2)

In order to achieve learner involvement, furniture must be ergonomically designed to meet orthopedic physiological requirements. Consider activity type, duration of activity and the learning style when selecting appropriate furniture to create engaging and comfortable spaces to include all learners. Chairs that are adjustable or come in different sizes as well as allowing for movement should be offered to allow for individual preferences. Tables should be scaled to compliment these heights as well. A choice of furniture allows for different postures throughout the day. Furniture needs to be able to adapt to the activities happening in the classroom in order to have a measurable positive outcome in learner performance.

(2)Bodies in Motion, The Third Teacher, Dr. D. Breithecker, August 2010 https://gsdfuture.org/wp-content/uploads/2018/04/Bodies-in-Motion.pdf





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Furniture

Cross Cultural Continuum

Through educational workshops with the district, it was confirmed that a majority of the district agrees that there needs to be a shift in direction when it comes to furniture selection. As the district moves toward more learner-driven choice and new educator pedagogies, the furniture needs to align as well.

Movement is the motor which drives child development. Children are born with an innate need to climb, jump, swing, balance, play ball or just to move about and not be able to sit still. The urge to move is therefore part of human nature, encouraging exercise in a natural and healthy way and ultimately promoting the development of the child."

Dr. Dieter Breithecker, German Health and Kinetics Scientist, Head of the Federal Institute on the Development of Posture and Exercise in Germany; International Expert on Ergonomics for Children Furniture in the classroom should encourage activity and discourage sedentary behavior which is critical to learner development as physical movement both increases well-being and encourages the physical and intellectual maturing process. Dynamic furniture is designed to foster children's natural physical movements. Furniture selections should allow for small scale movements such as leaning, rocking, turning, or swaying to encourage concentration and cognitive development. Many seating options included in the furniture specifications focus on independent movement and proper ergonomic positioning to accommodate such movement.

This is where the 60/40 informal formal rule was developed. The more movement and flexibility we have in our furniture, the better enhanced the learning experience can be. Rules and details can be found in the furniture appendix.























INFLEXIBLE









PROGRESSIVE



DOT LEGEND: CURRENT



...

STATIC

DIRECTIVE

INNOVATIVE

CONSERVATIVE

















Pre-Kindergarten

Pre-kindergarten education programs provide the foundation for future development in a child's life. These programs support growth in social and emotional functions, cognitive and language development, and adaptive and motor skills that increase success in future education and the workplace. Without these skills, children may struggle with academic achievement in later years.

"Currently many schools are designed with the assumption that critical skills for learning are in place upon entry into K-12 leaving many students without the attention or support they need to develop as learners. All students, regardless of socioeconomic background, need these cognitive and social-emotional skills and mindsets to engage and thrive in school. When educators neither prioritize these skills and mindsets nor integrate them with academic development, students are left without tools for engagement or a language for learning."¹

Pre-kindergarten programs better ensure equality in education. Early access to education fills gaps for under-resourced children, so they can perform at the same level as children that come from environments with more resources when they enter kindergarten. All children have the right to equitable learning opportunities. Pre-kindergarten is an accelerator to these opportunities.





¹ Dr. Brooke Stafford Brizard, Director of Education, Chan Zuckerberg Initiative.





Understanding and Designing for Early Learners

It is this period of time where a "formal" education path begins. Yet, it is also a time to build on the life-long learning skills necessary for each step forward along a child's learning journey. Here is a time for discovery, not just learning about fundamental concepts and developing of important skills. **Discovery helps young minds stay excited, adding to the brain's need for novelty and to learn to love learning**. Children possess a natural curiosity, and curricula that keep the focus on helping the child learn to love to learn will ensure the mix of fundamental knowledge is enhanced with active emphasis on having fun while one learns.

It is also during these years when the physiological, cognitive, and emotional states of the child show major growth. It's not possible to design for a "one-size-fits-all," particularly ergonomically. Affordances need to have adjustability to fit the needs of many. Social and emotional competencies are nurtured during these years as well. When people, particularly children, feel a sense of belonging, disengagement and problem behaviors are minimized or removed altogether.



Kearney Early Childhood and Education Center Kearney, MO



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Pathfinder Kindergarten Center

In an effort to maximize learning, the school program was redefined to eliminate time lost to transitions. Findings of a post-occupancy study support over 7 school days (45 hours) of learning time recaptured as a result of the design.

Design Period: January 2014 - April 2016

Construction Budget/Cost: \$25.8 Million / \$24.9 Million

Year of Completion: 2016

Project size: 65,000 SF / 600 students

Description of firm's involvement / innovative technologies:

Faced with a state mandate to instate full-day kindergarten and accommodate growing capacity demands, Mukilteo School District recently established its first kindergarten center at the Fairmount Elementary site. DLR Group's design creates spaces to support early learning, while maximizing the potential synergies of age-specific students. In an effort to maximize learning, the school program was redefined to eliminate time lost to transitions. Teachers and specialists move into the classrooms, allowing the students to stay in their respective pods. Larger programs that require more space, such as dining and project areas, are broken down into smaller spaces and dispersed into the pods. Given its significant effect on learning, indoor environmental guality received diligent design attention, including temperature, air guality, daylighting, and acoustics. With the kindergarten students spending a lot of time learning on the floor, heat is provided by radiant floors sourced from a geothermal ground-source heat pump.

With a total of 65,000 SF, the Pathfinder Kindergarten Center serves approximately 600 students. The site is constrained by limited access, an existing elementary building, and a protected wetland along the eastern edge. The buildable land area for the new school was very limited, requiring the design team to minimize the building footprint and maximize access to outdoor amenities. Emphasis on connection to nature and outdoor learning is accomplished through adjacent play areas, daylight, and operable windows to provide experiential connections for the young learners. DLR Group provided architecture, mechanical, electrical and structural engineering, and interior design services.

Community Engagement:

Building upon the District's Guiding Principles and Mission, "... to help prepare our community's children to be successful, contributing members of the community," the facility's design focused on five key points: Creating Connections, Building a Community, Personalized Educational Opportunities, Focusing on Learning, and School Identity.

Stakeholder Engagement:

The design team led several empathetic exercises with the stakeholders to genuinely connect with the specific needs of a kindergarten student that would be representative of any community in the district. This included a series of workshops, "day in the life" activities, observational analyses, research, surveys, and local school tours.







Top Floor Plan Indoor Pay Areas shown in magenta

Bottom Play Area Climbing Wall





Top Media Center

Bottom Cafeteria used for Student Projects





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Learning Models: Reimagined

To reduce transition time, the design team introduced two concepts: push-in specialists and decentralization of services. Forming smaller communities within the school, each pod includes essential components allowing students to remain in their pod for all their daily needs.

This push-in instructional model resulted in a lack of dedicated space for specialists who require working space as a team. This limitation, coupled with the kindergarten focus, created an opportunity to create a robust professional development space that we called the collaboratorium.

Learning Time: Recaptured

As a result of moving away from an operation-centric model and towards a student-centric one, transition time was drastically diminished. Larger programs, like dining and specialist areas are broken down into smaller breakout spaces and dispersed throughout pods. Teachers push into classrooms, allowing students to stay in their respective classrooms and utilize breakout spaces throughout their pods. The team estimated this approach would reduce daily transition times by half.







Collaboratorium I Pathfinder Kindergarten Center Everett, WA



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Daylighting & Thermal Comfort

Pathfinder Kindergarten Center is modeled to meet or exceed building standards by a variety of methods including: geothermal heating and cooling, high-efficiency windows, passive solar design, operable windows, highly efficient building materials for the wall and roof structure (continuous rigid insulation at walls, SIPS panels at roof assembly), as well as radiant slab heating. The radiant floors, heated by a geothermal pump, accommodate for extensive and comfortable learning on the floor.

Movement & Play

Movement and play promoting kinesthetic learning and gross motor skills was an important goal for this cohort. Two indoor play areas at each end of the building minimize travel time. Each utilizes an interactive smart board and an enhanced sound system allowing teacher instruction without stress to vocal chords. These areas connect to four distinct outdoor play areas with playground equipment chosen directly for this age group. Because each of these areas is different, the pods switch play areas during the week to enhance physical learning.

Closely connected creative spaces support full-day kindergarten curriculum and inspire the "learning through play" nature of this age group.



Top Building Section I Pathfinder Kindergarten Center Everett, WA

Bottom *Flexible Indoor/Outdoor Learning Environment Pathfinder Kindergarten Center I Everett, WA*



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Post-Occupancy Study Results

A year after occupation, the design team and a third-party researcher conducted a post-occupancy study to identify the design effectiveness in reducing timely transitions in a typical school day between activities and spaces. The goal was to test the idea of a modern-day 21st century kindergarten school and how to improve its efficiency for future use.

This user research included three elements: interviews (to empathize with what users think and say), behavioral observations (to study the users' action and why they do what they do), and photographic traces (to identify how the spaces are being used).

Initial findings of the study support the design hypothesis that transitions can be decreased through this model to provide more time in the learning environment. In addition, a second research comparison at another district school is being used to compare transition times in a comparable learning environment. **The findings support over 7 school days (45 hours) of learning time recaptured.**

TOTAL MOVEMENT AT CLASSROOM POD







IV-86 of 133





17



Outdoor Learning Environments

By committing to learning inside and outside the classroom, schools teach children that learning can occur everywhere.

Children need to see the world around themselves, to look up and appreciate the shore, the meadows, the commercial centers of the Norwalk Community. It is a beautiful part of the world, but so many people do not see what is around them. Children need to understand that learning can occur everywhere, inside and outside.

It is essential that we provide our children with the opportunity that allows them to enjoy learning and to discover along the way. This is most successful when tasks are open-ended, and when we let children lead learning. "In a recent survey that interviewed 12-year olds about their outdoor learning experiences, many kids felt that they had more autonomy during outdoor lessons, and they felt inspired to take charge of their own learning."⁵



Lessons held outdoors appear to increase student engagement in school - even after they come back inside. Exposure to natural settings appears to have an intrinsic effect on our emotional and cognitive functioning. "Among kids experiencing life stressors (like bullying), the children who reported the fewest psychological problems were those who had greater access to nature."⁷

Likewise, teachers benefit from aspects of lessons in nature. Time outside might renew engagement—after a bit of walking; a breather, a change in scenery; or a dose of nature can rejuvenate their attention and interest and reduce stress levels.

The Educational Facility Master Plan has incorporated outdoor learning spaces that are both socially programed for cultural and casual connections, as well as for formal academic outdoor learning that can help support science, health and math curriculum.

As an example, consider math lessons in which challenges are chalked onto the playground surface, or measured in elements around the school. These exercises teach students applied learning at an early age. There is so much in nature to inspire young minds; the Fibonacci series occurs naturally in everything from seashells to sunflowers. The sun and the stars reflect natural mathematical sequences as well. Imagine students studying sustainable concepts that tie natural phenomenons with the vernacular architecture of their home.

⁵Dettwiler et al 2017b as cited on https://www.parentingscience.com/outdoor-learning.html ⁶National Park Trust Facebook, City of Hopkinsville Local Government https://www.facebook.com/nationalparktrust/photo/a.239205519466996/2687611867959670/?type=3&theater ⁷Wells and Evans 2003 as cited on https://www.parentingscience.com/outdoor-learning.html



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Existing field trip programs could be expanded and related to playground designs and partnerships with organizations and programs such as the Maritine Center, Silvermine Arts and create outdoor experiences for kids that align with classroom curricula, encourages health and wellness through outdoor recreation, all while fostering future park stewards and conservationists.

Programming opportunities for individual schools that are age and place specific, that tie to the unique settings of the City of Norwalk, should be incorporated into all final designs.

By maximizing indoor-outdoor connections for learning, the proposals included in the Norwalk Facilities Plan Study can provide for:

Better Grades

"Dennis Eaton published in his book, *Cognitive and Affective Learning in Outdoor Education*, his findings that students' cognitive abilities are better developed outside the classroom than in."⁸ Moving the class outside opens up a world of fresh stimuli for the senses that have an amazing power to lock into the brain and secure whatever information was being learned at the time.

Students who get to experience an outdoor learning environment tend to be more attentive and, therefore, have a better recollection of the information that was shared.

Better Health

"Richard Louv, author of *Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder*, has coined the phrase nature-deficit disorder to describe the harmful effects on kids with too much indoor over-stimulation, including attention deficit disorder, anxiety, depression, and obesity. As he puts it, "As young people spend less of their lives in natural surroundings, their senses narrow, physiologically and psychologically, and we deny them access to a fundamental part of their humanity."⁹

Outdoor play provides student health benefits ranging from assisting in gross and fine-motor development, to healthier vision development that lowers the risk of nearsightedness, to inspiring children to be more physically active.

Decreased Stress Levels

Consistent exposure to nature decreases stress and anxiety, helps elevate mood, and helps with emotion. "When serotonin is released in the brain, it produces feelings of safety and wellbeing, earning it the nickname the happy hormone. Activities that cause this release are listening to music, receiving a high-five, or (relevant to this discussion) hearing sounds of nature."¹⁰

Increased Motivation

"There are positive effects on students' motivation levels that can be carried over to traditional indoor learning after the outdoor learning has concluded."¹¹

⁸⁻¹¹11 Proven Benefits of Outdoor Learning https://www.bachelorsdegreeonline.com/blog/2012/11-proven-benefits-of-outdoor-learning/





Outdoor Learning Environments

Better Attitudes About the Environment:

"A bonus benefit of the improved attitudes kids have toward the outdoors is an increase in their environmental awareness and more responsible behavior."¹² Through increased outdoor activities, students can develop a love, appreciation and respect for nature and all that is living.

Outdoor learning provides children with hands-on experiences in nature. Most children learn better by using their senses. Outdoor environments provide the perfect place to do this. Instead of viewing different types of plants or wildlife on a computer or TV screen, they can see, smell, hear, and touch them in nature. Students can even start a garden and grow fruits and vegetables, which may have them wanting to sample their harvest.

Hands-on experiences, in the outdoors, cultivate a love of nature and get students interested in our natural resources.



Better Overall Behavior

"Not only are kids' environmental behaviors improved by learning outside the classroom, their ability to behave in an educational setting is improved as well.

Other studies have found social adjustment, self-concept, and group cohesion - all potential pitfalls that result in poor classroom behavior - improved through outdoor education."¹³

Enhanced Communication Skills

"Many schools employ outdoor education specifically to target students' communication skills. Outdoor education achieves the gains in collaboration and communication skills by requiring students to work as teams to solve problems on expeditions."¹⁴ It has been shown that in outdoor settings, children are more motivated to work together in groups, which can improve their social skills. They learn to manage conflicts, communicate, and cooperate with their peers in a more effective manner.

Increase in Outdoor Skills

"Learning outdoor activities can only come with experience experience kids get through outdoor education. Gardening, using a compass, navigating by the sun or moss on trees, building a fire, all of these skills kids soak up in open-air classrooms."¹⁵

¹²⁻¹⁷11 Proven Benefits of Outdoor Learning https://www.bachelorsdegreeonline.com/blog/2012/11-proven-benefits-of-outdoor-learning/

Week of the Young Child St. Thomas-St. John

St. Thomas-St. John schools celebrated its youngest learners, grades K-2, with a variety of activities, including fun days, arts and crafts, career day and more. Photo highlights feature activities at Joseph Sibilly Elementary, Lockhart Elementary and Yvonne Bowsky Elementary schools.







Visioning

Increased Self-Reliance

"In 1995, researcher Jim Zuberbuhler stated in his article "Outdoors the Rules Are Different," "A willingness to challenge oneself physically and emotionally are integral to outdoor programs...to enhance self-reliance, confidence, self-esteem, and communication skills"¹⁶ through an increased ability to become more able to identify hazards and risks.

Community Improvement

"Embracing opportunities for outdoor learning that encourage community engagement unite the ideas that: a) education is most effective when paired with experience and b) knowledge ought to be used to benefit others."¹⁷

Service learning, such as creating disaster preparedness kits for neighbors, can allow community and culture to merge.









Applied Learning/CTE

A Paradigm Shift

Focus on Innovation:

Norwalk School District has a unique opportunity to change the narrative of what effective post-secondary planning should look like now and in the future through innovative programming. This programming seeks to meet the needs of students who are not only college bound but for students who will be entering the workforce or military upon graduation from their home high school. A program and unique campus serves as a capstone that allows every student to craft their own pathway of purpose. Based on several Co-Labs and conversations with Norwalk Public Schools and their stakeholders, we would recommend the entire District work together with an incredibly inclusive stakeholder engagement process that included students, teachers, administrators, community members, business and industry and governmental leadership and policy crafters. There is no longer just one path to success.

Industry Partnerships and Community Businesses: A Bridge to College and Career.

Understanding current and future trends of various industry partners is essential to harnessing the community of learners in Norwalk Public School District to spur on economic development regionally for both Norwalk and the State of Connecticut. Partnerships with local businesses and industries are critical to the success of a career tech facility. It is the pull of industry should shape the career pathways offered at NPS. Linking students to industry through re-imagined applied learning programs allows students to dream big about their futures. There will no longer be just one path to success. **Norwalk students should have access to multiple pathways** which enable them to evolve successfully into the entrepreneurs of tomorrow.

The Space Between.

There is growing recognition that the success of tomorrow will be grounded in the ability for individuals to come together as community to solve increasingly complex world problems. A facility that promotes teaching and learning must also allow for multiple levels of collaboration ranging from casual to intense. The allowances for interaction and incidental pathways created by an innovative i-Commons supports everything from drones to deliberations and was pivotal in the overall planning and design. The fluidity of bright and open spaces immerses students into an environment that encourages exploration. Whether a student knows what they want, but wants to dive deeper, or a student who wants to explore a broad spectrum of opportunities.





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Visioning

In 2016-17, the top three most prevalent career clusters in the nation's high schools were:

(1) Arts, audio-visual technology, and communication;

(2) Business management and administration; and

(3) Health sciences.²¹

In 2017, 35% of all CTE concentrations in U.S. high schools were STEM or STEM-related.

Science, Technology, Engineering, and Mathematics (STEM) subjects are critical disciplines for a society whose economic growth and adaptability are dependent upon innovation.

In 2017, CTE concentrations in STEM and STEM-related (health science; agriculture, food, and natural resources; and information technology) career clusters represented 35 percent of all CTE concentrations in high school.²²

²¹⁻²³U.S. Department of Education Bridging the Skills Gap: Career and Technical Education in High School (September 2019)

Spatial Considerations for Career & Technical Education

Career and Technical Education provides an important pathway to success for high school students and offers each student opportunities to personalize his or her education based on their career interests and unique learning needs. CTE refers to courses and programs designed to prepare students for careers in current or emerging professions.²³

CTE is designed to give students authentic workplace experience and is centered on the value that industry and community partners bring. For the most successful engagement, teaching and learning environments should afford industry and community partner spaces.

Space design considerations may include:

Pitch spaces where students can present ideas and projects to authentic audiences.

Touch-down spaces where business partners can temporarily office before or after sessions with students and faculty.

Video conferencing spaces that offer high-performance audio and video systems to create seamless connections with remote partners. These should be considered at large scale (full class or beyond) and small scale for individual students and teams to virtually collaborate with partners.

Application labs that offer work-like environments for students to engage in real-world projects and problems. These may be influenced by the industry and community partnerships that help sponsor them.



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Programming the Student Experience

Programming:

Aligning general parameters for the pathways CTE provides along with Connecticut's Career Clusters should be evaluated to fully understand the goals and needs of each career pathway/ industry partnership. Critical design elements such as square footages, heights, loading on the floor, access and the specific space, FFE, and equipment needs should be appropriately defined.

Engagement:

Norwalk School District has a unique opportunity to invite stakeholder groups that included students, teachers and industry leaders from each of the career pathways to a series of sessions that organize in multiple "deeper dives." The intent of these sessions would be to capture the hopes and aspirations of all involved. In addition, understanding the current and future trends of the various industry groups provide a crucial component. Industry partnerships are critical to the success of a career tech facility. It is the pull of the industry that really drives the career pathways offered at a career tech facility.

User Experience:

Key to CTE is providing variety in the programs, pathways, and architecture in order to allow for every individual student to craft their own experience. For example, allocating time for lunch on campus allows social time for casual collisions and knowledge sharing. The inclusion of a students during design is instrumental in ensuring that the student experience is part of the dialogue from programming, to design, to graphics.



Top A Focus on the Student Experience

Bottom Student Advisory Board for Cherry Creek Innovation Campus I Centennial, Colorado







Pathways of Purpose

With curriculum rooted in real-world skills and trade certifications ranging from computer sciences to aviation to health sciences, CTE offers students a new kind of bridge to college and viable, successful careers. Under the Career and Technical Education umbrella, NPS has the opportunity to expand the District's commitment to preparing students for the academic and professional demands of the 21st century. The student learning experience simulate state-of-the-art work environments, with a focus on putting learners in an industrybased culture and climate.

CTE program is geared toward students who are:



Looking for concurrent enrollment or dual enrollment opportunities to earn credit toward a college degree.



Wanting to learn a skill set or trade that will make them more competitive for career preparedness.



Wanting to further explore their interests and skill sets to enhance their college and career preparedness. This initiative focuses on linking students to industry through re-imagined applied learning programs that allow students to dream big about their futures. There will no longer be just one path to success – multiple pathways enable students to evolve successfully into the entrepreneurs of tomorrow. Norwalk School District has an ability to create a one-of-a-kind facility and program that supports their community of learners to explore, experiment and celebrate pathways of learning in preparation for life. Every learner is different. Every pathway should likewise respond to these differences. While seven pathways were identified, infinite combinations that are in direct response to the learner are possible.

7 Pathways

- 1. Advanced Manufacturing
- 2. Business Services
- 3. Health and Wellness
- 4. Hospitality and Tourism
- 5. Infrastructure Engineering



7. Transportation (Automotive and Aviation)

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Applied Learning/CTE

Innovation Commons

Key to any paradigm shift is the provision of places and spaces that are flexible in providing students an architecture for education that supports their development in integrated pathways of casual collisions.

Casual Collisions

An immense amount of focus was placed on creating learning environments that enhanced student experience but also exposed students to real world actualities. An intentional fragmented geometric floor plan was developed that allowed for multiplicity of visual experience from any given point in the building. There is intentional collision of spaces from various strands that allow for students to linger, reflect, learn and cross pollinate.

Innovation Commons

- 1. Learning Theater
- 2. Maker Space
- 3. Technology Stations
- 4. Learning Stair/Poster Gallery
- 5. Team Rooms
- 6. Collaboration Space
- 7. Dining + Social







4



Learning Studio

- 120-700 sf
- High Flexibility
- Low Infrastructure
- 4-24 Students



Low-Intensity Lab

- 900-1,400 sf
- Moderate Flexibility
- Moderate Infrastructure
- 20-24 Students





- 1,400-5,000 sf
- Low Flexibility
- High Infrastructure
- 20-24 Students





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Applied Learning/CTE

A Recognized Framework

In total, there are 16 career clusters in the National Career Clusters Framework, representing more than 79 career pathways to help students navigate their way to greater success in college and career.

As an organizing tool for curriculum design and instruction, career clusters provide the essential knowledge and skills for the 16 career clusters and their career pathways.

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To learn more about the National Career Cluster Framework and how it organizes educational preparation and occupational choices into a unified concept, visit the webpage for the Associate for Career and Technical Education.



ASSOCIATION FOR **CAREER & TECHNICAL EDUCATION®**

https://www.acteonline.org



Agriculture, Food and **Natural Resources**

Agribusiness systems Animal systems Environmental service systems Food products and processing systems Natural resources and plant systems



Arts, AV Tech and Communication

Audio/video technology and film Journalism and broadcasting Performing arts Printing technology Telecommunications Visual arts





Design and pre-construction Maintenance and operations

Business Management

Business information management

Human resources management

and Administration

Administrative support

General management

Operations management



Education and Training

Administration and administrative support Professional support services Teaching and training



Accounting Banking services

Business finance Insurance Securities and investments



Government and Public Education

Foreign service Governance National security Planning Public management and administration Revenue and taxation



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Biotechnology research and development **Diagnostic services** Health informatics Support services Therapeutic services



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Visioning

The career clusters also function as a useful guide in developing programs of study, bridging secondary and postsecondary curriculum and for creating individual student plans of study for a complete range of career options. Clusters help students discover their interests and their passions, and empower them to choose the educational pathway that can lead to success in high school, college, and career.

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Hospitality and Tourism

Lodging Recreation, amusements and attractions Restaurants and food and beverage Services Travel and tourism

Information Technology

Information support and services Network systems Programming and Software Development Web and digital communication



Consumer services Counseling and mental health services Early childhood development and services Family and community services



Personal care services

- Correction services Emergency and fire management Services Law enforcement services Legal services
- Security and protective services



Manufacturing

Health, safety and environmental assurance Logistics and inventory control Maintenance, installation and repair Manufacturing production process Development



Science, Technology, Engineering and Math

Engineering and technology Science and mathematics



Marketing, Sales and Service

Marketing communications Marketing management Market research Merchandising Professional sales



Transportation, Distribution and Logistics

Facility and mobile equipment maintenance Logistics planning and management services Transportation systems/infrastructure Planning, management and regulation Warehouse and distribution center Operations





Applied Learning/CTE

Potential Pathway

In a collaborative, startup-style learning environment, the business services pathway will give students an opportunity to cultivate an entrepreneurial mindset and develop skills to build and manage their own businesses. With a focus on building project management and leadership skills, students will engage in digital marketing, customer relationship management, sales, and small business management projects.

Future Careers

- Project Manager
- Sales Associate
- Social Medial Specialist
- Marketing Associate
- Human Resource Specialist

Future Industry Certifications

Certified Associate Project RISE Up Customer Service and Sales Professional



Business Management & Administration

Business Services

"Every great dream begins with a dreamer."

Harriet Tubman, American abolitionist and political activist.

Cherry Creek Innovation Campus I Centennial, Colorado







Potential Pathway

From virtual reality to cyber security to robotics, the IT & STEAM pathway gives students opportunities to use, learn, and create cutting edge technologies to tackle the challenges the future may bring. Through hands-on experiences, students can take ideas from conception to reality, learn to troubleshoot any kind of personal computing device or computer network, or build their own virtual reality environments.

Future Careers

Network Administrator	Product Designer
IT or STEAM Educator	Data Analyst
Mechanical Engineer	Game Designer
Computer Engineer	IT Support Specialist

Future Industry Certifications

Certified SOLIDWORKS Associate (CSWA) Certified Additive Manufacturing Associate (CSWA-MA) CompTIA A+, Network+ TestOut PC Pro, Network Pro Information Technology

"The best way to predict the future is to implement it."

NEWMAN + DLR Group

David Heinemeier Hansson, Danish programmer and racing driver

Missouri Innovation Campus I Lee's Summit, Missouri



Potential Pathway

With a focus on leadership development, students in the Culinary pathway will be able to develop the skills to manage, market, and operate food-service establishments, hotels, and resorts. Whether through guest visits, site tours, or apprenticeships, students will have engaging and unique opportunities to advance their culinary skills and deepen their understanding of business operations and world-wide tourism.

Future Careers

Executive Chef	Catering Director
Food Stylist	Executive Housekeeper
Marketing Director	Restaurant Owner
General Manager	Pastry Chef

Future Industry Certifications

ProStart National Certificate of Achievement ServSafe National Restaurant Association Certifications American Hotel & Lodging Educational Institute (AHLEI) Certifications American Culinary Federation (ACF) Fundamentals Cook Certification



"The best way to find yourself is to lose yourself in the service of others."

Mahatma Gandhi, activist and civil rights leader

Cherry Creek Innovation Campus I Centennial, Colorado







Applied Learning/CTE

Potential Pathway

Whether a student's focus is physical or occupational therapy, behavioral health, nursing, pharmacy, massage therapy, or cosmetology, the health and wellness pathway provides students opportunities to explore various Allied Health professions at the aide/technician level. In these courses, students will integrate their knowledge and skills with hands-on labs, authentic clinical settings, and industry-grade equipment.

Future Careers

Physical Therapist	Pharmacist
Registered Nurse	Social Worker
Counselor	Occupational Therapist
Psychiatrist	Health Science Educator

Future Industry Certifications

Behavioral Health Technician Certificate Certified Nurse Aide Certificate CPR/First Aid, AED Certificate Pharmacy Technician Certificate Hairstyling License OSHA 10- Healthcare

Health Science Human Services



"Wherever the art of medicine is loved, there is also a love of humanity"

Hippocrates, Greek physician

Missouri Innovation Campus I Lee's Summit, Missouri





Applied Learning/CTE

Potential Pathway

Education and training turns CTE students into experts in the learning process, empowering them to teach others just as well as they've been taught. While this isn't enough to become a teacher in most states, a CTE background in education still makes someone a prime candidate for careers in training and recruitment. That could be anything from on-the-job training to consulting. A student on this career track can find just as much opportunity in a small business as a multi-national corporation wherever workplace standards are in place. As a result, this track is vague. But it's also broad. Students in this track can take this knowledge virtually anywhere in the world and it will still apply. By learning training and educational principles, students can become excellent teachers — even if they're teaching new hires at a company.

Future Careers

- Administration & Administrative Support
 - Superintendents, Principals, Administrators
- **Professional Support Services**
- Social Workers
- Counselors
- Human Resources Manager
- Instructional Coordinators
- Teaching/Training
- Teachers
- Professional Coaches



Education & Training



"The art of teaching is the art of assisting discovery."

Mark Van Doren, American poet

Center for Advanced Professional Studies I Overland Park, Kansas







Potential Pathway

While this could mean drawing, painting, or composing for some students, this CTE track is more concerned with operating the technology that makes those products possible. That's why so many of these students go on to audio engineering, lighting technology, and similar careers. Those skills make these students right at home in any large venue, including stadiums. Then again, they could also enjoy the privacy of working freelance for local charities. In a nutshell, there's always someone who needs technicians with these skills. Theatre, speeches, concerts, rallies – they all need audio-visual technicians of some kind. With this background, students are always ready to answer the call.

Future Careers

Audio & Video Technology & Film Video Graphics, Special Effects & Animation Broadcasting & Journalism Journalists and Reporters, Print, Broadcast, Other Performing Arts Production Managers, Digital, Video, Stage Printing Technology Web Page Designers Telecommunications Visual Arts Graphic Designers, Commercial Photographers



Arts. AV Tech & Communication

Performing Arts

"The earth without art is just 'eh'."

Demetri Martin, American comedian

Joplin High School I Joplin, Missouri







Applied Learning/CTE

Typical Applied Learning Activities

A Recognized Framework

In 1998, when Don Tapscott published "Growing Up Digital" the definition of the classroom of the future was not fully clear. No one definitively predicted the full spectrum of changes in curriculum, culture, and technology we are experiencing today.

In multiple school districts across the country of all sizes, shapes and settings, a cultural transformation is occurring as a result of the pull of an ever changing workforce economy and a push from students who want to be engaged, who want to create their own pathways for advancement. There are three unique benefits to this student-centric approach to education:

- 1. Learning how to work with others collaboratively as an invaluable skill in any workplace;
- 2. Sharing research and knowledge to increase the return with collective contributions;
- 3. Hands-on activities through simulation labs and work study experiences that make learning more relevant.

The transformation of teaching and learning to a balanced curriculum of both theoretical and applied learning is fostering everything from the maker movement to CTE to STEM to STEAM. CTE specifically is growing both in popularity and in its ability to engage and connect students to the real world.

CTE curriculum is also redefining our design approach, shifting the focus to how space can enable these increasingly diverse and constantly changing programs rather than the other way around.

This shift requires a robust co-design process that empowers teachers, students, school leaders, designers and others to co-create transformational learning spaces. These are flexible, adaptive, personalized, learner-centered spaces. The aim is to collectively provide the places, spaces and pathways for students to engage in relevant learning activities.





What if CTE curriculum is more than just a bridge between high school and college and career prep? What if it could be the catalyst that shifts student engagement and outcomes to a different level? What if we can embed learning spaces in high schools and innovation centers that give every student professional career and mentorship opportunities?

This could foster enriched business partnerships that benefit districts, students and the local economy by effectively preparing a local workforce.

What if CTE is no longer, "Your Mama's Shop Class" but rather the stimulus that acknowledges place matters, place enables, and which puts people, pedagogy and place together?

These 'what if' questions have the potential to lead forwardthinking, engaging educational models that will forever change the way students learn.



Top *Millwright Technology*.

Bottom "Planting Plenty."



NEWMAN + DLR Group

Agriculture and Food Fair 2020 St. Croix The 49th Annual Agriculture and Food Fair on St. Croix, brought out a host of schools to the to showcase their craft and creativity around the theme, "Agriculture: Trendy in 2020."



Applied Learning/CTE

Applied Learning, including STEM, STEAM and CTE, prepares students for the future by connecting secondary education with both college expectations and labor market demands.

Programs specialize in teaching applied sciences, modern technologies, career preparation and trade skills, offering students the unique opportunity to create pathways for future professional success.

The transformation of teaching and learning to a balanced curriculum of both theoretical and applied learning is fostering everything from inquiry-based learning to the maker movement to STEM to STEAM to CTE. These programs are growing in popularity, and their ability to engage and connect students is helping redefine how space is designed. A robust co-design process empowers teachers, students, school leaders, architects and others to co-create transformational learning spaces, including the incorporation of flexible, adaptive, personalized, learner-centered spaces.

Applied learning looks beyond secondary school and encourages students to become lifelong learners. It benefits students by giving them:

Leadership development through student organizations.

Real-world relevance in curricula.

Peer-to-peer and student-to-teacher collaborative environments.

Industry accreditation.

Lab spaces to translate from theoretical to practical application.

Dual enrollment for college credits and scaffolded learning.

Cherry Creek Innovation Campus I Centennial, Colorado







Return on Investment: Applied Learning as an Economic Driver

For nearly a century, applied learning programs across the United States have focused on equipping students with technical and life skills to help them become productive citizens. Now more than ever, applied learning curriculum, internships and dual enrollment programs are needed to help ensure the strength and economic viability of our workforce, global competitiveness and the economic health of our nation.

- There is an estimated \$168 billion lifetime gain from applied learning's impact on reducing the high school dropout rate nationally."¹⁸
- There is an estimated \$806 billion income added to the U.S. economy by CTE/ community colleges."19

What could be the impact to Norwalk's economy?



A Hierarchical Planning Process as a Catalyst for Change

18-19DLR Group

Applied Learning: Creating Innovative Pathways to Success for 21st Century Students (Page 5) ²⁰United States Virgin Islands Economic Development Authority Tourism & Hospitality: Strong Opportunities for Tourism Investment https://www.usvieda.org/relocate-business/key-industries/tourism-hospitality











































National precedents in K-12 education design.

The process of discovery through virtual tours was an opportunity to seek forward-thinking examples of education and architecture in which to build a baseline framework from. The rich and experiential process of observation created a deep understanding of what spaces and collaborative processes constituted a future vision of Norwalk Public Schools.

The following projects provide benchmarks that utilized industry standards for the design of future-facing teaching and learning facilities in the United States.

Due to COVID-19 restrictions on travel, Norwalk leadership toured these facilities virtually.

Pathfinder Kindergarten Center	Everett, WA
Liberty ESD Las Brisas K-8 Elementary School	Goodyear, AZ
Queen Creek Silver Valley Elementary School	Mesa, AZ
CREATE at Arizona Science Center	Phoenix, AZ
Wainwright Intermediate School	Fircrest, WA
Putnam City Schools Capps Middle School	Oklahoma City, Ok
Jefferson Terrace PreK-8 School	Baton Rouge, LA
Canyon View High School	Waddell, AZ
Weld County School District RE-4 Severance High School	Windsor, CO
West-MEC SW Campus Improvements	Buckeye, AZ
Cherry Creek Career and Innovation Academy	Centennial, CO





Visioning

Virtual tours reveal the unique stories of future-facing design in teaching and learning environments around the nation.





Far Left Wainwright Intermediate Center I Tacoma, Washington **Left** Missouri Innovation Campus I Lee's Summit, Missouri

Top: Center for Advanced Professional Studies I Overland Park, KS **Bottom:** Agua Fria Canyon View High School I Waddell, Arizona





Pathfinder Kindergarten Center

Dispersed Support Areas: That Deliver Services When Needed

Faced with a state mandate to instate full-day kindergarten and accommodate growing capacity demands, Mukilteo School District recently established its first kindergarten center at an existing elementary school site.

DLR Group's design creates spaces to support early learning, while maximizing the potential synergies of age-specific students. In an effort to maximize learning, the school program was redefined to eliminate time lost to transitions. Teachers and specialists move into the classrooms, allowing the students to stay in their respective pods. Larger programs that require more space, such as dining and project areas, are broken down into smaller spaces and dispersed into the pods. Given its significant effect on learning, indoor environmental quality received dedicated design attention, including temperature, air quality, daylighting, and acoustics. With the kindergarten students spending a lot of time learning on the floor, heat is provided by radiant floors sourced from a geothermal ground-source heat With a total of 65,000 SF, the Pathfinder Kindergarten Center serves approximately 600 students. The site is constrained by limited access, an existing elementary building, and a protected wetland along the eastern edge. The buildable land area for the new school was very limited, requiring the design team to minimize the building footprint and maximize access to outdoor amenities. Emphasis on connection to nature and outdoor learning is accomplished through adjacent play areas, daylight, and operable windows to provide experiential connections for the young learners. DLR Group provided architecture, mechanical, electrical and structural engineering, and interior design services.



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Top Learning studio

Bottom Exterior play area







Top Learning commons and circulation

Bottom Access to outdoor learning and play





Liberty ESD Las Brisas K-8 Elementary School

Special Learning Spaces: That Let Us Dive Deeper

This new campus breaks away from the previous district school model and creates an efficient and exemplary learning environment for its students with flexible spaces to encourage outside-the-box use.

DLR Group's design of the new Liberty ESD Las Brisas K-8 Elementary School is an expression of the innovative and creative focus programs that the Liberty Elementary School District has targeted. This is the first campus for the district that was designed with the specific focus programs in mind. These include a K-8 performing and visual arts program and a K-5 Language Immersion program which allows students to focus their education or just explore new opportunities. The design celebrates these programs in dynamic entrances. The main and performing arts entrance at the northwest corner of the site highlights the performing arts wing and showcases the auditorium, black box theater and performing arts labs. The 61,500 SF two-story school incorporates high-performance energy strategies and integrates daylighting into all learning spaces. Flexibility in classrooms and shared labs accommodate trends for small group and breakout study space. The flagship theater space is a super flexible black box that serves as classroom, dance studio, production and performance space. Color and super graphics are strategically located throughout the facility to impact way-finding and emphasize school program identity. DLR Group provided architecture, interior design, landscape, MEP and structural design services.

Main entry

NEWMAN + DLR Group





Top Gymnasium and stage

Bottom Entry and commons space Right Playground









CREATE at Arizona Science Center

Follies: That Infuse Fun and Unexpected Moments

Founded on a mission to inspire, educate, and engage curious minds through science, the Arizona Science Center wanted its new space to supplement its interactive exhibits and learning programs.

DLR Group's renovation of an existing, adjacent space, the former Phoenix Museum of History, creates a maker space environment that provides hands-on, STEAM (Science, Technology, Engineering, Art, Math) learning opportunities focused on K-12 and community education. The flexible space invites visitors of all ages to make, iterate, and build. The design for the space reflects and inspires this culture of making by utilizing industrial materials - the same materials that can be found in the wood and metal shop - in inventive ways. By taking this approach, simple materials like plywood give the space a dynamic formal expression, while respecting the project budget.

The 6.682 SF renovation included extensive demolition and reconstruction to allow for an open and accessible relationship to the existing lobby, redefining the entry experience as a gesture inviting visitors from the public plaza beyond. Organized around a central social commons to foster collaborative relationships, the space provides a series of flexible workspaces that can be adapted for a variety of individual, small team, or larger group projects. Three zones can also be set up to allow for several classes to engage in design and making challenges as part of the education programming of the facility. More specialized design resource areas housing more sophisticated equipment, such as 3D printing and scanning, robotics, laser cutting, art, sewing, and wood and metal working, open into the workspace environment and provide the opportunity for more focused and self-directed making. DLR Group provided architecture, interior design, and MEP and structural engineering services.

View to connect commons

NEWMAN + DLR Group









1. Entrance 2. Reception 3. Wood Shop 4. Artistry Hub 5. Electronics Zone 6. Challenge Zone 1 7. Challenge Zone 2 8. Challenge Zone 3 9. Connect Commons

Bottom Maker space

Top Student exploring computer technology in the maker space

Bottom Positive collaboration in the maker space













Wainwright Intermediate School

Maker Space: That Provides Freedom to Invent

Looking to push the limits of traditional educational models, Tacoma School District opened its first elementary/ intermediate school to serve grades 4-8.

DLR Group's design for Wainwright Intermediate School embraces the variety of social and educational needs of this new student grouping in a flexible learning environment. To most effectively utilize the site with an existing mix of forest and hardscape, the school runs along a main spine - transitioning from public community space to core learning. In the center of the school, an exploratory commons redefines the traditional library - offering spaces to research, design, test, and create. The scope of work encompasses a 65,000 SF facility designed to serve 450 students. Seeking to make the most of traditional circulatory space, the corridors are open places, used for teaming and teachable moments. Additionally, the building can be used as a tool for learning with cutaways to reveal systems. With faculty interests in less-defined classrooms, collaborative learning suites provide flexibility for learning. DLR Group provided architecture, structural engineering and interior design services.

Main entry



















Top Learning commons

Bottom Media center







Putnam City Schools Capps Middle School

Inspirational Places: That Make Us Dream Big

Faced with a crippling existing facility, Putnam City Schools was tasked with accommodating a growing student population, as well as addressing the dilapidated building.

PCS hired DLR Group to design a brand new replacement middle school that will be the catalyst for change in Putnam City Schools. The building proper, influenced heavily by the site conditions, is located on the east and west side of a natural creek. The west portion of the building caters to the administrative, elective, and athletic programs for the facility, while the east serves as the learning communities for 6-8 grades. Connecting the two ends is a 200'+ media hub, bridging over the creek. Each learning center is planned around collaborative learning and teaching, with spaces to facilitate both student and teacher cross pollination. Teacher planning centers, learning labs, a large science CoLab, as well as small think tanks are just a few of the various spaces meant to cater toward a collaborative curriculum. With such an emphasis on nature, each learning center, is oriented with the bends of the creek, and are provided with ample views of the site. The interior of the building draws inspiration from the site strata itself, and outdoor learning environments spill off the building in all directions to provide yet another variety of learning environment. The 160,000 SF building serves approximately 900 students in grades 6-8. With an expected population of up to 1200 students, the building is designed to accommodate both populations through more efficient use of the designed spaces as well as by means of additions in the future. The site, with numerous constraints, is an existing park within a developed neighborhood. Bisecting the center of the site is a creek, requiring the design team to plan the facility in response to its natural setting. Emphasis on the natural site is expressed through the building parti, views out from learning environments, relationships of site programs, and most importantly, with a portion of the building bridging over the creek. DLR Group provided architecture and interior expertise, mechanical, electrical, and structural engineering.

Entry atrium

NEWMAN + DLR Group





Top Learning suite

Bottom Learning commons







Top Learning commons

Bottom Learning commons



NEWMAN + DLR Group

Jefferson Terrace Academy

Collaboration Space: That Gets Us Talking

Jefferson Terrace Academy responds to East Baton Rouge Parish School District's ongoing effort to provide 21st Century Learning Environments at all of their campuses.

DLR Group, in association with GraceHebert, was tasked with creating a contemporary and timeless facility for students in grades PreK-8. Diagrammatically speaking, the new facility is divided into two buildings. The south building houses the majority of administrative spaces, PreK/Kindergarten, special education, commons, music, and athletic spaces. The north building houses all of the facility's learning studios, elective spaces and media hub. Grade levels are paired together in learning communities to foster collaborative learning and vertical opportunities for students excelling past their grade level. The two buildings are connected by a secure courtyard that can be used to facilitate educational opportunities as well as control movement between buildings. Outdoor space (including the secure courtyard, play areas, etc.) are defined by the building extents. By doing so, the design focuses much of the facility functions internally, having as little impact on the surrounding neighbors as possible.

The 125,000 SF facility accommodates an 800 student population. Grades 1-8 occupy four similarly planned learning communities to the north of the campus, connected by shared elective and media center amenities. The new facility occupies a previously vacant piece of land in the middle of a wellestablished neighborhood. Site amenities meant to cater to the curriculum of the new PreK-8 also serve as opportunities for the surrounding community, including but not limited to a practice field, walking trail, and outdoor play. DLR Group provided architecture, interiors, and landscape expertise.

Aerial at main entry







Top right, middle, bottom Collaboration atrium adjacent to dispersed media, collaboration zones within the learning suite, and flex space.









IV-125 of 133



Canyon View High School

Flexible Space: That Allows Architecture to Adapt

Agua Fria Union High School District's team defined this vision: blurring the lines between ages and abilities to foster authentic learning and curricular exploration by expanding the definition of what a place-based high school can be.

DLR Group's design emphasizes spatial flexibility and sustainability as primary means of fulfilling the district's goals. The new facility offers the opportunity to strengthen relationships, foster multiple pedagogies for individualized learning opportunities, and nurtures a culture that is studentfocused and faculty-guided. Classes have the flexibility to be held in spaces designed to suit the learning of the moment, and adjust when necessary. The facility became home to a first of its kind teaching and learning accelerator, an open-source incubator for the art of teaching and learning. Faculty from around the district and beyond come to develop and practice modern pedagogies; visiting speakers are given opportunities to share their knowledge; and students and community can come to partner and explore not just teacherto-student frameworks, but also student-to-student as well as student-to-teacher norms.

The project comprised a new 231,000 SF high school. Sustainable design includes adoption of a new approach called Viewing Architecture through the Lens of User Experience for Sustainability. VALUES targets a metrics-based approach to evaluating the user experience of space and sustainable design strategies. DLR Group provided planning, architecture, engineering and interiors services.

Entry courtyard

NEWMAN + DLR Group

Main entry at dusk







Visioning



Top Site plan and building massing

Bottom Multi-purpose with direct connection to exterior courtyard





Top Learning stair

Bottom Collaboration and presentation area







Weld County School District RE-4 Severance High School

Learning Communities: That Create a Sense of Pride

As a growing community in northern Colorado, the Weld RE-4 School District saw the need for comprehensive, district-wide master planning early on. The master plan effort resulted in an extensive Facility Master Plan, planned upgrades and additions to the existing high school and programming for a second new high school in Severance, Colorado.

Severance High School integrates future-ready programming that creates active learning opportunities resulting in a paradigm shift to student-centered instruction and collaboration, flexibility of space and engaging learning. Some key features represented by this shift are: two story small learning communities, applied learning labs, decentralized administration and media resources which will give each learner that opportunity to engage in ways meaningful to them personally. Each learning community has a small student commons adjacent to open project areas, giving students social and collaboration space. A guiding directive from the district was to craft a new school that establishes a community culture equal to that at their existing Windsor High School; the collaborative, studentcentered, small learning community design does just that at the new Severance High School.

This 166,500 SF facility is designed to accommodate 800 students in its first phase of construction, and 1200 in its second. DLR Group provided district-wide facility assessments, bond planning, programming, architecture, interior design and construction administration.

Main entry













Small Learning Community Activity Zones

Level 01

Commons











West-MEC SW Campus Improvements

Relevancy: That Connects Learning to "Real Life"

West-MEC Southwest Campus is located in Buckeye, Arizona. DLR Group's campus design exudes the idea of energy and how it relates to a variety of career paths that directly relate to the needs of the community and business partners in the West Valley.

An iconic and bold architecture is conveyed to the community through the use of bold colors reflecting the school's brand as well as an architectural expression of high bay solar canopies integrated into the building. Pathways include sustainable energy, industrial technology; auto collision and technology; health sciences, cosmetology, and veterinary sciences. Different learning environments and social spaces are infused in the design. Lab spaces offer state-of-the-art equipment and adjacent collaborative learning spaces promote team interaction and second floor exterior roof patios enable outdoor learning environments. High-bay labs provide flexible learning environment for experimentation and exploration.

The scope of the West-MEC Southwest Campus project includes several phases of construction. Phase 1 includes the student services building and sustainable energy building (SEB), totaling 77,850 SF of building and photovoltaic solar panels canopies. The sustainable energy building consists of labs, classroom, and administrative spaces. Phase 2 includes the industrial technology building, consisting of labs, classrooms, and administrative spaces. Phases 3 and 3B include health sciences, cosmetology, STEM, an off-grid building, auto tech and collision, veterinary sciences, and an assembly building. The off-grid building is conceptualized to serve as an exhibition space for hands-on, energy-related concepts as well as a multipurpose meeting facility for the community and school. Phase 4 of the southwest campus consists of one building: Building F. This is a two-story 26,454 SF facility, which houses the medical assistant and pharmacy on the first floor, and the physical therapy and bio-sciences are housed on the second floor with access to an outdoor roof patio for an extended learning environment. Building G was constructed in a prior phase and is linked to by a bridge to Building F. DLR Group is providing architecture, mechanical, electrical, and structural engineering, and energy/ high-performance design.











Top Exterior elevation

Bottom Fabrication shop





Cherry Creek Career and Innovation Academy

Relevancy: That Connects Learning to "Real Life"

The new Cherry Creek Career and Innovation Academy expands career and technical program opportunities and serves as a college and career readiness hub for 11th and 12th grade students across the Cherry Creek School District.

DLR Group's design incorporates critical input from business partners who established baseline needs and space parameters to deliver authentic learning environments for seven relevant career pathways that support the local and regional economy. Pathways include advanced manufacturing, business services, health and wellness, hospitality and tourism, infrastructure engineering, I.T. and STEAM, transportation. In addition to on site instruction at CCIC, students are also afforded internships and apprenticeships in a variety of career fields. The campus includes a variety of instructional, lab, and social spaces where students can work in teams or individually on assigned tasks as they progress through their chosen career pathway. High-bay labs provide flexible learning spaces for experimentation and exploration, some with direct access to sheltered outdoor work areas. The heart of the campus is the i-commons, where career pathways converge. The i-commons brings together all campus users by encouraging interaction and intentional collisions between students, educators, and industry partners.

The 117,000 SF Cherry Creek Innovation Campus is a direct result of Cherry Creek 2021, the district's community engagement process conducted in advance of the November 2016 bond referendum. The outcome of that process is the understanding that the district must prepare students differently as they enter the future workforce. The 42-acre site, featuring rolling hills and a deep arroyo, allows for further programmatic expansion and addition of other buildings and facilities. Spaces include high/low intensity labs and classrooms, i-commons/social spaces, culinary lab and café, small and large collaboration and project areas, and exterior work yards. The facade features masonry and metal panel, including areas of distinctive cherry red, to reinforce district branding. The campus is located on 40 prominent acres in Dove Valley nearby the Denver Broncos training facility and is bordered by East Broncos Parkway and South Chambers Road. DLR Group provided planning, programming, architecture, interiors, branding/signage and structural engineering.

Main entry

NEWMAN + DLR Group





Bottom Advanced manufacturing high intensity lab Right Aviation high intensity lab









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V. THE STRANDS

Demographics/Enrollment Projections

The following are excerpts from the Milone + MacBroom Inc (MMI)'s report originally written in June of 2019, and updated in June 2020 and December 2020.

Enrollment History and Trends

Norwalk's school enrollments reversed a decreasing trend during the Great Recession, then leveled off between 2010 and 2013. A similar increasing pattern began in 2014-2015 and appeared to be leveling off in 2018-2019. However, the district experienced its largest single-year increase of the last two decades in 2019-2020. This large single-year increase was followed by a decline in enrollment for 2020-2021. According to the October 1, 2020, enrollment for NPS, PreK-12 enrollment is down 1.2% from 2019-2020, with a total 11,509 students. A majority of this drop in enrollment was experienced in kindergarten and the lower elementary grades.

The Connecticut State Department of Education recently examined the impact of the COIVD-19 pandemic on enrollment trends in its Analysis of Preliminary Public School Enrollment released in November 2020. Like Norwalk, the state as a whole experienced a drop in enrollment with the greatest declines experienced in the earliest grades, suggesting that parents are choosing to delay the start of public schooling for their youngest children due to the COVID-19 pandemic or seeking private alternatives for their youngest learners. Pre-K enrollment is down 20% statewide. Kindergarten enrollment fell by nearly 12% but without a corresponding decline in births, leading to the assumption that the decline in enrollment is due to delayed entry or alternative schooling.

District Wide Enrollment Projections

MMI developed three projection models based on different assumptions of economic and social outcomes. The following chart shows projected enrollments for the three models. All models assume different birth, housing, economic, and inmigration factors. Considering key assumptions, the MMI medium projection model represents the most probable scenario for the near future. Specifically, this model assumes that birth rates remain stable, labor and housing markets continue with modest growth, approved residential developments continue forward, and historic migration trends will return over time. The following chart shows the range of projected enrollments at the district-wide level based on MMI's three projection models.



The medium district-wide projection shows PreK-12 enrollment increasing by 562 students or 5.2% by the 2025-2026 school year. The rate of increase is projected to slow to 0.9% with an increase of 137 students in the final 5 years of the projection horizon. Total enrollment is projected to increase from 11,509 students in 2020-2021 to 12,208 students in 2030-2031.

The rate of enrollment change varies across grade level. Elementary (PreK-5) enrollment is expected to increase by 192 students by 2025-2026 and then flatten at approximately 5,550 students until the end of the projection horizon in 2030-2031.

NEWMAN + ^LDLR Group



Middle school enrollment (6-8) is projected to decline by 67 students (2.5%) by 2025-2026. The decline is a result of smaller elementary classes that are already in the system matriculating up. In the final 5 years of the projection, middle school enrollment rebounds slightly to 2,612 students in 2030-2031. High school (9-12) enrollment is projected to experience the greatest growth over the next decade. This growth stems from the larger grade cohorts matriculating into Norwalk's high schools as well as the expansion of NHS's P-TECH program which is assumed to include 100 inter-district regional students starting in 2024-2025. High school enrollment is projected to increase by 8.5% or 328 students in the first 5 years of the projection. In the final 5 years of the projection, high school enrollment stabilizes and averages 4,161 students annually.

High School Enrollment Projections

To support Norwalk's application to the Office of School Construction Grants Review (OSCG&R), school-specific enrollment projections for Norwalk's High School programs were prepared. As part of the expansion to Norwalk's P-TECH program at NHS, 100 additional seats will be offered to students outside of Norwalk with a focus of the draw being Bridgeport and Stamford students. It is anticipated that 25 inter-district magnet students per grade will be added in 2024-2025, increasing P-TECH's total enrollment to 500 students. For the purpose of the OSCG&R process and the NHS facility planning and design, the combined enrollment for NHS and P-TECH should be used. This results in a peak enrollment over the next 8 years of 1,991 for the 2024-2025 school year. Enrollment projections by high school are shown in the table below. Detailed projections by school and grade are contained in the appendix of this report.

Projected High School (9-12) Enrollments by School											
School	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
Brien McMahon High School	1,710	1,797	1,888	1,979	2,012	1,966	1,960	1,936	1,937	1,997	2,080
Center for Global Studies	276	283	280	278	288	279	280	276	277	277	283
P-TECH	399	393	393	393	493	493	493	493	493	493	493
Norwalk High School	1,466	1,550	1,503	1,506	1,498	1,441	1,439	1,424	1,437	1,361	1,377
NHS Construction Proj. Total	7,865	2,943	7,895	1,899	1.991	1,934	1,932	7,917	1,930	7,854	1,870
High School Total	3,851	4,023	4,064	4,156	4,291	4,179	4,172	4,129	4,144	4,128	4,233

Detailed Projection Tables

Districtwide Enrollment Projections by Grade

School Year	Birth Year	Births	ĸ	1	2	3	4	5	6	7	8	9	10	11	12	PK	PK-12 Total	K-12 Total	K-5 Total	6-8 Total	9-12 Total
2020-21	2015	1,151	-738	825	824	823	768	836	B§2	851	911	1,005	1,011	972	863	200	11,509	11,309	4,814	2,644	3,851
2021-22	2016	1,164	901	754	836	830	828	774	B44	912	869	1,099	1,001	997	926	237	11,808	11,571	4,923	2,625	4,023
2022-23	2017	1,085	835	885	760	838	.831	830	778	869	926	1.043	1,091	984	946	273	11,889	11,616	4,979	2,573	4,064
2023-24	2018	1,124	056	821	893	763	540	834	835	802	884	1,112	1,036	1,073	935	309	11,993	11,684	5,007	2,521	4,156
2024-25	2019	1,100	838	839	826	893	762	840	836	857	813	1,083	1,126	1,041	1,041	309	12,104	11,795	4,998	2,506	4,291
2025-26	2020	1,083	840	826	848	831	895	766	844	863	870	1,014	1,073	1,105	987	309	12,071	11,762	5,006	2,577	4,179
2026-27	2021	1,111	849	828	835	848	830	895	768	866	875	1,066	1,005	1,053	1,048	309	12,075	11,766	5,085	2,509	4,172
2027-28	2022	1,101	841	837	837	840	850	834	899	792	879	1,089	1,056	986	998	309	12,047	11,738	5,039	2,570	4,129
2028-29	2023	1,104	844	829	846	842	841	854	838	928	804	1,094	1,079	1,036	935	309	12,079	11,770	5,056	2,570	4,144
2029-30	2024	1,100	841	832	838	851	843	845	858	865	942	1,003	1,084	1,059	982	309	12,152	11,843	5,050	2,665	4,128
2030-31	2025	1,100	-841	829	841	843	853	.847	849	885	878	1,171	994	1,054	1.004	309	12,208	11,899	5,054	2,612	4,233





Projections by School & Grade

Norwalk currently has 1 Early Childhood Center, 11 Elementary Schools, 4 Middle Schools, 1 Inter-district Magnet and 4 high schools as indicated on the following



Elementary Enrollment Projections: (High Growth Scenario)

Grade level totals vary slightly from corresponding district-wide grade level projections due to formulaic rounding issues

Element	N ary Sc	lorwa hool	lk Pu Proje	tblic s	Schoo Enrol	ols Imen	t, 20	19-20	
School	PK	к	1	2	3	4	5	K-5th	PK-5th
Brookside	32	60	65	76	54	68	84	407	439
Columbus (K-8)		44	44	43	42	64	62	299	299
Cranbury		66	75	81	75	76	69	442	442
Fox Run	20	66	73	65	64	52	63	383	403
Jefferson	20	74	68	74	88	84	97	485	505
Kendall	18	85	76	66	71	98	91	487	505
Lower Ponus		-	-	-	-	-		0	0
Marvin		79	72	71	61	61	83	427	427
Naramake	18	68	53	64	52	69	64	370	388
Norwalk Global A	0	-	-	-	-	-	-	0	0
Rowayton		80	97	81	65	86	80	489	489
Silvermine		83	90	81	80	77	89	500	500
Tracey		80	82	69	68	73	63	435	435
Wolfpit		53	42	59	58	40	55	307	307
NECC	145								145
TOTAL	253	838	837	830	778	848	900	5,031	5,284
Element	N ary Sc	lorwa hool	lk Pu Proje	iblic S	Schoo Enrol	ols Imen	t, 20	20-21	
School	PK	к	1	2	3	4	5	K-5th	PK-5th
Brookside	36	65	62	67	74	56	74	398	434
Columbus (K-8)		44	44	44	43	42	64	281	281
Cranbury		83	63	76	81	75	77	455	455
		-			-				

Element	ary Sc	Elementary School Projected Enrollment, 2020-21										
School	PK	к	1	2	3	4	5	K-5th	PK-5t			
Brookside	36	65	62	67	74	56	74	398	434			
Columbus (K-8)		44	44	44	43	42	64	281	281			
Cranbury		83	63	76	81	75	77	455	455			
Fox Run	20	70	66	71	59	62	52	380	400			
Jefferson		72	75	66	71	85	83	452	452			
Kendall	18	78	83	80	69	71	98	479	497			
Lower Ponus		0	0	0	0	0	0	0	0			
Marvin		78	76	72	69	62	60	417	417			
Naramake	18	60	66	55	67	52	73	373	391			
Norwalk Global A	0	0	0	0	0	0	0	0	0			
Rowayton		92	80	96	81	66	81	496	496			
Silvermine		84	79	89	86	83	76	497	497			
Tracey		63	83	89	74	68	80	457	457			
Wolfpit		52	51	43	56	61	40	303	303			
NECC	145								145			
TOTAL	237	841	828	848	830	783	858	4,988	5,225			
Element	N ary Sc	lorwa hool	ilk Pu Proje	blic S	Schoo Enrol	ls Imen	t, 20	21-22				

Element	ary Sc	hool	Proje	cted	Enrol	Imen	t, 20	21-22	
School	PK	к	1	2	3	4	5	K-5th	PK-5tł
Brookside	36	66	67	63	65	76	61	398	434
Columbus (K-8)		44	44	44	44	43	42	261	261
Cranbury	36	85	80	63	75	80	78	461	497
Fox Run	20	71	70	63	64	58	62	388	408
Jefferson		73	73	72	64	68	84	434	434
Kendall	18	78	76	87	83	69	71	464	482
Lower Ponus		0	0	0	0	0	0	0	0
Marvin		80	76	76	69	70	60	431	431
Naramake	18	61	59	69	57	67	55	368	386
Norwalk Global A	0	0	0	0	0	0	0	0	0
Rowayton		93	92	80	98	82	61	506	506
Silvermine		84	80	78	93	89	82	506	506
Tracey		63	66	92	96	74	74	465	465
Wolfpit		53	50	54	40	59	61	317	317
NECC	145	1							145
TOTAL	273	851	833	841	848	835	791	4,999	5.272





The Strands

	N	lorwa	lk Pu	blic S	choo	ls			
Element	ary Sc	hool	Proje	cted	Enrol	Imen	t, 202	22-23	
School	PK	к	1	2	3	4	5	K-5th	PK-5th
Brookside	36	51	69	59	62	58	83	382	418
Columbus (K-8)		44	44	44	44	44	43	263	263
Cranbury	36	65	82	70	64	64	82	427	463
Fox Run	20	55	71	59	57	53	58	353	373
letterson		63	74	71	69	61	68	406	406
Kendall	18	78	76	79	91	83	69	476	494
Lower Ponus	36	72	0	72	0	72	0	216	252
Marvin	10	61	//	65	/4	60	69	406	406
Naramake	18	48	60	53	12	49	/1	353	371
Norwalk Global A	0	0	0	0	0	0	0	0	0
Silvermine		72	95	79	80	84	11	487	487
Silvermine		84	80	79	82	96	86	507	507
Nolfnit		65	66	12	98	9/	81	4//	4//
woitpit	4.45	41	52	40	21	30	59	265	265
NECC	145		-						145
TOTAL	309	797	846	848	844	857	846	5,038	5,347
	N	lorwa	lk Pu	blic S	choo	ls			
Element	ary Sc	nool	Proje	cted	Enrol	ımen	τ, 202	23-24	
School	РК	к	1	2	3	4	5	K-5th	PK-5th
Brookside	36	49	44	52	50	55	63	313	349
Columbus (K-8)		44	44	44	44	44	44	264	264
Cranbury	36	62	53	61	59	54	65	354	390
Fox Run	20	52	46	51	45	48	54	296	316
Jefferson		63	64	71	69	66	61	394	394
Kendall	18	78	76	80	82	91	83	490	508
Lower Ponus	36	72	72	72	72	72	72	432	468
Marvin		58	50	57	54	64	59	342	342
Naramake	18	45	39	47	47	61	52	291	309
Norwalk Global A	0	67	67	67	67	0	0	268	268
Rowayton		69	61	70	68	69	80	417	417
Silvermine		85	80	79	82	85	95	506	506
Ггасеу	<u> </u>	63	66	72	77	100	106	484	484
Wolfpit	<u> </u>	39	33	41	37	46	36	232	232
NECC	145								145
TOTAL	309	846	795	864	853	855	870	5,083	5,392
	N	lorwa	lk Pu	blic S	Schoo	ls			
Element	ary Sc	hool	Proje	cted	Enrol	Imen	t, 202	24-25	
School	РК	К	1	2	3	4	5	K-5th	PK-5th
Brookside	36	48	51	46	52	53	60	310	346
Columbus (K-8)		44	44	44	44	44	44	264	264
Cranbury	36	61	60	55	62	60	56	354	390
Fox Run	20	51	53	46	47	46	49	292	312
Jefferson		63	64	62	69	66	66	390	390
Kendall	18	78	76	80	83	83	91	491	509
Lower Ponus	36	72	72	72	72	72	72	432	468
Marvin		58	58	51	56	56	63	342	342
Naramake	18	44	45	42	49	48	65	293	311
Norwalk Global A	0	67	67	67	67	67	0	335	335
Rowayton		67	70	62	71	71	65	406	406
Silvermine		84	81	79	83	85	84	496	496
Ггасеу		63	66	72	77	77	108	463	463
Wolfpit		38	38	36	39	39	47	237	237
NECC	145								145
TOTAL	309	838	845	814	871	867	870	5,105	5,414

		nool	rioje		EIIIOI	Imen	1, 204	25-26		
School	РК	к	1	2	3	4	5	K-5th	PK-5th	
Brookside	36	50	50	54	46	55	58	313	349	
Columbus (K-8)		44	44	44	44	44	44	264	264	
Cranbury	36	64	59	63	56	63	63	368	404	
Fox Run	20	53	52	52	42	47	47	293	313	
Jefferson		63	64	62	60	66	65	380	380	
Kendall	18	78	76	79	84	83	83	483	501	
Lower Ponus	36	72	72	72	72	72	72	432	468	
Marvin		60	56	59	50	59	55	339	339	
Naramake	18	46	44	47	44	50	52	283	301	
Norwalk Global A	cader	67	67	67	67	67	67	402	402	
Rowayton		69	69	72	63	74	68	415	415	
Silvermine		84	80	81	82	86	84	497	497	
Tracev		63	66	72	77	77	84	439	439	
Wolfnit		30	37	41	34	41	40	232	232	
NECC	1.45	55	51	41	54	41	40	2.52	145	
NECC	145								145	
TOTAL	309	852	836	865	821	884	882	5,140	5,449	
Norwalk Public Schools Elementary School Projected Enrollment, 2026-27										
School	PK	К	1	2	3	4	5	K-5th	PK-5th	
Brookside	36	49	52	53	54	49	61	318	354	
Columbus (K-8)		44	44	44	44	44	44	264	264	
Cranbury	36	64	62	62	63	56	65	372	408	
Fox Run	20	53	54	52	48	42	48	297	317	
Jefferson		63	64	62	60	57	66	372	372	
Kendall	18	78	76	79	82	83	83	481	499	
Lower Ponus	36	72	72	72	72	72	72	432	468	
Marvin		59	59	57	58	52	58	343	343	
Naramake	18	45	45	47	50	45	54	286	304	
Norwalk Global A	cader	67	67	67	67	67	67	402	402	
Rowayton		69	71	71	73	66	71	421	402	
Silvermine		84	80	70	84	86	84	407	/07	
Tracov		62	60	73	77	77	04	437	437	
Malfalt		20	20	12	10	27	42	435	435	
woitpit		39	39	40	40	37	42	257	257	
NECC	145								145	
TOTAL										
	309	849	851	857	872	833	899	5,161	5,470	
Element	309 N ary Sc PK	849 Iorwa hool K	851 Ik Pu Proje 1	857 blic 9 cted 2	872 Schoo Enrol 3	833 ols Imen 4	899 t, 202 5	5,161 27-28 K-5th	5,470 PK-5th	
Element School Brookside	309 N ary Sc PK 36	849 lorwa hool K 45	851 Ik Pu Proje 1 51	857 blic S cted 2 54	872 Schoo Enrol 3 52	833 Is Imen 4 56	899 t, 202 55	5,161 27-28 K-5th 313	5,470 PK-5th 349	
Element School Brookside Columbus (K-8)	309 N ary Sc PK 36	849 lorwa hool K 45 44	851 Ik Pu Proje 1 51 44	857 blic 9 cted 54 44	872 Schoo Enrol 3 52 44	833 Is Imen 4 56 44	899 t, 202 55 44	5,161 27-28 K-5th 313 264	5,470 PK-5th 349 264	
Element School Brookside Columbus (K-8) Cranbury	309 N ary Sc 9K 36 36	849 lorwa hool K 45 44 58	851 Ik Pu Proje 1 51 44 62	857 blic 9 cted 2 54 44 65	872 Schoo Enrol 3 52 44 62	833 Is Imen 4 56 44 64	899 t, 202 55 44 59	5,161 27-28 K-5th 313 264 370	5,470 PK-5th 349 264 406	
Element School Brookside Columbus (K-8) Cranbury Fox Run	309 N ary Sc PK 36 36 20	849 lorwa hool 45 44 58 48	851 Ik Pu Proje 1 51 44 62 53	857 blic 9 cted 54 44 65 53	872 School Enrol 52 44 62 48	833 Imen 4 56 44 64 48	899 t, 202 55 44 59 42	5,161 27-28 K-5th 313 264 370 292	5,470 PK-5th 349 264 406 312	
Element School Brookside Columbus (K-8) Cranbury Fox Run Jefferson	309 N ary Sc 9K 36 20	849 hool K 45 44 58 48 63	851 Proje 1 51 44 62 53 64	857 blic 9 cted 54 44 65 53 62	872 Schoo Enrol 3 52 44 62 48 60	833 Ins Imen 56 44 64 48 58	899 t, 202 55 44 59 42 57	5,161 27-28 K-5th 313 264 370 292 364	5,470 PK-5th 349 264 406 312 364	
Element School Brookside Columbus (K-8) Cranbury Fox Run Jefferson Kendall	309 Nary Sc PK 36 20 18	849 hool K 45 44 58 48 63 78	851 Ik Pu Proje 1 51 44 62 53 64 77	857 blic 9 cted 54 44 65 53 62 80	872 Schoo Enrol 3 52 44 62 48 60 83	833 Ins Imen 4 56 44 64 48 58 83	899 t, 202 55 44 59 42 57 83	5,161 27-28 K-5th 313 264 370 292 364 484	5,470 PK-5th 349 264 406 312 364 502	
Element School Brookside Columbus (K-8) Cranbury Fox Run Jefferson Kendall Lower Ponus	309 Nary Sc 9K 36 20 18 36	849 hool K 45 44 58 48 63 78 72	851 Proje 1 51 44 62 53 64 77 72	857 blic 9 cted 54 44 65 53 62 80 72	872 School Enrol 3 52 44 62 48 60 83 72	833 Imen 4 56 44 64 48 58 83 72	899 t, 202 55 44 59 42 57 83 72	5,161 27-28 K-5th 313 264 370 292 364 484 432	5,470 PK-5th 349 264 406 312 364 502 468	
Element School Brookside Columbus (K-8) Cranbury Fox Run Jefferson Kendall Lower Ponus Marvin	309 Nary Sc 9K 36 20 18 36	849 lorwa hool K 45 44 58 48 63 78 78 72 54	851 Proje 1 51 44 62 53 64 77 72 57	857 blic 5 cted 2 54 44 65 53 62 80 72 60	872 School Enrol 3 52 44 62 48 60 83 72 57	833 Is Imen 4 56 44 64 48 58 83 72 61	899 t, 202 55 44 59 42 57 83 72 51	5,161 27-28 K-5th 313 264 370 292 364 484 432 340	5,470 PK-5th 349 264 406 312 364 502 468 340	
Element School Brookside Columbus (K-8) Cranbury Fox Run Jefferson Kendall Lower Ponus Marvin Naramake	309 Nary Sc 9K 36 20 18 36 20	849 lorwa hool K 45 44 58 48 63 78 72 54 41	851 Ik Pu Proje 1 51 44 62 53 64 77 72 57 44	857 blic 9 cted 54 44 65 53 62 80 72 60 48	872 School Enrol 3 52 44 62 48 60 83 72 57 49	833 Imen 4 56 44 64 48 58 83 72 61 50	899 t, 202 55 44 59 42 57 83 72 51 48	5,161 27-28 K-5th 313 264 370 292 364 484 432 340 280	5,470 PK-5th 349 264 406 312 364 502 468 340 298	
Element School Brookside Columbus (K-8) Cranbury Fox Run Jefferson Kendall Lower Ponus Marvin Naramake Norwalk Globel	309 Nary Sci 36 20 18 36 18	849 lorwa hool K 45 44 58 48 63 78 72 54 41 67	851 Ik Pu Proje 1 51 44 62 53 64 77 72 57 44 67	857 bblic 9 cted 54 44 65 53 62 80 72 60 48	872 school Enrol 3 52 44 62 48 60 83 72 57 49 67	833 Imen 4 56 44 64 48 58 83 72 61 50 67	899 t, 202 55 44 57 83 72 51 48 67	5,161 27-28 K-5th 313 264 370 292 364 484 432 340 280 402	5,470 PK-5th 349 264 406 312 364 502 468 340 298	
Element School Brookside Columbus (K-8) Cranbury Fox Run Jefferson Kendall Lower Ponus Marvin Naramake Norwalk Global A Powarton	309 N ary Sc 36 20 18 36 36 18 xcader	849 hool K 45 44 58 63 78 72 54 41 67 67	851 Proje 1 51 44 62 53 64 77 72 57 44 67 70	857 blic 9 cted 2 54 44 65 53 62 80 72 60 48 67 72	872 Enrol 3 52 44 62 48 60 83 72 57 49 67 71	833 Imen 4 56 44 64 48 58 83 72 61 50 67 75	899 t, 202 5 55 44 59 42 57 83 72 51 48 67 67	5,161 27-28 K-5th 313 264 370 292 364 484 432 340 280 402 414	5,470 PK-5th 349 264 406 312 364 502 468 340 298 402	
Element School Brookside Columbus (K-8) Cranbury Fox Run Jefferson Kendall Lower Ponus Marvin Naramake Norwalk Global A Rowayton	309 Nary Sci 20 18 36 20 18 36 20	849 lorwa hool K 45 44 58 48 63 78 78 72 54 41 67 63 97	851 Proje 1 51 44 62 53 64 77 72 57 44 67 70	857 blic 5 cted 2 54 44 65 53 62 80 72 60 48 67 73 90	872 School Enrol 3 52 44 62 48 60 83 72 57 49 67 71 83	833 Imen 4 56 44 48 58 83 72 61 50 67 75 97	899 t, 202 5 55 44 59 42 57 83 72 51 48 67 62 87	5,161 27-28 K-5th 313 264 370 292 364 484 432 340 280 402 414	5,470 PK-5th 349 264 406 312 364 502 468 340 298 402 414 502	
Element School Brookside Columbus (K-8) Cranbury Fox Run Jefferson Kendall Lower Ponus Marvin Naramake Norwalk Global A Rowayton Silvermine	309 Nary Sci 20 18 36 20 18 36 20	849 lorwa hool K 45 44 58 48 63 78 72 54 41 67 63 85 52	851 Ik Pu Proje 1 51 44 62 53 64 77 72 57 44 67 70 81	857 blic 5 cted 54 44 65 53 62 80 72 60 48 67 73 80	872 School Enrol 3 52 44 62 48 60 83 72 57 49 67 71 83 22	833 833 1 1 5 6 1 5 6 1 5 0 6 7 7 5 8 6 7 7 5 8 6 7 7 5 8 6 7 7 7 5 8 6 7 7 7 7 8 8 8 7 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8	899 t, 202 5 55 44 59 42 57 83 72 51 48 67 62 85 52 53 55 55 55 55 55 55 55 55 55	5,161 27-28 K-5th 313 264 370 292 364 484 432 340 280 402 414 500	5,470 PK-5th 349 264 406 312 364 502 468 340 298 402 414 500	
Element School Brookside Columbus (K-8) Cranbury Fox Run Jefferson Kendall Lower Ponus Marvin Naramake Norwalk Global A Rowayton Silvermine Tracey	309 N ary Sc 36 20 18 36 20 18 36 20	849 hool K 45 44 58 48 63 78 72 54 41 67 63 85 63	851 Ilk Pu Proje 1 51 44 62 53 64 77 72 57 44 67 70 81 67	857 blic 9 cted 2 54 44 65 53 62 80 72 60 48 67 72 60 48 67 73 80 72	872 Enrol 3 52 44 62 48 60 83 72 57 49 67 71 83 78	833 833 10 10 10 10 10 10 10 10 10 10	899 t, 207 55 44 59 42 57 83 72 51 48 67 62 85 85	5,161 27-28 K-5th 313 264 370 292 364 484 432 280 402 414 500 443	5,470 PK-5th 349 264 406 312 364 502 468 340 298 402 402 414 500 443	
Element School Brookside Columbus (K-8) Cranbury Fox Run Jefferson Kendall Lower Ponus Marvin Naramake Norwalk Global A Rowayton Silvermine Tracey Wolfpit	309 N ary Sc 36 20 18 36 20 18 36 20	849 hool K 45 44 58 63 78 72 54 41 67 63 85 63 36	851 Proje 1 51 44 62 53 64 77 72 57 44 67 70 81 67 39	857 blic 5 cted 54 44 65 53 62 80 72 60 48 67 73 80 72 41	872 Enrol 3 52 44 62 48 60 83 72 57 49 67 71 83 78 38	833 Imen 4 56 44 64 48 58 83 72 61 50 67 75 86 78 43	899 t, 207 55 44 59 42 57 83 72 51 48 67 62 85 85 85 38	5,161 27-28 K-5th 313 264 370 292 364 484 432 340 280 402 414 500 443 235	5,470 PK-5th 349 264 406 312 364 502 468 340 298 402 402 414 500 443 235	





-	N	lorwa	lk Pu	blic S	Schoo	ols			
Element	ary Sc I	hool	Proje	cted	Enrol	Imen	t, 204	28-29	
School	PK	К	1	2	3	4	5	K-5th	PK-5th
Brookside	36	46	47	53	54	54	62	316	352
Columbus (K-8)		44	44	44	44	44	44	264	264
Cranbury	36	59	57	64	65	63	67	375	411
Fox Run	20	49	49	53	49	48	48	296	316
Jefferson		63	64	62	60	57	58	364	364
Kendall	18	78	76	81	82	84	83	484	502
Lower Ponus	36	72	72	72	72	72	72	432	468
Marvin		55	53	59	60	59	60	346	346
Naramake	18	42	41	47	51	50	54	285	303
Norwalk Global A	Acader	67	67	67	67	67	67	402	402
Rowayton		64	64	71	74	74	72	419	419
Silvermine		83	81	80	83	85	85	497	497
Tracey		63	66	73	77	79	85	443	443
Wolfpit		37	35	42	40	41	43	238	238
NECC	145								145
TOTAL	309	822	816	868	878	877	900	5,161	5,470
		lorwa	lk Pu	blic S	Schoo	ols			
Element	ary Sc	hool	Proje	cted	Enrol	lmen	t, 202	29-30	
School	РК	К	1	2	3	4	5	K-5th	PK-5th
Brookside	36	46	47	49	53	56	60	311	347
Columbus (K-8)		44	44	44	44	44	44	264	264
Cranbury	36	59	57	59	65	66	65	371	407
Fox Run	20	49	50	48	49	49	49	294	314
Jefferson		63	64	62	59	57	57	362	362
Kendall	18	78	76	81	83	83	84	485	503
Lower Ponus	36	72	72	72	72	72	72	432	468
Marvin		55	54	54	58	62	59	342	342
Naramake	18	42	42	44	50	51	54	283	301
Norwalk Global A	l Acader	67	67	67	67	67	67	402	402
Rowayton		64	65	66	73	77	70	415	415
Silvermine		84	81	81	83	87	84	500	500
Tracey		63	66	72	78	78	85	442	442
Wolfpit		37	36	38	40	42	42	235	235
NFCC	145								145
TOTAL	309	822	821	837	87/	801	802	5 130	5 447
IUIAL	1 203	023	041	05/	0/4	071	072	0,100	3,447

Middle School Enrollment Projections: (High Growth Scenario)

Grade level totals vary slightly from corresponding district-wide grade level projections due to formulaic rounding issues

Midd	Norwalk I e School E	Public Scho	ols , 2019-20	
School	6	7	8	6th-8th
Nathan Hale	180	217	227	624
Ponus Ridge	228	212	233	673
Roton	178	195	206	579
West Rocks	249	264	213	726
Columbus (K-8)	18	17	13	48
TOTAL	853	905	892	2,650

Middle Sch	Norwalk I ool Projec	Public Scho cted Enroll	iols ment, 202	0-21
School	6	7	8	6th-8th
Nathan Hale	218	187	220	625
Ponus Ridge	224	234	215	673
Roton	209	195	201	605
West Rocks	237	250	270	757
Columbus (K-8)	19	17	15	51
TOTAL	907	883	921	2,711

Norwalk Public Schools Middle School Projected Enrollment, 2021-22										
School	6	7	8	6th-8th						
Nathan Hale	187	225	190	602						
Ponus Ridge	209	229	237	675						
loton	199	228	201	628						
West Rocks	251	238	256	745						
Columbus (K-8)	20	20	17	57						
OTAL	866	940	901	2,707						

Middle Sch	Norwalk I ool Projec	Public Scho ted Enroll	ols ment, 202	2-23
School	6	7	8	6th-8th
Nathan Hale	184	195	229	608
Ponus Ridge	185	215	233	633
Roton	150	218	236	604
West Rocks	242	252	244	738
Columbus (K-8)	41	21	20	82
TOTAL	802	901	962	2,665



V-07 of 207

Norwalk Public Schools Middle School Projected Enrollment, 2023-24					
School	6	7	8	6th-8th	
Nathan Hale	204	192	199	595	
Ponus Ridge	165	192	219	576	
Roton	193	165	226	584	
West Rocks	256	246	259	761	
Columbus (K-8)	41	42	21	104	
TOTAL	859	837	924	2,620	

Norwalk Public Schools Middle School Projected Enrollment, 2024-25					
School	6	7	8	6th-8th	
Nathan Hale	154	213	197	564	
Ponus Ridge	233	171	197	601	
Roton	177	213	172	562	
West Rocks	278	259	252	789	
Columbus (K-8)	43	42	43	128	
TOTAL	885	898	861	2,644	

Norwalk Public Schools Middle School Projected Enrollment, 2025-26					
School	6	7	8	6th-8th	
Nathan Hale	184	162	218	564	
Ponus Ridge	241	241	174	656	
Roton	156	196	222	574	
West Rocks	261	282	266	809	
Columbus (K-8)	43	44	43	130	
TOTAL	885	925	923	2,733	

Norwalk Public Schools Middle School Projected Enrollment, 2026-27					
School	6	7	8	6th-8th	
Nathan Hale	165	194	166	525	
Ponus Ridge	218	251	246	715	
Roton	245	172	203	620	
West Rocks	230	263	290	783	
Columbus (K-8)	39	45	45	129	
TOTAL	897	925	950	2,772	

High School Enrollment Projections: (High Growth Scenario) Grade level totals vary slightly from corresponding district-wide grade level projections due to formulaic rounding issues

To support Norwalk's application to the Office of School Construction Grants Review(OSCG&R), school specific enrollment projections for Norwalk's High School programs were prepared. As part of the expansion to Norwalk's P-TECH program at NHS, 100 additional seats will be offered to students outside of Norwalk with a focus of the draw being Bridgeport and Stamford Students. It is anticipated that 25 inter-district magnet students per grade will be added in 2024- 2025, increasing P-TECH's total enrollment to 500 students. For the purpose of the OSCG&R process and the NHS facility planning and design, the combined enrollment for NHS and P-TECH should be used. This results in a peak enrollment over the next 8 years of 1,991 for the 2024-2025 school year. Enrollment projections by high school are shown in the table below. Detailed projections by school and grade are contained in the appendix of this report.

Projected High School (9-12) Enrollments by School											
School	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
Brien McMahon High School	1,710	1,797	1,888	1,979	2,012	1,966	1,960	1,936	1,937	1,997	2,080
Center for Global Studies	276	283	280	278	288	279	280	276	277	277	283
P-TECH	399	393	393	393	493	493	493	493	493	493	493
Norwalk High School	1,466	1,550	1,503	1,506	1,498	1,441	1,439	1,424	1,437	1,361	1,377
NHS Construction Proj. Total	7,865	7,943	1,896	1,899	1,991	1,934	1,932	7,917	1,930	1,854	1,870
High School Total	3,851	4,023	4,064	4,156	4,291	4,179	4,172	4,129	4,144	4,128	4,233





Impact of ELL

An analysis of the 2019-20 enrollment increase indicates a high degree of in-migration to the District across all grade levels. Moreover, a high proportion of new students are from immigrant communities and require additional services. The following maps demonstrate the overlap between new-to-district enrollment hot spots with ELL student hot spots. The students who are new to district were identified by analyzing student identification numbers from one year to the next for 1st through 12th graders. Any student I.D. that appeared in 2019-20, but was not in the District's system in 2018-19 was assumed to be new to NPS.

As is evident from the following maps, a significant cluster of new students with English language learner needs are centered in SoNo and along the Route 7 corridor. The influx of students affected many school attendance areas in 2019-20. This needs to be specifically tracked in order to ensure that there sufficient places or spaces that can support appropriate ELL learners.





The Strands













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Capacity (Defined)

The capacity of a school, which is the number of students that can be accommodated by that school is determined by many factors, such as the age of the students, how they are scheduled to rooms throughout the day, maximum number of students allowed per teacher contracts, amount of choice students have in selecting courses, whether teachers "own" or "share" spaces, and the size of the classrooms available, which impacts how many students can reasonably fit within a room and still allow for effective teaching and learning.

Norwalk Public Schools teacher contracts limit the maximum number of students within a class as follows:

Pre-Kindergarten:

• 18 students

Kindergarten:

22 students

Grades 1-2:

22 students

Grades 3-5:

24 students

Grades 6-12:

28 students

Elementary School Capacity:

Elementary School capacity is generally the easiest to determine since capacity is typically a simple calculation of the number of classrooms used as a "home room" multiplied by the number of students in each class. Home room classrooms are called capacity generating rooms while spaces used for specials, such as art, and intervention rooms for special education are considered non-capacity generating rooms.

Middle School Capacity:

Middle school capacity is calculated similar to the elementary school in that rooms assigned to teach one or more of the four core classes (English Language Arts, Math, Social Studies and Science) are considered capacity generating rooms. Rooms assigned to teach specials or related arts (Foreign Language, etc.) are considered non-capacity generating. Depending on the number of teaching blocks per day, middle schools are generally have the lowest utilization compared to both elementary and high schools. At NPS middle schools have 6 periods per day to accommodate 4 core classes and two specials/related arts

Capacity Example:

An example elementary school is illustrated in the plan diagram on the next page showing which classroom spaces generate capacity for the school (yellow) and which ones do not (red). In this example there are two Pre-Kindergarten rooms, four Kindergarten rooms, seven 1st-2nd Grade rooms and ten 3rd-5th Grade rooms. If the capacity was based on maximum number of students allowed by teacher contract, the maximum calculated capacity of this school for K-5 (w/o PK) would be:

88+154+240 = 482 K-5 students.

However, if we adjust those numbers based on the recommended net square foot per student in a classroom established by Connecticut State DAS Standards and Guidelines for Schools, the number of students planned for each room would be adjusted based on the size of the room. The recommended calculated capacity of the example elementary school for K-5 would be:

85 + 146 + 213 = 444 K-5 students.







Top Example Capacity Floor Plan Diagram

There are diagrams for each school facility illustrating the capacity of the building in this section. The calculations shown for each school go hand-in-hand with the subsequent floor plan diagrams indicating which spaces generate capacity for the school (yellow) and which ones do not (red). The factors noted above are then applied to arrive at a total recommended existing "functional" capacity as they stand today with no changes or improvements implemented.

In addition to calculating the existing recommended capacity for each school, the school buildings have been assessed based on their ability to accommodate the future facing teaching and learning that has been consistently described as the educational vision for Norwalk Public Schools in the many Co-Labs with Administration. Principals, Teachers. Students and Parents. This Educational Vision revolves around inquiry-based learning that includes a variety of learning modalities, which can be fluidly accessed during a class. These modalities include spaces for project based and experiential learning, collaboration, movement, small group and individual spaces to afford intervention and focus, as well as spaces for presentation, evaluation and, in significantly smaller amounts, lecture. The assessments determine each school facilities' educational adequacy score on a scale of 1-5 (1 being Poor & 5 being Excellent). In other words, does the space align with the curriculum goals?

The educational adequacy score as well as the physical condition of the building result in intervention recommendations to improve the educational adequacy of the school facilities. However, these recommendations can further impact the calculated capacity. Next page are two different examples of potential interventions and their resulting impact on capacity. (Note: these two diagrams are theoretical examples and may not necessarily reflect the actual recommendations.)





The top diagram, Example 1 shows the number of classrooms being reduced, but the sizes of classrooms being increased to better accommodate a maximum class size. The reconfiguration also creates some small collaboration spaces that could be shared by multiple classes, but they are not well distributed to serve multiple teams. The capacity for K-5 would be:

This plan would likely NOT be recommended because the capacity is significantly reduced with only a modest improvement in educational adequacy given that the majority of the rooms are still singular rooms without access to collaboration space and the rooms are not planned as flexible or adaptable. Also, the cost of the intervention would be high given the minimal return on educational adequacy.

The bottom diagram, Example 2 has proposed less significant intervention. While some walls are proposed to be altered for connections between classrooms and to open up the collaboration spaces, creating a nexus for small group/ intervention work and project based activities, the basic layout of the existing rooms remains. The collaboration spaces are better distributed to allow for multiple rooms or teaching teams to easily access them. Additionally, this close proximity and connections allows for their square footage to be aggregated across multiple rooms and contribute towards the square foot per student recommended for teaching and learning. The recommended calculated capacity would be as follows:

This plan provides a greater improvement in educational adequacy through significantly increased flexibility, adaptability, choice and movement for students. The interventions would be less cost and greater value.





Bottom Intervention Example 2





High School Capacity:

High school offers students an opportunity to explore rigor and relevance through choice. That choice is in the form of course selection, within departmental and pathway offerings, applying credits earned towards graduation.

Different from elementary and middle school models, high school capacity is governed by policies and cultural norms coupled with student choice. There are five factors that have a direct and quantifiable impact on any high school's capacity:

- The number & type of courses offered
- A room's availability
- The number of courses students enroll in at any one time
- The number of students allowed to enroll in a course (class size cap)
- A courses occupancy rate (number of students enrolled / class size cap)

Due to these variables, its important to note that **high school** capacity changes over time and is never static.

Bottom Left A comparison of course occupancy rates between the comprehensive high schools. These patterns express healthy patterns of student choice.

Bottom Right P-TECH Norwalk, image courtesy of P-TECH Norwalk website



5	English	
b	Math	
5	Science	
ò	Soc Studies	
5	World Lang	

83%

83%

89%

82%

87%



When examining your comprehensive high schools, BMHS and NHS, it's apparent that healthy patterns of student choice are being exhibited within the data set. We've noted course occupancy rates in core content courses like English, Math, and Science being well within range of comparable comprehensive high schools around the country. Your course occupancy rates fall between 81% and 89% in those subjects, respectively (bottom left)

As a reader, you may be considering the benefits of higher efficiencies, say between 95% - 100%. The challenge with that mindset is the inverse affect on student choice. If one student is expected to be in English for period 2, because the efficiency of course scheduling requires them to be there to raise the overall capacity of a school, perhaps they wouldn't be able to attend band practice where their part in the musical performance would be missed by their fellow musicians.







Classroom availability & functionality

Current practice in Norwalk is to have classrooms reserved for teacher use when they aren't teaching. Teachers, on average, teach 5 courses a semester or a total of 130 students. That means that during non-scheduled course time, about 3 periods every two days, the classroom is absent of students. While this is a cultural norm in the district, should capacity ever need to be increased, this is an opportunity to offer more sections of courses, and therefore more opportunities for students to engage in the curriculum.

Furthermore, students are enrolling in 8 courses per term, organized within a 4-period A/B block schedule. Typically, block schedules, where a single class period is longer, require that teachers allow for greater differentiation of activities during their scheduled meeting time. It was typical in the industrial model of education of the past to design smaller spaces in order to be more efficient with the overall size of the high school, however more engaging teaching styles and student activities in modern approaches are straining the functionality of these spaces. There are several classrooms within the high schools that are smaller than recommend in the Connecticut DAS guidelines and to suit their respective level of learning activities. A good example of this are the original classrooms in BMHS.



Top Norwalk High School typical classroom layout

Bottom Brien McMahon High School typical classroom layout



NEWMAN + DLR Group

Norwalk High School

Norwalk High School is a comprehensive high school with a current enrollment near 1,400 students. Currently, it is colocated with P-TECH high school and co-enrolls students in Fine Arts, Health, Physical Education, Culinary Arts, and ROTC.

When we analyzed their capacity, maintaining the cultural norm of teacher reserved classrooms when they aren't teaching, we find that the facility is slightly over capacity. To accommodate students and course offerings, certain compromises have been made. Some spaces are scheduled beyond the five sections of a single teacher's course load and are shared by more than one teacher.

P-TECH Norwalk

P-TECH Norwalk is a special program with a current enrollment of 473 students. In speaking with the high school leadership, they desire to change their scheduling and provide core course content (english, math, etc.) separately from NHS to allow their program to reach its full potential for its teachers and students.

In the interim, between today and when the new facility is open in a few years, the only way to facilitate that separation is to maximize classroom utilization and remove teacher reserved classrooms and science labs, so sharing can be the new norm. From there, we recommend that P-TECH occupy the majority of the building level 100 classrooms for their programs, except for ROTC, Physical Education, SEBS programs, and Culinary Arts spaces, which should remain as is.

Looking ahead for Norwalk High School and P-TECH Norwalk

Recognizing that NHS and P-TECH Norwalk will be rebuilt with a design capacity of 1,500 (55 general classrooms) and 500 (16 general classrooms) respectively, it is apparent that classrooms will need to be scheduled all 8 periods without any reserved general classroom spaces or labs for teachers. Some specialty spaces, like ROTC or Culinary Arts may remain reserved, unless the number of sections filled with students demands otherwise. We recommend teacher workspace be provided, appropriately designed with phone rooms, conference spaces, hotel station style desking and equipment situated to suit their needs.

Bottom Norwalk High School Image Courtesy of NHS website



NEWMAN + ^LDLR Group

Brien McMahon High School

Brien McMahon high school is also a comprehensive high school offering a full compliment of courses for its 1,780 students. It is co-located with the Center for Global Studies, with co-enrollment in select courses. Like NHS, many of the classrooms are reserved for teacher use with some classrooms being shared due to scheduling and student enrollment.

As mentioned earlier, there are several original classrooms that are undersized for their purpose. In order not to adversely affect capacity, the scheduler has aligned smaller sections of courses to use those spaces, but it hasn't been without compromise. When considering Educational Adequacy, it would be ideal to create interventions to better support teachers and students.

Center for Global Studies

CGS high school is a special program offering with a current enrollment of 283 students. Courses include a robust World Languages program, several International Baccalaureate courses, as well as unique offerings in other departments.

Currently, many of the CGS courses are in the addition, on the first floor.











Capacity Summary

The capacity of a school is not static: as educational program requirements, teaching methods, policies and regulations change, so does the capacity of a school. The primary change factors in Norwalk Public Schools effecting capacity are:

- Providing Pre-K at Every Elementary
- Educational Adequacy Response = Space/Curriculum Alignment
- High School Scheduling and Curriculum Policy

Providing Pre-K at Every Elementary

In Norwalk Public Schools' 2016 Strategic Operations Plan & 2016 Facilities Study, providing at least 1 pre-K classroom at each elementary school location was a stated goal. The district did make progress towards that goal, but there are still at least 7 elementary locations that do not have pre-k (includes Naramake, which is in a portable), and it has been the policy to move the pre-k programs around to different sites based on which schools have room as enrollment goes up or down at a particular location. It is the District's goal to expand the pre-k offerings and provide for more stability, so the current recommendations increase the number of pre-k classrooms by 14 rooms. 10 would be going into existing classrooms within existing schools and 4 would be built new as part of a new Columbus Magnet School and new South Norwalk Elementary School. Utilizing existing rooms within the elementary schools results in a lowering of the capacity in those schools for children in the K-5 age group.

Educational Adequacy Response = Space/Curriculum Alignment To achieve the Norwalk Public School's Educational Vision for inquiry-based learning, flexibility and adaptability, the Newman/ DLR Group design team has proposed interventions at each of the schools to create spaces that will enable and support these goals. As demonstrated in previous examples, these recommendations do reduce capacity as some rooms are transformed into collaboration, small group and maker spaces. However, the capacity of rooms transformed is not completely lost as their square footage is in part aggregated across multiple adjacent rooms that are able to conveniently utilize those spaces and their capacity has therefore been increased by 2-3 students.

Bottom Norwalk Pubic Schools Gifted and Talented Promo Video, Youtube April 03, 2019







High School Scheduling and Curriculum Policy

While the existing stated preference is for teachers to retain reserved rooms, this policy requires a significant increase in the number of classrooms to accommodate both existing and future enrollment projections. The proposed new Norwalk High School Educational Specifications have already shifted away from reserved classrooms, and the projected enrollment at Brien McMahon will soon require expansion if the reserved room policy is maintained. It should be noted, that even with maximizing room use, the latest 10-year enrollment projections for BMHS will be a challenge to completely accommodate without modifying existing space and/or increasing the number of classrooms. Of course, the one unknown, is how much hybrid/online learning will be incorporated into a typical high school education in the future. While everyone agrees that in-person education is essential, the future of education may rely more on a curriculum that is individualized and selfselected. Students may have an opportunity to engage both online and in person, which could eventually reduce the need for some general classrooms. In such a scenario, it is of even greater importance that education spaces are flexible, can accommodate groups of all sizes and a wide range of activities and utilized to their fullest to maximize the District's facility investment.



Top Brien McMahon High School & CEnter for Global Studies

Bottom Nathan Hale Middle School Shout Out, Youtube Video Jan. 11, 2021





The existing capacity was calculated as follows:

Pre-K = 268 Students*

Existing Capacity

K-5 = 5,698Students*

6-8 = 2,608 Students*

9-12 = **2,430 Students** (with reserved classrooms)

9-12 = 3,650 Students

(hybrid for current enrollment)

Note: capacity in temporary portable classrooms was not counted as existing capacity since it is the goal of the District to eliminate the portable classrooms

Proposed Capacity

The proposed capacity based on Educational Adequacy response as follows:

With New South Norwalk Pre-K-5:	Without New South Norwalk Pre-K-5:
Pre-K = 519 Students*	Pre-K = 483 Students*
K-5 = 5,658Students*	K-5 = 5,244 Students*
6-8 = 2,926 Students*	6-8 = 2,926 Students*
9-12 = 4,180 Students (reserved classrooms eliminated)	9-12 = 4,180 Students (reserved classrooms eliminated)
*After Pre-K + Ed Adeq inclusion. Includes expanded Columbus Magnet and new South Norwalk PK-5	*After Pre-K + Ed Adeq inclusion. Includes expanded Columbus Magnet

Bottom Left Kendall College and Career Academy Shout Out, Youtube Video April 21, 2021







Facility Educational Adequacy

To determine the Educational Adequacy of each school site and building, the Newman/DLR Group team visited each of the 21 schools in the 19 buildings to evaluate their ability to support and enable teaching and learning in alignment with the Educational Vision of NPS. Upon touring the schools, we found that there are great similarities between the majority of the schools, which is not surprising given that the many of them were built at similar times. The first wave of schools was built in the late 1930's. The next and by far the largest wave of schools was built in the 1950's and early 60's. The next round was built in the 1970's. Then there are several renovations and additions that have occurred periodically over the last 40 years, but the majority of the school building stock is over 60 years old and was built to the educational standards of that time.

Most classrooms were built as isolated classrooms with 4 solid walls without any type of visual connection to the corridors or to adjacent spaces. Typically, the classrooms within a building are the same size and there are not small group rooms, collaboration spaces or break-out spaces that can be shared and flexibly used fluidly as part of an inquiry-based learning cycle. Most intervention spaces are located in other parts of the building instead of being integrated into holistic learning clusters with regular classrooms, which reinforces the notion that students receiving help or services are "different", which often translates into "less than" in the minds of students. In those schools built in the 70's, we found a lot of moveable walls that are not used. While they provide opportunity for adaptability of space, they are unreliable or broken, do not provide adequate acoustic separation or visual connections, and do have appropriate writeable surfaces. All of which could be remedied with new folding walls that are much more durable and versatile



Top West Rocks Facilities Visit

Bottom Brookside Facilities Visit







Facility Educational Adequacy

Based on our educational adequacy assessments we have identified possible classrooms that could be reassigned as collaborative break out areas. These areas have been identified in the recommended intervention plans and have been tracked in the proposed capacity numbers. Additionally, improvement recommendations have been made for creating more secure and usable public spaces, right-sizing of spaces that are too small to serve their current function and identifying potential locations for addition of missing program elements and/or replace existing temporary modular buildings. Areas for light renovation and heavy renovation have been identified.

Bottom 10 Critical Indicators Derived from the SEI/TEI



Right Meeker Elementary School Remodel I Greeley, Colorado







Educational Adequacy Index

The following floor plan diagrams offer possible changes to Norwalk's educational facilities. Each plan was analyzed through the lens of the 10 critical engagement indicators and from the goals, VALUES, needs and aspirations garnered from the facility planning workshops and on-site observation. Each floor plan diagram will have common analysis of the secure entry, "public" space delineation and opportunities to enhance the existing structure's ability to support the educational vision of the District.

The 19 facilities (21 schools) have been ranked in four tiers based on their Educational Adequacy Index scores.

Tier 1 Facilities are schools that are least able to provide for a future facing education - they have issues such as teaching spaces that are too small, teaching spaces in modular construction, out-of-date or inappropriate casework and equipment, inability to adapt or provide a flexible learning environment, have old and ergonomically inappropriate furniture, poor thermal comfort, lack of daylight, glare and/ or acoustic issues, inadequate separation between public shared space and academic spaces for community use, and/ or inadequate secure check-in at entrances

Tier 2 Facilities are schools that may have similar issues as Tier 1 Facilities; however, these schools scored better collectively, with an overall averaged adequacy score above a 3 but still could use improvements in many areas. Tier 3 Facilities scored better as an overall average than the Tier 2 Facilities in the majority of the categories assessed. They have some room for improvement in some areas. However, with the exception of a the newly constructed portions at Lower Ponus Ridge STEAM Academy, the spaces are still very much isolated rooms that do not connect or have spaces for collaboration, small groups or exploration. Tier 4 Facilities are new construction or are in the planning, design or construction process. We did evaluate the plans we were provided, but in some instances could not determine evaluated certain items.

Tier 1 Facilities:

- Columbus Magnet School
- Nathan Hale Middle School
- Naramake Elementary School
- Marvin Elementary School
- Roton Middle School
- West Rocks Middle School
- Wolfpit Elementary School

Tier 2 Facilities:

- Fox Run Elementary School
- Kendall College and Career Academy
- Rowayton Elementary School
- Silvermine Dual Language Magnet School
- Tracey Magnet School

Tier 3 Facilities:

- Brien McMahon/Center for Global Studies
- Brookside Elementary School
- Norwalk Early Childhood Center
- Upper Ponus Ridge STEAM Academy

Tier 4 Facilities - (Recent):

- Cranbury Elementary School
- Jefferson Elementary School
- Lower Ponus Ridge STEAM Academy
- Norwalk High School/P-TECH Norwalk



Educational Adequacy Index Score Breakdown:

The Educational Adequacy Scores are on a 1-5 point scale with 5 being the maximum achievable and 1 being the minimum score. The score breakdown is as follows:



Functions excellently



Functions well/good enough condition to support educational needs



- Functions/condition is OK, but could be better to support educational needs
- 2.00 Exists; baseline functionality; doesn't support educational needs



Does not exist/needs to be replaced





Educational Adequacy District Score:



Max. Achievable Score: 5

Left Silvermine Dual Language Magnet School Shout Out, Youtube Video March 04, 2021



Universal Needs

There are several interventions that should be considered at schools throughout the district. While some would require renovation/construction within the schools, several of them could be implemented in the immediate or short term without major construction.

Key components that should be considered throughout the district are:



Secure Vestibules: Many schools do not have secure vestibules. All schools should have a secure vestibule with a check-in point and entry into the front office. The NPS Security Director has also indicated that all glazing at vestibules should have "breech" resistant film installed.



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Furniture Upgrades: A vast improvement towards creating the varied setting needed for an inquiry-based learning model is to provide well designed, ergonomic, flexible/adaptable furniture. Both informal and formal styles are needed to allow for choice and to accommodate a range of activities.

Paint/Flooring/Acoustic Ceiling Updates: Several of the schools finishes that are dull and past their useful life. Much of the ambiance could be transformed with new finishes, and a targeted application of varied ceiling treatments and color patterns in limited areas to help establish focal points and create a greater sense of place.



Interior Mesh Shading Systems (Mecho Shades) & Exterior Sunshades: The majority of the schools have ample amounts of exterior windows in the classrooms and yet the rooms do not have appropriate daylight and views. This is because the windows let too much direct sunlight into the rooms contributing to glare and heat gain, and occupants pull the solid roller blinds down. By providing a roller shade that has a mesh of 3% openness, daylight and views will be maintained while eliminating the glare and much of the heat gain. When new windows are installed on east, south or west facing facades, exterior sunshades that are attached to the window units should be considered as this can greatly reduce the cooling loads, resulting in smaller cooling systems needing to be installed and lower energy bills.



Improved lighting: While there are a few instances where new LED light fixtures have been installed, the majority of the lighting is fluorescent fixtures. Often even the large classrooms will only have one on-off switch and no dimming capability. The fluorescents not only use much more energy, but often the quality of light is quite poor and there is a loud humming coming from the fixtures that can be very disruptive. Additionally, there are often robust energy incentive programs that can help offset the cost of upgrading fixtures.

The next set of recommendations would require modest amounts of construction within the schools; however, the results would be transformational in implementing a true inquiry-based learning model consistent with the goals and values of NPS and its community.

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Indoor Air Quality: Practically speaking, almost all of the schools have HVAC systems that do not meet current recommendations and/or current code for meeting indoor air quality standards. Three of the schools do not have a ventilation system that would bring fresh air into classroom spaces, and those that do need upgrades or are approaching end of useful life. Fresh air is not only a recommended strategy for reducing the spread of viruses, but it is essential for maintaining CO2 levels below the "parts per million" that keeps people well and productive. While installing a new ventilations system can be expensive, there may be unique opportunities at this time to receive federal funds through the American Rescue Plan Act for infrastructure projects to improve indoor air quality.





NEWMAN + ^LDLR Group



Collaborative Spaces, Maker Spaces, & Break-Out Spaces:

To enable the inquiry-based learning model different activities need to be fluidly available to support the learning cycle. There needs to be areas for students to work independently and collaborate in groups of 2-6. They need to be able to create things and test ideas through experiential learning where they design solutions and then make them to see if they work. They also need quiet nooks or areas off the "beaten path" where they can work quietly on their own or with an educator while remaining in their learning neighborhood. This variety of opportunity not only supports learning activities but contributes to student agency and engagement.



Increased Transparency: For the collaboration spaces to

be effective, there needs to be enough transparency and connection so that educators can maintain oversight and students still understand that they are a part of the learning cohort, whether that be defined as one class of students or an entire learning cluster of students all working together. The transparency also greatly contributes to increased relational security. When people can see and be seen by their community, they are less likely to misbehave and more likely to have a sense of belonging. Educators start to view the entire learning community as "their students" collectively, which leads to greater collaboration and support in both teaching and maintaining order. Finally, the increased transparency would not undermine emergency lock-down procedures, if there is a thoughtful emergency response plan in place with needed infrastructure to support it, including but not limited to secure vestibules and lockable cross-corridor security doors to zone the building.



Interdisciplinary Connections: Both the students and the educators of NPS have expressed the desire to have greater relevance in what they are teaching and learning. One step towards that to create interdisciplinary connections: have elements of the various curriculum goals and subjects be taught together and brought to bear in combined projects. To enable this, teaching spaces will need to be flexible and adaptable so that a project launch or presentation can occur one block, and the next small groups can brainstorm ideas followed by some content presentation in a more traditional lecture style followed by hand-on project creation. By providing spaces that can be combined and divided with folding walls, these different settings can occur. There may also be need for a cultural shift so that, for instance, science and the humanities coexist in a learning cluster connected together, even if the more intensive wet-lab infrastructure needs to remain in its current location

Bottom Reading Across America, Image Courtesy of NPS Newsletter March 04, 2021



Facility Assessment Summary

Brookside Elementary School



General Building Information:

Student Population: 474 (2019/20) School Type: Elementary Grades: Pre K-5

Original Construction: 1952 Significant Alterations: 1998 Total Area (gross): 68,727 SF





Max. Achievable Score: 5







Brookside Elementary School

School Images







Existing Max Capacity Plan As Per State Guidelines

Brookside Elementary School

Capacity



Existing Capacity Generating Space



Existing Non-Capacity Generating Space





Educational Adequacy Proposed Interventions

Brookside Elementary School has one of the highest educational adequacy scores in the district . There appears to be adequate parking for visitors and staff and adequate space to separate car drop-off from bus drop-off if both the front and back drives are utilized, although this was not observed. The approach and front entry of the school provide clear way-finding. The front security vestibule allows for check-in with the front office at a window before entering the rest of the school. While we were able to see that there was a buzzer and intercom at the front outside doors, we were not able to observe if the vestibule doors had the technology and electronic hardware installed so that they could be controlled from the front office. See Physical Assessment Report for additional information on specific needs and recommendations on exit doors and security technology needs.

The layout of the building allows for the building to be easily zoned for after-hours community use. However, only the front office, gymnasium with stage and cafeteria are in the public zone. The Library/Media Center is not within the public zone, but it is centrally located in the school which provides for easy access from the three academic wings. Overall, the layout of the school is well organized and easy to navigate. The finishes are in relatively good condition and well maintained. The primary concerns for educational adequacy centers around the classrooms themselves. Many are small if they are expected to accommodate the maximum class sizes allowed by the NPS teacher contracts. Additionally, they are all the same layout with no variety in content and no connections to each other or a variety of space types. They are not adaptable. The furniture is also very limited and does not provide for flexibility, change or choice during the day to accommodate the different modalities of learning that are part of the inquiry-based learning model. While many classrooms do have exits to the outdoors, they do not open onto usable outdoor learning environments. They appear to be used for egress

purposes only. The interventions for this school are as follows:

- The entrance is represented by a green circle as it is a secured vestibule with direct connection to the admin office for check-in prior to entering the building. Provide "breach" resistant film to the glazing of vestibule(s).
- Create collaborations spaces in the academic wings that open to corridor and adjacent classrooms. Add doors and interior windows to physically and visually connect to those spaces. They should be designed to feel like a physical extension of the surrounding classrooms with the ability to open or close those connections. Provide for technology, writable surfaces and flexible furniture so that these spaces can be used for both independent, small group and collaborative project-based work. Connect to improved/secure outdoor learning areas.
- Create flexible small group rooms with operable walls in one or two of the collaboration areas so that pull-out interventions can occur with specialists in a more fluid manner. Specialists (SPED/ELL/Reading & Math) should have a teacher work space for private phone calls and work so that the small group spaces can remain flexible.
- Add operable partitions to be able to combine some of the smaller classrooms into larger spaces through folding walls. This would allow for larger presentations, team teaching and cross curriculum opportunities.
- A variety of flexible and ergonomic furniture to allow for both informal and formal settings, individual, small and large group activities, and movement of students and the re-arrangement of furniture within the teaching spaces.
- Improve connections and sight lines to the primary public spaces for easy access and wayfinding, specifically the gym and the multi-purpose cafeteria, and add a set of cross corridor doors near the back entrance to reduce areas where people could hide or cause mischief out of sight.
- Convert the computer lab into a more flexible tinker space that would include technology for design but also fabrication and trial space for projects.



Proposed Intervention Plan with Functional Capacity

Brookside Elementary School



NORWALK



Collaboration in Clusters of Learning

Collaboration spaces can be at the nexus of learning clusters. Whether they are providing space for grade specific teams or for a house model where students join learning groups based skill level instead of grade, the collaboration space can become the flexible spaces that transform and adapt throughout the month, week or day.

The proposed collaborations spaces found on each school's Proposed Intervention Plan is consistent with both the NPS Educational Vision and VALUES, but is also consistent with the Connecticut DAS School Construction Standards and Guidelines document on educational facility planning concepts. The diagram below is from this document:





Top "Best Practices" Organization Models House Concept, Connecticut School Construction Standards and Guidelines -Chapter 2 September 22, 2016













Facility Assessment Summary

Columbus Magnet School



General Building Information:

Student Population: 299 (2019/20) School Type: Elementary Grades: K-8

Original Construction: 1938 Significant Alterations: 1998/ 2005 Total Area (gross): 49,356 SF





Max. Achievable Score: 5







Columbus Magnet School

School Images







Existing Max Capacity Plan As Per State Guidelines

Capacity

13 K - 5th Grade Teaching Stations 3 6 - 8th Grade Teaching Stations Kinder = 43 Students 1st-2nd Grade = 79 Students 3rd-5th Grade = 147 Students <u>6th-8th Grade = 60 Students</u> Total = 269 K-5 Students = 60 6-8 Students

Note:

Maximum Class sizes for Norwalk PS: K-2 = 22 Students 3-5 = 24 Students 6-8 = 28 Students

CT Guidelines SF/Student in a general classroom: K = 48sf/student 1-8 = 36sf/student

Key:

Existing Capacity Generating Space

Existing Non-Capacity Generating Space



Columbus Magnet School: First Floor




Columbus Magnet School: Lower Level & Second Floor





Second Floor



Lower Level



Educational Adequacy Proposed Interventions

Columbus Magnet School has a low educational adequacy score compared to the district; however, this score does not reflect the potential this beautiful historic building has for being transformed into a forward-facing school ready to meet children where they are for the next hundred years. The site is on a 3.25-acre urban site. The front door of the school is not handicap accessible and doesn't face a public street, but instead faces the one-way driveway of the public housing on the adjacent lot. The car drop-off and pick-up started occurring spontaneously with parents looping through the housing parking lot and gueuing in the driveway several years ago. Visually the driveway does appear to be part of the street fabric as an extension of Concord Road. The bus queuing takes place on Chestnut Street. There appears to be adequate parking for staff. While the pedestrian approach and front entry of the school provide clear wayfinding as viewed from the corner of Chestnut and Concord, it is difficult to locate the front entrance by car since there is not a clear vehicle route to the front of the school and the parking is at the back.

The front entrance vestibule does not allow for check-in prior to entering the building. The administrative area is undersized. The layout of the building is not easily zoned for after-hours community use, even though there is only one space that serves as combined cafeteria, gym and auditorium, which is over-scheduled and doesn't support their art-focused programming. The addition of cross-corridors doors would improve after-hours security, but the space must egress into the academic corridor making it difficult to completely lock off the corridor. The Library/Media Center is not within the public zone, but it is centrally located at the second floor in the school which provides for easy access for older students. It is not designed to function as a modern-day media center. The finishes are well maintained, but the casework need to be refreshed and made handicap accessible. The primary concerns for educational adequacy centers around the classrooms themselves. Many are small if they are expected to accommodate the maximum class sizes allowed by the NPS teacher contracts. Additionally, they are all the similar in layout with no variety in content and no connections to each other or a variety space types. They are not adaptable. The furniture is also very limited and does not provide for flexibility, change or choice during the day to accommodate different modalities of learning. Some resource/intervention rooms are in former closets with no natural light. Lastly, the Gifted and Talented Classroom is on the lower level and is not handicap accessible without passing through a cluttered storage room. The primary interventions for this school if it were to remain in the existing building are as follows:

- The entrance is represented by a red circle as it is not a secured vestibule and needs to be redesigned/rebuilt to allow direct connection to the admin office for check-in prior to entering the building. Provide "breach" resistant film to the glazing of vestibule. A handicap ramp in keeping with the historic character needs to be added at redesigned front steps and landscaping.
- Add new addition that provides an adequately sized cafeteria and kitchen on the first floor, and on the second floor three general 6th-8th grade classrooms, one technology classroom and a science classroom with a connected prep and storage room. Renovate like new the rest of the building & re-imagine the library into a true Learning Commons with media center. Create an outdoor learning classroom at the 2nd floor.
- Create collaborations spaces in the academic wings that open to corridor and adjacent classrooms. Add doors and interior windows to connect to those spaces physically and visually. They should be designed to feel like a physical extension of the surrounding classrooms with the ability to open or close those connections. Provide for technology, writable surfaces and flexible furniture so that these spaces can be used for both independent, small group and collaborative project based work.
- Create flexible small group rooms with operable walls in one or two of the collaboration areas so that pull-out interventions can occur with specialists in a more fluid manner. Specialists (SPED/



ELL/Reading & Math) should have a teacher work space for private phone calls and work so that the small group spaces can remain flexible.

- Add operable partitions to be able to combine some of the smaller classrooms into larger spaces through folding walls. This would allow for larger presentations, team teaching and cross curriculum opportunities.
- Provide a variety of flexible and ergonomic furniture to allow for both informal and formal settings, individual, small and large group activities, and movement of students and the rearrangement of furniture within the teaching spaces.
- Improve connections and sight lines to the primary public spaces for easy access and wayfinding. Create and after-hours lobby that connect to a new parking level and Chestnut Street. Addition of a new elevator will make the lower-level and new public areas handicap accessible.
- Add acoustic materials in spaces with solid plaster ceilings to improve reduce noise and increase speech legibility.
- Re-purpose basement floor classroom into teacher's lounge.

Multiple Options Considered

The Columbus Magnet School is the only elementary school located within the South Norwalk neighborhood and is not able to meet the needs of that community. The majority of students within the South Norwalk community are bussed to other neighborhood schools around the district as is evidenced by the patchwork of districting lines within the demographic study by SLR (see excerpts at the beginning of the STRANDS section of this report). It is the goal of both the District and the City to be able to provide a new Columbus Magnet School that is large enough to offer PK and up to 3-sections per grade for 6-8 in addition to the 2-sections per grade for K-5. They would like for this school to remain in South Norwalk, if possible. Additionally, they hope to create a newly formed South Norwalk Elementary for grades PK-5, with the final number of students served still being determined. The capacity numbers include in the Proposed Capacity Summary include the expanded enrollment for Columbus Magnet School and a 3-section per grade South Norwalk School. The Newman/DLR Group team explored test-fit concepts to determine if the new schools could utilize the existing site. The additional options are included in the Appendix.

On the following pages, the Proposed Intervention Plan illustrates expanding the existing building so that it could accommodate the Columbus Magnet School including one PK classroom and 2-sections per grade for K-8. It was a test-fit only and was created without the full Educational Specification that a project would require. Spaces have not been fully developed or individually labeled in every instance, as this was beyond the scope of the test fit and this Facilities Study.

Additionally, this specific option on the following pages does not show a new South Norwalk Elementary School. The District and the City are intending to work with the community to plan and develop an appropriate project that will meet the needs of the community. Also, the final location for a new Columbus Magnet School and whether or not it will be co-located on a site with a new South Norwalk Elementary is still to be determined.





Proposed Intervention Plan with Functional Capacity

Columbus Magnet School: First Floor

Capacity 18 K - 8th Grade Teaching Stations 1 Pre-K Teaching Stations Pre-K = 14 Students Kinder = 43 Students 1st-2nd Grade = 79 Students 3rd-5th Grade = 136 Students 6th-8th Grade = 60 Students 6th-8th Grade = 168 Students Total = 258 K-5 Students = 168 6-8 Students = 14 Pre-K Students Key: **Existing Capacity Generating Space** Existing Non-Capacity Generating Space New Program: Heavy Renovation **Proposed Addition** Light Renovation "Public" Access Space Nexus - Focal Point New Collaboration/Break-out Space Important Connections Improved Sight Lines: New windows & Glass doors VVV Operable Partition Opportunity for improved Outdoor Learni Solar Tubes to Bring in Daylight Fence to Secure Outdoor Learning Areas



Note: Maximum Class sizes for Norwalk PS: K-2 = 22 Students 3-5 = 24 Students 6-8 = 28 Students CT Guidelines SF/Student in a general classroom: K = 48sf/student 1-8 = 36sf/student





Columbus Magnet School: Lower Level & Second Floor





Second Floor

NEWMAN + DLR Group





Facility Assessment Summary

Cranbury Elementary School



General Building Information:Student Population: 435 (2019/20)Original Construction: 1958School Type: ElementarySignificant Alterations: -Grades: Pre K-5Total Area (gross): 60,043* SF







Max. Achievable Score: 5

*Total Building Area of proposed new

** Based on proposed new Cranbury ES

floor plans provided by NPS

Cranbury ES



Cranbury Elementary School

Existing School Images







Cranbury Elementary School: First Floor

Plans as shown were provided by NPS



Existing Non-Capacity Generating Space

V-44 of 207



Cranbury Elementary School: Second Floor



and represent proposed design by others.

Plans as shown were provided by NPS





Educational Adequacy Proposed Interventions

Cranbury Elementary School has a moderately low educational adequacy score compared to the district; however, it should be noted that now all aspects of the design could be evaluated, including the furniture, which would improve the score significantly if the layouts and furniture specification from Lower Ponus Ridge STEAM Academy were used. The Newman/DLR Group were provided schematic plans for evaluation by NPS. In the proposed site plan, there appears to be adequate parking for visitors and staff and a new bus drop-off separate from the existing car drop-off loop in the parking lot. The approach and front entry of the school provide clear wayfinding. The proposed front security vestibule will allow for check-in with the front office at a window before entering the rest of the school. It is assumed that the new building will incorporate all the latest security technology desired by NPS.

The layout of the building allows for easily zoned areas for after-hours community use. However, only the front office, gymnasium with stage and cafeteria are in the public zone. The Library/Media Center is not within the public zone, but it is centrally located, which provides for easy access from the older student classrooms. Some spaces are undersized based on comparison with the Connecticut DAS guidelines for schools. The primary concerns for educational adequacy centers around the classrooms themselves. They are all the same layout with no variety in size or content and no connections to each other or a variety of space types that would support an inquiry-based learning model. They are not adaptable. The SPED classrooms could be undersized if they are to accommodate a self-contained program. Since the Newman/DLR Group team reviewed only the schematic plans provided, we could not evaluate the furniture. The interventions for this school are as follows:

· Create collaborations spaces in the academic wings that

open to corridor and adjacent classrooms. Include doors and interior windows to connect to those spaces physically and visually. They should be designed to feel like a physical extension of the surrounding classrooms with the ability to open or close those connections. Provide for technology, writable surfaces and flexible furniture so that these spaces can be used for both independent, small group and collaborative project-based work.

- Create flexible small group rooms with operable walls in one or two of the collaboration areas so that pull-out interventions can occur with specialists in a more fluid manner. Specialists (SPED/ELL/Reading & Math) should have a teacher workspace for private phone calls and work so that the small group spaces can remain flexible.
- Add operable partitions to be able to combine some of the classrooms into larger spaces through folding walls. This would allow for larger presentations, team teaching and cross curriculum opportunities.
- Provide a variety of flexible and ergonomic furniture to allow for both informal and formal settings, individual, small and large group activities, and movement of students and the rearrangement of furniture within the teaching spaces.
- Provide connections and sight lines to the primary public spaces for easy access and wayfinding.
- Push classroom back to create nexus/break out space in corridor on the first and second level for this cluster of three classroom. The intent is to have one of these areas for each grade cluster, although it would also allow for a house model that combines grades.
- Create a flexible maker space/tinker space at the second floor with connections to the themed classroom that is intended for science. This could become a hub of creativity.











Proposed Intervention Plan with Functional Capacity





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Facility Assessment Summary

Fox Run Elementary School



General Building Information:

3.23

Max. Achievable Score: 5

Original Construction: 1958 Student Population: 456 (2019/20) Significant Alterations: 1996 School Type: Elementary Total Area (gross): 53,336 SF Grades: Pre K-5 3 2 Nonexistent/ Functions Needs Replacement 1 5 Excellently **Educational Adequacy** Index Educational Adequacy Total Score: Score Breakdown:

Site Functionality3.92Learning Styles2.36Environmental Quality2.88Space Assessments3.14Outdoor Amenities4.38





Fox Run Elementary School

School Images







Existing Max Capacity Plan As Per State Guidelines

Fox Run Elementary: First Floor





V-52 of 207



Educational Adequacy Proposed Interventions

Fox Run Elementary School has a moderately low educational adequacy score compared to the district. There appears to be adequate parking for visitors and staff and adequate space to separate car drop-off from bus drop-off with a bus loop that circles the parking lot. The approach and front entry of the school provide clear wayfinding. The main entry doors do not provide a secure vestibule. There is a security guard stand stationed in-front of the doors allowing visitors to enter/exit. While we were able to see that there was a buzzer and intercom at the front outside doors, we were not able to observe if the doors had the technology and electronic hardware installed so that they could be controlled from the security desk or front office. See Physical Assessment Report for additional information on specific needs and recommendations on exit doors and security technology needs.

Overall, the layout of the school is well organized except for access to the cafeteria is not easily found as it is not centrally located. It is around many corners, which is a problem for wayfinding and diminishes sightlines that maintain relational security. The open courtyard can be accessed from classrooms and features outdoor learning gardens. Most classroom furniture is ergonomic and does provide for flexibility, change or choice during the day to accommodate different modalities of learning. The layout of the building could be zoned for after-hours community use if cross corridor doors are provided, allowing the front office, gymnasium with stage, cafeteria, and library/media center to be in the public zone. The primary concerns for educational adequacy centers around the classrooms themselves. Many are small if they are expected to accommodate the maximum class sizes allowed by the NPS teacher contracts. Additionally, they are all the same layout with no variety in content and no connections to each other or a variety of space types. They are not adaptable. The interior finishes in the classrooms are outdated such as built-in casework and florescent lighting which

appears discolored/yellow. Several classrooms at Fox Run had ergonomic furniture which improved the school's overall score. While many classrooms do have exits to the outdoors, it is unclear if they are only used for egress purposes. The school appears to have a robust outdoor learning environment that is used by the school. The interventions for this school are as follows:

- The entrance is represented by a red circle as it is not a secured vestibule and needs to be redesigned/rebuilt to allow direct connection to the admin office for check-in prior to entering the building. Provide "breach" resistant film to the glazing of vestibule.
- Create collaborations spaces in the academic wings that open to corridor and adjacent classrooms. Add doors and interior windows to physically and visually connect to those spaces. They should be designed to feel like a physical extension of the surrounding classrooms with the ability to open or close those connections. Provide for technology, writable surfaces and flexible furniture so that these spaces can be used for both independent, small group and collaborative project-based work.
- Create flexible small group rooms with operable walls in one or two of the collaboration areas so that pull-out interventions can occur with specialists in a more fluid manner. Specialists (SPED/ELL/Reading & Math) should have a teacher workspace for private phone calls and work so that the small group spaces can remain flexible.
- Add operable partitions to be able to combine some of the smaller classrooms into larger spaces through folding walls. This would allow for larger presentations, team teaching and cross curriculum opportunities.
- Improve connections and sightlines to the primary public spaces for easy access and wayfinding and add two sets of cross corridor doors to close off the academic wings and to reduce areas where people could hide or cause mischief out of sight.
- Use an existing courtyard to expand the kitchen and connect the servery to the cafeteria.



Proposed Intervention Plan with Functional Capacity

Fox Run Elementary School: First Floor



V-54 of 207

NORWALK

NORWALK FACILITIES PLAN STUDY



V-55 of 207



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Facility Assessment Summary

Jefferson Elementary School



General Building Information:

Original Construction: 1971 Student Population: 504 (2019/20) Significant Alterations: 2005 School Type: Elementary Total Area (gross): 60,625* SF Grades: Pre K-5 3 2 Nonexistent/ Functions Needs Replacement 1 5 Excellently **Educational Adequacy** Index Educational Adequacy Total Score:** Score Breakdown:** Site Functionality 3.55 Learning Styles **Environmental Quality** Max. Achievable Score: 5 Space Assessments * Total Building Area includes proposed addition

** Based on proposed Jefferson ES floor plans provided by NPS





Outdoor Amenities

4.15

2.82

3.25

3.53

2.88



Jefferson Elementary School

Existing School Images







Existing Max Capacity Plan As Per State Guidelines

Jefferson Elementary: Lower Level





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Jefferson Elementary: First Floor



Plans as shown were provided by NPS and represent proposed design by others. They do not show existing conditions as of 1/31/2021 site visit









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Educational Adequacy Proposed Interventions

Jefferson Elementary School has a moderately high educational adequacy scores compared to the district. A proposed addition to the school is providing four new classrooms on the main level and a new gymnasium on the third level. In the proposed site plan provided by NPS, there appears to be adequate parking for visitors and staff and a new bus drop-off separate from the existing car drop-off loop in the parking lot. The approach and front entry of the school provide clear wayfinding. The design should ensure clear sightlines from the administration area to the parking. It is assumed that the new building will incorporate all the latest security technology desired by NPS.

The layout of the building allows does not allow for convenient community use of spaces beyond the gymnasium, which would be entered from a separate secure vestibule at the top floor. The cafeteria and Library/Learning Commons are not within the public zone. The primary concerns for educational adequacy centers around the classrooms themselves. Many of them are undersized for the younger children. For instance, the kindergarten classrooms are only 61-68% of the recommended size based on the Connecticut DAS guidelines for schools, while even accounting for the smaller class size of 22 student NPS maximum. The classrooms are all the same layout with no variety in content and no connections to each other or a variety of space types. They are not adaptable. The interventions for this school are as follows:

• Create break-out spaces in the academic wings that connect to adjacent classrooms. Include doors and interior windows to connect to those spaces physically and visually. They should be designed to feel like a physical extension of the surrounding classrooms with the ability to open or close those connections. Provide for technology, writable surfaces and flexible furniture so that these spaces can be used for both independent, small group and collaborative project-based work. Make the proposed locker units moveable so that the space can be re-arranged.

- Create flexible small group rooms with operable walls in one or two of the collaboration areas so that pull-out interventions can occur with specialists in a more fluid manner. Specialists (SPED/ELL/Reading & Math) should have a teacher workspace for private phone calls and work so that the small group spaces can remain flexible.
- Look for locations for operable partitions to be able to combine some of the smaller classrooms into larger spaces through folding walls. For more flexible use of small spaces.
- Provide a variety of flexible and ergonomic furniture to allow for both informal and formal settings, individual, small and large group activities, and movement of students and the rearrangement of furniture within the teaching spaces.
- Create connections and sightlines to the primary public spaces for easy access and wayfinding.





Proposed Intervention Plan with Functional Capacity

Jefferson Elementary School: Lower Level

NATURE AND IS SUBJECT TO ADJUSTMENTS PENDING FURTHER PROJECT DEVELOPMENT



Jefferson Elementary School: First Floor







Jefferson Elementary School: Second Floor







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Facility Assessment Summary

Kendall College and Career Academy



General Building Information:

Original Construction: 1951 Student Population: 503 (2019/20) Significant Alterations: 2006 School Type: Elementary Total Area (gross): 55,966 SF Grades: Pre K-5 2 Nonexistent/ Functions Needs Replacement 1 5 Excellently **Educational Adequacy** Index Educational Adequacy Total Score: Score Breakdown: Site Functionality 3.12 Learning Styles **Environmental Quality** Max. Achievable Score: 5 Space Assessments **Outdoor Amenities**





4.31

2.09

2.4

3.08

3.63

Kendall College and Career Academy

School Images









Kendall College and Career Academy: First Floor

NORWALK PUBLIC SCHOOLS



V-68 of 207

Educational Adequacy Proposed Interventions

Kendall College and Career Academy has a moderately low educational adequacy score compared to the district. There appears to be adequate parking for visitors and staff. There appears to be separate bus queuing and car queuing if the parking lot is used for one and the front loop is used for the other; however, the actual procedure should not include children exiting/entering vehicles in the parking. The vehicles should be directed to pull-up to the curb for exit/entry to occur. The approach and front entry of the school provide clear wayfinding. The front security vestibule is secure but is not connected to the front office and should be addressed so that secure check-in can occur before visitors enter the rest of the building. While we were able to see that there was a buzzer and intercom at the front outside doors, we were not able to observe if the vestibule doors had the technology and electronic hardware installed so that they could be controlled from the front office. See Physical Assessment Report for additional information on specific needs and recommendations on exit doors and security technology needs.

Overall, the layout of the school is organized into community zone (cafeteria and gym) and the academic zone. The building could be easily secured for after-hours community use if cross corridor doors are provided. However, the Library/Media Center is not within the public zone, but it is centrally located, which provides for easy access from the three academic wings. The finishes are in relatively good condition and well maintained, but some classrooms need a light renovation to update their finishes and improve accessibility. The primary concerns for educational adequacy centers around the classrooms themselves. Many are small if they are expected to accommodate the maximum class sizes allowed by the NPS teacher contracts. Additionally, they are all the same layout within each wing with no variety in content and no connections to each other or a variety of space types. They are not adaptable. The furniture is also very limited and does not provide for flexibility, change or choice during the day to accommodate different modalities of learning. While many classrooms do have exits to the outdoors, they sometimes do not open onto usable outdoor learning environments. They appear to be used for egress purposes only. The interventions for this school are as follows:

- The entrance is represented by a red circle needs to be redesigned/rebuilt to allow direct connection to the admin office for check-in prior to entering the building. Provide "breach" resistant film to the glazing of vestibule.
- Create collaborations spaces in the academic wings that open to corridor and adjacent classrooms. Add doors and interior windows to physically and visually connect to those spaces. They should be designed to feel like a physical extension of the surrounding classrooms with the ability to open or close those connections. Provide for technology, writable surfaces and flexible furniture so that these spaces can be used for both independent, small group and collaborative project-based work.
- Create flexible small group rooms with operable walls in one or two of the collaboration areas so that pull-out interventions can occur with specialists in a more fluid manner. Specialists (SPED/ELL/Reading & Math) should have a teacher workspace for private phone calls and work so that the small group spaces can remain flexible.
- Add operable partitions to be able to combine some of the smaller classrooms into larger spaces through folding walls. This would allow for larger presentations, team teaching and cross curriculum opportunities.
- A variety of flexible and ergonomic furniture to allow for both informal and formal settings, individual, small and large group activities, and movement of students and the re-arrangement of furniture within the teaching spaces.
- Improve connections and sightlines to the primary public spaces for easy access and wayfinding and add two sets of cross corridor doors to close off the academic wings and to reduce areas where people could hide or cause mischief out of sight.

NEWMAN + ^LDLR Group

Proposed Intervention Plan with Functional Capacity

Kendall College and Career Academy: First Floor







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Facility Assessment Summary



Lower Ponus Ridge STEAM Academy






School Images









Existing Max Capacity Plan As Per State Guidelines

Lower Ponus Ridge STEAM Academy

Capacity





V-74 of 207

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Educational Adequacy Proposed Interventions

Lower Ponus Ridge STEAM Academy has one of the highest educational adequacy scores in the district. There appears to be adequate parking for visitors and staff. There does not appear to be a separate car drop-off and bus drop-off areas. The long drive loop directly in front of the school provides for adequate space for bus queuing; however, the car queuing occurs within the parking lot. This prevents visitors/staff from being able to arrive and leave during dismissal times, and if not properly managed with controlled exit/entering of cars at the curb, could result in unsafe conditions. The Lower Ponus Ridge portion of the building has a separate entrance from the Upper Ponus Ridge portion of the building. It was not clear upon arrival which entry should be used and this is further confused because of the third public entry at the auditorium. Both additional signage and visual architectural/landscape cues should be installed to make this clearer for visitors. The front security vestibule allows for check-in with the front office at a window before entering the rest of the school. The vestibule doors had the proper technology and electronic hardware installed so that the doors could be controlled from the front office.

The layout of the building allows for easily zoned areas for after-hours community use of the cafeteria and multipurpose space, which are accessed from the Lower Ponus Ridge front lobby. Overall, the layout of the school is well organized and easy to navigate. The finishes are like-new condition and well maintained. The furniture is flexible and provide for change or choice during the day to accommodate different modalities of learning. The pre-kindergarten to second-grade classrooms are joined in pairs by shared small group rooms that offer visual connection into the classrooms and corridors. The school is connected to Upper Ponus Ridge STEAM Academy and shares amenities such as the gymnasium, auditorium, student support spaces such as the nurse's office, and teacher support spaces such as teacher workrooms and lounges. These support spaces are very far away from the academic wings for the PK-5 age group. If students are needing to walk to visit the nurse or student counseling services daily, this length of travel will take up time that could be used for learning & they may need an escort depending on the age. The primary concerns for educational adequacy centers around providing the same amount of differentiated learning spaces for classrooms of all ages. The interventions for this school are as follows:

- Provide "breach" resistant film to the glazing of vestibule(s), if it was not included in the recent construction.
- Create collaborations spaces in the third to fifth grade academic wing that open to corridor and adjacent classrooms. Add doors and interior windows to connect to those spaces physically and visually. They should be designed to feel like a physical extension of the surrounding classrooms with the ability to open or close those connections. Provide for technology, writable surfaces and flexible furniture so that these spaces can be used for both independent, small group and collaborative project-based work.
- Create flexible small group rooms with operable walls in one or two of the collaboration areas so that pull-out interventions can occur with specialists in a more fluid manner. Specialists (SPED/ELL/Reading & Math) should have a teacher workspace for private phone calls and work so that the small group spaces can remain flexible.
- Provide outdoor learning labs and gardens to activate the courtyard space for multipurpose use.











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Facility Assessment Summary

Marvin Elementary School



General Building Information: Student Population: 422 (2019/20) **Original Construction: 1971** Significant Alterations: 1995 School Type: Elementary Total Area (gross): 56,800 SF Grades: K-5 3 2 4 Nonexistent/ Functions Needs Replacement 1 5 Excellently **Educational Adequacy** Index Educational Adequacy Total Score: Score Breakdown: Site Functionality 3.62 2.68 Learning Styles 2.55 **Environmental Quality** Max. Achievable Score: 5 Space Assessments **Outdoor Amenities** 2.50







Marvin Elementary School

School Images













Capacity 23 K - 5th Grade Teaching Stations Kinder = 88 Students 1st-2nd Grade = 173 Students 3rd- 5th Grade = 240 Students

Total = 501 K-5 Students

Note:

Maximum Class sizes for Norwalk PS: PK = 18 Students K-2 = 22 Students 3-5 = 24 Students

CT Guidelines SF/Student in a general classroom: PK & K = 48sf/student

1-5 = 36sf/student









Educational Adequacy Proposed Interventions

Marvin Elementary School has a low educational adequacy score compared to the district. There appears to be adequate parking for visitors and staff. The drop off lane in the front separates to go past the gym or fork to the left to exit at the road. This could allow for separation of car and bus pick-up/drop-off, but the two streams of traffic would be co-mingled and passing by each other up to that point. The approach and front entry of the school do not provide clear wayfinding as the main entrance doors are hidden around a corner which is not visible from the drive and main walkway. Additionally, there are egress doors facing the front courtyard which are visible from the main walkway which can be mistaken as an entrance by visitors approaching the school. The main entry doors do not provide a secure vestibule, and direct access to the administration will be difficult to achieve without compromising student access to the gym and cafeteria or through a major intervention to reorganize that portion of the building. There was a buzzer and intercom at the front outside doors that was could be controlled from the front office. See Physical Assessment Report for additional information on specific needs and recommendations on exit doors and security technology needs.

Overall, the layout of the school is confusing because there are a lot of dead-end corridors around corners with room entries not seen from a distance, which is a problem for wayfinding and diminished sightlines that could maintain relational security. However, the school is organized in smaller wings, which could be made into dynamic learning clusters with appropriate interventions. The layout of the building could be zoned for after-hours community use if cross corridor doors are provided and egress carefully accommodated, allowing the front office, gymnasium with stage, cafeteria, and library/media center to be in the public zone. The primary concerns for educational adequacy centers around the classrooms themselves. Many are small if they are expected to accommodate the maximum class sizes allowed by the NPS teacher contracts. Additionally, except for kindergarten, they are all the same or similar layouts with no variety in content and no connections to each other or a variety space types. They are not adaptable except for two SPED rooms and a music room, which are separated by movable walls.

The finishes in the classrooms and corridors are outdated such as builtin casework and florescent lighting which appears discolored/yellow. The furniture is also very limited and does not provide for flexibility, change or choice during the day to accommodate different modalities of learning. While many classrooms do have exits to the outdoors, they do not open onto usable outdoor learning environments. This site has great potential as the building layout creates open courtyards and there is adequate space to create outdoor learning environments. The interventions for this school are as follows:

- The entrance is represented by a red circle as it is not a secured vestibule and needs to be redesigned/rebuilt to allow direct connection to the admin office for check-in prior to entering the building. Provide "breach" resistant film to the glazing of vestibule.
- Create collaborations spaces in the academic wings that open to corridor and adjacent classrooms. Add doors and interior windows to physically and visually connect to those spaces. They should be designed to feel like a physical extension of the surrounding classrooms with the ability to open or close those connections. Provide for technology, writable surfaces and flexible furniture so that these spaces can be used for both independent, small group and collaborative project-based work.
- Create flexible small group rooms with operable walls in one or two of the collaboration areas so that pull-out interventions can occur with specialists in a more fluid manner. Specialists (SPED/ELL/ Reading & Math) should have a teacher workspace for private phone calls and work so that the small group spaces can remain flexible.
- Add operable partitions to be able to combine some of the smaller classrooms into larger spaces through folding walls. This would allow for larger presentations, team teaching and cross curriculum opportunities.
- A variety of flexible and ergonomic furniture to allow for both informal and formal settings, individual, small and large group activities, and movement of students and the re-arrangement of furniture within the teaching spaces.
- Improve connections and sightlines to the primary public spaces for easy access and wayfinding, and add two sets of cross corridor doors to close off the academic wings and to reduce areas where people could hide or cause mischief out of sight.

Proposed Intervention Plan with Functional Capacity

Marvin Elementary School: First Floor



V-82 of 207





V-83 of 207





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Facility Assessment Summary

Naramake Elementary School



General Building Information: Student Population: 387 (2019/20) **Original Construction: 1961** Significant Alterations: 2014 School Type: Elementary Total Area (gross): 54,589* SF Grades: Pre K-5 3 2 4 Nonexistent/ Functions Needs Replacement 1 5 Excellently **Educational Adequacy** Index Educational Adequacy Total Score: Score Breakdown: Site Functionality 2.37 Learning Styles **Environmental Quality** 2.3 Max. Achievable Score: 5 Space Assessments 2.39 * Total Building Area includes proposed addition **Outdoor Amenities** 2.63





Naramake Elementary School

School Images







Naramake Elementary: First Floor





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Educational Adequacy Proposed Interventions

Naramake Elementary School has a low educational adequacy score compared to the district. There appears to be adequate parking for visitors and staff. Cars enter for drop-off in the parking lot and have ample space to queue and let students exit at a sidewalk separate from the parking area. The bus drop-off occurs within a separate loop in front of the school. The approach and front entry of the school provide clear wayfinding from the bus loop, but the front door is hidden from much of the parking area. Clear signage directing visitors to visitor parking would be helpful. The main entry doors do not provide a secure vestibule. There is a security guard stand stationed in-front of the doors allowing visitors to enter/exit. While we were able to see that there was a buzzer and intercom at the front outside doors, we were not able to observe if the doors had the technology and electronic hardware installed so that they could be controlled from the front office. See Physical Assessment Report for additional information on specific needs and recommendations on exit doors and security technology needs.

The layout of the building could allow for after-hours community use if cross corridor doors are provided, allowing the front office, gymnasium with stage plus the new cafeteria, and library/media center to be in a defined public zone. Although this public zone would still have a lot of corners and dead-end corridors, which is a problem for wayfinding and diminishes sightlines that maintain relational security. The primary concerns for educational adequacy centers around the classrooms themselves. There are two classroom "pods" that were part of the original building in addition to the center library "pod" that is being altered and expanded to relocate the kitchen and divide the existing library into dining and library. There is also a newer wing that houses the K-2 students, which has larger classrooms closer in size to the Connecticut DAS guidelines. While these classrooms are larger and have new finishes, they are less flexible and do not offer variety of space types. Many of the classrooms in the older pods are small if they are expected to accommodate the maximum class sizes allowed by the NPS teacher contracts, but they do have existing folding walls that could be replaced with new to create a variety of space types and sizes. Without taking advantage of this flexibility, many spaces have

no windows and no connections to each other, or a variety space types. The finishes in these older classrooms are outdated such as built-in casework and florescent lighting which appears discolored/yellow. The furniture is also very limited and does not provide for flexibility, change or choice during the day to accommodate different modalities of learning. While many classrooms do have exits to the outdoors, they do not open onto purposeful outdoor learning environments. They appear to be used for egress purposes only. The interventions for this school are as follows:

- The entrance is represented by a red circle as it is not a secured vestibule and needs to be redesigned/rebuilt to allow direct connection to the admin office for check-in prior to entering the building. Provide "breach" resistant film to the glazing of vestibule.
- Create collaborations spaces in the academic wings that open to corridor and adjacent classrooms. Add doors and interior windows to physically and visually connect to those spaces. They should be designed to feel like a physical extension of the surrounding classrooms with the ability to open or close those connections. Provide for technology, writable surfaces and flexible furniture so that these spaces can be used for both independent, small group and collaborative project-based work.
- Create flexible small group rooms with operable walls in the new collaboration areas so that pull-out interventions can occur with specialists in a more fluid manner. Specialists (SPED/ELL/Reading & Math) should have a teacher workspace for private phone calls and work so that the small group spaces can remain flexible.
- Also, replace existing folding walls with new so that they open easily, acoustically appropriate and provide for a combination of windows, writing surfaces and pin-up surfaces. These will allow spaces to combine some of the smaller classrooms into larger spaces. This would allow for larger presentations, team teaching and cross curriculum opportunities. The pods could completely be transformed to meet the needs of inquirybased learning and adapt each day or hour.
- A variety of flexible and ergonomic furniture to allow for both informal and formal settings, individual, small and large group activities, and movement of students and the re-arrangement of furniture within the teaching spaces.
- Improve connections and sightlines to the primary public spaces for easy access and wayfinding. Add two sets of cross corridor doors to close off the academic wings and to reduce areas where people could hide or cause mischief out of sight.







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V-89 of 207



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Facility Assessment Summary

Rowayton Elementary School









Rowayton Elementary School

School Images







Existing Max Capacity Plan As Per State Guidelines



Educational Adequacy Proposed Interventions

Rowayton Elementary School has a moderately low educational adequacy score compared to the district. The original historic portion of the building faces the street with an appropriate civic presence even though it poses entrance challenges. There appears to be adequate and separate parking for visitors and staff. Car drop-off is currently in the parking lot adjacent to the road and separate from the bus drop-off which is on the side of the school next to the handicap entrance. The approach and front entry of the school provide clear wayfinding to the non-handicap accessible front entrance, but it is not clear from the street where the handicap entrance is and where the after-hours entrance to the gym is located. None of the entrances provide a secure vestibule with access to check-in at an office prior to entering the building. A security desk is at the intersection of the front corridor and the main corridor of the oldest wing of the building which can see the front door, but not any of the others except through cameras. While we were able to see that there was a buzzer and intercom at the side doors, we were not able to observe if all the doors had the technology and electronic hardware installed so that they could be controlled from the front office and security desk. See Physical Assessment Report for additional information on specific needs and recommendations on exit doors and security technology needs.

Overall, the layout of the school is a continuous loop plus the classroom wing addition with the gymnasium. The layout of the building could be zoned for after-hours community use if cross corridor doors are provided and egress closely studied, but it would create two separate zones for after-hours community use: the gymnasium on one side and the cafeteria/auditorium on the other. The primary concerns for educational adequacy centers around the classrooms themselves. Many classrooms in the older portions of the building are small if they are expected to accommodate the maximum class sizes allowed by the NPS teacher contracts. Additionally, the majority are all the same layout with no variety in content and no connections to each other or a variety of space types. They are not adaptable. The furniture is also very limited and does not provide for flexibility, change or choice during the day to accommodate different modalities of learning. While many classrooms do have exits to the outdoors, but often do not open onto usable outdoor learning environments. The center courtvard creates open has great potential for outdoor learning if properly utilized and there are also gardens outside

of the kindergarten classrooms. The interventions for this school are as follows:

- The entrance is represented by a red circle as it is not a secured vestibule and needs to be redesigned/rebuilt to allow direct connection to the admin office for check-in prior to entering the building. Provide "breach" resistant film to the glazing of vestibule(s). Reimagine/ redesign the school entrance so that it provides a handicap accessible secure vestibule that connects directly to the administration.
- Create collaborations spaces in the academic wings that open to corridor and adjacent classrooms. Add doors and interior windows to physically and visually connect to those spaces. They should be designed to feel like a physical extension of the surrounding classrooms with the ability to open or close those connections. Provide for technology, writable surfaces and flexible furniture so that these spaces can be used for both independent, small group and collaborative project-based work.
- Create flexible small group rooms with operable walls in one or two of the collaboration areas so that pull-out interventions can occur with specialists in a more fluid manner. Specialists (SPED/ELL/Reading & Math) should have a teacher workspace for private phone calls and work so that the small group spaces can remain flexible.
- Add operable partitions to be able to combine some of the smaller classrooms into larger spaces through folding walls. This would allow for larger presentations, team teaching and cross curriculum opportunities.
- A variety of flexible and ergonomic furniture to allow for both informal and formal settings, individual, small and large group activities, and movement of students and the re-arrangement of furniture within the teaching spaces.
- Add acoustic materials in spaces with solid plaster ceilings to improve reduce noise and increase speech legibility.
- Improve connections and sightlines to the primary public spaces for easy access and wayfinding. Add two sets of cross corridor doors to close off the academic wings and to reduce areas where people could hide or cause mischief out of sight.
- Re-purpose second floor classroom into storage. The classroom does not provide handicap accessibility and the second means of egress is an exterior fire escape which is not good for children use. While it seems this is a beloved and unique room, an elevator would be very expensive given there is only one classroom at the upper floor.



Proposed Intervention Plan with Functional Capacity

Rowayton Elementary School: First Floor





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Facility Assessment Summary

Silvermine Dual Language Magnet School



General Building Information:

Student Population: 496 (2019/20) School Type: Elementary Grades: K-5 Original Construction: 1965 Significant Alterations: 1994/1998 Total Area (gross): 48,626 SF









School Images







Existing Max Capacity Plan As Per State Guidelines

Silvermine Dual Language Magnet School: First Floor







Educational Adequacy Proposed Interventions

Silvermine Dual Language Magnet School has a moderately low educational adequacy score compared to the district. There appears to be adequate parking for visitors and staff. A bus loop is located in front of the school; however, it appears that this is a shared loop for both car and bus drop-off. The drive is too narrow and not long enough to support both functions. The approach and front entry of the school provide clear wayfinding. The main entry doors do not provide a secure vestibule. There is a security guard stand stationed in-front of the doors allowing visitors to enter/exit. There is an intercom and buzzer system that provides access at the front doors from the front office. See Physical Assessment Report for additional information on specific needs and recommendations on exit doors and security technology needs.

Overall, the layout of the school is well organized and easy to navigate with the exception of access to the cafeteria and servery, which is through the gymnasium. This could be problematic if gym class occurs during a lunch period and collisions could occur as students are carrying lunch into the cafeteria. The corridors are welcoming with bright and colorful murals. The layout of the building could be zoned for after-hours community use if cross corridor doors are provided. However, only the front office, gymnasium with stage and cafeteria are in the public zone. The Library/Media Center is not within the public zone, but it is centrally located in the school which provides for easy access from the academic wings. The primary concerns for educational adequacy centers around the classrooms themselves. Many are small if they are expected to accommodate the maximum class sizes allowed by the NPS teacher contracts. Additionally, the finishes in the classrooms are outdated such as built-in casework, flooring and florescent lighting which appears discolored/yellow. The furniture is also very limited and does not provide for flexibility, change or choice during the day to accommodate different modalities of learning. Many classrooms have exits to the outdoors and especially those facing the front of the school lead to play space and outdoor garden areas. It is not certain if those facing the back are used as part of the learning day since they do not lead to purposeful and defined outdoor learning space. They may be used for egress purposes

only. The interventions for this school are as follows:

- The entrance is represented by a red circle as it is not a secured vestibule and needs to be redesigned/rebuilt to allow direct connection to the admin office for check-in prior to entering the building. Provide "breach" resistant film to the glazing of vestibule.
- Add three new secure vestibules in academic wings and expand the indoor space to create new nexus areas for break-out and collaboration amongst clusters of classrooms and at the Learning Commons/Library.
- Create collaborations spaces in the academic wings that open to corridor, adjacent classrooms and library/media center. Add doors and interior windows to physically and visually connect to those spaces. They should be designed to feel like a physical extension of the surrounding classrooms with the ability to open or close those connections. Technology, writable surfaces and flexible furniture to be provided so that these spaces can be used for both independent, small group and collaborative project-based work.
- Create flexible small group rooms with operable walls in one or two
 of the collaboration areas so that pull-out interventions can occur
 with specialists in a more fluid manner. Specialists (SPED/ELL/
 Reading & Math) should have a teacher workspace for private phone
 calls and work so that the small group spaces can remain flexible.
- Repair existing classroom operable partitions as needed and replace with writable surfaces.
- Combine the two small kindergarten rooms to create one adequately sized 1,000 sf kindergarten classroom. The remaining space to be used as collaboration and flexible small groups area.
- Provide a variety of flexible and ergonomic furniture to allow for both informal and formal settings, individual, small and large group activities, and movement of students and the re-arrangement of furniture within the teaching spaces.
- Improve connections and sightlines to the primary public spaces for easy access and wayfinding. Add a set of cross corridor doors in front of the main academic wing to reduce areas where people could hide or cause mischief out of sight.
- Provide new kitchen addition connected to cafeteria to efficiently accommodate meals for the student population and provide for new servery inside the cafeteria.



Proposed Intervention Plan with Functional Capacity

Silvermine Dual Language Magnet School: First Floor

Capacity (Alt. 1) 21 K-5th Grade Teaching Stations Kinder = 66 Students 1st-2nd Grade = 154 Students 3rd- 5th Grade = 250 Students

Total = 470 K-5 Students

Maximum Class sizes for Norwalk PS: PK = 18 Students K-2 = 22 Students 3-5 = 24 Students CT Guidelines SF/Student in a general classroom: PK & K = 48sf/student 1.5 = 26cf/ctudent

Note:

Alternate 1:

Proposes 5-sections for combined K-1; 2-3 and 4-5. This would function more like a house model where grades could be combined within a home-room and work collectively with other classrooms. This could make for a enriched environment, especially for dual language students. However, no PK is created and the school would still not have a dedicated music room.



V-100 of 207

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Proposed Intervention Plan with Functional Capacity

Silvermine Dual Language Magnet School: First Floor



V-101 of 207

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Facility Assessment Summary

Tracey Magnet School



General Building Information:

Student Population: 435 (2019/20) School Type: Elementary Grades: K-5 Original Construction: 1939 Significant Alterations: 2004 Total Area (gross): 77,000 SF



Educational Adequacy
3.02Score Breakdown:3.02Site Functionality2.92Learning Styles2.10Max. Achievable Score: 5Environmental Quality2.31Space Assessments3.12Outdoor Amenities3.25





Tracey Magnet School

School Images



























Educational Adequacy Proposed Interventions

Tracey Magnet School has a moderately low educational adequacy score compared to the district. There does not appear to be adequate parking for visitors and staff. Parent gueuing and drop-off is combined with parking and backs-up onto the road. There is a relatively short bus loop in front of the school; however, the angle of road causes blind-spot for bus drivers re-entering traffic. The approach and front entry of the school is unclear from the parking lot, causing unclear wayfinding. The front entry doors do not provide a secure vestibule and since visitor parking is on the side, is generally not used by visitors. There is a security guard stand stationed in front of the side entry doors allowing visitors to enter/exit, but that entrance is not handicap accessible. While we were able to see that there was a buzzer and intercom at the front outside doors, we were not able to observe if the doors had the technology and electronic hardware installed so that they could be controlled from the front office. See Physical Assessment Report for additional information on specific needs and recommendations on exit doors and security technology needs.

Overall, the layout of the school is easy to navigate even though the cafeteria and library are very far away from the entry. The layout of the building could be zoned for after-hours community use if cross corridor doors are provided and egress closely studied, but it would create two separate zones for after-hours community use: the gymnasium with stage on one side and the cafeteria and library on the other. Given that these functions often want to serve after hours functions together, there is a potential to create and outdoor plaza area with vestibule that could provide for handicap access from the parking area without enter the rest of the school and create a covered outdoor amenity space used for outdoor learning during the school day. The finishes in the cafeteria, library, and hallways are in relatively good condition and the entire school is well maintained. Some of the casework in the older parts of the building should be refurbished or replaced. Some of their operating mechanisms could pinch fingers when they open and close. The primary concerns for educational adequacy centers around the classrooms themselves. While most of the rooms are a good size, larger than many schools in the District, a few are too small for the maximum NPS class size. Additionally, they are all the same layout with no variety in content and no connections to each other or a variety of space types. They are not adaptable. The older section of the building had "middle" rooms between two classrooms that could be effectively used for pull-out and small group work if proper sightlines were maintained and cleared. The furniture, while more ergonomic than what is in many NPS schools, is also limited in variety and doesn't provide for change or choice during the day to accommodate different modalities of learning. The interventions for this school are as follows:

- The entrance is represented by a red circle as it is not a secured vestibule and needs to be redesigned/rebuilt to allow direct connection to the admin office for check-in prior to entering the building. Provide "breach" resistant film to the glazing of vestibule.
- Add outdoor canopy that connects the gymnasium and cafeteria, providing a shaded outdoor learning area. The canopy connects the two community zones of the school but also activates the existing courtyard.
- Create collaboration spaces in the academic wings that open to corridor and adjacent classrooms. Add doors and interior windows to physically and visually connect to those spaces. They should be designed to feel like a physical extension of the surrounding classrooms with the ability to open or close those connections. Provide for technology, writable surfaces and flexible furniture so that these spaces can be used for both independent, small group and collaborative project-based work.
- Create flexible small group rooms with operable walls in one or two of the collaboration areas between classrooms so that pullout interventions can occur with specialists in a more fluid manner.
 Specialists (SPED/ELL/Reading & Math) should have a teacher workspace for private phone calls and work so that the small group spaces can remain flexible.
- Add operable partitions to be able to combine some of the smaller classrooms into larger spaces through folding walls. This would allow for larger presentations, team teaching and cross curriculum opportunities. The classroom clusters could completely be transformed to meet the needs of inquiry-based learning and adapt each day or hour.
- A variety of flexible and ergonomic furniture to allow for both informal and formal settings, individual, small and large group activities, and movement of students and the re-arrangement of furniture within the teaching spaces.
- Add acoustic materials in spaces with solid plaster ceilings to improve reduce noise and increase speech legibility.
- Improve connections and sightlines to the primary public spaces for easy access and wayfinding. Add a set of cross corridor doors near the front office to reduce areas where people could hide or cause mischief out of sight.

NEWMAN + DLR Group

Proposed Intervention Plan with Functional Capacity

Tracey Magnet School: First Floor








Tracey Magnet School: Lower Level











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Facility Assessment Summary

Wolfpit Elementary School



General Building Information:

Student Population: 300 (2019/20) School Type: Elementary Grades: Pre K-5 Original Construction: 1965 Significant Alterations: 1998 Total Area (gross): 50,560 SF



Educational Adequacy
Total Score:Score Breakdown:2.76Site Functionality3.54Learning Styles2.45Max. Achievable Score: 5Environmental Quality2.69Space Assessments2.63Outdoor Amenities3.75





Wolfpit Elementary School

School Images







Existing Max Capacity Plan As Per State Guidelines

Wolfpit Elementary: First Floor







Wolfpit Elementary: Lower Level







Educational Adequacy Proposed Interventions

Wolfpit Elementary School has a low educational adequacy score compared to the district. There appears to be adequate parking for visitors and staff; however, there is no separation of car drop-off from bus drop-off with both sharing the main parking lot and entry/exits. The approach and front entry of the school provide clear wayfinding. The main entry doors do not provide a secure vestibule. There is a security guard stand stationed in-front of the doors allowing visitors to enter/exit. While we were able to see that there was a buzzer and intercom at the front outside doors, we were not able to observe if the doors had the technology and electronic hardware installed so that they could be controlled from the front office. See Physical Assessment Report for additional information on specific needs and recommendations on exit doors and security technology needs.

Overall, the layout of the school is organized into a "L" shaped public corridor and a classroom wing that has a series of 3 half-level-up/half-level-down classroom clusters. The primary concerns for educational adequacy centers around accessibility and lack of variety in teaching spaces. These classrooms are not handicap accessible. They connect to each other via an outdoor porch below/balcony above and then also through operable folding walls between rooms allowing flexibility and adaptability. The layout of the building could be zoned for after-hours community use if cross corridor doors are provided, allowing the front office, gymnasium with stage, cafeteria, and library/media center to be in the public zone. The finishes are outdated such as classroom built-in casework and lighting in the classrooms which do not provide dimming. The furniture is also very limited and does not provide for flexibility, change or choice during the day to accommodate different modalities of learning. While many classrooms do have exits to the outdoors, they do not

open onto usable outdoor learning environments. They appear to be used for egress purposes only. The interventions for this school are as follows:

- The entrance is represented by a red circle as it is not a secured vestibule and needs to be redesigned/rebuilt to allow direct connection to the admin office for check-in prior to entering the building. Provide "breach" resistant film to the glazing of vestibule.
- Add new addition that provides a handicap accessible connection to the classroom floors through a ramp down to the gym and an elevator to the upper and lower classroom levels. The addition also serves as a new nexus focal point, connecting the school and community.
- Create small collaboration spaces in the academic wings that open to corridor and adjacent classrooms. Add doors and interior windows to physically and visually connect to those spaces. They should be designed to feel like a physical extension of the surrounding classrooms with the ability to open or close those connections. Provide for technology, writable surfaces and flexible furniture so that these spaces can be used for both independent and small group work.
- Specialists (SPED/ELL/Reading & Math) should have a teacher workspace for private phone calls and work so that the small group spaces can remain flexible.
- Also, replace existing folding walls with new so that they open easily, acoustically appropriate and provide for a combination of windows, writing surfaces and pin-up surfaces. These will allow spaces to combine some of the smaller classrooms into larger spaces. This would allow for larger presentations, team teaching and cross curriculum opportunities. The pods could completely be transformed to meet the needs of inquiry-based learning and adapt each day or hour.
- Provide a variety of flexible and ergonomic furniture to allow for both informal and formal settings, individual, small and

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large group activities, and movement of students and the rearrangement of furniture within the teaching spaces.

- Improve connections and sightlines to the primary public spaces for easy access and wayfinding. Add a set of cross corridor doors in front of library closing off classroom wing to reduce areas where people could hide or cause mischief out of sight.
- Convert movement room into a maker space (art + engineering) that would include technology for design but also fabrication and trial space for projects. Improve collaboration with the library/media center by adding a folding wall between the maker space and library. Make the adjacent large corner classroom into a performing arts room that would have appropriate flooring and acoustics to allow for multiple uses.



Proposed Intervention Plan with Functional Capacity

Wolfpit Elementary School: First Floor



V-118 of 207 NORWALK NORWALK FACILITIES PLAN STUDY

THIS INFORMATION IS CONCEPTUAL IN NATURE AND IS SUBJECT TO ADJUSTMENTS PENDING FURTHER PROJECT DEVELOPMENT

Wolfpit Elementary: Lower Level







Facility Assessment Summary

Nathan Hale Middle School



General Building Information:

Student Population: 624 (2019/20) School Type: Middle Grades: 6-8

Educational Adequacy Total Score: Original Construction: 1952 Significant Alterations: 2005 Total Area (gross): 98,505 SF



Index

Score Breakdown:









Nathan Hale Middle School

School Images







Nathan Hale Middle: First Floor



Capacity

25 6th-8th Grade Teaching Stations 6-8 Grade= 423 Students

Science = 152 Students

Other= 12 Students

Total =587 6-8 Students

Note:

Maximum Class sizes for Norwalk PS:

6-12 = 28 Students

CT Guidelines SF/Student in a general classroom: Classroom= 36sf/student

Science= 40sf/student

Key:

Existing Capacity Generating Space

Existing Non-Capacity Generating Space





Nathan Hale Middle: Second Floor





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Nathan Hale Middle School has one of the lowest educational adequacy scores in the district. There does not appear to be adequate parking for visitors and staff. The site does not have separate car drop-off and bus drop-off areas. The car queuing occurs within the parking lot. This prevents visitors/staff from being able to arrive and leave during dismissal times, and if not properly managed with controlled exit/entering of cars at the curb, could result in unsafe conditions. The bus drop-off is in front of the school but runs through the front parking lot. The approach and front entry of the school provide clear wayfinding. The main entry doors do not provide a secure vestibule. There is a security guard desk stationed in-front of the doors allowing visitors to enter/exit. There is an intercom for visitors to communicate with the front office. See Physical Assessment Report for additional information on specific needs and recommendations on exit doors and security technology needs.

Overall, the layout has a lot of side corridors and corners, which diminish sightlines. The layout of the building could be zoned for after-hours community use if cross corridor doors are provided. However, only the front office, auditorium and gymnasium are in the public zone. The Cafeteria and Library/Media Center would not be within the public zone unless the public area is greatly expanded, which is doable, but creates more area that needs supervision. The primary concerns for educational adequacy centers around the classrooms themselves. Many are small if they are expected to accommodate the maximum class sizes allowed by the NPS teacher contracts. Additionally, except for science and a few specialty rooms, they are similar in layout with no variety in content and no connections to each other or a variety of space types. They are not adaptable, and several do not have natural light. The finishes in the classrooms are outdated such as built-in casework and florescent lighting which

appears discolored/yellow. The furniture is also very limited in movement and variety in most spaces and does not provide for flexibility, change or choice during the day to accommodate different modalities of learning. The interventions for this school are as follows:

- The entrance is represented by a red circle as it is not a secured vestibule and needs to be redesigned/rebuilt to allow direct connection to the admin office for check-in prior to entering the building. Provide "breach" resistant film to the glazing of vestibule.
- Create collaborations spaces in the academic wings that open to corridor and adjacent classrooms. Add doors and interior windows to physically and visually connect to those spaces. They should be designed to feel like a physical extension of the surrounding classrooms with the ability to open or close those connections. Provide for technology, writable surfaces and flexible furniture so that these spaces can be used for both independent, small group and collaborative project-based work.
- Create flexible small group rooms with operable walls in one or two of the collaboration areas so that pull-out interventions can occur with specialists in a more fluid manner. Specialists (SPED/ELL/Reading & Math) should have a teacher workspace for private phone calls and work so that the small group spaces can remain flexible.
- Add operable partitions to be able to combine some of the smaller classrooms into larger spaces through folding walls. This would allow for larger presentations, team teaching and cross curriculum opportunities.
- A variety of flexible and ergonomic furniture to allow for both informal and formal settings, individual, small and large group activities, and movement of students and the rearrangement of furniture within the teaching spaces.
- Improve connections and sight lines to the primary public spaces for easy access and wayfinding, Add a set of cross corridor doors closing off academic wings to reduce areas



Nathan Hale Middle School

where people could hide or cause mischief out of sight.

- Renovate the large locker rooms connected to the gymnasium into fitness and classroom space. NOTE: the gym is undersized for a middle school, so an alternative would be to increase the size of the gym with an addition.
- Convert the digital literacy lab into a more flexible tinker space that would include technology for design but also fabrication and trial space for projects.
- Provide operable walls to connect the computer to the cafeteria. Re-imagine how the library, computer lab and cafeteria can become a hub for collaboration, tutoring and research "coffee-shop" style. Then they can fabricate their projects in the tinker space.





Proposed Intervention Plan with Functional Capacity

Nathan Hale Middle School: First Floor



Capacity

25 6th-8th Grade Teaching Stations 6-8 Grade= 447 Students Science = 155 Students Other= 12 Students

Total =614 6-8 Students

Note:

Maximum Class sizes for Norwalk PS:

6-12 = 28 Students

CT Guidelines SF/Student in a general classroom: Classroom= 36sf/student

Science= 40sf/student









Nathan Hale Middle School: Second Floor







Facility Assessment Summary

Roton Middle School



General Building Information:

Student Population: 624 (2019/20) School Type: Middle Grades: 6-8 Original Construction: 1967 Significant Alterations: 2004 Total Area (gross): 98,390 SF









Roton Middle School

School Images







Existing Max Capacity Plan As Per State Guidelines

Roton Middle School: Second Floor - Main Entry



Second Floor - Main Entry





Roton Middle School: First Floor & Third Floor







Educational Adequacy Proposed Interventions

Roton Middle School has a low educational adequacy score compared to the district. There appears to be adequate parking for staff and daytime visitors, but parking for after hour events can be challenging. There is an adequate separation from car drop-off to bus drop-off with a bus loop that separates from the car loop as it nears the front entrance plaza. The approach and front entry of the school provide clear wayfinding. The main entry doors do not provide a secure vestibule that allows for check-in at the front office prior to entry.

Overall, the layout of the school is well organized and is relatively easy to navigate. The layout of the building allows for easily zoned areas for after-hours community use. However, only the front office, auditorium, gymnasium, and cafeteria are in the public zone. The Library/Media Center is at the upper floor within the front wing of the building across from the auditorium balcony. If there were an open interconnecting stair, it would be readily accessible for public use since the second floor can also be secured as public and academic zones at the links between the front and back wings. The primary concerns for educational adequacy centers around the classrooms themselves. Many are small if they are expected to accommodate the maximum class sizes allowed by the NPS teacher contracts, and a few spaces have been divided up into 1/2 sized spaces that are counted as regular classrooms for core teaching spaces. Additionally, most classrooms, except for science and specialty spaces, all have a similar layout with no variety in content and no connections to each other or a variety space types. Most regular classrooms at the upper level have operable partitions, which are either not functioning or are not used. The adaptability is not utilized to create a variety of space. The furniture is also very limited and does not provide for flexibility, change or choice during the day to accommodate different modalities of learning. While some classrooms at the lower-level do have exits to the outdoors. they do not open onto usable outdoor learning environments. This site has great potential as the building layout creates open courtyards and there is adequate space to create outdoor learning environments and wetlands to explore. The interventions for this school are as follows:

· The entrance is represented by a red circle as it is not a secured

vestibule and needs to be redesigned/rebuilt to allow direct connection to the admin office for check-in prior to entering the building. Provide "breach" resistant film to the glazing of the vestibule.

- Create collaborations spaces in the academic wings that open to corridor and adjacent classrooms. Add doors and interior windows to physically and visually connect to those spaces. They should be designed to feel like a physical extension of the surrounding classrooms with the ability to open or close those connections. Provide for technology, writable surfaces and flexible furniture so that these spaces can be used for both independent, small group and collaborative project-based work.
- Create flexible small group rooms with operable walls in one or two of the collaboration areas so that pull-out interventions can occur with specialists in a more fluid manner. Specialists (SPED/ELL/Reading & Math) should have a teacher workspace for private phone calls and work so that the small group spaces can remain flexible.
- Replace operable partitions to be able to combine some of the smaller classrooms into larger spaces through folding walls. This would allow for larger presentations, team teaching and cross curriculum opportunities. The classroom clusters could completely be transformed to meet the needs of inquiry-based learning and adapt each day or hour. Replace operable partitions in the auditorium if they do not function or if they do not provide appropriate acoustic separation.
- A variety of flexible and ergonomic furniture to allow for both informal and formal settings, individual, small and large group activities, and movement of students and the re-arrangement of furniture within the teaching spaces.
- Improve connections and sight lines to the primary public spaces for easy access and wayfinding. Add two sets of cross corridor doors to close off the academic wings and to reduce areas where people could hide or cause mischief out of sight.
- Renovate the large locker rooms connected to the gymnasium into fitness and classroom space.
- Renovate the second-floor small group resource classrooms into three flexible classrooms with a small group room in the middle. On the lower level, renovate the end classrooms to add a maker space, general classroom, and two small group resource classrooms Additionally, renovate one of the related arts classrooms to create a general classroom.



Roton Middle School

Interdisciplinary Learning

Connecting classrooms with functioning operable partitions allows for rooms to be adapted for various activities. It also can accommodate cross discipline learning. Two or more subject matter teachers can work with students together to really connect across the curriculum and bring real world relevance to learning. Additionally it helps students get help in the areas where they need it most. For instance, in a combined science and language arts project, one student may need more help understanding the science concepts and developing a model to demonstrate their ideas, while another student may need more help organizing their thoughts and writing about their findings. By breaking down subject matter silos, teachers are better able to meet every student where they are.









Proposed Intervention Plan with Functional Capacity

Roton Middle School: Second Floor - Main Entry

Capacity

26 6th-8th Grade Teaching Stations

6th-8th Grade = 464 Students

Science = 166 Students

Other = 24 Students

Total = 654 6-8 Students



Fence to Secure Outdoor Learning Areas





Roton Middle School: First Floor & Third Floor







Facility Assessment Summary



Upper Ponus Ridge STEAM Academy

General Building Information:

Student Population: 673 (2019/20) School Type: Middle Grades: 6-8 Original Construction: 1956 Significant Alterations: 2005 Total Area (gross): 104,365 SF



Educational Adequacy
Total Score:Score Breakdown:3.85Site Functionality4.383.85Learning Styles3.55Max. Achievable Score: 5Environmental Quality3.25Space Assessments3.99Outdoor Amenities2.71





School Images







Upper Ponus Ridge STEAM Academy: First Floor



Total = 527 6-8 Students

Classroom= 36sf/student Science= 40sf/student

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Educational Adequacy Proposed Interventions

Upper Ponus Ridge STEAM Academy has a high/moderately high educational adequacy score compared to the district. There appears to be adequate parking for visitors and staff. There does not appear to be a separate car drop-off and bus drop-off areas. The long drive loop directly in front of the school provides for adequate space for bus queuing; however, the car queuing occurs within the parking lot. This prevents visitors/staff from being able to arrive and leave during dismissal times, and if not properly managed with controlled exit/entering of cars at the curb, could result in unsafe conditions. The Upper Ponus Ridge portion of the building has a separate entrance from the Lower Ponus Ridge portion of the building. It was not clear upon arrival which entry should be used and this is further confused because of the third public entry at the auditorium and the location of the handicap access ramp. Both additional signage and visual architectural/landscape cues should be installed to make this clearer for visitors. The front security vestibule allows for check-in with the front office before entering the rest of the school. The vestibule doors have proper technology and electronic hardware installed so that the doors could be controlled from the front office

Overall, the layout has a lot of side corridors, wings and corners at the first floor, which diminish sightlines and can pose a challenge for wayfinding. The building has many spaces upfront for after-hours community use. However, these public spaces, which include auditorium, gymnasium and cafeteria, are spread out along a long main corridor with access to the spaces from side corridors which can be challenging for afterhours security. The Library/Media Center is not within the public zone, but it is centrally located in the school. The cafeteria is shared with Lower Ponus Ridge STEAM Academy and could be publicly accessed along with the multipurpose space from the Pre-K-5th-grade side; see Lower Ponus Ridge STEAM Academy diagram for details. The finishes are like-new condition and well maintained. The furniture observed while touring is varied with some rooms providing ergonomic furniture that allow movement and others having outdated hard furniture with chairs attached to desks. While touring, we observed that much of the new furniture had been moved into the auditorium for storage due to COVID. We have tried to evaluate the furniture configurations based on the furniture plans we were provided from the recent renovation project. The primary concerns for educational adequacy centers around providing the same amount of differentiated learning spaces for all wings of the building. Most classrooms in the old portions of the building, except for science and specialty spaces, have a similar layout with no variety in content and no connections to each other or a variety of space types. The classrooms in both the old and new are not adaptable and do not have visual connections. The new wing has a collaboration Learning Lab where students can interact with technology and each other, but the classrooms are still enclosed and isolated from each other. The interventions for this school are as follows:

- The entrance is represented by a green circle as it is a secured vestibule with direct connection to the admin office for check-in prior to entering the building. "Breach" resistant film should be provided to the glazing of vestibule if it was not included in the renovation project.
- Create collaborations spaces that open to corridor and adjacent classrooms. Add doors and interior windows to physically and visually connect to those spaces. They should be designed to feel like a physical extension of the surrounding classrooms with the ability to open or close those connections. Provide for technology, writable surfaces and flexible furniture so that these spaces can be used for both independent, small group and collaborative project-based work.



- Create flexible small group rooms with operable walls in one or two of the collaboration areas so that pull-out interventions can occur with specialists in a more fluid manner. Specialists (SPED/ELL/Reading & Math) should have a teacher workspace for private phone calls and work so that the small group spaces can remain flexible.
- A variety of flexible and ergonomic furniture to allow for both informal and formal settings, individual, small and large group activities, and movement of students and the rearrangement of furniture within the teaching spaces, if it was not purchased as part of the previous project.
- Provide outdoor learning labs and gardens to activate the courtyard spaces for multipurpose use and instruction.





Proposed Intervention Plan with Functional Capacity

Upper Ponus Ridge STEAM Academy: First Floor



V-142 of 207 NORWALK

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Upper Ponus Ridge STEAM Academy: Second Floor







Facility Assessment Summary

West Rocks Middle School



General Building Information:

Student Population: 726 (2019/20) School Type: Middle Grades: 6-8

Original Construction: 1955 Significant Alterations: 1998 Total Area (gross): 100,650 SF



Index

Score Breakdown:






West Rocks Middle School

School Images









West Rocks Middle School: First Floor



V-146 of 207 NORWALK NORWALK

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Educational Adequacy Proposed Interventions

West Rocks Middle School has a low/moderately low educational adequacy score compared to the district. There appears to be adequate parking for visitors and staff and adequate separation from car drop-off to bus drop-off with a bus loop in front of the main entrance. The approach and front entry of the school provide clear wayfinding. The front security vestibule allows for check-in with the front office at a window before entering the rest of the school. While we were able to see that there was a buzzer and intercom at the front outside doors, we were not able to observe if the doors had the technology and electronic hardware installed so that they could be controlled from the front office. See Physical Assessment Report for additional information on specific needs and recommendations on exit doors and security technology needs.

Overall, the layout of the school is well organized and is easy to navigate. The layout of the building could be zoned for afterhours community use if cross corridor doors are provided allowing the front office, auditorium, gymnasium, cafeteria, and Library/Media Center to be within the public zone. The public zone would benefit from greater visual connection and creating a hub at the intersection with the academic wing The primary concerns for educational adequacy centers around the classrooms themselves. There currently are not enough classrooms to serve the student population which has been temporarily addressed by adding a portable classroom building onto the campus. Additionally, many classrooms are small if they are expected to accommodate the maximum class sizes allowed by the NPS teacher contracts. They are all the same layout with no variety in content and no connections to each other or a variety space types. They are not adaptable. The furniture is also very limited and does not provide for flexibility, change or choice during the day to accommodate different

modalities of learning. The finishes in the classrooms are outdated such as built-in casework and florescent lighting which appears discolored/yellow. While some classrooms do have exits to the outdoors, they do not open onto usable outdoor learning environments. The interventions for this school are as follows:

- The entrance is represented by a red circle as it is not a secured vestibule and needs to be redesigned/rebuilt to allow direct connection to the admin office for check-in prior to entering the building. Provide "breach" resistant film to the glazing of the vestibule.
- Add new addition that provides three additional 6-8 classrooms, one related arts classroom, and two small group rooms. The addition would result in the portable classroom being removed from the site.
- Create collaborations spaces in the academic wings that open to corridor and adjacent classrooms. Add doors and interior windows to physically and visually connect to those spaces. They should be designed to feel like a physical extension of the surrounding classrooms with the ability to open or close those connections. Provide for technology, writable surfaces and flexible furniture so that these spaces can be used for both independent, small group and collaborative project-based work.
- Create flexible small group rooms with operable walls in one or two of the collaboration areas so that pull-out interventions can occur with specialists in a more fluid manner. Specialists (SPED/ELL/Reading & Math) should have a teacher workspace for private phone calls and work so that the small group spaces can remain flexible.
- Add operable partitions to be able to combine some of the smaller classrooms into larger spaces through folding walls. This would allow for larger presentations, team teaching and cross curriculum opportunities.
- A variety of flexible and ergonomic furniture to allow for both informal and formal settings, individual, small and large group



activities, and movement of students and the re-arrangement of furniture within the teaching spaces.

- Renovate the large locker rooms connected to the gymnasium into classroom space.
- Improve connections and sightlines to the primary public spaces for easy access and wayfinding, and a set of cross corridor doors to close off the academic wings and to reduce areas where people could hide or cause mischief out of sight.
- Create outdoor learning environments that are purposeful and secure.

Note: an option was developed to add four classrooms in the event additional 6-8 capacity was not created at the new Columbus Magnet School.





Proposed Intervention Plan with Functional Capacity

West Rocks Middle School: First Floor





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West Rocks Middle School: Second Floor & Lower Level







Facility Assessment Summary

Brien McMahon High School & Center for Global Studies



General Building Information:

Student Population: 1,986* (2020/21) School Type: High School Grades: 9-12 Original Construction: 1960 Significant Alterations: Total Area (gross): 130,394 SF









School Images







Brien McMahon High School & Center for Global Studies: First Floor



Brien McMahon High School & Center for Global Studies: Second Floor







Brien McMahon High School & Center for Global Studies: Lower Level







Educational Adequacy Proposed Interventions

Brien McMahon High School/Center for Global Studies has a high/moderately high educational adequacy score compared to the district. There appears to be adequate parking for students, visitors and staff and adequate separation from car drop-off to bus drop-off with a long bus loop around the parking lot. The approach and front entry of the school provide clear wayfinding to the front stair tower; however, there is confusion as to which door should be used by visitors as the intercom and buzzer is not located at the vestibule. The front vestibule and other entrance doors along the front do not allow for check-in with the front office before entering the rest of the school. Also, the Center for Global Studies entrance is slightly more challenging to find the first time visiting the site, as it is around to the right and behind the more prominent BMHS front entry.

Overall, the layout of the school is well organized and relatively easy to navigate with the public functions at the front and the classrooms toward the back of the main level and on the upper floor. The layout of the building has spaces for after-hours community use, creating three separate zones: one being the front office, auditorium, and library/media in the front, the gymnasium as another, and the multipurpose space as the third. The school would benefit from additional cross-corridor doors to ensure the access is limited and egress still maintained. The cafeteria is at a lower level with access to the fields and can function as another community space. However, during the school day, it is currently a challenge to keep visitors from entering at this level. The finishes are in good condition and well maintained. The primary concerns for educational adequacy centers around the classrooms themselves. Most of the general classrooms in the older portion of the building too small and are of a similar layout with no variety in content and no connections to each other or a variety of space types. They are not adaptable. The furniture is also very limited and does not provide for flexibility, change or choice during the day to accommodate different modalities of learning. In order to maximize the functionality and scheduling, a broader variety in space sizes and functionality are needed. Additionally, space for teacher work and collaboration should be created so that they have a work space beyond a reserved classroom, which will increase the effective utilization of the school spaces. The interventions for this school are as follows:

- The entrance is represented by a red circle as it is not a secured vestibule and needs to be redesigned/rebuilt to allow direct connection to the admin office for check-in prior to entering the building. Provide "breach" resistant film to the glazing of the vestibule.
- Add attractive 10-0" high fence with egress gates (3) to improve security at the cafeteria and allow for outdoor dining/learning.

- Create collaborations spaces that open to corridor and adjacent classrooms. Add doors and interior windows to physically and visually connect to those spaces. They should be designed to feel like a physical extension of the surrounding classrooms with the ability to open or close those connections. Provide for technology, writable surfaces and flexible furniture so that these spaces can be used for both independent, small group and collaborative project-based work.
- Create flexible small group rooms with operable walls at the collaboration areas so that pull-out interventions can occur with specialists in a more fluid manner. Specialists (SPED/ELL/Reading & Math) should have a teacher workspace for private phone calls and work so that the small group spaces can remain flexible.
- Provide operable partitions at the collaborative spaces so that they can be reconfigured into a variety of different sized spaces, both private and public. These will allow spaces to combine some of the smaller classrooms into larger spaces. This would allow for larger presentations, team teaching and cross curriculum opportunities. The spaces could completely be transformed to meet the needs of inquiry-based learning and adapt each day or hour.
- Create additional teacher work areas at corridor intersections so that teachers can maintain casual observation and be both accessible to students and have a private place to work.

Opinion of Capacity: BMHS/CGS Existing Facility

If teacher reserved classroom spaces were eliminated as a cultural norm, with other scheduling norms remaining consistent, we estimate the overall capacity of the facility to be approximately 2,183 combined students between BMHS and CGS.

Given the projected level of enrollment in the 2030/2031 school year for BMHS, there may be some compromises necessary from a scheduling perspective to accommodate that level of enrollment. Potential solutions could include increased class section size limits for certain courses, course enrollment caps, or the addition of an additional period of instruction. All those options come with pros and cons, including cost implications. Careful examination will be needed when the time comes.

Today, the combined facility has 71 classrooms and 18 science labs to compliment a host of art classrooms, PLTW/specialty labs, computer labs, culinary arts, and special education spaces.





Brien McMahon High School & Center for Global Studies: First Floor







Brien McMahon High School & Center for Global Studies: Second Floor





Brien McMahon High School & Center for Global Studies: Lower Level







Creating Community

Locating adaptable/flexible classrooms in strategic locations through out the building will not only allow for the right-sizing of some spaces to meet the needs of class scheduling, but it will also allow for smaller learning communities to be created that can then be associated with nearby teacher planning areas so that teachers and students alike have greater opportunities to interact and collaborate. These flexible learning spaces can serve students for casual encounters and small group work that extends beyond the class schedule. With teachers nearby, their is improved relational safety as well.







Facility Assessment Summary

Norwalk High School/P-TECH Norwalk



General Building Information:

Student Population: 1,616 (2019/20) School Type: High School Grades: 9-12 Original Construction: 1971 Significant Alterations: 2004 Total Area (gross): 310,000 SF



Educational Adequacy
Total Score:Score Breakdown:3.13Site Functionality3.85Learning Styles2.82Max. Achievable Score: 5Environmental Quality2.19Space Assessments3.19Outdoor Amenities3.17





Norwalk High School/P-TECH Norwalk

School Images







Norwalk High School/P-TECH Norwalk: First Floor 100 Level



Norwalk High School/P-TECH Norwalk: Second Floor Main Entry/200 Level



B House





Norwalk High School/P-TECH Norwalk: Third Floor 300 Level



B House





Norwalk High School/P-TECH Norwalk: Lower Level







Educational Adequacy Proposed Interventions

Norwalk High School/P-TECH Norwalk has a low/moderately low educational adequacy score compared to the district. There appears to be adequate parking for visitors and staff and adequate separation from car drop-off to bus drop-off with a bus loop in front of the main entrance. The approach and front entry of the school provide clear wayfinding for Norwalk High School; however, P=TECH Norwalk does not have a separate entrance or identity, which can make finding their administration and teaching spaces a serious challenge. The front vestibule does not allow for check-in with the front office before entering the rest of the school. See Physical Assessment Report for additional information on specific needs and recommendations on exit doors and security technology needs.

Overall, the school is very large and has four 3-story "houses" that have a donut circulation path within each. The layout of the building has areas for after-hours community use at the front main level. This public area is not sufficiently closed off for afterhours use. The main entrance is at the 200 level. P-Tech Norwalk and other career technical spaces exists at the 100 level, one level below the main entrance. There is a 300 level above, and the cafeteria is at the lowest level and is not conveniently accessible and does not adequately function as a social common, connecting the school community. There is currently a new high school construction project being planned, so no physical interventions are proposed at the existing building. However, in an effort to increase scheduling autonomy for the two school entities, the Newman/DLR Group team has analyzed the course offerings and scheduling practices of the two schools and find that the P-TECH Norwalk would need the use of most of the 100 level classrooms with the exception of the physical fitness/gym spaces, culinary spaces and ROTC spaces, which would remain scheduled as is.

We recommend teacher workspace be provided, appropriately designed with phone rooms, conference spaces, hotel station style desking and equipment situated to suit their needs.

Opinion of Capacity: NHS/P-TECH Existing Facility

If teacher reserved classroom spaces were eliminated as a cultural norm, with other scheduling norms remaining consistent, we estimate the overall capacity of the existing building to be approximately 2,175 combined students from NHS and P-TECH.

Today, the combined facility has 74 classrooms and 18 science labs to compliment a host of art classrooms, computer labs, culinary arts, and special education spaces.









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Facility Assessment Summary

Norwalk Early Childhood Center



General Building Information: Original Construction: 1939 Student Population: (2019/20) Significant Alterations: School Type: Preschool Total Area (gross): 17,295 SF Grades: Pre K 3 2 Nonexistent/ Functions Needs Replacement 1 5 Excellently **Educational Adequacy** Index Educational Adequacy Total Score: Score Breakdown: 4.27 Site Functionality 3.49 Learning Styles 3.14 **Environmental Quality** 3.88 Max. Achievable Score: 5 Space Assessments 3.25





3.75

Outdoor Amenities

Norwalk Early Childhood Center

School Images







Existing Max Capacity Plan As Per State Guidelines

Norwalk Early Childhood Center







Educational Adequacy Proposed Interventions

Norwalk Early Childhood Center has a moderately low educational adequacy score compared to the district. There appears to be adequate parking for visitors and staff, but parent gueuing and drop-off is combined with parking. There is not adequate space to separate car drop-off from bus dropoff, if occurs as the bus loop is combined in the parking lot. The approach and front entry of the school is unclear from the parking lot as it is tucked toward the back of the parking lot and does not stand-out as separate from the rest of the building. The front security vestibule does not allow for check-in with the front reception desk before entering the rest of the school. While we were able to see that there was a buzzer and intercom at the front outside doors and were admitted by the director from the reception desk. See Physical Assessment Report for additional information on specific needs and recommendations on exit doors and security technology needs.

The layout of the building allows for after-hours community use, with the gymnasium in the public zone, but there is not cross-corridor doors preventing access to the rest of the NECC if visitors exit the gym to the corridor. Overall, the layout of the school is well organized and easy to navigate. The finishes are in relatively good condition and well maintained. The corridors are bright and welcoming, as they feature a neighborhood with colorful wood siding on the walls, awnings over clear story windows, and railroad tracks painted on the floor to emulate a neighborhood. The classrooms are visible from the corridor through a two-way mirrored window for parents and staff to view from. The primary concerns for educational adequacy centers around the communal spaces. The gymnasium is well-sized but does not have acoustical treatment causing uncomfortable conditions for users. There is not enough storage in the school, resulting in student cubbies and cots being stored

in the corridors. While many classrooms do have exits to the outdoors, they do not open onto usable outdoor learning environments. They appear to be used for egress purposes only. The playground and field are well sized and includes a handicap accessible ramp playscape, but the outdoor play areas are disconnected from the classrooms. Students have to cross the parking lot to access any outdoor areas. The Director noted that by the middle of the school year an additional classroom would be beneficial. The gym could be partitioned to create this room; however, it has not been shown as an intervention due to additional PK space being created at other locations within the NPS system. The interventions for this school are as follows:

- Provide acoustic curtain divider and acoustic panels at ceiling and walls in the gymnasium to reduce noise and reverberation time.
- Provide new secure entry vestibule connected to main office or receptions and eliminate the public entrance to the gym. This would also allow for a more generous public area upon entry.
- Find additional space for storage in another part of the building, or as an alternative, create more organized storage areas within the existing gym through more substantial furniture wall systems.
- Provide additional rug area and soft seating for kids to both gather and reflect. These were possibly removed due to COVID-19.







THIS INFORMATION IS CONCEPTUAL IN NATURE AND IS SUBJECT TO ADJUSTMENTS PENDING FURTHER PROJECT DEVELOPMENT

V-174 of 207 NORWALK

NORWALK PUBLIC SCHOOLS NORWALK FACILITIES PLAN STUDY

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FACILITIES CONDITIONS ASSESSMENTS

OVERVIEW

As part of the Facilities Plan Study, multiple teams of architects and engineers assessed the physical conditions of 15 schools and the Central Kitchen. The focus of these assessments was to create an accurate record of the existing conditions of Norwalk's schools in order to update and expand the 2015 Feasibility Study report and provide recommendations for immediate, intermediate, and long-term building and building systems priorities.

Building Name			Discipline					
Ares	Lucation/ Program	Part	Туре	Candi tian	Phatar	Hates		
Plan	×	×	×	×	×	*See attached exirting plan for review and confirmation		
Extorior	North-Facing Facados	Waltr			000			
Extorior	North-Facing Facad <i>os</i>	Window			000			
Extorior	North-Facing Facados	Deers			000			
Extorior	North-Facing Facad <i>as</i>	Equipmont			000			
Extorior	Eart-Facing Facador	Wallr						
Extorior	Eart-Facing Facador	Window						
Extorior	Eart-Facing Facados	Deers			0			
Extorior	Eart-Facing Facador	Equipmont			0			
Extorior	South-Facinq Facados	Wallr			0			
Extorior	South-Facing Facados	Window						
Extorior	South-Facing Facados	Deers						
Extorior	South-Facinq Facados	Equipmont			000			
Extorior	Wast-Facinq Facadas	Walls						
Extorior	Wast-Facina Facadas	Window						
Extorior	Wast-Facina Facadas	Deers			0			
Extorior	Wast-Facing Facadas	Equipmont			000			
Extorior	High-Roofs	×			000			
Extorior	Lou-Roofs	×			000			
Extorior	Roof Access	×			000			





Facilities Conditions Assessment

Assessment Approach

Each school received assessment from three perspectives architectural, building systems, and food service. The assessors used field report checklists such as the one on the previous page to maintain consistency across the diverse range of schools. Please see the Appendix for the completed reports for each school.

After completing their walk through, each team analyzed their findings according to the assessment criteria below. The

Conditions criteria grades the overall quality of the building and systems and the priority criteria sets the time frame for addressing any issues noted. The application of these criteria received several passes to again ensure consistency across the District.

Upon completing this analysis, each school was given an overall condition and overall priority score. The teams also pulled out the priority 1-3 items for each school on the following pages.

ASSESSMENT CRITERIA									
CONDITION	/		PRIORITY						
Excellent	A	No visible defects, new or near new condition, may still be under warranty if applicable	Currently Critical	1	Requiring immediate action including a cited safety hazard and areas of accelerated deterioration, returning a building component to normal operation.				
Good	В	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional	Potentially Critical	2	Requiring action in the next year including components experiencing intermittent operations, potential life safety issues, and rapid deterioration, returning a building component to normal operation.				
Adequate	С	Moderately deteriorated or defective, but has not exceeded useful life	Necessary – Not Yet Critical	3	Requiring appropriate attention to preclude predictable deterioration, potential downtime, additional damage, and higher costs to remediation if deferred further.				
Marginal	D Defective or deteriorated in need of replacement; exceeded useful life		Recommended		Representing a sensible improvement to the existing conditions (not required for the most basic function of the facility; however, will improve overall usability and/or reduce long-term maintenance costs).				
Poor	F	Critically damaged or in need of immediate repair; well past useful life	Does Not Meet Current Code but Legacied	5	No Action required at this time but should substantial work be undertaken correction would be required.				





Facilities Conditions Assessment

Assessment Findings

Silver Petrucelli completed assessments of the 16 elementary and middle school properties in 2015. That report identified \$77.4 million of deferred maintenance to be addressed within the next 10 years. The Newman, MKA, and CES teams evaluated the 18 locations included in this physical assessment based on similar criteria to the 2015 study, but with a focus on greater thoroughness and the incorporation of food service concerns. They were also updated to include associated soft and escalation costs. This has had a substantial impact on overall cost projections. Please see the Appendix for a breakdown of the 2015 report as compared to this Facilities Plan Study.

Across the board, the schools were well-maintained and clean and it is obvious that the Facilities staff take great care and pride in their work. The items the facilities conditions assessments focused on; however, were for the large part items that are not obvious from a cursory visual inspection or within the normal scope of day-to-day maintenance. From this perspective, a wide range of facility conditions exist across the schools and there is a significant amount of deferred capital maintenance to be addressed in the coming years. The schools have been tiered by their respective levels of deferred maintenance needs on the following page.

Primary Recommendations

It is the Newman/DLR Group team's recommendation that the most pressing deferred maintenance items are prioritized for remediation. Next, strategic capital projects that cover intermediate and long-term items are addressed per individual school and in batches for similar issues.

Systems and facilities upgrades to be considered district-wide are:

Accessibility and Building Code Compliance – Provision of current standards of compliance at egress, circulation, toilet rooms, services, and educational and support spaces

Exteriors – Repairs and replacements at roofs, walls, doors, and windows

Interiors – Repairs and replacements of finishes nearing or past the end of their useful life

Food Service – Provision of architectural and equipment upgrades to support the District's operational goals

High Performance – Replacement of inefficient electrical, mechanical, and plumbing systems and equipment in addition to the targeted interventions at building envelopes included in the "exteriors" item above





Facilities Conditions Assessment

Tiering of Schools Conditions and Priorities

Tier 1 Facilities:

- *Fox Run Elementary School
- *Naramake Elementary School
- *West Rocks Middle School
- Central Preparation Kitchen
- Nathan Hale Middle School
- Roton Middle School
- Wolfpit Elementary School

Tier 2 Facilities:

- Columbus Magnet School
- Marvin Elementary School
- Rowayton Elementary School
- Silvermine Elementary School

Tier 3 Facilities:

- Brien McMahon High School/Center for Global Studies
- Kendall Elementary School
- Tracey Magnet School
- Brookside Elementary School
- Norwalk Early Childhood Center

Tier 4 Facilities (Not included in FCA):

- Norwalk High School/P-Tech
- Ponus Ridge Middle School
- Jefferson Elementary School
- Cranbury Elementary School
- Lower Ponus Ridge STEAM Academy






Accessibility and Building Code Compliance

There were many non-compliant conditions under current Accessibility and Building Codes observed in egress, circulation, toilet rooms (as seen below), services, and educational and support spaces. Non-compliant conditions require remediation up to the current code when significant works are undertaken in a building. The threshold of work to trigger compliance is different for each code, but a good rule of thumb is when 50% or more of the floor area is affected. Many of these items were noted in the 2015 report and were also checked against the 2013 and 2019 Accessibility reports and the 2016 Safety and Security report.



Interiors

Large ares of the schools have finishes past the end of their useful life or that contain hazardous materials, or both. There are also some limited areas of damage. The normal life span of most finishes used in NPS schools is 15-20 years. Any finishes that contain hazardous materials are not dangerous unless damaged and require a remediation process to replace. The majority of these items were noted in the 2015 report and the hazardous materials are carefully monitored through an existing and regularly updated hazardous materials management plan.









Exteriors

Most schools have some amount of damage or excess wear at the exterior walls. Many windows and doors are past the end of their useful life. Of special note for capital planning is that many roofs are due for replacement in 8-10 years. Many of these items were included in the 2015 report and the roof recommendations were updated significantly against the warranty information managed by the Facilities team.





Food Service

NPS is planning to shift to a food service system in which the majority of food is prepared at each school rather than at the Central Kitchen and shipped out. These items were not included in 2015 report. Below is a summary of the proposed changes. Please see the Appendix for a detailed Food Service. Executive Summary.

- Completely redesign and equip the older elementary school kitchens throughout the District to enable them to be self-sustaining production operations with adequate storage, preparation, and cooking equipment, a code approved hood and fire suppression system, requisite back-up hot and cold food holding units, two (2) serving lines (in most cases depending upon the anticipated enrollment figures), and a combination dishwashing/scullery area.

- Completely redesign and equip the remaining middle school kitchens to include the necessary preparation and cooking equipment, requisite back-up holding equipment, a modified food court style serving arrangement, a separate grab-and-go area, and a combination dishwashing/scullery area.

- Redesign the central production kitchen as more of a food storage warehouse, reducing the size of the preparation and cooking areas/equipment, while appropriately designing the walk-in refrigerator and freezer units, a large dry storage area, properly sized/located assembly area, a smaller preparation area with minimal cooking equipment, a means to wash transport carts, and a limited capacity for pot and pan washing.





High Performance

These items were minimally included in 2015 report, including the replacement of inefficient electrical, mechanical, and plumbing systems and equipment. The Newman/DLR Group team took a deeper dive to expand on those recommendations and propose targeted interventions at building envelopes, which were included in the previous "exteriors" section. Our recommendations focus on reducing energy use and should be supplemented in the future by renewable energy sources where applicable.

LIGHTING

- Replace outdated fluorescents with LEDs, upgrade controls, provide mechoshades for glare control

HVAC

- Replace mixed systems with centralized systems and controls optimized for performance and ventilation up to current standards

BOILERS

- Update to more efficient condensing boilers where able given terminal unit limitations

KITCHEN

- Provide EnergyStar equipment and systems to balance additional needs

RETRO-COMMISSIONING

- Pursue professional review and tuning of existing systems

Resources for High Performance Upgrades

As part of our discussions with the District, we recommended the pursuit of alternative funding resources to supplement state and District capital budgets. Some examples are:

The American Rescue Plan ESSER Funds

- https://www.d2l.com/k-12/stimulus-funding/arp/

- For "evidence-based" interventions that support the resiliency of schools post-COVID

EnergizeCT

- <u>https://www.energizect.com/events-resources/energy-articles/</u> Schools-K-12

- Rebates and support services for reducing energy usage in schools

Incentifind

- https://search.incentifind.com/

- Centralized database and services for high performance improvement incentives



Indoor Air Quality in Schools – HVAC Perspective

INTRODUCTION

Indoor air quality (IAQ) is governed by a number of different variables, depending on the type of building, type of HVAC system, and the use of the building. While HVAC is not the only driver of IAQ in a building, it is a major contributor. The major component of an HVAC system that affects IAQ is ventilation. Bringing fresh outdoor air into the space generally contributes to better IAQ by flushing out environmental contaminants introduced by the occupants and materials within the space. Ventilation also helps keep CO2 levels down, which contributes to better IAQ. Air filtration is the other major component of an HVAC system that contributes to IAQ. Filtration is important on both air that is recirculated throughout the building for heating and cooling control as well as on the ventilation air that is being brought into the building.

BRIEF HISTORY OF IAQ IN SCHOOLS

The importance of ventilation air in schools has been known and understood to some degree for decades. Some designs from the 1970s and 80s only included operable windows with central exhaust fans, but many incorporated unit ventilators that bring ventilation air in year round directly to each classroom. Unit ventilators from this era include heating coils to temper the air in the wintertime, but they exclude cooling coils to temper heat and humidity in the summertime. Ventilation rates provided by unit ventilators and other older air handling systems were typically in the range of 10-20 CFM per person.

ASHRAE Standard 62 was first introduced in 1973 which outlined methodology to calculate ventilation rates based on type of building and space. Per this standard, most buildings were required to have ventilation rates of 20 CFM per person. In 1981, to address the energy consumption of ventilation air, ASHRAE

reduced this requirement to 5 CFM per person. Eventually this was found to be inadequate and in 1989 the standard was raised back up to 15-20 CFM per person depending on space type. In 2004, ASHRAE revised Standard 62 to calculate ventilation rates on a per person and per area basis. The net effect of this new calculation slightly reduced the overall ventilation rate provided for most buildings, but provided for a more common baseline of ventilation per floor area regardless of number of occupants. For a school classroom, this requirement is 10 CFM per student and 0.12 CFM per square foot. For an 800 square foot classroom with 25 students plus teacher, this equates to 356 CFM total for the classroom. Based on the old standard of 20 CFM per person, the requirement would have been 520. High levels of air filtration has not always been considered an important factor in indoor air quality for schools. In the past, air filters were generally used to filter out large dust and debris particles, both for IAQ reasons and to protect the HVAC equipment from damage. The equivalent MERV rating of these types of filters was often MERV 6 to MERV 8. This has been the general practice for a long time, up until recently. Building codes still do not mandate minimum levels of particulate filtration, either for recirculated air or ventilation air.

CURRENT VENTILATION CODES AND BEST PRACTICES

The current ventilation requirement for a school classroom based on the 2018 Connecticut Building Code, which adopts the 2015 International Mechanical Code, is still 10 CFM per person and 0.12 CFM per square foot. This is how we design ventilation systems for new schools today. There is still no requirement for air filtration, but we now typically provide MERV 13 filters for air systems serving classrooms which are much better than MERV 8 filters. MERV 13 filters are effective at capturing most small particles beyond just dust and debris.



Although the total rate of ventilation provided to classrooms has not changed since 2004, the method of delivery has changed over time. Older HVAC systems utilized common air handling units that serve multiple classrooms and deliver a mix of fresh outdoor air and recirculated air. These units return air from multiple classrooms through ductwork, then mix that air with fresh outdoor air inside the unit, heat or cool it as necessary and then deliver back to the classrooms. Return air and outdoor air in these systems was often only filtered to MERV 8, but in some cases better filters were used such as MERV 11 or MERV 13. Today, we often design schools with Dedicated Outdoor Air Systems (DOAS). These systems handle only fresh outdoor air and deliver it to each classroom separately via ductwork. "Old" exhaust air is removed from each classroom and brought back separately to the DOAS unit which recovers energy from the exhaust airstream and then blow it out of the building. Incoming outdoor air is filtered through MERV 13 filters, and there is no return air necessary to filter. The major benefit of this system is being able to deliver precisely the right amount of ventilation air to each classroom while not mixing air with other classrooms. Energy recovery is also a major benefit, although unrelated to IAO.

DOAS systems are fast becoming the standard design for schools and many other types of buildings for their many benefits to IAQ and energy efficiency. DOAS systems do an excellent job of handling the overall ventilation rate, method of delivery, and filtration for each space such that they represent the current best practice for school HVAC design.

Safety and Security

The most recent security systems assessment involved a visit to sixteen school buildings for the Norwalk School District. The assessment was focused on the overall condition of existing systems related to security and video surveillance systems, and changes that may have implemented from previous concerns mentioned in a security report from 2016.

Based on information from the 2016 report, it was observed that previously flagged issues related to the existing security and video surveillance systems have been partially addressed. Issues still remain primarily related to the condition of devices and/or coverage. Installation of access control devices have been provided for most schools. Video surveillance coverage upgrades were observed and should continue to be implemented. The condition of the existing intrusion detection devices should be fully assessed for verification of proper functionality of sensors. This assessment should include verification of proper functionality of door hardware related items. A mass notification/panic alarm is not currently implemented. Installation of this system is highly recommended.

In addition, it was brought to the team's attention that the Norwalk School District has adopted a district-wide approach for video surveillance and access control monitoring (Milestone and S2 security). The implementation of a district-wide system allows for remote monitoring of all buildings by first responders which provides an extra layer of security during an emergency. It is highly recommended that as upgrades are being implemented in the existing building, that this approach continues to get executed as it will greatly improve the level of security for all building occupants.









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CENTRAL PREPARATION KITCHEN

ARCHITECTURAL	PRIORITY	CONDITION
	1-2	
	3	
BUILDING SYSTEMS		
Replace/add exit signage with integral batteries, replace building and pole mounted site lighting, replace all interior lighting, replace fire alarm system, relocate loose telcom equipment	1-2	С
Replace domestic water heater, replace heating hot water pump, replace roof exhaust fans and rooftop AHU, replace battery powered emergency lights, replace main electrical distribution, panels, and receptacles, add intercom system, video surveillance system, and access control system	3	
FOOD SERVICE	•	
	1	D
	2	
CENTRAL PREPARATION KITCHEN 352 MAIN AVE	1	D

Each of the following pages details the overall conditions score and ranked priority for the 16 locations included in the Facilities Conditions Assessment. Each page also gives an overview of the Priority 1, 2, and 3 items for each school.





FOX RUN ELEMENTARY SCHOOL



ARCHITECTURAL		PRIORITY	CONDITION
		1-2	С
Repair of walls, soffits, and canopies, replacement of secure vestibule, replacement of millwork, doors, and finishes	windows and doors, provision of a large areas of floor, wall, and ceiling	3	
BUILDING SYSTEMS			
Replace boilers		1-2	С
Add backflow preventer to domestic water service, re heaters, replace plumbing fixtures, replace heating ho fin-tube radiation; oil pumps, replace air handling units gym blower coil, install central air conditioning to repl controls with DDC system, replace site lighting, indoo exit signage, replace main electrical distribution, pane	place indirect and electric water of water heat exchanger, pumps, and s, packaged RTU, exhaust fans, and ace window units, replace pneumatic r lighting, emergency lighting, and els, and receptacles	3	
FOOD SERVICE			
		1	D
Replace preparation table with sinks, replace wall cab	inets, replace serving counter	2	
FOX RUN ELE	EMENTARY SCHOOL		
228 FILLOW S	STREET		
PK-5			
CONSTRUCT	ION 1958/1996		
53.336 SF TC	TAL GROSS AREA		





NARAMAKE ELEMENTARY SCHOOL



ARCHITECTURAL		PRIORITY	CONDITION
Review of scupper placement on roof, repair	irs at roofs and canopies	1-2	С
Replacement of windows, doors, and interior and hardware	or finishes, provision of compliant roof access	3	
BUILDING SYSTEMS			
Replace electric tank water heater, replace a system from boiler room and remove existi	roof exhaust fans and intakes, extend DDC ng pneumatic controls	1-2	B-C
Replace gym heating and ventilating unit, a split systems in media center, install centra replace electric panels throughout, replace controls, replace emergency lighting battery	dd cooling, replace perimeter radiation, replace I air conditioning to replace window AC units, interior and exterior lighting and lighting y units and exit signs	3	
FOOD SERVICE		•	
		1	D
Replace shelving units in dry storage room	(4) and cashier's counter	2	
NA	RAMAKE ELEMENTARY SCHOOL		
16	KING STREET		
PK	-5		
СО	NSTRUCTION 1961/2014		
49.	876 SE TOTAL GROSS AREA		





NATHAN HALE MIDDLE SCHOOL



ARCHITECTURAL	PRIORITY	CONDITION
Repairs at loading dock, provision of snow guards, investigation and remediation of damage at exterior wall of orchestra room	1-2	С
Repairs and replacements at exterior walls and doors, renovation of toilet rooms, replacement of interior finishes, millwork, doors, and door hardware	3	
BUILDING SYSTEMS		
Remove or block up unused p-traps at locker room showers	1-2	B-C
Remediate rust and re-paint exterior gas piping, replace large gas-fired heating & ventilating units serving classrooms, replace main electric switchgear, distribution, panels, and receptacles, replace interior lighting, lighting controls, and emergency lighting	3	
FOOD SERVICE		
	1	D
	2	
NATHAN HALE MIDDLE SCHOOL		
176 STRAWBERRY HILL AVENUE		
6-8		
CONSTRUCTION 1952/2017		

98,505 SF TOTAL GROSS AREA





ROTON MIDDLE SCHOOL



ARCHITECTURAL	PRIORITY	CONDITION
Investigation and remediation of damage at exterior wall of band room, repair at sink insulation, repairs at roof, replacement of window panes and elevator lights, provision of door hardware	1-2	С
Repairs and replacement at roof, walls, windows, and doors, renovation of toilet rooms, replacement of interior finishes, operable partitions, equipment, millwork, and doors	3	
BUILDING SYSTEMS		
Replace emergency lighting and exit signage	1-2	B-C
Install backflow preventer on domestic water service, replace indirect fired water heater, replace perimeter steam radiation and cabinet unit heaters, replace heating & ventilating units serving gym and administration area, replace interior lighting and controls throughout, replace main electric switchgear, distribution, or panels	3	
FOOD SERVICE		
Repair and refinish problem areas of walls and ceiling, address corrosion on various equipment items, or replace, eliminate 4" step into the walk-in refrigerator and freezer, thereby reducing associated liability, requires installation of new walk-in units, install trim strips at left side of walk-in assembly as area is very difficult/impossible to properly maintain	1	С
Replace utility carts (4)	2	
ROTON MIDDLE SCHOOL 201 HIGHLAND AVENUE GRADES 6-8 CONSTRUCTION 1967/2007 98.390 SE TOTAL GROSS AREA	1	С





WEST ROCKS MIDDLE SCHOOL



ARCHITECTURAL	PRIORITY	CONDITION
Replacement of roof, provision of door hardware work, investigation and remediation of water ponding at second floor restroom, repairs at canopies, investigation and remediation of exterior louver, replacement of rubber baseboard	1-2	B-C
Repairs at roofs, walls, and apertures, renovation of toilet rooms, repair and replacement of interior walls, finishes, bleachers, millwork, and hardware	3	
BUILDING SYSTEMS		
Replace roof mounted exhaust fans that are nearing end of useful life	1-2	В
Replace duplex ejector pumps, replace vertical inline heating pumps, replace six RTU's above administration/cafeteria wing and gas-fired makeup air unit serving kitchen, replace aging perimeter radiation, install central air conditioning system when window AC units reach end of useful life, replace oldest electrical panels and power distribution, replace indoor fluorescent lighting and lighting controls with LED and new controls, replace indoor emergency lighting twin-head battery packs and exit signs	3	
FOOD SERVICE		
	1	В
	2	
WEST ROCKS MIDDLE SCHOOL 81 WEST ROCKS ROAD GRADES 6-8 CONSTRUCTION 1955/1998/2006 100.650 SE TOTAL GROSS AREA	1	B



WOLFPIT ELEMENTARY SCHOOL



ARCHITECTURAL		PRIORITY	CONDITION
Replacement of windows and doors, p	rovision of snow guards	1-2	C-D
Replacement and repairs at roofs, wall replacement of interior finishes, fixture	s, exterior egress, renovation of toilet rooms s, and glazing, provision of secure vestibule	3	
BUILDING SYSTEMS			
Replace boilers, replace and add batter signs	ry powered emergency light fixtures, replace exit	1-2	С
Replace indirect hot water heater if stil and hot water pumps, replace air hand fans, replace pneumatic controls with lighting to LED, replace main electrical system	l in use, replace steam to hot water heat exchanger ling units, replace roof mounted general exhaust DDC system, replace or retrofit exterior and interior switchgear and distribution, replace fire alarm	3	
FOOD SERVICE			
Replace corroded, mobile cashiers sta	nd currently elevated atop a milk crate	1	D
Replace work table with overhead uten counter	sil rack, replace 2-shelf utility cart, replace serving	2	
	WOLFPIT ELEMENTARY SCHOOL		
	1 STARLIGHT DRIVE		
	K-5		
	CONSTRUCTION 1965/1998		
	50,560 SF TOTAL GROSS AREA		





COLUMBUS MAGNET SCHOOL



ARCHITECTURAL		PRIORITY	CONDITION
Provide safety markings at low stage e access, investigation and repair at gym	ntrance, repairs at windows, replacement of roof n roof, provision of door hardware and snow guards	1-2	С
Repairs and replacements at exterior walls and doors, replacement of gym fixtures and finishes, provision door hardware, replacement of millwork and non-compliant sinks and handrails		3	
BUILDING SYSTEMS			
		1-2	В
Replace indirect and electric tank water heaters, replace wall-mounted split system in faculty lounge, install central air conditioning to replace window AC units, replace fluorescent lighting with LED		3	
FOOD SERVICE			
		1	D
Replace all serving counters due to age (cold food counter)	e, condition, and lack of breath guard protection	2	
	COLUMBUS MAGNET SCHOOL		
	46 CONCORD STREET		
	K-8		
	CONSTRUCTION 1938/2004		
	49,356 SF TOTAL GROSS AREA		





MARVIN ELEMENTARY SCHOOL



ARCHITECTURAL	PRIORITY	CONDITION
Repair and replacement of floor finishes	1-2	С
Replacement and repairs at exterior walls, windows, and doors, renovation of toilet rooms, replacement of interior finishes and non-compliant hardware	3	
BUILDING SYSTEMS		
	1-2	С
Replace electric tank water heater and smaller point of use water heaters, replace plumbing fixtures and roof drains, replace gas piping on the roof, replace packaged RTU's, replace roof mounted exhaust fans, replace electric unit heaters throughout, replace HVAC controls with newer DDC system, replace interior and exterior lighting and emergency lighting, replace exit signs, replace electrical distribution, panels, and receptacles	3	
FOOD SERVICE		
Replace shelving units (3) and scullery sink	1	D
	2	
MARVIN ELEMENTARY SCHOOL 15 CALF PASTURE ROAD K-5 CONSTRUCTION 1971/1998 56 800 SE TOTAL GROSS AREA	2	С



ROWAYTON ELEMENTARY SCHOOL



ARCHITECTURAL	PRIORITY	CONDITION
Replacement and repairs at roofs, roof access, and exterior equipment	1-2	С
Replacement and repair at exterior walls, windows, and doors, replacement of finishes and millwork at interior	3	
BUILDING SYSTEMS		
Replace unit ventilators and air handling units in 1970s wing	1-2	В
Replace main electrical switchgear and remaining original panel	3	
FOOD SERVICE		
	1	С
	2	
ROWAYTON ELEMENTARY SCHOOL		
1 ROTON AVENUE		
K-5		
CONSTRUCTION 1939/2019		

62,889 SF TOTAL GROSS AREA





SILVERMINE ELEMENTARY SCHOOL



ARCHITECTURAL	PRIORITY	CONDITION
Replacement of equipment at exterior, investigation and remediation of water issues at roof, provision of snow guards, replacement of exterior glazing	1-2	С
Repairs and replacement at roofs, walls, windows, and doors, renovation of toilet rooms, repair and replacement of interior finishes and millwork, provision of door hardware	3	
BUILDING SYSTEMS		
Fix central battery for emergency lighting or replace emergency lights, fix or replace exit signage	1-2	B-C
Replace indirect fired water heater and electric storage tank water heater, replace boilers and hot water pumps, replace air handling units and exhaust fans, replace pneumatic controls with a DDC system	3	
FOOD SERVICE		
Properly position convection oven beneath hood to provide a minimum 6" overhang at both ends, replace 2-shelf utility cart with heavily corroded perimeter bumper and 3-shelf utility cart, replace handwashing sink	1	D
Replace hot food holding cabinet, hot food serving counter and balance of serving counter assembly	r 2	
SILVERMINE ELEMENTARY SCHOOL		
157 PERRY AVENUE		
K-5		
CONSTRUCTION 1965/2019		
48,626 SF TOTAL GROSS AREA		





BRIEN MCMAHON HIGH SCHOOL



ARCHITECTURAL	PRIORITY	CONDITION
Repairs at roof, repairs at roof access and light fixtures, provision of door hardware, renovation of in-school detention room	1-2	В
Repairs at roof, exterior, and interior doors, floors, and walls, renovation of locker rooms, provision of permanent stair at Community room, replacement of millwork	3	
BUILDING SYSTEMS		
Lighting in some areas is in marginal condition and not working properly, half of the egress lights with integral batteries need to be replaced, illuminated signage leading to areas of refuge is fading and needs to be replaced, unused electrical equipment, such as tombstone floor receptacles should be removed (hazard), PA and phone systems fail periodically, they should be extensively serviced and possibly overhauled	1-2	В
Receptacle quantity in classrooms is not adequate to support student laptop charging, video surveillance does not fully cover the building, additional cameras should be added	3	
FOOD SERVICE		
Repair damaged walls, remediate/repaint where necessary and infill dangerous recess at left end of walk-in refrigerator	1	С
Increase lighting density at suspect areas, replace thresholds at walk-in refrigerator and freezer doors, install closure panels at rear, left side of walk-in refrigerator within kitchen, and at front left of walk-in refrigerator within serving area where proper sanitation practices cannot be employed, repair or replace inoperative hood systems in the servery	2	
BRIEN MCMAHON HIGH SCHOOL		
300 HIGHLAND AVENUE		
GRADES 9-12		
CONSTRUCTION 1960/2006		
135.552 SE TOTAL GROSS AREA		





BROOKSIDE ELEMENTARY SCHOOL



ARCHITECTURAL	PRIORITY	CONDITION			
Repairs at roofs and interior walls, repairs at roofs and inter	1-2	В			
Repairs at exterior walls and interior doors, replacement of floor	3				
BUILDING SYSTEMS					
		1-2	В		
Replace domestic water heaters, replace duplex sump pum RTU's and add cooling to gym	3				
FOOD SERVICE					
		1	B-C		
Replace corroded casters on hot food serving counter, work table with can opener, and utility cart, finish or replace wood fascia directly behind tray slide, replace laminated table at serving area					
BROOKSIDE ELEME	ENTARY SCHOOL				
382 HIGHLAND AV	ENUE				
GRADES PK-5					
CONSTRUCTION 1	998/2004				
68.727 SF TOTAL G	ROSS AREA				





KENDALL ELEMENTARY SCHOOL



ARCHITECTURAL	PRIORITY	CONDITION			
Repairs at exterior walls and roofs, pro functional tuning of doors, ceiling tiles	1-2	B-C			
Replacement of gym windows and doo rooms, replacement and repair of inter sink	3				
BUILDING SYSTEMS					
		1-2	В		
Replace gas-fired domestic water heater, replace or upgrade DDC systems with newer system, replace interior lighting, emergency lighting, and lighting controls, replace exit signs					
FOOD SERVICE	•				
	1	В			
Install missing sections of coved base in kitchen and a coved base in the serving area of the cafeteria					
	KENDALL ELEMENTARY SCHOOL				
	57 FILLOW STREET				
	K-5				
	CONSTRUCTION 1951/2018				





NORWALK EARLY CHILDHOOD CENTER



ARCHITECTURAL	PRIORITY	CONDITION
Repairs at high-use areas	1-2	A-B
Investigation and repairs at exterior walls and soffits	3	
BUILDING SYSTEMS		
Install protective covers on electrical devices and switches in gymnasium space	1-2	В
Re-wire telcom equipment in a more orderly fashion	3	
FOOD SERVICE		
	1	
	2	
NORWALK EARLY CHILDHOOD CENTER		
11 ALLEN RD		
PRE-K		K
CONSTRUCTION UNKNOWN/2016		

17,295 SF TOTAL GROSS AREA





TRACEY MAGNET SCHOOL



ARCHITECTURAL	PRIORITY	CONDITION	
Provision of exterior equipment, provision	1-2	С	
Repairs and replacements at roofs, wall repair and replacement of interior, finish	3		
BUILDING SYSTEMS	<u></u>	<u></u>	
		1-2	В
Replace electric storage tank water heat ERV's, replace main electric service and air conditioning	3		
FOOD SERVICE			
	1	A	
Replace inadequately sized hood to fully encompass all cooking equipment, install right hand drainboard on the scullery sink			
	TRACEY MAGNET SCHOOL		
	20 CAMP STREET		
	K-5		K
	CONSTRUCTION 1939/2004		











THE STRANDS

A TIERED APPROACH

After completing the educational adequacy and facilities conditions assessments, the Newman/DLR Group team undertook several rounds of analysis to balance the assessed factors. Importantly, the Superintendent and her Cabinet and the Facilities team were consulted regularly during this process. The end result was a tiered approach to the Facilities Plan Study recommendations, broken down over the next twenty years, as seen in the timeline below. Each school was tiered as a whole, but there were also several multi-school projects of similar and targeted works pulled forward. This tiered approach is a key piece of the new framework for decision-making as the District pursues its educational and educational facilities goals. To support the goal of this report as a dynamic document that adapts meaningfully as time passes and the context of the District changes, the team recognizes the need to build in opportunities for review. The Newman/DLR Group team recommends a five-year check-in to validate and verify the progress and path of the report, as well as a ten-year full reassessment.





Decision-Making Toolkit

ASSESSMENT CRITERIA							
FACILITIES	s co	NDITION	EDU	CATIONAL ADEQUACY	CY PRIORITY		
Excellent	A	No visible defects, new or near new condition, may still be under warranty if applicable	5	Functions excellently	Currently Critical	1	Requiring immediate action including a cited safety hazard and areas of accelerated deterioration, returning a building component to normal operation.
Good	В	Good condition, but no longer new, may be slightly defective or deteriorated, but is overall functional	4	Functions well - good enough condition to support educational needs	Potentially Critical	2	Requiring action in the next year including components experiencing intermittent operations, potential life safety issues, and rapid deterioration, returning a building component to normal operation.
Adequate	С	Moderately deteriorated or defective, but has not exceeded useful life	3	Functions - condition is adequate, but could be better to support educational needs	Necessary – Not Yet Critical	3	Requiring appropriate attention to preclude predictable deterioration, potential downtime, additional damage, and higher costs to remediation if deferred further.
Marginal	D	Defective or deteriorated in need of replacement; exceeded useful life	2	Exists - baseline functionality but does not support educational needs	Recommended	4	Representing a sensible improvement to the existing conditions (not required for the most basic function of the facility; however, will improve overall usability and/or reduce long-term maintenance costs).
Poor	F	Critically damaged or in need of immediate repair; well past useful life	1	Does not exist or needs replaced	Does Not Meet Current Code but Legacied	5	No Action required at this time but should substantial work be undertaken correction would be required.

TIERED GROUPING

Critical Maintenance (Year 0-1):

- Repairs and replacement of damaged and critical condition architectural, mechanical, electrical, plumbing, and food service systems and equipment

Critical Multi-School Projects:

- Fixtures, Furnishings, and Equipment Upgrades - Part 1

Tier 1 Facilities (Years 2-10):

- *Fox Run Elementary School
- *Naramake Elementary School
- *West Rocks Middle School
- *Columbus Magnet School + South Norwalk Pre-K-5
- Central Preparation Kitchen
- Nathan Hale Middle School
- Roton Middle School
- Wolfpit Elementary School

Tier 1 Multi-school Projects:

- Lighting Upgrades
- Fixtures, Furnishings, and Equipment Upgrades - Part 2

*Denotes schools prioritized within Tier 1.

Tier 2 Facilities (Years 11-15):

- Marvin Elementary School
- Rowayton Elementary School
- Silvermine Elementary School

Tier 2 Multi-School Projects:

- Repairs and Replacements at

- Safety and Security Upgrades

- Tracey Magnet School

Exteriors

Tier 3 Facilities (Years 16-20):

- Brien McMahon High School/ Center for Global Studies

- Brookside Elementary School
- Kendall Elementary School
- Norwalk Early Childhood Center
- Upper Ponus Ridge STEAM Academy

Tier 4 Facilities (Recent):

- Cranbury Elementary School
- Jefferson Elementary School
- Lower Ponus Ridge STEAM Academy
- Norwalk High School/P-TECH





Scope of Tiered Groupings

Critical Maintenance and Improvements (Year 0-1)

- Critical Architectural, MEP, and Food Service Maintenance Items

- FF+E Upgrades - Part 1

- Flexible furnishings and Mechoshades for Tier 1 schools

Tier 1 (Years 2-10)

- Tier 1 Facilities

- Comprehensive renovations and targeted additions - *Prioritization of Tier 1 schools with the most
- comprehensive ventilation and air conditioning needs - *Prioritization of new South Norwalk Pre-K-5 and
- Columbus Magnet schools to meet growing enrollment needs

- Lighting Upgrades

- Replacement of all fluorescent fixtures with LED
- Provision of high performance control systems

- FF+E Upgrades - Part 2

- Flexible furnishings and Mechoshades for Tier 2+3 schools

Tier 2 (Years 11-15)

- Tier 2 Facilities

- Comprehensive and targeted renovations and targeted additions

- Safety and Security Upgrades
 - Provision of secure vestibules
 - Provision of security study-recommended items (MEP)
 - Provision of educational adequacy public access
 - recommendations ("schools as community centers")
 - Provision of compliant egress conditions
 - Provision of sprinklers where none exist
- Exterior Replacements and Repairs
 - Replacements at roofs, windows, doors nearing or past end of useful life
 - Repairs at walls, roofs, windows, and doors
 - Reminder this includes MEP items at exteriors and roofs

Tier 3 (Years 16-20)

- Tier 3 Facilities - Targeted renovations

*For further details, please see the Appendix for Facilities Conditions Assessments and the relevant pages in the Educational Adequacy sub-section of The Strands.





CONCLUDING REMARKS

From the start, the Norwalk School District Facilities Plan Study was aspirational. Norwalk Public School District core beliefs are:

Our youth are pushing, and the workforce is pulling - education and educational facilities **must change** to meet those needs
Educational equity does not mean parity – it means "meeting every student where they are"

- To balance these aspirations and the budget – the Facilities Plan Study provides a framework for decision-making for the next 20 years

How do you take multiple data points across enrollment projections, capacity, facilities conditions, and educational adequacy assessments and create from them a robust framework for decision-making?

In the body of this report, the Newman/DLR Group team laid out our data-driven, research informed, and community inspired process. This process was completed over **12 weeks** and included **33 stakeholder meetings** that engaged **over 250 faculty, students, and community leaders**.

The findings and recommendations of this report are in many ways unsurprising - school districts all over the country are struggling with aging buildings, limited budgets, and how to be adaptable and resilient in the face of drastic change. The District has a community that is enthusiastic and committed to new kinds of learning and learning environments in the pursuit of educational excellence and equity. This facilities plan study presents an opportunity to strategically and holistically leverage needed deferred capital maintenance projects.





VI. GLOSSARY

Glossary of Terms

Active | Passive Surveillance:

• Surveillance can be passive or active, depending on the way the data is collected. In passive surveillance, criteria are established for reporting diseases, risk factors or health-related events. Active surveillance is used when there is an indication that something unusual is occurring.

Access Control:

• Is the selective restriction of access to a place or other resource. The act of accessing may mean consuming, entering, or using. Permission to access a resource is called authorization.

Acoustics:

• A science that deals with the production, control, transmission, reception, and effects of sound.

Active Learning:

- It encompasses an entire curriculum, even when teachers rarely deliver traditional lectures. Puts the emphasis on problem solving over fact memorization. The "-based" learning.
- Challenge-based helps students tackle real-world problems with meaningful use of technologies. These are a way for students to find and solve a real issue and take action.
- Inquiry-based is a form of active learning that starts by posing questions, problems or scenarios rather than simply presenting established facts or portraying a smooth path to knowledge. The process is often assisted by a facilitator.
- Project-based learning leaves teachers with a lot of latitude for designing both hypothetical and real-world activities, which is where it diverges somewhat from its counterparts.

AP [Advanced Placement]:

• The ability to test out of college requirements differs from dual enrollment and college credits that apply to a degree.

Applied Learning:

• Applied Learning refers to an educational approach whereby students learn by engaging in direct application of skills, theories and models, and includes

everything from STEM [Science, Technology, Engineering & Math], to CTE [Career & Technical Education]. It 'applies" theory to application.

Blended Learning:

• Is a pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in their learning process. It allows for a mix of personal instruction and on-line learning. The focus is always on collaboration.

BOE:

• Board of Education

Bold [Bridging Organizational Leadership And Design]:

• A DLR Group initiative focused on leveraging innovative learning spaces by implementing professional development specifically focused on how space can connect and enable learning.

Building Systems:

• Typically thought of as the mechanical, electrical and plumbing systems, this definition should be broadened to include the exterior walls (or envelope), low voltage systems such as phones, alarms, announcements, technologies, and audiovisual items to better analyze life cycle cost.

Certifications:

• One of the goals of a CTE program is to give students the ability to gain industry recognized credentials while still in high school.

Class Size:

• Maximum number of students per class, typically stipulated by Board policies. Often with a caveat regarding "overages" due to enrollment growth that allow for the implementation of portables or additions. Class size can range from 18-24 in lower grades to 28-30 in upper grades.

Collaboration Space:

• Spaces that allow for small group and/or team interactions which typically include flexible furniture, white boards and technology.

College & Career Pathways:

• Recognition that students today may be engaged in multiple careers throughout their lifetime. The term college and career pathways acknowledges that scaffolded learning allows any student to pursue either/ or additional academic skills or applied learning experience.

Concurrent Enrollment:

• Programs that allow students to be enrolled in two separate, academically related institutions.

Cross-Disciplinary Collaboration:

• Beyond the typical collaborations such as Math/ Science, ELA/ Tech Ed, there are more and more cross-disciplinary connections that are driving invention. Maker spaces/STEM curricula can encourage this conversation.

CTE [Career & Technical Education]:

• Applied Learning that focuses on careers. Nationally, there are 16 "pathways" or "clusters" that have been identified. Federal funding and national student organizations are in alignment supporting an increasingly robust focus on how these pathways can support all students through enhanced engagement in high school.

Dual Enrollment:

• Programs that allow students to be enrolled in two separate, academically related institutions. Generally, it refers to high school students taking college or university courses.

Dynamic | Flexible | Diverse Spaces:

• The configuration of spaces [rooms] can have a direct impact on the activities housed within the spaces. Ranging in size of students participating [small, medium, and large] to types of activities such as create, tinker, think, contemplate, instruct, lecture, etc. All spaces should enable the intended instructional goal(s).

Ease of Maintenance:

• Building systems and materials should be specified based on local practice and knowledge in order to be appropriately and cost effectively maintained.

ES:

• Elementary School

Front Door Experience:

• The integration of stakeholders and community needs to be carefully considered regarding risk.

FTE:

• Full-time Employee

Global Connections:

• The ability to connect with "peer" institutions both nationally and globally through educators, students and curriculum.

High Performance Systems:

• Building systems designed to minimize life-cycle costs.

Home Room:

• The classroom in which a teacher records attendance and makes announcements.

HS:

• High School

Incubator | Business Connection Spaces:

• Spaces within a school identified as where connections can happen. Sometimes a room, sometimes a space, but always intentional.

Indoor Air Quality:

• Today, the indoor air quality can include monitoring everything from carbon monoxide to common allergens.

Innovation:

• The act or process of introducing new ideas, devices, approaches or methods. The wide spread adoption of invention/change for the good.

Instructional Technology Support Coaches [Scribe On The Side] Model:

• At the end of the day all teaching and learning is personal.

Instructional Methods:

- Individual: One person working on task by his/her self in class.
- Peer-to-peer: A two-person situation for short- or long-term needs in class.
- Small group: A 3-5 person group for short-term needs in class. Small group learning is an educational approach that focuses on individuals learning in small groups and is distinguished from learning climate and organizational learning. These activities require the learners to work together to achieve a learning goal.
- Large group: Group work is defined as more than four individuals working together to complete a task or assignment. In the classroom, group work can take many forms; however, the goal remains the same get students to interact with each other and collaborate to complete a unified task.
- Whole group: An in-class session where the teacher is sharing information to the entire class.
- Team work: This type of work teaches students the fundamental skills associated with working as a collective unit toward a common goal. This teamwork introduces a variety of skills that will be valuable for students later in the workforce, such as communication, compromise and collective effort; these projects usually take more time. There is an expectation that these will be worked on outside of class time, as these are typically project-based with longer completion time frames.

International Baccalaureate [IB]:

• Education programs aimed to do more than other curricula by developing inquiring, knowledgeable and caring young people who are motivated to succeed to build a better world through intercultural understanding and respect.

Life Cycle Cost:

• The total cost of building systems including front-end capital costs, the costs of operating and the costs of maintaining.

Life Skills [For Workplace]:

• Refers to the 4 "C's": Communication, Critical thinking, Creativity and Collaboration; all skills that employers look for in potential employees.

Light Sources:

• Light sources can be either natural or artificial. Light is a form of electromagnetic energy that, in the case of natural light, comes from the sun as the source and, in the case of artificial light, illuminates via energy from another source.

Maker Spaces | STEM | Tinker Spaces:

• Spaces that allow for both dry and wet [with water] activities to encourage "hands on" creative thinking.

MS:

• Middle School

Multi-Generational Facilities:

• Schools that add community programs leveraging school facilities as a community asset for all.

Nutrition | Farm to School | Agriculture:

• Farm to school enriches the connection communities have with fresh, healthy food and local food producers by changing food purchasing and education practices at schools and early care and education sites. As it relates to education: students participate in education activities related to agriculture, food, health or nutrition.

Online and Remote Learning:

• The availability of on-line and remote learning allows for expertise to be provided wherever you are.

Owned Classrooms:

• Typically refers to the practice that teachers are associated with a specific school classroom. This 'ownership' syndrome impacts calculations for capacity and/or linkages between the impacts of space on curriculum.

Partner Connections:

• Acknowledgment that the shift to "lifelong learning" requires multiple partners. Partner connections can include other academic institutions ranging from peer districts, community colleges and universities; business and industry: ranging from local businesses to industry associations; and of course, local government and agencies: ranging from town and recreation to government grants.

Passive | Territorial Reinforcement:

• The use of physical attributes that express ownership such as fences, signage, landscaping, lighting, pavement designs, etc.

Pathways:

• A CTE pathway is a sequence of two or more CTE courses within a student's area of career interest.

Scribe on the Side:

• Describes teachers as coaches versus lecturers at the front of a classroom often referred to as "sage on the stage."

Simultaneous | Multi-Modal Teaching Strategy:

• Multi-modal teaching is a style in which students learn material through a number of different sensory modalities. For example, a teacher will create a lesson in which students learn through auditory and visual methods, or visual and tactile methods. Simultaneous means several types of situations are being orchestrated throughout the class at the same time.

Spaces for Educators to Learn | Faculty Development:

• Often thought of as the teacher's workroom, or "that place in the library," this space is enhanced with the tools that enable the connection between space and curriculum to occur.

Stakeholders:

• Everyone connected to the District: students, teachers, staff, administration, Board of Education, parents, affiliated academic institutions, local business and industry, and professional organizations.

STEM:

• Interdisciplinary curriculum emphasizing (S)science, (T)echnology, (E) ngineering and (M)ath.

STEAM:

• Adds (A)rt to a STEM curriculum.

Student Engagement Index [SEI]:

• Is a survey looking to understand how the built environment impacts student engagement. It is a primary, peer-reviewed research project conducted by DLR Group to better confirm the correlation between space and engagement. With improved student engagement comes better student outcomes.

Teacher Engagement Index [TEI]:

• Is a survey looking to understand how the built environment impacts student engagement from the educators' perspective. It is a primary, peer-reviewed research project conducted by DLR Group to better confirm the correlation between space and engagement. With improved teacher engagement comes better student outcomes.

Team Building | Sports:

 How do the team building aspects of sports support the need for the 4 "C's". Especially when considering the need for increased collaboration in today's world.

Technology 1:1:

• Means every student has access to a device, be it an iPad, a Chromebook, or a computer.

Thermal Comfort:

• Thermal comfort is the condition of the mind that expresses satisfaction with the thermal environment. This term links the user experience and perception. For instance, if you are sitting next to a window on a winter day you may feel cold because of your proximity to the temperature of the glass surface versus the actual room temperature. Most people will feel comfortable at a range of temperatures around 68-72° F.

The "Arts":

• Anything that involves that creative process, although often defined as performing and/or visual arts.

The 4 "C's":

• A 21st Century Learning Term referencing the need to shift from the 3 "R's" [wRiting, Reading, and aRithmetic] to Creativity, Critical Thinking, Collaboration and Communication.

Teaching Styles [Each Make A Difference In Terms Of Design Solutions]:

- The Authority, or lecture style.
- The Facilitator, or activity style.
- The **Delegator**, or group style.
- The **Hybrid**, or blended style.

Variety in Experiences:

• A reference to student-centric learning and the need to acknowledge that for every student to succeed, education should address the multiple intelligences any individual excels at.

Ventilation:

• Typically refers to the amount of outdoor air introduced into interior spaces as part of the mechanical system.

Wayfinding:

• A system that helps a facility user navigate the built environment. Architecture can incorporate integral wayfinding that is based on a sense of place.

Whole Group:

• Whole group instruction is direct instruction using traditional textbooks or supplemental materials with minimal differentiation in either content or assessment. It is sometimes referred to as whole class instruction. It is typically provided through teacher-led direct instruction.
VII. INTEGRATED COST SUMMARY

COST SUMMARY

AN INTEGRATED APPROACH

After the educational and facilities conditions assessments were completed, our teams integrated the findings into clear proposals for the next 20 years. This process included several rounds of review and comment by the Core Planning Group, as well as regular examination in comparison to the established goals and values of Norwalk Public Schools. The following pages present the integrated proposals and their costs for each location in order of need, as well as recommendations for several multi-school projects for similar scopes of work. The summary is also presented as it relates to District initiatives and a recommended, proposed timeline. In complement to this cost summary, the District was presented with a comprehensive spreadsheet for their management and planning purposes.



"Like Project" Work Groupings are also included as a summary sheet in the supplemental spreadsheets provided to the District with this report:

- HVAC Upgrades - FF+E Upgrades
- Exterior Replacements and Repairs - Toilet Rooms Renovations
- Safety and Security Upgrades Finish Renovations
- Existing Partitions and Openings Renovations
 - Educational Adequacy Improvements Indoor
 - Educational Adequacy Improvements Outdoor
- Capacity and Enrollment Needs Additions
- Food Service Area Renovations and Additions
- Remaining Architectural and MEP Items





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Cost Summary by Tier

Critical Maintenance (Year 0-1):

- Repairs and replacement of damaged and critical condition architectural, mechanical, electrical, plumbing, and food service systems and equipment

Critical Multi-School Projects:

- Fixtures, Furnishings, and Equipment Upgrades - Part 1

Tier 1 Facilities (Years 2-10):

- *Fox Run Elementary School

- *Naramake Elementary School
- *West Rocks Middle School
- *Columbus Magnet School + South Norwalk Pre-K-5
- Central Preparation Kitchen
- Nathan Hale Middle School
- Roton Middle School
- Wolfpit Elementary School

Tier 1 Multi-school Projects:

- Lighting Upgrades

- Fixtures, Furnishings, and Equipment Upgrades - Part 2 \$218M-228M (\$24M-26M per year)

\$22-28M

\$6-7M

\$28-32M

(\$3-4M per year)

Tier 2 Facilities (Years 11-15):

- Marvin Elementary School
- Rowayton Elementary School
- Silvermine Dual Language
- Magnet School
- Tracey Magnet School

Tier 2 Multi-School Projects:

- Repairs and Replacements at Exteriors - Safety and Security Upgrades
- Tier 3 Facilities (Years 16-20):
- Brien McMahon High School/ Center for Global Studies
- Brookside Elementary School
- Kendall College and Career Academv
- Norwalk Early Childhood Center
- Upper Ponus Ridge STEAM
- Academy

Tier 4 Facilities (Recent):

- Cranbury Elementary School
- Jefferson Elementary School
- Lower Ponus Ridge STEAM Academv
- Norwalk High School/P-Tech Norwalk

\$55-65M

\$45-50M

\$75-85M

(\$9-10M per year)

(\$11-13M per year)

(\$15-17M per year)

No Costing Provided

*Denotes schools prioritized within Tier 1





Overview of Tiered Spending

Critical	\$ 28-35M
Tier 1	\$ 246-260M
Tier 2	\$ 120-135M
Tier 3	\$ 55-65M
Total for the next 20 years	\$ 429-495M (\$21-25M per year)

Breakdown of Expenses



- Enrollment: District-Wide Pre-K and Capacity
- Deferred Capital Maintenance
- Educational Adequacy



Overall Cost Summary

						EXECUTIVE COST SUM	MARY										
			CONSTRUCTIO	ON COSTS (2021)				CON	STRUCTION COSTS	(ESCALATED)			TOTAL P	TOTAL PROJECT COSTS			
PRIORITY / DISCIPLINE	Net Trade Cost (2021)	CM/GC Markups (%)	CM/GC Markups (\$)	Contingency (%)	Contingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Escalation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	Soft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)		
A	В	с	D	E	F	G	н	1	J	ĸ	L	М	N	0	Р		
CRITICAL MAINTENANCE (YEAR 0-1)						1											
CRITICAL MAINTENANCE	\$ 19.832.517	21.50%	\$ 4,263,991	20.00%	\$ 4.819.302	\$ 28.915.809	0.00	0.00%	0.00%	s -	\$ 28,915,809	25.00%	\$ 7,228,952	\$ 36.144.761	\$ 36.144.761		
ARCHITECTURAL	\$ 7,779,456		+ ,,,		+ .,===,===								+ .,,	,,			
MEP	\$ 11,802,061																
FOOD SERVICE	\$ 251,000																
TOTALS	\$ 19,832,517	21.50%	\$ 4,263,991	20.00%	\$ 4,819,302	\$ 28,915,809				\$-	\$ 28,915,809	25.00%	\$ 7,228,952	\$ 36,144,761 \$	\$ 36,144,761		
FF+F LIPGRADES - PART 1	\$ 3,496,063	25.00%	\$ 874.016	20.00%	\$ 874.01	\$ 5 244 095	0.00	0.00%	0.00%	s .	\$ 5 244 095	25.00%	\$ 1311024	\$ 6 555 118	\$ 6 555 118		
TOTALS	\$ 3,496,063	25.00%	\$ 874,016	20.00%	\$ 874,01	5 \$ 5,244,095	0.00	0.0078	0.0076	s -	\$ 5,244,095	25.00%	\$ 1,311,024 \$ 1,311.024	\$ 6,555,118 \$	\$ 6,555,118		
TIER 1 FACILITIES (YEARS 2-10)		1															
FOX RUN E.S.	\$ 6,836,714	21.50%	\$ 1,469,894	20.00%	\$ 1,661,322	\$ 9,967,929	5.00	4.50%	22.50%	\$ 2,242,784	\$ 12,210,713	25.00%	\$ 3,052,678	\$ 12,459,911 \$	\$ 15,263,391		
NARAMAKE E.S.	\$ 6,921,986	21.50%	\$ 1,488,227	20.00%	\$ 1,682,043	\$ 10,092,256	5.00	4.50%	22.50%	\$ 2,270,758	\$ 12,363,013	25.00%	\$ 3,090,753	\$ 12,615,319 \$	\$ 15,453,766		
WEST ROCKS M.S.	\$ 16,735,861	21.50%	\$ 3,598,210	20.00%	\$ 4,066,814	\$ 24,400,885	5.00	4.50%	22.50%	\$ 5,490,199	\$ 29,891,085	25.00%	\$ 7,472,771	\$ 30,501,107 \$	\$ 37,363,856		
CENTRAL PREPARATION KITCHEN	\$ 2,445,376	25.00%	\$ 611,344	20.00%	\$ 611,34	\$ 3,668,064	5.00	4.50%	22.50%	\$ 825,314	\$ 4,493,378	25.00%	\$ 1,123,345	\$ 4,585,080	\$ 5,616,723		
NATHAN HALE M.S.	\$ 15,960,585	21.50%	\$ 3,431,526	20.00%	\$ 3,878,422	\$ 23,270,533	5.00	4.50%	22.50%	\$ 5,235,870	\$ 28,506,403	25.00%	\$ 7,126,601	\$ 29,088,166	\$ 35,633,004		
ROTON M.S.	\$ 13,515,716	21.50%	\$ 2,905,879	20.00%	\$ 3,284,319	\$ 19,705,913	5.00	4.50%	22.50%	\$ 4,433,830	\$ 24,139,744	25.00%	\$ 6,034,936	\$ 24,632,391 \$	\$ 30,174,680		
WOLFPIT E.S.	\$ 10,993,763	21.50%	\$ 2,363,659	20.00%	\$ 2,671,484	\$ 16,028,906	5.00	4.50%	22.50%	\$ 3,606,504	\$ 19,635,410	25.00%	\$ 4,908,853	\$ 20,036,133	\$ 24,544,263		
TOTALS	\$ 73,410,001	9.76%	\$ 7,167,675	22.16%	\$ 17,855,748	\$ 107,134,487				\$ 24,105,259	\$ 131,239,746	25.00%	\$ 32,809,936	\$ 133,918,108 \$	\$ 164,049,682		
TIER 1 MULTI-SCHOOL PROJECTS (YEARS 2-10)																	
LIGHTING UPGRADES	\$ 10,642,917	21.50%	\$ 2,288,227	20.00%	\$ 2,586,229	\$ 15,517,373	5.00	4.50%	22.50%	\$ 3,491,409	\$ 19,008,782	25.00%	\$ 4,752,195	\$ 19,396,716 \$	\$ 23,760,977		
FF&E UPGRADES - PART 2	\$ 6,091,625	21.50%	\$ 1,309,699	20.00%	\$ 1,480,265	\$ 8,881,589	5.00	4.50%	22.50%	\$ 1,998,358	\$ 10,879,947	25.00%	\$ 2,719,987	\$ 11,101,987 \$	\$ 13,599,934		
TOTALS	\$ 16,734,542	21.50%	\$ 3,597,927	20.00%	\$ 4,066,494	\$ 24,398,962				\$ 5,489,767	\$ 29,888,729	25.00%	\$ 7,472,182	\$ 30,498,703 \$	\$ 37,360,911		
TIER 2 FACILITIES (VEAR 11-15)																	
COLUMBLIS MAGNET SCHOOL	\$ 17,694,087	21.50%	\$ 3,804,229	20.00%	\$ 4,299.66	\$ 25,797,979	10.00	4.50%	45.00%	\$ 11.609.090	\$ 37,407,069	25.00%	\$ 9,351,767	\$ 32,247,474	\$ 46.758.837		
MARVIN E.S.	\$ 8.175.477	21.50%	\$ 1,757,727	20.00%	\$ 1.986.641	\$ 11.919.845	10.00	4.50%	45.00%	\$ 5,363,930	\$ 17.283.775	25.00%	\$ 4,320,944	\$ 14.899.806	\$ 21.604.719		
ROWAYTON E.S.	\$ 4,909,164	25.00%	\$ 1,227,291	20.00%	\$ 1,227,29	\$ 7,363,746	10.00	4.50%	45.00%	\$ 3,313,686	\$ 10,677,432	25.00%	\$ 2,669,358	\$ 9,204,683	\$ 13,346,790		
SILVERMINE DUAL LANGUAGE MAGNET SCHOOL	\$ 5,955,695	21.50%	\$ 1,280,474	20.00%	\$ 1,447,234	\$ 8,683,403	10.00	4.50%	45.00%	\$ 3,907,531	\$ 12,590,935	25.00%	\$ 3,147,734	\$ 10,854,254	\$ 15,738,668		
TRACEY MAGNET SCHOOL	\$ 6,891,764	21.50%	\$ 1,481,729	20.00%	\$ 1,674,699	\$ 10,048,192	10.00	4.50%	45.00%	\$ 4,521,686	\$ 14,569,878	25.00%	\$ 3,642,470	\$ 12,560,240	\$ 18,212,348		
TOTALS	\$ 43,626,187	21.89%	\$ 9,551,451	20.00%	\$ 10,635,52	\$ 63,813,165				\$ 28,715,924	\$ 92,529,089	25.00%	\$ 23,132,272	\$ 79,766,456 \$	\$ 115,661,361		
TIER 2 MULTI-SCHOOL PROJECTS (YEAR 11-15)								1									
REPAIRS & REPLACEMENTS AT EXTERIORS	\$ 33.795.774	21.50%	\$ 7.266.091	20.00%	\$ 8,212,37	\$ 49.274.238	10.00	4.50%	45.00%	\$ 22.173.407	\$ 71.447.646	25.00%	\$ 17.861.911	\$ 61.592.798	\$ 89.309.557		
SAFETY & SECURITY UPGRADES	\$ 11.870.367	21.50%	\$ 2,552,129	20.00%	\$ 2.884.499	\$ 17.306.995	10.00	4.50%	45.00%	\$ 7,788,148	\$ 25.095.143	25.00%	\$ 6,273,786	\$ 21.633.744	\$ 31.368.929		
TOTALS	\$ 45,666,141	21.50%	\$ 9,818,220	20.00%	\$ 11,096,872	\$ 66,581,234				\$ 29,961,555	\$ 96,542,789	25.00%	\$ 24,135,697	\$ 83,226,542 \$	\$ 120,678,486		
TIER 3 FACILITIES (YEAR 16-20)			1					1									
BRIEN MCMAHON H.S. / CENTER FOR GLOBAL STUDIES	\$ 20,205,472	21.50%	\$ 4,344,176	20.00%	\$ 4,909,930	\$ 29,459,578	15.00	4.00%	60.00%	\$ 17,675,747	\$ 47,135,325	25.00%	\$ 11,783,831	\$ 36,824,473	\$ 58,919,156		
	\$ 4,114,109	25.00%	\$ 1,028,527	20.00%	\$ 1,028,52	\$ 6,171,163	15.00	4.00%	60.00%	\$ 3,702,698	> 9,873,861	25.00%	> 2,468,465	5 7,713,954 9	\$ 12,342,326		
NORWALK FARLY CHILDHOOD CENTER	 4,/14,521 286 172 	21.50%	\$ 100.160	20.00%	\$ 1,145,625	\$ 6,8/3,772	15.00	4.00%	60.00%	\$ 4,124,263	\$ 10,998,035	25.00%	\$ 2,749,509	\$ 5797,215	¢ 13,/4/,543		
LIPPER PONUS RIDGE STEAM ACADEMY	\$ 2,660 913	25.00%	\$ 665,228	20.00%	\$ 665.22	\$ 3,991 370	15.00	4.00%	60.00%	\$ 2,394,822	\$ 6,386,191	25.00%	\$ 1.596.548	\$ 4,989,212	\$ 7,982 739		
TOTALS	\$ 31,981,187	20.28%	\$ 6,486,486	20.35%	\$ 7,826,580	\$ 46,959,481				\$ 28,175,689	\$ 75,135,170	25.00%	\$ 18,783,792	\$ 58,699,351 \$	\$ 93,918,962		
TOTALS	\$ 234,746,636				\$ 57,174,539	\$ 343,047,232				\$ 116,448,194	\$ 459,495,426		\$ 114,873,856	\$ 428,809,040 \$	\$ 574,369,282		

Total Non-Escalated Project Cost

\$428,809,040

Total Escalated Project Cost

\$574,369,282 (\$28,718,464 per year)



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FOX RUN ELEMENTARY SCHOOL

1C

Facilities Conditions Score



OVERALL PRIORITY TIER

TOTAL NO	N-ESCALATED PR	OJECT COST
PRIORITY	COMPONENT	COST
1+2	EDUCATIONAL	\$958,445
CURRENTLY	FACILITIES	\$0
CRITICAL	MECHANICAL/	\$5,813,370
AND POTENTIALLY	ELECTRICAL/ PLUMBING	
CRITICAL	FOOD SERVICE	\$53,055
	SUB-TOTAL	\$6,824,870
3	EDUCATIONAL	\$3,693,072
NECESSARY	FACILITIES	\$4,580,405
	MECHANICAL/	\$3,405,615
	ELECTRICAL/ PLUMBING	
	FOOD SERVICE	\$0
	SUB-TOTAL	\$11,679,092
4+5	EDUCATIONAL	\$0
RECOMMENDED	FACILITIES	\$5,296,426
AND	MECHANICAL/	\$972,048
LEGACIED	ELECTRICAL/ PLUMBING	
	FOOD SERVICE	\$1,739,257
	SUB-TOTAL	\$8,007,731
TOTAL OVE	R NEXT 5 YEARS	\$26,511,693



Educational Adequacy Score





	Fox Run Elementary School																						
		CONSTRUCTION COSTS (2021) CONSTRUCTION COSTS (ESCALATED)																	TOTAL	L PROJE	CT COSTS		
PRIORITY / DISCIPLINE		Net Trade Cost (2021)	CM/GC Markups (%)	; CM/	GC Markups (\$)	Contingency (%)	Co	ontingency (\$)	Tota	al Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Es	calation (\$)	Total	Construction Cost (Escalated)	Soft Costs (%)	Soft Costs (\$)	Tot (N	al Porject Cost on-Escalated)	Total Proj (Escal	oject Cost lated)
А		В	С		D	Ε		F		G	Н	1	J		К		L	М	Ν		0	Р	P
1 - PRIORITY 1														-									
ARCHITECTURE	\$	-	35.00%	\$	-	20.00%	\$	-	\$	-	0.00	0.00%	0.00%	\$	-	\$	-	25.00%	\$ -	\$	-	\$	-
MEP	\$	-	35.00%	\$	-	20.00%	\$	-	\$	-	0.00	0.00%	0.00%	\$	-	\$	-	25.00%	\$ -	\$	-	\$	-
FOOD SERVICE	\$	-	35.00%	\$	-	20.00%	\$	-	\$	-	0.00	0.00%	0.00%	\$	-	\$	-	25.00%	\$ -	\$	-	\$	-
TOTA	LS \$	-	#DIV/0!	\$	-	#DIV/0!	\$	-	\$	-				\$	-	\$	-	#DIV/0!	\$ -	\$	-	\$	-
2 - PRIORITY 2																							
ARCHITECTURE	\$	-	35.00%	\$	-	20.00%	\$	-	\$	-	1.00	3.50%	3.50%	\$	-	\$	-	25.00%	\$ -	\$	-	\$	-
MEP	\$	2,870,800	35.00%	\$	1,004,780	20.00%	\$	775,116	\$	4,650,696	1.00	3.50%	3.50%	\$	162,774	\$	4,813,470	25.00%	\$ 1,203,368	\$	5,813,370	\$	6,016,838
FOOD SERVICE	\$	26,200	35.00%	\$	9,170	20.00%	\$	7,074	\$	42,444	1.00	3.50%	3.50%	\$	1,486	\$	43,930	25.00%	\$ 10,982	\$	53,055	\$	54,912
EDUCATIONAL ASSESSMENT	\$	473,306	35.00%	\$	165,657	20.00%	\$	127,793	\$	766,756	1.00	3.50%	3.50%	\$	26,836	\$	793,592	25.00%	\$ 198,398	\$	958,445	\$	991,990
ΤΟΤΑ	LS \$	3,370,306	35.00%	\$	1,179,607	20.00%	\$	909,983	\$	5,459,896				\$	191,096	\$	5,650,992	25.00%	\$ 1,412,748	\$	6,824,870	\$	7,063,740

Priority 1 (Currently Critical): Requiring immediate action including a cited safety hazard and areas of accelerated deterioration, returning a building component to normal operation.	-
Priority 2 (Potentially Critical): Requiring action in the next year including components experiencing intermittent operations, potential life safety issues, and rapid deterioration, returning a building component to normal operation.	Replace preparation table with sinks Replace wall cabinets Replace serving counter Replace boilers
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 6,824,870 \$ 7,063,740





	Fox Run Elementary School																			
			CONSTRUCTI	ON COSTS (2021)				CON	STRUCTION COSTS	(ESCALATED)			τοται	PROJECT COSTS	T COSTS I Porject Cost n-Escalated) Total Project Cost (Escalated) P 4,580,405 \$ 5,610,997 3,405,615 \$ 4,171,878					
PRIORITY / DISCIPLINE	Net Trade Cost CM/GC Markups CM/GC M (2021) (%) (\$)		CM/GC Markups (\$)	Contingency (%)	Contingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Escalation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	Soft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)					
А	В	С	D	E	F	G	Н	1	J	К	L	М	N	0	Р					
3 - PRIORITY 3																				
ARCHITECTURE	\$ 2,513,	54 21.50%	\$ 540,350	20.00%	\$ 610,72	1 \$ 3,664,324	5.00	4.50%	22.50%	\$ 824,473	\$ 4,488,797	25.00%	\$ 1,122,199	\$ 4,580,405	\$ 5,610,997					
MEP	\$ 1,868,	50 21.50%	\$ 401,760	20.00%	\$ 454,08	2 \$ 2,724,492	5.00	4.50%	22.50%	\$ 613,011	\$ 3,337,502	25.00%	\$ 834,376	\$ 3,405,615	\$ 4,171,878					
FOOD SERVICE	\$	21.50%	\$ -	20.00%	\$	\$ -	5.00	4.50%	22.50%	\$ -	\$ -	25.00%	\$ -	\$-	\$ -					
EDUCATIONAL ASSESSMENT	\$ 2,026,	77 21.50%	\$ 435,671	20.00%	\$ 492,41	0 \$ 2,954,458	5.00	4.50%	22.50%	\$ 664,753	\$ 3,619,211	25.00%	\$ 904,803	\$ 3,693,072	\$ 4,524,013					
TOTAL	6 \$ 6,408,	81 21.50%	\$ 1,377,780	20.00%	\$ 1,557,21	2 \$ 9,343,274				\$ 2,102,237	\$ 11,445,510	25.00%	\$ 2,861,378	\$ 11,679,092	\$ 14,306,888					

Priority 3 (Necessary): Requiring appropriate attention to preclude predictable deterioration, potential downtime, additional damage, and higher costs to remediation if deferred further.	Building and building systems repairs and replacements and educational adequacy improvements to be included in full renovation
Total Non-Escalated Project Cost	\$ 11,679,092
Total Escalated Project Cost	\$ 14,306,888





									Fox Rur	Elementary Scho	ol								
					CONSTRUCTIO	ON COSTS (2021)				STRUCTION COSTS	(ESCAL	ATED)			TOTAL	PROJECT COSTS			
PRIORITY / DISCIPLINE	Γ	Net Trade Cost (2021)	CM/GC Markups (%)	s CN	M/GC Markups (\$)	Contingency (%)	Co	ontingency (\$)	Total Construction Cost (2021)	ruction Cost Escalation Escalation Escalation Escalation Cost 221) (# of Years) (% / Year) (% Total) (\$) (Escalated)							Soft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)
А		В	С		D	E		F	G	Н	I	J		К	L	М	N	0	Р
4 - PRIORITY 4																	 		
ARCHITECTURE	\$	2,739,539	21.50%	\$	589,001	20.00%	\$	665,708	\$ 3,994,248	5.00	4.50%	22.50%	\$	898,706	\$ 4,892,954	25.00%	\$ 1,223,238	\$ 4,992,810	\$ 6,116,192
MEP	\$	133,340	21.50%	\$	28,668	20.00%	\$	32,402	\$ 194,410	5.00	4.50%	22.50%	\$	43,742	\$ 238,152	25.00%	\$ 59,538	\$ 243,012	\$ 297,690
FOOD SERVICE	\$	954,325	21.50%	\$	205,180	20.00%	\$	231,901	\$ 1,391,406	5.00	4.50%	22.50%	\$	313,066	\$ 1,704,472	25.00%	\$ 426,118	\$ 1,739,257	\$ 2,130,590
EDUCATIONAL ASSESSMENT			21.50%	\$	-	20.00%	\$	-	\$-	5.00	4.50%	22.50%	\$	-	\$ -	25.00%	\$ -	\$-	\$-
TOTALS	5\$	3,827,204	21.50%	\$	822,849	20.00%	\$	930,011	\$ 5,580,063				\$	1,255,514	\$ 6,835,578	25.00%	\$ 1,708,894	\$ 6,975,079 \$	8,544,472
5 - PRIORITY 5																			
ARCHITECTURE	\$	166,593	21.50%	\$	35,817	20.00%	\$	40,482	\$ 242,893	5.00	4.50%	22.50%	\$	54,651	\$ 297,543	25.00%	\$ 74,386	\$ 303,616 \$	\$ 371,929
MEP	\$	400,020	21.50%	\$	86,004	20.00%	\$	97,205	\$ 583,229	5.00	4.50%	22.50%	\$	131,227	\$ 714,456	25.00%	\$ 178,614	\$ 729,036 \$	\$ 893,070
FOOD SERVICE	\$	-	21.50%	\$	-	20.00%	\$	-	\$-	5.00	4.50%	22.50%	\$	-	\$-	25.00%	\$ -	\$ -	\$-
TOTALS	\$	566,613	21.50%	\$	121,822	20.00%	\$	137,687	\$ 826,122				\$	185,877	\$ 1,011,999	25.00%	\$ 253,000	\$ 1,032,652 \$	1,264,999

Priority 4 (Recommended): Representing a sensible improvement to the existing conditions (not required for the most basic function of the facility; however, will improve overall usability and/or reduce long-term maintenance costs).	Full renovation
Priority 5 (Legacied): No Action required at this time but should substantial work be undertaken correction would be required.	Required upgrades to meet Accessibility and Building Code
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 8,007,731 \$9,809,471





NARAMAKE ELEMENTARY SCHOOL

1C

Facilities Conditions Score



OVERALL PRIORITY TIER

TOTAL NO	TOTAL NON-ESCALATED PROJECT COST													
PRIORITY	COMPONENT	COST												
1+2	EDUCATIONAL	\$802,927												
CURRENTLY	FACILITIES	\$69,863												
CRITICAL	MECHANICAL/	\$1,943,016												
AND POTENTIALLY	ELECTRICAL/ PLUMBING													
CRITICAL	FOOD SERVICE	\$5,670												
	SUB-TOTAL	\$2,821,475												
3	EDUCATIONAL	\$4,989,396												
NECESSARY	FACILITIES	\$1,732,514												
	MECHANICAL/	\$2,024,847												
	ELECTRICAL/ PLUMBING													
	FOOD SERVICE	\$0												
	SUB-TOTAL	\$8,746,757												
4+5	EDUCATIONAL	\$0												
RECOMMENDED	FACILITIES	\$6,646,898												
AND	MECHANICAL/	\$1,054,677												
LEGACIED	ELECTRICAL/ PLUMBING													
	FOOD SERVICE	\$2,090,316												
	\$9,791,891													
TOTAL OVE	R NEXT 5 YEARS	\$21,360,124												



		Ν
VII- 11 of 74	NORWALK	N





Naramake Elementary School																				
					CONSTRUCTION	ON COSTS (2021)					CON	ISTRUCTION COSTS	(ESCALATE	ED)			TOTAL	PROJECT COSTS		
PRIORITY / DISCIPLINE	Γ	Net Trade Cost (2021)	CM/GC Markups (%)	s CM,	/GC Markups (\$)	Contingency (%)	Co	ontingency (\$)	Total Construction Cost (2021)	n Cost Escalation Escalation Escalation Escalation Total Const (# of Years) (% / Year) (% Total) (\$) (Esca						Soft Costs (%)	Soft Costs Total Porject Cost (\$) (Non-Escalated)		Total Project Cost (Escalated)	
А		В	с		D	Ε		F	G	Н	1	J		К	L	М	N	0	Р	
1 - PRIORITY 1																	 			
ARCHITECTURE	\$	8,000	35.00%	\$	2,800	20.00%	\$	2,160	\$ 12,960	0.00	0.00%	0.00%	\$	-	\$ 12,960	25.00%	\$ 3,240	\$ 16,200	\$ 16,200	
MEP	\$	-	35.00%	\$	-	20.00%	\$	-	\$-	0.00	0.00%	0.00%	\$	-	\$-	25.00%	\$ -	\$-	\$ -	
FOOD SERVICE	\$	-	35.00%	\$	-	20.00%	\$	-	\$-	0.00	0.00%	0.00%	\$	-	\$-	25.00%	\$ -	\$-	\$-	
TOTALS	\$	8,000	35.00%	\$	2,800	20.00%	\$	2,160	\$ 12,960				\$	- :	\$ 12,960	25.00%	\$ 3,240	\$ 16,200	\$ 16,200	
2 - PRIORITY 2																				
ARCHITECTURE	\$	26,500	35.00%	\$	9,275	20.00%	\$	7,155	\$ 42,930	1.00	3.50%	3.50%	\$	1,503	\$ 44,433	25.00%	\$ 11,108	\$ 53,663	\$ 55,541	
MEP	\$	959,514	35.00%	\$	335,830	20.00%	\$	259,069	\$ 1,554,413	1.00	3.50%	3.50%	\$	54,404	\$ 1,608,817	25.00%	\$ 402,204	\$ 1,943,016	\$ 2,011,021	
FOOD SERVICE	\$	2,800	35.00%	\$	980	20.00%	\$	756	\$ 4,536	1.00	3.50%	3.50%	\$	159	\$ 4,695	25.00%	\$ 1,174	\$ 5,670	\$ 5,868	
EDUCATIONAL ASSESSMENT	\$	396,507	35.00%	\$	138,777	20.00%	\$	107,057	\$ 642,341	1.00	3.50%	3.50%	\$	22,482	\$ 664,823	25.00%	\$ 166,206	\$ 802,927	\$ 831,029	
TOTALS	\$	1,385,321	35.00%	\$	484,862	20.00%	\$	374,037	\$ 2,244,220				\$	78,548	\$ 2,322,768	25.00%	\$ 580,692	\$ 2,805,275	\$ 2,903,460	

Priority 1 (Currently Critical): Requiring immediate action including a cited safety hazard and areas of accelerated deterioration, returning a building component to normal operation.	Review of scupper placement on roof
Priority 2 (Potentially Critical): Requiring action in the next year including components experiencing intermittent operations, potential life safety issues, and rapid deterioration, returning a building component to normal operation.	Repairs at roofs and canopies Replace shelving units in dry storage room (4) and cashier's counter Replace electric tank water heater Replace roof exhaust fans and intakes Extend DDC system from boiler room and remove existing pneumatic controls
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 2,821,475 \$ 2,919,660





	Naramake Elementary School																					
					CONSTRUCTIO	ON COSTS (2021)					CONS	STRUCTION COSTS	(ESCAL/	ATED)		TOTAL PROJECT COSTS						
PRIORITY / DISCIPLINE	'	Net Trade Cost (2021)	CM/GC Markups (%)	СМ	I/GC Markups (\$)	Contingency (%)	Co	ntingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	E	scalation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)		Soft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)		
A		В	С		D	E		F	G	Н	I	J		K	L	М		N	0	Р		
3 - PRIORITY 3																						
ARCHITECTURE	\$	950,625	21.50%	\$	204,384	20.00%	\$	231,002	\$ 1,386,011	5.00	4.50%	22.50%	\$	311,853	\$ 1,697,864	25.00%	\$	424,466	\$ 1,732,514	\$ 2,122,330		
MEP	\$	1,111,027	21.50%	\$	238,871	20.00%	\$	269,980	\$ 1,619,877	5.00	4.50%	22.50%	\$	364,472	\$ 1,984,350	25.00%	\$	496,087	\$ 2,024,847	\$ 2,480,437		
FOOD SERVICE	\$	-	21.50%	\$	-	20.00%	\$	-	\$ -	5.00	4.50%	22.50%	\$	-	\$-	25.00%	\$	-	\$ -	\$ -		
EDUCATIONAL ASSESSMENT	\$	2,737,666	21.50%	\$	588,598	20.00%	\$	665,253	\$ 3,991,517	5.00	4.50%	22.50%	\$	898,091	\$ 4,889,608	25.00%	\$	1,222,402	\$ 4,989,396	\$ 6,112,010		
TOTA	LS \$	4,799,318	21.50%	\$	1,031,853	20.00%	\$	1,166,234	\$ 6,997,406				\$	1,574,416	\$ 8,571,822	25.00%	\$	2,142,955	\$ 8,746,757	\$ 10,714,777		

Priority 3 (Necessary): Requiring appropriate attention to preclude predictable deterioration, potential downtime, additional damage, and higher costs to remediation if deferred further.	Building and building systems repairs and replacements and educational adequacy improvements to be included in full renovation
Total Non-Escalated Project Cost	\$ 8,746,757
Total Escalated Project Cost	\$ 10,714,777





									Narama	ke Elementary Sch	nool												
					CONSTRUCTIO	ON COSTS (2021)					CON	STRUCTION COSTS	ESCA	LATED)		TOTAL PROJECT COSTS							
PRIORITY / DISCIPLINE	RITY / DISCIPLINE Net Trade Cost (2021) CM/GC Markups CM/GC Markups Contingency Contingency (2021) (%) (\$) (\$) (\$) (\$) (2021)							Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)		Escalation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)		Soft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)				
A		В	с		D	Ε		F	G	н	1	J		к	L	м		N	0	Р			
4 - PRIORITY 4		*****																					
ARCHITECTURE	\$	3,537,157	21.50%	\$	760,489	20.00%	\$	859,529	\$ 5,157,175	5.00	4.50%	22.50%	\$	1,160,364	\$ 6,317,539	25.00%	\$	1,579,385	\$ 6,446,469	\$ 7,896,924			
MEP	\$	578,698	21.50%	\$	124,420	20.00%	\$	140,624	\$ 843,742	5.00	4.50%	22.50%	\$	189,842	\$ 1,033,584	25.00%	\$	258,396	\$ 1,054,677	\$ 1,291,979			
FOOD SERVICE	\$	1,146,950	21.50%	\$	246,594	20.00%	\$	278,709	\$ 1,672,253	5.00	4.50%	22.50%	\$	376,257	\$ 2,048,510	25.00%	\$	512,128	\$ 2,090,316	\$ 2,560,638			
EDUCATIONAL ASSESSMENT			21.50%	\$	-	20.00%	\$	-	\$-	5.00	4.50%	22.50%	\$	-	\$-	25.00%	\$	-	\$-	\$-			
TOTA	ALS \$	5,262,805	21.50%	\$	1,131,503	20.00%	\$	1,278,862	\$ 7,673,170				\$	1,726,463	\$ 9,399,633	25.00%	\$	2,349,908	\$ 9,591,462	\$ 11,749,541			
5 - PRIORITY 5																							
ARCHITECTURE	\$	109,975	21.50%	\$	23,645	20.00%	\$	26,724	\$ 160,344	5.00	4.50%	22.50%	\$	36,077	\$ 196,421	25.00%	\$	49,105	\$ 200,429	\$ 245,526			
MEP			21.50%	\$	-	20.00%	\$	-	\$ -	5.00	4.50%	22.50%	\$	-	\$-	25.00%	\$	-	\$ -	\$ -			
FOOD SERVICE	\$	-	21.50%	\$	-	20.00%	\$	-	\$ -	5.00	4.50%	22.50%	\$	-	\$-	25.00%	\$	-	\$-	\$ -			
TOTA	ALS \$	109,975	21.50%	\$	23,645	20.00%	\$	26,724	\$ 160,344				\$	36,077	\$ 196,421	25.00%	\$	49,105	\$ 200,429	\$ 245,526			

Priority 4 (Recommended): Representing a sensible improvement to the existing conditions (not required for the most basic function of the facility; however, will improve overall usability and/or reduce long-term maintenance costs).	Full renovation - note this does not include the areas included in the current Media Center and Cafeteria project
Priority 5 (Legacied): No Action required at this time but should substantial work be undertaken correction would be required.	Required upgrades to meet Accessibility and Building Code
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 9,791,891 \$ 11,995,067





WEST ROCKS MIDDLE SCHOOL

1B

Facilities Conditions Score



OVERALL PRIORITY TIER

TOTAL NON-ESCALATED PROJECT COST										
PRIORITY	COMPONENT	COST								
1+2	EDUCATIONAL	\$1,666,826								
CURRENTLY	FACILITIES	\$4,727,849								
CRITICAL	MECHANICAL/	\$5,347,529								
AND POTENTIALLY	ELECTRICAL/ PLUMBING									
CRITICAL	FOOD SERVICE	\$0								
	SUB-TOTAL	\$11,742,204								
3	EDUCATIONAL	\$15,370,500								
NECESSARY	FACILITIES	\$5,929,918								
	MECHANICAL/	\$4,938,233								
	PLUMBING									
	FOOD SERVICE	\$0								
	SUB-TOTAL	\$26,238,652								
4+5	EDUCATIONAL	\$0								
RECOMMENDED	FACILITIES	\$4,764,281								
AND	MECHANICAL/	\$1,419,500								
LEGACIED	ELECTRICAL/ PLUMBING									
	FOOD SERVICE	\$2,356,128								
	SUB-TOTAL	\$8,539,908								
TOTAL OVE	R NEXT 5 YEARS	\$46,520,765								





									West R	ocks Middle Scho	bl											
				CON	NSTRUCTIO	ON COSTS (2021)					CON	STRUCTION COSTS	(ESCALATED)		TOTAL PROJECT COSTS							
PRIORITY / DISCIPLINE		Net Trade Cost (2021)	CM/GC Markups (%)	CM/GC N (\$	Markups \$)	Contingency (%)	Co	ontingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Escalatio (\$)	n 1	Fotal Construction Cost (Escalated)	Soft Costs (%)		Soft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)		
А		В	с	D)	E		F	G	н	1	J	к		L	М		N	0	Р		
1 - PRIORITY 1																						
ARCHITECTURE		\$ 2,274,853	35.00%	\$	796,199	20.00%	\$	614,210	\$ 3,685,262	0.00	0.00%	0.00%	\$		\$ 3,685,262	25.00%	\$	921,315	\$ 4,606,577	\$ 4,606,577		
MEP		\$ -	35.00%	\$	-	20.00%	\$	-	\$-	0.00	0.00%	0.00%	\$	-	\$ -	25.00%	\$	-	\$ -	\$-		
FOOD SERVICE		\$-	35.00%	\$	-	20.00%	\$	-	\$-	0.00	0.00%	0.00%	\$	-	\$-	25.00%	\$	-	\$ -	\$-		
	TOTALS	\$ 2,274,853	35.00%	\$	796,199	20.00%	\$	614,210	\$ 3,685,262				\$	- 1	\$ 3,685,262	25.00%	\$	921,315	\$ 4,606,577 \$	4,606,577		
2 - PRIORITY 2																						
ARCHITECTURE		\$ 59,888	35.00%	\$	20,961	20.00%	\$	16,170	\$ 97,018	1.00	3.50%	3.50%	\$ 3	3,396	\$ 100,413	25.00%	\$	25,103	\$ 121,272 \$	125,517		
MEP		\$ 2,640,755	35.00%	\$	924,264	20.00%	\$	713,004	\$ 4,278,023	1.00	3.50%	3.50%	\$ 149	9,731	\$ 4,427,754	25.00%	\$	1,106,938	\$ 5,347,529	\$ 5,534,692		
FOOD SERVICE		\$ -	35.00%	\$	-	20.00%	\$	-	\$ -	1.00	3.50%	3.50%	\$	-	\$ -	25.00%	\$	-	\$ -	\$-		
EDUCATIONAL ASSESSMENT		\$ 823,124	35.00%	\$	288,093	20.00%	\$	222,243	\$ 1,333,461	1.00	3.50%	3.50%	\$ 46	5,671	\$ 1,380,132	25.00%	\$	345,033	\$ 1,666,826	\$ 1,725,165		
	TOTALS	\$ 3,523,767	35.00%	\$ 1,	,233,318	20.00%	\$	951,417	\$ 5,708,502				\$ 199	9,798	\$ 5,908,299	25.00%	\$	1,477,075	\$ 7,135,627 \$	7,385,374		

Priority 1 (Currently Critical): Requiring immediate action including a cited safety hazard and areas of accelerated deterioration, returning a building component to normal operation.	Replacement of roof, provision of door hardware work, investigation and remediation of water ponding at second floor restroom
Priority 2 (Potentially Critical): Requiring action in the next year including components experiencing intermittent operations, potential life safety issues, and rapid deterioration, returning a building component to normal operation.	Repairs at canopies, investigation and remediation of exterior louver, replacement of rubber baseboard Replace roof mounted exhaust fans that are nearing end of useful life
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 11,742,204 \$ 11,991,951





	West Rocks Middle School																					
					CONSTRUCTIO	ON COSTS (2021)					CONS		(ESCAI	ATED)		TOTAL PROJECT COSTS						
PRIORITY / DISCIPLINE		Net Trade Cost (2021)	CM/GC Markup: (%)	s CM/0	GC Markups (\$)	Contingency (%)	Co	ntingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)		Escalation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	S	oft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)		
A		В	с		D	E		F	G	н	1	J		к	L	м		N	0	Ρ		
3 - PRIORITY 3																						
ARCHITECTURE	\$	\$ 3,253,728	21.50%	\$	699,551	20.00%	\$	790,656	\$ 4,743,935	5.00	4.50%	22.50%	\$	1,067,385	\$ 5,811,320	25.00%	\$	1,452,830	\$ 5,929,918	\$ 7,264,150		
FOOD SERVICE	\$	\$-	21.50%	\$	-	20.00%	\$	-	\$-	5.00	4.50%	22.50%	\$	-	\$ -	25.00%	\$	-	\$-	\$-		
MEP	\$	\$ 2,709,593	21.50%	\$	582,562	20.00%	\$	658,431	\$ 3,950,587	5.00	4.50%	22.50%	\$	888,882	\$ 4,839,469	25.00%	\$	1,209,867	\$ 4,938,233	\$ 6,049,336		
EDUCATIONAL ASSESSMENT	\$	\$ 8,433,745	21.50%	\$	1,813,255	20.00%	\$	2,049,400	\$ 12,296,400	5.00	4.50%	22.50%	\$	2,766,690	\$ 15,063,090	25.00%	\$	3,765,773	\$ 15,370,500	\$ 18,828,863		
	TOTALS	\$ 14,397,066	21.50%	\$	3,095,369	20.00%	\$	3,498,487	\$ 20,990,921				\$	4,722,957	\$ 25,713,879	25.00%	\$	6,428,470	\$ 26,238,652	\$ 32,142,349		

Priority 3 (Necessary): Requiring appropriate attention to preclude predictable deterioration, potential downtime, additional damage, and higher costs to remediation if deferred further.	Building and building systems repairs and replacements and educational adequacy improvements to be included in full renovation
Total Non-Escalated Project Cost	\$ 26,238,652
Total Escalated Project Cost	\$ 32,142,349





									West R	tocks Middle Schoo	l I													
	CONSTRUCTION COSTS (2021)										CON	STRUCTION COSTS	(ESCALAT	ED)		TOTAL PROJECT COSTS								
PRIORITY / DISCIPLINE Net Trade Cost (2021) CM/GC Markups CM/GC Markups Contingency (5) Contingency (5) (5) (5) (5) (5) (5) (5) (5) (5) (5)								Total Construction Cost (2021)	Escalation (# of Years)	calation Escalation Escalation Escalation (% / Year) (% Total) (S) (S) (Escalated) (%)							Soft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)					
A		В	с		D	E		F	G	н	1	J		к	L	М		N	0	Р				
4 - PRIORITY 4																								
ARCHITECTURE	\$	2,540,221	21.50%	\$	546,148	20.00%	\$	617,274	\$ 3,703,642	5.00	4.50%	22.50%	\$	833,319	\$ 4,536,962	25.00%	\$	1,134,240	\$ 4,629,553	\$ 5,671,202				
MEP	\$	754,875	21.50%	\$	162,298	20.00%	\$	183,435	\$ 1,100,608	5.00	4.50%	22.50%	\$	247,637	\$ 1,348,244	25.00%	\$	337,061	\$ 1,375,760	\$ 1,685,306				
FOOD SERVICE	\$	1,292,800	21.50%	\$	277,952	20.00%	\$	314,150	\$ 1,884,902	5.00	4.50%	22.50%	\$	424,103	\$ 2,309,005	25.00%	\$	577,251	\$ 2,356,128	\$ 2,886,257				
EDUCATIONAL ASSESSMENT	\$	-	21.50%	\$	-	20.00%	\$	-	\$-	5.00	4.50%	22.50%	\$	-	\$-	25.00%	\$	-	\$-	\$ -				
TOTA	NLS \$	4,587,896	21.50%	\$	986,398	20.00%	\$	1,114,859	\$ 6,689,152				\$	1,505,059	\$ 8,194,212	25.00%	\$	2,048,553	\$ 8,361,440	\$ 10,242,765				
5 - PRIORITY 5																								
ARCHITECTURE	\$	73,925	21.50%	\$	15,894	20.00%	\$	17,964	\$ 107,783	5.00	4.50%	22.50%	\$	24,251	\$ 132,034	25.00%	\$	33,008	\$ 134,728	\$ 165,042				
MEP	\$	24,000	21.50%	\$	5,160	20.00%	\$	5,832	\$ 34,992	5.00	4.50%	22.50%	\$	7,873	\$ 42,865	25.00%	\$	10,716	\$ 43,740	\$ 53,582				
FOOD SERVICE	\$	-	21.50%	\$	-	20.00%	\$	-	\$-	5.00	4.50%	22.50%	\$	-	\$-	25.00%	\$	-	\$-	\$-				
τοτΑ	LS \$	97,925	21.50%	\$	21,054	20.00%	\$	23,796	\$ 142,775				\$	32,124	\$ 174,899	25.00%	\$	43,725	\$ 178,468	\$ 218,624				

Priority 4 (Recommended): Representing a sensible improvement to the existing conditions (not required for the most basic function of the facility; however, will improve overall usability and/or reduce long-term maintenance costs).	Full renovation and targeted additions - note that the addition will not be required if the new South Norwalk Pre-K-5 is built
Priority 5 (Legacied) : No Action required at this time but should substantial work be undertaken correction would be required.	Required upgrades to meet Accessibility and Building Code
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 8,539,908 \$ 10,461,389





NEW COLUMBUS MAGNET SCHOOL + SOUTH NORWALK PRE-K-5



OVERALL PRIORITY TIER

The new Columbus Magenet School and South Norwalk Pre-K-5 are discussed in detail in the Educational Adequacy sub-section of Section V: The Strands, as well as the Appendix. The numbers here are from the previous strategic operating plan.

TOTAL NON-ESCALATED PR	OJECT COST
COMPONENT	COST
NEW COLUMBUS MAGNET	\$33,550,059
STATE REIMBURSEMENT	\$7,960,000
SUB-TOTAL	\$41,310,059
NEW SOUTH NORWALK PRE-K-5	\$34,393,075
STATE REIMBURSEMENT	\$7,083,238
SUB-TOTAL	\$41,476,313
LAND ACQUISITION	\$12,000,000
SUB-TOTAL	\$12,000,000
ESTIMATED TOTAL	\$84,786,372





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COLUMBUS MAGNET SCHOOL

2C

Facilities Conditions Score



OVERALL PRIORITY TIER

TOTAL NO	TOTAL NON-ESCALATED PROJECT COST													
PRIORITY	COMPONENT	COST												
1+2	EDUCATIONAL	\$0												
CURRENTLY	FACILITIES	\$142,241												
CRITICAL	MECHANICAL/	\$0												
POTENTIALLY	ELECTRICAL/ PLUMBING													
CRITICAL	FOOD SERVICE	\$44,550												
	SUB-TOTAL	\$186,791												
3	EDUCATIONAL	\$												
NECESSARY	FACILITIES	\$834,368												
	MECHANICAL/ ELECTRICAL/ PLUMBING	\$1,181,483												
	FOOD SERVICE	\$0												
	SUB-TOTAL	\$28,504,509												
4+5	EDUCATIONAL	\$0												
RECOMMENDED	FACILITIES	\$5,430,418												
AND LEGACIED	MECHANICAL/ ELECTRICAL/ PLUMBING	\$1,058,125												
	FOOD SERVICE	\$2,123,896												
	SUB-TOTAL	\$8,612,439												
TOTAL OVE	R NEXT 5 YEARS	\$37,303,738												



Educational Adequacy Score





										Colum	bus Magnet Schoo	I												
					CONSTRUCTIO	ON COSTS (2021)						CON	STRUCTION COSTS	(ESCALATED)		TOTAL PROJECT COSTS								
PRIORITY / DISCIPLINE	Net Ti (2	rade Cost 2021)	CM/GC Markups (%)	5 CM/0	GC Markups (\$)	Contingency (%)	Co	ontingency (\$)	Tota	al Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Escalatior (\$)	n	Total Construction Cost (Escalated)	Soft Costs (%)	Soft Costs Soft Costs Total Porject Cost Total (%) (%) (\$) (Non-Escalated) (%)						
А		В	с		D	E		F		G	Н	1	J	К		L	м		N	0	Р			
1 - PRIORITY 1																								
ARCHITECTURE	\$	500	35.00%	\$	175	20.00%	\$	135	\$	810	0.00	0.00%	0.00%	\$	-	\$ 810	25.00%	\$	203	\$ 1,013	\$ 1,013			
MEP	\$	-	35.00%	\$	-	20.00%	\$		\$	-	0.00	0.00%	0.00%	\$	-	\$ -	25.00%	\$	-	\$-	\$-			
FOOD SERVICE	\$	-	35.00%	\$	-	20.00%	\$	-	\$	-	0.00	0.00%	0.00%	\$	-	\$-	25.00%	\$	-	\$-	\$-			
ΤΟΤΑΙ	s \$	500	35.00%	\$	175	20.00%	\$	135	\$	810				\$	-	\$ 810	25.00%	\$	203	\$ 1,013	\$ 1,013			
2 - PRIORITY 2																								
ARCHITECTURE	\$	69,742	35.00%	\$	24,410	20.00%	\$	18,830	\$	112,982	1.00	3.50%	3.50%	\$ 3	,954	\$ 116,936	25.00%	\$	29,234	\$ 141,228	\$ 146,171			
MEP	\$	-	35.00%	\$	-	20.00%	\$	-	\$	-	1.00	3.50%	3.50%	\$	-	\$-	25.00%	\$	-	\$-	\$-			
FOOD SERVICE	\$	22,000	35.00%	\$	7,700	20.00%	\$	5,940	\$	35,640	1.00	3.50%	3.50%	\$ 1	,247	\$ 36,887	25.00%	\$	9,222	\$ 44,550	\$ 46,109			
TOTA	s \$	91,742	35.00%	\$	32,110	20.00%	\$	24,770	\$	148,622				\$ 5	,202	\$ 153,824	25.00%	\$	38,456	\$ 185,778	\$ 192,280			

Priority 1 (Currently Critical): Requiring immediate action including a cited safety hazard and areas of accelerated deterioration, returning a building component to normal operation.	Provide safety markings at low stage entrance
Priority 2 (Potentially Critical): Requiring action in the next year including components experiencing intermittent operations, potential life safety issues, and rapid deterioration, returning a building component to normal operation.	Repairs at windows, replacement of roof access, investigation and repair at gym roof, provision of door hardware and snow guards Replace all serving counters due to age, condition, and lack of breath guard protection (cold food counter)
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 186,791 \$ 193,293





	Columbus Magnet School																						
	CONSTRUCTION COSTS (2021)															TOTAL PROJECT COSTS							
PRIORITY / DISCIPLINE	Net Trade Cost (2021) CM/GC Markups CM/GC Markups Contin (%) (\$) (9)				Contingency (%)	Cor	ntingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	E	scalation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	9	Soft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)				
А	B C D E F		G	н	1	J		к	L	м		N	0	P									
3 - PRIORITY 3																							
ARCHITECTURE	\$	457,815	21.50%	\$	98,430	20.00%	\$	111,249	\$ 667,494	5.00	4.50%	22.50%	\$	150,186	\$ 817,680	25.00%	\$	204,420	\$ 834,368	\$ 1,022,101			
MEP	\$	648,276	21.50%	\$	139,379	20.00%	\$	157,531	\$ 945,186	5.00	4.50%	22.50%	\$	212,667	\$ 1,157,853	25.00%	\$	289,463	\$ 1,181,483	\$ 1,447,317			
FOOD SERVICE	\$	-	21.50%	\$	-	20.00%	\$	-	\$-	5.00	4.50%	22.50%	\$	-	\$ -	25.00%	\$	-	\$-	\$ -			
EDUCATIONAL ASSESSMENT	\$	14,534,243	21.50%	\$	3,124,862	20.00%	\$	3,531,821	\$ 21,190,926	5.00	4.50%	22.50%	\$	4,767,958	\$ 25,958,885	25.00%	\$	6,489,721	\$ 26,488,658	\$ 32,448,606			
TOTALS	s \$	15,640,334	21.50%	\$	3,362,672	20.00%	\$	3,800,601	\$ 22,803,607				\$	5,130,812	\$ 27,934,419	25.00%	\$	6,983,605	\$ 28,504,509	\$ 34,918,023			

Priority 3 (Necessary): Requiring appropriate attention to preclude predictable deterioration, potential downtime, additional damage, and higher costs to remediation if deferred further.	Building and building systems repairs and replacements and educational adequacy improvements to be included in full renovation
Total Non-Escalated Project Cost	\$ 28,504,509
Total Escalated Project Cost	\$ 34,918,023





	Columbus Magnet School																							
				CONSTRUCT	ION COSTS (2021)					CONS	TRUCTION COSTS	(ESCAL	ATED)		TOTAL PROJECT COSTS									
PRIORITY / DISCIPLINE		Net Trade Cost (2021)	CM/GC Markups (%)	CM/GC Markups (\$)	Contingency (%)	C	ontingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)		Escalation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	Soft Costs (\$)		Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)					
A		В	С	D	E		F	G	н	1	J		K	L	М		N	0	Р					
4 - PRIORITY 4																_								
ARCHITECTURE	:	\$ 2,683,053	21.50%	\$ 576,856	20.00%	\$	651,982	\$ 3,911,891	10.00	4.50%	45.00%	\$	1,760,351	\$ 5,672,242	25.00%	\$	1,418,061	\$ 4,889,864	\$ 7,090,303					
MEP		\$ 580,590	21.50%	\$ 124,827	20.00%	\$	141,083	\$ 846,500	10.00	4.50%	45.00%	\$	380,925	\$ 1,227,425	25.00%	\$	306,856	\$ 1,058,125	\$ 1,534,282					
FOOD SERVICE	1	\$ 1,165,375	21.50%	\$ 250,556	20.00%	\$	283,186	\$ 1,699,117	10.00	4.50%	45.00%	\$	764,603	\$ 2,463,719	25.00%	\$	615,930	\$ 2,123,896	\$ 3,079,649					
EDUCATIONAL ASSESSMENT			21.50%	\$ -	20.00%	\$	-	\$-	10.00	4.50%	45.00%	\$	-	\$-	25.00%	\$	-	\$-	\$ -					
	TOTALS	\$ 4,429,018	21.50%	\$ 952,239	20.00%	\$	1,076,251	\$ 6,457,508				\$	2,905,879	\$ 9,363,387	25.00%	\$	2,340,847	\$ 8,071,885	\$ 11,704,234					
5 - PRIORITY 5																								
ARCHITECTURE	1	\$ 296,600	21.50%	\$ 63,769	20.00%	\$	72,074	\$ 432,443	10.00	4.50%	45.00%	\$	194,599	\$ 627,042	25.00%	\$	156,761	\$ 540,554	\$ 783,803					
MEP	1	\$-	21.50%	\$ -	20.00%	\$	-	\$-	10.00	4.50%	45.00%	\$	-	\$-	25.00%	\$	-	\$-	\$-					
FOOD SERVICE	:	\$-	21.50%	\$-	20.00%	\$	-	\$-	10.00	4.50%	45.00%	\$	-	\$-	25.00%	\$	-	\$-	\$-					
	TOTALS	\$ 296,600	21.50%	\$ 63,769	20.00%	\$	72,074	\$ 432,443				\$	194,599	\$ 627,042	25.00%	\$	156,761	\$ 540,554	\$ 783,803					

Priority 4 (Recommended): Representing a sensible improvement to the existing conditions (not required for the most basic function of the facility; however, will improve overall usability and/or reduce long-term maintenance costs).	Full renovation and targeted addition - note that the addition will not be required if the new South Norwalk Pre-K-5 is built
Priority 5 (Legacied): No Action required at this time but should substantial work be undertaken correction would be required.	Required upgrades to meet Accessibility and Building Code
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 8,612,439 \$ 12,488,037





CENTRAL PREPARATION KITCHEN



OVERALL PRIORITY TIER

TOTAL NON-ESCALATED PROJECT COST													
PRIORITY	COMPONENT	COST											
1+2	EDUCATIONAL	\$0											
CURRENTLY	FACILITIES	\$0											
CRITICAL AND POTENTIALLY	MECHANICAL/ ELECTRICAL/ PLUMBING	\$364,630											
CRITICAL	FOOD SERVICE	\$0											
	SUB-TOTAL	\$364,630											
3	EDUCATIONAL	\$0											
NECESSARY	FACILITIES	\$0											
	MECHANICAL/ ELECTRICAL/ PLUMBING	\$1,275,194											
	FOOD SERVICE	\$											
	SUB-TOTAL	\$1,275,194											
4+5	EDUCATIONAL	\$0											
RECOMMENDED	FACILITIES	\$0											
AND LEGACIED	MECHANICAL/ ELECTRICAL/ PLUMBING	\$205,191											
	FOOD SERVICE	\$3,364,791											
	SUB-TOTAL	\$3,569,982											
TOTAL OVER	NEXT 10 YEARS	\$5,209,806											

1D Facilities Conditions Score







	Central Preparation Kitchen																								
					CONSTRUCTIO	ON COSTS (2021)						CON	STRUCTION COSTS	ESCALATED])		TOTAL PROJECT COSTS								
PRIORITY / DISCIPLINE		Net Trade Cost (2021)	CM/GC Markups (%)	см/о	SC Markups (\$)	Contingency (%)	Co	ntingency (\$)	Total	Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Escalat (\$)	tion 1	Soft Costs (%)	Soft Costs Total Porject Co (\$) (Non-Escalated		tal Porject Cost Ion-Escalated)	st Total Project Cost) (Escalated)					
A		В	с		D	Ε		F		G	Н	1	J	К		L	М	N		0	Р				
1 - PRIORITY 1																									
ARCHITECTURE	\$	-	35.00%	\$	-	20.00%	\$	-	\$	-	0.00	0.00%	0.00%	\$	-	\$ -	25.00%	\$.	- \$	-	\$	-			
MEP	\$	2,638	35.00%	\$	923	20.00%	\$	712	\$	4,274	0.00	0.00%	0.00%	\$		\$ 4,274	25.00%	\$ 1,06	j8 \$	5,342	\$	5,342			
FOOD SERVICE	\$	-	35.00%	\$	-	20.00%	\$	-	\$	-	0.00	0.00%	0.00%	\$	-	\$-	25.00%	\$.	- \$	-	\$	-			
TOTA	ALS \$	2,638	35.00%	\$	923	20.00%	\$	712	\$	4,274				\$	- :	\$ 4,274	25.00%	\$ 1,06	i8 \$	5,342	\$	5,342			
2 - PRIORITY 2									-																
ARCHITECTURE	\$	-	35.00%	\$	-	20.00%	\$	-	\$	-	1.00	3.50%	3.50%	\$	-	\$-	25.00%	\$	- \$	-	\$	-			
MEP	\$	177,426	35.00%	\$	62,099	20.00%	\$	47,905	\$	287,430	1.00	3.50%	3.50%	\$	10,060	\$ 297,490	25.00%	\$ 74,37	73 \$	359,288	\$	371,863			
FOOD SERVICE	\$	-	35.00%	\$	-	20.00%	\$	-	\$	-	1.00	3.50%	3.50%	\$	-	\$-	25.00%	\$.	- \$	-	\$	-			
TOTA	ALS \$	177,426	35.00%	\$	62,099	20.00%	\$	47,905	\$	287,430				\$	10,060	\$ 297,490	25.00%	\$ 74,37	/3 \$	359,288	\$	371,863			

Priority 1 (Currently Critical): Requiring immediate action including a cited safety hazard and areas of accelerated deterioration, returning a building component to normal operation.	Replace/add exit signage with integral batteries
Priority 2 (Potentially Critical): Requiring action in the next year including components experiencing intermittent operations, potential life safety issues, and rapid deterioration, returning a building component to normal operation.	Replace building and pole mounted site lighting Replace all interior lighting Replace fire alarm system Relocate loose telcom equipment
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 364,530 \$ 377,205





									Central	Preparation Kitche	'n												
					CONSTRUCTIO	N COSTS (2021)					CONS	TRUCTION COSTS	ESCALA	TED)		TOTAL PROJECT COSTS							
PRIORITY / DISCIPLINE	Net Trade Cost (2021) CM/GC Markups CM/GC Markups (%) (\$)				Contingency (%)	Cor	ntingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	on Escalation I) (\$)		Total Construction Cost (Escalated)	Soft Costs (%)	sts Soft Costs (\$)		Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)				
A		B C D E F		G	н	H I J K L				L	м	٨		0	Р								
3 - PRIORITY 3																							
ARCHITECTURE	\$	-	21.50%	\$	-	20.00%	\$	-	\$-	5.00	4.50%	22.50%	\$	-	\$-	25.00%	\$	-	\$-	\$-			
MEP	\$	699,695	21.50%	\$	150,434	20.00%	\$	170,026	\$ 1,020,155	5.00	4.50%	22.50%	\$	229,535	\$ 1,249,690	25.00%	\$	312,423	\$ 1,275,194	\$ 1,562,113			
FOOD SERVICE	\$	-	21.50%	\$	-	20.00%	\$	-	\$-	5.00	4.50%	22.50%	\$	-	\$-	25.00%	\$	-	\$ -	\$-			
TOTALS	\$	699,695	21.50%	\$	150,434	20.00%	\$	170,026	\$ 1,020,155				\$	229,535	\$ 1,249,690	25.00%	\$	312,423	\$ 1,275,194	\$ 1,562,113			

Priority 3 (Necessary): Requiring appropriate attention to preclude predictable deterioration, potential downtime, additional damage, and higher costs to remediation if deferred further.	Building and building systems repairs and replacements to be included in full renovation
Total Non-Escalated Project Cost	\$ 1,275,194
Total Escalated Project Cost	\$ 1,562,113





									Central	Preparation Kitch	en									
					CONSTRUCTIO	ON COSTS (2021)					ATED)		TOTAL PROJECT COSTS							
PRIORITY / DISCIPLINE		Net Trade Cost (2021)	CM/GC Markups (%)	CM,	/GC Markups (\$)	Contingency (%)	Co	ontingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	E	scalation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	Sol	t Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)
A		В	С		D	E		F	G	Н	1	J		К	L	М		N	0	Ρ
4 - PRIORITY 4						*****														
ARCHITECTURE	\$	1,846,250	21.50%	\$	396,944	20.00%	\$	448,639	\$ 2,691,833	5.00	4.50%	22.50%	\$	605,662	\$ 3,297,495	25.00%	\$	824,374	\$ 3,364,791	\$ 4,121,869
MEP	\$	33,463	21.50%	\$	7,195	20.00%	\$	8,132	\$ 48,789	5.00	4.50%	22.50%	\$	10,978	\$ 59,767	25.00%	\$	14,942	\$ 60,986	\$ 74,708
FOOD SERVICE	\$	-	21.50%	\$	-	20.00%	\$	-	\$-	5.00	4.50%	22.50%	\$	-	\$ -	25.00%	\$	-	\$-	\$-
EDUCATIONAL ASSESSMENT	\$	-	21.50%	\$	-	20.00%	\$	-	\$ -	5.00	4.50%	22.50%	\$	-	\$-	25.00%	\$	-	\$-	\$-
TOTAL	.s \$	1,879,713	21.50%	\$	404,138	20.00%	\$	456,770	\$ 2,740,622				\$	616,640	\$ 3,357,261	25.00%	\$	839,315	\$ 3,425,777	\$ 4,196,577
5 - PRIORITY 5																				
ARCHITECTURE	\$	-	21.50%	\$	-	20.00%	\$	-	\$ -	5.00	4.50%	22.50%	\$	-	\$ -	25.00%	\$	-	\$-	\$ -
MEP	\$	79,125	21.50%	\$	17,012	20.00%	\$	19,227	\$ 115,364	5.00	4.50%	22.50%	\$	25,957	\$ 141,321	25.00%	\$	35,330	\$ 144,205	\$ 176,652
FOOD SERVICE	\$	-	21.50%	\$	-	20.00%	\$	-	\$-	5.00	4.50%	22.50%	\$	-	\$ -	25.00%	\$	-	\$-	\$-
TOTAL	.s \$	79,125	21.50%	\$	17,012	20.00%	\$	19,227	\$ 115,364				\$	25,957	\$ 141,321	25.00%	\$	35,330	\$ 144,205	\$ 176,652

Priority 4 (Recommended): Representing a sensible improvement to the existing conditions (not required for the most basic function of the facility; however, will improve overall usability and/or reduce long-term maintenance costs).	Full renovation
Priority 5 (Legacied): No Action required at this time but should substantial work be undertaken correction would be required.	Required upgrades to meet Accessibility and Building Code
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 3,569,982 \$ 4,373,229





NATHAN HALE MIDDLE SCHOOL

1C

Facilities Conditions Score



OVERALL PRIORITY TIER

TOTAL NON-ESCALATED PROJECT COST													
PRIORITY	COMPONENT	COST											
1+2	EDUCATIONAL	\$1,428,425											
CURRENTLY	FACILITIES	\$83,278											
CRITICAL	MECHANICAL/	\$101,250											
AND POTENTIALLY	ELECTRICAL/ PLUMBING												
CRITICAL	FOOD SERVICE	\$0											
	SUB-TOTAL	\$1,612,953											
3	EDUCATIONAL	\$12,265,062											
NECESSARY	FACILITIES	\$4,433,127											
	MECHANICAL/	\$5,338,059											
	ELECTRICAL/ PLUMBING												
	FOOD SERVICE	\$0											
	SUB-TOTAL	\$22,036,248											
4+5	EDUCATIONAL	\$0											
RECOMMENDED	FACILITIES	\$10,023,243											
AND	MECHANICAL/	\$4,520,655											
LEGACIED	ELECTRICAL/ PLUMBING												
	FOOD SERVICE	\$2,881,008											
	SUB-TOTAL	\$17,424,906											
TOTAL OVER	NEXT 10 YEARS	\$41,074,107											

Nonexistent/ Needs Replacement 1 Educational Adequacy Score





	Nathan Hale Middle School																						
						ONSTRUCTIO	ON COSTS (2021)						COM	NSTRUCTION COST	S (ESCALAT	ED)	TOTAL PROJECT COSTS						
PRIORITY / DISCIPLINE		Net Tra (2)	ade Cost 021)	CM/GC Markups (%)	CM/G	C Markups (\$)	Contingency (%)	Co	ontingency (\$)	Total Constructi (2021)	ion Cost	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Esc	alation [·] (\$)	Fotal Construction Cost (Escalated)	Soft Costs (%)	s	oft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)	
А			В	с		D	Ε		F	G		н	1	J		К	L	М		N	0	Р	
1 - PRIORITY 1																							
ARCHITECTURE		\$	-	35.00%	\$	-	20.00%	\$	-	\$	-	0.00	0.00%	0.00%	\$	-	\$-	25.00%	\$	-	\$ -	\$-	
MEP		\$	-	35.00%	\$	-	20.00%	\$	-	\$	-	0.00	0.00%	0.00%	\$	-	\$-	25.00%	\$	-	\$ -	\$-	
FOOD SERVICE		\$	-	35.00%	\$	-	20.00%	\$	-	\$	-	0.00	0.00%	0.00%	\$	-	\$-	25.00%	\$	-	\$-	\$-	
	TOTALS	\$	-	#DIV/0!	\$	-	#DIV/0!	\$	-	\$	-				\$	- 1	\$-	#DIV/0!	\$	-	\$-	\$-	
2 - PRIORITY 2																							
ARCHITECTURE		\$	41,125	35.00%	\$	14,394	20.00%	\$	11,104	\$	66,623	1.00	3.50%	3.50%	\$	2,332	\$ 68,954	25.00%	\$	17,239	\$ 83,278	\$ 86,193	
MEP		\$	50,000	35.00%	\$	17,500	20.00%	\$	13,500	\$	81,000	1.00	3.50%	3.50%	\$	2,835	\$ 83,835	25.00%	\$	20,959	\$ 101,250	\$ 104,794	
FOOD SERVICE		\$	-	35.00%	\$	-	20.00%	\$	-	\$	-	1.00	3.50%	3.50%	\$	-	\$-	25.00%	\$	-	\$-	\$-	
EDUCATIONAL ASSESSMENT		\$	705,395	35.00%	\$	246,888	20.00%	\$	190,457	\$ 1	,142,740	1.00	3.50%	3.50%	\$	39,996	\$ 1,182,736	25.00%	\$	295,684	\$ 1,428,425	\$ 1,478,420	
	TOTALS	\$	796,520	35.00%	\$	278,782	20.00%	\$	215,060	\$ 1	,290,362				\$	45,163	\$ 1,335,525	25.00%	\$	333,881	\$ 1,612,953	\$ 1,669,406	

Priority 1 (Currently Critical): Requiring immediate action including a cited safety hazard and areas of accelerated deterioration, returning a building component to normal operation.	None
Priority 2 (Potentially Critical): Requiring action in the next year including components experiencing intermittent operations, potential life safety issues, and rapid deterioration, returning a building component to normal operation.	Repairs at loading dock, provision of snow guards, investigation and remediation of damage at exterior wall of orchestra room Remove or block up unused p-traps at locker room showers
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 1,612,953 \$ 1,669,406





Nathan Hale Middle School																						
					CONSTRUCTIO	ON COSTS (2021)					CON	STRUCTION COST	S (ESCA	LATED)		TOTAL PROJECT COSTS						
PRIORITY / DISCIPLINE	Net Trac (202	Net Trade Cost (2021) CM/GC Markups (%) CM/GC Markups (\$) Contingency (%) C							Total Construction Cost (2021)	Escalation (# of Years)	Ilation Escalation Escalation Escalation (% / Year) (% Total) Escalation (\$					Soft Costs (%)		Soft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)		
A	B C D E			E		F	G	н	1	J		к	L	м		N	0	Р				
3 - PRIORITY 3																						
ARCHITECTURE	\$	2,432,443	21.50%	\$	522,975	20.00%	\$	591,084	\$ 3,546,502	5.00	4.50%	22.50%	\$	797,963	\$ 4,344,465	25.00%	\$	1,086,116	\$ 4,433,127	\$ 5,430,581		
MEP	\$	2,928,976	21.50%	\$	629,730	20.00%	\$	711,741	\$ 4,270,447	5.00	4.50%	22.50%	\$	960,851	\$ 5,231,298	25.00%	\$	1,307,824	\$ 5,338,059	\$ 6,539,122		
FOOD SERVICE	\$	-	21.50%	\$	-	20.00%	\$	-	\$-	5.00	4.50%	22.50%	\$	-	\$ -	25.00%	\$	-	\$-	\$-		
EDUCATIONAL ASSESSMENT	\$	6,729,801	21.50%	\$	1,446,907	20.00%	\$	1,635,342	\$ 9,812,050	5.00	4.50%	22.50%	\$	2,207,711	\$ 12,019,761	25.00%	\$	3,004,940	\$ 12,265,062	\$ 15,024,701		
TOTAL	5\$1	2,091,220	21.50%	\$	2,599,612	20.00%	\$	2,938,166	\$ 17,628,999				\$	3,966,525	\$ 21,595,523	25.00%	\$	5,398,881	\$ 22,036,248	\$ 26,994,404		

Priority 3 (Necessary): Requiring appropriate attention to preclude predictable deterioration, potential downtime, additional damage, and higher costs to remediation if deferred further.	Building and building systems repairs and replacements and educational adequacy improvements to be included in full renovation
Total Non-Escalated Project Cost	\$ 22,036,248
Total Escalated Project Cost	\$ 26,994,404





Nathan Hale Middle School																						
	1								Natila	In male initiale sent	001											
					CONSTRUCTIO	ON COSTS (2021)					CON	STRUCTION COSTS	(ESCALATED)			TOTAL PROJECT COSTS						
PRIORITY / DISCIPLINE	Net Trade (2021)	Cost	CM/GC Markups (%)	см/	'GC Markups (\$)	Contingency (%)	c	Contingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Escalation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	5	Soft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)			
A	В		с		D	Ε		F	G	н	1	J	к	L	м		N	0	Р			
4 - PRIORITY 4						*****																
ARCHITECTURE	\$ 5,3	330,784	21.50%	\$	1,146,119	20.00%	\$	1,295,381	\$ 7,772,283	5.00	4.50%	22.50%	\$ 1,748,76	4 \$ 9,521,047	25.00%	\$	2,380,262	\$ 9,715,354	\$ 11,901,308			
MEP	\$ 2,4	438,469	21.50%	\$	524,271	20.00%	\$	592,548	\$ 3,555,288	5.00	4.50%	22.50%	\$ 799,94	0 \$ 4,355,228	25.00%	\$	1,088,807	\$ 4,444,110	\$ 5,444,034			
FOOD SERVICE	\$ 1,5	580,800	21.50%	\$	339,872	20.00%	\$	384,134	\$ 2,304,806	5.00	4.50%	22.50%	\$ 518,58	1 \$ 2,823,388	25.00%	\$	705,847	\$ 2,881,008	\$ 3,529,235			
EDUCATIONAL ASSESSMENT			21.50%	\$	-	20.00%	\$	-	\$-	5.00	4.50%	22.50%	\$	- \$ -	25.00%	\$	-	\$-	\$ -			
TOTAL	5 \$ 9,3	350,053	21.50%	\$	2,010,261	20.00%	\$	2,272,063	\$ 13,632,377				\$ 3,067,28	5 \$ 16,699,662	25.00%	\$	4,174,916	\$ 17,040,472	\$ 20,874,578			
5 - PRIORITY 5																						
ARCHITECTURE	\$:	168,938	21.50%	\$	36,322	20.00%	\$	41,052	\$ 246,311	5.00	4.50%	22.50%	\$ 55,42	0 \$ 301,731	25.00%	\$	75,433	\$ 307,889	\$ 377,164			
MEP	\$	42,000	21.50%	\$	9,030	20.00%	\$	10,206	\$ 61,236	5.00	4.50%	22.50%	\$ 13,77	8 \$ 75,014	25.00%	\$	18,754	\$ 76,545	\$ 93,768			
FOOD SERVICE	\$	-	21.50%	\$	-	20.00%	\$	-	\$-	5.00	4.50%	22.50%	\$	- \$ -	25.00%	\$	-	\$-	\$ -			
TOTAL	\$ \$	210,938	21.50%	\$	45,352	20.00%	\$	51,258	\$ 307,547				\$ 69,19	8 \$ 376,745	25.00%	\$	94,186	\$ 384,434	\$ 470,931			

Priority 4 (Recommended): Representing a sensible improvement to the existing conditions (not required for the most basic function of the facility; however, will improve overall usability and/or reduce long-term maintenance costs).	Full renovation
Priority 5 (Legacied): No Action required at this time but should substantial work be undertaken correction would be required.	Required upgrades to meet Accessibility and Building Code
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 17,424,906 \$ 21,345,509





ROTON MIDDLE SCHOOL



OVERALL PRIORITY TIER

TOTAL NON-ESCALATED PROJECT COST													
PRIORITY	COMPONENT	COST											
1+2	EDUCATIONAL	\$1,403,325											
CURRENTLY	FACILITIES	\$87,075											
CRITICAL	MECHANICAL/	\$189,279											
AND POTENTIALLY	ELECTRICAL/ PLUMBING												
CRITICAL	FOOD SERVICE	\$106,110											
	SUB-TOTAL	\$1,785,789											
3	EDUCATIONAL	\$9,330,447											
NECESSARY	FACILITIES	\$9,674,593											
	MECHANICAL/	\$4,707,463											
	ELECTRICAL/ PLUMBING												
	FOOD SERVICE	\$0											
	SUB-TOTAL	\$23,712,503											
4+5	EDUCATIONAL	\$0											
RECOMMENDED	FACILITIES	\$3,688,870											
AND	MECHANICAL/	\$3,417,442											
LEGACIED	ELECTRICAL/ PLUMBING												
	FOOD SERVICE	\$2,612,736											
	SUB-TOTAL	\$9,719,048											
TOTAL OVER	NEXT 10 YEARS	\$35,217,341											



1C

Facilities Conditions Score



									Rote	on Middle School										
					CONSTRUCTIO	ON COSTS (2021)				ED)	TOTAL PROJECT COSTS								
PRIORITY / DISCIPLINE	N	let Trade Cost (2021)	CM/GC Markups (%)	s CM,	/GC Markups (\$)	Contingency (%)	Co	ontingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Esca	alation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	s	oft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)
A		В	с		D	Ε		F	G	н	1	J		K	L	М		N	0	Р
1 - PRIORITY 1																				
ARCHITECTURE	\$	17,000	35.00%	\$	5,950	20.00%	\$	4,590	\$ 27,540	0.00	0.00%	0.00%	\$	-	\$ 27,540	25.00%	\$	6,885	\$ 34,425	\$ 34,425
MEP	\$	-	35.00%	\$	-	20.00%	\$	-	\$-	0.00	0.00%	0.00%	\$	-	\$-	25.00%	\$	-	\$-	\$-
FOOD SERVICE	\$	49,600	35.00%	\$	17,360	20.00%	\$	13,392	\$ 80,352	0.00	0.00%	0.00%	\$	-	\$ 80,352	25.00%	\$	20,088	\$ 100,440	\$ 100,440
TOTAL	s \$	66,600	35.00%	\$	23,310	20.00%	\$	17,982	\$ 107,892				\$	-	\$ 107,892	25.00%	\$	26,973	\$ 134,865	\$ 134,865
2 - PRIORITY 2																				
ARCHITECTURE	\$	26,000	35.00%	\$	9,100	20.00%	\$	7,020	\$ 42,120	1.00	3.50%	3.50%	\$	1,474	\$ 43,594	25.00%	\$	10,899	\$ 52,650	\$ 54,493
MEP	\$	93,471	35.00%	\$	32,715	20.00%	\$	25,237	\$ 151,423	1.00	3.50%	3.50%	\$	5,300	\$ 156,723	25.00%	\$	39,181	\$ 189,279	\$ 195,904
FOOD SERVICE	\$	2,800	35.00%	\$	980	20.00%	\$	756	\$ 4,536	1.00	3.50%	3.50%	\$	159	\$ 4,695	25.00%	\$	1,174	\$ 5,670	\$ 5,868
EDUCATIONAL ASSESSMENT	\$	693,000	35.00%	\$	242,550	20.00%	\$	187,110	\$ 1,122,660	1.00	3.50%	3.50%	\$	39,293	\$ 1,161,953	25.00%	\$	290,488	\$ 1,403,325	\$ 1,452,441
TOTAL	s \$	815,271	35.00%	\$	285,345	20.00%	\$	220,123	\$ 1,320,739				\$	46,226	\$ 1,366,965	25.00%	\$	341,741	\$ 1,650,924	\$ 1,708,706

Priority 1 (Currently Critical): Requiring immediate action including a cited safety hazard and areas of accelerated deterioration, returning a building component to normal operation.	Investigation and remediation of damage at exterior wall of band room, repair at sink insulation Repair and refinish problem areas of walls and ceiling Address corrosion on various equipment items, or replace Eliminate 4" step into the walk-in refrigerator and freezer, thereby reducing associated liability Requires installation of new walk-in units Install trim strips at left side of walk-in assembly as area is very difficult/ impossible to properly maintain
Priority 2 (Potentially Critical): Requiring action in the next year including components experiencing intermittent operations, potential life safety issues, and rapid deterioration, returning a building component to normal operation.	Repairs at roof, replacement of window panes and elevator lights, provision of door hardware Replace utility carts (4) Replace emergency lighting and exit signage
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 1,785,789 \$ 1,843,571





Roton Middle School																			
				CONSTRUCT	ION COSTS (2021)			CONSTRUCTION COSTS (ESCALATED)							TOTAL PROJECT COSTS				
PRIORITY / DISCIPLINE		Net Trade Cost (2021)	CM/GC Markups (%)	CM/GC Markups (\$)	Contingency (%)	Contingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Ese	calation [·] (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	Si	oft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)	
A		В	с	D	E	F	G	Н	1	J		к	L	м		N	0	Р	
3 - PRIORITY 3																			
ARCHITECTURE	\$	5,308,419	21.50%	\$ 1,141,310	20.00%	\$ 1,289,946	\$ 7,739,674	5.00	4.50%	22.50%	\$	1,741,427	\$ 9,481,101	25.00%	\$	2,370,275	\$ 9,674,593	\$ 11,851,376	
MEP	\$	\$ 2,582,970	21.50%	\$ 555,339	20.00%	\$ 627,662	\$ 3,765,970	5.00	4.50%	22.50%	\$	847,343	\$ 4,613,314	25.00%	\$	1,153,328	\$ 4,707,463	\$ 5,766,642	
FOOD SERVICE	\$	\$-	21.50%	\$ -	20.00%	\$ -	\$ -	5.00	4.50%	22.50%	\$	-	\$ -	25.00%	\$	-	\$-	\$ -	
EDUCATIONAL ASSESSMENT	\$	5,119,587	21.50%	\$ 1,100,711	20.00%	\$ 1,244,060	\$ 7,464,358	5.00	4.50%	22.50%	\$	1,679,481	\$ 9,143,838	25.00%	\$	2,285,960	\$ 9,330,447	\$ 11,429,798	
	TOTALS \$	\$ 13,010,976	21.50%	\$ 2,797,360	20.00%	\$ 3,161,667	\$ 18,970,002				\$	4,268,251	\$ 23,238,253	25.00%	\$	5,809,563	\$ 23,712,503	\$ 29,047,816	

Priority 3 (Necessary): Requiring appropriate attention to preclude predictable deterioration, potential downtime, additional damage, and higher costs to remediation if deferred further.	Building and building systems repairs and replacements and educational adequacy improvements to be included in full renovation
Total Non-Escalated Project Cost	\$ 23,712,503
Total Escalated Project Cost	\$ 29,047,816





Roton Middle School																				
			CONSTRUCT	ON COSTS (2021)				CONSTRUCTION COSTS (ESCALATED)							TOTAL PROJECT COSTS					
PRIORITY / DISCIPLINE	Net Trade Cost (2021)	CM/GC Markups (%)	CM/GC Markups (\$)	Contingency (%)	Continge (\$)	ncy T	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Escalatio (\$)	n ⁻	Total Construction Cost (Escalated)	Soft Costs (%)	S	oft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)		
А	В	С	D	E	F		G	н	1	J	К		L	М		N	0	Р		
4 - PRIORITY 4																				
ARCHITECTURE	\$ 1,784,309	21.50%	\$ 383,626	20.00%	\$ 43	33,587 \$	2,601,523	5.00	4.50%	22.50%	\$ 58	5,343	\$ 3,186,865	25.00%	\$	796,716	\$ 3,251,903	\$ 3,983,581		
MEP	\$ 1,137,215	21.50%	\$ 244,501	20.00%	\$ 23	76,343 \$	1,658,059	5.00	4.50%	22.50%	\$ 37	8,063	\$ 2,031,123	25.00%	\$	507,781	\$ 2,072,574	\$ 2,538,904		
FOOD SERVICE	\$ 1,433,600	21.50%	\$ 308,224	20.00%	\$ 34	18,365 \$	2,090,189	5.00	4.50%	22.50%	\$ 47),292	\$ 2,560,481	25.00%	\$	640,120	\$ 2,612,736	\$ 3,200,602		
EDUCATIONAL ASSESSMENT		21.50%	\$-	20.00%	\$	- \$	\$-	5.00	4.50%	22.50%	\$	-	\$-	25.00%	\$	-	\$-	\$ -		
TOTALS	\$ 4,355,124	21.50%	\$ 936,352	20.00%	\$ 1,0	58,295 \$	6,349,771				\$ 1,42	3,698	\$ 7,778,469	25.00%	\$	1,944,617	\$ 7,937,213	\$ 9,723,087		
5 - PRIORITY 5																				
ARCHITECTURE	\$ 239,763	21.50%	\$ 51,549	20.00%	\$	58,262 \$	349,574	5.00	4.50%	22.50%	\$ 7	8,654	\$ 428,228	25.00%	\$	107,057	\$ 436,967	\$ 535,285		
MEP	\$ 737,925	21.50%	\$ 158,654	20.00%	\$ 17	79,316 \$	1,075,895	5.00	4.50%	22.50%	\$ 24	2,076	\$ 1,317,971	25.00%	\$	329,493	\$ 1,344,868	\$ 1,647,464		
FOOD SERVICE	\$-	21.50%	\$ -	20.00%	\$	- \$	\$-	5.00	4.50%	22.50%	\$	-	\$-	25.00%	\$	-	\$-	\$ -		
TOTALS	\$ 977,688	21.50%	\$ 210,203	20.00%	\$ 23	37,578 \$	1,425,468				\$ 32	0,730	\$ 1,746,199	25.00%	\$	436,550	\$ 1,781,835	\$ 2,182,748		

Priority 4 (Recommended): Representing a sensible improvement to the existing conditions (not required for the most basic function of the facility; however, will improve overall usability and/or reduce long-term maintenance costs).	Full renovation and targeted addition
Priority 5 (Legacied): No Action required at this time but should substantial work be undertaken correction would be required.	Required upgrades to meet Accessibility and Building Code
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 9,719,048 \$ 11,905,835




WOLFPIT ELEMENTARY SCHOOL



OVERALL PRIORITY TIER

TOTAL NO	N-ESCALATED PR	OJECT COST
PRIORITY	COMPONENT	COST
1+2	EDUCATIONAL	\$819,580
CURRENTLY	FACILITIES	\$487,443
CRITICAL	MECHANICAL/	\$482,015
AND POTENTIALLY	ELECTRICAL/ PLUMBING	
CRITICAL	FOOD SERVICE	\$40,500
	SUB-TOTAL	\$1,829,538
3	EDUCATIONAL	\$11,749,189
NECESSARY	FACILITIES	\$4,309,155
	MECHANICAL/	\$4,238,114
	PLUMBING	
	FOOD SERVICE	\$0
	SUB-TOTAL	\$20,296,459
4+5	EDUCATIONAL	\$0
RECOMMENDED	FACILITIES	\$2,935,073
AND	MECHANICAL/	\$855,117
LEGACIED	ELECTRICAL/ PLUMBING	
	FOOD SERVICE	\$1,923,029
	SUB-TOTAL	\$5,713,219
TOTAL OVER	NEXT 10 YEARS	\$27,839,215



1D

Facilities Conditions Score

Educational Adequacy Score



										Wolfpit	Elementary Scho	ol										
					CONSTRUCTIO	ON COSTS (2021)					CONSTRUCTION COSTS (ESCALATED)							TOTAL PROJECT COSTS				
PRIORITY / DISCIPLINE		Net Trade Cost (2021)	CM/GC Markups (%)	см/	GC Markups (\$)	Contingency (%)	Co	ontingency (\$)	Tota	al Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Escal (ation \$)	Total Construction Cost (Escalated)	Soft Costs (%)	s	oft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)	
А		В	с		D	Ε		F		G	Н	I	J	1	ĸ	L	М		N	0	Р	
1 - PRIORITY 1																						
ARCHITECTURE	\$	-	35.00%	\$	-	20.00%	\$	-	\$	-	0.00	0.00%	0.00%	\$	-	\$ -	25.00%	\$	-	\$-	\$-	
MEP	\$	-	35.00%	\$	-	20.00%	\$	-	\$	-	0.00	0.00%	0.00%	\$	-	\$-	25.00%	\$	-	\$-	\$-	
FOOD SERVICE	\$	1,200	35.00%	\$	420	20.00%	\$	324	\$	1,944	0.00	0.00%	0.00%	\$	-	\$ 1,944	25.00%	\$	486	\$ 2,430	\$ 2,430	
TOTA	LS \$	1,200	35.00%	\$	420	20.00%	\$	324	\$	1,944				\$	-	\$ 1,944	25.00%	\$	486	\$ 2,430	\$ 2,430	
2 - PRIORITY 2																						
ARCHITECTURE	\$	240,713	35.00%	\$	84,249	20.00%	\$	64,992	\$	389,954	1.00	3.50%	3.50%	\$	13,648	\$ 403,603	25.00%	\$	100,901	\$ 487,443	\$ 504,503	
MEP	\$	238,032	35.00%	\$	83,311	20.00%	\$	64,269	\$	385,612	1.00	3.50%	3.50%	\$	13,496	\$ 399,108	25.00%	\$	99,777	\$ 482,015	\$ 498,885	
FOOD SERVICE	\$	18,800	35.00%	\$	6,580	20.00%	\$	5,076	\$	30,456	1.00	3.50%	3.50%	\$	1,066	\$ 31,522	25.00%	\$	7,880	\$ 38,070	\$ 39,402	
EDUCATIONAL ASSESSMENT	\$	404,731	35.00%	\$	141,656	20.00%	\$	109,277	\$	655,664	1.00	3.50%	3.50%	\$	22,948	\$ 678,612	25.00%	\$	169,653	\$ 819,580	\$ 848,266	
TOTA	LS \$	902,276	35.00%	\$	315,796	20.00%	\$	243,614	\$	1,461,686				\$	51,159	\$ 1,512,845	25.00%	\$	378,211	\$ 1,827,108	\$ 1,891,057	

Priority 1 (Currently Critical): Requiring immediate action including a cited safety hazard and areas of accelerated deterioration, returning a building component to normal operation.	Replace corroded, mobile cashiers stand currently elevated atop a milk crate
Priority 2 (Potentially Critical): Requiring action in the next year including components experiencing intermittent operations, potential life safety issues, and rapid deterioration, returning a building component to normal operation.	Replacement of windows and doors, provision of snow guards Replace work table with overhead utensil rack Replace 2-shelf utility cart Replace serving counter Replace boilers Replace and add battery powered emergency light fixtures Replace exit signs
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 1,829,538 \$ 1,893,487





									Wolfpi	t Elementary Scho	ol										
					CONSTRUCTIO	ON COSTS (2021)				CONSTRUCTION COSTS (ESCALATED)							TOTAL PROJECT COSTS				
PRIORITY / DISCIPLINE	N	et Trade Cost (2021)	CM/GC Markups (%)	СМ	I/GC Markups (\$)	Contingency (%)	Co	ntingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	E	scalation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	S	oft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)	
А		В	С		D	E		F	G	н	1	J		К	L	М		N	0	Р	
							_														
3 - PRIORITY 3																					
ARCHITECTURE	\$	2,364,420	21.50%	\$	508,350	20.00%	\$	574,554	\$ 3,447,324	5.00	4.50%	22.50%	\$	775,648	\$ 4,222,972	25.00%	\$	1,055,743	\$ 4,309,155	\$ 5,278,715	
MEP	\$	2,325,440	21.50%	\$	499,970	20.00%	\$	565,082	\$ 3,390,492	5.00	4.50%	22.50%	\$	762,861	\$ 4,153,352	25.00%	\$	1,038,338	\$ 4,238,114	\$ 5,191,690	
FOOD SERVICE	\$	-	21.50%	\$	-	20.00%	\$	-	\$-	5.00	4.50%	22.50%	\$	-	\$ -	25.00%	\$	-	\$-	\$-	
EDUCATIONAL ASSESSMENT	\$	6,446,743	21.50%	\$	1,386,050	20.00%	\$	1,566,559	\$ 9,399,351	5.00	4.50%	22.50%	\$	2,114,854	\$ 11,514,205	25.00%	\$	2,878,551	\$ 11,749,189	\$ 14,392,757	
TOTALS	\$	11,136,603	21.50%	\$	2,394,370	20.00%	\$	2,706,195	\$ 16,237,167				\$	3,653,363	\$ 19,890,530	25.00%	\$	4,972,632	\$ 20,296,459	\$ 24,863,162	

Priority 3 (Necessary): Requiring appropriate attention to preclude predictable deterioration, potential downtime, additional damage, and higher costs to remediation if deferred further.	Building and building systems repairs and replacements and educational adequacy improvements to be included in full renovation
Total Non-Escalated Project Cost	\$ 20,296,459
Total Escalated Project Cost	\$ 24,863,162





									Wolfpit	t Elementary Schoc	اد									
					CONSTRUCTIC	ON COSTS (2021)					TED)		TOTAL PROJECT COSTS							
PRIORITY / DISCIPLINE	Net Tra (2)	ade Cost 021)	CM/GC Markups (%)	см/с	GC Markups (\$)	Contingency (%)	Co	ntingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Es	calation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	Sc	oft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)
A		В	с		D	E		F	G	Н	1	J		К	L	м		N	0	Р
4 - PRIORITY 4				1																
ARCHITECTURE	\$	1,463,325	21.50%	\$	314,615	20.00%	\$	355,588	\$ 2,133,528	5.00	4.50%	22.50%	\$	480,044	\$ 2,613,572	25.00%	\$	653,393	\$ 2,666,910	\$ 3,266,965
MEP	\$	90,000	21.50%	\$	19,350	20.00%	\$	21,870	\$ 131,220	5.00	4.50%	22.50%	\$	29,525	\$ 160,745	25.00%	\$	40,186	\$ 164,025	\$ 200,931
FOOD SERVICE	\$	1,055,160	21.50%	\$	226,859	20.00%	\$	256,404	\$ 1,538,423	5.00	4.50%	22.50%	\$	346,145	\$ 1,884,569	25.00%	\$	471,142	\$ 1,923,029	\$ 2,355,711
EDUCATIONAL ASSESSMENT			21.50%	\$	-	20.00%	\$	-	\$ -	5.00	4.50%	22.50%	\$	-	\$ -	25.00%	\$	-	\$-	\$ -
TOTALS	\$	2,608,485	21.50%	\$	560,824	20.00%	\$	633,862	\$ 3,803,171				\$	855,714	\$ 4,658,885	25.00%	\$	1,164,721	\$ 4,753,964	\$ 5,823,606
5 - PRIORITY 5																				
ARCHITECTURE	\$	147,140	21.50%	\$	31,635	20.00%	\$	35,755	\$ 214,530	5.00	4.50%	22.50%	\$	48,269	\$ 262,799	25.00%	\$	65,700	\$ 268,163	\$ 328,499
MEP	\$	379,200	21.50%	\$	81,528	20.00%	\$	92,146	\$ 552,874	5.00	4.50%	22.50%	\$	124,397	\$ 677,270	25.00%	\$	169,318	\$ 691,092	\$ 846,588
FOOD SERVICE	\$	-	21.50%	\$	-	20.00%	\$	-	\$ -	5.00	4.50%	22.50%	\$	-	\$-	25.00%	\$	-	\$ -	\$ -
TOTALS	\$	526,340	21.50%	\$	113,163	20.00%	\$	127,901	\$ 767,404				\$	172,666	\$ 940,070	25.00%	\$	235,017	\$ 959,255	\$ 1,175,087

Priority 4 (Recommended): Representing a sensible improvement to the existing conditions (not required for the most basic function of the facility; however, will improve overall usability and/or reduce long-term maintenance costs).	Full renovation and targeted addition
Priority 5 (Legacied): No Action required at this time but should substantial work be undertaken correction would be required.	Required upgrades to meet Accessibility and Building Code
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 5,713,219 \$ 6,998,693





MARVIN ELEMENTARY SCHOOL

2C

Facilities Conditions Score

2

OVERALL PRIORITY TIER

TOTAL NO	N-ESCALATED PR	OJECT COST
PRIORITY	COMPONENT	COST
1+2	EDUCATIONAL	\$0
CURRENTLY	FACILITIES	\$73,913
CRITICAL	MECHANICAL/	\$0
POTENTIALLY	ELECTRICAL/ PLUMBING	
CRITICAL	FOOD SERVICE	\$10,530
	SUB-TOTAL	\$84,443
3	EDUCATIONAL	\$5,358,030
NECESSARY	FACILITIES	\$4,529,661
	MECHANICAL/	\$5,861,634
	ELECTRICAL/ PLUMBING	
	FOOD SERVICE	\$0
	SUB-TOTAL	\$15,749,324
4+5	EDUCATIONAL	\$0
RECOMMENDED	FACILITIES	\$5,805,117
AND	MECHANICAL/	\$1,003,469
LEGACIED	ELECTRICAL/ PLUMBING	
	FOOD SERVICE	\$1,894,944
	SUB-TOTAL	\$8,703,530
TOTAL OVER	NEXT 15 YEARS	\$24,537,297





						MARVIN	ELEMENTARY S	CHOOL								
			CONSTRUC	TION COSTS (2021)				CONS	TRUCTION COSTS	ESCALATED)	TOTAL PROJECT COSTS					
PRIORITY / DISCIPLINE	Net Trade Cost (2021)	CM/GC Markups (%)	CM/GC Markup (\$)	s Contingency (%)	Contingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Escalation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	Soft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)	
A	В	с	D	E	F	G	Н	1	J	К	L	м	N	0	Р	
1 - PRIORITY 1																
ARCHITECTURE	\$.	35.00%	\$	- 20.00%	\$	- \$ -	0.00	0.00%	0.00%	\$ -	\$ -	25.00%	\$ -	\$-	\$-	
MEP	\$.	35.00%	\$	- 20.00%	\$	- \$ -	0.00	0.00%	0.00%	\$ -	\$ -	25.00%	\$ -	\$-	\$ -	
FOOD SERVICE	\$ 5,2	35.00%	\$ 1,82	0 20.00%	\$ 1,4	94 \$ 8,424	0.00	0.00%	0.00%	\$ -	\$ 8,424	25.00%	\$ 2,106	\$ 10,530	\$ 10,530	
TOTAL	S \$ 5,2	00 35.00%	\$ 1,82	0 20.00%	\$ 1,4	94 \$ 8,424				\$ -	\$ 8,424	25.00%	\$ 2,106	\$ 10,530	\$ 10,530	
2 - PRIORITY 2																
ARCHITECTURE	\$ 36,5	00 35.00%	\$ 12,77	5 20.00%	\$ 9,8	5 \$ 59,130	1.00	3.50%	3.50%	\$ 2,070	\$ 61,200	25.00%	\$ 15,300	\$ 73,913	\$ 76,499	
MEP	\$.	35.00%	\$	- 20.00%	\$	- \$ -	1.00	3.50%	3.50%	\$ -	\$-	25.00%	\$-	\$-	\$-	
FOOD SERVICE	\$ -	35.00%	\$	- 20.00%	\$	- \$ -	1.00	3.50%	3.50%	\$ -	\$ -	25.00%	\$ -	\$-	\$-	
TOTAL	S \$ 36,5	00 35.00%	\$ 12,77	5 20.00%	\$ 9,8	55 \$ 59,130				\$ 2,070	\$ 61,200	25.00%	\$ 15,300	\$ 73,913	\$ 76,499	

Priority 1 (Currently Critical): Requiring immediate action including a cited safety hazard and areas of accelerated deterioration, returning a building component to normal operation.	Replace shelving units (3) and scullery sink.
Priority 2 (Potentially Critical): Requiring action in the next year including components experiencing intermittent operations, potential life safety issues, and rapid deterioration, returning a building component to normal operation.	Repair and replacement of floor finishes
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 84,443 \$ 87,029





	MARVIN ELEMENTARY SCHOOL															
				CONSTRUCTI	ION COSTS (2021)			CONSTRUCTION COSTS (ESCALATED) TOTAL PROJECT COSTS								
PRIORITY / DISCIPLINE		Net Trade Cost (2021)	CM/GC Markups (%)	CM/GC Markups (\$)	Contingency (%)	Contingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Escalation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	Soft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)
A		В	c	D	E	F	G	н	1	J	к	L	м	N	0	P
3 - PRIORITY 3																
ARCHITECTURE	\$	\$ 2,485,411	21.50%	\$ 534,363	20.00%	\$ 603,955	\$ 3,623,729	5.00	4.50%	22.50%	\$ 815,339	\$ 4,439,067	25.00%	\$ 1,109,767	\$ 4,529,661	\$ 5,548,834
MEP	\$	\$ 3,216,260	21.50%	\$ 691,496	20.00%	\$ 781,551	\$ 4,689,307	5.00	4.50%	22.50%	\$ 1,055,094	\$ 5,744,401	25.00%	\$ 1,436,100	\$ 5,861,634	\$ 7,180,501
FOOD SERVICE	\$	\$-	21.50%	\$ -	20.00%	\$ -	\$-	5.00	4.50%	22.50%	ş -	\$ -	25.00%	\$ -	\$-	\$ -
EDUCATIONAL ASSESSMENT	\$	\$ 2,939,934	21.50%	\$ 632,086	20.00%	\$ 714,404	\$ 4,286,424	5.00	4.50%	22.50%	\$ 964,445	\$ 5,250,869	25.00%	\$ 1,312,717	\$ 5,358,030	\$ 6,563,586
	TOTALS	\$ 8,641,605	21.50%	\$ 1,857,945	20.00%	\$ 2,099,910	\$ 12,599,459				\$ 2,834,878	\$ 15,434,338	25.00%	\$ 3,858,584	\$ 15,749,324	\$ 19,292,922

Priority 3 (Necessary): Requiring appropriate attention to preclude predictable deterioration, potential downtime, additional damage, and higher costs to remediation if deferred further.	Building and building systems repairs and replacements to precede or be included in full renovation, depending on useful life remaining and extent of work
Total Non-Escalated Project Cost	\$ 15,749,324
Total Escalated Project Cost	\$ 19,292,922





MARVIN ELEMENTARY SCHOOL																				
					CONSTRUCTIO	ON COSTS (2021)				CONSTRUCTION COSTS (ESCALATED)						TOTAL PROJECT COSTS				
PRIORITY / DISCIPLINE	Net Trade (2021	Cost)	CM/GC Markups (%)	CM/	GC Markups (\$)	Contingency (%)	Co	ontingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	E	Escalation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)		Goft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)
A	В		С		D	Ε		F	G	н	1	J		К	L	М		N	0	Р
4 - PRIORITY 4								*****												
ARCHITECTURE	\$ 2	935,612	21.50%	\$	631,157	20.00%	\$	713,354	\$ 4,280,122	10.00	4.50%	45.00%	\$	1,926,055	\$ 6,206,177	25.00%	\$	1,551,544	\$ 5,350,153	\$ 7,757,722
MEP	\$	550,600	21.50%	\$	118,379	20.00%	\$	133,796	\$ 802,775	10.00	4.50%	45.00%	\$	361,249	\$ 1,164,023	25.00%	\$	291,006	\$ 1,003,469	\$ 1,455,029
FOOD SERVICE	\$ 1,	039,750	21.50%	\$	223,546	20.00%	\$	252,659	\$ 1,515,956	10.00	4.50%	45.00%	\$	682,180	\$ 2,198,135	25.00%	\$	549,534	\$ 1,894,944	\$ 2,747,669
EDUCATIONAL ASSESSMENT			21.50%	\$	-	20.00%	\$	-	\$-	10.00	4.50%	45.00%	\$	-	\$-	25.00%	\$	-	\$-	\$-
TOTALS	\$ 4,	525,962	21.50%	\$	973,082	20.00%	\$	1,099,809	\$ 6,598,853				\$	2,969,484	\$ 9,568,336	25.00%	\$	2,392,084	\$ 8,248,566	\$ 11,960,420
5 - PRIORITY 5																				
ARCHITECTURE	\$	249,638	21.50%	\$	53,672	20.00%	\$	60,662	\$ 363,971	10.00	4.50%	45.00%	\$	163,787	\$ 527,759	25.00%	\$	131,940	\$ 454,964	\$ 659,698
MEP	\$	-	21.50%	\$	-	20.00%	\$	-	\$-	10.00	4.50%	45.00%	\$	-	\$-	25.00%	\$	-	\$-	\$ -
FOOD SERVICE	\$	-	21.50%	\$	-	20.00%	\$	-	\$-	10.00	4.50%	45.00%	\$	-	\$-	25.00%	\$	-	\$-	\$-
TOTALS	\$	249,638	21.50%	\$	53,672	20.00%	\$	60,662	\$ 363,971				\$	163,787	\$ 527,759	25.00%	\$	131,940	\$ 454,964	\$ 659,698

Priority 4 (Recommended): Representing a sensible improvement to the existing conditions (not required for the most basic function of the facility; however, will improve overall usability and/or reduce long-term maintenance costs).	Full renovation
Priority 5 (Legacied): No Action required at this time but should substantial work be undertaken correction would be required.	Required upgrades to meet Accessibility and Building Code
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 8,703,530 \$ 12,620,118





ROWAYTON ELEMENTARY SCHOOL



OVERALL PRIORITY TIER

TOTAL NO	TOTAL NON-ESCALATED PROJECT COST										
PRIORITY	COMPONENT	COST									
1+2	EDUCATIONAL	\$0									
CURRENTLY	FACILITIES	\$5,002,011									
CRITICAL	MECHANICAL/	\$151,875									
AND POTENTIALLY	ELECTRICAL/ PLUMBING										
CRITICAL	FOOD SERVICE	\$0									
	SUB-TOTAL	\$5,153,886									
3	EDUCATIONAL	\$4,789,040									
NECESSARY	FACILITIES	\$1,794,324									
	MECHANICAL/	\$286,539									
	ELECTRICAL/ PLUMBING										
	FOOD SERVICE	\$0									
	SUB-TOTAL	\$6,869,903									
4+5	EDUCATIONAL	\$0									
RECOMMENDED	FACILITIES	\$3,690,330									
AND	MECHANICAL/	\$3,904,854									
LEGACIED	ELECTRICAL/ PLUMBING										
	FOOD SERVICE	\$1,918,755									
	SUB-TOTAL	\$9,513,939									
TOTAL OVER	NEXT 15 YEARS	\$21,537,728									



2C





Rowayton Elementary School																					
		CONSTRUCTION COSTS (2021)								CONSTRUCTION COSTS (ESCALATED)						TOTAL PROJECT COSTS					
PRIORITY / DISCIPLINE	Net Trade Co (2021)	t CM/GC Markup (%)	os CM/G	GC Markups (\$)	Contingency (%)	Co	ntingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Escalatio (\$)	on	Total Construction Cost (Escalated)	Soft Costs (%)	5	ioft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)		
А	В	с		D	E		F	G	н	1	J	К		L	М		N	0	Р		
1 - PRIORITY 1																					
ARCHITECTURE	\$	- 35.00%	\$	-	20.00%	\$	-	\$-	0.00	0.00%	0.00%	\$	-	\$-	25.00%	\$	-	\$-	\$-		
MEP	\$	- 35.00%	\$	-	20.00%	\$	-	\$-	0.00	0.00%	0.00%	\$	-	\$ -	25.00%	\$	-	\$-	\$-		
FOOD SERVICE	\$	- 35.00%	\$	-	20.00%	\$	-	\$-	0.00	0.00%	0.00%	\$	-	\$ -	25.00%	\$	-	\$-	\$-		
TOTALS	\$	- #DIV/0!	\$	-	#DIV/0!	\$	-	\$-				\$	-	\$-	#DIV/0!	\$	-	\$-	\$-		
2 - PRIORITY 2																					
ARCHITECTURE	\$ 2,47	,129 35.00%	\$	864,545	20.00%	\$	666,935	\$ 4,001,609	1.00	3.50%	3.50%	\$ 14	0,056	\$ 4,141,665	25.00%	\$	1,035,416	\$ 5,002,011	\$ 5,177,082		
MEP	\$ 7	,000 35.00%	\$	26,250	20.00%	\$	20,250	\$ 121,500	1.00	3.50%	3.50%	\$	4,253	\$ 125,753	25.00%	\$	31,438	\$ 151,875	\$ 157,191		
FOOD SERVICE	\$	- 35.00%	\$	-	20.00%	\$	-	\$-	1.00	3.50%	3.50%	\$	-	\$ -	25.00%	\$	-	\$ -	\$-		
TOTALS	\$ 2,54	,129 35.00%	\$	890,795	20.00%	\$	687,185	\$ 4,123,109				\$ 14	4,309	\$ 4,267,418	25.00%	\$	1,066,854	\$ 5,153,886	\$ 5,334,272		

Priority 1 (Currently Critical): Requiring immediate action including a cited safety hazard and areas of accelerated deterioration, returning a building component to normal operation.	None
Priority 2 (Potentially Critical): Requiring action in the next year including components experiencing intermittent operations, potential life safety issues, and rapid deterioration, returning a building component to normal operation.	Replacement and repairs at roofs, roof access, and exterior equipment Replace unit ventilators and air handling units in 1970s wing
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 5,153,886 \$ 5,334,272





Rowayton Elementary School																					
	CONSTRUCTION COSTS (2021)										CONSTRUCTION COSTS (ESCALATED)						TOTAL PROJECT COSTS				
PRIORITY / DISCIPLINE	Net	t Trade Cost (2021)	CM/GC Markups (%)	см	/GC Markups (\$)	Contingency (%)	Cor	ntingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	E	scalation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	1	Soft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)	
A		В	С		D	E		F	G	Н	1	J		к	L	м		N	0	Р	
														1							
3 - PRIORITY 3																					
ARCHITECTURE	\$	984,540	21.50%	\$	211,676	20.00%	\$	239,243	\$ 1,435,459	5.00	4.50%	22.50%	\$	322,978	\$ 1,758,438	25.00%	\$	439,609	\$ 1,794,324	\$ 2,198,047	
MEP	\$	157,223	21.50%	\$	33,803	20.00%	\$	38,205	\$ 229,231	5.00	4.50%	22.50%	\$	51,577	\$ 280,808	25.00%	\$	70,202	\$ 286,539	\$ 351,010	
FOOD SERVICE	\$	-	21.50%	\$	-	20.00%	\$	-	\$-	5.00	4.50%	22.50%	\$	-	\$ -	25.00%	\$	-	\$-	\$ -	
EDUCATIONAL ASSESSMENT	\$	2,627,731	21.50%	\$	564,962	20.00%	\$	638,539	\$ 3,831,232	5.00	4.50%	22.50%	\$	862,027	\$ 4,693,259	25.00%	\$	1,173,315	\$ 4,789,040	\$ 5,866,574	
TOTALS	\$	3,769,494	21.50%	\$	810,441	20.00%	\$	915,987	\$ 5,495,922				\$	1,236,583	\$ 6,732,505	25.00%	\$	1,683,126	\$ 6,869,903	\$ 8,415,631	

Priority 3 (Necessary): Requiring appropriate attention to preclude predictable deterioration, potential downtime, additional damage, and higher costs to remediation if deferred further.	Building and building systems repairs and replacements to precede or be included in full renovation, depending on useful life remaining and extent of work
Total Non-Escalated Project Cost	\$ 6,869,903
Total Escalated Project Cost	\$ 8,415,631





	Rowayton Elementary School														
			CONSTRUCT	ION COSTS (2021)				CON	STRUCTION COSTS	(ESCALATED)	TOTAL PROJECT COSTS				
PRIORITY / DISCIPLINE	Net Trade Cost (2021)	CM/GC Markups (%)	CM/GC Markups (\$)	Contingency (%)	Contingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Escalation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	Soft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)
А	В	С	D	E	F	G	н	1	J	к	L	М	N	0	Р
4 - PRIORITY 4															
ARCHITECTURE	\$ 599,1	85 21.50%	\$ 128,825	20.00%	\$ 145,60	2 \$ 873,612	10.00	4.50%	45.00%	\$ 393,125	\$ 1,266,737	25.00%	\$ 316,684	\$ 1,092,015	\$ 1,583,421
MEP	\$ 2,142,5	81 21.50%	\$ 460,655	20.00%	\$ 520,64	7 \$ 3,123,883	10.00	4.50%	45.00%	\$ 1,405,747	\$ 4,529,630	25.00%	\$ 1,132,408	\$ 3,904,854	\$ 5,662,038
FOOD SERVICE	\$ 1,052,8	15 21.50%	\$ 226,355	20.00%	\$ 255,83	4 \$ 1,535,004	10.00	4.50%	45.00%	\$ 690,752	\$ 2,225,756	25.00%	\$ 556,439	\$ 1,918,755	\$ 2,782,195
EDUCATIONAL ASSESSMENT		21.50%	\$ -	20.00%	\$	\$-	10.00	4.50%	45.00%	\$ -	\$-	25.00%	\$ -	\$-	\$-
TOTALS	\$ 3,794,5	81 21.50%	\$ 815,835	20.00%	\$ 922,08	3 \$ 5,532,499				\$ 2,489,625	\$ 8,022,124	25.00%	\$ 2,005,531	\$ 6,915,624	\$ 10,027,655
5 - PRIORITY 5															
ARCHITECTURE	\$ 1,425,6	88 21.50%	\$ 306,523	20.00%	\$ 346,44	2 \$ 2,078,652	10.00	4.50%	45.00%	\$ 935,394	\$ 3,014,046	25.00%	\$ 753,511	\$ 2,598,315	\$ 3,767,557
MEP	\$	21.50%	\$ -	20.00%	\$	- \$ -	10.00	4.50%	45.00%	\$ -	\$ -	25.00%	\$ -	\$ -	\$ -
FOOD SERVICE	\$	21.50%	\$ -	20.00%	\$	\$ -	10.00	4.50%	45.00%	\$ -	\$-	25.00%	\$ -	\$-	\$-
TOTALS	\$ 1,425,6	88 21.50%	\$ 306,523	20.00%	\$ 346,44	2 \$ 2,078,652				\$ 935,394	\$ 3,014,046	25.00%	\$ 753,511	\$ 2,598,315	\$ 3,767,557

Priority 4 (Recommended): Representing a sensible improvement to the existing conditions (not required for the most basic function of the facility; however, will improve overall usability and/or reduce long-term maintenance costs).	Full renovation
Priority 5 (Legacied): No Action required at this time but should substantial work be undertaken correction would be required.	Required upgrades to meet Accessibility and Building Code
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 9,513,939 \$ 13,795,212





SILVERMINE DUAL LANGUAGE MAGNET

2

OVERALL PRIORITY TIER

TOTAL NON-ESCALATED PROJECT COST											
PRIORITY	COMPONENT	COST									
1+2	EDUCATIONAL	\$0									
CURRENTLY	FACILITIES	\$204,176									
CRITICAL	MECHANICAL/	\$34,463									
POTENTIALLY	ELECTRICAL/ PLUMBING										
CRITICAL	FOOD SERVICE	\$60,143									
	SUB-TOTAL	\$298,781									
3	EDUCATIONAL	\$5,030,751									
NECESSARY	FACILITIES	\$2,262,078									
	MECHANICAL/	\$1,858,668									
	ELECTRICAL/ PLUMBING										
	FOOD SERVICE	\$0									
	SUB-TOTAL	\$9,151,496									
4+5	EDUCATIONAL	\$0									
RECOMMENDED	FACILITIES	\$4,176,422									
AND	MECHANICAL/	\$3,220,194									
LEGACIED	ELECTRICAL/ PLUMBING										
	FOOD SERVICE	\$2,172,739									
	SUB-TOTAL	\$9,569,354									
TOTAL OVER	NEXT 15 YEARS	\$19,019,632									



2C



	Silvermine Duel Language Magnet School														
			CONSTRUC	TION COSTS (2021)				CON	STRUCTION COSTS	(ESCALATED)	TOTAL PROJECT COSTS				
PRIORITY / DISCIPLINE	Net Trade Cost (2021)	CM/GC Markups (%)	CM/GC Markup (\$)	s Contingency (%)	Contingen (\$)	cy Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Escalation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	Soft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)
А	В	с	D	E	F	G	н	1	J	к	L	м	N	0	Р
1 - PRIORITY 1															
ARCHITECTURE	\$ 60,6	35.00%	\$ 21,2	6 20.00%	\$ 10	,382 \$ 98,2 9	4 0.00	0.00%	0.00%	\$ -	\$ 98,294	25.00%	\$ 24,573	\$ 122,867	\$ 122,867
MEP	\$ -	35.00%	\$	- 20.00%	\$	- \$	- 0.00	0.00%	0.00%	\$ -	\$ -	25.00%	\$ -	\$-	\$-
FOOD SERVICE	\$ 1,9	35.00%	\$ 66	5 20.00%	\$	513 \$ 3,07	8 0.00	0.00%	0.00%	\$.	\$ 3,078	25.00%	\$ 770	\$ 3,848	\$ 3,848
TOTALS	\$ 62,5	75 35.00%	\$ 21,90	1 20.00%	\$ 10	,895 \$ 101,37	2			\$ -	\$ 101,372	25.00%	\$ 25,343	\$ 126,714	\$ 126,714
2 - PRIORITY 2															
ARCHITECTURE	\$ 40,1	3 35.00%	\$ 14,0	3 20.00%	\$ 10	,841 \$ 65,04	17 1.00	3.50%	3.50%	\$ 2,27	7 \$ 67,324	25.00%	\$ 16,831	\$ 81,309	\$ 84,155
MEP	\$ 17,0	. 9 35.00%	\$ 5,95	7 20.00%	\$ 4	,595 \$ 27,57	1 1.00	3.50%	3.50%	\$ 96	5 \$ 28,536	25.00%	\$ 7,134	\$ 34,463	\$ 35,670
FOOD SERVICE	\$ 27,8	35.00%	\$ 9,73	0 20.00%	\$,506 \$ 45,03	1.00	3.50%	3.50%	\$ 1,57	5 \$ 46,612	25.00%	\$ 11,653	\$ 56,295	\$ 58,265
TOTALS	\$ \$ 84,9	2 35.00%	\$ 29,74	0 20.00%	\$ 23	,942 \$ 137,65	4			\$ 4,81	B \$ 142,472	25.00%	\$ 35,618	\$ 172,067	\$ 178,090

Priority 1 (Currently Critical): Requiring immediate action including a cited safety hazard and areas of accelerated deterioration, returning a building component to normal operation.	Replacement of equipment at exterior, investigation and remediation of water issues at roof Properly position convection oven beneath hood to provide a minimum 6" overhang at both ends Replace 2-shelf utility cart with heavily corroded perimeter bumper and 3-shelf utility cart Replace handwashing sink
Priority 2 (Potentially Critical): Requiring action in the next year including components experiencing intermittent operations, potential life safety issues, and rapid deterioration, returning a building component to normal operation.	Provision of snow guards, replacement of exterior glazing Replace hot food holding cabinet, hot food serving counter and balance of serving counter assembly Fix central battery for emergency lighting or replace emergency lights Fix or replace exit signage
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 298,781 \$ 304,804





									Silv	vermine Due	l Language Magne	t School											
	CONSTRUCTION COSTS (2021)										CONSTRUCTION COSTS (ESCALATED)							TOTAL PROJECT COSTS					
PRIORITY / DISCIPLINE	Net Trade Co (2021)	ost	CM/GC Markups (%)	CM/	/GC Markups (\$)	Contingency (%)	Co	ntingency (\$)	Total Construc (2021)	ction Cost l)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	E	scalation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	s	oft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)		
A	В		С		D	E		F	G		н	1	J		к	L	М		N	0	Ρ		
3 - PRIORITY 3																							
ARCHITECTURE	\$ 1,24	1,195	21.50%	\$	266,857	20.00%	\$	301,610	\$	1,809,662	5.00	4.50%	22.50%	\$	407,174	\$ 2,216,836	25.00%	\$	554,209	\$ 2,262,078	\$ 2,771,045		
MEP	\$ 1,01	9,845	21.50%	\$	219,267	20.00%	\$	247,822	\$	1,486,934	5.00	4.50%	22.50%	\$	334,560	\$ 1,821,494	25.00%	\$	455,374	\$ 1,858,668	\$ 2,276,868		
FOOD SERVICE	\$	-	21.50%	\$	-	20.00%	\$	-	\$	-	5.00	4.50%	22.50%	\$	-	\$-	25.00%	\$	-	\$-	\$-		
EDUCATIONAL ASSESSMENT	\$ 2,76	0,357	21.50%	\$	593,477	20.00%	\$	670,767	\$	4,024,601	5.00	4.50%	22.50%	\$	905,535	\$ 4,930,136	25.00%	\$	1,232,534	\$ 5,030,751	\$ 6,162,670		
TOTALS	\$ 5,02	1,397	21.50%	\$	1,079,600	20.00%	\$	1,220,199	\$	7,321,197				\$	1,647,269	\$ 8,968,466	25.00%	\$	2,242,117	\$ 9,151,496	\$ 11,210,583		

Priority 3 (Necessary): Requiring appropriate attention to preclude predictable deterioration, potential downtime, additional damage, and higher costs to remediation if deferred further.	Building and building systems repairs and replacements to precede or be included in full renovation, depending on useful life remaining and extent of work
Total Non-Escalated Project Cost	\$ 9,151,496
Total Escalated Project Cost	\$ 11,210,583





									Silvermine Du	el Language Magne	t School									
		CONSTRUCTION COSTS (2021)									CONSTRUCTION COSTS (ESCALATED)							TOTAL	PROJECT COSTS	
PRIORITY / DISCIPLINE	Net Trade (202	e Cost 1)	CM/GC Markups (%)	CM/	GC Markups (\$)	Contingency (%)	Co	ontingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Escala (\$	ition)	Total Construction Cost (Escalated)	Soft Costs (%)		Soft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)
A	В		С		D	Ε		F	G	н	1	J	к		L	м		N	0	Р
4 - PRIORITY 4													_							
ARCHITECTURE	\$ 2	2,099,402	21.50%	\$	451,371	20.00%	\$	510,155	\$ 3,060,928	10.00	4.50%	45.00%	\$ 1,	377,418	\$ 4,438,346	25.00%	\$	1,109,586	\$ 3,826,160	\$ 5,547,932
MEP	\$ 1	1,402,215	21.50%	\$	301,476	20.00%	\$	340,738	\$ 2,044,429	10.00	4.50%	45.00%	\$	919,993	\$ 2,964,423	25.00%	\$	741,106	\$ 2,555,537	\$ 3,705,528
FOOD SERVICE	\$ 1	1,192,175	21.50%	\$	256,318	20.00%	\$	289,699	\$ 1,738,191	10.00	4.50%	45.00%	\$	782,186	\$ 2,520,377	25.00%	\$	630,094	\$ 2,172,739	\$ 3,150,471
EDUCATIONAL ASSESSMENT			21.50%	\$	-	20.00%	\$	-	\$-	10.00	4.50%	45.00%	\$	-	\$-	25.00%	\$	-	\$-	\$ -
TOTALS	\$ 4	4,693,792	21.50%	\$	1,009,165	20.00%	\$	1,140,591	\$ 6,843,549				\$3,	079,597	\$ 9,923,146	25.00%	\$	2,480,786	\$ 8,554,436	\$ 12,403,932
5 - PRIORITY 5																				
ARCHITECTURE	\$	192,188	21.50%	\$	41,320	20.00%	\$	46,702	\$ 280,209	10.00	4.50%	45.00%	\$	126,094	\$ 406,304	25.00%	\$	101,576	\$ 350,262	\$ 507,879
MEP	\$	364,695	21.50%	\$	78,409	20.00%	\$	88,621	\$ 531,725	10.00	4.50%	45.00%	\$	239,276	\$ 771,002	25.00%	\$	192,750	\$ 664,657	\$ 963,752
FOOD SERVICE	\$	-	21.50%	\$	-	20.00%	\$		\$-	10.00	4.50%	45.00%	\$	-	\$-	25.00%	\$	-	\$-	\$ -
TOTAL	\$	556,883	21.50%	\$	119,730	20.00%	\$	135,322	\$ 811,935				\$	365,371	\$ 1,177,305	25.00%	\$	294,326	\$ 1,014,918	\$ 1,471,632

Priority 4 (Recommended): Representing a sensible improvement to the existing conditions (not required for the most basic function of the facility; however, will improve overall usability and/or reduce long-term maintenance costs).	Full renovation
Priority 5 (Legacied): No Action required at this time but should substantial work be undertaken correction would be required.	Required upgrades to meet Accessibility and Building Code
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 9,569,354 \$ 13,875,564





TRACEY MAGNET SCHOOL



OVERALL PRIORITY TIER

TOTAL NO	N-ESCALATED PR	OJECT COST
PRIORITY	COMPONENT	COST
1+2	EDUCATIONAL	\$0
CURRENTLY	FACILITIES	\$55,992
CRITICAL AND POTENTIALLY	MECHANICAL/ ELECTRICAL/ PLUMBING	\$0
CRITICAL	FOOD SERVICE	\$28,553
	SUB-TOTAL	\$84,544
3	EDUCATIONAL	\$6,968,615
NECESSARY	FACILITIES	\$2,133,377
	MECHANICAL/ ELECTRICAL/ PLUMBING	\$1,162,833
	FOOD SERVICE	\$0
	SUB-TOTAL	\$10,264,826
4+5	EDUCATIONAL	\$0
RECOMMENDED	FACILITIES	\$5,667,117
AND LEGACIED	MECHANICAL/ ELECTRICAL/ PLUMBING	\$5,830,462
	FOOD SERVICE	\$2,102,527
	SUB-TOTAL	\$13,600,106
TOTAL OVER	NEXT 15 YEARS	\$23,949,475



3B

Facilities Conditions Score

									Trace	ey Magnet School										
		CONSTRUCTION COSTS (2021)									CONSTRUCTION COSTS (ESCALATED)						то	TAL PR	OJECT COSTS	
PRIORITY / DISCIPLINE	N	et Trade Cost (2021)	CM/GC Markups (%)	см/	/GC Markups (\$)	Contingency (%)	Co	ontingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Escalat (\$)	ion To	tal Construction Cost (Escalated)	Soft Costs (%)	Soft Costs (\$)		Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)
А		В	с		D	Ε		F	G	Н	1	J	К		L	М	N		0	Ρ
1 - PRIORITY 1																				
ARCHITECTURE	\$	550	35.00%	\$	193	20.00%	\$	149	\$ 891	0.00	0.00%	0.00%	\$	- \$	891	25.00%	\$ 2	223 \$	1,114 \$	1,114
MEP	\$	-	35.00%	\$	-	20.00%	\$	-	\$-	0.00	0.00%	0.00%	\$	- \$	-	25.00%	\$	- \$	- \$	- 3
FOOD SERVICE	\$	-	35.00%	\$	-	20.00%	\$	-	\$-	0.00	0.00%	0.00%	\$	- \$	-	25.00%	\$	- \$	- \$	÷ -
TOTAL	s \$	550	35.00%	\$	193	20.00%	\$	149	\$ 891				\$	- \$	891	25.00%	\$ 2	223 \$	1,114 \$	1,114
2 - PRIORITY 2																				
ARCHITECTURE	\$	27,100	35.00%	\$	9,485	20.00%	\$	7,317	\$ 43,902	1.00	3.50%	3.50%	\$	1,537 \$	45,439	25.00%	\$ 11,3	360 \$	54,878 \$	56,798
MEP	\$	-	35.00%	\$	-	20.00%	\$	-	\$-	1.00	3.50%	3.50%	\$	- \$	-	25.00%	\$	- \$	- \$	-
FOOD SERVICE	\$	14,100	35.00%	\$	4,935	20.00%	\$	3,807	\$ 22,842	1.00	3.50%	3.50%	\$	799 \$	23,641	25.00%	\$ 5,9	910 \$	28,553 \$	29,552
TOTAL	.s \$	41,200	35.00%	\$	14,420	20.00%	\$	11,124	\$ 66,744				\$	2,336 \$	69,080	25.00%	\$ 17,2	270 \$	83,430 \$	86,350

Priority 1 (Currently Critical): Requiring immediate action including a cited safety hazard and areas of accelerated deterioration, returning a building component to normal operation.	Provision of exterior equipment
Priority 2 (Potentially Critical): Requiring action in the next year including components experiencing intermittent operations, potential life safety issues, and rapid deterioration, returning a building component to normal operation.	Provision of door hardware and stair access to stage Replace inadequately sized hood to fully encompass all cooking equipment Install right hand drainboard on the scullery sink
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 84,544 \$ 87,464





Tracey Magnet School																					
	CONSTRUCTION COSTS (2021)										CONSTRUCTION COSTS (ESCALATED) TOTAL PROJECT COSTS										
PRIORITY / DISCIPLINE	Net	t Trade Cost (2021)	CM/GC Markups (%)	см	/GC Markups (\$)	Contingency (%)	Coi	ntingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	E	scalation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	S	oft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Proje (Escala	ect Cost ited)
A		В	с		D	E		F	G	н	1	J		K	L	м		N	0	Ρ	
3 - PRIORITY 3																					
ARCHITECTURE	\$	1,170,578	21.50%	\$	251,674	20.00%	\$	284,450	\$ 1,706,702	5.00	4.50%	22.50%	\$	384,008	\$ 2,090,710	25.00%	\$	522,677	\$ 2,133,377	\$	2,613,387
MEP	\$	638,043	21.50%	\$	137,179	20.00%	\$	155,044	\$ 930,267	5.00	4.50%	22.50%	\$	209,310	\$ 1,139,577	25.00%	\$	284,894	\$ 1,162,833	\$	1,424,471
FOOD SERVICE	\$	-	21.50%	\$	-	20.00%	\$	-	\$ -	5.00	4.50%	22.50%	\$	-	\$-	25.00%	\$	-	\$-	\$	-
EDUCATIONAL ASSESSMENT	\$	3,823,657	21.50%	\$	822,086	20.00%	\$	929,149	\$ 5,574,892	5.00	4.50%	22.50%	\$	1,254,351	\$ 6,829,243	25.00%	\$	1,707,311	\$ 6,968,615	\$	8,536,553
TOTALS	\$	5,632,278	21.50%	\$	1,210,940	20.00%	\$	1,368,643	\$ 8,211,861				\$	1,847,669	\$ 10,059,529	25.00%	\$	2,514,882	\$ 10,264,826	\$ 1	2,574,412

Priority 3 (Necessary): Requiring appropriate attention to preclude predictable deterioration, potential downtime, additional damage, and higher costs to remediation if deferred further.	Building and building systems repairs and replacements to precede or be included in full renovation, depending on useful life remaining and extent of work
Total Non-Escalated Project Cost	\$ 10,264,826
Total Escalated Project Cost	\$ 12,574,412





						Trac	ey Magnet School								
			CONSTRUCT	ION COSTS (2021)				CONS	STRUCTION COSTS (ESCALATED)			τοτα	L PROJECT COSTS	
PRIORITY / DISCIPLINE	Net Trade Cost (2021)	CM/GC Markups (%)	CM/GC Markups (\$)	Contingency (%)	Contingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Escalation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	Soft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)
A	В	С	D	E	F	G	Н	1	J	К	L	М	N	0	Р
4 - PRIORITY 4															
ARCHITECTURE	\$ 2,970,3	84 21.50%	\$ 638,633	20.00%	\$ 721,80	\$ 4,330,820	10.00	4.50%	45.00%	\$ 1,948,869	\$ 6,279,689	25.00%	\$ 1,569,922	\$ 5,413,525	\$ 7,849,611
MEP	\$ 3,199,1	56 21.50%	\$ 687,819	20.00%	\$ 777,39	\$ 4,664,369	10.00	4.50%	45.00%	\$ 2,098,966	\$ 6,763,336	25.00%	\$ 1,690,834	\$ 5,830,462	\$ 8,454,170
FOOD SERVICE	\$ 1,153,6	50 21.50%	\$ 248,035	20.00%	\$ 280,33	\$ 1,682,022	10.00	4.50%	45.00%	\$ 756,910	\$ 2,438,931	25.00%	\$ 609,733	\$ 2,102,527	\$ 3,048,664
EDUCATIONAL ASSESSMENT		21.50%	\$ -	20.00%	\$.	\$-	10.00	4.50%	45.00%	\$ -	\$-	25.00%	\$ -	\$-	\$-
TOTALS	\$ 7,323,1	90 21.50%	\$ 1,574,486	20.00%	\$ 1,779,53	\$ 10,677,211				\$ 4,804,745	\$ 15,481,956	25.00%	\$ 3,870,489	\$ 13,346,514	\$ 19,352,445
5 - PRIORITY 5						-									
ARCHITECTURE	\$ 139,1	45 21.50%	\$ 29,916	20.00%	\$ 33,81	\$ 202,873	10.00	4.50%	45.00%	\$ 91,293	\$ 294,166	25.00%	\$ 73,542	\$ 253,592	\$ 367,708
MEP	\$ -	21.50%	\$-	20.00%	\$.	\$-	10.00	4.50%	45.00%	\$ -	\$-	25.00%	\$ -	\$-	\$-
FOOD SERVICE	\$ -	21.50%	\$ -	20.00%	\$.	\$ -	10.00	4.50%	45.00%	\$ -	\$ -	25.00%	\$ -	\$-	\$ -
TOTALS	\$ 139,1	45 21.50%	\$ 29,916	20.00%	\$ 33,81	\$ 202,873				\$ 91,293	\$ 294,166	25.00%	\$ 73,542	\$ 253,592	\$ 367,708

Priority 4 (Recommended): Representing a sensible improvement to the existing conditions (not required for the most basic function of the facility; however, will improve overall usability and/or reduce long-term maintenance costs).	Full renovation
Priority 5 (Legacied): No Action required at this time but should substantial work be undertaken correction would be required.	Required upgrades to meet Accessibility and Building Code
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 13,600,106 \$ 19,720,153





BRIEN MCMAHON HIGH SCHOOL/ CENTER FOR GLOBAL STUDIES



OVERALL PRIORITY TIER

TOTAL NON-ESCALATED PROJECT COST											
PRIORITY	COMPONENT	COST									
1+2	EDUCATIONAL	\$0									
CURRENTLY	FACILITIES	\$35,995									
CRITICAL AND POTENTIALLY	MECHANICAL/ ELECTRICAL/ PLUMBING	\$9,396,462									
CRITICAL	FOOD SERVICE	\$155,521									
	SUB-TOTAL	\$9,587,976									
3	EDUCATIONAL	\$0									
NECESSARY	FACILITIES	\$792,851									
	MECHANICAL/ ELECTRICAL/ PLUMBING	\$1,582,025									
	FOOD SERVICE	\$0									
	SUB-TOTAL	\$2,374,876									
4+5	EDUCATIONAL	\$21,114,756									
RECOMMENDED	FACILITIES	\$10,727,842									
AND LEGACIED	MECHANICAL/ ELECTRICAL/ PLUMBING	\$3,444,585									
	FOOD SERVICE	\$14,362,029									
	SUB-TOTAL	\$49,649,212									
TOTAL OVER	NEXT 20 YEARS	\$61,612,064									



3B

Facilities Conditions Score

VII-57 of 74 NORWALK FUBLIC SCHOOLS NORWALK FACILITIES PLAN STUDY





									Brien McMahon High	School / Center fo	or Global Studies									
					CONSTRUCTIO	ON COSTS (2021)					CON	STRUCTION COSTS	(ESCAL/	ATED)				TOTAL	PROJECT COSTS	
PRIORITY / DISCIPLINE	Γ	Net Trade Cost (2021)	CM/GC Markups (%)	s CM	/GC Markups (\$)	Contingency (%)	C	ontingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	E	scalation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	5	Soft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)
A		В	с		D	Ε		F	G	н	1	J		к	L	м		N	0	Р
1 - PRIORITY 1																				
ARCHITECTURE	\$	5,500	35.00%	\$	1,925	20.00%	\$	1,485	\$ 8,910	0.00	0.00%	0.00%	\$	-	\$ 8,910	25.00%	\$	2,228	\$ 11,138	\$ 11,138
MEP	\$	-	35.00%	\$	-	20.00%	\$	-	\$ -	0.00	0.00%	0.00%	\$	-	\$ -	25.00%	\$	-	\$ -	\$ -
FOOD SERVICE	\$	3,500	35.00%	\$	1,225	20.00%	\$	945	\$ 5,670	0.00	0.00%	0.00%	\$	-	\$ 5,670	25.00%	\$	1,418	\$ 7,088	\$ 7,088
TOTA	LS \$	9,000	35.00%	\$	3,150	20.00%	\$	2,430	\$ 14,580				\$	-	\$ 14,580	25.00%	\$	3,645	\$ 18,225	\$ 18,225
2 - PRIORITY 2																				
ARCHITECTURE	\$	12,275	35.00%	\$	4,296	20.00%	\$	3,314	\$ 19,886	1.00	3.50%	3.50%	\$	696	\$ 20,581	25.00%	\$	5,145	\$ 24,857	\$ 25,727
MEP	\$	4,640,228	35.00%	\$	1,624,080	20.00%	\$	1,252,862	\$ 7,517,169	1.00	3.50%	3.50%	\$	263,101	\$ 7,780,270	25.00%	\$	1,945,068	\$ 9,396,462	\$ 9,725,338
FOOD SERVICE	\$	73,300	35.00%	\$	25,655	20.00%	\$	19,791	\$ 118,746	1.00	3.50%	3.50%	\$	4,156	\$ 122,902	25.00%	\$	30,726	\$ 148,433	\$ 153,628
TOTA	LS \$	4,725,803	35.00%	\$	1,654,031	20.00%	\$	1,275,967	\$ 7,655,801				\$	267,953	\$ 7,923,754	25.00%	\$	1,980,938	\$ 9,569,751	\$ 9,904,692

Priority 1 (Currently Critical): Requiring immediate action including a cited safety hazard and areas of accelerated deterioration, returning a building component to normal operation.	Repairs at roof Repair damaged walls, remediate/repaint where necessary and infill dangerous recess at left end of walk-in refrigerator
Priority 2 (Potentially Critical): Requiring action in the next year including components experiencing intermittent operations, potential life safety issues, and rapid deterioration, returning a building component to normal operation.	Repairs at roof access and light fixtures, provision of door hardware, renovation of in-school detention room, Increase lighting density at suspect areas Replace thresholds at walk-in refrigerator and freezer doors Install closure panels at rear, left side of walk-in refrigerator within kitchen, and at front left of walk-in refrigerator within serving area where proper sanitation practices cannot be employed Repair or replace inoperative hood systems in the servery Lighting in some areas is in marginal condition and not working properly Half of the egress lights with integral batteries need to be replaced Illuminated signage leading to areas of refuge is fading and needs to be replaced Unused electrical equipment, such as tombstone floor receptacles should be removed (hazard) PA and phone systems fail periodically, they should be extensively serviced and possibly overhauled
Total Non-Escalated Project Cost	\$ 9,587,976
Total Escalated Project Cost	\$ 9,922,917





									Brien McMahon High	School / Center for	r Global Studies									
					CONSTRUCTIO	ON COSTS (2021)				STRUCTION COSTS	(ESCAL#	(TED)				TOTAL	PROJECT COSTS			
PRIORITY / DISCIPLINE	Ne	et Trade Cost (2021)	CM/GC Marku (%)	ps C	CM/GC Markups (\$)	Contingency (%)	Cor	ntingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	E	calation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	So	ft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)
A		В	с		D	Ε		F	G	Н	1	J		K	L	м		N	0	Р
3 - PRIORITY 3																				
ARCHITECTURE	\$	435,035	21.50%	\$	93,533	20.00%	\$	105,714	\$ 634,281	5.00	4.50%	22.50%	\$	142,713	\$ 776,994	25.00%	\$	194,249	\$ 792,851	\$ 971,243
MEP	\$	868,052	21.50%	\$	\$ 186,631	20.00%	\$	210,937	\$ 1,265,620	5.00	4.50%	22.50%	\$	284,764	\$ 1,550,384	25.00%	\$	387,596	\$ 1,582,025	\$ 1,937,980
FOOD SERVICE	\$	-	21.50%	Ş	\$ -	20.00%	\$	-	\$-	5.00	4.50%	22.50%	\$	-	\$-	25.00%	\$	-	\$-	\$-
TOTALS	\$	1,303,087	21.50%	\$	\$ 280,164	20.00%	\$	316,650	\$ 1,899,901				\$	427,478	\$ 2,327,379	25.00%	\$	581,845	\$ 2,374,876	\$ 2,909,223

Priority 3 (Necessary): Requiring appropriate attention to preclude predictable deterioration, potential downtime, additional damage, and higher costs to remediation if deferred further.	Building and building systems repairs and replacements to precede or be included in targeted renovations, depending on useful life remaining and extent of work
Total Non-Escalated Project Cost	\$ 2,374,876
Total Escalated Project Cost	\$ 2,909,223





									Brien McMahon High	School / Center fo	or Global Studies								
					CONSTRUCTION	ON COSTS (2021)					CONS	TRUCTION COSTS	(ESCA	LATED)			TOTAL	PROJECT COSTS	
PRIORITY / DISCIPLINE	Γ	Net Trade Cost (2021)	CM/GC Markups (%)	CM	I/GC Markups (\$)	Contingency (%)	c	ontingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)		Escalation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	Soft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)
A		В	С		D	Ε		F	G	н	1	J		К	L	м	N	0	Р
4 - PRIORITY 4													_						
ARCHITECTURE	\$	5,844,083	21.50%	\$	1,256,478	20.00%	\$	1,420,112	\$ 8,520,673	15.00	4.00%	60.00%	\$	5,112,404	\$ 13,633,077	25.00%	\$ 3,408,269	\$ 10,650,841	\$ 17,041,346
MEP	\$	1,890,033	21.50%	\$	406,357	20.00%	\$	459,278	\$ 2,755,668	15.00	4.00%	60.00%	\$	1,653,401	\$ 4,409,069	25.00%	\$ 1,102,267	\$ 3,444,585	\$ 5,511,336
FOOD SERVICE	\$	7,880,400	21.50%	\$	1,694,286	20.00%	\$	1,914,937	\$ 11,489,623	15.00	4.00%	60.00%	\$	6,893,774	\$ 18,383,397	25.00%	\$ 4,595,849	\$ 14,362,029	\$ 22,979,246
EDUCATIONAL ASSESSMENT	\$	11,585,600	21.50%	\$	2,490,904	20.00%	\$	2,815,301	\$ 16,891,805	15.00	4.00%	60.00%	\$	10,135,083	\$ 27,026,888	25.00%	\$ 6,756,722	\$ 21,114,756	\$ 33,783,610
TOTAL	.s \$	27,200,116	21.50%	\$	5,848,025	20.00%	\$	6,609,628	\$ 39,657,769				\$	23,794,661	\$ 63,452,431	25.00%	\$ 15,863,108	\$ 49,572,211	\$ 79,315,538
5 - PRIORITY 5																	 		
ARCHITECTURE	\$	42,250	21.50%	\$	9,084	20.00%	\$	10,267	\$ 61,601	15.00	4.00%	60.00%	\$	36,960	\$ 98,561	25.00%	\$ 24,640	\$ 77,001	\$ 123,201
MEP	\$	-	21.50%	\$	-	20.00%	\$	-	\$-	15.00	4.00%	60.00%	\$	-	\$-	25.00%	\$ -	\$-	\$-
FOOD SERVICE	\$	-	21.50%	\$	-	20.00%	\$		\$-	15.00	4.00%	60.00%	\$		\$-	25.00%	\$ -	\$-	\$-
TOTAL	.s \$	42,250	21.50%	\$	9,084	20.00%	\$	10,267	\$ 61,601				\$	36,960	\$ 98,561	25.00%	\$ 24,640	\$ 77,001	\$ 123,201

Priority 4 (Recommended): Representing a sensible improvement to the existing conditions (not required for the most basic function of the facility; however, will improve overall usability and/or reduce long-term maintenance costs).	Targeted renovations
Priority 5 (Legacied): No Action required at this time but should substantial work be undertaken correction would be required.	Required upgrades to meet Accessibility and Building Code
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 49,649,212 \$ 79,438,739





BROOKSIDE ELEMENTARY SCHOOL



OVERALL PRIORITY TIER

TOTAL NO	N-ESCALATED PR	OJECT COST				
PRIORITY	COMPONENT	COST				
1+2	EDUCATIONAL	\$0				
CURRENTLY	FACILITIES	\$3,649,167				
CRITICAL AND POTENTIALLY	MECHANICAL/ ELECTRICAL/ PLUMBING	\$0				
CRITICAL	FOOD SERVICE	\$3,645				
	SUB-TOTAL	\$3,652,812				
3	EDUCATIONAL	\$0				
NECESSARY	FACILITIES	\$343,082				
	MECHANICAL/ ELECTRICAL/ PLUMBING	\$3,430,448				
	FOOD SERVICE	\$0				
	SUB-TOTAL	\$3,773,530				
4+5	EDUCATIONAL	\$4,824,666				
RECOMMENDED	FACILITIES	\$1,713,869				
AND LEGACIED	MECHANICAL/ ELECTRICAL/ PLUMBING	\$2,588,623				
	FOOD SERVICE	\$0				
	SUB-TOTAL	\$9,127,158				
TOTAL OVER	NEXT 20 YEARS	\$16,553,500				



3B





								Brooksid	de Elementary Sch	lool							
			c	ONSTRUCTIO	ON COSTS (2021)					CON	STRUCTION COSTS	(ESCALATED)			τοτα	PROJECT COSTS	
PRIORITY / DISCIPLINE	Net Trade Cos (2021)	CM/GC Markups (%)	s CM/G	C Markups (\$)	Contingency (%)	Cor	ntingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Escalation (\$)	Total Construction Co (Escalated)	st Soft Costs (%)	Soft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)
A	В	с		D	E		F	G	н	1	J	к	L	м	N	0	Р
1 - PRIORITY 1																	
ARCHITECTURE	\$ 16	35.00%	\$	5,601	20.00%	\$	4,321	\$ 25,923	0.00	0.00%	0.00%	\$	- \$ 25,92	3 25.00%	\$ 6,481	\$ 32,404	\$ 32,404
MEP	\$	- 35.00%	\$	-	20.00%	\$	-	\$-	0.00	0.00%	0.00%	\$	- \$	- 25.00%	ş -	\$-	\$-
FOOD SERVICE	\$	- 35.00%	\$	-	20.00%	\$	-	\$-	0.00	0.00%	0.00%	\$	- \$	- 25.00%	\$ -	\$-	\$-
TOTALS	\$ 16	002 35.00%	\$	5,601	20.00%	\$	4,321	\$ 25,923				\$	- \$ 25,92	3 25.00%	\$ 6,481	\$ 32,404	\$ 32,404
2 - PRIORITY 2																	
ARCHITECTURE	\$ 1,786	056 35.00%	ş	625,120	20.00%	\$	482,235	\$ 2,893,411	1.00	3.50%	3.50%	\$ 101,2	69 \$ 2,994,6 8	0 25.00%	\$ 748,670	\$ 3,616,763	\$ 3,743,350
MEP	\$	- 35.00%	\$	-	20.00%	\$	-	\$-	1.00	3.50%	3.50%	\$	- \$	- 25.00%	ş -	\$-	\$-
FOOD SERVICE	\$ 1	800 35.00%	\$	630	20.00%	\$	486	\$ 2,916	1.00	3.50%	3.50%	\$:	02 \$ 3,0	.8 25.00%	\$ 755	\$ 3,645	\$ 3,773
TOTALS	\$ 1,787	856 35.00%	\$	625,750	20.00%	\$	482,721	\$ 2,896,327				\$ 101,3	71 \$ 2,997,6 9	8 25.00%	\$ 749,425	\$ 3,620,408	\$ 3,747,123

Priority 1 (Currently Critical): Requiring immediate action including a cited safety hazard and areas of accelerated deterioration, returning a building component to normal operation.	Repairs at roofs and interior walls
Priority 2 (Potentially Critical): Requiring action in the next year including components experiencing intermittent operations, potential life safety issues, and rapid deterioration, returning a building component to normal operation.	Repairs at roofs and interior Replace corroded casters on hot food serving counter, work table with can opener, and utility cart Finish or replace wood fascia directly behind tray slide Replace laminated table at serving area
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 3,652,812 \$ 3,779,527





									Brooksid	le Elementary Scho	ol								
				C	ONSTRUCTIC	ON COSTS (2021)					CONS	TRUCTION COSTS	ESCALA	TED)			тот	L PROJECT COSTS	
PRIORITY / DISCIPLINE		Net Trade Cost (2021)	CM/GC Markup (%)	s CM/GC	C Markups (\$)	Contingency (%)	Cont	tingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Es	calation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	Soft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)
A		B	С		D	E		F	G	Н	1	J		К	L	м	N	0	Ρ
3 - PRIORITY 3																			
ARCHITECTURE	\$	188,248	21.50%	\$	40,473	20.00%	\$	45,744	\$ 274,466	5.00	4.50%	22.50%	\$	61,755	\$ 336,220	25.00%	\$ 84,05	5 \$ 343,082	\$ 420,275
MEP	\$	1,882,276	21.50%	\$	404,689	20.00%	\$	457,393	\$ 2,744,358	5.00	4.50%	22.50%	\$	617,481	\$ 3,361,839	25.00%	\$ 840,46	\$ 3,430,448	\$ 4,202,299
FOOD SERVICE	\$	-	21.50%	\$	-	20.00%	\$	-	\$ -	5.00	4.50%	22.50%	\$	-	\$ -	25.00%	\$	\$-	\$ -
	TOTALS \$	2,070,524	21.50%	\$	445,163	20.00%	\$	503,137	\$ 3,018,824				\$	679,235	\$ 3,698,059	25.00%	\$ 924,51	\$ 3,773,530	\$ 4,622,574

Priority 3 (Necessary): Requiring appropriate attention to preclude predictable deterioration, potential downtime, additional damage, and higher costs to remediation if deferred further.	Building and building systems repairs and replacements to precede or be included in targeted renovations, depending on useful life remaining and extent of work
Total Non-Escalated Project Cost	\$ 3,773,530
Total Escalated Project Cost	\$ 4,622,574





									Brooksid	le Elementary Sch	ool									
					CONSTRUCTIO	ON COSTS (2021)					CON	STRUCTION COSTS	(ESCAL	ATED)				TOTAL	PROJECT COSTS	
PRIORITY / DISCIPLINE		Net Trade Cost (2021)	CM/GC Markups (%)	см/	GC Markups (\$)	Contingency (%)	Co	ontingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)		scalation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	S	ioft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)
A	-	В	С		D	E		F	G	Н	1	J		ĸ	L	М		N	0	P
4 - PRIORITY 4																				
ARCHITECTURE		\$ 819,257	21.50%	\$	176,140	20.00%	\$	199,080	\$ 1,194,477	15.00	4.00%	60.00%	\$	716,686	\$ 1,911,163	25.00%	\$	477,791	\$ 1,493,096	\$ 2,388,954
MEP		\$ 1,420,369	21.50%	\$	305,379	20.00%	\$	345,150	\$ 2,070,898	15.00	4.00%	60.00%	\$	1,242,539	\$ 3,313,437	25.00%	\$	828,359	\$ 2,588,623	\$ 4,141,796
FOOD SERVICE		\$ -	21.50%	\$	-	20.00%	\$	-	\$-	15.00	4.00%	60.00%	\$	-	\$ -	25.00%	\$	-	\$-	\$-
EDUCATIONAL ASSESSMENT	:	\$ 2,647,279	21.50%	\$	569,165	20.00%	\$	643,289	\$ 3,859,733	15.00	4.00%	60.00%	\$	2,315,840	\$ 6,175,572	25.00%	\$	1,543,893	\$ 4,824,666	\$ 7,719,466
	TOTALS	\$ 4,886,905	21.50%	\$	1,050,685	20.00%	\$	1,187,518	\$ 7,125,108				\$	4,275,065	\$ 11,400,173	25.00%	\$	2,850,043	\$ 8,906,385	\$ 14,250,216
5 - PRIORITY 5																				
ARCHITECTURE		\$ 121,138	21.50%	\$	26,045	20.00%	\$	29,436	\$ 176,618	15.00	4.00%	60.00%	\$	105,971	\$ 282,590	25.00%	\$	70,647	\$ 220,773	\$ 353,237
MEP	:	\$-	21.50%	\$	-	20.00%	\$	-	\$-	15.00	4.00%	60.00%	\$	-	\$ -	25.00%	\$	-	\$-	\$-
FOOD SERVICE	1	\$-	21.50%	\$	-	20.00%	\$	-	\$ -	15.00	4.00%	60.00%	\$	-	\$-	25.00%	\$	-	\$-	\$-
	TOTALS	\$ 121,138	21.50%	\$	26,045	20.00%	\$	29,436	\$ 176,618				\$	105,971	\$ 282,590	25.00%	\$	70,647	\$ 220,773	\$ 353,237

Priority 4 (Recommended): Representing a sensible improvement to the existing conditions (not required for the most basic function of the facility; however, will improve overall usability and/or reduce long-term maintenance costs).	Targeted renovations to improve educational adequacy
Priority 5 (Legacied): No Action required at this time but should substantial work be undertaken correction would be required.	Required upgrades to meet Accessibility and Building Code
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 9,127,158 \$ 14,603,453





KENDALL COLLEGE AND CAREER ACADEMY

3

OVERALL PRIORITY TIER

TOTAL NO	N-ESCALATED PR	OJECT COST
PRIORITY	COMPONENT	COST
1+2	EDUCATIONAL	\$0
CURRENTLY	FACILITIES	\$1,133,384
CRITICAL AND POTENTIALLY	MECHANICAL/ ELECTRICAL/ PLUMBING	\$60,750
CRITICAL	FOOD SERVICE	\$0
	SUB-TOTAL	\$1,194,134
3	EDUCATIONAL	\$0
NECESSARY	FACILITIES	\$935,405
	MECHANICAL/ ELECTRICAL/ PLUMBING	\$2,215,196
	FOOD SERVICE	\$0
	SUB-TOTAL	\$3,150,601
4+5	EDUCATIONAL	\$4,012,183
RECOMMENDED	FACILITIES	\$3,670,538
AND LEGACIED	MECHANICAL/ ELECTRICAL/ PLUMBING	\$2,710,859
	FOOD SERVICE	\$1,811,911
	SUB-TOTAL	\$12,205,491
TOTAL OVER	NEXT 20 YEARS	\$16,550,227

3B Facilities Conditions Score

VII-65 of 74





	Kendall College and Career Center																					
			cc	DNSTRUCTIO	N COSTS (2021)					CONSTRUCTION COSTS (ESCALATED)							TOTAL PROJECT COSTS					
PRIORITY / DISCIPLINE	Net Trade Cost (2021)	CM/GC Markups (%)	CM/GC (Markups (\$)	Contingency (%)	Co	ntingency (\$)	Total Const (20	truction Cost 021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Escalation (\$)	Total Constructi (Escalated	ion Cost d)	Soft Costs (%)	So	oft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)		
А	В	с		D	Ε		F		G	н	1	J	К	L		М		N	0	Р		
1 - PRIORITY 1																						
ARCHITECTURE	\$ -	35.00%	\$	-	20.00%	\$	-	\$	-	0.00	0.00%	0.00%	\$	- \$	-	25.00%	\$	-	\$ -	\$ -		
MEP	\$ -	35.00%	\$	-	20.00%	\$	-	\$	-	0.00	0.00%	0.00%	\$	- \$	-	25.00%	\$	-	\$-	\$-		
FOOD SERVICE	\$ -	35.00%	\$	-	20.00%	\$	-	\$	-	0.00	0.00%	0.00%	\$	- \$	-	25.00%	\$	-	\$ -	\$-		
TOTALS	s s -	#DIV/0!	\$	-	#DIV/0!	\$	-	\$	-				\$	- \$	-	#DIV/0!	\$	-	\$ -	\$ -		
2 - PRIORITY 2																						
ARCHITECTURE	\$ 559,6	96 35.00%	\$	195,894	20.00%	\$	151,118	\$	906,708	1.00	3.50%	3.50%	\$ 31,	35 \$ 9	938,442	25.00%	\$	234,611	\$ 1,133,384	\$ 1,173,053		
MEP	\$ 30,0	35.00%	\$	10,500	20.00%	\$	8,100	\$	48,600	1.00	3.50%	3.50%	\$ 1,3	01 \$	50,301	25.00%	\$	12,575	\$ 60,750	\$ 62,876		
FOOD SERVICE	\$ -	35.00%	\$	-	20.00%	\$	-	\$	-	1.00	3.50%	3.50%	\$	- \$	-	25.00%	\$	-	\$ -	\$-		
TOTALS	\$ 589,6	96 35.00%	\$	206,394	20.00%	\$	159,218	\$	955,308				\$ 33,4	36 \$ 9	988,743	25.00%	\$	247,186	\$ 1,194,134	\$ 1,235,929		

Priority 1 (Currently Critical): Requiring immediate action including a cited safety hazard and areas of accelerated deterioration, returning a building component to normal operation.	None
Priority 2 (Potentially Critical): Requiring action in the next year including components experiencing intermittent operations, potential life safety issues, and rapid deterioration, returning a building component to normal operation.	Repairs at exterior walls and roofs, provision of snow guards and door hardware, functional tuning of doors, ceiling tiles, and light fixtures Install missing sections of coved base in kitchen and a coved base in the serving area of the cafeteria
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 1,194,134 \$ 1,235,929





	Kendall College and Career Center																			
			CONSTRUCT	ON COSTS (2021)				CONSTRUCTION COSTS (ESCALATED)							TOTAL PROJECT COSTS					
PRIORITY / DISCIPLINE	Net Trade Cost (2021)	Net Trade Cost (2021) CM/GC Markups CM/GC Markups (\$) Contingency (\$) Continge		Escalation Total Construction Cost (\$) (Escalated)		otal Construction Cost (Escalated)	Soft Costs (%)	Soft Cost (\$)	5	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)									
A	В	с	D	E	F		G	н	1	J	к		L	м	N		0	Ρ		
3 - PRIORITY 3																				
ARCHITECTURE	\$ 513,254	21.50%	\$ 110,350	20.00%	\$ 124	\$,721	748,324	5.00	4.50%	22.50%	\$ 168	,373 \$	916,697	25.00%	\$ 229	,174 \$	935,405	\$ 1,145,872		
MEP	\$ 1,215,471	21.50%	\$ 261,326	20.00%	\$ 295	5,359 \$	1,772,157	5.00	4.50%	22.50%	\$ 398	,735 \$	2,170,892	25.00%	\$ 542	,723 \$	2,215,196	\$ 2,713,615		
FOOD SERVICE	\$ -	21.50%	\$ -	20.00%	\$	- \$	-	5.00	4.50%	22.50%	\$	- :	\$-	25.00%	\$	- \$		\$-		
TOTALS	\$ 1,728,725	21.50%	\$ 371,676	20.00%	\$ 420),080 \$	2,520,481				\$ 567	,108 \$	3,087,589	25.00%	\$ 771	,897 \$	3,150,601 \$	3,859,487		

Priority 3 (Necessary): Requiring appropriate attention to preclude predictable deterioration, potential downtime, additional damage, and higher costs to remediation if deferred further.	Building and building systems repairs and replacements to precede or be included in targeted renovations, depending on useful life remaining and extent of work
Total Non-Escalated Project Cost	\$ 3,150,601
Total Escalated Project Cost	\$ 3,859,487





								Kendall Co	llege and Career C	enter											
				CONSTRUCTIO	ON COSTS (2021)				CONSTRUCTION COSTS (ESCALATED)							TOTAL PROJECT COSTS					
PRIORITY / DISCIPLINE	Net Trade Cost CM/GC Markups CM/GC Markups ((2021) (%) (\$)		Contingency (%)	ntingency Contingency To (%) (\$)		Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	1	Escalation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)		Soft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)				
A	В		с	D	E		F	G	н	1	J		К	L	м		N	0	P		
4 - PRIORITY 4																					
ARCHITECTURE	\$ 1,	928,880	21.50%	\$ 414,709	20.00%	\$	468,718	\$ 2,812,307	15.00	4.00%	60.00%	\$	1,687,384	\$ 4,499,691	25.00%	\$	1,124,923	\$ 3,515,384	\$ 5,624,614		
MEP	\$ 1,	445,440	21.50%	\$ 310,770	20.00%	\$	351,242	\$ 2,107,452	15.00	4.00%	60.00%	\$	1,264,471	\$ 3,371,922	25.00%	\$	842,981	\$ 2,634,314	\$ 4,214,903		
FOOD SERVICE	\$	994,190	21.50%	\$ 213,751	20.00%	\$	241,588	\$ 1,449,529	15.00	4.00%	60.00%	\$	869,717	\$ 2,319,246	25.00%	\$	579,812	\$ 1,811,911	\$ 2,899,058		
EDUCATIONAL ASSESSMENT	\$ 2,3	201,472	21.50%	\$ 473,316	20.00%	\$	534,958	\$ 3,209,746	15.00	4.00%	60.00%	\$	1,925,848	\$ 5,135,594	25.00%	\$	1,283,898	\$ 4,012,183	\$ 6,419,492		
TOTALS	\$ 6,	569,982	21.50%	\$ 1,412,546	20.00%	\$	1,596,506	\$ 9,579,034				\$	5,747,420	\$ 15,326,454	25.00%	\$	3,831,614	\$ 11,973,792	\$ 19,158,068		
5 - PRIORITY 5																					
ARCHITECTURE	\$	85,133	21.50%	\$ 18,303	20.00%	\$	20,687	\$ 124,123	15.00	4.00%	60.00%	\$	74,474	\$ 198,597	25.00%	\$	49,649	\$ 155,154	\$ 248,246		
MEP	\$	42,000	21.50%	\$ 9,030	20.00%	\$	10,206	\$ 61,236	15.00	4.00%	60.00%	\$	36,742	\$ 97,978	25.00%	\$	24,494	\$ 76,545	\$ 122,472		
FOOD SERVICE	\$	-	21.50%	\$ -	20.00%	\$	-	\$-	15.00	4.00%	60.00%	\$	-	\$-	25.00%	\$	-	\$ -	\$ -		
TOTALS	\$	127,133	21.50%	\$ 27,333	20.00%	\$	30,893	\$ 185,359				\$	111,216	\$ 296,575	25.00%	\$	74,144	\$ 231,699	\$ 370,718		

Priority 4 (Recommended): Representing a sensible improvement to the existing conditions (not required for the most basic function of the facility; however, will improve overall usability and/or reduce long-term maintenance costs).	Targeted renovations
Priority 5 (Legacied): No Action required at this time but should substantial work be undertaken correction would be required.	Required upgrades to meet Accessibility and Building Code
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 12,205,491 \$ 19,528,786





NORWALK EARLY CHILDHOOD CENTER



OVERALL PRIORITY TIER

TOTAL NO	N-ESCALATED PR	OJECT COST
PRIORITY	COMPONENT	COST
1+2	EDUCATIONAL	\$0
CURRENTLY	FACILITIES	\$1,013
CRITICAL	MECHANICAL/	\$14,535
AND POTENTIALLY	ELECTRICAL/ PLUMBING	
CRITICAL	FOOD SERVICE	\$0
	SUB-TOTAL	\$15,548
3	EDUCATIONAL	\$0
NECESSARY	FACILITIES	\$87,617
	MECHANICAL/	\$65,291
	ELECTRICAL/ PLUMBING	
	FOOD SERVICE	\$0
	SUB-TOTAL	\$152,908
4+5	EDUCATIONAL	\$807,382
RECOMMENDED	FACILITIES	\$45,563
AND	MECHANICAL/	\$195,873
LEGACIED	ELECTRICAL/ PLUMBING	
	FOOD SERVICE	\$0
	SUB-TOTAL	\$1,048,818
TOTAL OVER	\$1,217,273	



3B

Facilities Conditions Score



									Norwalk	Early Childhood C	enter												
				со	NSTRUCTIO	N COSTS (2021)					CONSTRUCTION COSTS (ESCALATED)							TOTAL PROJECT COSTS					
PRIORITY / DISCIPLINE		Net Trade Cost (2021)	CM/GC Markup (%)	s CM/GC (Markups \$)	Contingency (%)	Con	tingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Escalation (\$)	Total C (onstruction Cost (Escalated)	Soft Costs (%)	Soft Costs (\$)	т	otal Porject Cost (Non-Escalated)	Total Project Cost (Escalated)			
А		В	с	1	D	E		F	G	н	1	J	к		L	м	N		0	Р			
1 - PRIORITY 1																							
ARCHITECTURE		\$ -	35.00%	\$	-	20.00%	\$	-	\$ -	0.00	0.00%	0.00%	\$	- \$	-	25.00%	\$	- \$	-	\$ -			
MEP		\$ -	35.00%	\$	-	20.00%	\$	-	\$ -	0.00	0.00%	0.00%	\$	- \$	-	25.00%	s	- \$	-	\$ -			
FOOD SERVICE		\$ -	35.00%	\$	-	20.00%	\$	-	\$ -	0.00	0.00%	0.00%	\$	- \$	-	25.00%	\$	- \$	-	\$ -			
	TOTALS	\$ -	#DIV/0!	\$	-	#DIV/0!	\$	-	\$-				\$	- \$	-	#DIV/0!	\$	- \$	-	\$ -			
2 - PRIORITY 2																							
ARCHITECTURE		\$ 50	35.00%	\$	175	20.00%	\$	135	\$ 810	1.00	3.50%	3.50%	\$	28 \$	838	25.00%	\$	210 \$	1,013	\$ 1,048			
MEP		\$ 7,17	B 35.00%	\$	2,512	20.00%	\$	1,938	\$ 11,628	1.00	3.50%	3.50%	\$	107 \$	12,035	25.00%	\$ 3	,009 \$	14,535	\$ 15,044			
FOOD SERVICE		\$ -	35.00%	\$	-	20.00%	\$	-	\$ -	1.00	3.50%	3.50%	\$	- \$	-	25.00%	\$	- \$	-	\$ -			
	TOTALS	\$ 7,67	8 35.00%	\$	2,687	20.00%	\$	2,073	\$ 12,438				\$ ·	135 \$	12,874	25.00%	\$ 3	,218 \$	15,548	\$ 16,092			

Priority 1 (Currently Critical): Requiring immediate action including a cited safety hazard and areas of accelerated deterioration, returning a building component to normal operation.	None
Priority 2 (Potentially Critical): Requiring action in the next year including components experiencing intermittent operations, potential life safety issues, and rapid deterioration, returning a building component to normal operation.	Repairs at high-use areas Install protective covers on electrical devices and switches in gymnasium space
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 15,548 \$ 16,092





	Norwalk Early Childhood Center															
			CONSTRUCTION	ON COSTS (2021)				CON	STRUCTION COSTS	(ESCALATED)	TOTAL PROJECT COSTS					
PRIORITY / DISCIPLINE	Net Trade Cost (2021)	CM/GC Markups (%)	CM/GC Markups (\$)	Contingency (%)	Contingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Escalation (\$)	Total Construction Cost (Escalated)	Soft Costs (%)	Soft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)	
A	В	С	D	E	F	G	Н	1	J	к	L	м	N	0	Ρ	
3 - PRIORITY 3																
ARCHITECTURE	\$ 48,07	5 21.50%	\$ 10,336	20.00%	\$ 11,682	\$ 70,093	5.00	4.50%	22.50%	\$ 15,771	\$ 85,864	25.00%	\$ 21,466	\$ 87,617	\$ 107,330	
MEP	\$ 35,82	5 21.50%	\$ 7,702	20.00%	\$ 8,705	\$ 52,233	5.00	4.50%	22.50%	\$ 11,752	\$ 63,985	25.00%	\$ 15,996	\$ 65,291	\$ 79,982	
FOOD SERVICE	\$ -	21.50%	ş -	20.00%	ş -	\$-	5.00	4.50%	22.50%	\$ -	\$ -	25.00%	\$ -	\$-	\$-	
TOTALS	\$ 83,90	0 21.50%	\$ 18,039	20.00%	\$ 20,388	\$ 122,326				\$ 27,523	\$ 149,850	25.00%	\$ 37,462	\$ 152,908	\$ 187,312	

Priority 3 (Necessary): Requiring appropriate attention to preclude predictable deterioration, potential downtime, additional damage, and higher costs to remediation if deferred further.	Building and building systems repairs and replacements to precede or be included in targeted renovations, depending on useful life remaining and extent of work
Total Non-Escalated Project Cost	\$ 152,908
Total Escalated Project Cost	\$ 187,312





Norwalk Early Childhood Center																						
					CONSTRUCTIO	ON COSTS (2021)				CONSTRUCTION COSTS (ESCALATED)							TOTAL PROJECT COSTS					
PRIORITY / DISCIPLINE		Net Trade Cost (2021)	CM/GC Markups (%) CM/GC Markups (\$)		Contingency Contingency (%) (\$)		Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Escalation Total Construction (\$) (Escalated)		Total Construction Cost (Escalated)	Soft Costs (%)		ioft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Project Cost (Escalated)				
A		В	с	-	D	E		F	G	н	1	J		к	L	м	N		0	Р		
4 - PRIORITY 4	-																					
ARCHITECTURE	\$	25,000	21.50%	\$	5,375	20.00%	\$	6,075	\$ 36,450	15.00	4.00%	60.00%	\$	21,870	\$ 58,320	25.00%	\$	14,580	\$ 45,563	\$ 72,900		
MEP	\$	-	21.50%	\$	-	20.00%	\$	-	\$-	15.00	4.00%	60.00%	\$	-	\$ -	25.00%	\$	-	\$ -	\$ -		
FOOD SERVICE	\$	-	21.50%	\$	-	20.00%	\$	-	\$-	15.00	4.00%	60.00%	\$	-	\$ -	25.00%	\$	-	\$-	\$-		
EDUCATIONAL ASSESSMENT	\$	443,008	21.50%	\$	95,247	20.00%	\$	107,651	\$ 645,906	15.00	4.00%	60.00%	\$	387,543	\$ 1,033,449	25.00%	\$	258,362	\$ 807,382	\$ 1,291,811		
TOTALS	s \$	468,008	21.50%	\$	100,622	20.00%	\$	113,726	\$ 682,356				\$	409,413	\$ 1,091,769	25.00%	\$	272,942	\$ 852,945	\$ 1,364,711		
5 - PRIORITY 5																						
ARCHITECTURE	\$	-	21.50%	\$	-	20.00%	\$	-	\$ -	15.00	4.00%	60.00%	\$	-	\$ -	25.00%	\$	-	\$ -	\$-		
MEP	\$	107,475	21.50%	\$	23,107	20.00%	\$	26,116	\$ 156,699	15.00	4.00%	60.00%	\$	94,019	\$ 250,718	25.00%	\$	62,679	\$ 195,873	\$ 313,397		
FOOD SERVICE	\$	-	21.50%	\$	-	20.00%	\$	-	\$ -	15.00	4.00%	60.00%	\$	-	\$ -	25.00%	\$	-	\$-	\$ -		
TOTALS	s \$	107,475	21.50%	\$	23,107	20.00%	\$	26,116	\$ 156,699				\$	94,019	\$ 250,718	25.00%	\$	62,679	\$ 195,873	\$ 313,397		

Priority 4 (Recommended): Representing a sensible improvement to the existing conditions (not required for the most basic function of the facility; however, will improve overall usability and/or reduce long-term maintenance costs).	Targeted renovations
Priority 5 (Legacied): No Action required at this time but should substantial work be undertaken correction would be required.	Required upgrades to meet Accessibility and Building Code
Total Non-Escalated Project Cost Total Escalated Project Cost	\$ 1,048,818 \$ 1,678,108




UPPER PONUS RIDGE STEAM ACADEMY



OVERALL PRIORITY TIER

TOTAL NON-ESCALATED PROJECT COST							
COMPONENT		COST					
EDUCATIONAL ADEQUACY IMPROVEMENTS	SUB-TOTAL	\$ 6,093,840					
TOTAL OVER	\$ 6,093,840						









Upper Ponus Ridge STEAM Academy																				
CONSTRUCTION COSTS (2021)							CONSTRUCTION COSTS (ESCALATED) TOTAL PROJECT COSTS													
PRIORITY / DISCIPLINE		Net Trade Cost (2021)	CM/GC Markups (%)	CM/GC Marku (\$)	ps Contingency (%)	Cor	ntingency (\$)	Total Construction Cost (2021)	Escalation (# of Years)	Escalation (% / Year)	Escalation (% Total)	Escalat (\$)	tion	Total Construction Cost (Escalated)	Soft Costs (%)	s	ioft Costs (\$)	Total Porject Cost (Non-Escalated)	Total Pro (Esca	oject Cost lated)
А		В	С	D	E		F	G	н	1	J	К		L	м		N	0	,	Ρ
4 - PRIORITY 4																				
ARCHITECTURE	\$	-	21.50%	\$	- 20.00%	\$	-	\$-	15.00	4.00%	60.00%	\$	-	\$-	25.00%	\$	-	\$ -	\$	-
MEP	\$	-	21.50%	\$	- 20.00%	\$	-	\$-	15.00	4.00%	60.00%	\$	-	\$-	25.00%	\$	-	\$-	\$	-
FOOD SERVICE	\$	-	21.50%	\$	- 20.00%	\$	-	\$-	15.00	4.00%	60.00%	\$	-	\$-	25.00%	\$	-	\$-	\$	-
EDUCATIONAL ASSESSMENT	\$	3,343,671	21.50%	\$ 718,8	89 20.00%	\$	812,512	\$ 4,875,072	15.00	4.00%	60.00%	\$ 2,9	925,043	\$ 7,800,116	25.00%	\$	1,950,029	\$ 6,093,840	\$	9,750,145
	TOTALS \$	3,343,671	21.50%	\$ 718,8	89 20.00%	\$	812,512	\$ 4,875,072				\$ 2,9	925,043	\$ 7,800,116	25.00%	\$	1,950,029	\$ 6,093,840	\$	9,750,145

Priority 4 (Recommended): Representing a sensible improvement to the existing conditions (not required for the most basic function of the facility; however, will improve overall usability and/or reduce long-term maintenance costs).	Targeted renovations to improve educational adequacy - note that this school was not included in the Facilities Conditions assessment
Total Non-Escalated Project Cost	\$ 6,093,840
Total Escalated Project Cost	\$ 9,750,145





VIII.APPENDIX

APPENDIX

TABLE OF CONTENTS

- 01 EXECUTIVE PACKAGE
- 02 FLOOR PLANS
- **03 PRESENTATIONS**
- 04 ASSESSMENTS
- 05 DETAILED COST SUMMARY
- 06 CAPACITY CALCULATIONS
- 07 SOUTH NORWALK SCHOOL
- 08 DISTRICT-PROVIDED DOCUMENTATION

In the pursuit of a dynamic and useful Facilities Plan Study, the Appendix is formatted as a supplemental digital folder of supporting documents. This page intentionally left blank.