

# EDUCATIONAL & FACILITY IMPROVEMENT SUMMARY

**UPDATE: 05 19 2020**

**The below education and facility improvement summary has been updated in anticipation of a short-term resiliency bond package.**

Staff has identified technology, curriculum and special education classrooms as priority scopes of work within the Educational Improvements category. Roofs, mechanical systems, security, seismic, and ADA were identified as priority scope of work within the Physical Facility Improvements category of work. Though both categories of work have many other essential needs, these scopes regularly rose to the top during discussions on need, priority and impact. Below are summaries of each.

## EDUCATIONAL IMPROVEMENTS

### TECHNOLOGY

Having a resilient and functioning technology infrastructure is an essential core for providing an effective school experience for our students, teachers, and staff. The technology infrastructure is critical in all aspects of the operations and functions throughout the district. The technology and network infrastructure provides the basis from which many of our most critical systems function. Starting with the Student Information System (SIS), our phone system which is our most critical element of communication, all electronic communication, access to our financial and human resources system (ERP), security access controls for our automated door locks, security cameras, paging systems, all require an up to date and well maintained infrastructure. Our classrooms and instructional materials are also dependent upon the same infrastructure to provide attendance, curriculum, communications (email, phone, and video conferencing), access to the Internet, electronic courses, learning management systems (LMS), instructional applications and a myriad of other resources. Without a healthy and well maintained core infrastructure all of those resources are at risk of failing at critical times.

Cyber security is also a component of a healthy core infrastructure. Technology changes rapidly and the advances in technology bring those same advances to the bad actors on the Internet. Aging and out of date infrastructure provides open opportunities to exploit the holes presented to be able to run malware, ransomware, and other acts of cyber crimes that put our student data, staff data, and critical resources at risk.

The infrastructure at PPS has been ignored and unattended to for many years and is so out of date that we are at risk of failing systems and leaving us vulnerable to cyber attacks. In order to provide the best educational opportunities, and in order to provide equitable access to all of the rich resources technology can make available, PPS needs a large investment to erase the technical debt that has accrued over the past 2 decades. The first, and best, of the three options presented below builds a plan to reverse the years of neglect and will bring our infrastructure up to an operational standard that will be reliable, resilient, secure, and more easily maintained. This investment will also provide the devices necessary for students to access all the abundant resources available in a fully realized digitally enabled

school district. Additionally, it will lay the needed foundation from which we can build a cyber security program to help defend against the myriad of bad actors and malicious attacks which are increasing rapidly across the country specifically targeting school districts.

### **Budget Options**

**A. \$127,500,000** - This option has been refined to align with a shorter Bond request timeline of 2-4 years. It does include all of the critical updates needed in the core infrastructure as well as classroom modernization, and device purchasing required to position us to transition to a fully realized Digital District with one-to-one programs in all of our schools. The significant adjustments in this Bond proposal are the removal of any equipment or device refresh options that would be delayed to be included in the next Bond ask from the community. Also, while we have included funds for the preparation for replacing our ERP solution, the actual replacement and transition funding are also being moved to the next Bond request.

	
Infrastructure & Security	40,000,000
Device Replacement & Refresh	34,000,000
Classroom Modernization	26,000,000
ERP Replacement	12,500,000
Implementation Services	15,000,000
Operational Projects	0
	<b>127,500,000</b>

### **CURRICULUM**

Portland Public Schools is committed to providing all students equitable access to a comprehensive, rigorous, equitable, and inclusive education. A core component of a comprehensive education includes students and teachers engaging with well-organized, high-quality resources that can be adapted to the needs of each class. A growing and compelling research base suggests that high-quality Tier I instructional materials can yield improvements in student learning outcomes equal to or greater than many interventions that are often more costly. A high-quality core curriculum can give educators within a school and across a school system a comprehensive and common foundation to organize the work they're undertaking at the classroom level and collaborate to develop together.

We must also reimagine learning for our students and build learning environments that are rich in digital and print materials to deepen engagement, expand access to information and content, and cultivate creativity. A digital rich environment provides extensive opportunities for more personalized learning options, anytime, anywhere while supporting students in attaining deep concepts and developing 21st-century skills. It allows educators flexibility to design and differentiate learning experiences based on their students' needs and strengths.

Portland Public Schools has not been able to prioritize the adoption of comprehensive print and digital instructional materials in the last ten years; as a result, students and teachers have been using outdated instructional resources that have impacted teaching and learning. The funds requested would support the purchasing of curriculum in core content areas such as language arts, mathematics, science, social-emotional learning, social sciences, English as a second language, and the visual and performing arts. This investment would not only bring instructional resources current, but would also allow the district to get back on the state’s materials adoption cycle and comply with ODE’s Standards for Public Elementary and Secondary Schools. For the first time in decades, PPS would have a comprehensive offering of high-quality instructional resources for students across grades and nearly all subject areas.

**Budget Options**

**A. \$29,644,000** - Full funding would allow for the adoption of comprehensive and current instructional materials, across core subject areas, including language arts, math, science, the arts and social emotional learning. This would lead to a) students working with high-quality, standards-based instructional materials, and, b) would allow for a return to the Oregon textbook adoption cycle.

**B. \$25,360,000** - Funding at this level would mean reducing investments in some content areas like science, English as a Second Language, and the arts. This would mean fewer print, digital, or intervention materials would be available in the content areas which are reduced.

	Option A	Option B
Arts	\$5,250,000	\$3,750,000
ESL	\$2,500,000	\$2,000,000
Language Arts	\$4,000,000	\$3,250,000
Learning Management System	\$400,000	\$400,000
Mathematics	\$6,300,000	\$6,100,000
Science	\$7,084,000	\$6,000,000
Social Emotional Learning	\$1,110,000	\$1,110,000
Social Sciences	\$2,000,000	\$1,750,000
World Languages	\$1,000,000	\$1,000,000
	<b>\$29,644,000</b>	<b>\$25,360,000</b>

**SPECIAL EDUCATION**

The educational suitability assessment completed as part of the FCA identified many District facilities as poor or unsatisfactory to deliver special education (SPED) programming. Many of the SPED instructional

spaces receiving this designation scored low due to inadequate storage, poor acoustics, and suboptimal location within the building.

Planning & Real Estate staff began meeting with the SPED leadership in August 2019 to outline capital investments that could improve SPED spaces. Through subsequent questionnaires and interviews SPED leadership identified flexible, portable furniture and equipment as high priority investments for SPED classrooms. Examples include mobile storage units, soft seating, and portable room partitions. This approach offers a balance of flexible, adaptive classroom configurations with visual and acoustic mitigation to support distraction-free, small group instruction.

### **Budget Options**

**A. \$22,300,000** - Provides the resources to equip or update the current focus option classrooms in the District with furniture and fixed equipment aligned with PPS standards and identified by SPED leadership as high priority investments for classroom improvements. The District currently supports 82 focus option SPED classrooms; many of these classrooms are overcrowded so some allowance for expansion is accounted for here. Beyond furniture and equipment aligned with PPS standards, this option includes an allowance for classroom modifications. These modifications include acoustic baffling, replacement of fluorescent lights with dimmable LEDs, and built-in casework, to name three important examples. Combined, the addition of District standard furniture and equipment with classroom modifications will support both the instructional requirements of special education staff and the sensory-needs of our students.

**B. \$13,400,000** - This option would include the same set of improvements outlined in the above option (A) but would affect fewer classrooms. The amount proposed is the mid-point between option A and option C, outlined below.

**C. \$4,500,000** - This lowest amount would cover the purchase and installation of furniture *only*. The option would offer some ability for SPED staff to create small, structured instructional spaces within classrooms but would be limited in its ability to provide a distraction-free learning environment. Perhaps most importantly, this option would offer the least ability to create sensory support spaces within classrooms, potentially exacerbating incidents of emotional dysregulation.

### **ADDITIONAL SCOPES OF WORK**

In addition to the above priorities, PPS has many educational improvement needs including physical education (PE), athletics, visual and performing arts (VAPA), among others.

The educational suitability assessment identified visual and VAPA and PE as programs underserved by our facilities. In both cases, facility constraints around available space for existing programs were observed. Regarding PE, there are currently nine schools in the District without dedicated gyms (i.e. PE takes place in dual-purpose spaces such as cafeteria-gyms). To be sure, these dual-purpose spaces present significant challenges to fulfilling the number of PE minutes required by state law (HB 3141). Outdoor covered play structures offer a viable option to extend the space available for physical education. Across the District's K-5s, K8s, and MSs, 46 currently *need* covered play structures. District staff are working to develop a prototype to expedite the design and permitting process for these structures.

Regarding visual and performing arts, the educational suitability assessment identified 18 schools with VAPA programming without dedicated visual or performing arts spaces. In such cases, arts programming migrates between general-use classrooms, often without vital facility supports such as sinks, storage, and tackable wall surfaces.

Athletics is another area that could benefit from significant capital investment. Many of PPS's sites lack the facilities to provide robust athletic programming and events. PPS athletics will be a part of the forthcoming capital planning efforts that will identify overall needs and priorities. Some athletic capital needs have already been identified, including Grant Bowl, West Sylvan fields, turf fields at various high schools, etc.

## **PHYSICAL FACILITY IMPROVEMENTS**

### **ROOF**

Maintaining roofing systems is essential to creating spaces conducive to learning and avoid serious facility conditions such as:

- **Structural deterioration:** Continual exposure to water exposes wood in roofs to mold and rot. This can weaken the framing considerably and cause a roof collapse which is a serious threat to your personal safety and the structural integrity of your home.
- **Interior damage:** Like water, the problem can trickle downward causing damage to the rest of your building, including ceilings, flooring, electrical systems, furniture and equipment.
- **Health problems:** Wet and damp conditions promote mold growth and create unhealthy conditions.
- **General inconvenience:** Smaller issues are easier to fix than large ones. A badly damaged roof takes days to repair which is a major inconvenience, not to mention the impact it can have on your energy bills and overall comfort.

The FCA identified approximately 150 deficiencies in categories 1-4 at over 60 sites. Roofing components that need to be repaired or replaced can range from relatively small scopes such as broken access hatches, to large concerns including deteriorated roofing membranes and regular water leaks. Anticipating the performance of any individual roofing is an inexact science, however staff estimates approximately 30 sites will require a full or majority roof replacement in the next 5-10 years with about 25 of those needing replacement within the next 3-4 years.

### **Budget Options**

**A. \$71,000,000** - Based on the current information available this amount is Staff's best estimation of the budget needed to respond to critical roofing needs over the course of the bond (approximately 12 roofs). Some roofs are likely to perform better than currently anticipated while others worse. Additional budget could be made available from Program Contingency to address additional roof needs that may

arise during the course of the bond program. This option provides for approximately 4 roofs per summer.

**B. \$53,000,000** - An alternative option is to budget the amount to address the sites estimated to require full or major roof replacement in the 3 roofs per summer (approximately 9 roofs). This option provides for approximately 3 roofs per summer.

Notes:

- Staff anticipate being able to replace 3-4 roofs per summer. This is also approximately the number of roofs per year to keep up with the life cycle of roofs.
- Roof replacements often include ancillary scope of work including roof level seismic improvements, additional building insulation, replacing outdated rooftop equipment, etc.
- Consistent with current practice, staff will convene regularly to review current roofing conditions and reprioritize/sequence roofing work based upon facility need.

## **MECHANICAL**

Mechanical system impacts to teaching and learning spaces range from simple discomfort (both hot and cold) to poor indoor air quality, costly emergency repairs and even school closures due to lack of heat. Along with roofs, mechanical deficiencies are PPS's largest facility need with dozens of schools having major mechanical system components in currently critical condition. Temperature issues are the most common complaints from school staff with over 6,000 mechanical system work orders submitted last year alone.

The FCA identified approximately 1,800 deficiencies in categories 1-3 at over 80 sites, with the majority of the deficiencies noted in category 1 (Currently Critical) or 2 (Potentially Critical). Additionally the FCA identifies over 50 sites that have repair/replacement costs exceeding \$1 million.<sup>1</sup>

Mechanical systems have many complex, dependent components making it challenging to predict a system's performance, identify the root cause of failure, design needed fixes and estimate the total cost. Detailed assessment by professional mechanical engineering firms is necessary to determine how to resolve a failing or poor performing system. However, based upon the FCA data, it's reasonable to assume many of the systems that have estimated costs exceeding \$1 million in categories 1 and 2, will require full or majority system replacements in the coming years. Additionally, it is reasonable to assume many other systems will require significant capital expenditure to maintain performance.

Staff estimates full mechanical system replacements average approximately \$10 million (depending on type of system, size of school, hazardous materials present, condition of ductwork, etc.). The FCA data points to large portions of systems in the majority of the schools needing significant repair or full/majority system replacement. Considering contractor availability, staff capacity, impacts to schools

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<sup>1</sup> The FCA estimates hard costs only. This estimate excludes projects costs including design, permitting, escalation, management, and contingency.

with these and other major capital projects, staff estimates approximately as many as 5 large mechanical system projects could be completed annually, plus additional smaller projects.

### **Budget Options**

**A. \$75,000,000** - Staff recommends budgeting to complete 5 large mechanical projects each year at an average cost of \$5 million per project (assuming some projects will require full system replacement, while others will require only targeted improvements). This amount would address approximately 15 of PPS highest priority sites. Additional smaller projects would also be completed over the course of the bond. Additional budget could be made available from Program Contingency to address additional HVAC needs that may arise during the course of the bond program.

**B. \$45,000,000** - An alternative option is to estimate completing 3 large mechanical projects per year. This amount would address approximately 9 of PPS highest priority sites.

### **Notes:**

- Staff anticipate being able to complete as many as 5 mechanical systems per year. Work would largely take place over summer with some work also taking place during the Fall (before the heating season begins).
- Staff will convene regularly to review current mechanical system performance and reprioritize/sequence work based upon highest need.

### **SECURITY**

PPS staff, students, parents and community members regularly emphasize the need for improved security systems throughout the district. The 2017 bond Secure Schools project is currently installing electronic access controls systems, updated public address system speakers, and other improvements at all schools in the district, but additional improvements will be of significant value.

Staff estimates \$26,500,000 will support adding locking hardware to all classroom doors throughout the district, along with additional security cameras and updated intrusion alarm systems.

### **Budget Options**

**A. \$4,000,000** - Staff estimates this amount will allow for the District to upgrade all classroom door locks to the current district standard that allows for a door to be secured from the inside of a classroom. Currently the majority of classrooms throughout district require use of a key or of a sub-standard lock to secure a classroom door.

**B. \$20,000,000** - Staff estimates this amount will allow for additional surveillance systems. The estimate is based on \$1.56/Sq.Ft. plus contingency and lifecycle support costs. The majority of non-modernized schools are limited to one surveillance camera. A single camera is not adequate in monitoring, deterring or preventing unwanted activity.

**C. \$2,500,000** - Staff estimates this amount will allow for the upgrade and/or replacement of intrusion systems in all non-modernized buildings. The existing intrusion systems are antiquated. Systems do not allow remote programming and cannot be integrated with other building security systems (access control/surveillance).

## **SEISMIC**

Although all new and modernized facilities meet seismic code requirements, and a number of PPS sites have received incremental seismic improvements in recent years via with roof replacement projects or other targeted improvements, few of PPS current buildings meet current seismic code.

Seismic deficiencies were not a scope within the FCA, however reviewing previous cost estimates places the total cost to bring all PPS sites up to current code at over \$1 billion. In addition to being costly, seismic retrofits are also very invasive, and time consuming; often larger scale projects cannot be completed over a single summer.

In reviewing options for seismic retrofits, Staff reviewed smaller schools that are both on the City of Portland URM database, and are likely to receive a full roof replacement in the near future (roof replacements include seismic improvements and offer an opportune time to complete simultaneous seismic retrofits). Staff identified 9 schools that are on the City of Portland URM database and are likely to be included in a full roof replacement as a part of this bond effort.

### **Budget Options**

**A. \$45,000,000** - Staff estimates this amount could retrofit up to 6 smaller schools that are on the City of Portland URM database and are likely to be included in a full roof replacement as part of this bond effort.

**B. \$15,000,000** - Another alternative option would be to budget for up to 3 of the smallest schools that are on the City of Portland URM database and are likely to be included in a full roof replacement as part of this bond effort.

### **Notes:**

- Staff preliminary identified schools that comprise the above options. Further review and development of scope would take place before confirming sites.
- PPS has received multiple Seismic Rehabilitation Grant Program (SRGP) grants in the last 8 years. These grants offer significant funds toward completing seismic improvements, but do not offer enough to complete full retrofits. Allocating funds for seismic improvement will allow Staff to continue to pursue this (and other) matching fund sources.

## **ADA**

Few schools within the PPS portfolio are fully accessible per ADA requirements and the current estimate to bring all sites up to current code exceeds \$100,000,000. There are currently 28 multi-level schools without elevators. PPS is in the process of updating it's ADA Transition Plan and is currently engaging community feedback. The ADA Transition Plan update process has looked at various options for phasing of improvements.

### **Budget Options**

**A. \$29,600,000** - Staff estimates this amount would allow the District to remove barriers at the main level District-wide. This option would allow building administrators to shift programs within schools to accommodate students experiencing disability.

**B. \$17,100,000** - Staff estimates this amount would allow the District to remove barriers at two K-5s, one MS, and one HS, per cluster. This option would provide greater support for students experiencing disability by reducing transportation needs, potentially allowing these students to remain at their neighborhood school. Please note this option identified the most affordable path to accessibility; issues around transportation, geography, or site condition were not considered. The advantage with this option, of course, is that it allows two choices at the K-5 level, reducing the transportation onus on the most vulnerable of our student population.

**C. \$11,000,000** - Staff estimates this amount would allow the District to make fully accessible one K-5, one MS, and one HS, per cluster. Providing at a minimum of one fully accessible school configuration in each cluster. Please note this option identified the most affordable path to accessibility; issues around transportation, geography, or site condition were not considered.

### **ADDITIONAL SCOPES OF WORK**

PPS has many other critical physical facility needs including plumbing systems, electrical systems, asbestos remediation, energy improvements, flooring replacement, play structure repair, foundation work, etc. Staff acknowledges the need for physical facility improvements exceeds the funding capacity of a single general obligation bond, however it will be important to allocate some funds to address the highest needs amongst these and other scopes, and allow for flexibility to respond to critical needs as they arise.