

Petersburg School District District Wide Identified Scope of Work	Estimated Product Cost	Estimated Other (general, overhead, profit, contingency)	Estimated Total Cost	Notes
C= District Wide Outside E=Elementary MH=Middle High School T=Vocational Building D=District				
SITE AND INFRASTRUCTURE				
Vehicular Surfaces C1 Monitor and Clean Out Storm Drains.Perform campus wide site and topography survey- identify traffic features.	\$10,000	\$13,328	\$23,328	This would be Aaron M with the Borough.
Pedestrian Surfaces C2 Perform campus wide site and topography survey to identify existing sidewalk locations. Identify responsible party for sidewalks and roads	\$10,000	\$13,328	\$23,328	This needs to be done, but we need to verify with the Borough, Aaron M re: responsibility.
Landscaping & Irrigation C3 Perform a campus wide site and topography survey to identify existing drainages and utility locations	\$10,000	\$13,325	\$23,325	There is a lot of water coming off of middle school classrooms west, east, and south side and thus entering into the boiler room.
Fencing & Gates C4 Perform a campus wide site and topography survey to identify fence locations	\$5,000	\$6,664	\$11,664	Not needed at this time
Site Furnishing & Equipment C5 Perform a campus wide site and topography survey to identify existing site features	\$2,500	\$3,332	\$5,832	Not needed at this time.
Site Furnishing and Equipment C5 Remove and dispose metal bench Install new metal bench	\$1,360	\$1,800	\$3,160	Summer Maintenance
Play Structure C6 Reattach the play structure to the foundation elements	\$5,000	\$6,664	\$11,664	Summer Maintenance
Freestanding Shelters C7 Re-grout existing canopy column bases.	\$5,000	\$6,653	\$11,653	In-House
Freestanding Shelters C7 Scrape away paint and rust to determine the best way to restore or repair the column base. \$11,653	\$5,000	\$6,653	\$11,653	In-House
Freestanding Shelters C7 Prime and paint all structural steel. \$35,046	\$15,000	\$20,045	\$35,045	In-House
Freestanding Shelters C7 Install adequate connection at the "T" of the walkway canopy. \$11,653	\$5,000	\$6,653	\$11,653	In-House
Freestanding Shelters C7 Investigate source of roof water intrusion, tighten roof screws \$4,559	\$2,000	\$2,559	\$4,559	In-House
Water System C8 Perform a campus wide site and topography survey to identify existing utility locations	\$7,500	\$9,996	\$17,496	Not necessary

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Sanitary Sewer C9 Perform a campus wide site and topography survey to identify existing drainage and utility locations.	\$7,500	\$9,996	\$17,496	Not necessary
Water System C8/ Sanitary Sewer C9 Replace insulated enclosure around water and sewer line at Voc-Ed building	\$2,500	\$3,332	\$5,832	In-House
Storm Water, C10 Perform a campus wide site and topography survey to identify existing draining and utility locations. (Borough)	\$7,500	\$9,996	\$17,496	This would be Aaron M with the Borough.
Lighting and Equipment, C11 Perform a campus wide site and topography survey to identify light poles and determine ownership (Borough)	\$2,500	\$3,332	\$5,832	Aaron Marohl- Borough District is responsible for shorter light poles on Charles, Dolphin, and 1st street. Borough is responsible for tall light poles
SITE AND INFRASTRUCTURE			\$241,016	TOTAL
SUBSTRUCTURE				
Piling & Pile Cap, E1 Add pile to beam connectors and support floor beams in out-of plane direction	\$10,000	\$13,328	\$23,328	In-House or Local Contract
Under Building Drainage, E2 Direct water out from under the building by installing a sump pump to assist with drainage to the existing culvert.	\$2,710	\$3,608	\$6,318	Local Contract
Under Building Drainage, E2 Redesign building skirting to promote cross ventilation. *Code Deficiency*	\$10,000	\$13,332	\$23,332	In-House
Foundation Walls, MH2 Install adequate reinforcing around the cut opening and ensure that the opening width is capable of handling auditorium load requirements.	\$3,000	\$3,998	\$6,998	Local Hire
Piling & Pile Cap, T1 Install a form material in the interstitial space between the slab and the soils beneath	\$10,000	\$13,328	\$23,328	Local Contractor
Piling & Pile Cap, D1 Add pile to beam connectors	\$30,000	\$39,984	\$69,984	Local Hire
SUBSTRUCTURE			\$153,288	TOTAL
SUPER STRUCTURE				

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Main Floor, E3 Cut deterioration from glulam beams and treat.		\$3,000	\$3,998	\$6,998	* Aaron will take a look at this to determine work level involved.
Main Floor, E3 Protect remainder of glulam beams that extend beyond the building envelope and add intermediate framing where necessary, depending on extent and rot that must be removed		\$5,000	\$6,664	\$11,664	* On north end of building closest playground/garden
Special Floors, E4 * Demolish bridge sections between sidewalk and south entrances to the building, and dispose. * Replace bridge sections with hot dipped galvanized steel.		\$99,200	\$132,214	\$231,414	
Pitched Roofs, E6 Install frame around exterior mechanical room door to handle out of plane loading on the CMU wall.		\$2,500	\$3,332	\$5,832	Jon is already working on some of this.
Pitched Roofs, E6 Install sheathing directly to top of the timber roof deck to resist seismic loading.		\$1,500	\$1,999	\$3,499	In-House. Referencing mechanical and boiler room near library.
Canopy Roofs, E7 Modify framing at the connection of the stair/deck canopy to be able to resist lateral loading to prevent collapse.		\$5,000	\$6,664	\$11,664	In-House or Local Contract
Canopy Roofs, E7 Repair south canopy columns and adequately protect to prevent further deterioration.		\$6,500	\$8,806	\$15,306	In-House or Local Contract
Canopy Roofs, E7 Tie south canopy to the elementary building to prevent separation and collapse during a seismic or wind event.		\$2,000	\$2,713	\$4,713	Need more information from LCG re: tie south canopy. But likely in-house or local hire
Stair Structure, E8 Replace stairs and landings/decks at north corridor entry, stairs from Hallway 105B, and stairs out of Classroom 15. *Code Deficiency*		\$17,500	\$23,324	\$40,824	In-House or Local Contract
Stair Railings, E9 Replace stair railings with code compliant handrail and guardrail *Code Deficiency*		\$22,320	\$29,748	\$52,068	In-House or Local Contract

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Main Floor, MH4 Remove wrestling mats and have the floor inspected. "The wrestling mat in the gym has a large hump in the middle of it corresponding with the beam and column line below, indicating that the framing members below have shifted."		\$1,500	\$1,999	\$3,499	We believe it is the OSB board that was put down without enough expansion. Floor should be pulled up and redone. will be costly.
Pitched Roofs, MH6 Install adequate boundary elements to tie the diaphragm to the steel framing and lateral force resisting system. Ensure that all metal decking is adequately attached to their supports. Summer 25? Code Deficiency		\$24,194	\$32,246	\$56,440	
Special Roofs, MH7 Replace the high school kitchen canopy with a permanent canopy with adequate foundation that meets snow load requirements. Code Deficiency		\$15,000	\$19,992	\$34,992	Local Hire
Building Lateral Force Resisting System MH8 Replace or reengineer connection where brace was modified or relocate door and reinstall original brace- Gym to weight room door		\$5,000	\$6,664	\$11,664	Phase 2 CIP
Stair Structure, MH9 Repair crumbling steps at Middle School main entrance.		\$5,000	\$6,664	\$11,664	Local Hire
Pitched Roofs, T3 Replace the deteriorated sheathing on the roof. Replace trusses to meet current snow load requirements. Code Deficiency		\$693,143	\$923,821	\$1,616,964	
Special Roofs, T4 Recommend a complete replacement of entrance canopy. Code Deficiency		\$10,000	\$13,328	\$23,328	
Main Floor, D2 Relevel the exterior beam lines to prevent the vertical displacement noticed in the floors.		\$7,500	\$9,996	\$17,496	Local Hire
Ramps, D3 Reconstruct ramp to be code compliant when it reaches end of life. Code Deficiency		\$21,000	\$27,989	\$48,989	Local Hire
Pitched Roofs, D4 Roof finish material is starting to fail, and roof will need to be replaced. Inspect attic at time of roof replacement for adequate venting above insulation. Code Deficiency		\$109,696	\$146,204	\$255,900	
Special Roofs, D5 Install strapping from front canopy to building 16" oc		\$1,600	\$2,122	\$3,722	
Special Roofs, D5 Relevel canopy and repair connection at ridge of front canopy		\$2,016	\$2,684	\$4,700	
Special Roofs, D5 Install blocking between the trusses at the middle beam support.		\$294	\$387	\$681	In-House

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Stair Structure, D6 Rear deck needs to be replaced with a permanent foundation and framing.	\$10,800	\$14,394	\$25,194	Need to just put concrete footing pads down- in-house
Stair & Ramp Railings, D7 Install handrail at front entry stair. Code Deficiency	\$320	\$426	\$746	In-House
Stair & Ramp Railings, D7 There is no easy way to retrofit the ramp so when it is reconstructed in the future it needs to be redesigned. Code Deficiency			\$0	Future Work
SUPER STRUCTURE			\$2,499,961	TOTAL
EXTERIOR ENCLOSURE				
Exterior Walls, E10 Siding is cracked at the outside wall of Hallway 105B. Repair siding to prevent water intrusion into exterior wall assembly.	\$12,300	\$16,286	\$28,586	In-House or Local Contract
Exterior Walls, E10 Install 221 sq ft of venting in crawl space skirting boards.	\$4,862	\$6,588	\$11,450	In-House or Local Contract
Fascias & Soffits, E11 Monitor and repaint areas of fascia and soffits. Paint is starting to peel from sections of fascia at the MPR.	\$2,500	\$3,332	\$5,832	In-House. Is part of the annual preventative maintenance program.
Exterior Walls, MH12 Stucco needs patch and repair. When second floor windows in 1985 addition are replaced and raised, stucco needs to be repaired or replaced with more durable material.	\$15,000	\$19,712	\$34,712	Aaron will look to find a temporary patch to address.
Exterior Walls, MH12 Replace metal siding on 1975 building.	\$420,000	\$560,056	\$980,056	CIP
Windows, MH14 Replace failing second story windows.	\$100,000	\$133,327	\$233,327	CIP
Windows, MH14 Replace Teacher's Lounge windows.	\$18,000	\$17,066	\$35,066	CIP
Windows, MH14 Replace windows in the 1975 building.	\$22,500	\$29,961	\$52,461	CIP

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Exterior Personnel Doors, MH 15 Replace door and frame * Gym exterior door- the frame and door are rusting, gasket is deteriorating, and daylight visible through gaps Code Deficiency * Corridor door 127- door is deteriorating and rusted out at the bottom. * Auditorium exterior exiting door- the door is rusted out and not longer attached to the wall.		\$10,500	\$14,034	\$24,534	Phase 2 CIP
Exterior Personnel Doors, MH 15 Replace Teacher's Lounge glass in exterior door		\$2,500	\$3,292	\$5,792	
Specialty Exterior Doors, MH16 Replace door * Boiler Room 03 door- door is rusting and falling apart		\$13,500	\$17,993	\$31,493	Phase 2 CIP
Exterior Walls, T7 Repair portions of siding as part of ongoing maintenance.		\$22,100	\$29,455	\$51,555	
Exterior Walls, T7 Install drywall over peg board or remove peg board and install drywall wall finish at outside walls. Peg boards used as wall finish can direct extraordinary amounts of water vapor		\$2,880	\$3,995	\$6,875	Suggest Dave's class accomplish this task
Exterior Personnel Doors, T10 Replace two sets of exterior wood man doors. Code Deficiency		\$1,900	\$2,507	\$4,407	PHASE 2 CIP
Exterior Personnel Doors, T10 Install threshold to single doors. Code Deficiency		\$900	\$1,194	\$2,094	PHASE 2 CIP
Exterior Personnel Doors, T10 Install exterior gaskets to single doors. Code Deficiency		\$900	\$1,194	\$2,094	PHASE 2 CIP
Exterior Personnel Doors, T10 Install door sweeps on hollow metal doors. Code Deficiency		\$780	\$776	\$1,556	PHASE 2 CIP
Special Doors, T11 Replace bottom seal on all the overhead doors. Replace jamb weather stripping on all		\$1,170	\$2,796	\$3,966	
Louvers, Screens & Shading Devices, T12 Remove louvers and infill wall opening to prevent heat loss.		\$625	\$833	\$1,458	
Exterior Walls, D8 Replace vinyl siding with more durable material as it reaches the end of its life cycle.		\$46,464	\$61,944	\$108,408	Local Hire
Exterior Walls, D8 Address water intrusion into the crawl space. Install sump pump and drain piping to crawlspace to address water. Code Deficiency		\$2,000	\$2,648	\$4,648	Relocate downspouts
EXTERIOR ENCLOSURE				\$6,630,292	TOTAL

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ROOF SYSTEMS					
Pitched Roofing, E14 Clean TPO membrane per manufacturers recommendations		\$4,974	\$6,628	\$11,602	In-House
Pitched Roofing, T13 Replace roof sheathing as needed (50%)		\$13,830	\$18,523	\$32,353	
Pitched Roofing, T13 Replace trusses as needed (50%)		\$165,960	\$220,860	\$386,820	
Pitched Roofing, T13 Replace metal roofing and trim		\$350,474	\$231,312	\$581,786	
Pitched Roofing, T13 Install perforated vinyl vented soffits on west and south side		\$4,290	\$5,699	\$9,989	
Gutters & Downspouts, T14 Replace wood fascia board for gutter slope and remove and reinstall gutter.		\$5,720	\$7,623	\$13,343	
Pitched Roofing, D12 Replace metal roof and install ice and water shield. Seal vapor barrier penetrations. Inspect roof assembly to ensure proper ventilation path. Code Deficiency		\$108,946	\$144,741	\$253,687	
Gutters & Downspouts, D13 Direct water from the downspouts away from the building crawlspace.		\$500	\$666	\$1,166	In-House
ROOF SYSTEMS				\$1,290,746	TOTAL
INTERIORS					
Fixed Partitions, E16 Minor renovation to install a teacher's lounge kitchenette in teacher's lounge		\$7,500	\$9,996	\$17,496	In-House or Local Contract
Personnel Doors, E17 Replace floor mounted door holders with magnetic or type with a keeper mechanism to reduce damage to door veneer.		\$7,050	\$9,284	\$16,334	
Personnel Doors, E17 Install kickplates on both sides of doors.		\$11,750	\$15,654	\$27,404	In-House or Local Contract
Personnel Doors, E17 Secure Boiler Room door frame to the wall		\$550	\$722	\$1,272	In-House or Local Contract
Casework/Millwork, E20 Casework has life remaining with proper maintenance and refinishing. Install hardware on classroom casework drawers.		\$28,800	\$38,385	\$67,185	In-House

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Fixed Partitions, MH18 Install braces and ties from top of CMU walls to floor diaphragm above, 16" oc Code Deficiency		\$11,200	\$14,927	\$26,127	CIP- ADA Accessibility-It is recommended that at the next cycle of locker room renovations entrance to the locker room is reconfigured for accessibility.
Fire Separation Walls, MH19 * Fire caulk around all metal pipe penetrations. Code Deficiency * Install fire collars around non-metal pipes Code Deficiency * Seal penetrations on both sides of the fire wall Code Deficiency		\$1,125	\$1,499	\$2,624	In-House
Interior Personnel Doors, MH20 Replace damaged doors into the middle school stairs. * Replace damaged single door * Replace damaged double door		\$8,200	\$10,929	\$19,129	Phase 2 CIP
Interior Special Doors, MH21 Replace doors * Doors and frames at the 1975 building line need to be replaced. Code Deficiency * Doors/frame out of the Gym and into the weight room need to be replaced. Code Deficiency		\$6,000	\$8,022	\$14,022	Phase 2 CIP
Interior Special Doors, MH21 Replace door gaskets * Door from the Gym into the Rec Center lobby needs new gaskets. Code Deficiency * Wrestling room door gaskets need to be replaced. Code Deficiency		\$500	\$653	\$1,153	Phase 2 CIP
Floor Finishes, MH22 Repair VCT flooring in the Art room		\$1,500	\$1,999	\$3,499	In-House
Floor Finishes, MH22 Repair sections of tile flooring in 1975 building (Locker room 150, Toilet 147.)		\$500	\$666	\$1,166	In-House
Floor Finishes, MH22 Install a floor transition strip at the auditorium floor. Code Deficiency		\$500	\$666	\$1,166	In-House
Wall Finishes, MH23 Fix damage to wall tile in Toilet 115 and mission section of tiles in Toilet 215		\$2,000	\$2,666	\$4,666	In-House
Ceiling Finishes, MH24 Patch, repair, and paint gypboard ceiling at storage room 148		\$1,500	\$1,999	\$3,499	In-House
Ceiling Finishes, MH24 Repair existing ceiling tile to match existing edges at band room 131		\$2,500	\$3,332	\$5,832	In-House
Interior Specialities, MH25 Replace toilet room grab bar to ADA accessible code.		\$8,800	\$11,729	\$20,529	CIP-ADA- to be done as toilets areas are renovated.

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Casework/Millwork, MH26 Replace casework and countertop * Biology with chemical resistant * Chemistry with chemical resistant Art Room- it is showing signs of extensive use and at end of life.	\$120,000	\$160,162	\$280,162	CIP.
Casework/Millwork, MH26 Replace casework and countertop * Art Room	\$77,000	\$102,399	\$179,399	
Seating, MH27 Repair broken Auditorium chairs with manufacturer's replacement parts. Folding mechanisms and brackets are starting to break down. Administration recommends a full replacement of auditorium seating. ~\$80,000	\$20,000	\$46,656	\$66,656	Recommend full replacement- working with community partners such as Petersburg Arts Council, Rasmussussen, etc.
Personnel Doors, T15 Replace a closer on classroom door into the shop. Install necessary gasketing on the fire door.	\$700	\$933	\$1,633	
Floor Finishes, T18 Remove and dispose remaining vinyl flooring at small shop. Code Deficiency The concrete floor finish is wearing off and will need to be repainted in the future to aid in dust control and cleanup.	\$2,033	\$2,710	\$4,743	Aaron will check to see if this is asbestos based but then in-house summer project
Wall Finishes, T19 All penetrations through walls on north and west walls need to fire caulked and fireblocked to ensure continuity of the system. Replace peg board with drywall at small shop.	\$2,880	\$3,839	\$6,719	
Ceiling Finishes, T20 Acoustic ceiling tiles in the classroom are stained with water. Replace tiles and monitor leaks	\$750	\$1,000	\$1,750	
Ceiling Finishes, D17 Replace tiles as needed (minor roof leak staining on the tile in the Kitchenette)	\$3,381	\$4,507	\$7,888	In-House
INTERIORS			\$782,053	TOTAL
MECHANICAL				
Plumbing Fixtures, E23 Replace P-trap serving the sink located in the Teacher's Lounge.	\$110	\$144	\$254	In-House or Local Contract
Plumbing Fixtures, E23 Provide insulation on lavatory sink traps and exposed hot/cold water supplies.	\$2,700	\$3,596	\$6,296	In-House or Local Contract

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Plumbing Fixtures, E23 * Remove and relocate urinals for appropriate installation height for child age group. \$15,289 * Provide individual sensor operated flush valves to serve urinals. \$7,858	\$11,700	\$15,447	\$27,147	Local Contract
Plumbing Fixtures, E23 Remove and replace toilets in kindergarten classrooms with toilets that are appropriate height for child age group.	\$2,700	\$3,596	\$6,296	Aaron will look into. If it's an easy swap it will be done in-house
Plumbing Fixtures, E23 Install grab bar to serve ADA complaint toilet stall.	\$900	\$11,697	\$12,597	
Plumbing Fixtures, E23 Install grab bar to serve ADA complaint toilet stall.	\$900	\$11,697	\$12,597	
Plumbing Equipment, E25 Provide air gap fitting to serve dishwasher drain	\$150	\$196	\$346	In-House
Plumbing Equipment, E25 Provide seismic restraint system to serve hot water generators and associated expansion tank	\$300	\$392	\$692	In-House
Plumbing Equipment, E25 Replace broken hot water generator aquastate.	\$250	\$330	\$580	In-House
Plumbing Equipment, E25 Provide air gap fitting to serve dishwasher drain	\$150	\$196	\$346	In-House
Plumbing Equipment, E25 Provide seismic restraint system to serve hot water generators and associated expansion tank.	\$300	\$392	\$692	In-House
Plumbing Equipment, E25 Replace broken hot water generator aquastate.	\$250	\$330	\$580	In-House
Heating Equipment, E27 Provide expansion tank with seismic restraint, or replace expansion tank.	\$2,500	\$3,312	\$5,812	In-House
Heating Equipment, E27 Replace hydronic circulation pumps with variable speed circulation pumps. Provide a suction diffuser at inlet of the pump. Reconfigure piping to provide multi-purpose valve at outlet side of pump in accordance with manufacturer's installation instructions.	\$15,000	\$20,014	\$35,014	
Heating Equipment, E27 Replace terminal heating devices and associated isolation valves, balance valves, and control valves/control valve body.	\$18,000	\$23,998	\$41,998	

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Heating Distribution System, E28 Replace deteriorated piping insulation "Condition of piping insulation varied from poor to good, with most of the insulation located in the crawlspace being in deteriorated condition."	\$33,158	\$44,194	\$77,352	
Ventilation Equipment, E29 Proved access door large enough to provide unobstructed passageway for future removal.	\$500	\$671	\$1,171	In-House
Ventilation Equipment, E29 Locate return air smoke detector on return air ductwork. Code Deficiency	\$110	\$150	\$260	Johnson Electrical for smoke detector
Ventilation Equipment, E29 Range hood and associated exhaust ductwork routed to exterior of building at teacher's lounge. Code Deficiency	\$2,400	\$3,202	\$5,602	Local Contract
Ventilation Equipment, E29 Remove and replace crawlspace ventilation unit and return fan.	\$2,500	\$3,326	\$5,826	
Ventilation Equipment, E29 Remove the ceiling cabinet fan from the nurses room. Prove supply and exhaust air from the heat recovery ventilator to maintain negative room pressure relative to adjacent spaces.	\$1,100	\$1,482	\$2,582	
Ventilation Distribution System, E30 Provide volume dampers to serve all supply air and exhaust air grilles/registers/diffusers for appropriate airflow balancing. Rebalance each heat recovery unit, and ventilation unit	\$16,579	\$50,789	\$67,368	
Control Systems, E31 * Pneumatic Controls: Remove pneumatic controls, tubing , and associate air compressor to replace with DDC controls. Provide new NFPA 13 compliant air compressor to serve dry type fire protection. "Pneumatic controls and actuators are in poor condition. They are past their serviceable life, and in many cases do not function properly." * Electric Controls: Remove and replace electric controls with DDC type controls.	\$253,659	\$338,076	\$591,735	
Riser and Equipment, E32 Install new NEPA 13 compliant air compressor to serve dry type fire protection system.	\$2,500	\$3,332	\$5,832	Local Hire
Fuel Supply (Gas & Oil), E34 * Remove and relocate fuel oil tank to meet NFPA 30 clearance requirements. * Remove underground fuel oil piping to replace with NFPA 30 complaint double wall piping. * Provide isolation valve on fuel oil supply at fuel oil tank. * Provide flexible connector on fuel oil supply for seismic restraint. * Excavate and backfill trench, including marking tape. Code Deficiency	\$7,080	\$9,433	\$16,513	Local Contract

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Fuel Supply (Gas & Oil), E34 * Provide concrete housekeeping pad for propane tank. * Remove and reinstall propane tank. * Provide tank with seismic restraint. Code Deficiency	\$4,550	\$5,961	\$10,511	In-House
Fuel Supply (Gas & Oil), E34 Remove single stage pressure regulator and replace it with two stage. Code Deficiency	\$275	\$366	\$641	In-House
	Mechanical - Elementary Only Subtotal			\$936,640
Plumbing Fixtures, MH29 Provide insulation on lavatory sink traps and exposed hot/cold water supplies.	\$5,700	\$7,597	\$13,297	In-House
Plumbing Equipment, MH31 BASEMENT MECHANICAL ROOM Replace hot water generator and provide expansion tank to serve new hot water generator.	\$10,500	\$14,052	\$24,552	Local Contractor
Plumbing Equipment, MH31 MECHANICAL 301 Provide hot water circulation piping to connect to tempering valve for minimum flow requirements.	\$700	\$930	\$1,630	Local Contractor
Plumbing Equipment, MH31 BASEMENT MECHANICAL ROOM Reconfigure hot water circulation piping to connect to tempering valve to provide minimum fl	\$2,000	\$2,573	\$4,573	In-House
Plumbing Equipment, MH31 MECHANICAL 301 Secure mezzanine expansion tank with seismic restraint.	\$500	\$594	\$1,094	In-House
Plumbing Equipment, MH31 BASEMENT MECHANICAL ROOM Replace pressure relief valve serving hot water generator.	\$300	\$396	\$696	In-House
Plumbing Equipment, MH31 MECHANICAL 301 Reset/adjust hot water supply temperature set points on how water system equipment to provide 120-degree of hot water downstream of the tempering valve.	\$150	\$198	\$348	In-House
Plumbing Equipment, MH31 MECHANICAL 301 Repair leak on hot water generator piping.	\$700	\$930	\$1,630	In-House
Waste and Vent Piping, MH32 Replace waste and vent piping with future building renovations	\$483,882	\$644,918	\$1,128,800	
Heating Equipment MH33 Install new seismic restraint to existing expansion tank	\$500	\$643	\$1,143	

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Heating Equipment MH33 Replace boiler room exhaust fan		\$3,000	\$3,859	\$6,859	
Heating Equipment MH33 Replace basement mechanical room supply fan		\$6,500	\$7,397	\$13,897	
Heating Equipment MH33 Replace basement boiler room unit heater and associated pneumatic control valve with electric/DDC control valve		\$5,000	\$6,754	\$11,754	
Heating Equipment MH33 Install grilles to provide convective air flow where finned tube is located within casework		\$15,000	\$19,939	\$34,939	
Heating Equipment MH33 Replace hydronic circulation pump with variable speed type, including section diffusers, flexible connections, and isolation valves		\$40,000	\$53,385	\$93,385	
Heating Equipment MH33 Install pump bypass via three-way terminal heating unit control valves		\$10,000	\$13,185	\$23,185	
Heating Equipment MH33 Replace isolation valves, control valves, balance valves, and associated branch piping serving perimeter baseboards and terminal heating devices.		\$161,294	\$214,826	\$376,120	
Ventilation Equipment, MH35 Provide range hood and associated exhaust ductwork to serve range located in teachers' lounge in Middle School		\$1,200	\$1,479	\$2,679	
Ventilation Equipment, MH35 MECHANICAL 303 Provide new return air smoke detector or relocate existing smoke detector from supply air ductwork to return air ductwork (Typ. 2) Code Deficiency		\$1,000	\$1,333	\$2,333	
Ventilation Equipment, MH35 MECHANICAL 303 Remove and replace exhaust fans * 1,230 CFM exhaust fan * 350 CFM exhaust fan * 300 CFM exhaust fan * 200 CFM exhaust fan * 150 CFM exhaust fan		\$11,280	\$15,034	\$26,314	
Ventilation Equipment, MH35 MECHANICAL 303 Remove and replace pneumatic actuators and associated dampers on heating/cooling distribution ductwork with electronic dampers and connect to DDC control system.		\$16,000	\$21,324	\$37,324	

Petersburg School District District Wide Identified Scope of Work	Estimated Product Cost	Estimated Other (general, overhead, profit, contingency)	Estimated Total Cost	Notes
C= District Wide Outside E=Elementary MH=Middle High School T=Vocational Building D=District				
Ventilation Equipment, MH35 MECHANICAL 303 Remove and replace supply and return fans with new fan walls, dampers, duct mounted heating coils and DDC control. * 13,500 CFM supply fan * 5,000 CFM supply fan * 1,300 CFM supply fan * 5,000 CFM supply fan	\$455,200	\$628,013	\$1,083,213	
Ventilation Equipment, MH35 MECHANICAL 303 Remove existing supply and return fans and replace with central ventilation unit with variable air volume boxes for distribution to applicable zones	\$1,612,940	\$2,149,726	\$3,762,666	**Recommendation--One central ventilation unit**
Ventilation Equipment, MH35 MECHANICAL 302 Replace supply and return fans or rebuild existing supply and return fans with new fan walls, dampers, duct mounted heating coils and DDC controls. * 10,150 CFM supply fan * 9,100 CFM supply fan	\$287,011	\$382,513	\$669,524	
Ventilation Equipment, MH35 MECHANICAL 302 Remove and replace pneumatic actuators and associated dampers on heating/cooling distribution ductwork with electronic dampers and connect to DDC control systems.	\$5,760	\$7,677	\$13,437	
Ventilation Equipment, MH35 MECHANICAL 302 Provide new return air smoke detector from supply air ductwork to return air ductwork	\$500	\$666	\$1,166	
Ventilation Equipment, MH35 MECHANICAL 221 Install return air smoke detector.	\$1,000	\$1,333	\$2,333	
Ventilation Equipment, MH35 MECHANICAL 221 Remove and replace exhaust fan * 515 CFM exhaust fan	\$2,620	\$3,491	\$6,111	
Ventilation Equipment, MH35 MECHANICAL 221 Remove and replace pneumatic actuators and associated dampers on heating/cooling distribution ductwork to replace with electronic dampers and connect to DDC control system.	\$11,200	\$14,927	\$26,127	

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C= District Wide Outside E=Elementary MH=Middle High School T=Vocational Building D=District				
Ventilation Equipment, MH35 MECHANICAL 221 Replace supply and return fans or rebuild existing supply and return fans with new fan walls, dampers, duct mounted heating coils, and DDC controls. * 7,500 CFM supply fan * 4,150 CFM supply fan * 6,300 CFM supply fan * 6,200 CFM supply fan * 3,500 CFM supply fan	\$368,300	\$490,870	\$859,170	
Ventilation Equipment, MH35 MECHANICAL 221 Consideration should be given to removal of existing individual supply and return fans for replacement with central ventilation unit with variable air volume boxes for distribution to applicable zones.	\$287,011	\$382,513	\$669,524	
Fire Protection Riser & Equipment, MH38 Remove air compressor and provide dedicated air compressor that is NFPA 13 compliant to serve the fire protection system, including modification to existing piping.	\$5,000	\$6,664	\$11,664	
Fire Protection Sprinklers & Piping, MH39 Install two escutcheon skirts missing in the Band Room	\$200	\$267	\$467	In-House
Compressed Air & Vacuum Systems, MH41 Replace the pneumatic control system with direct digital control (DDC) system to connect existing building DDC controls. Provide dedicated NFPA 13 compliant air compressor to serve the fire protection systems.	\$616,951	\$822,273	\$1,439,224	CIP- The air compressor is from the original building construction and past its service life,
	Mechanical - MMS/PHS Only Subtotal			\$10,351,178
Approximately \$3.4 M of the total looks to be reduced by following the recommendation of a replacement of 1 ventilation unit.	\$3,399,255			
Plumbing Fixtures, T21 Remove, replace, and relocate interior hose bibb to facilitate repair of interior face of exterior wall and prove appropriate backflow protection. Code Deficiency	\$1,250	\$1,673	\$2,923	
Plumbing Fixtures, T21 Remove and replace exterior hose bibb.	\$1,650	\$2,159	\$3,809	
Plumbing Fixtures, T21 Provide dedicated emergency eyewash (x4) meeting UPC requirements.	\$8,200	\$10,975	\$19,175	Local Contractor
Plumbing Fixtures, T21 Clean and remove wood shavings and dust that has accumulated in the wood shop area floor drains and associated waste piping. Provide floor drain covers to serve floor drains. Code Deficiency	\$300	\$396	\$696	

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C= District Wide Outside E=Elementary MH=Middle High School T=Vocational Building D=District					
Plumbing Piping, T22 Remove and reconfigure water meter piping to provide proper piping layout with bypass.		\$1,000	\$1,331	\$2,331	Local Contractor & Borough
Plumbing Piping, T22 Remove and replace piping insulation that is in poor condition and provide new insulation on piping not currently provided with insulation.		\$5,000	\$6,657	\$11,657	In-House
Plumbing Piping, T22 Provide hot water circulation piping to serve toilet rooms and handwash sinks to reduce wait time for water heater.		\$7,500	\$9,996	\$17,496	Local Contractor
Heating Equipment, T24 Remove and replace the electric unit heater and associated thermostat serving the classroom area. Consider providing a hydronic unit heater.		\$3,500	\$4,664	\$8,164	
Heating Equipment, T24 Remove and replace the electric heater serving the toilet room. Consider providing a hydronic unit heater.		\$2,500	\$3,334	\$5,834	
Heating Equipment, T24 Remove and replace the electric baseboard serving the toilet room. Consider providing a hydronic unit heater.		\$2,500	\$3,334	\$5,834	
Heating Equipment, T24 Provide a control valve actuator to serve the vertical unit heater located in the wood shop area.		\$850	\$1,125	\$1,975	
Heating Equipment, T24 Remove horizontal unit heaters serving the metal shop for replacement with vertical unit heaters to maintain manufacturers minimum mounting height.		\$6,000	\$7,979	\$13,979	
Ventilation Equipment, T26 * Install 2,000 CFM make-up air unit. Code Deficiency		\$10,000	\$13,304	\$23,304	
Ventilation Equipment, T26 Remove and replace toilet exhaust fans.		\$450	\$600	\$1,050	
Ventilation Equipment, T26 Verify air handling unit controls are set up to prevent recirculation of return air from the shop area.		\$150	\$193	\$343	
Ventilation Equipment, T26 Remove and replace intake ductwork, louver, and 500 CFM wall mounted exhaust fan serving storage room (size assumed)		\$3,000	\$3,991	\$6,991	
Ventilation Equipment, T26 Install 250 CFM exhaust ventilation fan and ductwork to hazardous material storage cabinets. Code Deficiency		\$2,500	\$3,326	\$5,826	

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Dust Collection Systems, T31 Remove Shop-Vacs from elevated platforms. Connect and extend ductwork from the dust collector to serve equipment and/or workstations presently served by the shop-vacs.	\$10,000	\$13,328	\$23,328	
Welding Exhaust System, T33 * Install welding booth enclosure and reconfigure ventilation for welding booth.	\$12,500	\$16,649	\$29,149	
Welding Exhaust System, T33 Install blast gate dampers and balancing dampers on welding exhaust ductwork.	\$1,750	\$2,317	\$4,067	
Welding Exhaust System, T33 Remove and replace 500 CFM exhaust fan at welding booth	\$12,500	\$16,649	\$29,149	
	Mechanical - Vo-Tech Only Subtotal			\$217,080
Plumbing Piping, D19 Reconfigure water service piping to provide proper layout with bypass.	\$1,000	\$1,332	\$2,332	Local Hire
Plumbing Piping, D19 Remove and replace cold water piping insulation in the crawlspace with a more suitable material and protective jacket; closed cell foam type insulation or similar.	\$2,000	\$2,664	\$4,664	Local Hire
Plumbing Piping, D19 Replace water meter and the electrical connections	\$1,000	\$1,332	\$2,332	Petersburg Borough
Plumbing Equipment, D20 Provide listed tempering valve to serve water heater. Code Deficiency	\$1,000	\$1,329	\$2,329	Aaron will look into the tempering valve. In-house
Plumbing Equipment, D20 Provide floor drain to serve water heater drain pan. Code Deficiency	\$750	\$1,002	\$1,752	Contractor
Waste & Vent Piping, D21 Remove and reroute underground water and/or sewer service piping to maintain 10-foot clearance between services per UPC requirements.	\$10,000	\$13,328	\$23,328	Contractor
HVAC Equipment, D22 Provide 36"x36" concrete pad to secure outdoor unit, above grade.	\$1,500	\$2,025	\$3,525	In-House
HVAC Equipment, D22 Provide flexible connectors on refrigerant piping serving the outdoor units (contractor)	\$1,500	\$2,025	\$3,525	Contractor
HVAC Equipment, D22 Field investigate and install wall mounted controller to serve indoor unit	\$1,000	\$1,332	\$2,332	Contractor
HVAC Distribution Systems, D23 Provide insulation on refrigerant piping inside the building per the manufacturer's installation instructions.	\$5,000	\$6,664	\$11,664	in-house *not a big priority*
Control Systems, D24 Program and test equipment control to verify control mode, scheduling, and that temperature set points are functioning appropriately for the equipment served.	\$5,000	\$6,664	\$11,664	In-House

Petersburg School District District Wide Identified Scope of Work		Estimated Product Cost	Estimated Other (general, overhead, profit, contingency)	Estimated Total Cost	Notes
C= District Wide Outside E=Elementary MH=Middle High School T=Vocational Building D=District					
Mechanical - District Only Subtotal					\$69,447
MECHANICAL				\$11,574,345	TOTAL
ELECTRICAL					
Panels & Motor Control Centers, E37 Provide code required labeling, to include arc-flash warnings, calculated available fault current, the amperage panelboards are rated for, etc. at each panelboard. Code Deficiency		\$2,000	\$2,674	\$4,674	Local Contract
Panels & Motor Control Centers, E37 Provide a ground bar in all panels that do not currently have one.		\$2,800	\$3,732	\$6,532	In-House
Panels & Motor Control Centers, E37 Install UL-listed handle ties on breakers requiring them, per NEW 240.15(B) and NEC 110.3(B) Code Deficiency		\$20,000	\$26,630	\$46,630	In-House
Panels & Motor Control Centers, E37 If new electrical loads are anticipated or added, remove and replace new panelboards with 54 spaces. Code Deficiency		\$10,000	\$13,315	\$23,315	
Conduit & Feeders, E39 Replace damaged feeders in Panel M3, Grounding to panel M3.		\$2,750	\$3,665	\$6,415	Local Contract
Light Fixtures, E40 Test all existing emergency lights and exit signs for proper operation and replace batteries and fixtures where needed. Code Deficiency		\$2,000	\$2,673	\$4,673	In House * Already occurring
Light Fixtures, E40 Provide emergency lights in the classrooms that do not have any, in the electrical and mechanical spaces, and at the exterior egress and other rooms, areas, and halls where not currently installed, but required. Code Deficiency		\$18,000	\$23,984	\$41,984	Local Contract
Light Fixtures E40 Locate the inverter supplying power to the fixtures in the MPR and replace the batteries. Code Deficiency		\$2,500	\$3,313	\$5,813	In-House
Light Fixtures E40 Replace existing fluorescent style fixtures with newer energy efficient LED style fixtures.		\$4,250	\$5,647	\$9,897	In-House
Devices and Connections, E42 Provide code required labeling, to include arc-flash warnings and calculated available fault current, at each panelboard. Code Deficiency		\$16,000	\$21,327	\$37,327	

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C= District Wide Outside E=Elementary MH=Middle High School T=Vocational Building D=District				
Devices and Connections, E42 Provide nameplates at each of the panelboards to identify them and where they are supplied from.	\$8,000	\$10,611	\$18,611	
Devices and Connections, E42 Provide ground bars in all panels that do not have them.	\$2,800	\$3,713	\$6,513	
Devices and Connections, E42 Provide permanent nameplates at each equipment disconnect, identifying the load it controls and where it is supplied from Code Deficiency	\$5,000	\$6,684	\$11,684	
Devices and Connections, E42 Remove and replace the circuit breaker supplying power to the kitchen range with a new circuit breaker with ground fault protection. Code Deficiency	\$500	\$636	\$1,136	In-House
Devices and Connections, E42 Remove and replace all receptacles throughout the building with new listed tamper-resistant type 20 amp 120 Volt receptacles.	\$33,000	\$44,033	\$77,033	In-House
Devices and Connections, E42 Remove and replace all device covers at the receptacles located outdoors with new metallic, extra duty rated, weather proof while -in-use covers. Code Deficiency	\$1,750	\$2,334	\$4,084	In-House
Devices and Connections, E42 Remove and replace all receptacles in mechanical and electrical rooms and spaces, with new 20 Amp 120 Volt GFCI tamper-resistant types receptacles.Code Deficiency	\$2,800	\$3,713	\$6,513	In-House
Devices and Connections, E42 Remove and replace the non-GFCI receptacles within 6' of the sinks and on the exterior of the building with new 20 Amp 120 Volt GCI tamper-resistant type receptacles.	\$8,000	\$10,610	\$18,610	In-House
Devices and Connections, E42 Provide red identification marking at the circuit breaker supplying power to the fire alarm system. Code Deficiency	\$50	\$64	\$114	In-House
Devices and Connections, E42 Provide a lock-on type device at the circuit breakers supplying power to the fire alarm system.	\$210	\$318	\$528	In-House
Devices and Connections, E42 Install permanent markings to disconnect in boiler room to indicate their purpose and circuit sources	\$1,000	\$1,280	\$2,280	
Devices and Connections, E42 Replace circuit breaker supplying power to kitchen range with ground fault	\$500	\$640	\$1,140	

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C= District Wide Outside E=Elementary MH=Middle High School T=Vocational Building D=District				
Conduit & Wiring, E43 Install grounding system throughout school.	\$5,000	\$6,664	\$11,664	
Data & Communication, E45 Replace the batteries in the existing UPS supplying power to the telecom rack. Code Deficiency	\$3,000	\$3,996	\$6,996	Jon is already working on some of this.
Data & Communication, E45 Provide a network card to the existing UPS so that it can be remotely monitored Code Deficiency	\$1,500	\$1,998	\$3,498	Jon is already working on some of this.
Data & Communication, E45 Install a new larger floor mount telecommunication rack to allow for easier access and space for upgradability Code Deficiency	\$1,200	\$1,595	\$2,795	Jon is already working on some of this.
Security System, E46 Install new intrusion detection system	\$49,737	\$66,240	\$115,977	Just a recommendation. We have a system in place and upgrade as needed
Security System, E46 Install exterior CCTV camera	\$10,000	\$13,248	\$23,248	Just a recommendation. We have a system in place and upgrade as needed
Security System, E46 Install interior CCTV system	\$15,000	\$19,922	\$34,922	Just a recommendation. We have a system in place and upgrade as needed
Intercom Systems, E48 Replace the existing Rauland Telecente with a newer, more modern intercom and lockdown system. Code Deficiency	\$66,316	\$88,386	\$154,702	Door security Updgrade Phase II
Power Generation & Distribution, E49 If backup power generation is desired, we recommend installing an adequately sized generator with an appropriately sized transfer switch. New 150 KVA generator, including transfer switch, feeders, and modification to service and distribution system to connection.	\$90,000	\$119,952	\$209,952	
Grounding System, E50 Install ground bar in all panels Install equipment grounding system (already listed in Conduit & Wiring)	\$2,800	\$3,742	\$6,542	
	Electrical- Elementary Only Subtotal			\$905,802
Main Distribution Panels & Switchgear, MH42 Replace 1,600 amp main distribution panel on exterior of building and reconnect all subpanels. Code Deficiency	\$35,000	\$46,488	\$81,488	CIP

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Main Distribution Panels & Switchgear, MH42 Install new permanent plaques or directories at each of the electrical service disconnects denoting all other electrical services, feeders, and branch circuits supplying the building as required by NEC 230.2(E). Code Deficiency		\$2,000	\$2,659	\$4,659	
Main Distribution Panels & Switchgear, MH42 Install code required labeling to service disconnect, distribution equipment, and each panel board, including arc flash warning and calculated available fault current. Code Deficiency		\$2,000	\$2,659	\$4,659	
Main Distribution Panels & Switchgear, MH42 Install arc-fault reduction at the 1600 amp exterior switchboard. Code Deficiency		\$30,000	\$39,886	\$69,886	
Panels & Motor Control Centers, MH43 Install code required labeling, to include arc-flash warnings and calculated available fault current at each panelboard. Code Deficiency		\$5,000	\$6,706	\$11,706	
Panels & Motor Control Centers, MH43 In all panels, install group grounded conductors with the respective circuit's ungrounded branch circuit conductors. Code Deficiency		\$15,000	\$20,033	\$35,033	
Panels & Motor Control Centers, MH43 Install ground bar in all panels		\$8,750	\$11,693	\$20,443	
Panels & Motor Control Centers, MH43 Replace 54 circuit panels for new or additional loads		\$20,000	\$26,653	\$46,653	
Panels & Motor Control Centers, MH43 Provide a lock-on type device at the circuit breakers supplying power to the fire alarm system. Code Deficiency		\$210	\$258	\$468	
Panels & Motor Control Centers, MH43 Provide red identification marking at the circuit breaker supplying power to the fire alarm system. Code Deficiency		\$50	\$60	\$110	
Panels & Motor Control Centers, MH43 Install new circuit directories at all panels		\$5,250	\$6,964	\$12,214	
Panels & Motor Control Centers, MH43 Provide nameplates at each panelboard identifying the panel and where it is supplied from. Code Deficiency		\$3,750	\$4,987	\$8,737	
Light Fixtures, MH46 Provide emergency lights in all classrooms, restrooms, mechanical spaces, electrical spaces, at the exterior egress, and halls where not currently installed, but required. Provide raceway and branch circuitry and connect to unswitched leg of area lighting circuitry. Code Deficiency		\$36,000	\$47,914	\$83,914	Local Contractor
Light Fixtures, MH46 Provide additional exit signs where required. Code Deficiency		\$5,500	\$7,382	\$12,882	In-House & Local Contractor

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C= District Wide Outside E=Elementary MH=Middle High School T=Vocational Building D=District					
Light Fixtures, MH46 Provide additional LED light fixtures with battery backups outside each exterior door.		\$7,700	\$10,200	\$17,900	In-House & Local Contractor
Light Fixtures, MH46 Replace existing fluorescent style fixtures with newer energy efficient LED style fixtures. (Boiler room and mechanical room)		\$42,500	\$56,638	\$99,138	In-House
Lighting Controls, MH47 Replace all damaged switch cover plates and repair or replace malfunctioning occupancy sensors to ensure optimal performance. Code Deficiency		\$16,129	\$21,469	\$37,598	In-House
Lighting Controls, MH47 Relocate storage racks obstructing occupancy sensor switches or install ceiling mounted occupancy sensors in combination with existing wall-mounted switches to enhance detections accuracy. Code Deficiency		\$210	\$280	\$490	In-House
Power Overview, MH49 Replace duplex receptacle into tamper resistant outlets throughout school. Code Deficiency		\$90,000	\$119,952	\$209,952	In-House
Power Overview, MH49 Replace exterior duplex receptacle into weatherproof, GFCI duplex receptacle Code Deficiency		\$3,500	\$8,164	\$11,664	In-House
Power Overview, MH49 Replace mechanical and electrical room duplex receptacle into GFCI receptacle Code Deficiency		\$8,750	\$11,721	\$20,471	In-House
Power Overview, MH49 Install permanent name plate at equipment disconnect identifying load it controls and where it is supplied from. Code Deficiency		\$5,000	\$5,000	\$10,000	In-House
Fire Alarm, MH51 Add additional speaker/strobes in the hallways for better coverage. Code Deficiency		\$7,000	\$9,330	\$16,330	
Fire Alarm, MH51 Install smoke detectors in all classrooms. Code Deficiency		\$15,000	\$19,992	\$34,992	
Fire Alarm, MH51 Install speaker/strobes in all classrooms.		\$14,000	\$18,659	\$32,659	
Fire Alarm, MH51 Replace the circuit breaker supplying the fire alarm system with a breaker suitable for being locked in the on position. Code Deficiency		\$500	\$666	\$1,166	

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Fire Alarm, MH51 Remove the residential style smoke detectors and replace them with smoke detectors connected to the building Simplex 4100ES fire alarm panel. Code Deficiency		\$1,400	\$1,866	\$3,266	
Fire Alarm, MH51 Investigate and clear 'trouble'lights on fire alarm panel.		\$110	\$101	\$211	
Data & Communication, MH52 Replace the batteries in the existing UPS supplying power to the telecom rack. Code Deficiency		\$3,000	\$3,998	\$6,998	In-House
Data & Communication, MH52 Provide a network card to the existing UPS so that it can be remotely monitored. Code Deficiency		\$1,500	\$1,963	\$3,463	Jon is already working on a lot of this
Data & Communication, MH52 Install additional telecommunication outlets in the classrooms as required for computers and equipment. Code Deficiency		\$22,500	\$29,988	\$52,488	Jon is already working on a lot of this
Data & Communication, MH52 Install additional wireless access points in larger rooms and common areas throughout the building. Code Deficiency		\$6,300	\$8,397	\$14,697	Jon is already working on a lot of this
Data & Communication, MH52 Relocate existing switches into the centralized telecommunication room and pull new category 6 cable to the existing jacks. Code Deficiency		\$40,324	\$40,324	\$80,648	Jon is already working on a lot of this
Security System, MH53 Install a building intrusion detection system, with door contacts, glass break sensors, motion sensors, sirens, and a dialer to monitor and alert of a break in.		\$120,971	\$161,230	\$282,201	This is completed as identified as a need throughout the year.
Security System, MH53 Install exterior CCTV cameras (25)		\$25,000	\$33,320	\$58,320	This is completed as identified as a need throughout the year.
Security System, MH53 Install interior CCTV cameras (35)		\$35,000	\$46,648	\$81,648	This is completed as identified as a need throughout the year.
Intercom System, MH55 Replace the existing Rauland Telecenter with a newer, more modern intercom and lockdown system. Code Deficiency		\$161,294	\$214,973	\$376,267	Phase 2 CIP
Power Generation & Distribution, MH56 If backup power generation is desired, we recommend installing an adequately sized generator with an appropriately sized transfer switch. New 150 KVA generator, including transfer switch, feeders, and modification to service and distribution system to connection.		\$90,000	\$119,952	\$209,952	

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Grounding System, MH57 Install equipment grounding system		\$10,000	\$13,495	\$23,495	
Grounding System, MH57 Install ground bar in all panels		\$8,750	\$11,496	\$20,246	
Electrical- Middle/High Only Subtotal				\$2,099,112	
Main Distribution Panels & Switchgear, T34 Provide code required labeling to the service disconnect and distribution equipment to include arc-flash warning and calculated available fault current, at each panelboard. Code Deficiency		\$500	\$666	\$1,166	
Main Distribution Panels & Switchgear, T34 Provide proper labeling on the emergency power off button clearly identifying its purpose. Code Deficiency		\$150	\$166	\$316	
Main Distribution Panels & Switchgear, T34 Install arc-fault reduction at the 1600 Amp switchboard. Code Deficiency		\$30,000	\$39,856	\$69,856	
Panels and Motor Control Centers, T35 Provide code required labeling, to include arc-flash warning and calculated available fault current, at each panelboard. Code Deficiency		\$2,000	\$2,645	\$4,645	
Panels and Motor Control Centers, T35 Remove and replace the branch circuit conductors supplied by the 50 Amp circuit breaker in Panel C with new branch circuit conductors, rated for 50 Amps. Code Deficiency		\$500	\$687	\$1,187	
Panels and Motor Control Centers, T35 Install group grounded conductors with the respective circuit's ungrounded branch circuit conductors. Code Deficiency		\$5,000	\$6,666	\$11,666	
Panels and Motor Control Centers, T35 Install ground bar in all panels. Code Deficiency		\$2,450	\$3,227	\$5,677	
Panels and Motor Control Centers, T35 If it is anticipated that new electrical loads will be added, in the future, or additional spare capacity is needed in the electrical panels, remove and replace the panelboards with new panelboards with 54 spaces.		\$10,000	\$13,280	\$23,280	
Panels and Motor Control Centers, T35 Install UL-listed handle ties on breakers requiring them, per NEC 240.15(B) and NEC 110.3 (B) Code Deficiency		\$17,500	\$23,281	\$40,781	
Panels and Motor Control Centers, T35 Remove or relocate the welding table in front of Panel C so that this panel has NEC required working space. Code Deficiency		\$250	\$317	\$567	Talk to Dave to move
Light Fixtures, T38 Provide emergency lighting in the classroom and car shop. Code Deficiency (contractor)		\$18,000	\$23,972	\$41,972	

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Light Fixtures, T38 Provide additional emergency lighting fixtures in the shops and classroom as needed to provide the required illumination levels and uniformity ratio on the path of egress. Code Deficiency (contractor)		\$8,000	\$10,649	\$18,649	
Light Fixtures, T38 Provide additional LED light fixtures, in new locations on the exterior of the building, to provide additional illumination to provide a sense of security. Code Deficiency		\$7,000	\$9,334	\$16,334	Local Contractor
Lighting Controls, T39 Provide occupancy sensors throughout the building so that fixtures will be turned off when not needed and provide energy savings.		\$12,500	\$16,703	\$29,203	In-House
Lighting Controls, T39 Provide switching controls for the office lighting that are currently always on.		\$420	\$516	\$936	Aaron wil check on this. In-House
Devices & Connections, T41 Provide conduit knockout seals for all unused openings on panels and junction boxes. Code Deficiency		\$2,000	\$2,666	\$4,666	In-House
Devices & Connections, T41 Install covers for all junction boxes. Code Deficiency		\$1,000	\$1,318	\$2,318	In-House
Devices & Connections, T41 Replace duplex receptacle in the shop areas with tamper resistant GFCI receptacles and all receptacles in the classroom should be replaced with tamperproof receptacles. Code Deficiency		\$15,000	\$19,986	\$34,986	In-House
Devices & Connections, T41 Remove extension cords and provide new receptacles with raceway and branch circuitry back to and connected to new circuit breakers in the panelboards. Code Deficiency		\$2,000	\$2,666	\$4,666	Local Contractor
Devices and Connections T41 Provide engraved nameplates at each equipment disconnect, identifying its purpose, the load it serves, and where it is supplied from. Code Deficiency		\$2,000	\$2,666	\$4,666	
Fire Alarm, T43 Install an annunciator panel near the front entry. Code Deficiency Remove and relocate or provide new fire alarm detection devices in each beam pocket. Code Deficiency		\$11,500	\$15,322	\$26,822	
Data & Communications, T44 Provide a new UPS to supply the telecom rack to reduce brown outs, so that when there is a loss of power, existing systems can be properly shut down. Code Deficiency		\$1,000	\$1,332	\$2,332	Jon- In-House

Petersburg School District District Wide Identified Scope of Work		Estimated Product Cost	Estimated Other (general, overhead, profit, contingency)	Estimated Total Cost	Notes
C= District Wide Outside E=Elementary MH=Middle High School T=Vocational Building D=District					
Data & Communications, T44 Install a new larger floor mount telecommunication rack to allow for easier access and space for expandability. Code Deficiency		\$1,200	\$1,601	\$2,801	Jon- In-House
Data & Communications, T44 Install additional telecommunication outlets in the classroom as required for computers and equipment. Code Deficiency		\$2,000	\$2,664	\$4,664	Jon- In-House
Security Systems, T45 If vandalism or burglary is a concern, install a building intrusion detection system, with door contract, glass break sensors, motion sensors, sirens, and a dialer to monitor and alert for a break in.		\$13,125	\$17,480	\$30,605	In-House- as needed
Security Systems, T45 Provide additional exterior cameras to provide coverage for all walkways around the building.		\$4,000	\$5,324	\$9,324	In-House- as needed
Security Systems, T45 Provide additional interior cameras to provide coverage for all areas where shop equipment is stored or used.		\$8,000	\$10,648	\$18,648	In-House- as needed
Intercom System, T47 If an intercom system is desired, we recommend installing a new intercom system.		17500	23324	\$40,824	Phase 2 CIP
Power Generation & Distribution, T48 If backup power generation is desired, we recommend installing an adequately sized generator and appropriately sized transfer switch.		65000	86632	\$151,632	
Grounding Systems, T50 Install ground bar to all panels, Istll equipment grounding system		3950	5265	\$9,215	
Electrical- Vocational Only Subtotal				\$614,404	
Panels & Motor Control Centers, D26 Provide code required labeling, to include arc-flash warning and calculated available fault current at the load center. Code Deficiency		\$500	\$661	\$1,161	
Panels & Motor Control Centers, D26 Remove and replace the PVC conduit for the telecommunication equipment so that it is outside of the NEC required working clearance. Code Deficiency		\$2,500	\$3,327	\$5,827	
Panels & Motor Control Centers, D26 If it is anticipated that new electrical loads will be added, in the future, or additional spare capacity is needed, remove and replace the load center with a larger 42 space panelboard.		\$5,000	\$6,664	\$11,664	
Light Fixtures, D29 Remove and replace all emergency lights with new emergency lights.		\$3,750	\$5,000	\$8,750	In-House

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Light Fixtures, D29 Provide emergency lights in Conference 104, Secretarial 105, in mechanical and electrical spaces, and at the exterior egress and other rooms, areas, and halls where not currently installed, but required. Provide raceway and branch circuitry and connect to unswitched leg of area lighting circuitry.		\$5,000	\$6,666	\$11,666	In-House
Light Fixtures, D29 Remove and replace all expired self-luminous exit signs with new UL listed self-luminous exit signs or provide new exit signs with 120 volt power and internal battery packs with new branch circuitry connected to the area's local lighting circuit. Properly dispose of existing self-luminous exit signs.		\$700	\$932	\$1,632	In-House
Light Fixtures, D29 Install new emergency exterior lighting fixtures.		\$3,200	\$4,269	\$7,469	In-House
Light Fixtures, D29 Replace exterior weatherproof light fixture		\$1,400	\$1,864	\$3,264	Already Done
Lighting Controls, D30 Provide occupancy sensors throughout the building so that fixtures will be turned off when not needed.		\$5,000	\$6,669	\$11,669	In-House
Devices & Connectors, D32 Remove and replace all receptacles located outdoors with new listed weather-resistant, ground fault type circuit interrupter type 20 Amp 120 Volt receptacles. Code Deficiency		\$1,000	\$1,333	\$2,333	In-House
Devices & Connectors, D32 Remove and replace all device covers at the receptacles located outdoors with new metallic, extra duty rated, waterproof while-in-use covers. Code Deficiency		\$500	\$666	\$1,166	In-House
Devices & Connectors, D32 Remove and replace on-GFCI receptacle in the kitchen with new 20 Amp 120 Volt GFCI type receptacles. Where receptacles are not located in readily accessible locations, remove and replace the circuit's supplying circuit breaker with a new 20 Amp 120 Volt GFCI type circuit breaker. Code Deficiency		\$700	\$933	\$1,633	In-House
Devices & Connectors, D32 Remove and replace all receptacles in mechanical and electrical rooms and spaces with new 20 Amp 120 Volt GFCI type receptacles. Code Deficiency		\$500	\$666	\$1,166	In-House
Devices & Connectors, D32 Remove extension cords and provide new receptacles with raceway and branch circuitry back to and connected to new circuit breakers in the panelboard. Code Deficiency		\$750	\$999	\$1,749	Contractor
Fire Alarm, D38 Remove fire alarm or install a new fire alarm compliant with NFPA Code Deficiency		\$6,300	\$8,397	\$14,697	In-House

Petersburg School District District Wide Identified Scope of Work	Estimated Product Cost	Estimated Other (general, overhead, profit, contingency)	Estimated Total Cost	Notes
C= District Wide Outside E=Elementary MH=Middle High School T=Vocational Building D=District				
Data & Communications, D35 Replace or repair the existing UPS	\$2,000	\$2,666	\$4,666	In-House
Security Systems, D36 If vandalism or burglary is a concern, install a building intrusion detection system, with door contacts, glass break sensors, motion sensors, sirens, and a dialer to monitor and alert of a break in.	\$2,700	\$3,565	\$6,265	In-House As needed
Security Systems, D36 Provide additional exterior cameras to provide coverage for all walkways around the building.	\$4,000	\$5,277	\$9,277	In-House As needed
Security Systems, D36 Provide additional interior cameras to provide coverage for all hallways in the building.	\$4,000	\$5,277	\$9,277	In-House As needed
Intercom System, D38 If an intercom system is desired, we recommend installing a new intercom system.	\$3,600	\$4,798	\$8,398	Not necessary
Power Generation & Distribution, D39 If backup power generation is desired, we recommend installing an adequately sized generator and an appropriately sized transfer switch.	\$20,000	\$26,565	\$46,565	
Grounding System, D41 *Provide a new grounding electrode system with connections to all grounding electrodes present. Code Deficiency *If local or school district guidelines require an equipment grounding conductor to be run in each conduit, provide an appropriately sized grounding conductor in each conduit containing feeders or branch circuitry.	\$1,350	\$1,799	\$3,149	
	Electrical - District Only Subtotal			\$173,443
	ELECTRICAL			\$3,792,761 TOTAL
TOTAL FOR DISTRICT-WIDE SCOPE OF WORK			\$26,964,462	