

Building Information - Troy City (44925) - Heywood Elementary

Program Type	Classroom Facilities Assistance Program (CFAP) - Regular
Setting	Small City
Assessment Name	Heywood Elementary School (15990) FINAL
Assessment Date (on-site; non-EEA)	2016-08-06
Kitchen Type	Warming Kitchen
Cost Set:	2016
Building Name	Heywood Elementary
Building IRN	15990
Building Address	290 South Ridge Avenue
Building City	Troy
Building Zipcode	45373
Building Phone	(937) 332.6750
Acreage	4.37
Current Grades:	K-5
Teaching Stations	25
Number of Floors	2
Student Capacity	500
Current Enrollment	314
Enrollment Date	2016-08-06
Enrollment Date is the date in which the current enrollment was taken.	
Number of Classrooms	21
Historical Register	NO
Building's Principal	Mr. Maurice Sadler
Building Type	Elementary

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North elevation photo:



East elevation photo:



South elevation photo:



West elevation photo:



GENERAL DESCRIPTION

- 37,095** Total Existing Square Footage
- 1930,1973** Building Dates
- K-5** Grades
- 314** Current Enrollment
- 25** Teaching Stations
- 4.37** Site Acreage

Heywood Elementary, which is not on the National Register of Historic Buildings, and originally constructed in 1930, is a 3 story, 37,095 square foot brick and stone school building located in a small town residential setting. The existing facility features a conventionally partitioned design, and does not utilize modular buildings. The structure of the overall facility contains brick veneer on load bearing masonry type exterior wall construction, with load bearing masonry type wall construction in the interior. The base floor system of the overall facility consists of concrete slab on grade. The intermediate floor systems of the overall facility consists of cast in place concrete type construction. The roof structure of the 1930 Original Construction is wood deck on wood rafter type construction. The roof structure of the 1973 Addition is steel deck on steel joist type construction. The roofing system over portions of the 1930 Original Construction is slate shingle, originally installed in 1930. The roofing system over the remaining portions of the 1930 Original Construction and the 1973 Addition is a modified bitumen system by Tremco, that was installed in 2006. The ventilation system of the building is inadequate to meet the needs of the users. The Classrooms are undersized in terms of the current standards established by the State of Ohio. Physical Education and Student Dining spaces consist of one Multipurpose space. The electrical system for the facility is inadequate. The facility is not equipped with a compliant security system. The building has a non-compliant automatic fire alarm system. The facility is not equipped with an automated fire suppression system. The building contains asbestos. The overall building is not compliant with ADA accessibility requirements. The school is located on a 4.37 acre site adjacent to residential properties. The playground and play areas are fenced for security. Access onto the site is unrestricted. Site circulation is fair to poor. There is dedicated space for school buses to load and unload on the site, as well as curbside loading and unloading. Parking for staff, visitors and community events is inadequate according to staff reports. During the time of the assessment, the adjacent street to the south was in the process of being replaced, including new concrete curbs, sidewalks, and an asphalt road surface.

No Significant Findings

Building Construction Information - Troy City (44925) - Heywood Elementary (15990)

Name	Year	Handicapped Access	Floors	Square Feet	Non OSDM Addition
Original Construction	1930	no	3	36,367	no
Kitchen Addition	1973	no	1	728	no

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Building Component Information - Troy City (44925) - Heywood Elementary (15990)

Addition	Auditorium Fixed Seating	Corridors	Agricultural Education Lab	Primary Gymnasium	Media Center	Vocational Space	Student Dining	Kitchen	Natatorium	Indoor Tracks	Adult Education	Board Offices	Outside Agencies	Auxiliary Gymnasium
Original Construction (1930)		6921		2356	1033			608						
Kitchen Addition (1973)		625												
Total	0	7,546	0	2,356	1,033	0	0	608	0	0	0	0	0	0
Master Planning Considerations	The south and east side of the site is steeply sloped. Building expansion is not recommended due to the size and configuration of the existing site.													

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Existing CT Programs for Assessment

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Program Type	Program Name	Related Space	Square Feet
No Records Found			

Legend:

Not in current design manual

In current design manual but missing from assessment

Building Summary - Heywood Elementary (15990)

District: Troy City				County: Miami		Area: West Central Ohio (2)									
Name: Heywood Elementary				Contact: Mr. Maurice Sadler											
Address: 290 South Ridge Avenue Troy, OH 45373				Phone: (937) 332.6750											
Bldg. IRN: 15990				Date Prepared: 2016-08-06		By: Julie Apt									
				Date Revised: 2016-12-11		By: Bernie Merritt									
Current Grades		K-5	Acreage:		4.37										
Proposed Grades		N/A	Teaching Stations:		25										
Current Enrollment		314	Classrooms:		21										
Projected Enrollment		N/A													
Addition		Date	HA	Number of Floors	Current Square Feet										
<u>Original Construction</u>		1930	no	3	36,367										
<u>Kitchen Addition</u>		1973	no	1	728										
Total				37,095											
*HA =		Handicapped Access													
*Rating =		1 Satisfactory													
		2 Needs Repair													
		3 Needs Replacement													
*Const P/S =		Present/Scheduled Construction													
CEFPI Appraisal Summary															
				Section		Points Possible		Points Earned		Percentage		Rating		Category	
<u>Cover Sheet</u>								—		—		—		—	
1.0 <u>The School Site</u>				100		66		66%		Borderline					
2.0 <u>Structural and Mechanical Features</u>				200		102		51%		Borderline					
3.0 <u>Plant Maintainability</u>				100		65		65%		Borderline					
4.0 <u>Building Safety and Security</u>				200		114		57%		Borderline					
5.0 <u>Educational Adequacy</u>				200		90		45%		Poor					
6.0 <u>Environment for Education</u>				200		108		54%		Borderline					
<u>LEED Observations</u>								—		—		—		—	
<u>Commentary</u>								—		—		—		—	
Total				1000		545		55%		Borderline					
Enhanced Environmental Hazards Assessment Cost Estimates															
FACILITY ASSESSMENT				Rating		Dollar Assessment									
Cost Set: 2016															
A. <u>Heating System</u>				3		\$1,265,681.40		C=Under Contract							
B. <u>Roofing</u>				3		\$135,528.70									
C. <u>Ventilation / Air Conditioning</u>				2		\$5,000.00		Renovation Cost Factor							
D. <u>Electrical Systems</u>				3		\$602,051.85		Cost to Renovate (Cost Factor applied)							
E. <u>Plumbing and Fixtures</u>				3		\$413,365.00		\$7,863,624.64							
F. <u>Windows</u>				2		\$9,653.00		<i>The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.</i>							
G. <u>Structure: Foundation</u>				2		\$24,108.00									
H. <u>Structure: Walls and Chimneys</u>				2		\$85,878.50									
I. <u>Structure: Floors and Roofs</u>				1		\$0.00									
J. <u>General Finishes</u>				3		\$1,609,008.70									
K. <u>Interior Lighting</u>				3		\$185,475.00									
L. <u>Security Systems</u>				3		\$105,720.75									
M. <u>Emergency/Egress Lighting</u>				3		\$37,095.00									
N. <u>Fire Alarm</u>				3		\$55,642.50									
O. <u>Handicapped Access</u>				3		\$279,069.00									
P. <u>Site Condition</u>				2		\$277,607.40									
Q. <u>Sewage System</u>				1		\$0.00									
R. <u>Water Supply</u>				1		\$0.00									
S. <u>Exterior Doors</u>				1		\$0.00									
T. <u>Hazardous Material</u>				3		\$580,285.00									
U. <u>Life Safety</u>				3		\$211,044.00									
V. <u>Loose Furnishings</u>				2		\$111,285.00									
W. <u>Technology</u>				3		\$488,912.10									
- X. <u>Construction Contingency / Non-Construction Cost</u>				-		\$1,583,672.43									
Total						\$8,066,083.33									

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Original Construction (1930) Summary

District: Troy City				County: Miami		Area: West Central Ohio (2)	
Name: Heywood Elementary				Contact: Mr. Maurice Sadler			
Address: 290 South Ridge Avenue Troy, OH 45373				Phone: (937) 332.6750			
Bldg. IRN: 15990				Date Prepared: 2016-08-06		By: Julie Apt	
				Date Revised: 2016-12-11		By: Bernie Merritt	
Current Grades		K-5	Acreage:		4.37		
Proposed Grades		N/A	Teaching Stations:		25		
Current Enrollment		314	Classrooms:		21		
Projected Enrollment		N/A					
Addition		Date	HA	Number of Floors	Current Square Feet		
Original Construction		1930	no	3	36,367		
Kitchen Addition		1973	no	1	728		
Total					37,095		
*HA		=	Handicapped Access				
*Rating		=	1 Satisfactory				
		=	2 Needs Repair				
		=	3 Needs Replacement				
*Const P/S		=	Present/Scheduled Construction				
CEFPI Appraisal Summary							
		Section		Points Possible	Points Earned	Percentage	Rating Category
		<u>Cover Sheet</u>		—	—	—	—
		1.0 <u>The School Site</u>		100	66	66%	Borderline
		2.0 <u>Structural and Mechanical Features</u>		200	102	51%	Borderline
		3.0 <u>Plant Maintainability</u>		100	65	65%	Borderline
		4.0 <u>Building Safety and Security</u>		200	114	57%	Borderline
		5.0 <u>Educational Adequacy</u>		200	90	45%	Poor
		6.0 <u>Environment for Education</u>		200	108	54%	Borderline
		<u>LEED Observations</u>		—	—	—	—
		<u>Commentary</u>		—	—	—	—
		Total		1000	545	55%	Borderline
Enhanced Environmental Hazards Assessment Cost Estimates							
FACILITY ASSESSMENT							
Cost Set: 2016				Rating	Dollar Assessment		
A. <u>Heating System</u>		3	\$1,240,842.04				
B. <u>Roofing</u>		3	\$131,826.20				
C. <u>Ventilation / Air Conditioning</u>		2	\$5,000.00				
D. <u>Electrical Systems</u>		3	\$590,236.41				
E. <u>Plumbing and Fixtures</u>		3	\$404,869.00				
F. <u>Windows</u>		2	\$9,569.00				
G. <u>Structure: Foundation</u>		2	\$24,108.00				
H. <u>Structure: Walls and Chimneys</u>		2	\$82,805.00				
I. <u>Structure: Floors and Roofs</u>		1	\$0.00				
J. <u>General Finishes</u>		3	\$1,463,292.70				
K. <u>Interior Lighting</u>		3	\$181,835.00				
L. <u>Security Systems</u>		3	\$103,645.95				
M. <u>Emergency/Egress Lighting</u>		3	\$36,367.00				
N. <u>Fire Alarm</u>		3	\$54,550.50				
O. <u>Handicapped Access</u>		3	\$278,873.40				
P. <u>Site Condition</u>		2	\$270,185.72				
Q. <u>Sewage System</u>		1	\$0.00				
R. <u>Water Supply</u>		1	\$0.00				
S. <u>Exterior Doors</u>		1	\$0.00				
T. <u>Hazardous Material</u>		3	\$578,126.70				
U. <u>Life Safety</u>		3	\$208,714.40				
V. <u>Loose Furnishings</u>		2	\$109,101.00				
W. <u>Technology</u>		3	\$479,317.06				
- X. <u>Construction Contingency / Non-Construction Cost</u>		-	\$1,527,691.42				
Total			\$7,780,956.50				
		C=Under Contract					
		Renovation Cost Factor		97.49%			
		Cost to Renovate (Cost Factor applied)		\$7,585,654.49			
<i>The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.</i>							

A. Heating System

Description: The existing system for the 1930 Original Construction is a natural gas fired boiler type system (converted from a Columbus Heat and Vent and furnace type system), installed in 1930 with upgrades in 1973 and 1999, and is in fair condition. The system in the 1973 Addition is an extension of that found in the 1930 Original Construction. 2-pipe vs. 4-pipe designations are not applicable in this facility, as no central air conditioning is provided. The (4) heated water boilers, manufactured by Weben-Jarco, Inc., were installed in 1999 and are in fair condition. Heating water is distributed via circulating pumps to heating coils in a central air handling unit, with heated air supplied throughout the overall facility. The terminal equipment was installed in 1999 and is in fair condition. The system does not appear to comply with the 15 CFM per person fresh air requirements of the Ohio Building Code mechanical code and Ohio School Design Manual. The pneumatic type system temperature controls are original to each addition and are in fair condition. The system does not feature individual temperature controls in all spaces required by the OSDM. The overall system does not feature any central energy recovery systems. The facility is equipped with widespread louvered interior doors to facilitate Corridor utilization as return air plenums. The existing system is ducted, but the ductwork cannot be integrated into a possible future system due to arrangement, air volume, and routing of existing ductwork. The overall heating system is evaluated as being in safe but inefficient working order, and long term life expectancy of the existing system is not anticipated. The structure is not equipped with central air conditioning. The site does not contain underground fuel tanks.

Rating: 3 Needs Replacement

Recommendations: Provide new overall heating, ventilating, and air conditioning system to achieve compliance with Ohio Building Code and Ohio School Design Manual standards. Replace existing ductwork to facilitate efficient exchange of conditioned air.

Item	Cost	Unit	Whole Building	Original Construction (1930) 36,367 ft ²	Kitchen Addition (1973) 728 ft ²	Sum	Comments
HVAC System Replacement:	\$26.12	sq.ft. (of entire building addition)		Required	Required	\$968,921.40	(includes demo of existing system and reconfiguration of piping layout and new controls, air conditioning)
Convert To Ducted System	\$8.00	sq.ft. (of entire building addition)		Required	Required	\$296,760.00	(includes costs for vert. & horz. chases, cut openings, soffits, etc. Must be used in addition to HVAC System Replacement if the existing HVAC system is non-ducted)
Sum:			\$1,265,681.40	\$1,240,842.04	\$24,839.36		



Natural Gas Fired Heated Water Boilers



Circulating Pumps

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B. Roofing

Description: The roof over portions of the Original Construction is a slate shingle system that is believed to be installed in 1930, and is in fair condition. There are a few shingles that have been broken, or have come loose and need to be replaced. The roof over the other portions of the Original Construction and 1973 Kitchen Addition is a modified bitumen system by Tremco that was installed in 2006, is under a 15-year warranty, and is in fair condition. There are District reports of current leaking. Blisters form in the roofing system and burst. Burst blisters adjacent to seams cause leaks. Signs of past leaking were observed during the physical assessment. Access to portions of the roof was gained by access hatch that is in fair condition and access ladder that is in poor condition. Some low roof areas were not accessible. Fall safety protection cages are not required, and are not provided. There were no observations of standing water on the roof. Metal cap flashings and copings are in fair condition. Roof storm drainage is addressed through a system of gutters and downspouts and through-wall scuppers, which are properly located, and in poor condition. The roof is not equipped with overflow roof drains though they are not required. No problems requiring attention were encountered with any roof penetrations. There are not any covered walkways attached to this structure.

Rating: 3 Needs Replacement

Recommendations: The roof over the Tremco portions of the Original Construction and the 1973 Kitchen Addition requires replacement to meet Ohio School Design Manual guidelines due to condition and age of system and projected lifecycle. The roof over the slate roof portions of the Original Construction requires yearly inspection and maintenance. The flashing and coping for the Tremco portions of the roof require replacement due to condition and projected lifecycle. Due to existing conditions gutters and downspouts require replacement. Replace wood decking in areas of past leaking in the Original Construction. Replace one wooden ladder. Provide three ladders and one access hatch for inaccessible low roof areas in the Original Construction.

Item	Cost	Unit	Whole Building	Original Construction (1930) 36,367 ft ²	Kitchen Addition (1973) 728 ft ²	Sum	Comments
Deck Replacement:	\$5.25	sq.ft. (Qty)		200 Required		\$1,050.00	(wood or metal, including insulation)
Built-up Asphalt:	\$13.20	sq.ft. (Qty)		3,946 Required	133 Required	\$53,842.80	
Repair/replace cap flashing and coping:	\$18.40	n.ft.		237 Required	72 Required	\$5,685.60	
Gutters/Downspouts	\$13.10	n.ft.		710 Required	15 Required	\$9,497.50	
Roof Insulation:	\$3.20	sq.ft. (Qty)		3,946 Required	133 Required	\$13,052.80	(non-tapered insulation for use in areas without drainage problems)
Roof Access Hatch:	\$2,000.00	each		1 Required		\$2,000.00	(remove and replace)
Roof Access Ladder with Fall Protection Cage:	\$100.00	n.ft.		4 Required		\$400.00	(remove and replace)
Other: Slate Roof Repairs	\$50,000.00	lump sum		Required		\$50,000.00	Yearly inspection and maintenance for the slate roof for 10 years.
Sum:			\$135,528.70	\$131,826.20	\$3,702.50		



Roof Hatch



Slate Roof

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C. Ventilation / Air Conditioning

Description: The overall facility is not equipped with a central air conditioning system. Window units are located in the Teacher's Lounge and Lab Room locations. Isolated room systems consisting of thru-wall heat pump/fan coil HVAC units are located in the Administrative Offices, Computer Lab, and Media Center. The ventilation system in the overall facility consists of an air handling unit, installed in 1999 and in fair condition, providing fresh air to Classrooms and other miscellaneous spaces such as the Multi-Purpose Room (Gymnasium and Student Dining). Relief air venting is provided by louvered interior doors, transfer grilles to corridors, and an air handler. The ventilation system does not appear to meet the Ohio Building Code 15 CFM per occupant fresh air requirement. The overall system is not compliant with Ohio Building Code and Ohio School Design Manual requirements. Dust collection systems are not required in this facility. The Art program is equipped with a kiln and the kiln ventilation system is inadequate. General building exhaust systems for Restrooms, Storage Rooms, Art Rooms, and Custodial Closets do not appear to be adequately placed, and in fair condition.

Rating: 2 Needs Repair

Recommendations: Provide an air conditioning system to meet with Ohio Building Code and Ohio School Design Manual requirements. Replace general building exhaust systems located in Restrooms, Storage Rooms, Art Rooms, and Custodial Closets. Pricing included in Item A. Provide the Art program with a kiln ventilation system to meet Ohio Building Code and Ohio School Design Manual requirements.

Item	Cost	Unit	Whole Building	Original Construction (1930)	Kitchen Addition (1973)	Sum	Comments
				36,367 ft ²	728 ft ²		
Kiln Exhaust System:	\$5,000.00	each		1 Required		\$5,000.00	
Sum:			\$5,000.00	\$5,000.00	\$0.00		



Condensing Unit



Thru-Wall HVAC Unit

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D. Electrical Systems

Description: The electrical system provided to the 1930 Original Construction is a 250 volts, 900 amp, 3 phase and 3 wire system installed in 1930 with upgrades in 1973, and is in fair condition. The system in the 1973 Addition is an extension of that found in the 1930 Original Construction. Power is provided to the school by multiple utility owned, pole-mounted transformer located outside the Mechanical Room, and is presumed to be in fair condition. The Square D panel systems, original to each addition, are in fair condition, and for the most part cannot be expanded to add additional capacity. The Classrooms are not equipped with adequate electrical outlets. The typical Classroom contains (4) general purpose outlets, (0) dedicated outlets for each Classroom computer, and (1) dedicated outlet for each Classroom television. Some Classrooms are equipped with as many as (5) general purpose outlets, while others are equipped with as few as (3) general purpose outlets. There are not any spaces that have no electrical outlets. The Corridors appear to be equipped with adequate electrical outlets for servicing. Adequate GFI protected exterior outlets are not provided around the perimeter of the building. The facility is not equipped with an emergency generator. Adequate lightning protection safeguards are not provided. Stage lighting power system including control panel, breakers, and dimmers is inadequately provided, in fair condition and does not meet OSDM requirements. The overall electrical system does not fully meet Ohio School Design Manual requirements in supporting the current needs of the school, and will be inadequate to meet the facility's future needs.

Rating: 3 Needs Replacement

Recommendations: The entire electrical system requires replacement to meet Ohio School Design Manual guidelines for overall capacity and due to age, condition, lack of OSDM-required features, and to accommodate the addition of an air conditioning system. Provide an emergency generator, with funding included in the electrical system replacement. Provide adequate lightning protection safeguards in the overall facility, including associated grounding system, with funding included in the electrical system replacement. Provide control panel, dimmers, and breakers to support the Stage lighting system, with funding included in the electrical system replacement.

Item	Cost	Unit	Whole Building	Original Construction (1930)	Kitchen Addition (1973)	Sum	Comments
System Replacement:	\$16.23	sq.ft. (of entire building addition)		36,367 ft ² Required	728 ft ² Required	\$602,051.85	(Includes demo of existing system. Includes generator for life safety systems. Does not include telephone or data or equipment) (Use items below ONLY when the entire system is NOT being replaced)
Sum:			\$602,051.85	\$590,236.41	\$11,815.44		



Main Electrical Distribution Panel



Pole Mounted Transformers

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E. Plumbing and Fixtures

Description: The service entrance is equipped with a reduced pressure back flow preventer in good condition. A water treatment system is not provided, though none is needed. The domestic water supply piping in the overall facility is reported to be mostly galvanized steel with limited copper. The galvanized steel is original to the overall facility. The galvanized steel is in fair condition and the copper is in good condition. The facility is systematically replacing the galvanized steel with copper as needed. The waste piping in the overall facility is reported to be mostly cast iron with limited PVC. The cast iron is original to the overall facility. The cast iron is in fair condition and the PVC is in good condition. The facility is systematically replacing the cast iron with PVC as needed. The facility is equipped with a 76 gallon gas water heater which is in good condition. The school contains 2 Large Group Restrooms for boys, 2 Large Group Restrooms for girls, 0 Restrooms associated with specialty Classrooms, and 5 Restrooms for staff. Boys' Large Group Restrooms contain 0 ADA and 5 non-ADA wall mounted flush valve toilets, 3 ADA and 3 non-ADA wall mounted flush valve urinals, as well as 2 ADA and 2 non-ADA wall mounted lavatories. Girls' Large Group Restrooms contain 0 ADA and 4 non-ADA wall mounted flush valve toilets, 0 ADA and 5 non-ADA floor mounted flush valve toilets, as well as 3 ADA and 2 non-ADA wall mounted lavatories. Staff Restrooms contain 0 ADA and 5 non-ADA floor mounted flush valve toilets, 0 ADA and 0 non-ADA wall or floor mounted urinals, as well as 1 ADA and 6 non-ADA wall mounted lavatories and 1 non-ADA countertop lavatory. Condition of fixtures is good to fair. The facility is equipped with 0 ADA and 4 non-ADA drinking fountain, as well as 2 ADA and 2 non-ADA electric water coolers, in fair condition. The 20 Elementary Classrooms are not equipped with ADA or non-ADA sink mounted type drinking fountains. 3 Classrooms are equipped with sinks only which are in fair condition. Observation revealed that the Special Education Classroom is for learning intervention and not designated for Special Needs. Special Education Classroom does not have in Classroom Restroom, but is located in close proximity to Restrooms in the Corridor. Kitchen is not equipped with the required Restroom. Heath Clinic is equipped with the required Restroom and the fixtures are in fair condition. Kindergarten Classrooms are not equipped with Restroom facilities. Kindergarten Classrooms are located in close proximity to Restrooms in the Corridor. Kitchen fixtures consist of 1 hand wash sink, 1 double compartment sink, 1 rinse sink with disposal and 1 commercial dishwasher, which are in fair condition due to age. The Kitchen is not equipped with a satisfactory grease interceptor, though none is required. The Kitchen is provided the required 140 degree hot water supply via a heat booster which is in good condition. The school does not meet the OBC requirements for fixtures. Relative to LEED requirements, the school is not equipped with low flow type fixtures. Per OBC and OSDM requirements this facility should be equipped with 16 toilets, 5 urinals, 16 lavatories, 20 Classroom sink mounted drinking fountains, 4 drinking fountains and 5 electric water coolers. Observations revealed that the school is currently equipped with 19 toilets, 6 urinals, 17 lavatories, 0 Classroom sink mounted drinking fountains, 4 drinking fountains and 6 electric water coolers. ADA requirements are not met for fixtures and drinking fountains. Custodial Closets are properly located and are adequately provided with required service sinks or floor drain sinks which are in good condition. Science Classroom, Lab utility sinks, gas connections, compressed air connections, and safety shower / eyewash are not provided, but are not required due to existing grade configuration. Due to existing grade configuration, no Biology or Chemistry Classroom acid waste systems are required. Adequate exterior wall hydrants are not adequately provided.

Rating: 3 Needs Replacement

Recommendations: In the overall facility, replace the remaining galvanized steel domestic water piping and the remaining cast iron waste piping due to age and condition. Due to age and condition and to facilitate the school's compliance with OBC and OSFC fixture requirements, in the overall facility, replace 12 toilets and 4 lavatories (include ADA compliant faucets) and 8 electric water coolers. Due to age, condition, LEED, OBC and OSFC, replace 45 faucets and valves throughout the overall facility. Provide 20 in Classroom sinks with deck mounted drinking fountain. All fixtures, whether new or replaced, to be mounted at ADA compliant heights. Provide 1 additional utility sink. Provide 2 additional exterior wall hydrants. Provide 1 solids interceptor for the Art Room. See Item O for replacement of fixtures related to ADA requirements, as well as reconfiguration of toilet stalls in Boys and Girls Restrooms and the reconfiguration of 4 Staff Restrooms. Funding for fixtures and equipment replacement in Kitchen is provided for in Item J.

Item	Cost	Unit	Whole Building	Original Construction (1930)	Kitchen Addition (1973)	Sum	Comments
Domestic Supply Piping:	\$3.50	sq.ft. (of entire building addition)		36,367 ft ²	728 ft ²		
				Required	Required	\$129,832.50	(remove / replace)
Sanitary Waste Piping:	\$3.50	sq.ft. (of entire building addition)					
				Required	Required	\$129,832.50	(remove / replace)
Toilet:	\$1,500.00	unit		12 Required		\$18,000.00	(remove / replace) See Item O
Sink:	\$1,500.00	unit		4 Required		\$6,000.00	(remove / replace)
Electric water cooler:	\$3,000.00	unit		8 Required		\$24,000.00	(double ADA)
Replace faucets and flush valves	\$500.00	per unit		41 Required	4 Required	\$22,500.00	(average cost to remove/replace)
Other: Classroom Sink with Deck Mounted Drinking Fountain	\$3,800.00	each		20 Required		\$76,000.00	Provide new Classroom sink with deck mounted drinking fountain. Includes fixture, demolition, supply piping, drains and floor repair.
Other: Exterior Wall Hydrant	\$1,400.00	each		1 Required	1 Required	\$2,800.00	Provide additional exterior wall hydrants.
Other: Solids Interceptor	\$2,000.00	each		1 Required		\$2,000.00	Provide a solids interceptor on sink in the Art Room.
Other: Utility Sink	\$2,400.00	per unit		1 Required		\$2,400.00	Provide new utility sink for janitor's closet. Includes sink, faucet, supply lines, drains and floor/wall repair.
Sum:			\$413,365.00	\$404,869.00	\$8,496.00		



Reduced Pressure Backflow Preventer



Commercial Dishwasher with Heat Booster

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F. Windows

Description: The overall facility is equipped with aluminum frame windows with insulated glazing type window system, which was installed sometime between 1985 and 1995, and is in good condition. The window system features operable windows throughout the building, and operable windows are not equipped with opening limiters, but do have insect screens in fair condition. Window system seals are in good to fair condition, with minimal air and water infiltration being experienced. Window system hardware is in fair condition. The window system features no blinds. This facility is not equipped with any curtain wall systems. This facility does not feature any glass block windows. The exterior doors in the overall facility are equipped with thermally broken aluminum frame transoms with tempered insulated glazing, in good condition. Exterior door vision panels are tempered insulated glazing. The school does not contain any skylights. The school does not contain any clerestories. Interior glass is OSDM-compliant. Window security grilles are not provided for ground floor windows. There is not a Greenhouse associated with this school.

Rating: 2 Needs Repair

Recommendations: Caulk perimeter of window panels to remain throughout the overall facility.

Item	Cost	Unit	Whole Building	Original Construction (1930)	Kitchen Addition (1973)	Sum	Comments
				36,367 ft²	728 ft²		
Other: Recaulk Perimeter Window Joints	\$3.50	n.ft.		2,734 Required	24 Required	\$9,653.00	Caulk perimeter of windows.
Sum:			\$9,653.00	\$9,569.00	\$84.00		



Typical Aluminum Windows of the Original Construction



Typical Awning Windows

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G. Structure: Foundation

Description: The overall facility is equipped with concrete foundation walls on concrete footings, which displayed minimal locations of significant differential settlement, cracking, or leaking, and are in fair condition. Areas of minor cracking and spalling were observed through the overall facility. The District reports that there has been minor past leaking throughout the basement. No grading or site drainage deficiencies were noted around the perimeter of the structure that are contributing or could contribute to foundation / wall structural deterioration.

Rating: 2 Needs Repair

Recommendations: Repair areas of cracking and spalling through the overall facility. Replace the concrete walls of the window wells and exterior basement steps as required through the overall facility.

Item	Cost	Unit	Whole Building	Original Construction (1930) 36,367 ft ²	Kitchen Addition (1973) 728 ft ²	Sum	Comments
Other: Concrete Walls	\$50.00	sq.ft. (Qty)		406 Required		\$20,300.00	Replace damaged concrete walls.
Other: Repair damaged foundation walls.	\$28.00	sq.ft. (Qty)		136 Required		\$3,808.00	Repair minor areas of cracking and spalling.
Sum:			\$24,108.00	\$24,108.00	\$0.00		



Replace Concrete Window Wells



Minor Foundation Repair

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H. Structure: Walls and Chimneys

Description: The overall facility has a brick veneer on load bearing masonry wall system, which displayed locations of deterioration, and is in fair condition. The Original Construction does not contain control or expansion joints and none are needed, as there is no indication of exterior masonry cracking or separation. The exterior masonry of the 1973 Kitchen Addition appears to have appropriately spaced and adequately caulked control joints in fair condition. Control joints are provided at lintel locations, at doors and windows, building corners, and wall offsets and are in fair condition. The school does not contain expansion joints and none are needed, as there is no indication of exterior masonry cracking or separation. Exterior walls in the overall facility are inadequately insulated. Brick veneer masonry walls are not cavity walls. Weep holes and vents are not provided or required. The exterior masonry has not been cleaned and sealed in recent years, and shows evidence of mortar deterioration in minor locations. Architectural exterior accent materials consist of stone, which is in fair condition. Exterior building fenestration in the Original Construction represents 13.93% of the exterior surfaces. Exterior building fenestration in the 1973 Kitchen Addition represents 3.20% of the exterior surfaces. Interior Corridor and demising walls are glazed brick and plaster partition walls, project full height from floor to bottom of deck, and are in good condition. Interior masonry appears to have adequately spaced and caulked control joints in good condition. Interior soffits are of plaster type construction, and in good condition. The window sills are stone and are in fair condition. The exterior lintels are steel, and are in good condition, with the exception of one which is rusted. Chimneys are in fair condition. Canopies over entrances are of stone, plaster, and wood type construction, and are in good condition. The school is provided with a covered concrete and masonry conventional loading dock to facilitate the receipt of product, supplies, and foodstuffs, 167 square feet in size and featuring conventional man doors. The dock itself is in good condition, and is equipped with bumper pads in poor condition.

Rating: 2 Needs Repair

Recommendations: Provide tuckpointing in all areas of mortar deterioration as required through the overall facility. Repair stone accents as required in the Original Construction. Provide masonry cleaning and sealing as required through the overall facility. Recaulk existing control joints in the 1973 Kitchen Addition. Replace one masonry lintel as required in the Original Construction. Exterior wall insulation deficiencies are addressed in Item J. Replace the loading dock bumper pads. Replace the ornamental railing at window wells.

Item	Cost	Unit	Whole Building	Original Construction (1930)	Kitchen Addition (1973)	Sum	Comments
				36,367 ft ²	728 ft ²		
Tuckpointing:	\$5.25	sq.ft. (Qty)		500 Required		\$2,625.00	(wall surface)
Exterior Masonry Cleaning:	\$1.50	sq.ft. (Qty)		23,438 Required	975 Required	\$36,619.50	(wall surface)
Exterior Masonry Sealing:	\$1.00	sq.ft. (Qty)		23,438 Required	975 Required	\$24,413.00	(wall surface)
Exterior Caulking:	\$5.50	n.ft.		150 Required		\$825.00	(removing and replacing)
Lintel Replacement:	\$250.00	n.ft.		8 Required		\$2,000.00	(total removal and replacement including pinning and shoring)
Other: Ornamental Railing	\$225.00	n.ft.		56 Required		\$12,600.00	Replace ornamental metal railing.
Other: Replace Dock Bumpers	\$212.00	each			3 Required	\$636.00	Replace loading dock bumpers.
Other: Stone repair	\$28.00	sq.ft. (Qty)		220 Required		\$6,160.00	Repair stone accents.
Sum:			\$85,878.50	\$82,805.00	\$3,073.50		



Typical Areas of Tuckpointing



Typical Stone Repairs

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I. Structure: Floors and Roofs

Description: The floor construction of the base floor of the overall facility is concrete slab on grade type construction, and is in fair condition. There is no crawl space. The floor construction of the intermediate floors of the overall facility is cast-in-place concrete type construction, and is in fair condition. Ceiling to structural deck spaces are sufficient to accommodate HVAC, electrical, and plumbing scopes of work in required renovations. The roof construction of the Original Construction is wood deck on wood rafters type construction, and is in good condition, with the exception of two locations at chimneys where there was previous leaking. The attic contains a concrete floor, so there is a fire separation assembly for the wood roof structure. The roof construction of the 1973 Kitchen Addition is steel deck on steel joist type construction, and is in fair condition.

Rating: 1 Satisfactory

Recommendations: Refer to Item B for pricing of replacement of damaged wood decking. Existing conditions require no renovation or replacement at the present time.

Item	Cost	Unit	Whole Building	Original Construction (1930)	Kitchen Addition (1973)	Sum	Comments
				36,367 ft ²	728 ft ²		
Sum:			\$0.00	\$0.00	\$0.00		



Typical Concrete Attic Floor & Wood Rafters



Wood Rafters and Decking

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J. General Finishes

Description: The overall facility features conventionally partitioned Classrooms with wood, VCT, marmoleum, VAT, or carpet type flooring, acoustical tile type ceilings, as well as glazed block and painted plaster type wall finishes, and they are in fair condition. The overall facility has Corridors with terrazzo, marmoleum, or VCT type flooring, acoustical tile type ceilings, as well as glazed block and painted plaster type wall finishes, and they are in fair condition. The overall facility has Restrooms with terrazzo type flooring, acoustical tile type ceilings, as well as glazed block, painted block, and painted plaster type wall finishes, and they are in fair condition. Toilet partitions are metal or plastic laminate, and are in good to fair condition. The 1973 Addition consists of a Warming Kitchen with quarry tile type flooring, acoustical tile type ceilings, as well as painted brick and painted block type wall finishes, and they are in fair condition. Classroom casework in the overall facility is wood type construction with plastic laminate tops, is adequately provided, and in fair to poor condition. The typical Classroom contains 0 lineal feet of casework, and Classroom casework provided ranges from 0 to 20 feet. Typical Classrooms are provided with approximately 15 feet of wood type built in closet space. Classrooms are provided adequate chalkboards, markerboards, and tackboards which are in fair condition. The Classroom storage cubbies and coat hooks, located in the Classrooms, are adequately provided, and in fair condition. The Art program is not equipped with a kiln. The facility is equipped with wood louvered interior doors that are flush mounted without proper ADA hardware, and in fair to poor condition. Some door hardware has been replaced with proper ADA hardware. Most doors do have proper ADA clearances, but four do not. The Gymnasium space has rubber type flooring, acoustical tile type ceilings, as well as glazed block and painted plaster type wall finishes, and they are in fair condition. Gymnasium stands are not provided. Three Gymnasium basketball backboards are a fixed type, and are in fair to poor condition. The Media Center, located on the first floor, has marmoleum type flooring, acoustical tile type ceilings, as well as painted plaster type wall finishes, and they are in fair condition. Student Dining shares the Gymnasium space. OSDM-required fixed equipment for Stage is inadequately provided, and in fair to poor condition. Existing Gymnasium, Media Center, and Music spaces are inadequately provided with appropriate sound attenuation acoustical surface treatments. The existing Kitchen is a Warming Kitchen only, is slightly undersized based on current enrollment, and the existing Kitchen equipment, installed over 20 years ago, is in fair condition. The Kitchen hood is in fair condition, and is not equipped with the required UL 300 compliant wet chemical fire suppression system. The required 6" overhang on all three exposed sides of the cooking equipment is not provided by the hood. Kitchen hood exhaust ductwork is of proper construction, material, insulation, and installed as required by the OSDM and OBCMC. Reach-in coolers and freezers are located within the Kitchen spaces, and are in fair condition.

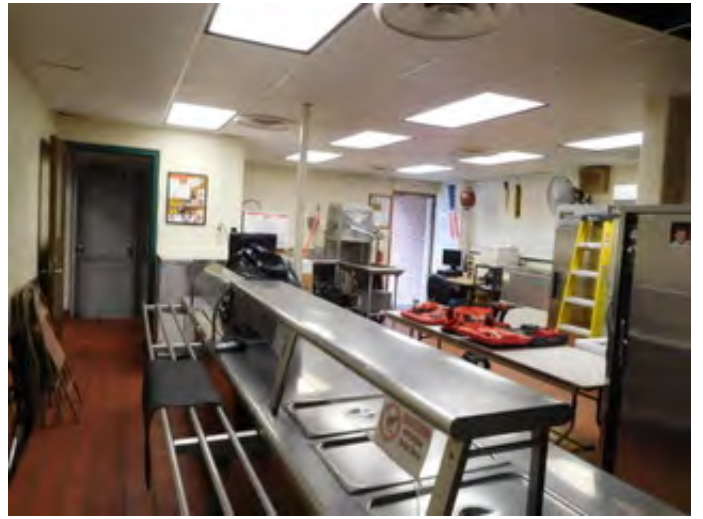
Rating: 3 Needs Replacement

Recommendations: Provide complete replacement of finishes and casework due to condition and installation of systems outlined in Items A, C, D, E, I, K, L, M, N, T, U, and W. Provide for the replacement of interior doors due to age and condition. Funding for replacement of interior doors with inadequate clearances is provided in Item O. Provide for the complete replacement of Warming Kitchen equipment due to age and condition. Provide for the replacement of the Warming Kitchen Hood. Provide for the replacement of walk-in cooler and freezer due to age and condition. Provide for an Art program kiln, with funding for exhaust system provided in Item C. Provide for the replacement of toilet accessories. Provide for the repair of terrazzo flooring due to condition. Provide for the replacement of basketball backboards due to age and condition. Provide for Gymnasium bleachers. Remove Corridor transfer grilles, fill voids, and coordinate with adjacent finishes. Provide for appropriate sound attenuation acoustical surface treatments in the Multipurpose Room, Media Center, and Music Room. Provide for Stage Equipment. Provide for additional wall insulation.

Item	Cost	Unit	Whole Building	Original Construction (1930)	Kitchen Addition (1973)	Sum	Comments
				36,367 ft ²	728 ft ²		
Complete Replacement of Finishes and Casework (Elementary):	\$15.90	sq.ft. (of entire building addition)		Required		\$578,235.30	(elementary, per building area, with removal of existing)
Toilet Accessory Replacement	\$0.20	sq.ft. (of entire building addition)		Required		\$7,273.40	(per building area)
Door, Frame, and Hardware:	\$1,300.00	each		68 Required	2 Required	\$91,000.00	(non-ADA)
Terrazzo Floor Repair	\$25.00	sq.ft. (Qty)		300 Required		\$7,500.00	(floor area affected; max. area to be 300 sf)
Basketball Backboard Replacement	\$3,200.00	each		3 Required		\$9,600.00	(non-electric)
Bleacher Replacement	\$110.00	per seat		314 Required		\$34,540.00	(based on current enrollment)
Art Program Kiln:	\$2,750.00	each		1 Required		\$2,750.00	
Additional Wall Insulation	\$6.00	sq.ft. (Qty)		23,438 Required	975 Required	\$146,478.00	(includes the furring out of the existing walls, insulation and abuse resistant GWB)
Hard Plaster Replacement	\$9.00	sq.ft. (Qty)		62,230 Required		\$560,070.00	(Hazardous Material Replacement Cost - See T.)
Gypsum Board Replacement	\$4.00	sq.ft. (Qty)		1,000 Required		\$4,000.00	(Hazardous Material Replacement Cost - See T.)
Reach-in Refrigerator/Freezer:	\$6,433.00	per unit			2 Required	\$12,866.00	
Kitchen Exhaust Hood:	\$56,000.00	per unit			1 Required	\$56,000.00	(includes fans, exhaust & ductwork)
Total Warming Kitchen Replacement	\$112.50	sq.ft. (Qty)			608 Required	\$68,400.00	(square footage based upon only existing area of food preparation, serving, kitchen storage areas and walk-ins. Includes demolition and removal of existing kitchen equipment)
Other: Sound Control	\$3.00	sq.ft. (Qty)		4,712 Required		\$14,136.00	Provide for appropriate sound attenuation acoustical surface treatments in the Multipurpose Room, Media Center, and Music Room.
Other: Stage Equipment	\$14,000.00	allowance		Required		\$14,000.00	Provide for a Stage Equipment allowance.
Other: Transfer Grilles	\$48.00	sq.ft. (Qty)		45 Required		\$2,160.00	Remove Corridor transfer grilles, fill voids, and coordinate with adjacent finishes.
Sum:			\$1,609,008.70	\$1,463,292.70	\$145,716.00		



Gymnasium Finishes



Warming Kitchen

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K. Interior Lighting

Description: The typical Classrooms in the overall facility are equipped with T-8 2x4 lay-in direct fluorescent fixture type lighting, with dual level switching. Classroom fixtures are in fair condition, providing an average illumination of 54 FC, thus complying with the 40 FC recommended by the OSDM. The typical Corridors in the overall facility are equipped with T-8 2x4 lay-in direct fluorescent fixture type lighting, with single level switching. Corridor fixtures are in fair condition, providing an average illumination of 19 FC, thus complying with the 15 FC recommended by the OSDM. The Multi-Purpose Room (Gymnasium/Student Dining) spaces are equipped with T-8 2x4 lay-in direct fluorescent fixture type lighting, in fair condition, providing an average illumination of 37 FC, which is less than the 40 FC recommended by the OSDM. The Media Center is equipped with T-8 2x4 lay-in direct fluorescent fixture type lighting, in fair condition, providing an average illumination of 58 FC, thus complying with the 30 FC recommended by the OSDM. The Kitchen spaces are equipped with T-8 2x4 lay-in direct fluorescent fixture type lighting, with single level switching. Kitchen fixtures are in fair condition, providing an average illumination of 43 FC, which is less than the 50 FC recommended by the OSDM. The Service Areas in the overall facility are equipped with surface mount incandescent and T-8 1x4 suspended and surface mount fluorescent fixture type lighting, in fair condition, providing inadequate illumination based on OSDM requirements. The typical Administrative spaces in the overall facility are equipped with T-8 2x4 lay-in direct fluorescent fixture type lighting, in fair condition, providing inadequate illumination based on OSDM requirements. The overall lighting systems of the facility are not fully compliant with Ohio School Design Manual requirements due to age and condition, utilization of incandescent fixtures, inadequate lighting levels, and lack of multi-level switching.

Rating: 3 Needs Replacement

Recommendations: Provide complete replacement of lighting system due to age, condition, lighting levels, lack of multilevel switching, utilization of incandescent fixtures, and installation of systems outlined in Items A, C, J, and U.

Item	Cost	Unit	Whole Building	Original Construction (1930)	Kitchen Addition (1973)	Sum	Comments
Complete Building Lighting Replacement	\$5.00	sq.ft. (of entire building addition)		36,367 ft ²	728 ft ²		
			Required	Required		\$185,475.00	Includes demo of existing fixtures
Sum:			\$185,475.00	\$181,835.00	\$3,640.00		



Administrative Offices Fluorescent Light Fixtures



Kitchen Fluorescent Light Fixtures

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L. Security Systems

Description: The overall facility contains a Sonitrol motion detector, CCTV, door contact type security system in fair condition. Motion detectors are inadequately provided in main entries, central gathering areas, offices, main Corridors, and spaces where 6 or more computers are located. Exterior doors are inadequately equipped with door contacts. An automatic visitor control system is provided. Compliant color CCTV cameras are inadequately provided at main entry areas, parking lots, central gathering areas, and main Corridors. CCTV is monitored in Administrative Area with the use of a LCD monitor. A compliant computer controlled access control system integrating alarms and video signals, with appropriate UPS backup, is not provided. The system is equipped with card / biometric readers. The security system is not adequately provided throughout, and the system is not fully compliant with Ohio School Design Manual guidelines. There are no playground fencing issues requiring attention. The exterior site lighting system is equipped with pendant incandescent and surface mounted LED entry lights in fair condition. Pedestrian walkways are illuminated with pole and surface mounted LED fixtures in fair condition. Parking and bus pick-up / drop off areas are illuminated by pole mounted LED fixtures in fair condition. The exterior site lighting system provides inadequate illumination due to insufficient fixture capacity and sparse placement of fixtures.

Rating: 3 Needs Replacement

Recommendations: Provide complete replacement of security system to meet Ohio School Design Manual guidelines. Provide complete replacement of exterior site lighting system to meet Ohio School Design Manual guidelines.

Item	Cost	Unit	Whole Building	Original Construction (1930)	Kitchen Addition (1973)	Sum	Comments
				36,367 ft ²	728 ft ²		
Security System:	\$1.85	sq.ft. (of entire building addition)		Required	Required	\$68,625.75	(complete, area of building)
Exterior Site Lighting:	\$1.00	sq.ft. (of entire building addition)		Required	Required	\$37,095.00	(complete, area of building)
Sum:			\$105,720.75	\$103,645.95	\$2,074.80		



Security System Door Contacts



Pole Mounted Entry Light Fixture

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M. Emergency/Egress Lighting

Description: The overall facility is inadequately equipped with an emergency egress lighting system consisting of non-compliant non-illuminated and plastic construction exit signs, as well as OSDM compliant red lettered and LED illuminated exit signs, and the system is in fair condition. The facility is inadequately equipped with emergency egress floodlighting (which consists mainly of emergency egress lighting attached to exit signs), but is also equipped with some recessed fluorescent lighting used as emergency egress lighting, and the system is in fair condition. The system is not provided with appropriate battery backup or emergency generator on separate circuits. The system is not adequately provided throughout, and does not meet Ohio School Design Manual and Ohio Building Code requirements.

Rating: 3 Needs Replacement

Recommendations: Provide complete replacement of emergency / egress lighting system to meet Ohio School Design Manual and Ohio Building Code guidelines.

Item	Cost	Unit	Whole Building	Original Construction (1930)	Kitchen Addition (1973)	Sum	Comments
Emergency/Egress Lighting:	\$1.00	sq.ft. (of entire building addition)		36,367 ft ²	728 ft ²		
Sum:			\$37,095.00	\$36,367.00	\$728.00		(complete, area of building)



Exit Sign with Emergency Egress Light Fixture



Exit Sign with Emergency Egress Light Fixture

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N. Fire Alarm

Description: The overall facility is equipped with a Simplex non-addressable type fire alarm system, installed in 1930 with minimal upgrades, and in fair condition, consisting of manual pull stations and audible horns and strobe indicating devices. The system is not automatic and is not monitored by a third party. The system does not appear to be equipped with sufficient audible horn and strobe indicating devices. The system is not equipped with any smoke detectors, heat sensors, flow switches, and tamper switches. The systems thus will not support future fire suppression systems. The systems are not adequately provided throughout, and does not have additional zone capabilities. The systems are not fully compliant with Ohio Building Code, NFPA, and Ohio School Design Manual requirements.

Rating: 3 Needs Replacement

Recommendations: Provide complete replacement of fire alarm systems to meet OBC, NFPA, and Ohio School Design Manual guidelines.

Item	Cost	Unit	Whole Building	Original Construction (1930)	Kitchen Addition (1973)	Sum	Comments
Fire Alarm System:	\$1.50	sq.ft. (of entire building addition)		36,367 ft ²	728 ft ²		
Sum:			\$55,642.50	\$54,550.50	\$1,092.00	\$55,642.50	(complete new system, including removal of existing)



Fire Alarm System Control Panel



Fire Alarm System Manual Pull Station

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O. Handicapped Access

Description: At the site, there is not an accessible route provided from the public right-of-way, the accessible parking areas, and from the passenger unloading zone to the main entrance of the school. There is an accessible route connecting all or most areas of the site. The exterior entrances are mostly not ADA accessible, due to steps at the entrances. One ADA accessible entrance is located at the northeast entrance from the playground. Access from the parking / drop-off area to the building entries is not compromised by steps or steep ramps. Adequate handicap parking is provided. Exterior doors are equipped with ADA hardware. Building entrances should be equipped with 2 ADA power assist doors and 0 are provided. Playground layout and equipping are compliant. On the interior of the building, space allowances and reach ranges are mostly compliant. There is not an accessible route through the building which does include protruding objects. Electric water coolers are not recessed, but due to wide hallways, do not impede the traffic flow. Ground and floor surfaces are mostly compliant. Ramps and stairs do not meet all ADA requirements, due to slip surfaces on treads and handrails. Elevation changes within the overall facility are facilitated by 6 non-compliant stairwells in good condition. This multistory building does not have a compliant elevator that accesses every floor. Access to the Stage is not facilitated by a Corridor at Stage level, chair lift, ramp or other. Interior doors are not recessed. Doors open all the way and do not impede the traffic flow. Doors are provided adequate clearances, with the exception of 4 doors, and are not provided with ADA-compliant hardware. 7 ADA-compliant toilets are required, and 0 are currently provided. 7 ADA-compliant Restroom lavatories are required, and 6 are currently provided. 4 ADA-compliant urinals are required, and 3 are currently provided. 3 ADA-compliant electric water coolers are required, and 2 are currently provided. Toilet partitions are metal and plastic and do provide appropriate ADA clearances where present. ADA-compliant accessories are adequately provided and mounted. Mirrors do meet ADA requirements for mounting heights. Due to existing grade configuration, no Science Classroom considerations require evaluation. Health Clinic Restroom is not compliant with ADA requirements. The Special Education Classroom does not have an in Classroom Restroom, but is located in close proximity to a Restroom. ADA is signage is not provided in both the interior and exterior.

Rating: 3 Needs Replacement

Recommendations: To facilitate the school's meeting of ADA requirements, throughout the overall facility: Provide ADA-compliant signage. Provide an accessible elevator. Provide 2 power assisted doors. Provide stairway chair lift at northeast stair tower near playground. Provide stairway chair lift at Gym/Cafeteria for access and 1 lift for Stage access. Provide exterior access ramp at rear northwest corner entrance. Remount 1 urinal in the Boy's first floor Restroom. Reconfigure a total of 4 toilet compartments; 1 per Boys and Girl's Restrooms, to provide a fully ADA compliant toilet compartment. Includes 4 toilets, 4 full sets of accessories, grab bars and partitions. Reconfigure and enlarge 4 existing Staff Restrooms, to include 4 toilets, 4 lavatories and 4 full sets of accessories including grab bars. Provide a new Restroom for the Kitchen, to include 1 toilet, 1 lavatory and 1 full set of accessories including grab bars. All fixtures, whether new or replaced, to be mounted at correct ADA compliant heights. Provide 41 ADA compliant pipe wrap throughout the overall facility. Provide non-slip strips on 4 non-compliant stairways. Rework a total of 4 doors to meet ADA clearance requirements. Funding for replacement of door hardware in the overall facility not included in Item O, is provided for in Item J with the complete replacement of doors. Funding provided in Item E for electric water coolers, classroom sink with drinking fountains and fixtures not included in Item O. Funding for replacement of handrails is provided for in Item U. Funding for replacement of toilets and lavatories to be mounted at ADA compliant heights is provided for in Item E.

Item	Cost	Unit	Whole Building	Original Construction (1930)	Kitchen Addition (1973)	Sum	Comments
Signage:	\$0.20	sq.ft. (of entire building addition)		36,367 ft ²	728 ft ²		Required Required (\$7,419.00(per building area))
Ramps:	\$40.00	sq.ft. (Qty)		25 Required			\$1,000.00(per ramp/interior-exterior complete)
Lifts:	\$15,000.00	unit		1 Required			\$15,000.00(complete)
Elevators:	\$42,000.00	each		3 Required			\$126,000.00(per stop, \$84,000 minimum)
ADA Assist Door & Frame:	\$7,500.00	unit		2 Required			\$15,000.00(openers, electrical, patching, etc)
Replace Doors:	\$5,000.00	leaf		4 Required			\$20,000.00(rework opening and corridor wall to accommodate ADA standards when door opening is set back from edge of corridor and cannot accommodate a wheelchair.)
Other: ADA Pipe Wrap	\$50.00	each		40 Required	1 Required		\$2,050.00Provide ADA compliant pipe wrap on all wall mounted lavatories.
Other: Add unisex toilet room	\$10,000.00	per restroom		1 Required			\$10,000.00Provide new unisex toilet room for Kitchen. Includes fixtures, demolition, walls, door and hardware, supply lines and full set of accessories and grab bars.
Other: Non-Slip Tread Strips	\$400.00	per unit		4 Required			\$1,600.00Provide non slip tread strips on stairways. Funding provided is per stairway.
Other: Reconfigure Toilet Room for ADA Compliance	\$10,000.00	per restroom		4 Required			\$40,000.00Enlarge and reconfigure existing Toilet Room to meet ADA requirements. Includes fixtures, walls, door and hardware, supply lines and full set of accessories and grab bars.
Other: Reconfigure Toilet Stall to meet ADA Compliance	\$2,500.00	per restroom		4 Required			\$10,000.00Reconfigure existing toilet compartment to create ADA compliant stall. Includes fixture, accessories, grab bars, demolition, floor/wall repair and partitions.
Other: Remount existing urinal	\$1,000.00	each		1 Required			\$1,000.00Remount existing urinal to ADA compliant height. Includes demolition, rough in and wall repair.
Other: Wheelchair Stair Lift	\$15,000.00	per level		2 Required			\$30,000.00Provide stairway chair lift. Includes lift, demolition, installation and wall/floor repair.
Sum:			\$279,069.00	\$278,873.40	\$195.60		



Non-Compliant Restroom



Compliant Handicap Parking

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P. Site Condition

Description: The 4.37 acre steeply sloped site is located in a small town residential setting with generous tree, shrub, and floral type landscaping. Outbuildings include a small storage shed. There are some signs of erosion at pavement edges and ponding on hard surface play areas. The site is bordered by lightly traveled city streets. Two vehicular entrances onto the site impede proper separation of bus and other vehicular traffic, and one way bus traffic is provided. There is a curbside bus loading and unloading zone in front of the school, which is not separated from other vehicular traffic. There is also a loop provided for student pickup and drop off. Staff and visitor parking is facilitated by an asphalt parking lot in fair to poor condition, containing 40 parking places, which according to standards based on enrollment, provides adequate parking for staff members, visitors, and the disabled. However, the staff has reported that parking is inadequate, and that vehicles must often find parking places on adjacent streets. The site and parking lot drainage design, consisting of sheet drainage into city storm sewers and catch basins, provides adequate evacuation of storm water, and no problems with parking lot ponding were observed. Some ponding was observed on hard surface play areas. Concrete curbs in fair condition are appropriately placed. Concrete sidewalks are properly sloped, are located to provide a logical flow of pedestrian traffic, and are in good to fair condition. Trash pick-up and service drive pavement appears heavy duty, and is in fair to poor condition, and is equipped with a concrete pad area for dumpsters, which is in poor condition. Exterior concrete steps in fair condition are appropriately located at several building entrances, and at several sidewalks leading to the property edge. Two concrete stairwells lead into areas of the basement. Exterior concrete ramps are not provided. Steel handrails in good to fair condition are inadequately provided. Guardrails are provided for fall protection at the front of the school around area wells, and are in poor condition. Site fencing is not provided around the entire site, but the play areas are completely fenced for security and separation from vehicular traffic. The fence is a steel wire mesh type, and in fair condition. The playground equipment is primarily constructed of coated steel and high density plastic, and is in good to fair condition. Playground equipment is placed to provide compliant fall zones, and on a compliant wood fiber mulch of sufficient depth. A basketball court is provided on a concrete surface, and is in good to fair condition, although some ponding was noticed. Painted surface games and funnel ball is provided on an asphalt surface in fair to poor condition, and a small asphalt track is provided around the playground equipment in fair condition. The site is equipped with sufficient benches in fair condition, but no tables are provided. The athletic facilities are comprised of a multipurpose field with soccer goals and a baseball backstop, which is in fair condition. Site features are suitable for outdoor instruction, which is enhanced through the District's provision of outdoor furniture and a small gathering area in front of the school. The south and east side of the site is steeply sloped. Building expansion is not recommended due to the size and configuration of the existing site.

Rating: 2 Needs Repair

Recommendations: Provide additional parking spaces due to district reports of inadequate parking, including adequate provisions for the disabled. Provide for additional bus pickup and drop off area. Provide allowances for unforeseen site circumstances. Provide for the replacement of heavy duty asphalt paving due to condition. Provide for the replacement of light duty asphalt due to condition. Provide for a new concrete dumpster pad due to condition. Provide for the replacement of concrete curbs due to condition. Provide for the replacement of concrete sidewalks due to condition. Provide for replacement or repair of concrete steps due to condition. Provide for exterior steel handrails and guardrails due to condition and where required by the OBC and OSDM standards. Provide for soil stabilization at edges of pavement. Provide for additional catch basins due to observed ponding on site. Provide for replacement of exterior furnishings due to condition.

Item	Cost	Unit	Whole Building	Original Construction (1930)	Kitchen Addition (1973)	Sum	Comments
Replace Existing Asphalt Paving (heavy duty):	\$30.60	sq. yard		1,337 Required 36,367 ft ²	28 Required 728 ft ²	\$41,769.00	(including drainage / tear out for heavy duty asphalt)
Replace Existing Asphalt Paving (light duty):	\$28.60	sq. yard		2,194 Required	45 Required	\$64,035.40	(including drainage / tear out for light duty asphalt)
Additional Parking Spaces Required for Elementary	\$121.00	per student		19 Required	1 Required	\$2,420.00	(\$1,100 per parking space; 0.11 space per elementary student. Parking space includes parking lot drive space.)
Bus Drop-Off for Elementary	\$110.00	per student		294 Required	6 Required	\$33,000.00	(Number of students should be rounded up to the nearest 100. \$5500 per bus; 40 students per bus; 80% of elementary school students riding)
Concrete Curb:	\$18.00	in.ft.		465 Required	10 Required	\$8,550.00	(new)
Concrete Sidewalk:	\$4.69	sq.ft. (Qty)		98 Required	2 Required	\$469.00	(5 inch exterior slab)
Stabilize soil erosion:	\$2.50	sq.ft. (Qty)		408 Required	9 Required	\$1,042.50	(includes stripping and re-grading)
Exterior Hand / Guard Rails:	\$43.00	in.ft.		150 Required	3 Required	\$6,579.00	
Replace Concrete Steps:	\$32.00	sq.ft. (Qty)		98 Required	2 Required	\$3,200.00	
Provide Exterior Parking Lot Catch Basin:	\$2,500.00	each		1 Required	1 Required	\$5,000.00	
Provide Concrete Dumpster Pad:	\$2,400.00	each		1 Required		\$2,400.00	(for two dumpsters)
Base Sitework Allowance for Unforeseen Circumstances	\$50,000.00	allowance		Required		\$50,000.00	Include this and one of the next two. (Applies for whole building, so only one addition should have this item)
Sitework Allowance for Unforeseen Circumstances for buildings between 0 SF and 100,000 SF	\$1.50	sq.ft. (of entire building addition)		Required	Required	\$55,642.50	Include this one <u>or</u> the next. (Each addition should have this item)
Other: Exterior Furnishings	\$500.00	each		6 Required	1 Required	\$3,500.00	Provide for replacement of exterior furnishings for an outdoor learning environment due to condition.
Sum:			\$277,607.40	\$270,185.72	\$7,421.68		



Asphalt Parking Lot Condition



Exterior Concrete Steps and Sidewalk

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Q. Sewage System

Description: The sanitary sewer system is tied in to the city system, and is in fair condition. No significant system deficiencies were reported by the school district or noted during the physical assessment.

Rating: 1 Satisfactory

Recommendations: Existing conditions require no renovation or replacement at the present time.

Item	Cost	Unit	Whole Building	Original Construction (1930)	Kitchen Addition (1973)	Sum	Comments
				36,367 ft ²	728 ft ²		
Sum:			\$0.00	\$0.00	\$0.00		



Sanitary Waste Piping



Sanitary Waste Piping

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R. Water Supply

Description: The domestic water supply system is tied in to the municipal system, features 4" service and 2" water meter, and is in fair condition. The District was not able to provide water supply flow test data. The existing domestic water service appears to meet the facility's current needs. The facility is not equipped with an automated fire suppression system, and the existing water supply will not provide adequate support for a future system. The domestic water service is not equipped with a water booster pump, and none is required. The system does not provide adequate pressure and capacity for the future needs of the school.

Rating: 1 Satisfactory

Recommendations: Provide a new city water supply line of adequate capacity to support the existing needs of the facility, as well as a future automated fire suppression system. Funding provided in Item U.

Item	Cost	Unit	Whole Building	Original Construction (1930)	Kitchen Addition (1973)	Sum	Comments
				36,367 ft ²	728 ft ²		
Sum:			\$0.00	\$0.00	\$0.00		



Incoming Domestic Water Service Line



Incoming Domestic Water Meter

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S. Exterior Doors

Description: Typical exterior doors in the overall facility are fiber-reinforced plastic type construction type construction, installed on aluminum frames, and in good condition. Typical exterior doors feature no vision panels, and appropriate hardware. Entrance doors in the overall facility are aluminum type construction, installed on aluminum frames, and in good condition. Entrance doors feature insulated tempered glass vision panels and transoms, and appropriate hardware. The facility is not equipped with any roof access doors. There are no overhead doors in the facility.

Rating: 1 Satisfactory

Recommendations: Existing conditions require no renovation or replacement at the present time.

Item	Cost	Unit	Whole Building	Original Construction (1930)	Kitchen Addition (1973)	Sum	Comments
				36,367 ft ²	728 ft ²		
Sum:			\$0.00	\$0.00	\$0.00		



Typical Entrance Doors



Typical Exterior Doors

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T. Hazardous Material

Description: The School District provided the AHERA three year reinspection reports, prepared by Westech Environmental Solutions, and dated 2014, documenting known and assumed locations of asbestos and other hazardous materials. Hard Plaster, Carpet Mastic, Cove Base Mastic, Marmoleum Floor Mastic, Tectum Mastic, Vinyl asbestos floor tile and mastic, 12x12 Ceiling Tile and Mastic, Window and Door Caulking, Fire and Solid Core Doors, Pipe insulation and Fittings, Tank Insulation, Sink Undercoating, Drywall Mud, Chalk Board Mastic, and a Stage Curtain containing hazardous materials are located in the 1930 Original Construction and 1973 Addition in fair to poor condition. These materials were described in the report and open to observation and found to be in both friable and non-friable condition with moderate to light damage. There are no underground storage tanks on the site. Due to the construction date, there is a potential for lead based paint. Fluorescent lighting will require special disposal.

Rating: 3 Needs Replacement

Recommendations: Remove all hazardous materials, inclusive of asbestos-containing materials in the overall facility, as noted in the attached Environmental Hazards Assessment. Provide for the testing of paint that has the potential of being lead-based. Provide for disposal of fluorescent lighting.

Item	Cost	Unit	Whole Building	Original Construction (1930) 36,367 ft ²	Kitchen Addition (1973) 728 ft ²	Sum	Comments
<i>Environmental Hazards Form</i>				EHA Form	EHA Form	—	
Tank Insulation Removal	\$8.00	sq.ft. (Qty)		200 Required	0 Required	\$1,600.00	
Estimated Cost For Abatement Contractor to Perform Lead Mock-Ups	\$1.00	per unit		5,000 Required	0 Required	\$5,000.00	
Special Engineering Fees for LBP Mock-Ups	\$1.00	per unit		5,000 Required	0 Required	\$5,000.00	
Fluorescent Lamps & Ballasts Recycling/Incineration	\$0.10	sq.ft. (Qty)		29,017 Required	583 Required	\$2,960.00	
Pipe Insulation Removal	\$10.00	in.ft.		1,000 Required	0 Required	\$10,000.00	
Pipe Fitting Insulation Removal	\$20.00	each		2 Required	0 Required	\$40.00	
Hard Plaster Removal	\$7.00	sq.ft. (Qty)		62,230 Required	0 Required	\$435,610.00	See J
Gypsum Board Removal	\$6.00	sq.ft. (Qty)		1,000 Required	0 Required	\$6,000.00	See J
Acoustical Panel/Tile Ceiling Removal	\$3.00	sq.ft. (Qty)		3,750 Required	700 Required	\$13,350.00	See J
Fire Door Removal	\$100.00	each		15 Required	0 Required	\$1,500.00	See S
Window Component (Compound, Tape, or Caulk) - Reno & Demo	\$300.00	each		200 Required	0 Required	\$60,000.00	
Resilient Flooring Removal, Including Mastic	\$3.00	sq.ft. (Qty)		3,315 Required	0 Required	\$9,945.00	See J
Carpet Mastic Removal	\$2.00	sq.ft. (Qty)		1,345 Required	0 Required	\$2,690.00	
Sink Undercoating Removal	\$100.00	each		4 Required	0 Required	\$400.00	
Other: Chalk Board Mastic Removal	\$1.00	sq.ft. (Qty)		4,000 Required		\$4,000.00	Provide for removal of Chalk Board mastic
Other: Cove Base Mastic Removal	\$2.00	in.ft.		725 Required		\$1,450.00	Provide for removal of Cove Base Mastic
Other: Marmoleum and Mastic Removal	\$3.00	sq.ft. (Qty)		6,280 Required		\$18,840.00	Provide for removal of Marmoleum Mastic
Other: Stage Curtain Removal	\$1.00	sq.ft. (Qty)		1,000 Required		\$1,000.00	Provide for the removal of the Stage Curtain
Other: Tectum Mastic	\$3.00	sq.ft. (Qty)		300 Required		\$900.00	Provide for removal of Tectum Mastic
Sum:			\$580,285.00	\$578,126.70	\$2,158.30		



Fire Door



VAT Flooring

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U. Life Safety

Description: The overall facility is not equipped with a compliant automated fire suppression system. Exit Corridors are situated such that dead-end Corridors are not present. The facility features 2 interior stair towers which are not protected by a compliant two hour fire enclosure. The facility does not have any exterior stairways from intermediate floors. Guardrails on one stairway are constructed with vertical bars with less than 4" clearance, does meet the 4" ball test, is not constructed in a ladder effect and do not extend past the top and bottom stair risers as required by the Ohio Building Code. Guard rails on the remaining 5 stairways are attached to wall structures and do not extend past the top and bottom stair risers as required by the Ohio Building Code. The Kitchen hood is in fair condition due to age, and does not include equipment that requires fire suppression. Fire extinguishers are not provided in sufficient quantity. Existing fire extinguishers are inadequately spaced. The facility is not equipped with an emergency generator. The existing water supply is provided by a tie-in to the municipal system and is insufficient to meet the future fire suppression needs of the school. Rooms with a capacity greater than 50 occupants are equipped with adequate egress.

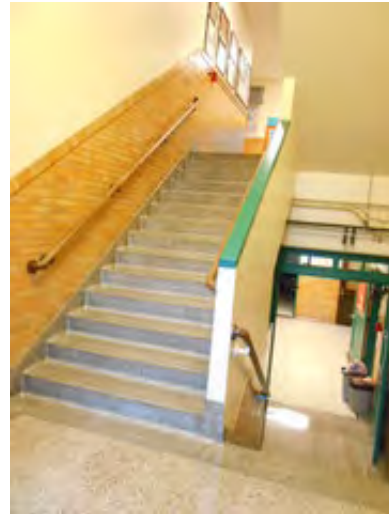
Rating: 3 Needs Replacement

Recommendations: Provide new automated fire suppression system to meet Ohio School Design Manual guidelines. Provide increased water service of a capacity sufficient to support the fire suppression system, funding included in fire suppression funding. Provide new emergency generator, with funding provided via complete replacement of electrical system in Item D. Provide new guard and handrails at all interior stairways in the overall facility. Provide fire-rated enclosure around 2 existing stair towers in the overall facility. Provide 4 additional fire extinguishers. Funding for replacement of Kitchen hood is provided for in Item J.

Item	Cost	Unit	Whole Building	Original Construction (1930)	Kitchen Addition (1973)	Sum	Comments
Sprinkler / Fire Suppression System:	\$3.20	sq.ft. (Qty)		36,367 Required	728 Required	\$118,704.00	(includes increase of service piping, if required)
Interior Stairwell Closure:	\$5,000.00	per level		6 Required		\$30,000.00	(includes associated doors, door frames and hardware)
Handrails:	\$5,000.00	level		12 Required		\$60,000.00	
Provide Fire Extinguisher and Wall Cabinet:	\$585.00	each		4 Required		\$2,340.00	(includes preparation of wall to receive recessed cabinet)
Sum:			\$211,044.00	\$208,714.40	\$2,329.60		



Compliant Fire Extinguisher



Non-Compliant Stair Tower

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V. Loose Furnishings

Description: The typical Classroom furniture is mismatched, and in generally fair condition, consisting of student desks & chairs, teacher desks & chairs, desk height file cabinets, reading tables, computer workstations, bookcases, and wastebaskets. The facility's furniture and loose equipment were evaluated in item 6.17 in the CEFPI section of this report, and on a scale of 1 to 10 the overall facility received a rating of 6 due to observed conditions, and due to the fact that it lacks some of the Design Manual required elements.

Rating: 2 Needs Repair

Recommendations: Provide for replacement of outdated or inadequate furnishings.

Item	Cost	Unit	Whole Building	Original Construction (1930)	Kitchen Addition (1973)	Sum	Comments
				36,367 ft ²	728 ft ²		
CEFPI Rating	6	\$3.00/sq.ft. (of entire building addition)		Required	Required	\$111,285.00	
Sum:			\$111,285.00	\$109,101.00	\$2,184.00		



Typical Teacher Desk and Chair



Typical Student Desk and Chair

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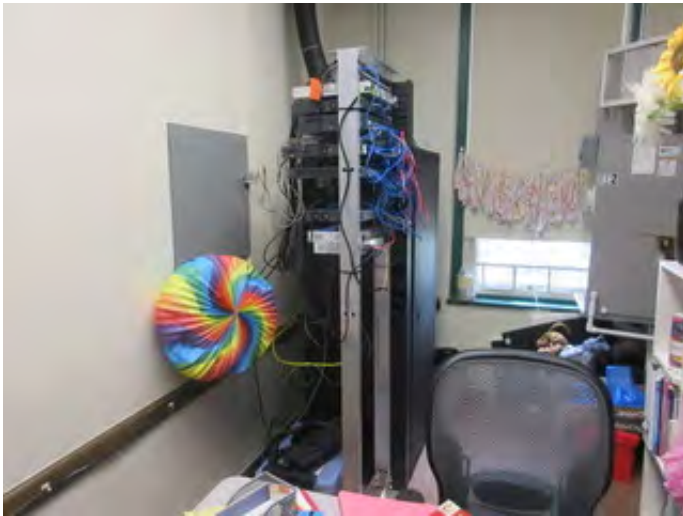
W. Technology

Description: The typical Classroom is equipped with the required one data port for teacher use, one voice port with a digitally based phone system, one cable port and monitor, and a 2-way PA system that can be initiated by either party to meet Ohio School Design Manual requirements. The typical Classroom is not fully equipped with the required four technology data ports for student use to meet Ohio School Design Manual requirements. The facility is equipped with a centralized clock system. Specialized electrical / sound system requirements of Gymnasium, Stage, Student Dining, and Music spaces appear to be inadequately provided, and in fair condition. OSDM-compliant computer network infrastructure does not appear to be provided. The facility does contain a media distribution center, and provides Computer Labs for use by students. Elevators are not present in this one-story facility.

Rating: 3 Needs Replacement

Recommendations: Provide complete replacement of technology systems to meet Ohio School Design Manual requirements.

Item	Cost	Unit	Whole Building	Original Construction (1930)	Kitchen Addition (1973)	Sum	Comments
				36,367 ft ²	728 ft ²		
ES portion of building with total SF < 50,000	\$13.18	sq.ft. (Qty)		36,367 Required	728 Required	\$488,912.10	
Sum:			\$488,912.10	\$479,317.06	\$9,595.04		



IT Data Rack



Centralized Clock

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X. Construction Contingency / Non-Construction Cost

Renovation Costs (A-W)		\$6,482,410.90
7.00%	Construction Contingency	\$453,768.76
Subtotal		\$6,936,179.66
16.29%	Non-Construction Costs	\$1,129,903.67
Total Project		\$8,066,083.33

Construction Contingency	\$453,768.76
Non-Construction Costs	\$1,129,903.67
Total for X.	\$1,583,672.43

Non-Construction Costs Breakdown		
Land Survey	0.03%	\$2,080.85
Soil Borings / Phase I Envir. Report	0.10%	\$6,936.18
Agency Approval Fees (Bldg. Code)	0.25%	\$17,340.45
Construction Testing	0.40%	\$27,744.72
Printing - Bid Documents	0.15%	\$10,404.27
Advertising for Bids	0.02%	\$1,387.24
Builder's Risk Insurance	0.12%	\$8,323.42
Design Professional's Compensation	7.50%	\$520,213.47
CM Compensation	6.00%	\$416,170.78
Commissioning	0.60%	\$41,617.08
Non-Construction Contingency (includes partnering and mediation services)	1.12%	\$77,685.21
Total Non-Construction Costs	16.29%	\$1,129,903.67

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School Facility Appraisal

Name of Appraiser Bernie Merritt **Date of Appraisal** 2016-08-06
Building Name Heywood Elementary
Street Address 290 South Ridge Avenue
City/Town, State, Zip Code Troy, OH 45373
Telephone Number(s) (937) 332.6750
School District Troy City

Setting: Small City

Site-Acreage	4.37	Building Square Footage	37,095
Grades Housed	K-5	Student Capacity	500
Number of Teaching Stations	25	Number of Floors	2
Student Enrollment	314		
Dates of Construction	1930,1973		

Energy Sources: Fuel Oil Gas Electric Solar
Air Conditioning: Roof Top Windows Units Central Room Units
Heating: Central Roof Top Individual Unit Forced Air
 Hot Water Steam

Type of Construction

Load bearing masonry
 Steel frame
 Concrete frame
 Wood
 Steel Joists

Exterior Surfacing

Brick
 Stucco
 Metal
 Wood
 Stone

Floor Construction

Wood Joists
 Steel Joists
 Slab on grade
 Structural slab

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1.0 The School Site

School Facility Appraisal

		Points Allocated	Points
1.1	<p>Site is large enough to meet educational needs as defined by state and local requirements</p> <p><i>The site is 4.37 acres compared to 14 acres required by the OSDM.</i></p>	25	10
1.2	<p>Site is easily accessible and conveniently located for the present and future population</p> <p><i>The School is centrally located within the School District, and is easily accessible. The site is accessible from city streets that are suitable for buses, cars, and service vehicles. Two entry points are provided into the site, without appropriate separation of car and bus traffic.</i></p>	20	16
1.3	<p>Location is removed from undesirable business, industry, traffic, and natural hazards</p> <p><i>The site is adjacent to residential uses, and there are no undesirable features adjacent to the School site.</i></p>	10	8
1.4	<p>Site is well landscaped and developed to meet educational needs</p> <p><i>The site is generously landscaped with mature shade trees, ornamental trees, and shrubs which define the property and emphasize the building entrance. Lawn areas where mowing is required does exceed a 3:1 slope in some areas.</i></p>	10	8
1.5	<p>ES Well equipped playgrounds are separated from streets and parking areas</p> <p>MS Well equipped athletic and intermural areas are separated from streets and parking</p> <p>HS Well equipped athletic areas are adequate with sufficient solid-surface parking</p> <p><i>Playground areas consist of coated steel and high density plastic type play equipment, which is in good to fair condition, and is located on wood fiber mulch which is an approved soft surface material. Play equipment is ADA accessible, and includes an accessible route to equipment. Fencing is provided to separate vehicular traffic from pedestrians. Hard surface play areas provide educational features painted on an asphalt surface, which is in fair to poor condition. A basketball court, and funnel ball are provided on the hard surface, and is separated from vehicular use areas with a fence.</i></p>	10	8
1.6	<p>Topography is varied enough to provide desirable appearance and without steep inclines</p> <p><i>The site is steeply sloped and has been graded to provide flat use areas to accommodate buildings, perimeter walks, vehicular circulation, parking areas, outdoor play areas, and physical education spaces, and is desirable.</i></p>	5	4
1.7	<p>Site has stable, well drained soil free of erosion</p> <p><i>Soils appear to be stable, although erosion was evident at edges of sidewalks and pavement and signs of ponding water in small areas were observed.</i></p>	5	3
1.8	<p>Site is suitable for special instructional needs, e.g., outdoor learning</p> <p><i>The site has been developed to accommodate outdoor learning, including benches, but no picnic tables, to facilitate instruction.</i></p>	5	2
1.9	<p>Pedestrian services include adequate sidewalk with designated crosswalks, curb cuts, and correct slopes</p> <p><i>Sidewalks are adequately provided to accommodate safe pedestrian circulation including designated crosswalks, curb cuts, and correct slopes.</i></p>	5	4
1.10	<p>ES/MS Sufficient on-site, solid surface parking for faculty and staff is provided</p> <p>HS Sufficient on-site, solid surface parking is provided for faculty, students, staff and community</p> <p><i>Parking for faculty and staff is not adequately provided on the site according to district reports.</i></p>	5	3
TOTAL - The School Site		100	66

2.0 Structural and Mechanical Features

School Facility Appraisal

Structural		Points Allocated	Points
2.1	Structure meets all barrier-free requirements both externally and internally <i>Entire building is not ADA-compliant.</i>	15	6
2.2	Roofs appear sound, have positive drainage, and are weather tight <i>The roofs over portions of the building are in fair condition. The roofs over other portions are in fair condition, but require replacement due to age of the system.</i>	15	10
2.3	Foundations are strong and stable with no observable cracks <i>Foundations are in fair condition with observable cracks.</i>	10	6
2.4	Exterior and interior walls have sufficient expansion joints and are free of deterioration <i>Exterior and interior walls are in fair condition, have sufficient control and expansion joints which are starting to show signs of deterioration.</i>	10	6
2.5	Entrances and exits are located so as to permit efficient student traffic flow <i>Corridor/building layout does not provide an efficient means of circulation throughout the building.</i>	10	4
2.6	Building "envelope" generally provides for energy conservation (see criteria) <i>Building envelope does not meet minimum energy conservation requirements.</i>	10	4
2.7	Structure is free of friable asbestos and toxic materials <i>The building is reported to contain asbestos and other hazardous materials.</i>	10	5
2.8	Interior walls permit sufficient flexibility for a variety of class sizes <i>Interior walls throughout the facility are fixed walls and are not flexible.</i>	10	5
Mechanical/Electrical		Points Allocated	Points
2.9	Adequate light sources are well maintained, and properly placed and are not subject to overheating <i>Light sources are improperly placed and provide inadequate lighting in some areas. Fixtures are well maintained in most areas. Light fixtures do not appear to be subject to overheating.</i>	15	6
2.10	Internal water supply is adequate with sufficient pressure to meet health and safety requirements <i>Internal water supply will not support a future fire suppression system, but is adequate for current requirements.</i>	15	6
2.11	Each teaching/learning area has adequate convenient wall outlets , phone and computer cabling for technology applications <i>Classrooms have an inadequate number of outlets and data jacks for technology applications.</i>	15	2

2.12	Electrical controls are safely protected with disconnect switches easily accessible <i>Disconnect switches are provided in required easily accessible locations to allow for safe servicing of equipment.</i>	10	8
2.13	Drinking fountains are adequate in number and placement, and are properly maintained including provisions for the disabled <i>Drinking fountains are not adequate in number and placement, and do not meet ADA requirements. Drinking fountains are properly maintained.</i>	10	5
2.14	Number and size of restrooms meet requirements <i>The number and size of Restrooms meet requirements.</i>	10	9
2.15	Drainage systems are properly maintained and meet requirements <i>Drainage systems exhibit some signs of past leakage and repairs.</i>	10	7
2.16	Fire alarms, smoke detectors, and sprinkler systems are properly maintained and meet requirements <i>The fire alarm system does not meet requirements. Smoke detectors are not provided. The facility is not sprinkled.</i>	10	2
2.17	Intercommunication system consists of a central unit that allows dependable two-way communication between the office and instructional areas <i>The central intercommunication system provides reliable communication between the Administration area and all teaching/learning areas.</i>	10	8
2.18	Exterior water supply is sufficient and available for normal usage <i>Exterior wall hydrants are inadequately provided around the exterior of the facility.</i>	5	3
TOTAL - Structural and Mechanical Features		200	102

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3.0 Plant Maintainability

School Facility Appraisal

		Points Allocated	Points
3.1	Windows, doors, and walls are of material and finish requiring minimum maintenance <i>Exterior materials and finishes for doors, windows and walls are durable and require minimal maintenance.</i>	15	12
3.2	Floor surfaces throughout the building require minimum care <i>Flooring throughout the facility consists of VCT, VAT, wood, terrazzo, sealed concrete, marmoleum, and carpet, which is somewhat well maintained throughout the facility. Wood flooring is not easily maintained in the Classrooms.</i>	15	9
3.3	Ceilings and walls throughout the building, including service areas, are easily cleaned and resistant to stain <i>Acoustical tile ceilings are not easily cleaned or resistant to stain. Glazed block and painted block is easily cleaned and resistant to stain. Drywall and plaster type finishes are not easily cleaned and resistant to stain.</i>	10	6
3.4	Built-in equipment is designed and constructed for ease of maintenance <i>Casework is wood type construction with plastic laminate tops is inadequately provided, and is in fair to poor condition.</i>	10	5
3.5	Finishes and hardware , with compatible keying system, are of durable quality <i>Door hardware varies throughout the facility, and does not meet ADA requirements.</i>	10	6
3.6	Restroom fixtures are wall mounted and of quality finish <i>Fixtures are wall and floor mounted and are of good to fair quality.</i>	10	7
3.7	Adequate custodial storage space with water and drain is accessible throughout the building <i>Custodial storage space is adequately located throughout the facility, including provisions for water and drains.</i>	10	10
3.8	Adequate electrical outlets and power , to permit routine cleaning, are available in every area <i>Electrical outlets are adequately provided in Corridors and allow for convenient routine cleaning.</i>	10	8
3.9	Outdoor light fixtures, electrical outlets , equipment, and other fixtures are accessible for repair and replacement <i>Outdoor light fixtures are provided inadequately, but are accessible for repair and replacement. Electrical outlets are inadequately provided around the exterior of the facility.</i>	10	2
TOTAL - Plant Maintainability		100	65

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4.0 Building Safety and Security

School Facility Appraisal

Site Safety	Points Allocated	Points
<p>4.1 Student loading areas are segregated from other vehicular traffic and pedestrian walkways</p> <p><i>Student loading is not separated from other vehicular traffic.</i></p>	15	6
<p>4.2 Walkways, both on and offsite, are available for safety of pedestrians</p> <p><i>Walkways are adequately provided both on and off-site for pedestrian safety.</i></p>	10	8
<p>4.3 Access streets have sufficient signals and signs to permit safe entrance to and exit from school area</p> <p><i>School signs are located as required on adjacent access streets.</i></p>	5	4
<p>4.4 Vehicular entrances and exits permit safe traffic flow</p> <p><i>Buses and other vehicular traffic use the same entrance and exit points to the site, which does not provide safe vehicular traffic flow.</i></p>	5	2
<p>4.5 ES Playground equipment is free from hazard</p> <p>MS Location and types of intramural equipment are free from hazard</p> <p>HS Athletic field equipment is properly located and is free from hazard</p> <p><i>Playground equipment consists of coated steel and high density plastic type equipment in good to fair condition, appears to be free from hazard, and is located on an approved soft surface material to a sufficient depth.</i></p>	5	4

Building Safety	Points Allocated	Points
<p>4.6 The heating unit(s) is located away from student occupied areas</p> <p><i>Heating systems are located on the areas that are not accessible by students.</i></p>	20	18
<p>4.7 Multi-story buildings have at least two stairways for student egress</p> <p><i>The building does have 2 stairways, which are not enclosed and are not fully ADA and OBC compliant.</i></p>	15	8
<p>4.8 Exterior doors open outward and are equipped with panic hardware</p> <p><i>Exterior doors open in the direction of travel and are equipped with panic hardware.</i></p>	10	8
<p>4.9 Emergency lighting is provided throughout the entire building with exit signs on separate electrical circuits</p> <p><i>Emergency light fixtures and exit signs are not on separate circuits and are inadequately provided.</i></p>	10	4
<p>4.10 Classroom doors are recessed and open outward</p> <p><i>Classroom doors are not recessed from the Corridor. Doors open outward, but do not impede traffic flow in the Corridors.</i></p>	10	7
<p>4.11 Building security systems are provided to assure uninterrupted operation of the educational program</p>	10	2

Security systems are inadequately provided and are in fair condition.

4.12	Flooring (including ramps and stairways) is maintained in a non-slip condition <i>Terrazzo and VCT flooring has been well maintained throughout the facility. Main stairways are not maintained in a non-slip condition.</i>	5	3
4.13	Stair risers (interior and exterior) do not exceed 6 1/2 inches and range in number from 3 - 16 <i>Stair treads and risers are properly designed and meet requirements. Stair risers do not exceed 7 inches permitted by the OBC.</i>	5	4
4.14	Glass is properly located and protected with wire or safety material to prevent accidental student injury <i>Glass at door transoms and sidelights is tempered for safety.</i>	5	4
4.15	Fixed Projections in the traffic areas do not extend more than eight inches from the corridor wall <i>Drinking fountains and electric water coolers are not recessed in the Corridor wall. Corridors are wide enough so that non-recessed fixture does not impede traffic flow in Corridors.</i>	5	4
4.16	Traffic areas terminate at an exit or a stairway leading to an egress <i>Exits are properly located to allow safe egress from the building. Entry and exit points to the building have been adequately provided. Corridor and building layout does provide an efficient means of circulation throughout the building. There are no dead-end Corridors in the building. Stairways are not enclosed.</i>	5	3

Emergency Safety	Points Allocated	Points	
4.17	Adequate fire safety equipment is properly located <i>The facility is not sprinkled. Fire alarm devices are not provided adequately. Fire extinguishers do not appear to be adequately provided.</i>	15	2
4.18	There are at least two independent exits from any point in the building <i>Multiple exits are provided from Corridors throughout the facility. There are no dead-end Corridors in the building.</i>	15	13
4.19	Fire-resistant materials are used throughout the structure <i>The structure is a masonry load bearing system with cast in place concrete at the intermediate floors. Roof construction is wood rafters and deck. Interior walls are masonry. Finishes comply with OBBC requirements.</i>	15	6
4.20	Automatic and manual emergency alarm system with a distinctive sound and flashing light is provided <i>The fire alarm is provided with manual actuation, but is not adequately provided with all required devices.</i>	15	4
TOTAL - Building Safety and Security		200	114

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5.0 Educational Adequacy

School Facility Appraisal

Academic Learning Space		Points Allocated	Points
5.1	<p>Size of academic learning areas meets desirable standards</p> <p><i>The average Classroom is 780 SF compared to 900 SF required by the OSDM.</i></p>	25	10
5.2	<p>Classroom space permits arrangements for small group activity</p> <p><i>Undersized Classrooms do not allow sufficient space for effective small group activities.</i></p>	15	6
5.3	<p>Location of academic learning areas is near related educational activities and away from disruptive noise</p> <p><i>The Music Room is located adjacent to academic learning areas, which can be distracting. The Gymnasium is located in fairly close proximity to learning areas, which can be distracting.</i></p>	10	4
5.4	<p>Personal space in the classroom away from group instruction allows privacy time for individual students</p> <p><i>Undersized Classrooms do not permit privacy time for individual students.</i></p>	10	4
5.5	<p>Storage for student materials is adequate</p> <p><i>Storage cubbies, located in the Classroom, are adequately provided for student storage.</i></p>	10	8
5.6	<p>Storage for teacher materials is adequate</p> <p><i>Casework is inadequately provided for storage of teacher materials.</i></p>	10	6

Special Learning Space		Points Allocated	Points
5.7	<p>Size of special learning area(s) meets standards</p> <p><i>The Special Education Classroom is 378 SF compared to 900 SF recommended in the OSDM.</i></p>	15	5
5.8	<p>Design of specialized learning area(s) is compatible with instructional need</p> <p><i>Special Education spaces are not adequately provided to meet instructional needs.</i></p>	10	4
5.9	<p>Library/Resource/Media Center provides appropriate and attractive space</p> <p><i>The Media Center is 1,033 SF compared to 1,099 SF recommended in the OSDM. The Library is not visually appealing and does not provide natural light.</i></p>	10	4
5.10	<p>Gymnasium (or covered P.E. area) adequately serves physical education instruction</p> <p><i>The Gymnasium is 2,356 SF compared to 3,500 - 10,000 SF recommended in the OSDM. The Gymnasium is undersized for effective physical education instruction.</i></p>	5	2
5.11	<p>ES Pre-kindergarten and kindergarten space is appropriate for age of students and nature of instruction</p> <p>MS/HS Science program is provided sufficient space and equipment</p> <p><i>The Kindergarten space is undersized, and does not provide adequate instruction space.</i></p>	10	4

5.12	Music Program is provided adequate sound treated space	5	2
	<i>The Music Room is combined with the Art Room and is 1,323 SF compared to 1,800-3,000 recommended in the OSDM. Music instruction is provided in a standard Classroom without any sound treatment.</i>		
5.13	Space for art is appropriate for special instruction, supplies, and equipment	5	2
	<i>The Art Room is combined with the Music Room and is 1,323 SF compared to 1,200 SF recommended in the OSDM. The Art Room is undersized and does not provide sufficient space for storage of supplies and equipment. The Art Program is not provided with a kiln.</i>		

School Facility Appraisal

Points Allocated Points

5.14	Space for technology education permits use of state-of-the-art equipment	5	4
	<i>The facility is provided with Computer Labs for student use.</i>		
5.15	Space for small groups and remedial instruction is provided adjacent to classrooms	5	2
	<i>No spaces have been provided adjacent to Classrooms for small groups or remedial instruction.</i>		
5.16	Storage for student and teacher material is adequate	5	3
	<i>Storage cubbies have been adequately provided for storage of student materials. Casework is not adequately provided for storage of teacher materials.</i>		

Support Space

Points Allocated Points

5.17	Teacher's lounge and work areas reflect teachers as professionals	10	4
	<i>The Teacher's Lounge is 254 SF compared to 450-900 SF, for 8-24 staff, recommended in the OSDM. The Teacher's Lounge does not reflect a professional environment.</i>		
5.18	Cafeteria/Kitchen is attractive with sufficient space for seating/dining, delivery, storage, and food preparation	10	4
	<i>Student Dining shares the Gymnasium space. The Kitchen space is 625 SF compared to 1,236 SF recommended in the OSDM.</i>		
5.19	Administrative offices provided are consistent in appearance and function with the maturity of the students served	5	2
	<i>Administrative Offices are not adequately provided for Elementary School students.</i>		
5.20	Counselor's office insures privacy and sufficient storage	5	3
	<i>The Counselor's Office is 243 SF compared to 120 SF, plus 100 SF for Storage and 200 SF for Conference, recommended in the OSDM. The space provided for the Counselor does not insure privacy, and lacks sufficient storage space.</i>		
5.21	Clinic is near administrative offices and is equipped to meet requirements	5	2
	<i>The Clinic is 171 SF compared to 370 SF recommended in the OSDM. The Clinic is located within the Administrative Offices and is not provided with required equipment.</i>		
5.22	Suitable reception space is available for students, teachers, and visitors	5	3
	<i>Reception space consists of approximately 256 SF compared to 200-400 SF recommended by the OSDM.</i>		
5.23	Administrative personnel are provided sufficient work space and privacy	5	2

The Administrative area consists of approximately 997 SF for the Orincipal, Reception, , Clinic, Work Room, Storage, and two Restrooms, compared to 2,600 SF recommended by the OSDM.

TOTAL - Educational Adequacy

200

90

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6.0 Environment for Education

School Facility Appraisal

Exterior Environment	Points Allocated	Points
6.1 Overall design is aesthetically pleasing to age of students <i>The building is a traditional design with classical detailing, which is aesthetically pleasing.</i>	15	12
6.2 Site and building are well landscaped <i>The site is generously landscaped with mature shade trees, ornamental trees, and shrubs which define the property and emphasize the building entrance. Lawn areas where mowing is required does exceed a 3:1 slope in some areas.</i>	10	7
6.3 Exterior noise and poor environment do not disrupt learning <i>The site is adjacent to residential uses, and there are no undesirable features adjacent to the school site.</i>	10	8
6.4 Entrances and walkways are sheltered from sun and inclement weather <i>Exits are not sheltered from sun and inclement weather.</i>	10	2
6.5 Building materials provide attractive color and texture <i>Exterior building materials consist of brick and stone which does provide an attractive color and texture.</i>	5	4

Interior Environment	Points Allocated	Points
6.6 Color schemes, building materials, and decor provide an impetus to learning <i>Overall building design and materials reflect a dated décor which does not enhance learning.</i>	20	8
6.7 Year around comfortable temperature and humidity are provided throughout the building <i>The facility is not air conditioned to provide year-round temperature and humidity control.</i>	15	2
6.8 Ventilating system provides adequate quiet circulation of clean air and meets 15cfm VBC requirement <i>The ventilating systems do not provide an adequate quantity of ventilation air to the spaces. Ventilation systems introduce minimal noise into the teaching and learning areas.</i>	15	4
6.9 Lighting system provides proper intensity, diffusion, and distribution of illumination <i>The lighting system does not provide proper intensity in some areas. Location of lighting fixtures provides uneven distribution of illumination. Diffusion of illumination is adequately provided by the light fixture lenses.</i>	15	6
6.10 Drinking fountains and restroom facilities are conveniently located <i>Drinking fountains and Restroom facilities are conveniently located.</i>	15	12
6.11 Communication among students is enhanced by commons area(s) for socialization <i>There are areas for students to gather in the Gymnasium and a small area with benches in front of the school.</i>	10	7

6.12	Traffic flow is aided by appropriate foyers and corridors <i>Corridors and Foyers are adequately designed for efficient traffic flow. Classroom doorways are not recessed, but do not impede traffic flow. Entry and exit points to the building have been adequately provided. Corridor and building layout does provide an efficient means of circulation throughout the building.</i>	10	8
6.13	Areas for students to interact are suitable to the age group <i>There are areas for students to gather in the Gymnasium and a small area with benches in front of the school.</i>	10	7
6.14	Large group areas are designed for effective management of students <i>The Gymnasium is undersized to allow effective management of large groups of students.</i>	10	5
6.15	Acoustical treatment of ceilings, walls, and floors provides effective sound control <i>Limited acoustical treatment has been provided in the Music Room, Media Center, or Gymnasium.</i>	10	4
6.16	Window design contributes to a pleasant environment <i>The windows are fairly well designed to contribute to a pleasant environment.</i>	10	6
6.17	Furniture and equipment provide a pleasing atmosphere <i>Classroom furniture is mismatched and in fair to poor condition.</i>	10	6
TOTAL - Environment for Education		200	108

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LEED Observation Notes

School District:	Troy City
County:	Miami
School District IRN:	44925
Building:	Heywood Elementary
Building IRN:	15990

Sustainable Sites

Construction process can have a harmful effect on local ecology, especially when buildings are build on productive agricultural, wildlife or open areas. Several measures can be take however to prevent the impact on undeveloped lands or to improve previously contaminated sites. Appropriate location reduces the need for private transportation and helps to prevent an increase in air pollution. Developing buildings in urban areas and on brownfield sites instead of greenfield locations has economical and environmental benefits. Controlling stormwater runoff and erosion can prevent the worsening of water quality in receiving bodies of water and the impact on aquatic life. Once the building is constructed, it's important to decrease heat island effects and reduce the light pollution on the site.

(source: LEED Reference Guide, 2001:9)

The amount of asphalt contributes to the heat island effect for non-roofs (see SS Credit 7.1). Open space is effectively maximized at this urban site (see SS Credit 5.2). The size of the parking area exceeds the amount required with 40 spaces provided and 35 spaces required (see SS Credit 4.4). Reducing the amount of redundant asphalt and providing softer landscape elements including grasses, shrubs and flora, would contribute to a reduction in the heat island effect. Most of the roof surfaces have high reflectance and low thermal emittance, which helps mitigate the heat island effect.

Water Efficiency

In the US ca. 340 billion gallons of fresh water are withdrawn daily from surface sources, 65% of which is discharged later after use. Water is also withdrawn from underground aquifers. The excessive usage of water results in the current water deficit, estimated at 3,700 billion gallons. Water efficiency measures in commercial buildings can reduce water usage by at least 30%. Low-flow fixtures, sensors or using non potable water for landscape irrigation, toilet flushing and building systems are just some of available strategies. Not only do they result in environmental savings, but also bring about financial benefits, related to lower water use fees, lower sewage volumes to treat and energy use reductions.

(source: LEED Reference Guide, 2001:65)

Currently there are no overall facility measures to reduce wastewater or water usage. The site is in an urban area with limited areas of grass, deciduous trees, conifers, shrubs and area of flora. The overall facility does not contain water-efficient fixtures or appliances to meet LEED requirements. Battery operated or electrical flush sensors on the fixtures could provide reduced water use. Use of non-potable water on landscape is another area where reduced water usage could be utilized.

Energy & Atmosphere

Buildings in the US account for more than 30% of the total energy use and for approximately 60% of electricity. 75% of energy is derived from the burning of fossil fuels, which releases CO2 into the Atmosphere and contributes to global warming. Moreover, coal fired electric utilities release nitrogen oxides and sulfur dioxide, where the former contribute to smog and the latter to acid rain. Other types of energy production are not less harmful. Burning of natural gas produces nitrogen oxides and greenhouse gases as well, nuclear power creates nuclear wastes, while hydroelectric generating plants disrupt natural water flows. Luckily there are several practices that can reduce energy consumption and are environmentally and economically beneficial. Not only will they reduce the air pollution and mitigate global warming thanks to being less dependent on power plants, but also they will reduce operational costs and will quickly pay back. In order to make the most of those practices, it's important to adopt a holistic approach to the building's energy load and integrate different energy saving strategies.

(source: LEED Reference Guide, 2001:93)

The overall facility is equipped with HVAC equipment that, due to age, condition, and inefficiency, does not provide appropriate energy controls or recovery to meet LEED requirements. Most equipment in the overall facility is natural gas fired, but could be updated to electric fired. The District does not produce their own energy or buy energy credits to meet LEED requirements. The site is such that some measure of solar panel installation could be accomplished. By replacing all light switches in the facility with sensor switches, the school would see a reduction in the energy usage and, subsequently, a cost savings as well.

Material & Resources

The steps related to process building materials, such as extraction, processing and transportation are not environmentally natural, as they pollute the air, water and use natural resources. Construction and demolition wastes account for 40% of the solid waste stream in the US. Reusing existing documents is one of the best strategies to reduce solid wastes volumes and prevents them from ending up at landfills. It also reduces habitat disturbance and minimizes the need for the surrounding infrastructure. While using new materials one should take into account different material sources. Salvaged materials provide savings on material costs, recycled content material minimizes waste products and local materials reduce the environmental impact of transportation. Finally, using rapidly renewable materials and certified wood decreases the consumption of natural resources. Recycling and reusing construction waste is another strategy to be taken into consideration in sustainable design.

(source: LEED Reference Guide, 2001:167)

The facility provides storage and collection of recyclables (see MR Prerequisite 1). By providing containers designated for the collection of paper, plastic and glass bottles and cans reduces the solid waste impact on the environment and is a simple way to achieve LEED credits.

Indoor Environmental Quality

As we spend a big majority of our time indoors, the emphasis should be put on optimal indoor environmental quality strategies while (re)designing a building. Otherwise, a poor IEQ will have adverse effects on occupants' health, productivity and quality of life. IEQ strategies such as ventilation effectiveness and control of contaminants or a building flush-out prior to occupancy can reduce potential liability, increase the market value of the building but can also result in a significantly higher productivity (16%). Other strategies involve automatic sensors and controls, introducing fresh air to the building or providing lots of daylighting views.

(source: LEED Reference Guide, 2001:215)

Corridors and Classrooms feature hard, easy to clean surfaces, but do not provide acoustical measure other than ceiling tile (see EQ Credit 9). The overall facility is equipped with HVAC equipment that, due to age, condition, and inefficiency, does not provide appropriate indoor air quality or controls to meet LEED requirements. Existing site and building layout, along with existing window opening sizes, may make achieving LEED credits for this section difficult and costly.

Innovation & Design Process

This category is aimed at recognizing projects that implemented innovative building features and sustainable building knowledge, and whose strategy or measure results exceeded those which are required by the LEED Rating System. Expertise in sustainable design is the key element of the innovative design and construction process.

(source: LEED Reference Guide, 2001:271)

This facility does not implement innovative building features or sustainable building knowledge which is needed to exceed results that are required by the LEED Rating System.

Justification for Allocation of Points

Building Name and Level: **Heywood Elementary**

K-5

Building features that clearly exceed criteria:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

Building features that are non-existent or very inadequate:

1. The facility is reported to contain asbestos.
2. The facility is not fully ADA compliant.
3. The facility is not equipped with an automated fire suppression system.
4. The facility is not equipped with a compliant security system.
- 5.
- 6.

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Environmental Hazards Assessment Cost Estimates

Owner:	Troy City
Facility:	Heywood Elementary
Date of Initial Assessment:	Aug 6, 2016
Date of Assessment Update:	Dec 11, 2016
Cost Set:	2016

District IRN:	44925
Building IRN:	15990
Firm:	SBDP

Scope remains unchanged after cost updates.

Building Addition	Addition Area (sf)	Total of Environmental Hazards Assessment Cost Estimates	
		Renovation	Demolition
1930 Original Construction	36,367	\$578,126.70	\$541,936.70
1973 Kitchen Addition	728	\$2,158.30	\$2,158.30
Total	37,095	\$580,285.00	\$544,095.00
Total with Regional Cost Factor (97.49%)	—	\$565,719.85	\$530,438.22
Regional Total with Soft Costs & Contingency	—	\$703,926.90	\$660,025.86

Environmental Hazards - Troy City (44925) - Heywood Elementary (15990) - Original Construction

Owner: Troy City **Bldg. IRN:** 15990
Facility: Heywood Elementary **BuildingAdd:** Original Construction
Date On-Site: **Consultant Name:**

A. Asbestos Containing Material (ACM)		AFM=Asbestos Free Material		
ACM Found	Status	Quantity	Unit Cost	Estimated Cost
1. Boiler/Furnace Insulation Removal	Not Present	0	\$10.00	\$0.00
2. Breeching Insulation Removal	Not Present	0	\$10.00	\$0.00
3. Tank Insulation Removal	Reported Asbestos-Containing Material	200	\$8.00	\$1,600.00
4. Duct Insulation Removal	Not Present	0	\$8.00	\$0.00
5. Pipe Insulation Removal	Reported Asbestos-Containing Material	1000	\$10.00	\$10,000.00
6. Pipe Fitting Insulation Removal	Reported Asbestos-Containing Material	2	\$20.00	\$40.00
7. Pipe Insulation Removal (Crawlspace/Tunnel)	Not Present	0	\$12.00	\$0.00
8. Pipe Fitting Insulation Removal (Crawlspace/Tunnel)	Not Present	0	\$30.00	\$0.00
9. Pipe Insulation Removal (Hidden in Walls/Ceilings)	Not Present	0	\$15.00	\$0.00
10. Dismantling of Boiler/Furnace/Incinerator	Not Present	0	\$2,000.00	\$0.00
11. Flexible Duct Connection Removal	Not Present	0	\$100.00	\$0.00
12. Acoustical Plaster Removal	Not Present	0	\$7.00	\$0.00
13. Fireproofing Removal	Not Present	0	\$25.00	\$0.00
14. Hard Plaster Removal	Reported Asbestos-Containing Material	62230	\$7.00	\$435,610.00
15. Gypsum Board Removal	Reported Asbestos-Containing Material	1000	\$6.00	\$6,000.00
16. Acoustical Panel/Tile Ceiling Removal	Reported Asbestos-Containing Material	3750	\$3.00	\$11,250.00
17. Laboratory Table/Counter Top Removal	Not Present	0	\$100.00	\$0.00
18. Cement Board Removal	Not Present	0	\$5.00	\$0.00
19. Electric Cord Insulation Removal	Not Present	0	\$1.00	\$0.00
20. Light (Reflector) Fixture Removal	Not Present	0	\$50.00	\$0.00
21. Sheet Flooring with Friable Backer Removal	Not Present	0	\$4.00	\$0.00
22. Fire Door Removal	Reported Asbestos-Containing Material	15	\$100.00	\$1,500.00
23. Door and Window Panel Removal	Not Present	0	\$100.00	\$0.00
24. Decontamination of Crawlspace/Chase/Tunnel	Not Present	0	\$3.00	\$0.00
25. Soil Removal	Not Present	0	\$150.00	\$0.00
26. Non-ACM Ceiling/Wall Removal (for access)	Not Present	0	\$2.00	\$0.00
27. Window Component (Compound, Tape, or Caulk) - Reno & Demo	Reported Asbestos-Containing Material	200	\$300.00	\$60,000.00
28. Window Component (Compound, Tape, or Caulk) - Reno Only	Not Present	0	\$300.00	\$0.00
29. Resilient Flooring Removal, Including Mastic	Reported Asbestos-Containing Material	3315	\$3.00	\$9,945.00
30. Carpet Mastic Removal	Reported Asbestos-Containing Material	1345	\$2.00	\$2,690.00
31. Carpet Removal (over RFC)	Not Present	0	\$1.00	\$0.00
32. Acoustical Tile Mastic Removal	Not Present	0	\$3.00	\$0.00
33. Sink Undercoating Removal	Reported Asbestos-Containing Material	4	\$100.00	\$400.00
34. Roofing Removal	Not Present	0	\$2.00	\$0.00
35. (Sum of Lines 1-34)	Total Asb. Hazard Abatement Cost for Renovation Work			\$539,035.00
36. (Sum of Lines 1-34)	Total Asb. Hazard Abatement Cost for Demolition Work			\$539,035.00

B. Removal Of Underground Storage Tanks <input checked="" type="checkbox"/> None Reported					
Tank No.	Location	Age	Product Stored	Size	Est.Rem.Cost
1. (Sum of Lines 1-0)	Total Cost For Removal Of Underground Storage Tanks				\$0.00

C. Lead-Based Paint (LBP) - Renovation Only <input type="checkbox"/> Addition Constructed after 1980	
1. Estimated Cost For Abatement Contractor to Perform Lead Mock-Ups	\$5,000.00
2. Special Engineering Fees for LBP Mock-Ups	\$5,000.00
3. (Sum of Lines 1-2)	Total Cost for Lead-Based Paint Mock-Ups \$10,000.00

D. Fluorescent Lamps & Ballasts Recycling/Incineration <input type="checkbox"/> Not Applicable			
Area Of Building Addition	Square Feet w/Fluorescent Lamps & Ballasts	Unit Cost	Total Cost
1. 36367	29017	\$0.10	\$2,901.70

E. Other Environmental Hazards/Remarks <input checked="" type="checkbox"/> None Reported		
Description		Cost Estimate
1. (Sum of Lines 1-0)	Total Cost for Other Environmental Hazards - Renovation	\$0.00
2. (Sum of Lines 1-0)	Total Cost for Other Environmental Hazards - Demolition	\$0.00

F. Environmental Hazards Assessment Cost Estimate Summaries		
1. A35, B1, C3, D1, and E1	Total Cost for Env. Hazards Work - Renovation	\$551,936.70
2. A36, B1, D1, and E2	Total Cost for Env. Hazards Work - Demolition	\$541,936.70

* INSPECTION ASSUMPTIONS for Reported/Assumed Asbestos-Free Materials (Rep/Asm AFM):

- a. Unless reported otherwise by the District, materials installed after 1980 are assumed to be asbestos-free.
- b. Unless reported otherwise by the District, small quantities (less than 1,000 square feet) of the following materials are assumed to be asbestos free: hard plaster, acoustical plaster and gypsum board systems; acoustical panels and tiles; fireproofing; 12"x12" floor tile and mastic.
- c. Unless reported otherwise by the District, all roofing materials are assumed to be asbestos-free.

THESE MATERIALS SHOULD BE PROPERLY SAMPLED AND ANALYZED FOR ASBESTOS PRIOR TO DISTURBING THEM.

Environmental Hazards - Troy City (44925) - Heywood Elementary (15990) - Kitchen Addition

Owner: Troy City **Bldg. IRN:** 15990
Facility: Heywood Elementary **BuildingAdd:** Kitchen Addition
Date On-Site: **Consultant Name:**

A. Asbestos Containing Material (ACM)		AFM=Asbestos Free Material		
ACM Found	Status	Quantity	Unit Cost	Estimated Cost
1. Boiler/Furnace Insulation Removal	Not Present	0	\$10.00	\$0.00
2. Breeching Insulation Removal	Not Present	0	\$10.00	\$0.00
3. Tank Insulation Removal	Not Present	0	\$8.00	\$0.00
4. Duct Insulation Removal	Not Present	0	\$8.00	\$0.00
5. Pipe Insulation Removal	Not Present	0	\$10.00	\$0.00
6. Pipe Fitting Insulation Removal	Not Present	0	\$20.00	\$0.00
7. Pipe Insulation Removal (Crawlspace/Tunnel)	Not Present	0	\$12.00	\$0.00
8. Pipe Fitting Insulation Removal (Crawlspace/Tunnel)	Not Present	0	\$30.00	\$0.00
9. Pipe Insulation Removal (Hidden in Walls/Ceilings)	Not Present	0	\$15.00	\$0.00
10. Dismantling of Boiler/Furnace/Incinerator	Not Present	0	\$2,000.00	\$0.00
11. Flexible Duct Connection Removal	Not Present	0	\$100.00	\$0.00
12. Acoustical Plaster Removal	Not Present	0	\$7.00	\$0.00
13. Fireproofing Removal	Not Present	0	\$25.00	\$0.00
14. Hard Plaster Removal	Not Present	0	\$7.00	\$0.00
15. Gypsum Board Removal	Not Present	0	\$6.00	\$0.00
16. Acoustical Panel/Tile Ceiling Removal	Reported Asbestos-Containing Material	700	\$3.00	\$2,100.00
17. Laboratory Table/Counter Top Removal	Not Present	0	\$100.00	\$0.00
18. Cement Board Removal	Not Present	0	\$5.00	\$0.00
19. Electric Cord Insulation Removal	Not Present	0	\$1.00	\$0.00
20. Light (Reflector) Fixture Removal	Not Present	0	\$50.00	\$0.00
21. Sheet Flooring with Friable Backer Removal	Not Present	0	\$4.00	\$0.00
22. Fire Door Removal	Not Present	0	\$100.00	\$0.00
23. Door and Window Panel Removal	Not Present	0	\$100.00	\$0.00
24. Decontamination of Crawlspace/Chase/Tunnel	Not Present	0	\$3.00	\$0.00
25. Soil Removal	Not Present	0	\$150.00	\$0.00
26. Non-ACM Ceiling/Wall Removal (for access)	Not Present	0	\$2.00	\$0.00
27. Window Component (Compound, Tape, or Caulk) - Reno & Demo	Not Present	0	\$300.00	\$0.00
28. Window Component (Compound, Tape, or Caulk) - Reno Only	Not Present	0	\$300.00	\$0.00
29. Resilient Flooring Removal, Including Mastic	Not Present	0	\$3.00	\$0.00
30. Carpet Mastic Removal	Not Present	0	\$2.00	\$0.00
31. Carpet Removal (over RFC)	Not Present	0	\$1.00	\$0.00
32. Acoustical Tile Mastic Removal	Not Present	0	\$3.00	\$0.00
33. Sink Undercoating Removal	Not Present	0	\$100.00	\$0.00
34. Roofing Removal	Not Present	0	\$2.00	\$0.00
35. (Sum of Lines 1-34)	Total Asb. Hazard Abatement Cost for Renovation Work			\$2,100.00
36. (Sum of Lines 1-34)	Total Asb. Hazard Abatement Cost for Demolition Work			\$2,100.00

B. Removal Of Underground Storage Tanks <input checked="" type="checkbox"/> None Reported					
Tank No.	Location	Age	Product Stored	Size	Est.Rem.Cost
1. (Sum of Lines 1-0)	Total Cost For Removal Of Underground Storage Tanks				\$0.00

C. Lead-Based Paint (LBP) - Renovation Only <input type="checkbox"/> Addition Constructed after 1980	
1. Estimated Cost For Abatement Contractor to Perform Lead Mock-Ups	\$0.00
2. Special Engineering Fees for LBP Mock-Ups	\$0.00
3. (Sum of Lines 1-2)	Total Cost for Lead-Based Paint Mock-Ups \$0.00

D. Fluorescent Lamps & Ballasts Recycling/Incineration <input type="checkbox"/> Not Applicable			
Area Of Building Addition	Square Feet w/Fluorescent Lamps & Ballasts	Unit Cost	Total Cost
1. 728	583	\$0.10	\$58.30

E. Other Environmental Hazards/Remarks <input checked="" type="checkbox"/> None Reported		
Description	Cost Estimate	
1. (Sum of Lines 1-0)	Total Cost for Other Environmental Hazards - Renovation	\$0.00
2. (Sum of Lines 1-0)	Total Cost for Other Environmental Hazards - Demolition	\$0.00

F. Environmental Hazards Assessment Cost Estimate Summaries		
1. A35, B1, C3, D1, and E1	Total Cost for Env. Hazards Work - Renovation	\$2,158.30
2. A36, B1, D1, and E2	Total Cost for Env. Hazards Work - Demolition	\$2,158.30

* INSPECTION ASSUMPTIONS for Reported/Assumed Asbestos-Free Materials (Rep/Asm AFM):

- a. Unless reported otherwise by the District, materials installed after 1980 are assumed to be asbestos-free.
- b. Unless reported otherwise by the District, small quantities (less than 1,000 square feet) of the following materials are assumed to be asbestos free: hard plaster, acoustical plaster and gypsum board systems; acoustical panels and tiles; fireproofing; 12"x12" floor tile and mastic.
- c. Unless reported otherwise by the District, all roofing materials are assumed to be asbestos-free.

THESE MATERIALS SHOULD BE PROPERLY SAMPLED AND ANALYZED FOR ASBESTOS PRIOR TO DISTURBING THEM.