

**Building Information - Troy City (44925) - Cookson Elementary**

Program Type	Classroom Facilities Assistance Program (CFAP) - Regular
Setting	Small City
Assessment Name	Cookson Elementary School (7294) FINAL
Assessment Date (on-site; non-EEA)	2016-08-06
Kitchen Type	Warming Kitchen
Cost Set:	2016
Building Name	Cookson Elementary
Building IRN	7294
Building Address	921 Mystic Lane
Building City	Troy
Building Zipcode	45373
Building Phone	(937) 332.6740
Acreage	5.82
Current Grades:	K-5
Teaching Stations	27
Number of Floors	1
Student Capacity	480
Current Enrollment	319
Enrollment Date	2016-08-06
Enrollment Date is the date in which the current enrollment was taken.	
Number of Classrooms	24
Historical Register	<b>NO</b>
Building's Principal	Ms. Stephanie Johnson
Building Type	Elementary

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North elevation photo:



East elevation photo:



South elevation photo:



West elevation photo:



#### GENERAL DESCRIPTION

- 45,828** Total Existing Square Footage
- 1964,1968** Building Dates
- K-5** Grades
- 319** Current Enrollment
- 27** Teaching Stations
- 5.82** Site Acreage

Cookson Elementary, which is not on the National Register of Historic Buildings, and originally constructed in 1964, is a one story, 45,828 square foot brick 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. There are no intermediate floors in this single story structure. The roof structure of the overall facility is tectum deck on steel joist type construction. The roofing system of the overall facility is a modified bitumen system by Tremco, installed in 2006. The ventilation system of the building is inadequate to meet the needs of the users. The Classrooms are slightly 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 manual fire alarm system. The facility is not equipped with a compliant automated fire suppression system. The building contains asbestos. The overall building is not compliant with ADA accessibility requirements. The school is located on a 5.82 acre site adjacent to residential properties. The property and playgrounds are not fenced for security. Access onto the site is unrestricted. Site circulation is fair. There is no dedicated space for school buses to load and unload on the site. Parking for staff, visitors and community events is adequate.

*No Significant Findings*

**Building Construction Information - Troy City (44925) - Cookson Elementary (7294)**

<b>Name</b>	<b>Year</b>	<b>Handicapped Access</b>	<b>Floors</b>	<b>Square Feet</b>	<b>Non OSDM Addition</b>
Original Construction	1964	no	1	41,546	no
Classroom Addition	1968	yes	1	4,282	no

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**Building Component Information - Troy City (44925) - Cookson Elementary (7294)**

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 (1964)		6405		3647	1957			1167						
Classroom Addition (1968)		492												
Total	0	6,897	0	3,647	1,957	0	0	1,167	0	0	0	0	0	0
<b>Master Planning Considerations</b>		There are no readily evident conditions that might significantly effect master planning with regard to the site. Due to the size of the site, building expansion is not recommended. There is a short retaining wall to the north of the site between the city park and school property line.												

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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 - Cookson Elementary (7294)

<b>District:</b> Troy City				<b>County:</b> Miami		<b>Area:</b> West Central Ohio (2)	
<b>Name:</b> Cookson Elementary				<b>Contact:</b> Ms. Stephanie Johnson			
<b>Address:</b> 921 Mystic Lane Troy, OH 45373				<b>Phone:</b> (937) 332.6740			
<b>Bldg. IRN:</b> 7294				<b>Date Prepared:</b> 2016-08-06		<b>By:</b> Julie Apt	
				<b>Date Revised:</b> 2016-12-11		<b>By:</b> Bernie Merritt	
Current Grades		K-5	Acreage:		5.82		
Proposed Grades		N/A	Teaching Stations:		27		
Current Enrollment		319	Classrooms:		24		
Projected Enrollment		N/A					
Addition		Date	HA	Number of Floors	Current Square Feet		
<u>Original Construction</u>		1964	no	1	41,546		
<u>Classroom Addition</u>		1968	yes	1	4,282		
<b>Total</b>						<b>45,828</b>	
		*HA	=	Handicapped Access			
		*Rating	=	1 Satisfactory			
			=	2 Needs Repair			
			=	3 Needs Replacement			
		*Const P/S	=	Present/Scheduled Construction			
<b>CEFPI Appraisal Summary</b>							
<b>Section</b>							
<b>Points Possible</b>							
<b>Points Earned</b>							
<b>Percentage</b>							
<b>Rating</b>							
<b>Category</b>							
<u>Cover Sheet</u>							
1.0 <u>The School Site</u>							
2.0 <u>Structural and Mechanical Features</u>							
3.0 <u>Plant Maintainability</u>							
4.0 <u>Building Safety and Security</u>							
5.0 <u>Educational Adequacy</u>							
6.0 <u>Environment for Education</u>							
<u>LEED Observations</u>							
<u>Commentary</u>							
<b>Total</b>							
1000							
615							
62%							
Borderline							
<b>Enhanced Environmental Hazards Assessment Cost Estimates</b>							
<b>FACILITY ASSESSMENT</b>							
Cost Set: 2016							
Rating							
Dollar Assessment							
C							
A. <u>Heating System</u>							
3							
\$1,563,651.36							
B. <u>Roofing</u>							
3							
\$935,560.90							
C. <u>Ventilation / Air Conditioning</u>							
2							
\$5,000.00							
D. <u>Electrical Systems</u>							
3							
\$743,788.44							
E. <u>Plumbing and Fixtures</u>							
3							
\$398,796.00							
F. <u>Windows</u>							
3							
\$252,960.00							
G. <u>Structure: Foundation</u>							
2							
\$2,016.00							
H. <u>Structure: Walls and Chimneys</u>							
2							
\$44,177.50							
I. <u>Structure: Floors and Roofs</u>							
1							
\$0.00							
J. <u>General Finishes</u>							
2							
\$1,228,650.30							
K. <u>Interior Lighting</u>							
3							
\$229,140.00							
L. <u>Security Systems</u>							
3							
\$130,609.80							
M. <u>Emergency/Egress Lighting</u>							
3							
\$45,828.00							
N. <u>Fire Alarm</u>							
3							
\$68,742.00							
O. <u>Handicapped Access</u>							
3							
\$78,240.00							
P. <u>Site Condition</u>							
2							
\$363,588.81							
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>							
2							
\$157,446.30							
U. <u>Life Safety</u>							
3							
\$148,989.60							
V. <u>Loose Furnishings</u>							
2							
\$137,484.00							
W. <u>Technology</u>							
3							
\$604,013.04							
- X. <u>Construction Contingency / Non-Construction Cost</u>							
-							
\$1,744,001.44							
<b>Total</b>							
<b>\$8,882,683.49</b>							
<b>C=Under Contract</b>							
Renovation Cost Factor							
97.49%							
Cost to Renovate (Cost Factor applied)							
\$8,659,728.14							
<i>The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.</i>							

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Original Construction (1964) Summary

<b>District:</b> Troy City				<b>County:</b> Miami		<b>Area:</b> West Central Ohio (2)	
<b>Name:</b> Cookson Elementary				<b>Contact:</b> Ms. Stephanie Johnson			
<b>Address:</b> 921 Mystic Lane Troy, OH 45373				<b>Phone:</b> (937) 332.6740			
<b>Bldg. IRN:</b> 7294				<b>Date Prepared:</b> 2016-08-06		<b>By:</b> Julie Apt	
				<b>Date Revised:</b> 2016-12-11		<b>By:</b> Bernie Merritt	
Current Grades		K-5	Acreage:		5.82		
Proposed Grades		N/A	Teaching Stations:		27		
Current Enrollment		319	Classrooms:		24		
Projected Enrollment		N/A					
<b>Addition</b>		<b>Date</b>	<b>HA</b>	<b>Number of Floors</b>	<b>Current Square Feet</b>		
<b>Original Construction</b>		1964	no	1	41,546		
<b>Classroom Addition</b>		1968	yes	1	4,282		
<b>Total</b>					45,828		
		*HA	= Handicapped Access				
		*Rating	=1 Satisfactory				
			=2 Needs Repair				
			=3 Needs Replacement				
		*Const P/S	= Present/Scheduled Construction				
<b>CEFPI Appraisal Summary</b>							
		<b>Section</b>		<b>Points Possible</b>	<b>Points Earned</b>	<b>Percentage</b>	<b>Rating Category</b>
		<u>Cover Sheet</u>		—	—	—	—
		1.0 <u>The School Site</u>		100	65	65%	Borderline
		2.0 <u>Structural and Mechanical Features</u>		200	113	57%	Borderline
		3.0 <u>Plant Maintainability</u>		100	68	68%	Borderline
		4.0 <u>Building Safety and Security</u>		200	124	62%	Borderline
		5.0 <u>Educational Adequacy</u>		200	132	66%	Borderline
		6.0 <u>Environment for Education</u>		200	113	57%	Borderline
		<u>LEED Observations</u>		—	—	—	—
		<u>Commentary</u>		—	—	—	—
		<b>Total</b>		<b>1000</b>	<b>615</b>	<b>62%</b>	<b>Borderline</b>
<b>Enhanced Environmental Hazards Assessment Cost Estimates</b>							
<b>FACILITY ASSESSMENT</b>				<b>Rating</b>	<b>Dollar Assessment</b>	<b>C</b>	
Cost Set: 2016							
A. <u>Heating System</u>		3	\$1,417,549.52	-	C=Under Contract		
B. <u>Roofing</u>		3	\$849,157.30	-			
C. <u>Ventilation / Air Conditioning</u>		2	\$5,000.00	-	Renovation Cost Factor		
D. <u>Electrical Systems</u>		3	\$674,291.58	-	97.49%		
E. <u>Plumbing and Fixtures</u>		3	\$363,822.00	-	Cost to Renovate (Cost Factor applied)		
F. <u>Windows</u>		3	\$213,180.00	-	\$7,889,743.59		
G. <u>Structure: Foundation</u>		2	\$1,568.00	-	The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.		
H. <u>Structure: Walls and Chimneys</u>		2	\$39,409.00	-			
I. <u>Structure: Floors and Roofs</u>		1	\$0.00	-			
J. <u>General Finishes</u>		2	\$1,142,525.10	-			
K. <u>Interior Lighting</u>		3	\$207,730.00	-			
L. <u>Security Systems</u>		3	\$118,406.10	-			
M. <u>Emergency/Egress Lighting</u>		3	\$41,546.00	-			
N. <u>Fire Alarm</u>		3	\$62,319.00	-			
O. <u>Handicapped Access</u>		3	\$78,240.00	-			
P. <u>Site Condition</u>		2	\$333,573.38	-			
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>		2	\$148,708.70	-			
U. <u>Life Safety</u>		3	\$134,702.20	-			
V. <u>Loose Furnishings</u>		2	\$124,638.00	-			
W. <u>Technology</u>		3	\$547,576.28	-			
- X. <u>Construction Contingency / Non-Construction Cost</u>		-	\$1,588,932.58	-			
<b>Total</b>					\$8,092,874.74		

Classroom Addition (1968) Summary

<b>District:</b> Troy City				<b>County:</b> Miami		<b>Area:</b> West Central Ohio (2)	
<b>Name:</b> Cookson Elementary				<b>Contact:</b> Ms. Stephanie Johnson			
<b>Address:</b> 921 Mystic Lane Troy, OH 45373				<b>Phone:</b> (937) 332.6740			
<b>Bldg. IRN:</b> 7294				<b>Date Prepared:</b> 2016-08-06		<b>By:</b> Julie Apt	
				<b>Date Revised:</b> 2016-12-11		<b>By:</b> Bernie Merritt	
Current Grades		K-5	Acreage:		5.82	CEFPI Appraisal Summary	
Proposed Grades		N/A	Teaching Stations:		27		
Current Enrollment		319	Classrooms:		24		
Projected Enrollment		N/A					
<b>Addition</b>		<b>Date</b>	<b>HA</b>	<b>Number of Floors</b>	<b>Current Square Feet</b>	<b>Section</b>	
<u>Original Construction</u>		1964	no	1	41,546	<b>Points Possible</b>	
<b>Classroom Addition</b>		<b>1968</b>	<b>yes</b>	<b>1</b>	<b>4,282</b>	<b>Points Earned</b>	
<b>Total</b>				<b>45,828</b>		<b>Percentage</b>	
		<b>*HA</b>	=	Handicapped Access		<b>Rating</b>	
		<b>*Rating</b>	=	1 Satisfactory		<b>Category</b>	
			=	2 Needs Repair			
			=	3 Needs Replacement			
		<b>*Const P/S</b>	=	Present/Scheduled Construction			
						<b>1.0 The School Site</b>	
						<b>2.0 Structural and Mechanical Features</b>	
						<b>3.0 Plant Maintainability</b>	
						<b>4.0 Building Safety and Security</b>	
						<b>5.0 Educational Adequacy</b>	
						<b>6.0 Environment for Education</b>	
						<b>LEED Observations</b>	
						<b>Commentary</b>	
						<b>Total</b>	
						<b>1000</b>	
						<b>615</b>	
						<b>62%</b>	
						<b>Borderline</b>	
<b>FACILITY ASSESSMENT</b>				<b>Enhanced Environmental Hazards Assessment Cost Estimates</b>			
Cost Set: 2016				C=Under Contract			
Rating				Renovation Cost Factor			
Dollar Assessment				Cost to Renovate (Cost Factor applied)			
C				The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.			
A.	Heating System	3	\$146,101.84				
B.	Roofing	3	\$86,403.60				
C.	Ventilation / Air Conditioning	2	\$0.00	97.49%			
D.	Electrical Systems	3	\$69,496.86	\$769,984.55			
E.	Plumbing and Fixtures	3	\$34,974.00				
F.	Windows	3	\$39,780.00				
G.	Structure: Foundation	2	\$448.00				
H.	Structure: Walls and Chimneys	2	\$4,768.50				
I.	Structure: Floors and Roofs	1	\$0.00				
J.	General Finishes	2	\$86,125.20				
K.	Interior Lighting	3	\$21,410.00				
L.	Security Systems	3	\$12,203.70				
M.	Emergency/Egress Lighting	3	\$4,282.00				
N.	Fire Alarm	3	\$6,423.00				
O.	Handicapped Access	3	\$0.00				
P.	Site Condition	2	\$30,015.43				
Q.	Sewage System	1	\$0.00				
R.	Water Supply	1	\$0.00				
S.	Exterior Doors	1	\$0.00				
T.	Hazardous Material	2	\$8,737.60				
U.	Life Safety	3	\$14,287.40				
V.	Loose Furnishings	2	\$12,846.00				
W.	Technology	3	\$56,436.76				
X.	Construction Contingency / Non-Construction Cost	-	\$155,068.86				
<b>Total</b>				<b>\$789,808.75</b>			



A. Heating System

**Description:** The existing system for the 1964 Original Construction is a natural gas fired heated water boiler type system, installed in 1964, and is in fair condition. The system in the 1968 Addition is an extension of that found in the 1964 Original Construction. 2-pipe vs. 4-pipe designations are not applicable in this facility, as no central air conditioning is provided. The single heated water boiler, manufactured by Kewanee, was installed in 1964 and is in fair condition. Heating water is distributed to terminal units consisting of unit ventilators, cabinet heaters, unit heaters, fin tubes, and air handlers. The terminal equipment is original to each addition 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 not equipped with louvered interior doors to facilitate Corridor utilization as return air plenums. The existing system is not ducted, and floor to structural deck heights will not accommodate the installation of properly sized ductwork for a future Ohio School Design Manual approved system. The overall heating system is evaluated as not being in safe and efficient 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. Convert to ducted system to facilitate efficient exchange of conditioned air. Provide architectural soffits to accommodate the installation of ductwork.

Item	Cost	Unit	Whole Building	Original Construction (1964) 41,546 ft <sup>2</sup>	Classroom Addition (1968) 4,282 ft <sup>2</sup>	Sum	Comments
HVAC System Replacement:	\$26.12	sq.ft. (of entire building addition)		Required	Required	\$1,197,027.36	(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	\$366,624.00	(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)
<b>Sum:</b>			\$1,563,651.36	\$1,417,549.52	\$146,101.84		



Natural Gas Fired Heated Water Boiler



Unit Ventilator

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B. Roofing

**Description:** The roof over the overall facility is a modified bitumin system by Tremco that was installed in 2006, and is in poor condition. There are District reports of current leaking. One section of the roof is approximately 50% covered with patches, and there is patch material left on the roof to be installed for the next area that leaks. 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 the roof was gained by access hatch and access ladder that are in fair condition. One portion of the roof was 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 roof drains, which are properly located, and in fair condition. The roof is not equipped with overflow roof drains though they are not required as there are no parapets. 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 overall facility requires replacement to meet Ohio School Design Manual guidelines due to condition. The flashing and coping on the overall facility require replacement due to condition. Replace all roof drains in the overall facility. Provide once access ladder for the inaccessible section of the roof. Paint one existing roof access ladder. Install insulation in areas where the roof is being replaced throughout the overall facility.

Item	Cost	Unit	Whole Building	Original Construction (1964)	Classroom Addition (1968)	Sum	Comments
Built-up Asphalt:	\$13.20	sq.ft. (Qty)		41,546 ft <sup>2</sup>	4,282 ft <sup>2</sup>		
				43,623 Required	4,496 Required	\$635,170.80	
Repair/replace cap flashing and coping:	\$18.40	n.ft.		2,666 Required	271 Required	\$54,040.80	
Remove/replace existing roof Drains and Sump:	\$1,200.00	each		27 Required	2 Required	\$34,800.00	
Roof Insulation:	\$3.20	sq.ft. (Qty)		43,623 Required	4,496 Required	\$153,980.80	(non-tapered insulation for use in areas without drainage problems)
Roof Insulation:	\$4.70	sq.ft. (Qty)		10,906 Required	1,124 Required	\$56,541.00	(tapered insulation for limited area use to correct ponding)
Roof Access Ladder with Fall Protection Cage:	\$100.00	n.ft.		10 Required		\$1,000.00	(remove and replace)
<b>Other:</b> Paint Roof Ladder	\$2.75	sq.ft. (Qty)		10 Required		\$27.50	Paint exterior roof access ladder.
<b>Sum:</b>			\$935,560.90	\$849,157.30	\$86,403.60		



Excessive Patching and Stored Patching Materials



Typical Blisters and Cracking

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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 a Classroom location. Isolated room systems consisting of multiple ducted split and packaged roof top units with DX cooling are located in the Administrative Offices, Computer Lab, and Media Center. The ventilation system in the overall facility consists of unit ventilators, original to each addition and in fair condition, providing fresh air to Classrooms and the Media Center, and air handlers, original to each addition and in fair condition, providing fresh air to other miscellaneous spaces such as the Multi-Purpose Room (Gymnasium and Student Dining). Relief air venting is provided by transfer grilles to corridors, ceiling plenums, unit ventilators, central relief fans, and air handlers. 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 not equipped with a kiln. General building exhaust systems for Restrooms, Storage Rooms, Art Rooms, and Custodial Closets do not appear to be inadequately 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 (1964)	Classroom Addition (1968)	Sum	Comments
Kiln Exhaust System:	\$5,000.00	each		41,546 ft <sup>2</sup>	4,282 ft <sup>2</sup>		
				1 Required		\$5,000.00	
<b>Sum:</b>			\$5,000.00	\$5,000.00	\$0.00		



Roof Top Unit



Window AC

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D. Electrical Systems

**Description:** The electrical system provided to the 1964 Original Construction is a 120/208 volts, 800 amp, 3 phase and 4 wire system installed in 1964, and is in fair condition. The system in the 1968 Addition is an extension of that found in the 1964 Original Construction. Power is provided to the school by a single utility owned, pad-mounted transformer located outside the Mechanical Room in a utility company Electrical 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 (5) 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 (6) general purpose outlets, while others are equipped with as few as (4) 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 (1964)	Classroom Addition (1968)	Sum	Comments
System Replacement:	\$16.23	sq.ft. (of entire building addition)		41,546 ft <sup>2</sup>	4,282 ft <sup>2</sup>	\$743,788.44	(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)
<b>Sum:</b>			\$743,788.44	\$674,291.58	\$69,496.86		



Main Electrical Distribution Panel



Electrical Sub-Panel

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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 provided and is in good condition. The domestic water supply piping in the overall facility is reported to be mostly copper with limited galvanized steel. 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 has systematically replaced the galvanized steel with copper as needed. The waste piping in the overall facility is reported to be mostly cast iron with limited galvanized steel. The cast iron is original to the overall facility. Both the cast iron and galvanized steel are in fair condition. The facility is equipped with (2) 91 - gallon gas water heaters which are in good condition. The school contains 2 Large Group Restrooms for boys, 2 Large Group Restrooms for girls, 2 Restrooms associated with specialty Classrooms and 4 Restrooms for staff. Boys' Large Group Restrooms contain 2 ADA and 2 non-ADA floor mounted flush valve toilets, 2 ADA and 6 non-ADA wall mounted flush valve urinals, as well as 2 ADA and 3 non-ADA wall mounted lavatories. Girls' Large Group Restrooms contain 2 ADA and 6 non-ADA floor mounted flush valve toilets, as well as 2 ADA and 3 non-ADA wall mounted lavatories. The Restrooms associated with Specialty Classrooms contain 0 ADA and 2 non-ADA floor mounted flush valve toilets, as well as 1 ADA and 1 non-ADA wall mounted lavatories. No urinals are associated with these Restrooms. Staff Restrooms contain 1 ADA and 3 non-ADA floor mounted flush valve toilets, as well as 2 ADA and 2 non-ADA wall mounted lavatories. In addition, there are 6 non-functioning shower heads located in former Locker Rooms that are now used as storage and offices. Condition of fixtures is good to fair. The facility is equipped with 0 ADA and 0 non-ADA drinking fountains, as well as 3 ADA and 1 non-ADA electric water coolers, which are in good to fair condition. The 25 Elementary Classrooms are mostly equipped with ADA or non-ADA sink mounted type drinking fountains. The Classrooms which do have a sink mounted type drinking fountain are in good to fair condition. The 2 Kindergarten Classrooms are equipped with a sink only which are in fair condition. It is reported that the Special Education/Needs Classroom located at this facility serves the Special Education/Needs for all the Elementary Schools in the District. Special Education/Needs Classroom is not equipped with the required Restroom facility. Special Education Classroom is located adjacent to Restrooms in the Corridor. Kitchen is equipped with the required Restroom and the fixtures are in fair condition. Heath Clinic is equipped with the required Restroom and the fixtures are in good to fair condition. Kindergarten Classrooms are equipped with Restroom facilities and the fixtures are in fair condition. Kitchen fixtures consist of 1 double compartment sink, 1 rinse sink with disposal, 1 hand wash sink, 1 interior wall hydrant 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 17 toilets, 5 urinals, 17 lavatories, 25 Classroom sink mounted drinking fountains, and 5 electric water coolers. Observations revealed that the school is currently equipped with 18 toilets, 8 urinals, 16 lavatories, 20 Classroom sink mounted drinking fountains and 4 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 mostly provided.

Rating:

3 Needs Replacement

Recommendations:

In the overall facility, replace the remaining galvanized steel domestic water piping. Replace the cast iron and galvanized steel waste piping in the overall facility, 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 6 toilets, 3 lavatories (include ADA compliant faucets) and 1 electric water cooler. Provide 2 additional electric water coolers. Due to age, condition, LEED, OBC and OSFC, replace 47 faucets and valves throughout the overall facility. Replace 4 and provide 3 additional in Classroom sinks with deck mounted drinking fountain (include ADA compliant faucets). All fixtures, whether new or replaced, to be mounted at ADA compliant heights. Provide 1 additional exterior wall hydrants. Provide 2 solids interceptors for the Art Room. See Item O for replacement of fixtures related to ADA requirements, as well as the reconfiguration of 1 Staff Restroom in the Kitchen and 2 Kindergarten Restrooms. Funding for replacement of Kitchen fixtures is provided for in Item J.

Item	Cost	Unit	Whole Building	Original Construction (1964)	Classroom Addition (1968)	Sum	Comments
				41,546 ft <sup>2</sup>	4,282 ft <sup>2</sup>		
Domestic Supply Piping:	\$3.50	sq.ft. (of entire building addition)		Required	Required	\$160,398.00	(remove / replace)
Sanitary Waste Piping:	\$3.50	sq.ft. (of entire building addition)		Required	Required	\$160,398.00	(remove / replace)
Toilet:	\$1,500.00	unit		6 Required		\$9,000.00	(remove / replace) See Item O
Sink:	\$1,500.00	unit		3 Required		\$4,500.00	(remove / replace)
Electric water cooler:	\$3,000.00	unit		2 Required	1 Required	\$9,000.00	(double ADA)
Replace faucets and flush valves	\$500.00	per unit		43 Required	4 Required	\$23,500.00	(average cost to remove/replace)
<b>Other:</b> Classroom Sink with Deck Mounted Drinking Fountain	\$3,800.00	each		7 Required		\$26,600.00	Provide new Classroom sink with deck mounted drinking fountain. Includes fixture, demolition, supply piping, drains and floor repair.
<b>Other:</b> Exterior Wall Hydrant	\$1,400.00	each		1 Required		\$1,400.00	Provide additional exterior wall hydrants.
<b>Other:</b> Solids Interceptor	\$2,000.00	each		2 Required		\$4,000.00	Provide a solids interceptor on sinks in Art Room.
<b>Sum:</b>			\$398,796.00	\$363,822.00	\$34,974.00		



Commercial Dish Washer



Reduced Pressure Backflow Preventer

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F. Windows

**Description:** The overall facility is equipped with aluminum frame windows with single glazed type window system, which was installed in 1964 and 1968, and is in fair to poor condition. Windows in the Library were recently replaced and are in good condition. The window system features operable windows throughout the building, and operable windows are not equipped with opening limiters, but do contain insect screens in fair condition. Window system seals are in 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. There are glass block windows in the overall facility, in fair to poor condition. The exterior doors in the overall facility are equipped with aluminum sidelights and 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:** 3 Needs Replacement

**Recommendations:** Replace the existing non-insulated window system and glass block in the overall facility, except for the Library windows, with a new insulated window system to comply with Ohio School Design Manual requirements.

Item	Cost	Unit	Whole Building	Original Construction (1964)	Classroom Addition (1968)	Sum	Comments
				41,546 ft <sup>2</sup>	4,282 ft <sup>2</sup>		
Insulated Glass/Panels:	\$60.00	sq.ft. (Qty)		3,553 Required	663 Required	\$252,960.00	(includes blinds)
Sum:			\$252,960.00	\$213,180.00	\$39,780.00		



Typical Windows of the Original Construction



Typical Aluminum Window

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G. Structure: Foundation

**Description:** The overall facility is equipped with concrete foundation walls on concrete footings, which displayed minor 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 no past leaking. 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.

Item	Cost	Unit	Whole Building	Original Construction (1964)	Classroom Addition (1968)	Sum	Comments
				41,546 ft <sup>2</sup>	4,282 ft <sup>2</sup>		
<b>Other: Repair Foundation</b>	\$28.00	sq.ft. (Qty)		56 Required	16 Required	\$2,016.00	Repair minor cracking and spalling.
<b>Sum:</b>			\$2,016.00	\$1,568.00	\$448.00		



Typical Foundation of the Original Construction



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 minor deterioration, and is in good to fair condition. The exterior masonry appears to have appropriately spaced and adequately caulked control joints in fair condition. Control joints are provided at some lintel locations, at doors and windows, building corners, and wall offsets and are in fair condition. The school does not have sufficient expansion joints, and they are in fair condition. There is one corner in the Original Construction on the front elevation that is cracked due to lack of expansion joints. Exterior walls in the overall facility inadequately insulated. Brick veneer masonry walls are not cavity walls. Weep holes and vents are not provided or required, with the exception of weeps being provided in the masonry below the new Library windows, and those are in good condition. Weep holes are not rope type weeps. Vents are not provided. The exterior masonry has not been cleaned and sealed in recent years, and shows evidence of mortar deterioration in minor locations throughout the building. Architectural exterior accent materials consist of EIFS and vertical vinyl siding, which are in good to fair condition. Exterior building fenestration in the Original Construction represents 19.71% of the exterior surfaces. Exterior building fenestration in the 1968 Classroom Addition represents 26.68% of the exterior surfaces. The classrooms in the overall facility have unit ventilators which will be removed. Masonry infill will be required. Interior Corridor and demising walls are concrete masonry units and glazed block 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 good to fair condition. The exterior lintels are steel, and are in fair condition. Chimneys are in good condition. Canopies over entrances are steel tube frame and plaster type construction, and are in good condition. Exterior soffits are of plaster type construction, and in good condition. The school is not equipped with a loading dock.

**Rating:** 2 Needs Repair

**Recommendations:** Provide tuckpointing in all areas of mortar deterioration as required through the overall facility. Provide masonry cleaning and sealing as required through the overall facility. Recaulk existing control joints. Sawcut and caulk one new expansion joint in existing masonry in the Original Construction. Prep and paint exposed steel lintels through the overall facility. Exterior wall insulation deficiencies are addressed in Item J. Infill masonry openings from removed unit ventilators.

Item	Cost	Unit	Whole Building	Original Construction (1964)	Classroom Addition (1968)	Sum	Comments
				41,546 ft <sup>2</sup>	4,282 ft <sup>2</sup>		
Tuckpointing:	\$5.25	sq.ft. (Qty)		54 Required	16 Required	\$367.50	(wall surface)
Exterior Masonry Cleaning:	\$1.50	sq.ft. (Qty)		14,097 Required	1,821 Required	\$23,877.00	(wall surface)
Exterior Masonry Sealing:	\$1.00	sq.ft. (Qty)		14,097 Required	1,821 Required	\$15,918.00	(wall surface)
Exterior Caulking:	\$5.50	ln.ft.		72 Required	24 Required	\$528.00	(removing and replacing)
Install Control Joints	\$60.00	ln.ft.		14 Required		\$840.00	
<b>Other:</b> Masonry Infill	\$27.00	sq.ft. (Qty)		96 Required		\$2,592.00	Provide masonry infill at removed unit ventilators.
<b>Other:</b> Paint lintels	\$2.75	sq.ft. (Qty)		20 Required		\$55.00	Paint existing steel lintels.
<b>Sum:</b>			\$44,177.50	\$39,409.00	\$4,768.50		



Exterior Masonry



Exterior Masonry Cleaning Needed

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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. There are no intermediate floors in this single story structure. Ceiling to structural deck spaces are insufficient to accommodate HVAC, electrical, and plumbing scopes of work in required renovations. Ceiling height in the corridors is approximately 8'-0". The roof construction of the overall facility is tectum deck on steel joist type construction, and is in fair condition.

**Rating:** 1 Satisfactory

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

Item	Cost	Unit	Whole Building	Original Construction (1964)	Classroom Addition (1968)	Sum	Comments
				41,546 ft <sup>2</sup>	4,282 ft <sup>2</sup>		
Sum:			\$0.00	\$0.00	\$0.00		



Typical Roof Structure of the Original Construction



Typical Roof Structure of the Original Construction

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J. General Finishes

**Description:** The overall facility features conventionally partitioned Classrooms with VCT type flooring, acoustical tile type ceilings, as well as painted block and glazed block type wall finishes, and they are in fair condition. The overall facility has Corridors with terrazzo type flooring, acoustical tile type ceilings, as well as painted block and glazed block 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 painted block and glazed block type wall finishes, and they are in fair condition. Toilet partitions are metal or plastic, and are in good to fair condition. Classroom casework in the overall facility is wood type construction with plastic laminate tops, is inadequately provided, and in fair condition. The typical Classroom contains 5 lineal feet of casework, and Classroom casework provided ranges from 5 to 8 feet. 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 non-louvered interior doors that are flush mounted with proper ADA clearances, and in fair condition. Interior doors are not equipped with proper ADA hardware, except for three doors in the 1968 Addition. The Gymnasium space has rubber type flooring, exposed type ceilings, as well as brick, painted block, and glazed block type wall finishes, and they are in fair condition. Gymnasium stands are not provided. Six Gymnasium basketball backboards are a fixed type, and are in good to fair condition. The Media Center, located in the 1964 Original Construction, has marmoleum type flooring, acoustical tile type ceilings, as well as painted block and glazed block type wall finishes, and they are in fair condition. Student Dining shares the Gymnasium space. OSDM-required fixed equipment for Stage is adequately provided, and in fair 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 oversized 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 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.

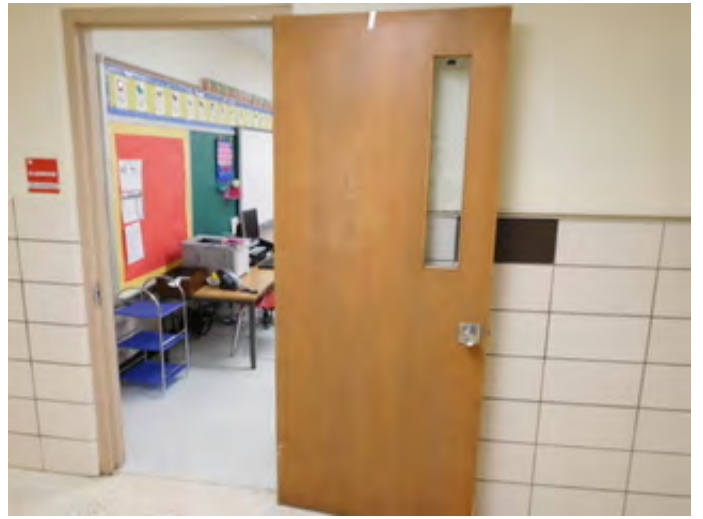
**Rating:** 2 Needs Repair

**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. Provide for the replacement of walk-in cooler and freezer due to age and condition. Provide for the replacement of the Warming Kitchen Hood to meet OSDM standards. Provide for complete replacement of Warming Kitchen Equipment 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 Gymnasium bleachers. Provide for appropriate sound attenuation acoustical surface treatments in the Gymnasium, Media Center, and Music Room. Provide for Stage Equipment. Provide for additional wall insulation. Remove Corridor transfer grilles, fill voids, and coordinate with adjacent finishes.

Item	Cost	Unit	Whole Building	Original Construction (1964) 41,546 ft²	Classroom Addition (1968) 4,282 ft²	Sum	Comments
Complete Replacement of Finishes and Casework (Elementary):	\$15.90	sq.ft. (of entire building addition)		Required	Required	\$728,665.20	(elementary, per building area, with removal of existing)
Toilet Accessory Replacement	\$0.20	sq.ft. (of entire building addition)		Required	Required	\$9,165.60	(per building area)
Door, Frame, and Hardware:	\$1,300.00	each		72 Required	4 Required	\$98,800.00	(non-ADA)
Terrazzo Floor Repair	\$25.00	sq.ft. (Qty)		273 Required	27 Required	\$7,500.00	(floor area affected; max. area to be 300 sf)
Bleacher Replacement	\$110.00	per seat		319 Required		\$35,090.00	(based on current enrollment)
Art Program Kiln:	\$2,750.00	each		1 Required		\$2,750.00	
Additional Wall Insulation	\$6.00	sq.ft. (Qty)		14,097 Required	1,821 Required	\$95,508.00	(includes the furring out of the existing walls, insulation and abuse resistant GWB)
Hard Plaster Replacement	\$9.00	sq.ft. (Qty)		1,000 Required		\$9,000.00	(Hazardous Material Replacement Cost - See T.)
Gypsum Board Replacement	\$4.00	sq.ft. (Qty)		1,600 Required		\$6,400.00	(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)		1,167 Required		\$131,287.50	(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)
<b>Other: Sound Control</b>	\$3.00	sq.ft. (Qty)		6,438 Required		\$19,314.00	Provide for appropriate sound attenuation acoustical surface treatments in the Gymnasium, Media Center, and Music Room.
<b>Other: Stage Equipment</b>	\$14,000.00	allowance		Required		\$14,000.00	Provide for a Stage Equipment allowance.
<b>Other: Transfer Grilles</b>	\$48.00	sq.ft. (Qty)		40 Required	8 Required	\$2,304.00	Remove Corridor transfer grilles, fill voids, and coordinate with adjacent finishes.
<b>Sum:</b>			\$1,228,650.30	\$1,142,525.10	\$86,125.20		



Kitchen Hood



Typical Classroom Door

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K. Interior Lighting

**Description:** The typical Classrooms in the overall facility are equipped with T-8 1x4 suspended direct fluorescent fixture type lighting, with dual level switching. Classroom fixtures are in fair condition, providing an average illumination of 47 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 14 FC, which is less than the 15 FC recommended by the OSDM. The Multi-Purpose Room (Gymnasium/Student Dining) spaces are equipped with T-8 2x4 surface mount 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 suspended 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 1x4 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 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, 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, and installation of systems outlined in Items A, C, J, and U.

Item	Cost	Unit	Whole Building	Original Construction (1964)	Classroom Addition (1968)	Sum	Comments
Complete Building Lighting Replacement	\$5.00	sq.ft. (of entire building addition)		41,546 ft <sup>2</sup>	4,282 ft <sup>2</sup>	\$229,140.00	Includes demo of existing fixtures
<b>Sum:</b>			\$229,140.00	\$207,730.00	\$21,410.00		



Classroom Fluorescent Light Fixtures



Media Center 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 is no site fencing provided for security or separation from vehicular traffic. The exterior site lighting system is equipped with recessed incandescent and surface mounted LED and HID high pressure sodium entry lights in fair condition. Pedestrian walkways are illuminated with surface mounted LED and HID high pressure sodium fixtures in fair condition. Parking and bus pick-up / drop off areas are not illuminated. 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. Provide OSDM-compliant playground fencing, with funding included in complete replacement of security system.

Item	Cost	Unit	Whole Building	Original Construction (1964)	Classroom Addition (1968)	Sum	Comments
				41,546 ft <sup>2</sup>	4,282 ft <sup>2</sup>		
Security System:	\$1.85	sq.ft. (of entire building addition)		Required	Required	\$84,781.80	(complete, area of building)
Exterior Site Lighting:	\$1.00	sq.ft. (of entire building addition)		Required	Required	\$45,828.00	(complete, area of building)
Sum:			\$130,609.80	\$118,406.10	\$12,203.70		



Security System CCTV Camera



Entry Light Fixtures

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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 (1964)	Classroom Addition (1968)	Sum	Comments
Emergency/Egress Lighting	\$1.00	sq.ft. (of entire building addition)		41,546 ft <sup>2</sup>	4,282 ft <sup>2</sup>		
				Required	Required	\$45,828.00	(complete, area of building)
<b>Sum:</b>			\$45,828.00	\$41,546.00	\$4,282.00		



Exit Sign with Emergency Egress Lighting



Exit Sign with Emergency Egress Lighting

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N. Fire Alarm

**Description:** The overall facility is equipped with a Faraday non-addressable type fire alarm system, installed in 1964 with minimal upgrades, and in fair condition, consisting of manual pull stations and audible devices/bells. The system is not automatic and is not monitored by a third party. The system does not appear to be equipped with sufficient audible devices/bells. The system is not equipped with any horn and strobe indicating devices, 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 (1964)	Classroom Addition (1968)	Sum	Comments
Fire Alarm System:	\$1.50	sq.ft. (of entire building addition)		41,546 ft <sup>2</sup> Required	4,282 ft <sup>2</sup> Required	\$68,742.00	(complete new system, including removal of existing)
Sum:			\$68,742.00	\$62,319.00	\$6,423.00		



Fire Alarm System Control Panel



Fire Alarm System Manual Pull Station

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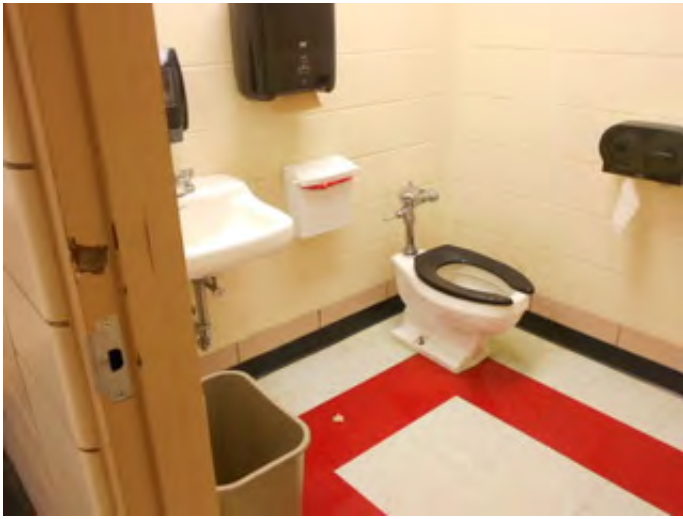
O. Handicapped Access

**Description:** At the site, there are accessible routes provided from the public right-of-way, the accessible parking areas, and from the passenger unloading zone to the main entrance. There is an accessible route connecting most areas of the site. The exterior entrances are ADA accessible. 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 1 is provided. Playground layout and equipping are compliant. On the interior of the building, space allowances and reach ranges are mostly compliant. There is an accessible route through to or through the overall facility 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 compliant. Special provisions for floor level changes in this single story structure are not required. Access to the Stage not facilitated by a Corridor at Stage level, chair lift, or ramp. Interior doors are not recessed. Doors that are not recessed, open all the way and do not impede the traffic flow. Doors are provided adequate clearances, with the exception of 3 doors, and are mostly not provided with ADA-compliant hardware. 8 ADA-compliant toilets are required, and 5 are currently provided. 8 ADA-compliant Restroom lavatories are required, and 7 are currently provided. 2 ADA-compliant urinals are required, and 2 are currently provided. 3 ADA-compliant electric water coolers are required, and 3 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 compliant with ADA requirements. Special Education/Needs do not have in Classroom Restrooms. Special Education/Needs Classroom is located adjacent to Restrooms in the Corridor. Adequate ADA signage is provided on the interior, but not on the exterior.

**Rating:** 3 Needs Replacement

**Recommendations:** To facilitate the school's meeting of ADA requirements, throughout the overall facility: Provide ADA-compliant signage. Provide 1 power assisted door at the main entrance. Provide 1 chair lift to facilitate Stage access. Replace 1 toilet in the Health Clinic Restroom due to age. Replace 2 toilets, 2 wall mounted lavatories and provide 2 sets of grab bars in the Staff Restrooms. Reconfigure and enlarge 1 existing Staff Restroom in the Kitchen and 2 Kindergarten Restrooms, to include 3 toilets, 3 lavatories and 3 full sets of accessories including grab bars. Replace a total of 7 in Classroom sink faucets with ADA compliant faucets. All fixtures, whether new or replaced, to be mounted at correct ADA compliant heights. Provide 16 ADA compliant pipe wrap throughout the overall facility. Rework a total of 3 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 toilets and lavatories to be mounted at ADA compliant heights is provided for in Item E.

Item	Cost	Unit	Whole Building	Original Construction (1964)	Classroom Addition (1968)	Sum	Comments
				41,546 ft <sup>2</sup>	4,282 ft <sup>2</sup>		
Lifts:	\$15,000.00	unit		1 Required		\$15,000.00	(complete)
Toilet/Urinals/Sinks:	\$1,500.00	unit		5 Required		\$7,500.00	(replacement ADA)
ADA Assist Door & Frame:	\$7,500.00	unit		1 Required		\$7,500.00	(openers, electrical, patching, etc)
Replace Doors:	\$5,000.00	leaf		3 Required		\$15,000.00	(rework narrow opening to provide 3070 wood door, HM frame, door/light, includes hardware)
<b>Other:</b> ADA Pipe Wrap	\$50.00	each		16 Required		\$800.00	Provide ADA compliant pipe wrap on all wall mounted lavatories.
<b>Other:</b> Grab bars	\$345.00	each		2 Required		\$690.00	Provide 1 set of grab bars. Includes grab bars, demolition, blocking and wall repair.
<b>Other:</b> Lavatory Faucet	\$250.00	each		7 Required		\$1,750.00	Provide new ADA compliant lavatory sink faucet. Includes removal and re-installation.
<b>Other:</b> Reconfigure Toilet Room for ADA Compliance	\$10,000.00	per restroom		3 Required		\$30,000.00	Enlarge and reconfigure existing Toilet Room to meet ADA requirements. Includes fixtures, walls, door and hardware, supply lines and full set of accessories including grab bars.
<b>Sum:</b>			\$78,240.00	\$78,240.00	\$0.00		



Non Compliant Unisex Restroom



ADA Compliant Power Assisted Door

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P. Site Condition

Description:

The 5.82 acre relatively flat site is located in a small town residential setting with moderate tree, shrub, and floral type landscaping. Outbuildings include a small storage shed. There are apparent problems with erosion and ponding. Signs of soil erosion were observed at edges of pavement, and signs of ponding were noticed on asphalt surfaces and some lawn areas. There are signs of underground storm line repairs due to select asphalt patching throughout the hard surface playground areas, although no reports of said repairs can be confirmed. The site is bordered by lightly traveled city streets. Two entrances onto the site are provided. Bus traffic does not access the site. There is a curbside bus loading and unloading zone in front of the school, which is not separated from other vehicular traffic. Staff and visitor parking is facilitated by an asphalt parking lot in poor condition, containing 37 parking places, which provides adequate parking for staff members, visitors, and the disabled. The site and parking lot drainage design, consisting of sheet drainage, catch basins, and storm sewers, does not provide adequate evacuation of storm water, and signs of parking lot ponding were observed. Concrete curbs in fair to poor condition are appropriately placed. Concrete and asphalt sidewalks are properly sloped, are located to provide a logical flow of pedestrian traffic, and are in fair condition. Trash pick-up and service drive pavement is not heavy duty, is in poor condition, and is equipped with a concrete pad area for dumpsters, which is in poor condition. Exterior concrete steps and a ramp are located at the main entrance to the building, and are in good to fair condition. Exterior concrete steps are also provided for access into the Mechanical and Electrical Rooms, and they are in good to fair condition. Steel handrails are provided at all steps, and they are in fair condition, but do not meet all OSDM and OBC requirements. There is no site fencing provided for security or separation from vehicular traffic. 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. Hard surface play areas are provided with three basketball courts, funnel ball, and painted surface games on an asphalt surface in poor condition. The site is equipped with sufficient tables and benches in good to fair condition. The athletic facilities are comprised of an open practice field with soccer goals, and they are in fair condition. There is a city park adjacent to the site, which contains two baseball or softball diamonds. Site features are suitable for outdoor instruction which is enhanced through the District's provision of outdoor furniture and two wood structure pavilions. There are no readily evident conditions that might significantly effect master planning with regard to the site. Due to the size of the site, building expansion is not recommended. There is a short retaining wall to the north of the site between the city park and school property line.

Rating:

2 Needs Repair

Recommendations:

Provide for replacement of heavy duty asphalt due to age and condition. Provide for replacement of light duty asphalt due to age and condition. Provide for an adequate bus drop-off area. Provide for replacement of concrete curbs due to age and condition. Provide for replacement of concrete sidewalks due to age and condition. Provide for exterior steel handrails and guardrails due to condition and where required by the OBC and OSDM standards. Provide for the replacement of the concrete dumpster pad due to age and condition. Provide for soil stabilization at edges of pavement. Provide for replacement of catch basins due to signs of ponding on site. Provide for replacement of two exterior furnishings due to condition. Provide for replacement of basketball backboards due to age and condition. Provide allowances for unforeseen site circumstances.

Item	Cost	Unit	Whole Building	Original Construction (1964) 41,546 ft <sup>2</sup>	Classroom Addition (1968) 4,282 ft <sup>2</sup>	Sum	Comments
New Asphalt Paving (heavy duty):	\$27.80	sq. yard		1,624 Required	161 Required	\$49,623.00	
New Asphalt Paving (light duty):	\$25.80	sq. yard		3,986 Required	394 Required	\$113,004.00	
Bus Drop-Off for Elementary	\$110.00	per student		291 Required	29 Required	\$35,200.00	<b>(Number of students should be rounded up to the nearest 100. \$5500 per bus; 40 students per bus; 80% of elementary school students riding)</b>
Concrete Curb:	\$18.00	in.ft.		410 Required	40 Required	\$8,100.00	(new)
Concrete Sidewalk:	\$4.69	sq.ft. (Qty)		2,502 Required	247 Required	\$12,892.81	(5 inch exterior slab)
Stabilize soil erosion:	\$2.50	sq.ft. (Qty)		500 Required	50 Required	\$1,375.00	(includes stripping and re-grading)
Exterior Hand / Guard Rails:	\$43.00	in.ft.		58 Required	6 Required	\$2,752.00	
Provide Exterior Parking Lot Catch Basin:	\$2,500.00	each		4 Required	1 Required	\$12,500.00	
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 <b>one</b> 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	\$68,742.00	Include this one <b>or</b> the next. (Each addition should have this item)
<b>Other:</b> Basketball Backboard Replacement	\$1,000.00	each		5 Required	1 Required	\$6,000.00	Provide for replacement of basketball backboards due to age and condition.
<b>Other:</b> Exterior Furnishing Replacement	\$500.00	each		2 Required		\$1,000.00	Provide for replacement of two exterior furnishings due to condition.
<b>Sum:</b>			\$363,588.81	\$333,573.38	\$30,015.43		



Pavillion



Play Area Asphalt and Catch Basin

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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 (1964)	Classroom Addition (1968)	Sum	Comments
				41,546 ft <sup>2</sup>	4,282 ft <sup>2</sup>		
Sum:			\$0.00	\$0.00	\$0.00		



Sanitary Waste Piping



Waste Vent 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 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 (1964)	Classroom Addition (1968)	Sum	Comments
				41,546 ft <sup>2</sup>	4,282 ft <sup>2</sup>		
Sum:			\$0.00	\$0.00	\$0.00		



Incoming Domestic Water Service Line



Incoming Domestic Water Service Meter

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S. Exterior Doors

**Description:** Typical exterior doors in the overall facility are fiber-reinforced plastic type construction, installed on aluminum frames, and in fair 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, transoms, sidelights, 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 (1964)	Classroom Addition (1968)	Sum	Comments
				41,546 ft <sup>2</sup>	4,282 ft <sup>2</sup>		
Sum:			\$0.00	\$0.00	\$0.00		



Typical Entrance Doors of the Original Construction



Typical Exterior Door of the Original Construction

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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 2013, documenting known and assumed locations of asbestos and other hazardous materials. Hard Plaster, Cove Base Mastic, Marmoleum Floor Mastic, Window and Door Caulking, Fire and Solid Core Doors, Pipe insulation, Sink Undercoating, Drywall Joint Compound, Chalk Board Mastic, Cement Board, Boiler Components, and a Stage Curtain containing hazardous materials are located in the overall facility 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:** 2 Needs Repair

**Recommendations:** Remove all hazardous materials, inclusive of asbestos-containing materials in the overall facility, as noted in the attached Environmental Hazards Assessment. Provide for removal of fire doors including all interior solid core doors. 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 (1964)	Classroom Addition (1968)	Sum	Comments
<i>Environmental Hazards Form</i>				41,546 ft <sup>2</sup>	4,282 ft <sup>2</sup>		
<i>Estimated Cost For Abatement Contractor to Perform Lead Mock-Ups</i>	\$1.00	per unit		5,000 Required	0 Required	\$5,000.00	
<i>Special Engineering Fees for LBP Mock-Ups</i>	\$1.00	per unit		5,000 Required	0 Required	\$5,000.00	
<i>Fluorescent Lamps &amp; Ballasts Recycling/Incineration</i>	\$0.10	sq.ft. (Qty)		33,237 Required	3,426 Required	\$3,666.30	
<i>Pipe Insulation Removal</i>	\$10.00	n.ft.		500 Required	0 Required	\$5,000.00	
<i>Dismantling of Boiler/Furnace/Incinerator</i>	\$2,000.00	each		1 Required	0 Required	\$2,000.00	
<i>Hard Plaster Removal</i>	\$7.00	sq.ft. (Qty)		1,000 Required	0 Required	\$7,000.00	See J
<i>Gypsum Board Removal</i>	\$6.00	sq.ft. (Qty)		1,600 Required	0 Required	\$9,600.00	See J
<i>Cement Board Removal</i>	\$5.00	sq.ft. (Qty)		80 Required	0 Required	\$400.00	
<i>Fire Door Removal</i>	\$100.00	each		73 Required	7 Required	\$8,000.00	See S
<i>Window Component (Compound, Tape, or Caulk) - Reno &amp; Demo</i>	\$300.00	each		238 Required	12 Required	\$75,000.00	
<i>Sink Undercoating Removal</i>	\$100.00	each		26 Required	0 Required	\$2,600.00	
<b>Other:</b> Chalk Board Mastic Removal	\$1.00	sq.ft. (Qty)		4,000 Required		\$4,000.00	Provide for removal of Chalk Board mastic
<b>Other:</b> Cove Base Mastic Removal	\$2.00	n.ft.		4,330 Required	300 Required	\$9,260.00	Provide for removal of Cove Base Mastic
<b>Other:</b> Marmoleum and Mastic Removal	\$3.00	sq.ft. (Qty)		5,475 Required	1,165 Required	\$19,920.00	Provide for removal of Marmoleum and Mastic
<b>Other:</b> Stage Curtain Removal	\$1.00	sq.ft. (Qty)		1,000 Required		\$1,000.00	Provide for the removal of the Stage Curtain
<b>Sum:</b>			\$157,446.30	\$148,708.70	\$8,737.60		



Pipe Insulation



Stage Curtain



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. Stair towers and guardrails are not present in this single story structure. Exterior stairways are not present in this single story structure. 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 4 additional fire extinguishers.

Item	Cost	Unit	Whole Building	Original Construction (1964)	Classroom Addition (1968)	Sum	Comments
Sprinkler / Fire Suppression System:	\$3.20	sq.ft. (Qty)		41,546 Required	4,282 Required	\$146,649.60	(includes increase of service piping, if required)
Provide Fire Extinguisher and Wall Cabinet:	\$585.00	each		3 Required	1 Required	\$2,340.00	(includes preparation of wall to receive recessed cabinet)
<b>Sum:</b>			\$148,989.60	\$134,702.20	\$14,287.40		



Compliant Fire Extinguisher



Compliant Exit Corridor

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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 (1964)	Classroom Addition (1968)	Sum	Comments
				41,546 ft <sup>2</sup>	4,282 ft <sup>2</sup>		
CEFPI Rating	6	\$3.00/sq.ft. (of entire building addition)		Required	Required	\$137,484.00	
Sum:			\$137,484.00	\$124,638.00	\$12,846.00		



Typical Student Desk and Chairs



Typical Teacher 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 (1964)	Classroom Addition (1968)	Sum	Comments
				41,546 ft <sup>2</sup>	4,282 ft <sup>2</sup>		
ES portion of building with total SF < 50,000	\$13.18	sq.ft. (Qty)		41,546 Required	4,282 Required	\$604,013.04	
<b>Sum:</b>			\$604,013.04	\$547,576.28	\$56,436.76		



IT Data Rack



Classroom Smartboard

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X. Construction Contingency / Non-Construction Cost

<b>Renovation Costs (A-W)</b>		\$7,138,682.05
7.00%	Construction Contingency	\$499,707.74
<b>Subtotal</b>		\$7,638,389.79
16.29%	Non-Construction Costs	\$1,244,293.70
<b>Total Project</b>		<b>\$8,882,683.49</b>

Construction Contingency	\$499,707.74
Non-Construction Costs	\$1,244,293.70
<b>Total for X.</b>	<b>\$1,744,001.44</b>

<b>Non-Construction Costs Breakdown</b>		
Land Survey	0.03%	\$2,291.52
Soil Borings / Phase I Envir. Report	0.10%	\$7,638.39
Agency Approval Fees (Bldg. Code)	0.25%	\$19,095.97
Construction Testing	0.40%	\$30,553.56
Printing - Bid Documents	0.15%	\$11,457.58
Advertising for Bids	0.02%	\$1,527.68
Builder's Risk Insurance	0.12%	\$9,166.07
Design Professional's Compensation	7.50%	\$572,879.23
CM Compensation	6.00%	\$458,303.39
Commissioning	0.60%	\$45,830.34
Non-Construction Contingency (includes partnering and mediation services)	1.12%	\$85,549.97
<b>Total Non-Construction Costs</b>	<b>16.29%</b>	<b>\$1,244,293.70</b>

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School Facility Appraisal

**Name of Appraiser** Bernie Merritt **Date of Appraisal** 2016-08-06  
**Building Name** Cookson Elementary  
**Street Address** 921 Mystic Lane  
**City/Town, State, Zip Code** Troy, OH 45373  
**Telephone Number(s)** (937) 332.6740  
**School District** Troy City

**Setting:** Small City

Site-Acreage	5.82	Building Square Footage	45,828
Grades Housed	K-5	Student Capacity	480
Number of Teaching Stations	27	Number of Floors	1
Student Enrollment	319		
Dates of Construction	1964,1968		

**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><b>Site is large enough</b> to meet educational needs as defined by state and local requirements</p> <p><i>The site is 5.82 acres compared to 14 acres required by the OSDM.</i></p>	25	10
1.2	<p><b>Site is easily accessible</b> 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	14
1.3	<p><b>Location</b> 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 <b>well landscaped and developed</b> to meet educational needs</p> <p><i>The site is moderately landscaped with mature shade trees, ornamental trees, and shrubs which define the property and emphasize the building entrance. Lawn areas where mowing is required do not exceed 3:1 slope.</i></p>	10	8
1.5	<p>ES Well equipped <b>playgrounds are separated</b> from streets and parking areas</p> <p>MS Well equipped <b>athletic and intermural areas are separated</b> from streets and parking</p> <p>HS Well equipped <b>athletic areas</b> 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 not provided to separate vehicular traffic from pedestrians. Hard surface play areas provide educational features painted on an asphalt surface, which is in poor condition. Basketball courts and funnel ball are provided on the hard surface, but is not separated from vehicular use areas with a fence.</i></p>	10	7
1.6	<p><b>Topography</b> is varied enough to provide desirable appearance and without steep inclines</p> <p><i>The site is gently sloped to provide positive drainage across the site. A flat area is provided 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 <b>soil free of erosion</b></p> <p><i>Soils appear to be stable and well drained, although erosion was evident at edges of sidewalks and pavement. Signs of ponding water were observed.</i></p>	5	3
1.8	<p>Site is suitable for <b>special instructional needs</b>, e.g., outdoor learning</p> <p><i>The site has been developed to accommodate outdoor learning, including benches, pavillions, and picnic tables to facilitate instruction.</i></p>	5	4
1.9	<p><b>Pedestrian services</b> 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 <b>on-site, solid surface parking</b> for faculty and staff is provided</p> <p>HS Sufficient <b>on-site, solid surface parking</b> is provided for faculty, students, staff and community</p> <p><i>Adequate parking is provided for faculty, staff, community and student parking, and is located on asphalt pavement in poor condition.</i></p>	5	3
<b>TOTAL - The School Site</b>		<b>100</b>	<b>65</b>

## 2.0 Structural and Mechanical Features

### School Facility Appraisal

Structural		Points Allocated	Points
2.1	Structure meets all <b>barrier-free</b> requirements both externally and internally <i>Entire building meets most ADA requirements with the exception of signage, Stage access and Restrooms.</i>	15	10
2.2	<b>Roofs</b> appear sound, have positive drainage, and are weather tight <i>The roofs over the entire building require replacement.</i>	15	4
2.3	<b>Foundations</b> are strong and stable with no observable cracks <i>Foundations are in fair condition with observable cracks.</i>	10	8
2.4	<b>Exterior and interior walls</b> have sufficient expansion joints and are free of deterioration <i>Exterior and interior walls are in good condition, have sufficient control and expansion joints, and are free from deterioration.</i>	10	8
2.5	<b>Entrances and exits</b> are located so as to permit efficient student traffic flow <i>Exits are properly located to allow safe egress from the building.</i>	10	8
2.6	<b>Building "envelope"</b> generally provides for energy conservation (see criteria) <i>Building envelope does not meet minimum energy conservation requirements.</i>	10	4
2.7	Structure is <b>free of friable asbestos</b> and <b>toxic materials</b> <i>The building is reported to contain asbestos and other hazardous materials.</i>	10	5
2.8	Interior walls permit sufficient <b>flexibility</b> for a variety of class sizes <i>Interior walls throughout the facility are fixed walls and are not flexible.</i>	10	6
Mechanical/Electrical		Points Allocated	Points
2.9	<b>Adequate light sources</b> 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	<b>Internal water supply</b> 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 <b>wall outlets</b> , 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	<b>Electrical controls</b> are safely protected with <b>disconnect switches</b> easily accessible <i>Disconnect switches are provided in required easily accessible locations to allow for safe servicing of equipment.</i>	10	8
2.13	<b>Drinking fountains</b> 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, but meet ADA requirements. Drinking fountains are properly maintained.</i>	10	8
2.14	Number and size of <b>restrooms meet requirements</b> <i>The number and size of Restrooms meet requirements.</i>	10	9
2.15	<b>Drainage systems</b> are properly maintained and meet requirements <i>Drainage systems exhibit some signs of past leakage and repairs.</i>	10	7
2.16	<b>Fire alarms, smoke detectors, and sprinkler systems</b> 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	<b>Intercommunication system</b> consists of a central unit that allows dependable <b>two-way communication</b> 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	<b>Exterior water supply</b> is sufficient and available for normal usage <i>Exterior wall hydrants are mostly adequately provided around the exterior of the facility.</i>	5	4
<b>TOTAL - Structural and Mechanical Features</b>		<b>200</b>	<b>113</b>

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### 3.0 Plant Maintainability

School Facility Appraisal

		Points Allocated	Points
3.1	<b>Windows, doors, and walls</b> 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	<b>Floor surfaces</b> throughout the building require minimum care <i>Flooring throughout the facility consists of VCT, marmoleum, wood, terrazzo, and sealed concrete, which is somewhat well maintained throughout the facility.</i>	15	10
3.3	<b>Ceilings and walls</b> 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. Painted block and glazed block is easily cleaned and resistant to stain.</i>	10	7
3.4	<b>Built-in equipment</b> is designed and constructed for ease of maintenance <i>Casework is wood type construction with plastic laminate tops, is well constructed and in fair condition.</i>	10	6
3.5	<b>Finishes and hardware</b> , with compatible keying system, are of durable quality <i>Door hardware varies throughout the facility, and does not meet ADA requirements.</i>	10	4
3.6	<b>Restroom fixtures</b> 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 <b>custodial storage space</b> 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 <b>electrical outlets and power</b> , 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	<b>Outdoor light fixtures, electrical outlets</b> , 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	4
<b>TOTAL - Plant Maintainability</b>		<b>100</b>	<b>68</b>

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## 4.0 Building Safety and Security

### School Facility Appraisal

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Site Safety	Points Allocated	Points
4.1 <b>Student loading areas</b> are segregated from other vehicular traffic and pedestrian walkways <i>Student loading occurs in the street, and is not separated from other vehicular traffic.</i>	15	6
4.2 <b>Walkways</b> , both on and offsite, are available for safety of pedestrians <i>Walkways are adequately provided both on and off-site for pedestrian safety.</i>	10	8
4.3 <b>Access streets</b> have sufficient signals and signs to permit safe entrance to and exit from school area <i>School signs are located as required on adjacent access streets.</i>	5	4
4.4 <b>Vehicular entrances and exits</b> permit safe traffic flow <i>Bus traffic remains in the street, and other vehicular traffic is provided with two entry points onto the site. Some other vehicular traffic utilizes the street for student pickup and drop off, which does not permit safe traffic flow.</i>	5	2
4.5      ES <b>Playground equipment</b> is free from hazard MS        Location and types of <b>intramural equipment</b> are free from hazard HS <b>Athletic field equipment</b> is properly located and is free from hazard <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>	5	4

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Building Safety	Points Allocated	Points
4.6 <b>The heating unit(s)</b> is located away from student occupied areas <i>Heating boilers are located in rooms that are not accessible by students. Unit ventilators are located in the Classrooms and other learning areas.</i>	20	10
4.7            Multi-story buildings have at least <b>two stairways</b> for student egress <i>The overall facility is one story without stairways.</i>	15	15
4.8 <b>Exterior doors</b> open outward and are equipped with panic hardware <i>Exterior doors open in the direction of travel and are equipped with panic hardware.</i>	10	8
4.9 <b>Emergency lighting</b> is provided throughout the entire building with exit signs on separate electrical circuits <i>Emergency light fixtures and exit signs are not on separate circuits and are inadequately provided.</i>	10	4
4.10 <b>Classroom doors</b> are recessed and open outward <i>Classroom doors are not recessed from the Corridor. Doors open outward, but do not impede traffic flow in the Corridors.</i>	10	8

4.11	<b>Building security systems</b> are provided to assure uninterrupted operation of the educational program <i>Security systems are inadequately provided and are in fair condition.</i>	10	2
4.12	<b>Flooring</b> (including ramps and stairways) is maintained in a non-slip condition <i>Terrazzo and VCT flooring has been well maintained throughout the facility.</i>	5	4
4.13	<b>Stair risers</b> (interior and exterior) do not exceed 6 1/2 inches and range in number from 3 - 16 <i>The overall facility is one story without stairways.</i>	5	5
4.14	<b>Glass</b> 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	<b>Fixed Projections</b> 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	<b>Traffic areas</b> 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.</i>	5	4

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**Emergency Safety**

		Points Allocated	Points
4.17	Adequate <b>fire safety equipment</b> is properly located <i>The facility is not sprinkled. Fire alarm devices are not provided adequately. Fire extinguishers are not adequately provided.</i>	15	4
4.18	There are at least <b>two independent exits</b> 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	14
4.19	<b>Fire-resistant materials</b> are used throughout the structure <i>The structure is a masonry load bearing system with steel joist and tectum deck. Interior walls are masonry. Wall and ceiling finishes comply with OBBC requirements.</i>	15	12
4.20	Automatic and manual <b>emergency alarm system</b> with a distinctive sound and flashing light is provided <i>The fire alarm is not equipped with automatic actuation devices and is not provided with visual indicating devices.</i>	15	2
<b>TOTAL - Building Safety and Security</b>		<b>200</b>	<b>124</b>

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## 5.0 Educational Adequacy

### School Facility Appraisal

Academic Learning Space		Points Allocated	Points
5.1	<p><b>Size of academic learning areas</b> meets desirable standards</p> <p><i>The average Classroom is 860 SF compared to 900 SF required by the OSDM.</i></p>	25	16
5.2	<p><b>Classroom space</b> permits arrangements for small group activity</p> <p><i>Slightly undersized Classrooms do not allow sufficient space for effective small group activities.</i></p>	15	9
5.3	<p><b>Location of academic learning areas</b> is near related educational activities and away from disruptive noise</p> <p><i>The Gymnasium is properly isolated from the academic learning areas to reduce distractions. The Music Room is located adjacent to academic learning areas, which can be distracting.</i></p>	10	6
5.4	<p><b>Personal space</b> in the classroom away from group instruction allows privacy time for individual students</p> <p><i>Slightly undersized Classrooms do not permit privacy time for individual students.</i></p>	10	6
5.5	<p><b>Storage for student materials</b> is adequate</p> <p><i>Storage cubbies and coat hooks, located in the Classroom, are adequately provided for student storage.</i></p>	10	8
5.6	<p><b>Storage for teacher materials</b> is adequate</p> <p><i>Casework is inadequately provided for storage of teacher materials.</i></p>	10	5

Special Learning Space		Points Allocated	Points
5.7	<p><b>Size of special learning area(s)</b> meets standards</p> <p><i>Two Special Education Classrooms total is 1,064 SF compared to 900 SF recommended in the OSDM. Special Education Classrooms are appropriately sized, and meet standards.</i></p>	15	12
5.8	<p><b>Design of specialized learning area(s)</b> is compatible with instructional need</p> <p><i>Special Education spaces are properly designed to meet instructional needs.</i></p>	10	8
5.9	<p><b>Library/Resource/Media Center</b> provides appropriate and attractive space</p> <p><i>The Media Center is 1,957 SF compared to 957 SF recommended in the OSDM. The Media Center is an not visually appealing, but includes natural light and sufficient book storage space.</i></p>	10	8
5.10	<p><b>Gymnasium (or covered P.E. area)</b> adequately serves physical education instruction</p> <p><i>The Gymnasium is 3,647 SF compared to 3,500-10,000 SF recommended in the OSDM.</i></p>	5	4
5.11	<p>ES <b>Pre-kindergarten and kindergarten space</b> is appropriate for age of students and nature of instruction</p> <p>MS/HS <b>Science</b> program is provided sufficient space and equipment</p>	10	8

Pre-K and Kindergarten spaces are adequate for age of students served.

5.12	<b>Music Program</b> is provided adequate sound treated space	5	2
	<i>The Music Room is 834 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	<b>Space for art</b> is appropriate for special instruction, supplies, and equipment	5	2
	<i>The Art Room is 957 SF compared to 1,200 SF recommended in the OSDM. Art instruction is provided in a standard Classroom without sufficient space for storage of supplies and equipment.</i>		

<b>School Facility Appraisal</b>	Points Allocated	Points	
5.14	<b>Space for technology education</b> 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 <b>small groups and remedial instruction</b> 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	<b>Storage for student and teacher material</b> is adequate	5	3
	<i>Storage cubbies and coat hooks have been adequately provided for storage of student materials. Casework is not adequately provided for storage of teacher materials.</i>		

<b>Support Space</b>	Points Allocated	Points	
5.17	<b>Teacher's lounge and work areas</b> reflect teachers as professionals	10	4
	<i>The Teacher's Lounge is 383 SF compared to 450-900 SF, for 8-24 staff, recommended in the OSDM. The Teacher's Lounge does not reflect a professional environment. Limited work space is provided for preparation of teacher materials.</i>		
5.18	<b>Cafeteria/Kitchen</b> is attractive with sufficient space for seating/dining, delivery, storage, and food preparation	10	8
	<i>The Student Dining space is 3,647 SF compared to 3,000 SF recommended in the OSDM. The Kitchen space is 1,167 SF compared to 638 SF recommended in the OSDM. Student Dining shares the Gymnasium space.</i>		
5.19	<b>Administrative offices</b> provided are consistent in appearance and function with the maturity of the students served	5	4
	<i>Administrative Offices are adequately provided for Elementary School students.</i>		
5.20	<b>Counselor's office</b> insures privacy and sufficient storage	5	3
	<i>The Counselor's Office is 136 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 insure privacy, but lacks sufficient storage space.</i>		
5.21	<b>Clinic</b> is near administrative offices and is equipped to meet requirements	5	3
	<i>The Clinic is 264 SF compared to 370 SF recommended in the OSDM. The Clinic is located within the Administrative Offices and is provided with required equipment.</i>		
5.22	<b>Suitable reception space</b> is available for students, teachers, and visitors	5	4
	<i>Reception space consists of approximately 486 SF compared to 200-400 SF recommended by the OSDM.</i>		

5.23 **Administrative personnel** are provided **sufficient work space and privacy** 5 3

*The Administrative area consists of approximately 1,240 SF for the principal, assistant principal, secretary, Conference Room, Storage, Copy Room, and Restroom, compared to 2,600 SF recommended by the OSDM.*

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**TOTAL - Educational Adequacy** 200 132

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## 6.0 Environment for Education

### School Facility Appraisal

Exterior Environment	Points Allocated	Points
<p>6.1 Overall <b>design is aesthetically pleasing</b> to age of students</p> <p><i>The building is a traditional design with classical detailing, which is aesthetically pleasing.</i></p>	15	9
<p>6.2 Site and building are <b>well landscaped</b></p> <p><i>The site is moderately landscaped with mature shade trees, ornamental trees, and shrubs which define the property and emphasize the building entrance. Lawn areas where mowing is required do not exceed 3:1 slope.</i></p>	10	8
<p>6.3 <b>Exterior noise and poor environment</b> do not disrupt learning</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
<p>6.4 <b>Entrances and walkways are sheltered</b> from sun and inclement weather</p> <p><i>The main entrance to the School is partially sheltered. Exits are partially sheltered from sun and inclement weather.</i></p>	10	8
<p>6.5 <b>Building materials</b> provide attractive color and texture</p> <p><i>Exterior building materials consist of brick and stone, which does provide an attractive color and texture. Interior building materials consist of glazed block and painted concrete block which does provide an attractive color and texture.</i></p>	5	3

Interior Environment	Points Allocated	Points
<p>6.6 <b>Color schemes, building materials, and decor</b> provide an impetus to learning</p> <p><i>Overall building design and materials reflect a dated décor which does not enhance learning.</i></p>	20	8
<p>6.7 <b>Year around comfortable temperature and humidity</b> are provided throughout the building</p> <p><i>The facility is not air conditioned to provide year-round temperature and humidity control.</i></p>	15	2
<p>6.8 <b>Ventilating system</b> provides adequate quiet circulation of clean air and meets 15cfm VBC requirement</p> <p><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></p>	15	4
<p>6.9 <b>Lighting system</b> provides proper intensity, diffusion, and distribution of illumination</p> <p><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></p>	15	8
<p>6.10 <b>Drinking fountains and restroom facilities</b> are conveniently located</p> <p><i>Drinking fountains are not conveniently located and Restroom facilities are conveniently located.</i></p>	15	9
<p>6.11 <b>Communication among students</b> is enhanced by commons area(s) for socialization</p>	10	8

*There are areas for students to gather in the Gymnasium, as well as a small gathering area at the entrance to the school. Outdoor pavilions have been provided to encourage socialization and communication among students.*

6.12	<b>Traffic flow</b> is aided by appropriate foyers and corridors	10	8
	<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>		
6.13	<b>Areas for students to interact</b> are suitable to the age group	10	8
	<i>There are areas for students to gather in the Gymnasium, as well as a small gathering area at the entrance to the school. Outdoor pavilions have been provided to encourage socialization and communication among students.</i>		
6.14	<b>Large group areas are designed</b> for effective management of students	10	6
	<i>The Gymnasium is appropriately sized but is not equipped with bleachers for effective management of large groups of students.</i>		
6.15	<b>Acoustical treatment</b> of ceilings, walls, and floors provides effective sound control	10	6
	<i>Existing Gymnasium, Media Center, and Music spaces are inadequately provided with appropriate sound attenuation acoustical surface treatments.</i>		
6.16	<b>Window design</b> contributes to a pleasant environment	10	4
	<i>The windows are not designed well, and do not contribute to a pleasant environment.</i>		
6.17	<b>Furniture and equipment</b> provide a pleasing atmosphere	10	6
	<i>Classroom furniture is mismatched and in fair condition.</i>		
<b>TOTAL - Environment for Education</b>		<b>200</b>	<b>113</b>

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# LEED Observation Notes

**School District:** Troy City  
**County:** Miami  
**School District IRN:** 44925  
**Building:** Cookson Elementary  
**Building IRN:** 7294

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## 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 is a negligible contribution 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 meets the amount required with 37 spaces provided and 36 spaces required (see SS Credit 4.4). By utilizing a porous material, run-off would be mitigated. Providing softer landscape elements including grasses, shrubs and flora, would contribute to a reduction in the heat island effect as well. Roof surfaces have high reflectance and low thermal emittance, which helps to mitigate the heat island effect.

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## 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

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## 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.

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## 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.

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## 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.

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## 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.

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***Justification for Allocation of Points***

Building Name and Level: **Cookson 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

<b>Owner:</b>	Troy City
<b>Facility:</b>	Cookson Elementary
<b>Date of Initial Assessment:</b>	Aug 6, 2016
<b>Date of Assessment Update:</b>	Dec 11, 2016
<b>Cost Set:</b>	2016

<b>District IRN:</b>	44925
<b>Building IRN:</b>	7294
<b>Firm:</b>	SBDP

**Scope remains unchanged after cost updates.**

Building Addition	Addition Area (sf)	Total of Environmental Hazards Assessment Cost Estimates	
		Renovation	Demolition
1964 Original Construction	41,546	\$152,803.70	\$108,623.70
1968 Classroom Addition	4,282	\$4,642.60	\$4,642.60
<b>Total</b>	<b>45,828</b>	<b>\$157,446.30</b>	<b>\$113,266.30</b>
Total with Regional Cost Factor (97.49%)	—	\$153,494.40	\$110,423.32
Regional Total with Soft Costs & Contingency	—	\$190,993.54	\$137,400.06

**Environmental Hazards - Troy City (44925) - Cookson Elementary (7294) - Original Construction**

**Owner:** Troy City **Bldg. IRN:** 7294  
**Facility:** Cookson 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	Not Present	0	\$8.00	\$0.00
4. Duct Insulation Removal	Not Present	0	\$8.00	\$0.00
5. Pipe Insulation Removal	Reported Asbestos-Containing Material	500	\$10.00	\$5,000.00
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	Reported Asbestos-Containing Material	1	\$2,000.00	\$2,000.00
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	1000	\$7.00	\$7,000.00
15. Gypsum Board Removal	Reported Asbestos-Containing Material	1600	\$6.00	\$9,600.00
16. Acoustical Panel/Tile Ceiling Removal	Not Present	0	\$3.00	\$0.00
17. Laboratory Table/Counter Top Removal	Not Present	0	\$100.00	\$0.00
18. Cement Board Removal	Reported Asbestos-Containing Material	80	\$5.00	\$400.00
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	73	\$100.00	\$7,300.00
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	238	\$300.00	\$71,400.00
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	Reported Asbestos-Containing Material	26	\$100.00	\$2,600.00
34. Roofing Removal	Not Present	0	\$2.00	\$0.00
35. (Sum of Lines 1-34)	<b>Total Asb. Hazard Abatement Cost for Renovation Work</b>			\$105,300.00
36. (Sum of Lines 1-34)	<b>Total Asb. Hazard Abatement Cost for Demolition Work</b>			\$105,300.00

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)	<b>Total Cost For Removal Of Underground Storage Tanks</b>				\$0.00

C. Lead-Based Paint (LBP) - Renovation Only <input checked="" 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)	<b>Total Cost for Lead-Based Paint Mock-Ups</b>	\$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. 41546	33237	\$0.10	\$3,323.70

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

F. Environmental Hazards Assessment Cost Estimate Summaries		
1. A35, B1, C3, D1, and E1	<b>Total Cost for Env. Hazards Work - Renovation</b>	\$118,623.70
2. A36, B1, D1, and E2	<b>Total Cost for Env. Hazards Work - Demolition</b>	\$108,623.70

\* 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) - Cookson Elementary (7294) - Classroom Addition**

**Owner:** Troy City **Bldg. IRN:** 7294  
**Facility:** Cookson Elementary **BuildingAdd:** Classroom 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	Not Present	0	\$3.00	\$0.00
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	7	\$100.00	\$700.00
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	12	\$300.00	\$3,600.00
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)	<b>Total Asb. Hazard Abatement Cost for Renovation Work</b>			\$4,300.00
36. (Sum of Lines 1-34)	<b>Total Asb. Hazard Abatement Cost for Demolition Work</b>			\$4,300.00

B. Removal Of Underground Storage Tanks <input type="checkbox"/> None Reported					
Tank No.	Location	Age	Product Stored	Size	Est.Rem.Cost
1. (Sum of Lines 1-0)	<b>Total Cost For Removal Of Underground Storage Tanks</b>				\$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)	<b>Total Cost for Lead-Based Paint Mock-Ups</b> \$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. 4282	3426	\$0.10	\$342.60

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

F. Environmental Hazards Assessment Cost Estimate Summaries		
1. A35, B1, C3, D1, and E1	<b>Total Cost for Env. Hazards Work - Renovation</b>	\$4,642.60
2. A36, B1, D1, and E2	<b>Total Cost for Env. Hazards Work - Demolition</b>	\$4,642.60

\* 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.