

**Building Information - Oakwood City (44586) - Harman Elem**

Program Type	Expedited Local Partnership Program (ELPP)
Setting	Suburban
Assessment Name	Harman Elementary with EEA, Related Scope Adjustments & 2018 Costs
Assessment Date (on-site; non-EEA)	2017-08-24
Kitchen Type	Warming Kitchen
Cost Set:	2018
Building Name	Harman Elem
Building IRN	15289
Building Address	735 Harman Ave
Building City	Dayton
Building Zipcode	45419
Building Phone	(937) 297-5338
Acreage	2.20
Current Grades:	1-6
Teaching Stations	31
Number of Floors	3
Student Capacity	372
Current Enrollment	452
Enrollment Date	2017-10-04
Enrollment Date is the date in which the current enrollment was taken.	
Number of Classrooms	27
Historical Register	<b>NO</b>
Building's Principal	Mrs. Sarah Patterson
Building Type	Elementary/Middle

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North elevation photo:



East elevation photo:



South elevation photo:



West elevation photo:



**GENERAL DESCRIPTION**

**70,084** Total Existing Square Footage  
**1909,1949,1960,1998,2003** Building Dates  
**1-6** Grades  
**452** Current Enrollment  
**31** Teaching Stations  
**2.20** Site Acreage

Harman School, which is not on the National Register of Historic Buildings, and originally constructed in 1909, is a 3 story, 70,084 square foot brick and stone school building located in a suburban residential setting. There have been four additions to the facility in 1949, 1960, 1998 and 2003. The existing facility features a conventionally partitioned design, and does not utilize modular buildings. The structure of the 1909 Original Construction contains masonry type exterior wall construction, with wood framing and plaster type wall construction in the interior. The floor system consists of wood framing. The roof structure is wood framing. The roofing system of the overall facility is a combination of fully adhered TPO membrane, concrete slate shingles and asphalt shingles, installed in 1993, over 24 years ago. The structure of the 1949 Addition and 1960 Addition contains masonry type exterior wall construction, with wood framing and plaster type wall construction in the interior. The floor system consists of site cast concrete. The roof structure is wood framing. The 1998 Addition is a courtyard infill project with gypsum board on metal studs type wall construction in the interior. The floor system consists of steel bar joists with concrete and metal decking. The 2003 Addition contains brick and stone veneer on metal studs exterior wall construction, with metal stud and gypsum board type construction in the interior. The floor system consists of precast concrete planks on steel framing. The ventilation system of the building is inadequate to meet the needs of the users. The Classrooms are undersized in terms of the current standards established by the State of Ohio except for the 2003 Addition. Physical Education and Student Dining spaces consist of one Gymnasium and separate Student Dining. The electrical system for the facility is generally adequate. The facility is equipped with a security system. The building has a non-compliant automatic fire alarm system. The facility is not equipped with an automated fire suppression system. The building is reported to contain asbestos and other hazardous materials. The overall building is not compliant with ADA accessibility requirements. Only the 2003 Addition is compliant with ADA accessibility requirements. The school is located on a 2-acre site adjacent to residential properties. The property and playgrounds are fenced for security. Access onto the site is restricted. Site circulation is poor. There is no dedicated space for school buses to load and unload on the site. Parking for staff, visitors and community events is inadequate.

This School District does not have bussing for students, which removes the need for a bus loop. The site is sloped with the high point in the southeast corner of the site, which created a need for a high quantity of cast concrete retaining wall. There is no room on this site for building expansion without using area designated for hard-surface play area. The site borders are two residential streets and 2 alleys in very close proximity to the adjacent residences.

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**Building Construction Information - Oakwood City (44586) - Harman Elem (15289)**

<b>Name</b>	<b>Year</b>	<b>Handicapped Access</b>	<b>Floors</b>	<b>Square Feet</b>	<b>Non OSDM Addition</b>	<b>Built Under ELPP</b>
Original Construction	1909	no	2	32,931	no	no
Classroom Addition	1949	no	2	18,739	no	no
Classroom Addition	1960	no	2	4,170	no	no
Stairwell Addition	1998	no	2	366	no	no
Classroom Addition	2003	yes	2	13,878	no	no

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Building Component Information - Oakwood City (44586) - Harman Elem (15289)

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 (1909)		6652		2007										
Classroom Addition (1949)		3831					1542	693						
Classroom Addition (1960)		73			1944									
Stairwell Addition (1998)		228												
Classroom Addition (2003)		1874												
<b>Total</b>	<b>0</b>	<b>12,658</b>	<b>0</b>	<b>2,007</b>	<b>1,944</b>	<b>0</b>	<b>1,542</b>	<b>693</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**Master Planning Considerations**

This School District does not have bussing for students, which removes the need for a bus loop. The site is sloped with the high point in the southeast corner of the site, which created a need for a high quantity of cast concrete retaining wall. There is no room on this site for building expansion without using area designated for hard-surface play area. The site borders are two residential streets and 2 alleys in very close proximity to the adjacent residences.

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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 - Harman Elem (15289)

<b>District:</b> Oakwood City				<b>County:</b> Montgomery		<b>Area:</b> West Central Ohio (2)	
<b>Name:</b> Harman Elem				<b>Contact:</b> Mrs. Sarah Patterson			
<b>Address:</b> 735 Harman Ave Dayton, OH 45419				<b>Phone:</b> (937) 297-5338			
<b>Bldg. IRN:</b> 15289				<b>Date Prepared:</b> 2017-08-24		<b>By:</b> Paul W. Garland	
				<b>Date Revised:</b> 2018-04-10		<b>By:</b> Paul Brown	

Current Grades		1-6	Acreage:	2.20	<b>Suitability Appraisal Summary</b>			
Proposed Grades		N/A	Teaching Stations:	31				
Current Enrollment		452	Classrooms:	27				
Projected Enrollment		N/A						

				Section	Points Possible	Points Earned	Percentage	Rating	Category
				<u>Cover Sheet</u>	—	—	—		—
<b>Addition</b>				<u>1.0 The School Site</u>	100	60	60%		Borderline
<u>Original Construction</u>	Date	HA	Number of Floors	<u>2.0 Structural and Mechanical Features</u>	200	109	55%		Borderline
	1909	no	2	<u>3.0 Plant Maintainability</u>	100	56	56%		Borderline
<u>Classroom Addition</u>	1949	no	2	<u>4.0 Building Safety and Security</u>	200	128	64%		Borderline
	1960	no	2	<u>5.0 Educational Adequacy</u>	200	119	60%		Borderline
<u>Classroom Addition</u>	1960	no	2	<u>6.0 Environment for Education</u>	200	140	70%		Satisfactory
<u>Stairwell Addition</u>	1998	no	2	<u>LEED Observations</u>	—	—	—		—
<u>Classroom Addition</u>	2003	yes	2	<u>Commentary</u>	—	—	—		—
<b>Total</b>				<b>Total</b>	<b>1000</b>	<b>612</b>	<b>61%</b>		<b>Borderline</b>
				<b>Enhanced Environmental Hazards Assessment Cost Estimates</b>					
				<b>C=Under Contract</b>					
				<b>Renovation Cost Factor</b>					
				Cost to Renovate (Cost Factor applied) 98.97%					
				Cost to Renovate (Cost Factor applied) \$13,652,186.17					
<i>The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.</i>									

FACILITY ASSESSMENT				Rating	Dollar Assessment	Cost
Cost Set: 2018						
A.	<u>Heating System</u>	3	\$2,391,266.08	-		
B.	<u>Roofing</u>	3	\$293,854.00	-		
C.	<u>Ventilation / Air Conditioning</u>	2	\$5,000.00	-		
D.	<u>Electrical Systems</u>	3	\$1,137,463.32	-		
E.	<u>Plumbing and Fixtures</u>	2	\$670,880.00	-		
F.	<u>Windows</u>	2	\$43,217.00	-		
G.	<u>Structure: Foundation</u>	1	\$0.00	-		
H.	<u>Structure: Walls and Chimneys</u>	2	\$190,093.00	-		
I.	<u>Structure: Floors and Roofs</u>	2	\$934,991.50	-		
J.	<u>General Finishes</u>	2	\$1,667,766.05	-		
K.	<u>Interior Lighting</u>	3	\$367,420.00	-		
L.	<u>Security Systems</u>	3	\$211,739.40	-		
M.	<u>Emergency/Egress Lighting</u>	3	\$70,084.00	-		
N.	<u>Fire Alarm</u>	2	\$122,647.00	-		
O.	<u>Handicapped Access</u>	3	\$684,366.80	-		
P.	<u>Site Condition</u>	2	\$221,360.80	-		
Q.	<u>Sewage System</u>	1	\$0.00	-		
R.	<u>Water Supply</u>	1	\$0.00	-		
S.	<u>Exterior Doors</u>	3	\$54,200.00	-		
T.	<u>Hazardous Material</u>	3	\$849,348.40	-		
U.	<u>Life Safety</u>	2	\$243,763.20	-		
V.	<u>Loose Furnishings</u>	2	\$140,168.00	-		
W.	<u>Technology</u>	3	\$786,310.42	-		
-	<u>Construction Contingency / Non-Construction Cost</u>	-	\$2,708,328.15	-		
<b>Total</b>					\$13,794,267.12	

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Original Construction (1909) Summary

<b>District:</b> Oakwood City				<b>County:</b> Montgomery		<b>Area:</b> West Central Ohio (2)				
<b>Name:</b> Harman Elem				<b>Contact:</b> Mrs. Sarah Patterson						
<b>Address:</b> 735 Harman Ave Dayton, OH 45419				<b>Phone:</b> (937) 297-5338						
<b>Bldg. IRN:</b> 15289				<b>Date Prepared:</b> 2017-08-24		<b>By:</b> Paul W. Garland				
				<b>Date Revised:</b> 2018-04-10		<b>By:</b> Paul Brown				
Current Grades	1-6	Acreage:	2.20	<b>Suitability Appraisal Summary</b>						
Proposed Grades	N/A	Teaching Stations:	31							
Current Enrollment	452	Classrooms:	27							
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>	<b>Points Possible</b>	<b>Points Earned</b>	<b>Percentage</b>	<b>Rating</b>	<b>Category</b>
<b>Original Construction</b>	<b>1909</b>	<b>no</b>	<b>2</b>	<b>32,931</b>	<b>1.0 The School Site</b>	100	60	60%	Borderline	
<b>Classroom Addition</b>	1949	no	2	18,739	<b>2.0 Structural and Mechanical Features</b>	200	109	55%	Borderline	
<b>Classroom Addition</b>	1960	no	2	4,170	<b>3.0 Plant Maintainability</b>	100	56	56%	Borderline	
<b>Stairwell Addition</b>	1998	no	2	366	<b>4.0 Building Safety and Security</b>	200	128	64%	Borderline	
<b>Classroom Addition</b>	2003	yes	2	13,878	<b>5.0 Educational Adequacy</b>	200	119	60%	Borderline	
<b>Total</b>				<b>70,084</b>	<b>6.0 Environment for Education</b>	200	140	70%	Satisfactory	
					<b>LEED Observations</b>	—	—	—	—	
					<b>Commentary</b>	—	—	—	—	
					<b>Total</b>	<b>1000</b>	<b>612</b>	<b>61%</b>	<b>Borderline</b>	
<b>Enhanced Environmental Hazards Assessment Cost Estimates</b>										
<b>C=Under Contract</b>										
<b>Renovation Cost Factor</b>										
<b>Cost to Renovate (Cost Factor applied)</b>										
<b>98.97%</b>										
<b>\$8,067,586.14</b>										
<i>The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.</i>										
<b>FACILITY ASSESSMENT</b>										
<b>Cost Set: 2018</b>										
					<b>Rating</b>		<b>Dollar Assessment</b>			
A.	<b>Heating System</b>				3		\$1,123,605.72	-		
B.	<b>Roofing</b>				3		\$145,070.00	-		
C.	<b>Ventilation / Air Conditioning</b>				2		\$5,000.00	-		
D.	<b>Electrical Systems</b>				3		\$534,470.13	-		
E.	<b>Plumbing and Fixtures</b>				2		\$337,117.00	-		
F.	<b>Windows</b>				2		\$36,260.00	-		
G.	<b>Structure: Foundation</b>				1		\$0.00	-		
H.	<b>Structure: Walls and Chimneys</b>				2		\$82,036.00	-		
I.	<b>Structure: Floors and Roofs</b>				2		\$834,563.50	-		
J.	<b>General Finishes</b>				2		\$1,172,545.45	-		
K.	<b>Interior Lighting</b>				3		\$170,405.00	-		
L.	<b>Security Systems</b>				3		\$105,853.35	-		
M.	<b>Emergency/Egress Lighting</b>				3		\$32,931.00	-		
N.	<b>Fire Alarm</b>				2		\$57,629.25	-		
O.	<b>Handicapped Access</b>				3		\$417,036.20	-		
P.	<b>Site Condition</b>				2		\$107,210.80	-		
Q.	<b>Sewage System</b>				1		\$0.00	-		
R.	<b>Water Supply</b>				1		\$0.00	-		
S.	<b>Exterior Doors</b>				3		\$24,200.00	-		
T.	<b>Hazardous Material</b>				3		\$788,973.10	-		
U.	<b>Life Safety</b>				2		\$144,092.80	-		
V.	<b>Loose Furnishings</b>				2		\$65,862.00	-		
W.	<b>Technology</b>				3		\$366,233.63	-		
-	<b>X. Construction Contingency / Non-Construction Cost</b>				-		\$1,600,452.14	-		
<b>Total</b>							<b>\$8,151,547.07</b>			



Classroom Addition (1949) Summary

<b>District:</b> Oakwood City				<b>County:</b> Montgomery		<b>Area:</b> West Central Ohio (2)																																																																																																																																											
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<table border="1"> <thead> <tr> <th colspan="3">FACILITY ASSESSMENT</th> <th>Rating</th> <th>Dollar Assessment</th> </tr> <tr> <th colspan="3">Cost Set: 2018</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>A.</td> <td><u>Heating System</u></td> <td></td> <td>3</td> <td>\$639,374.68 -</td> </tr> <tr> <td>B.</td> <td><u>Roofing</u></td> <td></td> <td>3</td> <td>\$84,130.00 -</td> </tr> <tr> <td>C.</td> <td><u>Ventilation / Air Conditioning</u></td> <td></td> <td>2</td> <td>\$0.00 -</td> </tr> <tr> <td>D.</td> <td><u>Electrical Systems</u></td> <td></td> <td>3</td> <td>\$304,133.97 -</td> </tr> <tr> <td>E.</td> <td><u>Plumbing and Fixtures</u></td> <td></td> <td>2</td> <td>\$186,173.00 -</td> </tr> <tr> <td>F.</td> <td><u>Windows</u></td> <td></td> <td>2</td> <td>\$3,741.00 -</td> </tr> <tr> <td>G.</td> <td><u>Structure: Foundation</u></td> <td></td> <td>1</td> <td>\$0.00 -</td> </tr> <tr> <td>H.</td> <td><u>Structure: Walls and Chimneys</u></td> <td></td> <td>2</td> <td>\$64,806.00 -</td> </tr> <tr> <td>I.</td> <td><u>Structure: Floors and Roofs</u></td> <td></td> <td>2</td> <td>\$55,858.00 -</td> </tr> <tr> <td>J.</td> <td><u>General Finishes</u></td> <td></td> <td>2</td> <td>\$349,474.50 -</td> </tr> <tr> <td>K.</td> <td><u>Interior Lighting</u></td> <td></td> <td>3</td> <td>\$97,445.00 -</td> </tr> <tr> <td>L.</td> <td><u>Security Systems</u></td> <td></td> <td>3</td> <td>\$53,406.15 -</td> </tr> <tr> <td>M.</td> <td><u>Emergency/Egress Lighting</u></td> <td></td> <td>3</td> <td>\$18,739.00 -</td> </tr> <tr> <td>N.</td> <td><u>Fire Alarm</u></td> <td></td> <td>2</td> <td>\$32,793.25 -</td> </tr> <tr> <td>O.</td> <td><u>Handicapped Access</u></td> <td></td> <td>3</td> <td>\$219,347.80 -</td> </tr> <tr> <td>P.</td> <td><u>Site Condition</u></td> <td></td> <td>2</td> <td>\$64,427.50 -</td> </tr> <tr> <td>Q.</td> <td><u>Sewage System</u></td> <td></td> <td>1</td> <td>\$0.00 -</td> </tr> <tr> <td>R.</td> <td><u>Water Supply</u></td> <td></td> <td>1</td> <td>\$0.00 -</td> </tr> <tr> <td>S.</td> <td><u>Exterior Doors</u></td> <td></td> <td>3</td> <td>\$16,000.00 -</td> </tr> <tr> <td>T.</td> <td><u>Hazardous Material</u></td> <td></td> <td>3</td> <td>\$39,983.90 -</td> </tr> <tr> <td>U.</td> <td><u>Life Safety</u></td> <td></td> <td>2</td> <td>\$47,705.60 -</td> </tr> <tr> <td>V.</td> <td><u>Loose Furnishings</u></td> <td></td> <td>2</td> <td>\$37,478.00 -</td> </tr> <tr> <td>W.</td> <td><u>Technology</u></td> <td></td> <td>3</td> <td>\$211,875.83 -</td> </tr> <tr> <td>X.</td> <td><u>Construction Contingency / Non-Construction Cost</u></td> <td></td> <td>-</td> <td>\$617,327.58 -</td> </tr> <tr> <td colspan="4"><b>Total</b></td> <td><b>\$3,144,220.76</b></td> </tr> </tbody> </table>											FACILITY ASSESSMENT			Rating	Dollar Assessment	Cost Set: 2018					A.	<u>Heating System</u>		3	\$639,374.68 -	B.	<u>Roofing</u>		3	\$84,130.00 -	C.	<u>Ventilation / Air Conditioning</u>		2	\$0.00 -	D.	<u>Electrical Systems</u>		3	\$304,133.97 -	E.	<u>Plumbing and Fixtures</u>		2	\$186,173.00 -	F.	<u>Windows</u>		2	\$3,741.00 -	G.	<u>Structure: Foundation</u>		1	\$0.00 -	H.	<u>Structure: Walls and Chimneys</u>		2	\$64,806.00 -	I.	<u>Structure: Floors and Roofs</u>		2	\$55,858.00 -	J.	<u>General Finishes</u>		2	\$349,474.50 -	K.	<u>Interior Lighting</u>		3	\$97,445.00 -	L.	<u>Security Systems</u>		3	\$53,406.15 -	M.	<u>Emergency/Egress Lighting</u>		3	\$18,739.00 -	N.	<u>Fire Alarm</u>		2	\$32,793.25 -	O.	<u>Handicapped Access</u>		3	\$219,347.80 -	P.	<u>Site Condition</u>		2	\$64,427.50 -	Q.	<u>Sewage System</u>		1	\$0.00 -	R.	<u>Water Supply</u>		1	\$0.00 -	S.	<u>Exterior Doors</u>		3	\$16,000.00 -	T.	<u>Hazardous Material</u>		3	\$39,983.90 -	U.	<u>Life Safety</u>		2	\$47,705.60 -	V.	<u>Loose Furnishings</u>		2	\$37,478.00 -	W.	<u>Technology</u>		3	\$211,875.83 -	X.	<u>Construction Contingency / Non-Construction Cost</u>		-	\$617,327.58 -	<b>Total</b>				<b>\$3,144,220.76</b>
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Classroom Addition (1960) Summary

<b>District:</b> Oakwood City				<b>County:</b> Montgomery		<b>Area:</b> West Central Ohio (2)				
<b>Name:</b> Harman Elem				<b>Contact:</b> Mrs. Sarah Patterson						
<b>Address:</b> 735 Harman Ave Dayton, OH 45419				<b>Phone:</b> (937) 297-5338						
<b>Bldg. IRN:</b> 15289				<b>Date Prepared:</b> 2017-08-24		<b>By:</b> Paul W. Garland				
				<b>Date Revised:</b> 2018-04-10		<b>By:</b> Paul Brown				
Current Grades	1-6	Acreage:	2.20	<b>Suitability Appraisal Summary</b>						
Proposed Grades	N/A	Teaching Stations:	31							
Current Enrollment	452	Classrooms:	27							
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>	<b>Points Possible</b>	<b>Points Earned</b>	<b>Percentage</b>	<b>Rating</b>	<b>Category</b>
<u>Original Construction</u>	1909	no	2	32,931	<u>1.0 The School Site</u>	100	60	60%		Borderline
<u>Classroom Addition</u>	1949	no	2	18,739	<u>2.0 Structural and Mechanical Features</u>	200	109	55%		Borderline
<b>Classroom Addition 1960</b>	<b>no</b>		<b>2</b>	<b>4,170</b>	<u>3.0 Plant Maintainability</u>	100	56	56%		Borderline
<u>Stairwell Addition</u>	1998	no	2	366	<u>4.0 Building Safety and Security</u>	200	128	64%		Borderline
<u>Classroom Addition</u>	2003	yes	2	13,878	<u>5.0 Educational Adequacy</u>	200	119	60%		Borderline
<b>Total</b>				<b>70,084</b>	<u>6.0 Environment for Education</u>	200	140	70%		Satisfactory
					<u>LEED Observations</u>	—	—	—		—
					<u>Commentary</u>	—	—	—		—
					<b>Total</b>	<b>1000</b>	<b>612</b>	<b>61%</b>		<b>Borderline</b>
<b>Enhanced Environmental Hazards Assessment Cost Estimates</b>										
<b>C=Under Contract</b>										
<b>Renovation Cost Factor</b>										
Cost to Renovate (Cost Factor applied) 98.97%										
Total \$690,487.44										
<i>The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.</i>										
<b>FACILITY ASSESSMENT</b>										
Cost Set: 2018										
					<b>Rating</b>	<b>Dollar Assessment</b>	<b>C</b>			
A.	<u>Heating System</u>				3	\$142,280.40	-			
B.	<u>Roofing</u>				3	\$22,190.00	-			
C.	<u>Ventilation / Air Conditioning</u>				2	\$0.00	-			
D.	<u>Electrical Systems</u>				3	\$67,679.10	-			
E.	<u>Plumbing and Fixtures</u>				2	\$35,190.00	-			
F.	<u>Windows</u>				2	\$0.00	-			
G.	<u>Structure: Foundation</u>				1	\$0.00	-			
H.	<u>Structure: Walls and Chimneys</u>				2	\$19,992.00	-			
I.	<u>Structure: Floors and Roofs</u>				2	\$14,090.00	-			
J.	<u>General Finishes</u>				2	\$83,035.00	-			
K.	<u>Interior Lighting</u>				3	\$22,850.00	-			
L.	<u>Security Systems</u>				3	\$11,884.50	-			
M.	<u>Emergency/Egress Lighting</u>				3	\$4,170.00	-			
N.	<u>Fire Alarm</u>				2	\$7,297.50	-			
O.	<u>Handicapped Access</u>				3	\$30,134.00	-			
P.	<u>Site Condition</u>				2	\$10,335.50	-			
Q.	<u>Sewage System</u>				1	\$0.00	-			
R.	<u>Water Supply</u>				1	\$0.00	-			
S.	<u>Exterior Doors</u>				3	\$2,000.00	-			
T.	<u>Hazardous Material</u>				3	\$18,967.00	-			
U.	<u>Life Safety</u>				2	\$13,110.40	-			
V.	<u>Loose Furnishings</u>				2	\$8,340.00	-			
W.	<u>Technology</u>				3	\$47,148.80	-			
- X.	<u>Construction Contingency / Non-Construction Cost</u>				-	\$136,979.28	-			
<b>Total</b>						<b>\$697,673.48</b>				

Stairwell Addition (1998) Summary

<b>District:</b> Oakwood City				<b>County:</b> Montgomery		<b>Area:</b> West Central Ohio (2)	
<b>Name:</b> Harman Elem				<b>Contact:</b> Mrs. Sarah Patterson			
<b>Address:</b> 735 Harman Ave Dayton, OH 45419				<b>Phone:</b> (937) 297-5338			
<b>Bldg. IRN:</b> 15289				<b>Date Prepared:</b> 2017-08-24		<b>By:</b> Paul W. Garland	
				<b>Date Revised:</b> 2018-04-10		<b>By:</b> Paul Brown	

Current Grades	1-6	Acreage:	2.20	<b>Suitability Appraisal Summary</b>						
Proposed Grades	N/A	Teaching Stations:	31							
Current Enrollment	452	Classrooms:	27							
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>	<b>Points Possible</b>	<b>Points Earned</b>	<b>Percentage</b>	<b>Rating</b>	<b>Category</b>
<u>Original Construction</u>	1909	no	2	32,931	<u>1.0 The School Site</u>	100	60	60%		Borderline
<u>Classroom Addition</u>	1949	no	2	18,739	<u>2.0 Structural and Mechanical Features</u>	200	109	55%		Borderline
<u>Classroom Addition</u>	1960	no	2	4,170	<u>3.0 Plant Maintainability</u>	100	56	56%		Borderline
<b>Stairwell Addition</b>	<b>1998</b>	<b>no</b>	<b>2</b>	<b>366</b>	<u>4.0 Building Safety and Security</u>	200	128	64%		Borderline
<u>Classroom Addition</u>	2003	yes	2	13,878	<u>5.0 Educational Adequacy</u>	200	119	60%		Borderline
<b>Total</b>				<b>70,084</b>	<u>6.0 Environment for Education</u>	200	140	70%		Satisfactory
					<u>LEED Observations</u>	—	—	—		—
					<u>Commentary</u>	—	—	—		—
					<b>Total</b>	<b>1000</b>	<b>612</b>	<b>61%</b>		<b>Borderline</b>

*HA = Handicapped Access	
*Rating =1 Satisfactory	
=2 Needs Repair	
=3 Needs Replacement	
*Const P/S = Present/Scheduled Construction	

<b>FACILITY ASSESSMENT</b>				Dollar
Cost Set: 2018		Rating		Assessment
A.	<u>Heating System</u>	3	\$12,487.92	-
B.	<u>Roofing</u>	3	\$2,610.00	-
C.	<u>Ventilation / Air Conditioning</u>	2	\$0.00	-
D.	<u>Electrical Systems</u>	3	\$5,940.18	-
E.	<u>Plumbing and Fixtures</u>	2	\$0.00	-
F.	<u>Windows</u>	2	\$0.00	-
G.	<u>Structure: Foundation</u>	1	\$0.00	-
H.	<u>Structure: Walls and Chimneys</u>	2	\$0.00	-
I.	<u>Structure: Floors and Roofs</u>	2	\$0.00	-
J.	<u>General Finishes</u>	2	\$1,372.50	-
K.	<u>Interior Lighting</u>	3	\$2,330.00	-
L.	<u>Security Systems</u>	3	\$1,043.10	-
M.	<u>Emergency/Egress Lighting</u>	3	\$366.00	-
N.	<u>Fire Alarm</u>	2	\$640.50	-
O.	<u>Handicapped Access</u>	3	\$73.20	-
P.	<u>Site Condition</u>	2	\$549.00	-
Q.	<u>Sewage System</u>	1	\$0.00	-
R.	<u>Water Supply</u>	1	\$0.00	-
S.	<u>Exterior Doors</u>	3	\$0.00	-
T.	<u>Hazardous Material</u>	3	\$36.60	-
U.	<u>Life Safety</u>	2	\$441.60	-
V.	<u>Loose Furnishings</u>	2	\$732.00	-
W.	<u>Technology</u>	3	\$4,138.24	-
-	<u>Construction Contingency / Non-Construction Cost</u>	-	\$8,003.57	-
<b>Total</b>			<b>\$40,764.41</b>	

<b>Renovation Cost Factor</b>		98.97%
Cost to Renovate (Cost Factor applied)		\$40,344.54
<i>The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.</i>		

Classroom Addition (2003) Summary

<b>District:</b> Oakwood City				<b>County:</b> Montgomery		<b>Area:</b> West Central Ohio (2)				
<b>Name:</b> Harman Elem				<b>Contact:</b> Mrs. Sarah Patterson						
<b>Address:</b> 735 Harman Ave Dayton, OH 45419				<b>Phone:</b> (937) 297-5338						
<b>Bldg. IRN:</b> 15289				<b>Date Prepared:</b> 2017-08-24		<b>By:</b> Paul W. Garland				
				<b>Date Revised:</b> 2018-04-10		<b>By:</b> Paul Brown				
Current Grades	1-6	Acreage:	2.20	<b>Suitability Appraisal Summary</b>						
Proposed Grades	N/A	Teaching Stations:	31							
Current Enrollment	452	Classrooms:	27							
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>	<b>Points Possible</b>	<b>Points Earned</b>	<b>Percentage</b>	<b>Rating</b>	<b>Category</b>
<u>Original Construction</u>	1909	no	2	32,931	<u>1.0 The School Site</u>	100	60	60%	Borderline	
<u>Classroom Addition</u>	1949	no	2	18,739	<u>2.0 Structural and Mechanical Features</u>	200	109	55%	Borderline	
<u>Classroom Addition</u>	1960	no	2	4,170	<u>3.0 Plant Maintainability</u>	100	56	56%	Borderline	
<u>Stairwell Addition</u>	1998	no	2	366	<u>4.0 Building Safety and Security</u>	200	128	64%	Borderline	
<b>Classroom Addition</b>	<b>2003</b>	<b>yes</b>	<b>2</b>	<b>13,878</b>	<u>5.0 Educational Adequacy</u>	200	119	60%	Borderline	
<b>Total</b>				<b>70,084</b>	<u>6.0 Environment for Education</u>	200	140	70%	Satisfactory	
					<u>LEED Observations</u>	—	—	—	—	
					<u>Commentary</u>	—	—	—	—	
					<b>Total</b>	<b>1000</b>	<b>612</b>	<b>61%</b>	<b>Borderline</b>	
					<u>Enhanced Environmental Hazards Assessment Cost Estimates</u>					
					<u>C=Under Contract</u>					
					<u>Renovation Cost Factor</u>					98.97%
					<u>Cost to Renovate (Cost Factor applied)</u>					\$1,741,932.76
					<i>The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.</i>					
<b>FACILITY ASSESSMENT</b>										
Cost Set: 2018				Rating	Dollar Assessment					
A.	<u>Heating System</u>			3	\$473,517.36					
B.	<u>Roofing</u>			3	\$39,854.00					
C.	<u>Ventilation / Air Conditioning</u>			2	\$0.00					
D.	<u>Electrical Systems</u>			3	\$225,239.94					
E.	<u>Plumbing and Fixtures</u>			2	\$112,400.00					
F.	<u>Windows</u>			2	\$3,216.00					
G.	<u>Structure: Foundation</u>			1	\$0.00					
H.	<u>Structure: Walls and Chimneys</u>			2	\$23,259.00					
I.	<u>Structure: Floors and Roofs</u>			2	\$30,480.00					
J.	<u>General Finishes</u>			2	\$61,338.60					
K.	<u>Interior Lighting</u>			3	\$74,390.00					
L.	<u>Security Systems</u>			3	\$39,552.30					
M.	<u>Emergency/Egress Lighting</u>			3	\$13,878.00					
N.	<u>Fire Alarm</u>			2	\$24,286.50					
O.	<u>Handicapped Access</u>			3	\$17,775.60					
P.	<u>Site Condition</u>			2	\$38,838.00					
Q.	<u>Sewage System</u>			1	\$0.00					
R.	<u>Water Supply</u>			1	\$0.00					
S.	<u>Exterior Doors</u>			3	\$12,000.00					
T.	<u>Hazardous Material</u>			3	\$1,387.80					
U.	<u>Life Safety</u>			2	\$38,412.80					
V.	<u>Loose Furnishings</u>			2	\$27,756.00					
W.	<u>Technology</u>			3	\$156,913.92					
- X.	<u>Construction Contingency / Non-Construction Cost</u>			-	\$345,565.57					
<b>Total</b>					<b>\$1,760,061.39</b>					

A. Heating System

**Description:** The existing system for the Original Construction, 1949 Addition, 1960 Addition and 1998 Addition is a gas fired boiler, installed in 1994, and is in fair condition. The existing system for the 2003 Addition is a gas fired boiler, installed in 2003, and is in good condition. 2-pipe vs. 4-pipe designations are not applicable in this facility, as no central air conditioning is provided. The steam boiler, manufactured by Sellers, was installed in 1987 and is in fair condition. Steam is distributed to terminal units consisting of unit ventilators, cabinet heaters, unit heaters, fin tubes, rooftop units and air handlers. The terminal equipment is original to each Building Addition. The hot water boiler, manufactured by Lochinvar, was installed in 2003 and is in good condition. Hot water is distributed to terminal units consisting of reheat coils, unit ventilators, cabinet heaters, unit heaters, and rooftop unit. The terminal equipment was installed in 2003 and is in good condition. The system does not comply with the 15 CFM per person fresh air requirements of the Ohio Building Code mechanical code and Ohio School Design Manual. The pneumatic and electronic type system temperature controls were installed in 1987 and 2003 and are in fair to poor 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 ducted, but the ductwork cannot be integrated into a possible future system due to arrangement, air volume, and routing of existing ductwork. The overall heating system is evaluated as being in safe but inefficient working order, and long term life expectancy of the existing system is not anticipated with routine yearly maintenance. The structure is not equipped with central air conditioning. The site does not contain underground fuel tanks that are currently in use.

**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.

Item	Cost	Unit	Whole Building	Original Construction (1909)	Classroom Addition (1949)	Classroom Addition (1960)	Stairwell Addition (1998)	Classroom Addition (2003)	Sum	Comments
HVAC System Replacement:	\$26.12	sq.ft. (of entire building addition)		32,931 ft <sup>2</sup> Required	18,739 ft <sup>2</sup> Required	4,170 ft <sup>2</sup> Required	366 ft <sup>2</sup> Required	13,878 ft <sup>2</sup> Required	\$1,830,594.08	(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	Required	Required	Required	\$560,672.00	(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>			\$2,391,266.08	\$1,123,605.72	\$639,374.68	\$142,280.40	\$12,487.92	\$473,517.36		



Rooftop Unit Serving the 1998 Building Addition



Unit Ventilator At Harman Elementary

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B. Roofing

**Description:** The roofs over the 1909 Original Construction, 1949, and 1960 Additions are a combination of concrete slate shingles, asphalt shingles, and single-ply membrane roofing systems, installed in 1993. The concrete slate shingles are in good condition, but the other portions of the roof are in fair condition and are recommended to be replaced. The roof over the 1998 Addition is a TPO membrane system installed in 1998, and is in fair condition. The roof over the 2003 Addition is a combination of concrete slate shingles installed in 2003, which are in good condition, and a TPO membrane system installed in 2003, which is in fair condition. There are no District reports of current leaking. No signs of past leaking were observed during the physical assessment. Access to the roof was gained by 2 access hatches that are in good condition. Roof ladders and fall safety protection cages are not required. There were no observations of standing water on the roof. Metal cap flashings and stone copings are in fair condition. Roof storm drainage is addressed through a system of gutters and downspouts and roof drains, which are properly located, and in fair condition. The roof is equipped with overflow roof drains in the 2003 Addition in sufficient quantity and in good condition. Additional roof drains will be required in areas of roof replacement throughout the rest of the facility. No problems requiring attention were encountered with any roof penetrations. There is a covered walkway attached to this structure. The portico, enclosing the courtyard, is used for the main entry into the building and outdoor circulation between the two entries on the east side of the building. It is part of the 1928 Original Construction, has wood type construction and a concrete slate roofing system. The roof structure is in poor condition, but the roofing is in fair condition.

**Rating:** 3 Needs Replacement

**Recommendations:** All areas of roof throughout the facility that is either single-ply membrane, TPO membrane, or asphalt shingles require replacement due to age of system and projected life cycle. Provide insulation in areas of roof replacement to meet Ohio School Design Manual guidelines. Though it is in good condition, provide funding to replace roofing over the portico (funding included in asphalt shingle cost). Fixing the roof structure may require a roof replacement and will require further investigation by a structural engineer. Replace metal coping in areas of roof replacement. Replace roof drain covers in the areas of roof replacement in the 2003 Addition. In areas of membrane roof replacement, provide 1 new roof drain in the 1909 Original Construction, 2 new roof drains in the 1949 Addition, and 1 new roof drain in the 1960 Addition. Replace metal coping and flashing in areas of roof replacement. Replace gutters and downspouts in areas of asphalt roof replacement.

Item	Cost	Unit	Whole Building	Original Construction (1909)	Classroom Addition (1949)	Classroom Addition (1960)	Stairwell Addition (1998)	Classroom Addition (2003)	Sum	Comments
				32,931 ft <sup>2</sup>	18,739 ft <sup>2</sup>	4,170 ft <sup>2</sup>	366 ft <sup>2</sup>	13,878 ft <sup>2</sup>		
Asphalt Shingle with Ventilated Nail Base	\$8.20	sq.ft. (Qty)		4,750 Required	2,650 Required				\$60,680.00	
Membrane (all types):	\$8.70	sq.ft. (Qty)		6,150 Required	3,250 Required	1,500 Required	120 Required	2,860 Required	\$120,756.00	(unless under 10,000 sq.ft.)
Repair/replace cap flashing and coping:	\$18.40	ln.ft.		650 Required	450 Required	100 Required	50 Required	300 Required	\$28,520.00	
Gutters/Downspouts	\$13.10	ln.ft.		250 Required	150 Required		20 Required		\$5,502.00	
Overflow Roof Drains and Piping:	\$2,500.00	each		1 Required	2 Required	1 Required			\$10,000.00	
Roof Insulation:	\$3.20	sq.ft. (Qty)		10,900 Required	5,900 Required	1,500 Required	120 Required	2,860 Required	\$68,096.00	(non-tapered insulation for use in areas without drainage problems)
<b>Other:</b> Replace Roof Drain Cover	\$100.00	each						3 Required	\$300.00	Remove and replace roof drain covers and gaskets.
<b>Sum:</b>			\$293,854.00	\$145,070.00	\$84,130.00	\$22,190.00	\$2,610.00	\$39,854.00		



Existing Roof Over 1909 Original Construction



Portico With Sagging Roof Structure

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C. Ventilation / Air Conditioning

**Description:** The Original Construction, 1949 Addition and 1960 Addition is not equipped with a central air conditioning system. The 1998 Addition is equipped with a dx split system type central air conditioning system, which is in fair condition. The addition is served by a rooftop unit with a condensing unit located on the roof, ducted to Classrooms. The 2003 Addition is equipped with a dx packaged type central air conditioning system, which is in fair condition. The addition is served by a rooftop unit ducted to VAV terminals. Window units are provided in various locations. Split systems are provided in Rooms 34, 35, the Computer Lab and the South library. The ventilation system in the Original Construction, 1949 Addition and 1960 Addition consists of unit ventilators, original to each addition, providing fresh air to Classrooms, and dx split systems, installed in 1995 and in fair condition, providing fresh air to Rooms 34, 35, the Computer Lab and South Library. A second South Library split system was installed in 2015 and is in good condition. Relief air venting is provided by central relief fans. The ventilation system in the 1998 Addition consists of a rooftop unit, installed in 1998 and in fair condition, providing fresh air to Classrooms. Relief air venting is provided by central relief fans. The ventilation system in the 2003 Addition consists of a rooftop unit and vav terminals, installed in 2003 and in fair condition, providing fresh air to Classrooms. Relief air venting is provided by central relief fans. The ventilation system does not 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 and no system is provided. The Art program is equipped with a kiln, though it is not in operation due to a lack of exhaust required per Ohio School Design Manual Requirements and Ohio Mechanical Code. General building exhaust systems for Restrooms / Storage Rooms / Art Rooms / Custodial Closets / Other are adequately placed, and in good 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 / Custodial Closets / Other. Pricing included in Item A. Provide a kiln exhaust system for the art room.

Item	Cost	Unit	Whole Building	Original Construction (1909) 32,931 ft <sup>2</sup>	Classroom Addition (1949) 18,739 ft <sup>2</sup>	Classroom Addition (1960) 4,170 ft <sup>2</sup>	Stairwell Addition (1998) 366 ft <sup>2</sup>	Classroom Addition (2003) 13,878 ft <sup>2</sup>	Sum	Comments
Kiln Exhaust System:	\$5,000.00	each		1 Required					\$5,000.00	
<b>Sum:</b>			\$5,000.00	\$5,000.00	\$0.00	\$0.00	\$0.00	\$0.00		



Air Cooled Condensing Units Serving rooms 34, 35, the Computer Lab and South Library



Aaon Rooftop Unit Serves the 2003 Building Addition

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D. Electrical Systems

**Description:** The electrical system provided to the 1909 Original Construction is a 240/120V, 1200 amps, 3 phase and 4 wire system that was renovated in 1998, providing power to the 1949, 1960, 1998 and 2003 Additions, and is in good condition. Power to the 1909 Original Construction, 1949, 1960, 1998 and 2003 Additions is provided to the school by a single utility owned, pole-mounted transformer located outside, and in good condition. The panel system, installed in 1908 Original Construction, 1949, 1960, 1998 and 2003 Additions, is in fair condition, and cannot be expanded to add additional capacity. The Classrooms in the 1908 Original Construction, 1949, 1960 and 1998 Additions are equipped with inadequate electrical outlets. The typical Classroom contains (6) general purpose outlets, (0) dedicated outlet for each Classroom computer, and (0) 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 Classrooms in the 2003 Addition are equipped with adequate electrical outlets. The typical Classroom contains (8) general purpose outlets, (2) dedicated outlets for each Classroom computer, and (1) dedicated outlet for each Classroom television. Some Classrooms are equipped with as many as (8) general purpose outlets, while others are equipped with as few as (6) general purpose outlets. There are not any spaces that have no electrical outlets. The Corridors are not 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 a suitable emergency generator. Adequate lightning protection safeguards are not provided. Stage lighting power system including control panel, breakers, and dimmers is inadequately provided, in poor condition and does not meet OSDM requirements. The overall electrical system does not meet Ohio School Design Manual requirements in supporting the current needs of the school, and will 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, due to condition and age, lack of OSDM-required features, to accommodate the addition of an air conditioning system. Provide adequate electrical outlets for servicing at corridors and around the perimeter of the building. Provide an emergency generator, with funding included in the electrical system replacement. Provide adequate control panel, dimmers, and breakers to support the Stage lighting system. Provide adequate lightning protection safeguards in the overall facility, including associated grounding system, with funding included in the electrical system replacement.

Item	Cost	Unit	Whole Building	Original Construction (1909)	Classroom Addition (1949)	Classroom Addition (1960)	Stairwell Addition (1998)	Classroom Addition (2003)	Sum	Comments
System Replacement:	\$16.23	sq.ft. (of entire building addition)		32,931 ft <sup>2</sup>	18,739 ft <sup>2</sup>	4,170 ft <sup>2</sup>	366 ft <sup>2</sup>	13,878 ft <sup>2</sup>	\$1,137,463.32	(Includes demo of existing system. Includes generator for life safety systems. Does not include telephone or data or equipment) (Use items below ONLY when the entire system is NOT being replaced)
Sum:			\$1,137,463.32	\$534,470.13	\$304,133.97	\$67,679.10	\$5,940.18	\$225,239.94		



Main Electrical System



Stage Area

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## E. Plumbing and Fixtures

Description:	<p>The service entrance is equipped with a reduced pressure back flow preventer in good condition. A water treatment system is not provided, though none is needed. The domestic water supply piping in the Original Construction, 1949 and 1960 Addition is galvanized, is original to each addition, and is in fair to poor condition. The domestic water supply piping in the 1998 and 2003 Addition is copper, is original to each addition, and is in good condition. The waste piping in the Original Construction, 1949 and 1960 Addition is galvanized, is original to each addition, and is in fair condition. The waste piping in the 1998 and 2003 Addition is cast iron, is original to each addition, and is in good condition. The facility is equipped with a 50 gallon gas water heater in good condition. The school contains (3) Large Group Restrooms for boys, (4) Large Group Restrooms for girls, (1) Locker Room Restroom for boys, (1) Locker Room Restroom for girls, (0) Restrooms associated with specialty Classrooms, and (4) Restrooms for staff. Boys' Large Group Restrooms contain (2) ADA and (6) non-ADA wall mounted flush valve toilets, (9) ADA and (0) non-ADA wall mounted flush valve urinals, as well as (4) ADA and (1) non-ADA wall mounted lavatories. Girls' Large Group Restrooms contain (2) ADA and (17) non-ADA wall mounted flush valve toilets, as well as (6) ADA and (3) non-ADA wall mounted lavatories. Boys' Locker Room Restroom contains (0) ADA and (3) non-ADA wall mounted flush valve toilets, (5) ADA and (0) non-ADA wall mounted flush valve urinals, as well as (2) ADA and (0) non-ADA wall mounted lavatories. Girls' Locker Room Restroom contains (0) ADA and (2) non-ADA floor mounted flush valve toilets, as well as (0) ADA and (1) non-ADA wall mounted lavatory. Staff Restrooms contain (0) ADA and (4) non-ADA floor mounted flush valve toilets, as well as (0) ADA and (4) non-ADA wall mounted lavatories. Condition of fixtures is fair. The facility is equipped with (0) ADA and (1) non-ADA drinking fountains, as well as (2) ADA and (6) non-ADA electric water coolers, in fair condition. The (31) Elementary Classrooms are equipped with (30) ADA and (1) non-ADA sink mounted type drinking fountains (one room containing both a non-ADA and an ADA), in good to fair condition. Special Education Classroom is not equipped with the required Restroom facilities. Kitchen is not equipped with the required Restroom. Health Clinic is equipped with the required Restroom, and fixtures are in fair condition. Due to existing grade configuration, Kindergarten / Pre-K Classroom Restroom considerations are not relevant. Kitchen fixtures consist of (1) dishwasher, (1) disposal, (1) double compartment sink, which are in fair condition. The Kitchen is not equipped with a satisfactory grease interceptor due to insufficient capacity. The Kitchen is not provided the required 140 degree hot water supply via an 80 gallon electric tank type water heater, 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 (36) toilets, (13) urinals, (23) lavatories, (32) Classroom sink mounted drinking fountains, and (15) electric water coolers. Observations revealed that the school is currently equipped with (42) toilets, (14) urinals, (28) lavatories, (31) Classroom sink mounted drinking fountains, and (8) electric water coolers. ADA requirements are not met for fixtures and drinking fountains (see Item O). Custodial Closets are properly located and are adequately provided with required service sinks or floor drain sinks, which are in fair to poor condition. 6th grade Project Laboratory is not equipped with required utility sink, gas / compressed air connections, and safety shower / eyewash. The Art room does not have OFCC required sink with solids interceptor and emergency eyewash station. Due to existing grade configuration, no Biology or Chemistry Classroom acid waste systems are required. Adequate exterior wall hydrants are provided.</p>
Rating:	2 Needs Repair
Recommendations:	<p>To facilitate the school's compliance with OBC and OFCC fixture requirements, provide (13) new toilets / (18) new lavatories / (7) new urinals / (8) new Double ADA electric water coolers / (1) new lavatory mounted type drinking fountains. Due to age, condition, LEED, and OFCC requirements, provide (10) new toilets / (10) new lavatories / (5) new Double ADA electric water coolers / new lavatory mounted type drinking fountains. See Item O for replacement of fixtures related to ADA requirements. Replace faucets and flush valves for all fixtures in the 2003 Building Addition, and the fixtures that were replaced in the 1909 and 1949 Building Additions to meet LEED requirements. Replace galvanized water supply piping in the Original Building, 1949 Addition and 1960 Addition with copper piping. Provide 140 degree water supply to the kitchen from the existing 80 gallon electric water heater. Replace sanitary waste piping in the Original Building, 1949 Addition and 1960 Addition due to age. Provide a sink with solids interceptor and emergency eyewash station to the art room. Provide the Project Laboratory with the required utility sink, gas connections, compressed air connections, and safety shower / eyewash station. Provide a grease trap in the kitchen. Replace the mop sinks in the Janitor Closets. Replace the 2 compartment sink in the Kitchen.</p>

Item	Cost	Unit	Whole Building	Original Construction (1909) 32,931 ft <sup>2</sup>	Classroom Addition (1949) 18,739 ft <sup>2</sup>	Classroom Addition (1960) 4,170 ft <sup>2</sup>	Stairwell Addition (1998) 366 ft <sup>2</sup>	Classroom Addition (2003) 13,878 ft <sup>2</sup>	Sum	Comments
Domestic Supply Piping:	\$3.50	sq.ft. (of entire building addition)		Required	Required	Required			\$195,440.00	(remove / replace)
Sanitary Waste Piping:	\$3.50	sq.ft. (of entire building addition)		Required	Required	Required			\$195,440.00	(remove / replace)
Toilet:	\$3,800.00	unit		1 Required				12 Required	\$49,400.00	(new)
Toilet:	\$1,500.00	unit		4 Required	4 Required	2 Required			\$15,000.00	(remove / replace) See Item O
Urinal:	\$3,800.00	unit		1 Required				6 Required	\$26,600.00	(new)
Sink:	\$2,500.00	unit		2 Required	4 Required			12 Required	\$45,000.00	(new)
Sink:	\$1,500.00	unit		3 Required	4 Required	2 Required			\$13,500.00	(remove / replace)
Electric water cooler:	\$3,000.00	unit		7 Required	6 Required				\$39,000.00	(double ADA)
Replace faucets and flush valves	\$500.00	per unit		22 Required	18 Required			24 Required	\$32,000.00	(average cost to remove/replace)
<b>Other:</b> Chemical Resistant Sink	\$2,650.00	each		6 Required					\$15,900.00	(new for 6th grade project laboratory)
<b>Other:</b> Compressed Air System	\$15,000.00	per system		1 Required					\$15,000.00	(new for 6th grade project laboratory)
<b>Other:</b> Emergency Eyewash / Safety Shower	\$2,500.00	each		1 Required					\$2,500.00	(new)
<b>Other:</b> Gas Connections	\$800.00	each		12 Required					\$9,600.00	(new for project laboratory)
<b>Other:</b> Kitchen Grease Trap	\$6,000.00	each			1 Required				\$6,000.00	(new)
<b>Other:</b> Mop Sink	\$1,000.00	each		1 Required				2 Required	\$3,000.00	(remove and replace)
<b>Other:</b> Sink with Drinking Fountain	\$2,500.00	each		1 Required					\$2,500.00	(new)
<b>Other:</b> Two Compartment Sink	\$2,500.00	each		1 Required					\$2,500.00	(remove and replace)
<b>Other:</b> Utility Sink	\$2,500.00	each		1 Required					\$2,500.00	(new)
<b>Sum:</b>			\$670,880.00	\$337,117.00	\$186,173.00	\$35,190.00	\$0.00	\$112,400.00		



Backflow Preventers at the Domestic Water Service Entrance



80 Gallon Electric Water Heater in Storage Room below the Kitchen at Harman Elementary School

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F. Windows

**Description:** The overall facility is equipped with thermally broken aluminum clad wood frame windows with double glazed insulated glazing type window system, which was installed in 2003, and is in good condition. The window system features operable windows in most areas of the building, and operable windows are not equipped with opening limiters, but are equipped with 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. Surface mounted roller shades are installed. This facility is not equipped with any curtain wall systems. This facility does not feature any glass block windows. The existing windows throughout the facility seem to have been replaced at the time of the 2003 Addition. There are a select few windows that were not replaced due to existing single-zone air conditioning units. The exterior doors in the 1909 Original Construction, the 1949 Addition and the 1960 Addition are equipped with wood transoms with single pane glazing, in poor condition. Exterior door vision panels are single pane glazing. The exterior doors in the 2003 Addition are equipped with aluminum clad wood transoms with double-pane insulated glazing in good condition. Exterior door vision panels are double-pane insulated glazing. The school does not contain skylights. The school does not contain clerestories. Interior glass is not OSDM-compliant due to not being tempered. Window security grilles are provided for four ground floor windows by the hard-surface play area. There is not a Greenhouse associated with this school.

**Rating:** 2 Needs Repair

**Recommendations:** Replace the existing non-insulated window system in the Original Construction, the 1949 Addition and the 1960 Addition with a new insulated window system to match existing insulated system and comply with Ohio School Design Manual requirements. Replace window transoms at exterior doors of the Original Construction, the 1949 Addition and the 1960 Addition. Exterior door vision panel replacement is addressed in Item S in exterior door replacement scope. Replace insect screens at the windows that are along the hard-surface play area. Provide security grilles at ground floor windows. Replace non-compliant interior glass.

Item	Cost	Unit	Whole Building	Original Construction (1909) 32,931 ft²	Classroom Addition (1949) 18,739 ft²	Classroom Addition (1960) 4,170 ft²	Stairwell Addition (1998) 366 ft²	Classroom Addition (2003) 13,878 ft²	Sum	Comments
Insulated Glass/Panels:	\$65.00	sq.ft. (Qty)		64 Required					\$4,160.00	(includes blinds)
<b>Other:</b> Replace Damaged Insect Screens	\$6.50	sq.ft. (Qty)			64 Required			64 Required	\$832.00	Windows along hard-surface play area.
<b>Other:</b> Replace Interior Glazing	\$45.00	sq.ft. (Qty)		364 Required	32 Required				\$17,820.00	Remove and Replace
<b>Other:</b> Transom and Sidelight Replacement	\$65.00	sq.ft. (Qty)		48 Required	29 Required				\$5,005.00	Does not include glazing in door.
<b>Other:</b> Window Security Grilles	\$35.00	sq.ft. (Qty)		360 Required				80 Required	\$15,400.00	Existing ground floor windows.
<b>Sum:</b>			\$43,217.00	\$36,260.00	\$3,741.00	\$0.00	\$0.00	\$3,216.00		



Windows at Entry Courtyard



Windows Next to Hard-Surface Play Area

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G. Structure: Foundation

**Description:** The overall facility is equipped with concrete foundation walls on concrete footings, which displayed no locations of significant differential settlement, cracking, or leaking, and are in good condition. No significant issues related to foundation cracking or spalling were encountered. 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:** 1 Satisfactory

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

Item	Cost	Unit	Whole Building	Original Construction (1909)	Classroom Addition (1949)	Classroom Addition (1960)	Stairwell Addition (1998)	Classroom Addition (2003)	Sum	Comments
				32,931 ft <sup>2</sup>	18,739 ft <sup>2</sup>	4,170 ft <sup>2</sup>	366 ft <sup>2</sup>	13,878 ft <sup>2</sup>		
Sum:			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		



West Elevation Foundation Wall



Basement

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H. Structure: Walls and Chimneys

**Description:** The Original Construction, the 1949 Addition, the 1960 Addition and the 1998 Addition have a brick and stone veneer on load bearing masonry wall system, which displayed locations of deterioration, and is in fair condition. The 2003 Addition has a brick and stone veneer with steel framing and metal stud walls. The exterior masonry appears to have inappropriately spaced control joints in fair condition. Control joints are not provided at lintel locations, at doors and windows and building corners, but they are provided at wall offsets and are in fair condition. The school does have sufficient exterior expansion joints at the connection of the 2003 Addition only, and they are in fair condition. Control joints in the 2003 Addition are adequately provided at lintel locations, at doors, windows and building corners and offsets, and are in good condition. Interior expansion joints are located at the connection of the Original Construction and the 1949 Addition, but they are only seen in the floor and the corners of the interior walls. Exterior walls in the Original Construction, the 1949 Addition, the 1960 Addition and the 1998 Addition are inadequately insulated. Brick veneer masonry walls are not cavity walls. The 2003 Addition is adequately insulated. Weep holes are not provided at lintels, below sills, and the base of masonry walls in the Original Construction, the 1949 Addition, the 1960 Addition and the 1998 Addition. In the 2003 Addition, weep holes are rope type weeps that will need to be replaced. Vents are not provided. The exterior masonry has not been cleaned and sealed in recent years, and shows evidence of mortar deterioration in areas of the Original Construction and the 1949 Addition. Architectural exterior accent materials consist of stone which are in fair condition. Exterior building fenestration in the 1909 Original Construction represents 21.2% of the exterior surfaces. Exterior building fenestration in the 1949 Addition represents 25.9% of the exterior surfaces. Exterior building fenestration in the 1960 Addition represents 25.5% of the exterior surfaces. Exterior building fenestration in the 1998 Addition represents 0% of the exterior building surfaces due to it being an infill project. Exterior building fenestration in the 2003 Addition represents 18.4% of the exterior surfaces. Interior walls in the 1909 Original construction, 1949 Addition and 1960 Addition are concrete masonry units with plaster in the corridors and wood framing with plaster for the demising walls that project full height from floor to bottom of deck, and are in good condition. Interior soffits are of gypsum board or acoustical ceiling tile type construction due to a 2003 interior renovation project, and are in good condition. The interior walls of the 2003 Addition are metal stud framing with gypsum board and are in good condition. The window sills are either brick or limestone and are in fair condition. The exterior lintels are steel, and are rusting in fair condition. Chimneys are in fair condition which would require minor areas of tuckpointing, masonry cleaning and masonry sealing. These chimneys are no longer functional and could be removed, but they are located in the center of the building and removal would not be recommended. Canopies over entrances are wood framing type construction, and are in fair condition. Exterior soffits are of wood type construction, and in fair to poor 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 in the 1909 Original Construction, the 1949 Addition and the 1960 Addition. Provide masonry cleaning, sealing caulking as required through the overall facility. Sawcut and caulk new appropriately spaced control joints in existing masonry in the 1909 Original Construction, the 1949 Addition and the 1960 Addition. Recaulk existing control joints in the 2003 Addition. Prep and paint exposed steel lintels through the overall facility. Exterior wall insulation deficiencies are addressed in Item J. Replacement or repainting of wood soffits and fascia are addressed in Item I. Replace rope weeps for cell vents. Replace brick masonry sills in the 1909 Original Construction. Infill voids of masonry walls after unit ventilator removal.

Item	Cost	Unit	Whole Building	Original Construction (1909) 32,931 ft <sup>2</sup>	Classroom Addition (1949) 18,739 ft <sup>2</sup>	Classroom Addition (1960) 4,170 ft <sup>2</sup>	Stairwell Addition (1998) 366 ft <sup>2</sup>	Classroom Addition (2003) 13,878 ft <sup>2</sup>	Sum	Comments
Tuckpointing:	\$5.25	sq.ft. (Qty)		7,328 Required	5,460 Required	1,680 Required			\$75,957.00	(wall surface)
Exterior Masonry Cleaning:	\$1.50	sq.ft. (Qty)		7,328 Required	5,460 Required	1,680 Required		6,206 Required	\$31,011.00	(wall surface)
Exterior Masonry Sealing:	\$1.00	sq.ft. (Qty)		7,328 Required	5,460 Required	1,680 Required		6,206 Required	\$20,674.00	(wall surface)
Exterior Caulking:	\$5.50	in.ft.		1,476 Required	1,456 Required	480 Required		1,244 Required	\$25,608.00	(removing and replacing)
Sill Replacement:	\$45.00	in.ft.		164 Required					\$7,380.00	(remove and replace)
Install Control Joints	\$60.00	in.ft.		120 Required	188 Required	48 Required			\$21,360.00	
<b>Other:</b> Clean and Paint Steel Lintels	\$2.00	in.ft.		328 Required	184 Required	96 Required		276 Required	\$1,768.00	Lintels do not need to be replaced.
<b>Other:</b> Infill Brick @ Unit Ventilators	\$45.00	sq.ft. (Qty)		42 Required	63 Required	28 Required			\$5,985.00	Fill voids with matching materials.
<b>Other:</b> Remove Rope Weeps	\$5.00	each						70 Required	\$350.00	Replace with cell vents
<b>Sum:</b>			\$190,093.00	\$82,036.00	\$64,806.00	\$19,992.00	\$0.00	\$23,259.00		



Base of Exterior Wall of 1949 Addition



Steel Lintels at 1949 Addition

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I. Structure: Floors and Roofs

**Description:** The floor construction of the base floor (basement) of the overall facility is concrete slab on grade type construction, and is in good condition. There is no crawl space. The floor construction of the first and second floors of the 1909 Original Construction is plywood on wood joist) type construction, and is in fair condition. The floor construction of the first and second floors of the 1949 and the 1960 Addition is cast-in-place concrete, and is in good condition. The floor construction of the 1998 Addition is metal decking with concrete topping on steel bar joists, and is in good condition. The 2003 Addition floor construction is precast concrete planks with concrete topping, and is in good condition. Ceiling to structural deck spaces are sufficient to accommodate HVAC, electrical, and plumbing scopes of work in required renovations. The roof construction of the 1909 Original Construction, the 1949 Addition and the 1960 Addition is wood deck on wood joist type construction, and is in fair condition. The roof construction of the 1998 Addition is metal roof deck on steel bar joists. The roof construction of the 2003 Addition is metal roof decking on metal trusses. The soffits and fascia trim throughout the entire facility are wood construction.

**Rating:** 2 Needs Repair

**Recommendations:** Provide replacement for wood joist framing on the first and second floor of the 1909 Original Construction. Provide fire separation assembly for wood roof structure in the Original Construction, the 1949 Addition and the 1960 Addition. Refer to Item U for pricing of fire suppression system for wood structures. Provide cleaning and painting of all wood fascia, soffits and trim. Repair wood trim at all soffits of entries and front canopy. Pricing for canopy repairs included in this section.

Item	Cost	Unit	Whole Building	Original Construction (1909)	Classroom Addition (1949)	Classroom Addition (1960)	Stairwell Addition (1998)	Classroom Addition (2003)	Sum	Comments
				32,931 ft <sup>2</sup>	18,739 ft <sup>2</sup>	4,170 ft <sup>2</sup>	366 ft <sup>2</sup>	13,878 ft <sup>2</sup>		
Replace Wood Floor System	\$45.00	sq.ft. (Qty)		15,911 Required					\$715,995.00	
Fire Rated Drywall over Existing Wood Ceiling Joists	\$3.50	sq.ft. (Qty)		15,911 Required	9,164 Required	2,092 Required			\$95,084.50	(per square feet of required drywall)
Repair Soffits:	\$24.00	sq.ft. (Qty)		2,620 Required	991 Required	282 Required		1,270 Required	\$123,912.00	
<b>Sum:</b>			\$934,991.50	\$834,563.50	\$55,858.00	\$14,090.00	\$0.00	\$30,480.00		



Soffit at 1949 South Elevation



Soffit at 1949 and 1909 Intersection

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## J. General Finishes

Description:	<p>The overall facility features conventionally partitioned Classrooms with sealed linoleum or carpet type flooring, ACT type ceilings, as well as painted plaster type wall finishes, and they are in good condition. The overall facility has Corridors with sealed linoleum type flooring, ACT type ceilings, as well as painted plaster type wall finishes, and they are in good condition. The 1909 Original Construction has Restrooms with linoleum, or tile type flooring, painted plaster type ceilings, as well as tile or painted plaster type wall finishes, and they are in good condition. The 1949 Addition has Restrooms with tile and terrazzo type flooring, painted plaster type ceilings, as well as tile and glazed block type wall finishes, and they are all in good condition. The 1960 Addition has Restrooms with linoleum type flooring, ACT type ceilings, as well as painted CMU type wall finishes, and they are in good condition. The 2003 Addition has Restrooms with tile type flooring, ACT type ceilings, as well as tile type wall finishes, and they are in good condition. Toilet partitions in the overall facility are plastic, and are in good condition. Classroom casework in the overall facility is wood type construction with plastic laminate tops, is adequately provided, and in good condition. The typical Classroom contains 15-20 lineal feet of casework, and Classroom casework provided ranges from 15 to 26 lineal feet. Classrooms are provided adequate chalkboards, markerboards, and tackboards, which are in good condition. The Classroom storage cubbies, located in the Classrooms, are adequately provided, and in good condition. The Art program is not equipped with a kiln. The 1909 Original Construction, 1949, and 1960 Additions are equipped with wood louvered and non-louvered interior doors that are flush mounted without proper ADA hardware and clearances, and in fair condition. The 2003 Addition is equipped with wood non-louvered interior doors that are flush mounted and fully recessed with proper ADA hardware and clearances, and are in good condition. The Gymnasium space has rubber type flooring, ACT type ceilings, as well as painted plaster type wall finishes, and they are in good condition. Gymnasium does not have telescoping stands or any other form of seating. Gymnasium basketball backboards are fixed type, and are in good condition. The Media Center, located in the 1960 Addition, has carpet type flooring, ACT type ceilings, as well as painted plaster type wall finishes, and they are in good condition. Student Dining, located in the 1949 Addition, has VCT type flooring, ACT type ceilings, as well as painted CMU and plaster type wall finishes, and they are in fair condition. OSDM-required fixed equipment for Stage is inadequately provided, and in fair condition. Existing Gymnasium, Student Dining, and Media Center spaces are inadequately provided with appropriate sound attenuation acoustical surface treatments. The existing Kitchen is a Warming Kitchen only, is undersized based on current enrollment, and the existing Kitchen equipment, installed in year of construction, and is in fair condition. The Kitchen hood is in fair condition, and is not equipped with the required UL 300 compliant wet chemical fire suppression system. The required 6" overhang on all three exposed sides of the cooking equipment is not provided by the hood. Kitchen hood exhaust ductwork is not installed as required by the OSDM and OBCMC. Reach-in cooler and freezer are located within the Kitchen spaces, and are in fair condition.</p>
Rating:	2 Needs Repair
Recommendations:	<p>Replace existing flooring in the Student Dining area. Provide funding to paint interior of overall facility. Provide full replacement of suspended acoustical ceiling systems in the overall facility due to complete HVAC replacement. Replace toilet accessories. Funding for replacement of all interior doors is provided in Item O. Provide additional sound attenuation in the Gymnasium, Media Center, and Student Dining spaces. Provide full replacement of Warming Kitchen equipment due to age. Provide new reach in cooler and freezer for Kitchen. Provide new kitchen hood. Provide additional wall insulation in the 1909 Original Construction, 1949 and 1960 Additions. Provide Kiln for Art program. NOTE: The Gymnasium has a rubber floor and is not documented in the most recent asbestos report. We are unsure if this was checked by the EEA Assessor and it may need to be replaced if it is a hazardous material. Replace the dishwasher and disposer in the Kitchen. POST-ASSESSMENT NOTE: Rii 3-9-18 Scope adjusted for Hard Plaster, Resilient Flooring, and Carpet replacement to coordinate with Item T.</p>



Item	Cost	Unit	Whole Building	Original Construction (1909)	Classroom Addition (1949)	Classroom Addition (1960)	Stairwell Addition (1998)	Classroom Addition (2003)	Sum	Comments
				32,931 ft²	18,739 ft²	4,170 ft²	366 ft²	13,878 ft²		
Paint:	\$2.00	sq.ft. (of entire building addition)		Required	Required	Required	Required	Required	\$140,168.00	(partial finish - floor area/prep and installation)
Acoustic Ceiling:	\$3.50	sq.ft. (Qty)		25,950 Required	16,600 Required	3,800 Required	183 Required	8,802 Required	\$193,672.50	(partial finish - tear out and replace per area)
Vinyl Enhanced Tile (VET):	\$4.10	sq.ft. (Qty)			1,542 Required				\$6,322.20	(tear out and replace per area; to be used in lieu of VCT)
Toilet Accessory Replacement	\$0.20	sq.ft. (of entire building addition)		Required	Required	Required		Required	\$13,943.60	(per building area)
Art Program Kiln:	\$2,750.00	each		1 Required					\$2,750.00	
Additional Wall Insulation	\$6.00	sq.ft. (Qty)		7,328 Required	5,460 Required	1,680 Required			\$86,808.00	(includes the furring out of the existing walls, insulation and abuse resistant GWB)
Hard Plaster Replacement	\$9.00	sq.ft. (Qty)		98,790 Required					\$889,110.00	(Hazardous Material Replacement Cost - See T.)
Acoustical Panel / Tile Ceiling Replacement	\$1.50	sq.ft. (Qty)				2,690 Required			\$4,035.00	(Hazardous Material Replacement Cost - See T.)
Resilient Flooring Replacement, Including Mastic	\$2.25	sq.ft. (Qty)		4,350 Required	7,290 Required	3,200 Required			\$33,390.00	(Hazardous Material Replacement Cost - See T.)
Carpet Replacement (over RFC)	\$3.00	sq.ft. (Qty)		4,350 Required	4,440 Required	3,200 Required			\$35,970.00	(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)			693 Required				\$77,962.50	(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:</b> Dishwasher	\$10,000.00	lump sum			Required				\$10,000.00	(remove and replace)
<b>Other:</b> Disposer	\$1,000.00	each			1 Required				\$1,000.00	(remove and replace)
<b>Other:</b> Fixed equipment for stage	\$20,000.00	lump sum		Required					\$20,000.00	Remove and replace existing fixed equipment for the Stage. Provide adequate equipment per OSDM.
<b>Other:</b> Provide Sound Attenuation	\$15.25	sq.ft. (Qty)		2,007 Required	1,542 Required	1,944 Required			\$83,768.25	Provide sound absorbing panels to the Gymnasium, Media Center, and Student Dining spaces.
<b>Sum:</b>			\$1,667,766.05	\$1,172,545.45	\$349,474.50	\$83,035.00	\$1,372.50	\$61,338.60		



Typical Corridor Finishes



Typical Classroom Finishes

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K. Interior Lighting

**Description:** The typical Classrooms in the overall facility are equipped with T-8 fluorescent, 2x4 lay-in and 1x4 indirect suspended fixture type lighting with single and multi-level switching. Classroom fixtures are in good condition, providing an average illumination of 66 FC, thus complying with the 40 FC recommended by the OSDM. The typical Corridors in the overall facility are equipped with T-8 fluorescent, 2x4 lay-in and recessed downlight fixture type lighting with single level switching. Corridor fixtures are in good condition, providing an average illumination of 23 FC, thus complying with the 15 FC recommended by the OSDM. The Gymnasium is equipped with T-8 fluorescent, 1x4 surface mount fixture type lighting, in good condition, providing an average illumination of 45 FC, which is less than the 50 FC recommended by the OSDM. The Media Center is equipped with T-8 fluorescent, 1x4 linear direct/indirect suspended fixture type lighting in good condition, providing an average illumination of 72 FC, thus complying with the 30 FC recommended by the OSDM. The Student Dining spaces are equipped with T-8 fluorescent, 1x4 parabolic surface mount fixture type lighting with multi-level switching. Student Dining fixtures are in good condition, providing an average illumination of 70 FC, thus complying with the 40 FC recommended by the OSDM. The Kitchen spaces are equipped with T-8 fluorescent, 1x4 wraparound surface mount fixture type lighting with single switching. Kitchen fixtures are in fair condition, providing an average illumination of 79 FC, thus complying with the 50 FC recommended by the OSDM. The Service Areas in the overall facility are equipped with T-8 fluorescent, 1x4 wraparound and 1x4 channel strip suspended fixture type lighting in good condition. The typical Administrative spaces in the overall facility are equipped with 1x4 indirect suspended, T-8 fluorescent fixture type, and decorative pendant suspended, incandescent fixture type lighting in good condition, providing adequate illumination based on OSDM requirements. The overall lighting systems of the facility are not fully compliant with Ohio School Design Manual requirements due to inadequate lighting levels.

**Rating:** 3 Needs Replacement

**Recommendations:** Provide complete replacement of lighting system due to condition, lighting levels, lack of multi-level switching, utilization of incandescent fixtures and installation of systems outlined in Items A, J and U. Provide adequate occupancy sensors to areas currently lacking for compliance with ASHRAE 90.1.

Item	Cost	Unit	Whole Building	Original Construction (1909)	Classroom Addition (1949)	Classroom Addition (1960)	Stairwell Addition (1998)	Classroom Addition (2003)	Sum	Comments
				32,931 ft <sup>2</sup>	18,739 ft <sup>2</sup>	4,170 ft <sup>2</sup>	366 ft <sup>2</sup>	13,878 ft <sup>2</sup>		
Complete Building Lighting Replacement	\$5.00	sq.ft. (of entire building addition)		Required	Required	Required	Required	Required	\$350,420.00	Includes demo of existing fixtures
Other: Enhanced Lighting Controls	\$250.00	each		23 Required	15 Required	8 Required	2 Required	20 Required	\$17,000.00	Provide Occupancy sensor to areas currently lacking for compliance with ASHRAE 90.1. Basic labor to replace electric switch with favorable site conditions. Shutoff power to circuit. Remove existing switch. Wire, secure and test new switch. Repower circuit and verify proper operation. Includes planning, equipment and material acquisition, area preparation and protection, setup and cleanup.
Sum:			\$367,420.00	\$170,405.00	\$97,445.00	\$22,850.00	\$2,330.00	\$74,390.00		



Gym Lighting



Typical Classroom Lighting

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L. Security Systems

**Description:** The overall facility contains a CCTV (Honeywell) and Door access control security system, installed in 2015 and in good condition. Motion detectors are not provided in main entries, central gathering areas, offices, main Corridors, and spaces where 6 or more computers are located. Door contacts are provided in the Main entry, and (4) exterior doors. An automatic visitor control system is not provided. The Administrative office is not located adjacent to the Main Entrance to the facility and though a secure Entrance vestibule is not provided, the Main Entry is equipped with Door Buzzer Entry system and CCTV camera monitored and controlled by a computer in the Administrative office. Compliant color CCTV cameras are 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, computer based recording device. A compliant computer controlled access control system integrating alarms and video signals, with appropriate UPS backup, is provided. The system is not equipped with card / biometric readers. The security system is not adequately provided throughout, and the system is not fully compliant with Ohio School Design Manual guidelines. There are no playground fencing issues requiring attention. The exterior site lighting system is equipped with surface mount wall pack, HID metal halide at entry lights in poor condition. Pedestrian walkways are illuminated with surface mount round pendant, HID metal halide fixtures in poor condition. Parking pick-up / drop off areas are not illuminated. The exterior site lighting system provides inadequate illumination due to insufficient fixture capacity.

**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 Secure Entrance Vestibule at Main Entry to the facility. The allowance is based upon adding three sets of double doors and wall system to deny access to the school at the split-level stair at the main entry.

Item	Cost	Unit	Whole Building	Original Construction (1909) 32,931 ft²	Classroom Addition (1949) 18,739 ft²	Classroom Addition (1960) 4,170 ft²	Stairwell Addition (1998) 366 ft²	Classroom Addition (2003) 13,878 ft²	Sum	Comments
Security System:	\$1.85	sq.ft. (of entire building addition)		Required	Required	Required	Required	Required	\$129,655.40	(complete, area of building)
Exterior Site Lighting:	\$1.00	sq.ft. (of entire building addition)		Required	Required	Required	Required	Required	\$70,084.00	(complete, area of building)
Other: Secure Entrance Vestibule	\$12,000.00	allowance		Required					\$12,000.00	Add 2 sets of doors and wall system to deny direct access to the school at the Main Entry.
<b>Sum:</b>			\$211,739.40	\$105,853.35	\$53,406.15	\$11,884.50	\$1,043.10	\$39,552.30		



Lighting At Pedestrian Walkway



CCTV Type Security System Monitored In Administrative Area

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M. Emergency/Egress Lighting

**Description:** The 1909 Original Construction, 1949, 1960 and 1998 Additions is equipped with an emergency egress lighting system consisting of plastic construction, incandescent illuminated exit signs, and the system is in good condition. The 2003 Addition is equipped with OSDM compliant red lettered, edge lit, LED illuminated exit signs, and the system is in good condition. The overall facility is equipped with emergency egress floodlighting, and is equipped with recessed fluorescent lighting used as emergency egress lighting that is powered on separate circuits, and the system is in good condition. The system is provided with appropriate battery backup, but not backed up by an emergency generator. The system is inadequately 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 and egress lighting system, backed up by an emergency generator to meet Ohio School Design Manual and Ohio Building Code guidelines

Item	Cost	Unit	Whole Building	Original Construction (1909) 32,931 ft²	Classroom Addition (1949) 18,739 ft²	Classroom Addition (1960) 4,170 ft²	Stairwell Addition (1998) 366 ft²	Classroom Addition (2003) 13,878 ft²	Sum	Comments
Emergency/Egress Lighting:	\$1.00	sq.ft. (of entire building addition)		Required	Required	Required	Required	Required	\$70,084.00	(complete, area of building)
<b>Sum:</b>			\$70,084.00	\$32,931.00	\$18,739.00	\$4,170.00	\$366.00	\$13,878.00		



Typical Emergency And Egress Lighting In Original Construction



Typical Emergency And Egress Lighting In 2003 Addition

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N. Fire Alarm

**Description:** The overall facility is equipped with a Siemens (MXL-IQ) type fire alarm system, installed in 2003, and in good condition, consisting of manual pull stations, bells, horn and strobe indicating devices. The system is automatic and is monitored by a third party (Sonitrol). The system is equipped with sufficient audible horns and strobe indicating devices and smoke detectors. The system is not equipped with any heat sensors. The system to the 1909 Original Construction, 1949, 1960 and 1998 Additions are not equipped with any flow switches and tamper switches. The system in the 2003 Addition is equipped with sufficient flow switches and tamper switches and will support future fire suppression systems to the overall facility. The system is adequately provided throughout, but does not have additional zone capabilities. The system is not fully compliant with Ohio Building Code, NFPA, and Ohio School Design Manual requirements.

**Rating:** 2 Needs Repair

**Recommendations:** Provide partial replacement of fire alarm system replacing the outdated fire alarm control panel for additional expansion capability to the overall facility, add heat sensor in elevator shaft, additional flow and tamper switches to support future fire suppression systems to the 1909 Original Construction, 1949, 1960 and 1998 Additions to meet OBC, NFPA, and Ohio School Design Manual guidelines.

Item	Cost	Unit	Whole Building	Original Construction (1909)	Classroom Addition (1949)	Classroom Addition (1960)	Stairwell Addition (1998)	Classroom Addition (2003)	Sum	Comments
				32,931 ft <sup>2</sup>	18,739 ft <sup>2</sup>	4,170 ft <sup>2</sup>	366 ft <sup>2</sup>	13,878 ft <sup>2</sup>		
Fire Alarm System:	\$1.75	sq.ft. (of entire building addition)		Required	Required	Required	Required	Required	\$122,647.00	(complete new system, including removal of existing)
Sum:			\$122,647.00	\$57,629.25	\$32,793.25	\$7,297.50	\$640.50	\$24,286.50		



Fire Alarm System



Typical Fire Alarm Devices

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## O. Handicapped Access

**Description:** At the site, there is not an accessible route provided from the public right-of-way, the accessible parking areas, and from the passenger unloading zone to the main entrance of the school because access to the main entry is facilitated by stairs. There is not an accessible route connecting all or most areas of the site because access to the playground is facilitated by stairs and slides. The exterior entrances are mostly not ADA accessible due to stairs. Access from the parking / drop-off area to the building entries is compromised by steps. Adequate handicap parking is not provided. Exterior doors are not equipped with ADA hardware. Building entrances should be equipped with 3 ADA power assist doors and 2 are currently provided. The main entry requires 1 ADA power assist door opener as well as 2 chair lifts because of the stairs on the interior and exterior that facilitate entry into the building. The 2003 Addition is the best access point for the handicapped because it gives direct access to the elevator and the entry point is not blocked by stairs. This entry has 2 power assist doors (one at the main entry and one at the vestibule door) and they are in fair condition. Playground layout and equipping are not compliant because the playground is inaccessible and equipment/playground surface does not meet ADA requirements. On the interior of the building, space allowances and reach ranges are mostly not compliant. There is an accessible route through the building which does not include protruding objects. Ground and floor surfaces are compliant. Ramps and stairs do meet all ADA requirements. Elevation changes within the overall facility are facilitated by 8 compliant stairwells in good condition, 1 compliant lifts in fair condition, and 1 compliant ramp in good condition. Special provisions for floor level changes in this 2 story structure have been appropriately addressed by a ramp, chairlift, and a compliant elevator in the 2003 addition that is in good condition. Access to the Stage is facilitated by a Corridor at Stage level. The only portion of the facility that is not accessible is the Auditorium space. The existing ramp connects the stage and the cafeteria, but does not provide access to the Auditorium seating area. Interior doors in the 1909 Original Construction, 1949, 1960 and 1998 Additions are not recessed, are not provided adequate clearances, and are not provided with ADA-compliant hardware. Interior doors in the 2003 Addition are a combination of recessed and non-recessed, are provided adequate clearances, and are provided with ADA-compliant hardware. 18 ADA-compliant toilets are required, and 4 are currently provided. 18 ADA-compliant Restroom lavatories are required, and 12 are currently provided. 0 ADA-compliant Science Classroom lab sinks are required, and 0 are currently provided. 4 ADA-compliant urinals are required, and 14 are currently provided. 0 ADA-compliant showers are required, and 0 are currently provided. 6 ADA-compliant electric water coolers are required, and 2 are currently provided. In the 1909 Original Construction, 1949, and 1960 Additions, toilet partitions are plastic, and do not provide appropriate ADA clearances. ADA-compliant accessories are not adequately provided and mounted. In the 2003 Addition, toilet partitions are plastic, and do provide appropriate ADA clearances. ADA-compliant accessories are adequately provided and mounted. Mirrors do meet ADA requirements for mounting heights. Science Classrooms are compliant with ADA requirements. Health Clinic and Special Education Restrooms are not compliant with ADA requirements due to size. ADA signage is only provided on the interior and exterior of the building in the 2003 Addition.

**Rating:** 3 Needs Replacement

**Recommendations:** Provide ADA-compliant signage, electric water coolers, toilets, sinks, urinals, toilet partitions, doors and frames, door hardware in the 1909 Original Construction, 1949, 1960, and 1998 Additions to facilitate the school's meeting of ADA requirements. Provide new ADA-compliant signage in the 2003 Addition. Parking issues are corrected in Item P. Provide 2 new power assist door openers at east entry of the 2003 Addition. Provide 1 new power assist door opener at the main entry in the 1909 Original Construction. Provide 2 chair lifts for the main entry - one interior and one exterior. Replace existing chair lift in the 1909 Original Construction due to age. In the 1949 Addition, enlarge both staff Restrooms and the Restroom in the Art Room to allow for ADA spatial clearances. In the boys group Restroom of the 1949 Addition, remove 1 urinal to make room for an ADA stall that accommodates required ADA spatial clearances. In the girls group Restroom of the 1949 Addition, remove 1 toilet to make room for an ADA stall that accommodates required ADA spatial clearances. In the 1909 Original Construction, enlarge both staff Restrooms, the clinic Restroom, and the Restroom located inside a Classroom to allow for ADA spatial clearances. In the 1909 Original Construction, remove 1 toilet in the girl's Locker Room, girl's Restroom, and boy's Locker Room to make room for an ADA stall that accommodates required ADA spatial clearances. Provide funding to rework doorways and Corridor walls to accommodate ADA standards as needed throughout the overall facility. Refer to Item P - Site Condition for funding regarding playground and accessibility renovations.

Item	Cost	Unit	Whole Building	Original Construction (1909) 32,931 ft²	Classroom Addition (1949) 18,739 ft²	Classroom Addition (1960) 4,170 ft²	Stairwell Addition (1998) 366 ft²	Classroom Addition (2003) 13,878 ft²	Sum	Comments
Signage:	\$0.20	sq.ft. (of entire building addition)		Required	Required	Required	Required	Required	\$14,016.80	(per building area)
Lifts:	\$15,000.00	unit		3 Required					\$45,000.00	(complete)
Electric Water Coolers:	\$1,800.00	unit		3 Required	2 Required				\$9,000.00	(replacement double ADA)
Electric Water Coolers:	\$3,000.00	unit		4 Required	4 Required				\$24,000.00	(new double ADA)
Toilet/Urinals/Sinks:	\$3,800.00	unit		20 Required	4 Required	4 Required			\$106,400.00	(new ADA)
Toilet Partitions:	\$1,000.00	stall		3 Required	2 Required				\$5,000.00	(ADA - grab bars, accessories included)
ADA Assist Door & Frame:	\$7,500.00	unit		1 Required				2 Required	\$22,500.00	(openers, electrical, patching, etc)
Replace Doors:	\$1,300.00	leaf		35 Required	17 Required	7 Required			\$76,700.00	(standard 3070 wood door, HM frame, door/light, includes hardware)
Replace Doors:	\$5,000.00	leaf		1 Required	2 Required				\$15,000.00	(rework narrow opening to provide 3070 wood door, HM frame, door/light, includes hardware)
Replace Doors:	\$5,000.00	leaf		22 Required	15 Required	1 Required			\$190,000.00	(rework opening and corridor wall to accommodate ADA standards when door opening is set back from edge of corridor and cannot accommodate a wheelchair.)
<b>Other:</b> Enlarge Restrooms to Accommodate ADA	\$25,000.00	each		4 Required	3 Required				\$175,000.00	Enlarge Restroom to accommodate ADA requirements. (Cost includes removal of existing and new ADA toilet and sink)
<b>Other:</b> Remove Toilet Fixture	\$200.00	each		3 Required	2 Required				\$1,000.00	Remove toilet fixture for ADA spatial allowances. Cover/patch wall as needed.
<b>Other:</b> Remove Toilet Partition	\$150.00	each		3 Required	2 Required				\$750.00	Remove toilet partition for ADA spatial allowances.
<b>Sum:</b>			\$684,366.80	\$417,036.20	\$219,347.80	\$30,134.00	\$73.20	\$17,775.60		



Existing Chair Lift



Typical Restroom in 1909 Original Construction

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P. Site Condition

Description:

The 2 acre moderately sloped site is located in a suburban residential setting with moderate tree and shrub type landscaping. There are no outbuildings. There are no apparent problems with erosion or ponding. The site is bordered on two sides by moderately traveled city streets, and a narrow alley on a third. A residential property is directly adjacent to the north property line. A single entrance onto the site facilitates proper vehicular traffic. Bus traffic is not provided because the School District does not have student bussing. Staff and visitor parking is facilitated by an asphalt parking lot in fair condition, containing 24 parking places, which does not provide 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 provide adequate evacuation of storm water, and no problems with parking lot ponding were observed. Concrete curbs are in good condition and are appropriately placed. Concrete 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, but is equipped with a concrete pad area for dumpsters. Due to the sloping site there are several sets of exterior stairs and rails. The east (main entry) elevation and south elevation have cast concrete steps with a wrought iron hand rail and non-compliant guardrail. There is also guardrail on top of masonry retaining wall, which is needed due to the site grading. The west elevation has metal stairs for basement access with handrail, in fair condition. Additional building entries are accessed with concrete stairs with metal pipe rails. All concrete stairs are in good condition, all rails are in fair condition. Fencing along the west elevation is mounted on top of cast concrete retaining walls, which are in fair condition. The fencing is adequate for safety of grade changes, access to the site, playground enclosure and separation from the parking lot. Concrete retaining walls are in fair condition. The playground equipment is primarily constructed of coated steel and high-density plastic, and is in good condition. Playground equipment is placed to provide compliant fall zones, and on a compliant wood fiber mulch of sufficient depth. Hard surface play area with a basketball court is provided on an asphalt surface in fair condition. The site and playground area are equipped with tables and benches in good condition. The evident conditions that would affect master planning would be the very close proximity to property lines on three sides of the facility. The parking lot on the north side of the site is in very close proximity to a residential property, the west side is along a narrow alley and the south has a retaining wall due to the adjacent street. The east side (main entry) would be a challenge due to the security of bringing the building closer to a moderately traveled suburban road. Any additions at the parking area would not be feasible due to the grade change of approximately 10 feet. Any feasible additions to this facility would be to the northeast where the hard surface play area is currently located.

Rating:

2 Needs Repair

Recommendations:

Provide additional parking spaces to meet OSDM guidelines, including adequate provisions for the disabled. Provide a new asphalt wear course in the current parking lot. Replace all metal railings with new code-compliant railings. Provide new asphalt wear course at the existing hard surface play area. Provide patching for the concrete retaining walls along the west property line. Repair small portions of concrete sidewalk at the east side of the property. Clean and paint metal steps on the west elevation to the basement access.

Item	Cost	Unit	Whole Building	Original Construction (1909)	Classroom Addition (1949)	Classroom Addition (1960)	Stairwell Addition (1998)	Classroom Addition (2003)	Sum	Comments
Asphalt Paving / New Wearing Course:	\$19.00	sq. yard		32,931 ft <sup>2</sup>	1,745 Required	4,170 ft <sup>2</sup>	366 ft <sup>2</sup>	775 Required	\$47,880.00	(includes minor crack repair in less than 5% of paved area)
Additional Parking Spaces Required for Elementary	\$121.00	per student						26 Required	\$3,146.00	(\$1,100 per parking space; 0.11 space per elementary student. Parking space includes parking lot drive space.)
Concrete Sidewalk:	\$4.69	sq.ft. (Qty)		1,470 Required		650 Required			\$9,942.80	(5 inch exterior slab)
Exterior Hand / Guard Rails:	\$43.00	in.ft.		8 Required	54 Required	24 Required			\$3,698.00	
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	Required	Required	Required	\$105,126.00	Include this one <b>or</b> the next. (Each addition should have this item)
<b>Other:</b> ADA Parking Space Linework	\$75.00	per stall						2 Required	\$150.00	Provide appropriate ADA markings/designations for parking lot.
<b>Other:</b> Clean and Paint Metal Stairs	\$650.00	allowance			Required				\$650.00	Condition of stairs does not warrant replacement.
<b>Other:</b> Repair cracked retaining wall	\$16.00	sq.ft. (Qty)		36 Required	12 Required				\$768.00	Includes chipping, cleaning and epoxy grout.
<b>Sum:</b>			\$221,360.80	\$107,210.80	\$64,427.50	\$10,335.50	\$549.00	\$38,838.00		





View from Parking Lot



Cracked Retaining Wall

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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 (1909)	Classroom Addition (1949)	Classroom Addition (1960)	Stairwell Addition (1998)	Classroom Addition (2003)	Sum	Comments
				32,931 ft <sup>2</sup>	18,739 ft <sup>2</sup>	4,170 ft <sup>2</sup>	366 ft <sup>2</sup>	13,878 ft <sup>2</sup>		
Sum:			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		



Sewage Ejector Pumps at Harman Elementary



Cast Iron Sanitary Piping at Harman Elementary School

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R. Water Supply

**Description:** The domestic water supply system is tied in to the municipal system, features a combined water meter pit and fire department connection. A 6" line is provided from the water main and splits into a 4" domestic service with a 4" meter in good condition, and 6" fire service with a siamese fire department connection. 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 2003 Addition is equipped with an automated fire suppression system, which provides adequate support for the 2003 Building Addition. The Original Construction, 1949, 1960 and 1998 Building Additions are not equipped with an automated fire suppression system, and the existing water supply will provide adequate support for a future system in the additions that currently do not have automatic fire suppression. The domestic water service is not equipped with a water booster pump, and none is required. The system provides adequate pressure and capacity for the future needs of the school.

**Rating:** 1 Satisfactory

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

Item	Cost	Unit	Whole Building	Original Construction (1909)	Classroom Addition (1949)	Classroom Addition (1960)	Stairwell Addition (1998)	Classroom Addition (2003)	Sum	Comments
				32,931 ft <sup>2</sup>	18,739 ft <sup>2</sup>	4,170 ft <sup>2</sup>	366 ft <sup>2</sup>	13,878 ft <sup>2</sup>		
Sum:			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		



Dual 2" Backflow Preventers at Harman Elementary School



Location Where the 4" Domestic Water and 6" Fire Service Pipes Enter the Building

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S. Exterior Doors

**Description:** Typical exterior doors in the 1909 Original Construction are hollow metal type construction, installed on hollow metal frames, and in fair to poor condition. Typical exterior doors feature single glazed unprotected glass or no vision panels, and inappropriate hardware. Typical exterior doors in the 1949 Addition are hollow metal type construction, installed on hollow metal frames, and in fair condition. Typical exterior doors feature single glazed unprotected vision panels, and appropriate hardware. There is one exterior door in the 1960 Addition that is hollow metal type construction, installed on hollow metal frames, and in fair condition. The exterior door features insulated tempered glass vision panels and inappropriate hardware. Typical exterior doors in the 2003 Addition are hollow metal type construction, installed on hollow metal frames, and in fair condition. Typical exterior doors feature no vision panels, and inappropriate hardware. Entrance doors in the 1909 Original Construction and 1949 Addition are wood type construction, installed on wood frames, and in fair to poor condition. Entrance doors feature single glazed unprotected vision panels, transoms, sidelights, and inappropriate hardware. Entrance doors in the 2003 Addition are wood type construction, installed on wood frames, and in fair condition. Entrance doors feature insulated tempered glass vision panels, transoms, sidelights, and inappropriate hardware. The 1960 Addition features no entrance doors. The 1998 Addition features no exterior or entrance doors. The facility is not equipped with any roof access doors. There are no overhead doors in the facility.

**Rating:** 3 Needs Replacement

**Recommendations:** Replace all exterior and entrance doors throughout the overall facility to comply with Ohio Building Code, ADA, and Ohio School Design Manual guidelines including any vestibule doors. Replacement of single glazed transoms and sidelights is addressed in Item F. POST-ASSESSMENT  
 NOTE: Rii 3-9-18 Scope amended for Fire Door replacement to coordinate with Item T.

Item	Cost	Unit	Whole Building	Original Construction (1909) 32,931 ft²	Classroom Addition (1949) 18,739 ft²	Classroom Addition (1960) 4,170 ft²	Stairwell Addition (1998) 366 ft²	Classroom Addition (2003) 13,878 ft²	Sum	Comments
Door Leaf/Frame and Hardware:	\$2,000.00	per leaf		11 Required	8 Required	1 Required		6 Required	\$52,000.00	(includes removal of existing)
Fire Door Replacement	\$1,100.00	each		2 Required					\$2,200.00	(Hazardous Material Replacement Cost - See T.)
<b>Sum:</b>			\$54,200.00	\$24,200.00	\$16,000.00	\$2,000.00	\$0.00	\$12,000.00		



Typical Entrance Door



Typical Exterior Door

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T. Hazardous Material

**Description:** The School District has been assessed previously, in 2001, and an Enhanced Environmental Hazards Assessment (EEHA) was subsequently conducted. The Table below summarizes the scopes of work called for in the Enhanced Environmental Hazards Assessment. The district did not provide documentation of any abatement projects since that time. Ceiling tile, carpet mastic, drywall systems, sink undercoatings, pipe fitting insulation, and resilient flooring are reported to be in the 1909 Original Construction, 1949 and 1960 Additions in good condition. These materials were open to observation and found to be in non-friable condition. There are no underground storage tanks on the site. Due to the construction date, there is a potential for lead based paint in the 1909 Original Construction, 1949 and 1960 Additions. However, during the construction of the 2003 Addition and renovation, all interior spaces of the existing facility were repainted. Fluorescent lighting will require special disposal.

**Rating:** 3 Needs Replacement

**Recommendations:** Remove all hazardous materials, inclusive of asbestos-containing materials in the 1909 Original Construction, 1949 and 1960 Additions as noted in the attached Environmental Hazards Assessment. Provide for the testing of paint that has the potential of being lead-based. Provide for disposal of fluorescent lighting. NOTE: The District has not provided updated asbestos reports or abatement reports. Existing drawings state that abatement was done with the 2003 Addition/Renovation. All information provided here is based on what the district provided, but is not the most up-to-date information. NOTE: The Gymnasium has a rubber floor and is not documented in the most recent asbestos report. We are unsure if this was checked by the EEA Assessor and it may need to be replaced if it is a hazardous material.

Item	Cost	Unit	Whole Building	Original Construction (1909) 32,931 ft²	Classroom Addition (1949) 18,739 ft²	Classroom Addition (1960) 4,170 ft²	Stairwell Addition (1998) 366 ft²	Classroom Addition (2003) 13,878 ft²	Sum	Comments
<i>Environmental Hazards Form</i>				<u>EEHA Form</u>	<u>EEHA Form</u>	<u>EEHA Form</u>	<u>EEHA Form</u>	<u>EEHA Form</u>	—	
Duct Insulation Removal	\$8.00	sq.ft. (Qty)		100 Required	0 Required	0 Required	0 Required	0 Required	\$800.00	
Estimated Cost For Abatement Contractor to Perform Lead Mock-Ups	\$1.00	per unit		5,000 Required	0 Required	0 Required	0 Required	0 Required	\$5,000.00	
Special Engineering Fees for LBP Mock-Ups	\$1.00	per unit		5,000 Required	0 Required	0 Required	0 Required	0 Required	\$5,000.00	
Fluorescent Lamps & Ballasts Recycling/Incineration	\$0.10	sq.ft. (Qty)		32,931 Required	18,739 Required	4,170 Required	366 Required	13,878 Required	\$7,008.40	
Pipe Insulation Removal	\$10.00	in.ft.		325 Required	170 Required	0 Required	0 Required	0 Required	\$4,950.00	
Pipe Fitting Insulation Removal	\$20.00	each		10 Required	0 Required	0 Required	0 Required	0 Required	\$200.00	
Pipe Insulation Removal (Hidden in Walls/Ceilings)	\$15.00	in.ft.		800 Required	400 Required	250 Required	0 Required	0 Required	\$21,750.00	
Dismantling of Boiler/Furnace/Incinerator	\$2,000.00	each		1 Required	0 Required	0 Required	0 Required	0 Required	\$2,000.00	
Hard Plaster Removal	\$7.00	sq.ft. (Qty)		98,790 Required	0 Required	0 Required	0 Required	0 Required	\$691,530.00	See J
Fire Door Removal	\$100.00	each		2 Required	0 Required	0 Required	0 Required	0 Required	\$200.00	See S
Non-ACM Ceiling/Wall Removal (for access)	\$2.00	sq.ft. (Qty)		3,200 Required	1,600 Required	1,000 Required	0 Required	0 Required	\$11,600.00	See J
Resilient Flooring Removal, Including Mastic	\$3.00	sq.ft. (Qty)		4,350 Required	7,290 Required	3,200 Required	0 Required	0 Required	\$44,520.00	See J
Carpet Removal (over RFC)	\$1.00	sq.ft. (Qty)		4,350 Required	4,440 Required	3,200 Required	0 Required	0 Required	\$11,990.00	See J
Sink Undercoating Removal	\$100.00	each		17 Required	9 Required	0 Required	0 Required	0 Required	\$2,600.00	
<b>Other: EHA Other Hazard</b>	\$1.00	per unit		40,200 Required					\$40,200.00	Rubber type flooring - 2-1- sf @ \$20/sf = \$40,200
<b>Sum:</b>			\$849,348.40	\$788,973.10	\$39,983.90	\$18,967.00	\$36.60	\$1,387.80		



Pipe Fittings and Insulation in the Attic



Pipe Fittings in Basement

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U. Life Safety

**Description:** The 1909 Original Construction, the 1949 Addition, the 1960 Addition and the 1998 Addition are not equipped with an automated fire suppression system. The 2003 Addition is equipped with a compliant automated fire suppression system in good condition, with a fire service entrance sized for the overall school. Exit Corridors are situated such that dead-end Corridors are not present. The facility features 5 interior stair towers, 4 of which are not protected by a two-hour fire enclosure. Guardrails are not at the correct height and do not extend past the top and bottom stair risers as required by the Ohio Building Code. The Kitchen hood is in fair condition, and is not equipped with the required UL 300 compliant wet chemical fire suppression system. The required 6" overhang of the cooking equipment is not provided by the hood. Kitchen hood exhaust ductwork is not of proper construction and not installed as required by the OSDM and OBCMC. The cooking equipment is not interlocked to shut down in the event of discharge of the fire suppression system. Fire extinguishers are provided in sufficient quantity. Existing fire extinguishers are adequately 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 sufficient to meet the future fire suppression needs of the school. Rooms with a capacity greater than 50 occupants are equipped with adequate egress.

**Rating:** 2 Needs Repair

**Recommendations:** Provide a new automated fire suppression system to meet Ohio School Design Manual guidelines in the 1909 Original Construction and the 1949, 1960 and 1998 Additions. Provide new emergency generator, with funding provided via complete replacement of electrical system in Item D. Provide new handrails to meet the requirements of the Ohio Building Code in the 1909 Original Construction and the 1949 Addition. Replace kitchen hood as noted in Item J. Provide interlock to de-energize cooking equipment upon discharge of the Kitchen hood fire suppression system. Provide emergency generator with funding provided via complete replacement of electrical system in Item D.

Item	Cost	Unit	Whole Building	Original Construction (1909) 32,931 ft²	Classroom Addition (1949) 18,739 ft²	Classroom Addition (1960) 4,170 ft²	Stairwell Addition (1998) 366 ft²	Classroom Addition (2003) 13,878 ft²	Sum	Comments
Sprinkler / Fire Suppression System:	\$3.20	sq.ft. (Qty)		26,279 Required	14,908 Required	4,097 Required	138 Required	12,004 Required	\$183,763.20	(includes increase of service piping, if required)
Generator:	\$50,000.00	unit		1 Required	0 Required	0 Required	0 Required	0 Required	\$50,000.00	(75 KW w/fence and pad/day tank only, life safety only)
Handrails:	\$5,000.00	level		2 Required					\$10,000.00	
<b>Sum:</b>			\$243,763.20	\$144,092.80	\$47,705.60	\$13,110.40	\$441.60	\$38,412.80		



Interior Stairway



Kitchen Hood

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V. Loose Furnishings

**Description:** The typical Classroom furniture is of mostly consistent design, and in generally fair condition, consisting of student desks & chairs, teacher desks & chairs, desk height file cabinets, reading tables, computer workstations, bookcases, wastebaskets, etc. 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 7 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 (1909)	Classroom Addition (1949)	Classroom Addition (1960)	Stairwell Addition (1998)	Classroom Addition (2003)	Sum	Comments
CEFPI Rating 7	\$2.00	sq.ft. (of entire building addition)		32,931 ft <sup>2</sup>	18,739 ft <sup>2</sup>	4,170 ft <sup>2</sup>	366 ft <sup>2</sup>	13,878 ft <sup>2</sup>	\$140,168.00	
Sum:			\$140,168.00	\$65,862.00	\$37,478.00	\$8,340.00	\$732.00	\$27,756.00		



Loose Furnishings in Media Center



Typical Classroom Furniture

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W. Technology

**Description:** The typical Classroom in the 1908 Original Construction, 1949, 1960, 1998 and 2003 Additions is equipped with the required four technology data ports for student use, one data port for teacher use, one voice port with a digitally based phone system, one cable port and monitor, one audio/visual port for projector, wireless access point (WAP), 2-way PA system that can be initiated by either party, one port for smart board, and computers for use by students to meet Ohio School Design Manual requirements. The typical Classroom is not equipped with central sound system, curriculum technology such as interactive tablet, student response system and document camera. The facility is not equipped with a centralized clock system. Specialized electrical / sound system requirements of Gymnasium, Stage, Student Dining, and Music spaces are inadequately provided, and in fair condition. OSDM-compliant computer network infrastructure is provided. The facility does contain a media distribution center, and provides Computer Labs for use by students. Elevators are equipped with telephones.

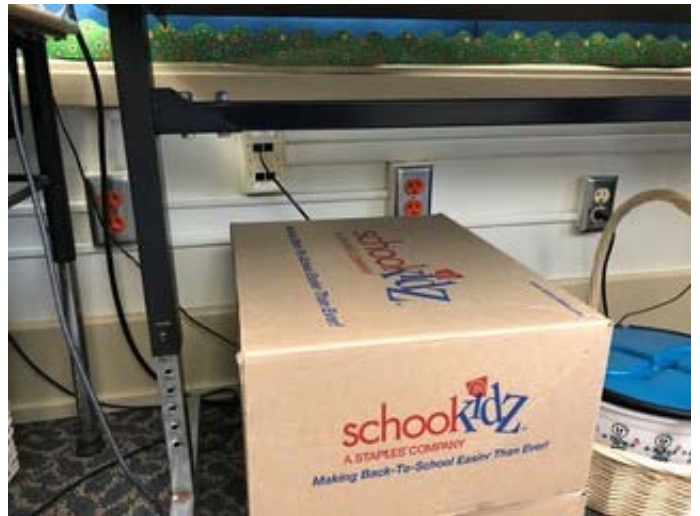
**Rating:** 3 Needs Replacement

**Recommendations:** Provide complete replacement of technology systems to meet Ohio School Design Manual requirements, and to sustain the capacity to keep pace with technological development.

Item	Cost	Unit	Whole Building	Original Construction (1909)	Classroom Addition (1949)	Classroom Addition (1960)	Stairwell Addition (1998)	Classroom Addition (2003)	Sum	Comments
				32,931 ft <sup>2</sup>	18,739 ft <sup>2</sup>	4,170 ft <sup>2</sup>	366 ft <sup>2</sup>	13,878 ft <sup>2</sup>		
ES portion of building with total SF 50,000 to 69,360	\$11.51	sq.ft. (Qty)		26,992 Required	15,616 Required	3,475 Required	305 Required	11,565 Required	\$667,039.03	
MS portion of building with total SF < 67,950	\$10.29	sq.ft. (Qty)		5,399 Required	3,123 Required	695 Required	61 Required	2,313 Required	\$119,271.39	
<b>Sum:</b>			\$786,310.42	\$366,233.63	\$211,875.83	\$47,148.80	\$4,138.24	\$156,913.92		



Typical Classroom Technology



Typical Data In Classrooms

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X. Construction Contingency / Non-Construction Cost

<b>Renovation Costs (A-W)</b>		\$11,085,938.97
7.00%	Construction Contingency	\$776,015.73
<b>Subtotal</b>		\$11,861,954.70
16.29%	Non-Construction Costs	\$1,932,312.42
<b>Total Project</b>		<b>\$13,794,267.12</b>

Construction Contingency	\$776,015.73
Non-Construction Costs	\$1,932,312.42
<b>Total for X.</b>	<b>\$2,708,328.15</b>

<b>Non-Construction Costs Breakdown</b>		
Land Survey	0.03%	\$3,558.59
Soil Borings / Phase I Envir. Report	0.10%	\$11,861.95
Agency Approval Fees (Bldg. Code)	0.25%	\$29,654.89
Construction Testing	0.40%	\$47,447.82
Printing - Bid Documents	0.15%	\$17,792.93
Advertising for Bids	0.02%	\$2,372.39
Builder's Risk Insurance	0.12%	\$14,234.35
Design Professional's Compensation	7.50%	\$889,646.60
CM Compensation	6.00%	\$711,717.28
Commissioning	0.60%	\$71,171.73
Non-Construction Contingency (includes partnering and mediation services)	1.12%	\$132,853.89
<b>Total Non-Construction Costs</b>	<b>16.29%</b>	<b>\$1,932,312.42</b>

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School Facility Appraisal

**Name of Appraiser** Paul Brown **Date of Appraisal** 2017-08-24  
**Building Name** Harman Elem  
**Street Address** 735 Harman Ave  
**City/Town, State, Zip Code** Dayton, OH 45419  
**Telephone Number(s)** (937) 297-5338  
**School District** Oakwood City

**Setting:** Suburban

Site-Acreage	2.20	Building Square Footage	70,084
Grades Housed	1-6	Student Capacity	372
Number of Teaching Stations	31	Number of Floors	3
Student Enrollment	452		
Dates of Construction	1909,1949,1960,1998,2003		

**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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<b>1.0 The School Site</b>	Points Allocated	Points
1.1 <b>Site is large enough</b> to meet educational needs as defined by state and local requirements <i>The site consists of 2.20 acres and does not meet OSFC guidelines.</i>	25	10
1.2 <b>Site is easily accessible</b> and conveniently located for the present and future population <i>The site is conveniently located in the core of the residential community, but it is not easily accessible due to topography variations.</i>	20	12
1.3 <b>Location</b> is removed from undesirable business, industry, traffic, and natural hazards <i>Location is within a residential community and removed from undesirables.</i>	10	8
1.4 Site is <b>well landscaped and developed</b> to meet educational needs <i>Site is well landscaped.</i>	10	8
1.5 ES Well equipped <b>playgrounds are separated</b> from streets and parking areas MS Well equipped <b>athletic and intermural areas are separated</b> from streets and parking HS Well equipped <b>athletic areas</b> are adequate with sufficient solid-surface parking <i>Playground is separated from streets and parking areas by a fence, but is not accessible to the disabled.</i>	10	6
1.6 <b>Topography</b> is varied enough to provide desirable appearance and without steep inclines <i>Site has steep inclines.</i>	5	3
1.7 Site has stable, well drained <b>soil free of erosion</b> <i>No visible signs of erosion were observed.</i>	5	4
1.8 Site is suitable for <b>special instructional needs</b> , e.g., outdoor learning <i>Site is well equipped for outdoor learning.</i>	5	4
1.9 <b>Pedestrian services</b> include adequate sidewalk with designated crosswalks, curb cuts, and correct slopes <i>Adequate sidewalks are provided around the site.</i>	5	4
1.10 ES/MS Sufficient <b>on-site, solid surface parking</b> for faculty and staff is provided HS Sufficient <b>on-site, solid surface parking</b> is provided for faculty, students, staff and community <i>Limited on-site parking is provided. Parking is mainly on the street and is congested.</i>	5	1
<b>TOTAL - 1.0 The School Site</b>	100	60

2.0 Structural and Mechanical Features	Points Allocated	Points
<b>Structural</b>		
2.1 Structure meets all <b>barrier-free</b> requirements both externally and internally	15	3
<i>Building does not meet barrier-free requirements.</i>		
2.2 <b>Roofs</b> appear sound, have positive drainage, and are weather tight	15	8
<i>All roofing requires replacement due to age and projected life-cycle except for the slate roofing over the 2003 Addition.</i>		
2.3 <b>Foundations</b> are strong and stable with no observable cracks	10	8
<i>No visible cracks were observed during the physical assessment.</i>		
2.4 <b>Exterior and interior walls</b> have sufficient expansion joints and are free of deterioration	10	7
<i>Exterior walls show some signs of mortar deterioration.</i>		
2.5 <b>Entrances and exits</b> are located so as to permit efficient student traffic flow	10	8
<i>There are no dead end Corridors.</i>		
2.6 <b>Building "envelope"</b> generally provides for energy conservation (see criteria)	10	6
<i>Walls in the 1909 Original Construction, 1949 and 1960 Additions do not have sufficient insulation.</i>		
2.7 Structure is <b>free of friable asbestos and toxic materials</b>	10	1
<i>Structure is assumed to contain asbestos and toxic materials at least in the 1909 Original Construction. The district has not provided updated asbestos or abatement reports.</i>		
2.8 Interior walls permit sufficient <b>flexibility</b> for a variety of class sizes	10	1
<i>No flexible partitions are provided.</i>		
<b>Mechanical/Electrical</b>		
2.9 <b>Adequate light sources</b> are well maintained, and properly placed and are not subject to overheating	15	10
<i>The light source for the overall facility meets the recommended lighting levels. Some areas require replacement due to incandescent fixtures. The Gym lighting is not meeting the recommended lighting level by the OSDM</i>		
2.10 <b>Internal water supply</b> is adequate with sufficient pressure to meet health and safety requirements	15	12
<i>Internal water supply is adequate with sufficient pressure.</i>		
2.11 Each teaching/learning area has adequate convenient <b>wall outlets</b> , phone and computer cabling for technology applications	15	12
<i>Typical teaching/learning area are equipped with adequate convenient receptacles, phone and computer cabling for technology applications.</i>		
2.12 <b>Electrical controls</b> are safely protected with <b>disconnect switches</b> easily accessible	10	5
<i>The existing Electrical and Mechanical equipment is equipped with disconnect switches and are easily accessible. The condition of the disconnect switches are in fair condition.</i>		
2.13 <b>Drinking fountains</b> are adequate in number and placement, and are properly maintained including provisions for the disabled	10	3
<i>Drinking fountains are inadequate in number and placement and are not all properly maintained for ADA compliance.</i>		
2.14 Number and size of <b>restrooms meet requirements</b>	10	3
<i>Number and size of Restrooms does not meet requirements.</i>		
2.15 <b>Drainage systems</b> are properly maintained and meet requirements	10	4
<i>Drainage system are not properly maintained on the roof and will need replaced due to age and condition. Site drainage systems are properly maintained and meet requirements.</i>		
2.16 <b>Fire alarms, smoke detectors, and sprinkler systems</b> are properly maintained and meet requirements	10	6

*The Fire alarm devices and smoke detectors in the overall facility looked properly maintained and meets requirement. The existing Sprinkler systems to the 2003 Building Addition looked properly maintained and meets requirements.*

2.17 **Intercommunication system** consists of a central unit that allows dependable **two-way communication** between the office and instructional areas 10 8

*The Classrooms and Administrative areas are equipped 2-PA system for communication.*

2.18 **Exterior water supply** is sufficient and available for normal usage 5 4

*Exterior water supply is sufficient and available for normal usage.*

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**TOTAL - 2.0 Structural and Mechanical Features** 200 109

<b>3.0 Plant Maintainability</b>	Points Allocated	Points
<p>3.1 <b>Windows, doors, and walls</b> are of material and finish requiring minimum maintenance</p> <p><i>The building has mostly wood windows and doors, which are not easily maintained.</i></p>	15	7
<p>3.2 <b>Floor surfaces</b> throughout the building require minimum care</p> <p><i>Corridors, which are sealed linoleum require minimum maintenance, but there is carpet in some Classrooms which requires more attention.</i></p>	15	9
<p>3.3 <b>Ceilings and walls</b> throughout the building, including service areas, are easily cleaned and resistant to stain</p> <p><i>Ceilings throughout the building are mostly ACT, which is not resistant to stain. Walls throughout the building are mainly plaster, but also include glazed block and painted CMU - not all are resistant to stain.</i></p>	10	7
<p>3.4 <b>Built-in equipment</b> is designed and constructed for ease of maintenance</p> <p><i>Built-in equipment is designed and constructed for ease of maintenance.</i></p>	10	7
<p>3.5 <b>Finishes and hardware</b>, with compatible keying system, are of durable quality</p> <p><i>Hardware and keying systems vary throughout the facility.</i></p>	10	4
<p>3.6 <b>Restroom fixtures</b> are wall mounted and of quality finish</p> <p><i>Most Restroom fixtures are wall mounted and of quality finish.</i></p>	10	7
<p>3.7 Adequate <b>custodial storage space</b> with water and drain is accessible throughout the building</p> <p><i>Custodial space is not adequate, water and drainage is accessible.</i></p>	10	4
<p>3.8 Adequate <b>electrical outlets and power</b>, to permit routine cleaning, are available in every area</p> <p><i>The overall facility (Corridors and exterior perimeter of the building)is not equipped with adequate electrical outlets for servicing.</i></p>	10	4
<p>3.9 <b>Outdoor light fixtures, electrical outlets</b>, equipment, and other fixtures are accessible for repair and replacement</p> <p><i>The outdoor light fixtures and electrical outlets, equipment's are accessible for repair and replacement.</i></p>	10	7
<hr/>		
<b>TOTAL - 3.0 Plant Maintainability</b>	100	56

<b>4.0 Building Safety and Security</b>	Points Allocated	Points
<b>Site Safety</b>		
4.1 <b>Student loading areas</b> are segregated from other vehicular traffic and pedestrian walkways <i>Student loading and unloading areas are along the narrow, congested street.</i>	15	3
4.2 <b>Walkways</b> , both on and offsite, are available for safety of pedestrians <i>Walkways surrounding the school are adequate.</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>Adequate signs are provided on adjacent streets.</i>	5	3
4.4 <b>Vehicular entrances and exits</b> permit safe traffic flow <i>Congested streets with parking on both sides are too narrow to accommodate volume of traffic and safety of pedestrians.</i>	5	2
4.5 <b>ES 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 is fenced in and free from hazard.</i>	5	4
<b>Building Safety</b>		
4.6 <b>The heating unit(s)</b> is located away from student occupied areas <i>The overall heating system is evaluated as being in safe but inefficient working order, and long term life expectancy of the existing system is not anticipated.</i>	20	10
4.7 Multi-story buildings have at least <b>two stairways</b> for student egress <i>Stairways are provided at the end of each hall.</i>	15	13
4.8 <b>Exterior doors</b> open outward and are equipped with panic hardware <i>Doors open outward, but not all are equipped with panic hardware.</i>	10	6
4.9 <b>Emergency lighting</b> is provided throughout the entire building with exit signs on separate electrical circuits <i>The Emergency lighting is provided throughout the entire building with exit signs on separate electrical circuits, however, its not backed by an emergency generator.</i>	10	8
4.10 <b>Classroom doors</b> are recessed and open outward <i>Doors are not recessed in the 1909 Original Construction, 1949 and 1960 Additions.</i>	10	4
4.11 <b>Building security systems</b> are provided to assure uninterrupted operation of the educational program <i>The building security system is consisted of CCTV system and monitored by the Administrative Area. The system is not fully compliant with the OSDM requirements.</i>	10	5
4.12 <b>Flooring</b> (including ramps and stairways) is maintained in a non-slip condition <i>Flooring is well maintained.</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>Stair risers are appropriate.</i>	5	4
4.14 <b>Glass</b> is properly located and protected with wire or safety material to prevent accidental student injury <i>Safety glass is not provided on the interior of the 1909 Original Construction, 1949 and 1968 Additions.</i>	5	3
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 the chair lift extend more than eight inches into the Corridors.</i>	5	3
4.16 <b>Traffic areas</b> terminate at an exit or a stairway leading to an egress <i>There are no dead end Corridors.</i>	5	4



Emergency Safety	Points Allocated	Points
4.17 Adequate <b>fire safety equipment</b> is properly located	15	13
<i>Fire safety equipment is adequate and properly located.</i>		
4.18 There are at least <b>two independent exits</b> from any point in the building	15	13
<i>There are at least two independent exits from any point in the building.</i>		
4.19 <b>Fire-resistant materials</b> are used throughout the structure	15	6
<i>There is wood construction within the facility, which is not fire-resistant.</i>		
4.20 Automatic and manual <b>emergency alarm system</b> with a distinctive sound and flashing light is provided	15	12
<i>The existing emergency alarm system is automatic, but it is equipped with distinctive sound and flashing light. The system does not have additional zone capabilities for future needs of the school.</i>		
<b>TOTAL - 4.0 Building Safety and Security</b>	200	128

<b>5.0 Educational Adequacy</b>	Points Allocated	Points
<b>Academic Learning Space</b>		
5.1 <b>Size of academic learning areas</b> meets desirable standards	25	15
<i>Classrooms are undersized throughout the 1909 Original Construction, 1949, and 1960 Additions per OSDM standards. The 2003 Addition has adequately sized Classrooms.</i>		
5.2 <b>Classroom space</b> permits arrangements for small group activity	15	6
<i>Classrooms are too small to provide small group activity, with the exception of Classrooms in the 2003 Addition.</i>		
5.3 <b>Location of academic learning areas</b> is near related educational activities and away from disruptive noise	10	6
<i>Gymnasium is centrally located, but mostly separated from Classrooms.</i>		
5.4 <b>Personal space</b> in the classroom away from group instruction allows privacy time for individual students	10	6
<i>Classrooms are generally too small to permit privacy.</i>		
5.5 <b>Storage for student materials</b> is adequate	10	7
<i>Student storage space is limited.</i>		
5.6 <b>Storage for teacher materials</b> is adequate	10	8
<i>Storage for teacher materials appears adequate.</i>		
<b>Special Learning Space</b>		
5.7 <b>Size of special learning area(s)</b> meets standards	15	6
<i>Special learning areas are too small.</i>		
5.8 <b>Design of specialized learning area(s)</b> is compatible with instructional need	10	4
<i>Special learning areas are too small.</i>		
5.9 <b>Library/Resource/Media Center</b> provides appropriate and attractive space	10	8
<i>Media Center is adequate.</i>		
5.10 <b>Gymnasium (or covered P.E. area)</b> adequately serves physical education instruction	5	3
<i>Gymnasium is undersized with limited storage.</i>		
5.11 <b>ES Pre-kindergarten and kindergarten space</b> is appropriate for age of students and nature of instruction MS/HS <b>Science</b> program is provided sufficient space and equipment	10	8
<i>Spaces are adequate and appropriate for age of students.</i>		
5.12 <b>Music Program</b> is provided adequate sound treated space	5	4
<i>Music Program has adequate sound attenuation.</i>		
5.13 <b>Space for art</b> is appropriate for special instruction, supplies, and equipment	5	3
<i>Art Room is not equipped with a kiln, but otherwise adequate.</i>		
<b>School Facility Appraisal</b>		
5.14 <b>Space for technology education</b> permits use of state-of-the-art equipment	5	4
<i>Computer room appears to be well equipped.</i>		
5.15 Space for <b>small groups and remedial instruction</b> is provided adjacent to classrooms	5	2
<i>There are not spaces for small groups or remedial instruction.</i>		
5.16 <b>Storage for student and teacher material</b> is adequate	5	4

Storage for student and teacher material appears to be adequate.

<b>Support Space</b>	Points Allocated	Points
5.17 <b>Teacher's lounge and work areas</b> reflect teachers as professionals <i>Teacher lounge and work areas are adequate.</i>	10	8
5.18 <b>Cafeteria/Kitchen</b> is attractive with sufficient space for seating/dining, delivery, storage, and food preparation <i>Cafeteria/Kitchen are undersized based on current enrollment.</i>	10	4
5.19 <b>Administrative offices</b> provided are consistent in appearance and function with the maturity of the students served <i>Offices appear sufficient to meet student needs.</i>	5	4
5.20 <b>Counselor's office</b> insures privacy and sufficient storage <i>Counselor's office is small with limited storage.</i>	5	2
5.21 <b>Clinic</b> is near administrative offices and is equipped to meet requirements <i>Clinic is undersized and not equipped to meet requirements.</i>	5	2
5.22 <b>Suitable reception space</b> is available for students, teachers, and visitors <i>Reception space has limited seating.</i>	5	2
5.23 <b>Administrative personnel</b> are provided <b>sufficient work space and privacy</b> <i>Administrative work space is limited.</i>	5	3
<hr/>		
<b>TOTAL - 5.0 Educational Adequacy</b>	200	119

<b>6.0 Environment for Education</b>	Points Allocated	Points
<b>Exterior Environment</b>		
6.1 Overall <b>design is aesthetically pleasing</b> to age of students <i>Overall design is aesthetically pleasing to students and community.</i>	15	13
6.2 Site and building are <b>well landscaped</b> <i>Site is well landscaped.</i>	10	9
6.3 <b>Exterior noise and poor environment</b> do not disrupt learning <i>Residential setting does not create disruptive noise.</i>	10	8
6.4 <b>Entrances and walkways</b> are <b>sheltered</b> from sun and inclement weather <i>The main entrance is sheltered from sun, but all other entrances are exposed.</i>	10	6
6.5 <b>Building materials</b> provide attractive color and texture <i>Brick, limestone, and slate shingled roofs provide attractive color and texture.</i>	5	4
<b>Interior Environment</b>		
6.6 <b>Color schemes, building materials, and decor</b> provide an impetus to learning <i>Color schemes and building materials are consistent throughout the facility.</i>	20	18
6.7 <b>Year around comfortable temperature and humidity</b> are provided throughout the building <i>Year around comfortable temperature and humidity are inadequately provided throughout the building</i>	15	6
6.8 <b>Ventilating system</b> provides adequate quiet circulation of clean air and meets 15cfm VBC requirement <i>The ventilation system does not meet the Ohio Building Code 15 CFM per occupant fresh air requirement.</i>	15	5
6.9 <b>Lighting system</b> provides proper intensity, diffusion, and distribution of illumination <i>The lighting system complies with the required lighting levels for each space of the building.</i>	15	10
6.10 <b>Drinking fountains and restroom facilities</b> are conveniently located <i>Drinking fountains and Restroom facilities are conveniently located.</i>	15	12
6.11 <b>Communication among students</b> is enhanced by commons area(s) for socialization <i>Common areas for the students are limited internally, but the courtyard provides an adequate space for socialization.</i>	10	7
6.12 <b>Traffic flow</b> is aided by appropriate foyers and corridors <i>Traffic flow is sufficient.</i>	10	7
6.13 <b>Areas for students to interact</b> are suitable to the age group <i>Library, Gymnasium, and outdoor courtyard provide adequate areas for students to interact.</i>	10	8
6.14 <b>Large group areas are designed</b> for effective management of students <i>Gymnasium and Student Dining spaces are undersized per OSDM, which does not allow for effective management of students.</i>	10	6
6.15 <b>Acoustical treatment</b> of ceilings, walls, and floors provides effective sound control <i>Acoustical treatment is adequate in Classrooms, but Student Dining, Gymnasium, and Media Center spaces require additional sound attenuation.</i>	10	6
6.16 <b>Window design</b> contributes to a pleasant environment <i>Window design fits the architectural style of the building and contributes to a pleasing environment.</i>	10	8
6.17 <b>Furniture and equipment</b> provide a pleasing atmosphere	10	7

*Furniture and equipment is adequate and provides a pleasing atmosphere. Few spaces have mismatched furniture.*

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**TOTAL - 6.0 Environment for Education**

200

140

# LEED Observation Notes

**School District:** Oakwood City  
**County:** Montgomery  
**School District IRN:** 44586  
**Building:** Harman Elem  
**Building IRN:** 15289

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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 suburban location of the facility allows for a lot of students to walk or bike to school, however there is not a public bus system for the school. The facility is centrally located within the community. Heat island effects can be reduced with roof replacements to have more reflective roofs.

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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)

All plumbing fixtures should be replaced with water-conserving fixtures, such as dual-flush water closets and pint-flush urinals. Tank type water closets could be fed via water collected through a rain harvesting system to further reduce potable water usage.

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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)

To improve on the energy stewardship by the School District, a ground geo-exchange loop with vertical boreholes that serves new geothermal heat pumps or a hybrid system would offer additional savings to the District. To assist the District in optimizing its new building automation system, enhanced commissioning by a certified Commissioning Authority has a potential to provide the District a fully functional building control system upon completion of a construction project.

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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)

Materials & Resources credits could gain large amounts of points if building is reused, renovated, or added to.

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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)

Outdoor airflow delivery monitoring should be provided to assure building personnel that adequate outdoor ventilation air is supplied to all spaces while the building is occupied.

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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)

Innovation & Design process credits could be obtained by providing higher values of regional materials, recycled content, or water conservation.

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**Justification for Allocation of Points**

Building Name and Level: **Harman Elem**

**1-6**

**Building features that clearly exceed criteria:**

1. Site landscaping provides a pleasant environment.
2. Building aesthetics are pleasing and consistent with the surrounding community.
- 3.
- 4.
- 5.
- 6.

**Building features that are non-existent or very inadequate:**

1. Building is not fully compliant with ADA requirements. Signage, hardware, and clearances are inconsistent throughout.
2. Building does not have a secured entry.
- 3.
- 4.
- 5.
- 6.

[Back to Assessment Summary](#)

# Environmental Hazards Assessment Cost Estimates

<b>Owner:</b>	Oakwood City
<b>Facility:</b>	Harman Elem
<b>Date of Initial Assessment:</b>	Aug 24, 2017
<b>Date of Assessment Update:</b>	Apr 10, 2018
<b>Cost Set:</b>	2018

<b>District IRN:</b>	44586
<b>Building IRN:</b>	15289
<b>Firm:</b>	Resource International, Inc.

**Scope remains unchanged after cost updates.**

Building Addition	Addition Area (sf)	Total of Environmental Hazards Assessment Cost Estimates	
		Renovation	Demolition
1909 Original Construction	32,931	\$788,973.10	\$778,973.10
1949 Classroom Addition	18,739	\$39,983.90	\$39,983.90
1960 Classroom Addition	4,170	\$18,967.00	\$18,967.00
1998 Stairwell Addition	366	\$36.60	\$36.60
2003 Classroom Addition	13,878	\$1,387.80	\$1,387.80
<b>Total</b>	<b>70,084</b>	<b>\$849,348.40</b>	<b>\$839,348.40</b>
Total with Regional Cost Factor (98.97%)	—	\$840,600.11	\$830,703.11
Regional Total with Soft Costs & Contingency	—	\$1,045,961.24	\$1,033,646.37



**Environmental Hazards(Enhanced) - Oakwood City (44586) - Harman Elem (15289) - Original Construction**

**Owner:** Oakwood City **Bldg. IRN:** 15289  
**Facility:** Harman Elem **BuildingAdd:** Original Construction  
**Date On-Site:** 2018-02-20 **Consultant Name:** Tom Abbinante

A. Asbestos Containing Material (ACM)		AFM=Asbestos Free Material		
ACM Found	Status	Quantity	Unit Cost	Estimated Cost
1. Boiler/Furnace Insulation Removal	Reported / Assumed Asbestos-Free Material	0	\$10.00	\$0.00
2. Breeching Insulation Removal	Reported / Assumed Asbestos-Free Material	0	\$10.00	\$0.00
3. Tank Insulation Removal	Not Present	0	\$8.00	\$0.00
4. Duct Insulation Removal	Assumed Asbestos-Containing Material	100	\$8.00	\$800.00
5. Pipe Insulation Removal	Reported Asbestos-Containing Material	325	\$10.00	\$3,250.00
6. Pipe Fitting Insulation Removal	Assumed Asbestos-Containing Material	10	\$20.00	\$200.00
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)	Assumed Asbestos-Containing Material	800	\$15.00	\$12,000.00
10. Dismantling of Boiler/Furnace/Incinerator	Assumed Asbestos-Containing Material	1	\$2,000.00	\$2,000.00
11. Flexible Duct Connection Removal	Reported / Assumed Asbestos-Free Material	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	98790	\$7.00	\$691,530.00
15. Gypsum Board Removal	Reported / Assumed Asbestos-Free Material	0	\$6.00	\$0.00
16. Acoustical Panel/Tile Ceiling Removal	Reported / Assumed Asbestos-Free Material	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	Reported / Assumed Asbestos-Free Material	0	\$1.00	\$0.00
20. Light (Reflector) Fixture Removal	Reported / Assumed Asbestos-Free Material	0	\$50.00	\$0.00
21. Sheet Flooring with Friable Backer Removal	Reported / Assumed Asbestos-Free Material	0	\$4.00	\$0.00
22. Fire Door Removal	Assumed Asbestos-Containing Material	2	\$100.00	\$200.00
23. Door and Window Panel Removal	Reported / Assumed Asbestos-Free Material	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)	Assumed Asbestos-Containing Material	3200	\$2.00	\$6,400.00
27. Window Component (Compound, Tape, or Caulk) - Reno & Demo	Reported / Assumed Asbestos-Free Material	0	\$300.00	\$0.00
28. Window Component (Compound, Tape, or Caulk) - Reno Only	Reported / Assumed Asbestos-Free Material	0	\$300.00	\$0.00
29. Resilient Flooring Removal, Including Mastic	Reported Asbestos-Containing Material	4350	\$3.00	\$13,050.00
30. Carpet Mastic Removal	Reported / Assumed Asbestos-Free Material	0	\$2.00	\$0.00
31. Carpet Removal (over RFC)	Assumed Asbestos-Containing Material	4350	\$1.00	\$4,350.00
32. Acoustical Tile Mastic Removal	Reported / Assumed Asbestos-Free Material	0	\$3.00	\$0.00
33. Sink Undercoating Removal	Assumed Asbestos-Containing Material	17	\$100.00	\$1,700.00
34. Roofing Removal	Reported / Assumed Asbestos-Free Material	0	\$2.00	\$0.00
35. (Sum of Lines 1-34)	<b>Total Asb. Hazard Abatement Cost for Renovation Work</b>			\$735,480.00
36. (Sum of Lines 1-34)	<b>Total Asb. Hazard Abatement Cost for Demolition Work</b>			\$735,480.00

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 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. 32931	32931	\$0.10	\$3,293.10	

E. Other Environmental Hazards/Remarks			<input checked="" type="checkbox"/> None Reported
Description		Cost Estimate	
1. Rubber type flooring - 2-1- sf @ \$20/sf = \$40,200		\$40,200.00	
2. (Sum of Lines 1-1)	<b>Total Cost for Other Environmental Hazards - Renovation</b>	\$40,200.00	
3. (Sum of Lines 1-1)	<b>Total Cost for Other Environmental Hazards - Demolition</b>	\$40,200.00	

F. Environmental Hazards Assessment Cost Estimate Summaries		
1. A35, B1, C3, D1, and E2	<b>Total Cost for Env. Hazards Work - Renovation</b>	\$788,973.10
2. A36, B1, D1, and E3	<b>Total Cost for Env. Hazards Work - Demolition</b>	\$778,973.10

\* 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(Enhanced) - Oakwood City (44586) - Harman Elem (15289) - Classroom Addition**

**Owner:** Oakwood City **Bldg. IRN:** 15289  
**Facility:** Harman Elem **BuildingAdd:** Classroom Addition  
**Date On-Site:** 2018-02-20 **Consultant Name:** Tom Abbinante

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 / Assumed Asbestos-Free Material	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)	Assumed Asbestos-Containing Material	250	\$15.00	\$3,750.00
10. Dismantling of Boiler/Furnace/Incinerator	Not Present	0	\$2,000.00	\$0.00
11. Flexible Duct Connection Removal	Not Present	0	\$100.00	\$0.00
12. Acoustical Plaster Removal	Not Present	0	\$7.00	\$0.00
13. Fireproofing Removal	Not Present	0	\$25.00	\$0.00
14. Hard Plaster Removal	Reported / Assumed Asbestos-Free Material	0	\$7.00	\$0.00
15. Gypsum Board Removal	Reported / Assumed Asbestos-Free Material	0	\$6.00	\$0.00
16. Acoustical Panel/Tile Ceiling Removal	Reported / Assumed Asbestos-Free Material	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	Reported / Assumed Asbestos-Free Material	0	\$1.00	\$0.00
20. Light (Reflector) Fixture Removal	Not Present	0	\$50.00	\$0.00
21. Sheet Flooring with Friable Backer Removal	Reported / Assumed Asbestos-Free Material	0	\$4.00	\$0.00
22. Fire Door Removal	Reported / Assumed Asbestos-Free Material	0	\$100.00	\$0.00
23. Door and Window Panel Removal	Reported / Assumed Asbestos-Free Material	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)	Assumed Asbestos-Containing Material	1000	\$2.00	\$2,000.00
27. Window Component (Compound, Tape, or Caulk) - Reno & Demo	Reported / Assumed Asbestos-Free Material	0	\$300.00	\$0.00
28. Window Component (Compound, Tape, or Caulk) - Reno Only	Reported / Assumed Asbestos-Free Material	0	\$300.00	\$0.00
29. Resilient Flooring Removal, Including Mastic	Assumed Asbestos-Containing Material	3200	\$3.00	\$9,600.00
30. Carpet Mastic Removal	Reported / Assumed Asbestos-Free Material	0	\$2.00	\$0.00
31. Carpet Removal (over RFC)	Assumed Asbestos-Containing Material	3200	\$1.00	\$3,200.00
32. Acoustical Tile Mastic Removal	Reported / Assumed Asbestos-Free Material	0	\$3.00	\$0.00
33. Sink Undercoating Removal	Assumed Asbestos-Containing Material	0	\$100.00	\$0.00
34. Roofing Removal	Reported / Assumed Asbestos-Free Material	0	\$2.00	\$0.00
35. (Sum of Lines 1-34)	<b>Total Asb. Hazard Abatement Cost for Renovation Work</b>			\$18,550.00
36. (Sum of Lines 1-34)	<b>Total Asb. Hazard Abatement Cost for Demolition Work</b>			\$18,550.00

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 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. 4170		\$0.10	\$417.00

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>	\$18,967.00
2. A36, B1, D1, and E2	<b>Total Cost for Env. Hazards Work - Demolition</b>	\$18,967.00

\* 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(Enhanced) - Oakwood City (44586) - Harman Elem (15289) - Stairwell Addition**

**Owner:** Oakwood City **Bldg. IRN:** 15289  
**Facility:** Harman Elem **BuildingAdd:** Stairwell Addition  
**Date On-Site:** 2018-02-20 **Consultant Name:** Tom Abbinante

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)	Reported / Assumed Asbestos-Free Material	0	\$15.00	\$0.00
10. Dismantling of Boiler/Furnace/Incinerator	Not Present	0	\$2,000.00	\$0.00
11. Flexible Duct Connection Removal	Not Present	0	\$100.00	\$0.00
12. Acoustical Plaster Removal	Not Present	0	\$7.00	\$0.00
13. Fireproofing Removal	Not Present	0	\$25.00	\$0.00
14. Hard Plaster Removal	Reported / Assumed Asbestos-Free Material	0	\$7.00	\$0.00
15. Gypsum Board Removal	Reported / Assumed Asbestos-Free Material	0	\$6.00	\$0.00
16. Acoustical Panel/Tile Ceiling Removal	Reported / Assumed Asbestos-Free Material	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	Reported / Assumed Asbestos-Free Material	0	\$1.00	\$0.00
20. Light (Reflector) Fixture Removal	Not Present	0	\$50.00	\$0.00
21. Sheet Flooring with Friable Backer Removal	Reported / Assumed Asbestos-Free Material	0	\$4.00	\$0.00
22. Fire Door Removal	Reported / Assumed Asbestos-Free Material	0	\$100.00	\$0.00
23. Door and Window Panel Removal	Reported / Assumed Asbestos-Free Material	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 / Assumed Asbestos-Free Material	0	\$300.00	\$0.00
28. Window Component (Compound, Tape, or Caulk) - Reno Only	Reported / Assumed Asbestos-Free Material	0	\$300.00	\$0.00
29. Resilient Flooring Removal, Including Mastic	Reported / Assumed Asbestos-Free Material	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	Reported / Assumed Asbestos-Free Material	0	\$2.00	\$0.00
35. (Sum of Lines 1-34)	<b>Total Asb. Hazard Abatement Cost for Renovation Work</b>			\$0.00
36. (Sum of Lines 1-34)	<b>Total Asb. Hazard Abatement Cost for Demolition Work</b>			\$0.00

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	\$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. 366	366	\$0.10	\$36.60

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>	\$36.60
2. A36, B1, D1, and E2	<b>Total Cost for Env. Hazards Work - Demolition</b>	\$36.60

\* 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.

**Environmental Hazards(Enhanced) - Oakwood City (44586) - Harman Elem (15289) - Classroom Addition**

**Owner:** Oakwood City **Bldg. IRN:** 15289  
**Facility:** Harman Elem **BuildingAdd:** Classroom Addition  
**Date On-Site:** 2018-02-20 **Consultant Name:** Tom Abbinante

A. Asbestos Containing Material (ACM)		AFM=Asbestos Free Material		
ACM Found	Status	Quantity	Unit Cost	Estimated Cost
1. Boiler/Furnace Insulation Removal	Reported / Assumed Asbestos-Free Material	0	\$10.00	\$0.00
2. Breeching Insulation Removal	Reported / Assumed Asbestos-Free Material	0	\$10.00	\$0.00
3. Tank Insulation Removal	Not Present	0	\$8.00	\$0.00
4. Duct Insulation Removal	Reported / Assumed Asbestos-Free Material	0	\$8.00	\$0.00
5. Pipe Insulation Removal	Reported / Assumed Asbestos-Free Material	0	\$10.00	\$0.00
6. Pipe Fitting Insulation Removal	Reported / Assumed Asbestos-Free Material	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)	Reported / Assumed Asbestos-Free Material	0	\$15.00	\$0.00
10. Dismantling of Boiler/Furnace/Incinerator	Reported / Assumed Asbestos-Free Material	0	\$2,000.00	\$0.00
11. Flexible Duct Connection Removal	Reported / Assumed Asbestos-Free Material	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	Reported / Assumed Asbestos-Free Material	0	\$6.00	\$0.00
16. Acoustical Panel/Tile Ceiling Removal	Reported / Assumed Asbestos-Free Material	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	Reported / Assumed Asbestos-Free Material	0	\$1.00	\$0.00
20. Light (Reflector) Fixture Removal	Reported / Assumed Asbestos-Free Material	0	\$50.00	\$0.00
21. Sheet Flooring with Friable Backer Removal	Reported / Assumed Asbestos-Free Material	0	\$4.00	\$0.00
22. Fire Door Removal	Reported / Assumed Asbestos-Free Material	0	\$100.00	\$0.00
23. Door and Window Panel Removal	Reported / Assumed Asbestos-Free Material	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 / Assumed Asbestos-Free Material	0	\$300.00	\$0.00
28. Window Component (Compound, Tape, or Caulk) - Reno Only	Reported / Assumed Asbestos-Free Material	0	\$300.00	\$0.00
29. Resilient Flooring Removal, Including Mastic	Reported / Assumed Asbestos-Free Material	0	\$3.00	\$0.00
30. Carpet Mastic Removal	Reported / Assumed Asbestos-Free Material	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 / Assumed Asbestos-Free Material	0	\$100.00	\$0.00
34. Roofing Removal	Reported / Assumed Asbestos-Free Material	0	\$2.00	\$0.00
35. (Sum of Lines 1-34)	<b>Total Asb. Hazard Abatement Cost for Renovation Work</b>			\$0.00
36. (Sum of Lines 1-34)	<b>Total Asb. Hazard Abatement Cost for Demolition Work</b>			\$0.00

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	\$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. 13878		\$0.10	\$1,387.80

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>	\$1,387.80
2. A36, B1, D1, and E2	<b>Total Cost for Env. Hazards Work - Demolition</b>	\$1,387.80

\* 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.