Building Information - Shaker Heights City (44750) - Shaker Heights Middle School

Program Type	Classroom Facilities Assistance Program (CFAP) - Regular
Setting	Urban
Assessment Name	Shaker Heights MS Assessment - Shaker Heights CSD - CFAP Update (11-2-21)
Assessment Date (on-site; non-EEA)	2015-02-09
Kitchen Type	Full Kitchen
Cost Set:	2016
Building Name	Shaker Heights Middle School
Building IRN	4457
Building Address	20600 Shaker Blvd
Building City	Shaker Heights
Building Zipcode	44122
Building Phone	(216) 295-4100
Acreage	22.76
Current Grades:	7-8
Teaching Stations	32
Number of Floors	2
Student Capacity	1184
Current Enrollment	861
Enrollment Date	2014-04-23

Enrollment Date is the date in which the current enrollment was taken.

Number of Classrooms	24
Historical Register	**NO**
Building's Principal	Danny Young
Building Type	Middle

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Building Pictures - Shaker Heights City(44750) - Shaker Heights Middle School(4457)

North elevation photo:

East elevation photo:

South elevation photo:

West elevation photo:

GENERAL DESCRIPTION

167,084 Total Existing Square Footage
1955,1955,1955 Building Dates
7-8 Grades
861 Current Enrollment
32 Teaching Stations
22.76 Site Acreage

The 1955 building is situated on a 22.8 acre site surrounded by open fields and residences. The structure of the building consists of steel columns and masonry piers bearing on poured-in-place concrete foundations walls and concrete piers. Floors consist of concrete pan joists and poured structural concrete. The roof is framed with hollow core concrete planks supported by steel beams. The red brick clad building has a multi-winged floor plan. The exterior envelope is 95% glazing in some areas of the building. Full height single glazed windows are present in corridors and in many classrooms. Some flat areas of the roof are covered with a built-up roof. The top-layer has white granules. The library and auditorium are covered with an asphalt membrane roofing over concrete. Classroom wings are covered with sloped asphalt shingle roofs. One of the dominant design features is the large roof overhangs around the auditorium wing. Durable flooring materials such as terrazzo and VCT are used throughout. The walls in common areas consist of plaster with a wood wainscot. The performance wing of the building has full height wood veneer. The existing system for the overall facility consists of four, Burnham gas-fired steam boilers in fair condition, 1995. The capacity of each is 2,821 MBH. The steam boilers serves unit ventilators in each classroom, and fin tube in the common areas and several air handling units that serve larger spaces. The boilers and air handling units are controlled with DDC controls and the rest of the controls are pneumatic and in good condition considering their age. Each ventilator has an outside air grilled at the exterior wall. Overall, the ventilators and the air handling units do not provide the required outside air delivery to meet OBC mechanical code. The DDC controls were added two years ago under an energy performance contract. The staff indicates the controls keep the boilers on too long on mild days. On the day of the site visit, the staff turned off the boilers because the building was warm enough and no longer required the heating on. There is a dedicated steam boiler, Hydro- Therm, 105 MBH, for the kitchen kettle. The operation is controlled by the kitchen staff. The 1987 boiler is in poor condition. The pipe system does not provide a capacity for simultaneous heating and cooling operation which is not compliant with the OSDM requirements. The overall electrical system does not meet OSDM requirements in supporting the current needs of the school and will not be adequate to meet the facility's future needs. The domestic water supply system is galvanized and copper and is tied to the city system. There is a 6'' water main that serves a 4'' domestic water line and a 4'' fire water line. There is no backflow preventer in the building, but there is a pressure reducing valve on the 4'' water service. The system provides adequate pressure and capacity for the facility's needs. The facility does have an automatic fire suppression system for the area that was previously used as a shop and the attached storage areas. The system is no longer required because the space is not used for a shop area. The staff indicates that they do not believe the system is still active. Due to the size of the building, the current water service size will likely not meet the requirements for a full fire suppression system for the building.

Windows around the building are obsolete in terms of thermal performance and light management. They represent a significant portion of the building's envelope, thus contributing to difficulties in efficiently maintaining consistent temperatures.

PROBABLE INFLATION COST SUMMARY FOR SUMMER 2022

The building assessment costs in this report are based on OFCC Assessment Cost Guidelines 2021. Based on current market conditions, the following cost projections have been made for Summer 2022 construction. Cost years beyond 2022 have been calculated with a 3.5% inflation rate.

Facility Cost Assessment Adjusted for Inflation through Summer 2022		Estimated 2022 Assessement Cost	Cost/sf.
A	Heating System	$6,689,527.96	$40.04
B	Roofing	$847,090.97	$5.07
C	Ventilation / Air Conditioning	$0.00	$0.00
D	Electrical Systems	$3,167,351.24	$18.96
E	Plumbing and Fixtures	$1,048,123.16	$6.27
F	Windows	$2,829,769.25	$16.94
G	Structure: Foundation	$314,871.15	$1.88
H	Structure: Walls and Chimneys	$112,020.07	$0.67
I	Structure: Floors and Roofs	$0.00	$0.00
J	General Finishes	$3,230,485.57	$19.33
K	Interior Lighting	$952,378.80	$5.70
L	Security Systems	$545,863.43	$3.27
M	Emergency / Egress Lighting	$179,239.36	$1.07
N	Fire Alarm	$268,859.04	$1.61
O	Handicapped Access	$661,867.83	$3.96
P	Site Condition	$372,524.80	$2.23
Q	Sewage Systems	$0.00	$0.00
R	Water Supply	$21,860.00	$0.13
S	Exterior Doors	$133,056.00	$0.80
T	Hazardous Material	$901,388.40	$5.39
U	Life Safety	$1,483,502.08	$8.88
V	Loose Furnishings	$784,714.38	$4.70
W	Technology	$1,501,143.29	$8.98
X	Construction Contingency / Non-Construction Cost	$6,290,769.37	$37.65
	ESCALATED OFCC GUIDELINE BUDGET (2021) - OME	**$32,336,406.15**	**$193.53**
	OFCC 2021 COST GUIDELINES BUDGET	$28,138,563.02	
	VARIANCE	$4,197,843.13	
	VARIANCE %	14.92%	
	UNIT PRICE CONCERNS		
	Total	$3,175,676.83	
	REV OFCC GUIDELINE UNIT PRICE BUDGET - OME	**$35,512,082.98**	**$212.54**
	OFCC 2021 COST GUIDELINES BUDGET	**$28,138,563.02**	
	VARIANCE	**$7,373,519.96**	
	VARIANCE %	**26.20%**	

LOCALLY FUNDED INITIATIVES

Total	$0.00	
REV OFCC GUIDELINE UNIT PRICE BUDGET - OME	**$35,512,082.98**	**$212.54**
OFCC 2021 COST GUIDELINES BUDGET	**$28,138,563.02**	
VARIANCE	**$7,373,519.96**	
VARIANCE %	**26.20%**	

2022 Costs	$35,512,082.98
2023 Costs with 3.5% inflation	$36,755,005.88
2024 Costs with 3.5% inflation	$38,041,431.09
2025 Costs with 3.5% inflation	$39,372,881.18
2026 Costs with 3.5% inflation	$40,750,932.02

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Building Construction Information - Shaker Heights City (44750) - Shaker Heights Middle School (4457)

Name	Year	Handicapped Access	Floors	Square Feet	Non OSDM Addition	Built Under ELPP
Auditorium	1955	yes	1	6,935	yes	no
Natatorium	1955	no	1	7,034	yes	no
Original Building	1955	yes	2	153,115	no	no

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Building Component Information - Shaker Heights City (44750) - Shaker Heights Middle School (4457)

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
Auditorium (1955)	6935													
Natatorium (1955)									7034					
Original Building (1955)		38077		6421	4217		4444	2500						6148
Total	6,935	38,077	0	6,421	4,217	0	4,444	2,500	7,034	0	0	0	0	6,148
Master Planning Considerations														

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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 - Shaker Heights Middle School (4457)

District: Shaker Heights City
Name: Shaker Heights Middle School
Address: 20600 Shaker Blvd
Shaker Heights,OH 44122
Bldg. IRN: 4457

County: Cuyahoga **Area:** Northeastern Ohio (8)
Contact: Danny Young
Phone: (216) 295-4100
Date Prepared: 2015-02-09 **By:** Kelton Waller
Date Revised: 2021-11-03 **By:** Bill Prenosil

Current Grades	7-8	Acreage:	22.76
Proposed Grades	N/A	Teaching Stations:	32
Current Enrollment	861	Classrooms:	24
Projected Enrollment	N/A		

Addition	Date	HA	Number of Floors	Current Square Feet
Natatorium	1955	no	1	7,034
Original Building	1955	yes	2	153,115
Auditorium	1955	yes	1	6,935
Total				**167,084**

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

Suitability Appraisal Summary

Section	Points Possible	Points Earned	Percentage	Rating Category
Cover Sheet	—	—	—	—
1.0 The School Site	100	94	94%	Excellent
2.0 Structural and Mechanical Features	200	140	70%	Satisfactory
3.0 Plant Maintainability	100	72	72%	Satisfactory
4.0 Building Safety and Security	200	161	81%	Satisfactory
5.0 Educational Adequacy	200	161	81%	Satisfactory
6.0 Environment for Education	200	140	70%	Satisfactory
LEED Observations	—	—	—	—
Commentary	—	—	—	—
Total	1000	768	77%	Satisfactory

Enhanced Environmental Hazards Assessment Cost Estimates

FACILITY ASSESSMENT Cost Set: 2016	Rating	Dollar Assessment	C
A. Heating System	3	$5,589,154.08	-
B. Roofing	3	$743,887.95	-
C. Ventilation / Air Conditioning	1	$0.00	-
D. Electrical Systems	3	$2,711,773.32	-
E. Plumbing and Fixtures	3	$915,521.50	-
F. Windows	3	$2,288,945.00	-
G. Structure: Foundation	2	$280,905.00	-
H. Structure: Walls and Chimneys	2	$108,925.00	-
I. Structure: Floors and Roofs	1	$0.00	-
J. General Finishes	3	$3,004,792.50	-
K. Interior Lighting	3	$835,420.00	-
L. Security Systems	3	$476,189.40	-
M. Emergency/Egress Lighting	3	$167,084.00	-
N. Fire Alarm	3	$250,626.00	-
O. Handicapped Access	2	$551,654.80	-
P. Site Condition	2	$348,018.80	-
Q. Sewage System	1	$0.00	-
R. Water Supply	3	$20,000.00	-
S. Exterior Doors	3	$108,000.00	-
T. Hazardous Material	1	$901,388.40	-
U. Life Safety	3	$1,249,170.80	-
V. Loose Furnishings	2	$765,575.00	-
W. Technology	3	$1,296,884.05	-
X. Construction Contingency / Non-Construction Cost	1	$5,524,647.42	-
Total		$28,138,563.02	

C=Under Contract	
Renovation Cost Factor	102.31%
Cost to Renovate (Cost Factor applied)	$28,788,563.83

The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.

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Natatorium (1955) Summary

District: Shaker Heights City
Name: Shaker Heights Middle School
Address: 20600 Shaker Blvd
Shaker Heights,OH 44122
Bldg. IRN: 4457

County: Cuyahoga **Area:** Northeastern Ohio (8)
Contact: Danny Young
Phone: (216) 295-4100
Date Prepared: 2015-02-09 **By:** Kelton Waller
Date Revised: 2021-11-03 **By:** Bill Prenosil

Current Grades	7-8	Acreage:	22.76
Proposed Grades	N/A	Teaching Stations:	32
Current Enrollment	861	Classrooms:	24
Projected Enrollment	N/A		

Addition	Date	HA	Number of Floors	Current Square Feet
Natatorium	**1955**	**no**	**1**	**7,034**
Original Building	1955	yes	2	153,115
Auditorium	1955	yes	1	6,935
Total				**167,084**

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

FACILITY ASSESSMENT Cost Set: 2016		Rating	Dollar Assessment	C
A.	Heating System	3	$183,728.08	-
B.	Roofing	3	$62,920.70	-
C.	Ventilation / Air Conditioning	1	$0.00	-
D.	Electrical Systems	3	$114,161.82	-
E.	Plumbing and Fixtures	3	$68,819.00	-
F.	**Windows**	**3**	**$0.00**	-
G.	**Structure: Foundation**	**2**	**$0.00**	-
H.	**Structure: Walls and Chimneys**	**2**	**$0.00**	-
I.	Structure: Floors and Roofs	1	$0.00	-
J.	General Finishes	3	$14,068.00	-
K.	Interior Lighting	3	$35,170.00	-
L.	Security Systems	3	$20,046.90	-
M.	Emergency/Egress Lighting	3	$7,034.00	-
N.	Fire Alarm	3	$10,551.00	-
O.	Handicapped Access	2	$63,306.80	-
P.	**Site Condition**	**2**	**$0.00**	-
Q.	Sewage System	1	$0.00	-
R.	**Water Supply**	**3**	**$0.00**	-
S.	Exterior Doors	3	$8,000.00	-
T.	Hazardous Material	1	$11,033.40	-
U.	Life Safety	3	$22,508.80	-
V.	**Loose Furnishings**	**2**	**$0.00**	-
W.	**Technology**	**3**	**$0.00**	-
X.	Construction Contingency / Non-Construction Cost	1	$151,797.30	-
Total			$773,145.80	

Suitability Appraisal Summary

Section	Points Possible	Points Earned	Percentage	Rating Category
Cover Sheet	—	—	—	—
1.0 The School Site	100	94	94%	Excellent
2.0 Structural and Mechanical Features	200	140	70%	Satisfactory
3.0 Plant Maintainability	100	72	72%	Satisfactory
4.0 Building Safety and Security	200	161	81%	Satisfactory
5.0 Educational Adequacy	200	161	81%	Satisfactory
6.0 Environment for Education	200	140	70%	Satisfactory
LEED Observations	—	—	—	—
Commentary	—	—	—	—
Total	1000	768	77%	Satisfactory

Enhanced Environmental Hazards Assessment Cost Estimates

C=Under Contract	
Renovation Cost Factor	102.31%
Cost to Renovate (Cost Factor applied)	$791,005.47

The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.

Original Building (1955) Summary

District: Shaker Heights City
Name: Shaker Heights Middle School
Address: 20600 Shaker Blvd
Shaker Heights,OH 44122
Bldg. IRN: 4457

County: Cuyahoga **Area:** Northeastern Ohio (8)
Contact: Danny Young
Phone: (216) 295-4100
Date Prepared: 2015-02-09 **By:** Kelton Waller
Date Revised: 2021-11-03 **By:** Bill Prenosil

Current Grades	7-8	Acreage:	22.76
Proposed Grades	N/A	Teaching Stations:	32
Current Enrollment	861	Classrooms:	24
Projected Enrollment	N/A		

Addition	Date	HA	Number of Floors	Current Square Feet
Natatorium	1955	no	1	7,034
Original Building	**1955**	**yes**	**2**	**153,115**
Auditorium	1955	yes	1	6,935
Total				**167,084**

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

FACILITY ASSESSMENT Cost Set: 2016		Rating	Dollar Assessment	C
A.	Heating System	3	$5,224,283.80	-
B.	Roofing	3	$680,967.25	-
C.	Ventilation / Air Conditioning	1	$0.00	-
D.	Electrical Systems	3	$2,485,056.45	-
E.	Plumbing and Fixtures	3	$817,302.50	-
F.	Windows	3	$2,288,945.00	-
G.	Structure: Foundation	2	$280,905.00	-
H.	Structure: Walls and Chimneys	2	$108,925.00	-
I.	Structure: Floors and Roofs	1	$0.00	-
J.	General Finishes	3	$2,909,528.50	-
K.	Interior Lighting	3	$765,575.00	-
L.	Security Systems	3	$436,377.75	-
M.	Emergency/Egress Lighting	3	$153,115.00	-
N.	Fire Alarm	3	$229,672.50	-
O.	Handicapped Access	2	$471,361.00	-
P.	Site Condition	2	$348,018.80	-
Q.	Sewage System	1	$0.00	-
R.	Water Supply	3	$20,000.00	-
S.	Exterior Doors	3	$76,000.00	-
T.	Hazardous Material	1	$816,611.50	-
U.	Life Safety	3	$934,618.00	-
V.	Loose Furnishings	2	$765,575.00	-
W.	Technology	3	$1,296,884.05	-
X.	Construction Contingency / Non-Construction Cost	1	$5,157,168.44	-
Total			$26,266,890.54	

Suitability Appraisal Summary

Section	Points Possible	Points Earned	Percentage	Rating Category
Cover Sheet	—	—	—	—
1.0 The School Site	100	94	94%	Excellent
2.0 Structural and Mechanical Features	200	140	70%	Satisfactory
3.0 Plant Maintainability	100	72	72%	Satisfactory
4.0 Building Safety and Security	200	161	81%	Satisfactory
5.0 Educational Adequacy	200	161	81%	Satisfactory
6.0 Environment for Education	200	140	70%	Satisfactory
LEED Observations	—	—	—	—
Commentary	—	—	—	—
Total	1000	768	77%	Satisfactory

Enhanced Environmental Hazards Assessment Cost Estimates

C=Under Contract	
Renovation Cost Factor	102.31%
Cost to Renovate (Cost Factor applied)	$26,873,655.71

The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.

Auditorium (1955) Summary

District: Shaker Heights City
Name: Shaker Heights Middle School
Address: 20600 Shaker Blvd
Shaker Heights,OH 44122
Bldg. IRN: 4457

County: Cuyahoga **Area:** Northeastern Ohio (8)
Contact: Danny Young
Phone: (216) 295-4100
Date Prepared: 2015-02-09 **By:** Kelton Waller
Date Revised: 2021-11-03 **By:** Bill Prenosil

Current Grades	7-8	Acreage:	22.76
Proposed Grades	N/A	Teaching Stations:	32
Current Enrollment	861	Classrooms:	24
Projected Enrollment	N/A		

Addition	Date	HA	Number of Floors	Current Square Feet
Natatorium	1955	no	1	7,034
Original Building	1955	yes	2	153,115
Auditorium	**1955**	**yes**	**1**	**6,935**
Total				**167,084**

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

FACILITY ASSESSMENT Cost Set: 2016		Rating	Dollar Assessment	C
A.	Heating System	3	$181,142.20	-
B.	**Roofing**	**3**	**$0.00**	-
C.	Ventilation / Air Conditioning	1	$0.00	-
D.	Electrical Systems	3	$112,555.05	-
E.	Plumbing and Fixtures	3	$29,400.00	-
F.	**Windows**	**3**	**$0.00**	-
G.	**Structure: Foundation**	**2**	**$0.00**	-
H.	**Structure: Walls and Chimneys**	**2**	**$0.00**	-
I.	Structure: Floors and Roofs	1	$0.00	-
J.	General Finishes	3	$81,196.00	-
K.	Interior Lighting	3	$34,675.00	-
L.	Security Systems	3	$19,764.75	-
M.	Emergency/Egress Lighting	3	$6,935.00	-
N.	Fire Alarm	3	$10,402.50	-
O.	Handicapped Access	2	$16,987.00	-
P.	**Site Condition**	**2**	**$0.00**	-
Q.	Sewage System	1	$0.00	-
R.	**Water Supply**	**3**	**$0.00**	-
S.	Exterior Doors	3	$24,000.00	-
T.	Hazardous Material	1	$73,743.50	-
U.	Life Safety	3	$292,044.00	-
V.	**Loose Furnishings**	**2**	**$0.00**	-
W.	**Technology**	**3**	**$0.00**	-
X.	Construction Contingency / Non-Construction Cost	1	$215,681.68	-
Total			$1,098,526.68	

Suitability Appraisal Summary

Section	Points Possible	Points Earned	Percentage	Rating Category
Cover Sheet	—	—	—	—
1.0 The School Site	100	94	94%	Excellent
2.0 Structural and Mechanical Features	200	140	70%	Satisfactory
3.0 Plant Maintainability	100	72	72%	Satisfactory
4.0 Building Safety and Security	200	161	81%	Satisfactory
5.0 Educational Adequacy	200	161	81%	Satisfactory
6.0 Environment for Education	200	140	70%	Satisfactory
LEED Observations	—	—	—	—
Commentary	—	—	—	—
Total	1000	768	77%	Satisfactory

Enhanced Environmental Hazards Assessment Cost Estimates

C=Under Contract	
Renovation Cost Factor	102.31%
Cost to Renovate (Cost Factor applied)	$1,123,902.65

The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.

A. Heating System

Description: The existing system for the overall facility consists of four, Burnham gas-fired steam boilers in fair condition, 1995. The capacity of each is 2,821 MBH. The steam boilers serves unit ventilators in each classroom, and fin tube in the common areas and several air handling units that serve larger spaces. The boilers and air handling units are controlled with DDC controls and the rest of the controls are pneumatic and in good condition considering their age. Each ventilator has an outside air grilled at the exterior wall. Overall, the ventilators and the air handling units do not provide the required outside air delivery to meet OBC mechanical code. The DDC controls were added two years ago under an energy performance contract. The staff indicates the controls keep the boilers on too long on mild days. On the day of the site visit, the staff turned off the boilers because the building was warm enough and no longer required the heating on. There is a dedicated steam boiler, Hydro- Therm, 105 MBH, for the kitchen kettle. The operation is controlled by the kitchen staff. The 1987 boiler is in poor condition. The pipe system does not provide a capacity for simultaneous heating and cooling operation which is not compliant with the OSDM requirements. The staff indicated that the site does not contain underground fuel tanks.

Rating: 3 Needs Replacement

Recommendations: Provide a new overall heating ventilating and air conditioning system to achieve compliance with OBC and OSDM standards. Convert to ducted system to facilitate efficient exchange of conditioned air. Provide new DDC temperature controls with the new system. The new ducted system will likely require architectural soffits to accommodate the installation of the ductwork.

Item	Cost	Unit	Whole Building	Auditorium (1955) 6,935 ft²	Natatorium (1955) 7,034 ft²	Original Building (1955) 153,115 ft²	Sum	Comments
HVAC System Replacement:	$26.12	sq.ft. (of entire building addition)		Required	Required	Required	$4,364,234.08	(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	$1,224,920.00	(includes costs for vert. & horz. chases, cut openings, soffits, etc. Must be used in addition to HVAC System Replacement if the existing HVAC system is non-ducted)
Sum:			$5,589,154.08	$181,142.20	$183,728.08	$5,224,283.80		

Steam boilers

Classroom Unit Ventilator

Back to Assessment Summary

B. Roofing

Description: Low slope roof areas are covered by a combination of built-up roofing (with and without a reflective coating) and ballasted membrane roofing. Ponding was observed over the built-up roof. Indications of ponding such as saturated gravel and biological growth were observed in some of the ballasted areas. In 2013, built-up roof was placed over the library and auditorium. Pitched roofs over the classroom wings are covered with asphalt shingles. Approximately 45 skylights were observed in the low slope roof areas. Several areas around the roof overhangs and eaves are finished with painted wood that is peeling. Evidence of birds and insects was observed in the roof overhanings.

Rating: 3 Needs Replacement

Recommendations: Replace underside of exterior roof overhangs and eaves with an exterior grade sheathing product. 01-27-16 UPDATE: REPLACE SLATE ROOF WITH ASPHALT SHINGLES ON 1955 ORIGINAL BUILDING. PROVIDE FOR DECK REPLACEMENT ON SLOPED ROOF SECTION OF 1955 ORIGINAL BUILDING. PROVIDE FOR DECK REPLACEMENT ON 1955 ORIGINAL BUILDING AND 1955 AUDITORIUM. REPLACE LOW SLOPED ROOF AREA ON 1955 AUDITORIUM. REPLACE GUTTERS AND DOWNSPOUTS ON 1955 ORIGINAL BUILDING. REPLACE ROOF DRAINS ON 1955 ORIGINAL BUILDING. PROVIDE FOR TAPERED INSULATION ON 1955 ORIGINAL BUILDING AND 1955 NATATORIUM TO PROVIDE FOR PROPER DRAINAGE. REPLACE WOOD FASCIA ON 1955 ORIGINAL BUILDING WITH AZEK OR FYPON FASCIA. PROVIDE VENTED ALUMINUM SOFFIT ON 1955 ORIGINAL BUILDING. 11-2-21 Update: Remove scope completed in 2018: built-up roof replacement.

Item	Cost	Unit	Whole Building	Auditorium (1955) 6,935 ft²	Natatorium (1955) 7,034 ft²	Original Building (1955) 153,115 ft²	Sum	Comments
Asphalt Shingle:	$3.00	sq.ft. (Qty)				50,130 Required	$150,390.00	
Deck Replacement:	$5.25	sq.ft. (Qty)			700 Required	5,013 Required	$29,993.25	(wood or metal, including insulation)
Gutters/Downspouts	$13.10	ln.ft.			2,000 Required		$26,200.00	
Remove/replace existing roof Drains and Sump:	$1,200.00	each				45 Required	$54,000.00	
Roof Insulation:	$4.70	sq.ft. (Qty)			7,031 Required	74,720 Required	$384,229.70	(tapered insulation for limited area use to correct ponding)
Other: Aluminum Soffit	$12.00	ln.ft.				1,550 Required	$18,600.00	Vented Aluminum Soffit
Other: Facia	$15.00	ln.ft.				4,000 Required	$60,000.00	Replace wood fascia with Azek or Fypon fascia
Other: Provide screens at vents in roof overhangs and eaves.	$15,000.00	lump sum				Required	$15,000.00	Remove insect and bird debris before installing screens.
Other: Storm Leaders	$18.25	ln.ft.				300 Required	$5,475.00	Provide for 4'' PVC storm leaders to include insulation.
Sum:			$743,887.95	$0.00	$62,920.70	$680,967.25		

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C. Ventilation / Air Conditioning

Description: Heating only Air handling units with minimum outside air serve the following areas: Pool, Boys Gym, and Girls Gym. The following areas have air conditioning: Main office: AHU with DX cooling (original equipment, ACCU has been rebuilt) Band Room, Choir Rm, and Auditorium Classroom: fan coil units with DX cooling Teachers Lounge: RTU, 2 years old. Library: RTU1: older than 20 years (poor condition), RTU2: 6-7 years old (good condition) Computer Labs: RTUs about 10 years old in good condition Data/server room: wall AC with roof mounted DX cooling - good condition. The ventilation system does not meet the OBC fresh air requirement. The pool does not have enough ventilation to meet current requirememts. The overall system is not compliant with Ohio School Design Manual requirements. The general building exhaust systems located in the restrooms are dated and in poor condition.

Rating: 1 Satisfactory

Recommendations: Provide an air conditioning system to meet OBC and OSDM requirements. Pricing included in Item A.

Item	Cost	Unit	Whole Building	Auditorium (1955) 6,935 ft²	Natatorium (1955) 7,034 ft²	Original Building (1955) 153,115 ft²	Sum	Comments
Sum:			$0.00	$0.00	$0.00	$0.00		

Rooftop unit

Window air conditioners

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D. Electrical Systems

Description: There are two power feeds for electrical system in the facility. One is 480V, 3 phase, 1600 amps and the other is 480V, 3 phase, 1600 amps. The main breakers and electrical distribution equipment are original and in fair to poor condition. The panel boards are original equipment and in poor condition. The panel boards are recessed in the corridor walls where students have access to the front panel cover. These covers are kept locked. There is an electric meter installed on each power main line that reports the electric usage to the DDC temperature control system. This was installed 2 years ago. The transformer is owned by the utility and is in a vault in the basement. The power into the transformer is fed underground. The electric meter outside the vault, near the main disconnect. The panel board system is in poor condition and is also beyond the normal equipment life. There is no extra capacity in most sections of the building. Additional outlets have been added to the classrooms, but some the classrooms are still not equipped with adequate electrical outlets. Adequate GFI protected exterior outlets are not provided around the perimeter of the building. The facility is equipped with a diesel emergency generator. There is no lightning protection. The overall electrical equipment is in fair to poor condition and is beyond the normal equipment life and should be replaced. The panel boards should be moved into a secure area so students do not have access. Most of the classrooms do not meet OSDM requirements in supporting the current needs of the school and will be inadequate to meet the facility's future needs. The overall electrical system does not meet OSDM requirements in supporting the current needs of the school and will not be adequate to meet the facility's future needs.

Rating: 3 Needs Replacement

Recommendations: Provide lightning protection system. The entire electrical system does not meet Ohio School Design Manual guidelines for overall capacity.

Item	Cost	Unit	Whole Building	Auditorium (1955) 6,935 ft²	Natatorium (1955) 7,034 ft²	Original Building (1955) 153,115 ft²	Sum	Comments
System Replacement:	$16.23	sq.ft. (of entire building addition)		Required	Required	Required	$2,711,773.32	(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:			$2,711,773.32	$112,555.05	$114,161.82	$2,485,056.45		

Main Electrical Switch Gear

Panel Board mounted in corridor wall

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E. Plumbing and Fixtures

Description: The domestic water supply piping in the original building is copper and most is in satisfactory condition. A water treatment system is not required for the domestic water system. There is a small water softener for the boiler water make-up. The facility has three gas fired condensing domestic water boilers; Weil-McLain 2005, with an external storage tank that serves the locker rooms and pool area. The approximate 500 gallon storage tank is original construction and was converted from steam heat in satisfactory condition. There is one AO Smith domestic water heater (less than 5 years old) in the main mechanical room with an external storage tank that serves the rest of the school. The storage tank was converted from steam heat and is approximately 1000 gallons. The sanitary waste piping is cast iron and is in fair condition. No issues were noted by the staff. There is no backflow preventer on the incoming water service in the building, however there is a pressure reducing valve. There are the required backflow preventers for non-potable water usage in the building, i.e. heating system make-up water and pool make up water. The pool filter is the original configuration, with a manual backwash cycle. The internal filter bags and leafs media are 5-6 years old and appear to be in satisfactory condition. The pool pumps are 1-2 years old and in good condition. The school contains 10 restrooms for boys, 10 restrooms for girls, and 18 restrooms for the staff. The First floor has 1 boys ADA restroom and 1 girls ADA restroom. There are no ADA restrooms on the Second floor. One girl's restroom has been updated to wall mounted toilets. All the original toilets are floor mounted. There are 63 LAVs, 2 ADA LAVs, 76 toilets, 3 ADA toilets, and 30 floor mounted urinals. The Art room has 6 stainless steel sinks in fair to good condition. The manual faucets are in fair to poor condition and showing age. There are 4 electric water coolers and 19 drinking fountains in the school in generally good condition. There is an Ansul suppression system in the kitchen hood and a grease trap for the three compartment sink in the kitchen.

Rating: 3 Needs Replacement

Recommendations: Provide all of the faucets and flush valves with sensor, and low flow devices/fixtures to meet OSFC requirements. Replace art room sink faucts. Provide backflow preventer for main service entrance and pool. 01-27-16 UPDATE: PROVIDE FOR ADDITIONAL ELECTRIC WATER COOLERS IN 1955 ADDITION. DUE TO AGE AD CONDITION, REPLACE EXISTING SANITARY WASTE PIPING IN 1955 ORIGINAL BUILDING AND 1955 NATATORIUM.

Item	Cost	Unit	Whole Building	Auditorium (1955) 6,935 ft²	Natatorium (1955) 7,034 ft²	Original Building (1955) 153,115 ft²	Sum	Comments
Back Flow Preventer:	$5,000.00	unit			1 Required	1 Required	$10,000.00	
Sanitary Waste Piping:	$3.50	sq.ft. (of entire building addition)			Required	Required	$560,521.50	(remove / replace)
Toilet:	$1,500.00	unit		8 Required	8 Required	63 Required	$118,500.00	(remove / replace) See Item O
Urinal:	$3,800.00	unit		3 Required	4 Required	23 Required	$114,000.00	(new)
Sink:	$1,500.00	unit		4 Required	8 Required	53 Required	$97,500.00	(remove / replace)
Electric water cooler:	$3,000.00	unit				4 Required	$12,000.00	(double ADA)
Replace faucets and flush valves	$500.00	per unit				6 Required	$3,000.00	(average cost to remove/replace)
Sum:			$915,521.50	$29,400.00	$68,819.00	$817,302.50		

Floor mounted toilet

floor mounted urinal

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F. Windows

Description: Single pane metal windows account for almost 80% of the building envelope at classrooms wings and many corridors around the building. This glazing system offers no thermal benefit and is in some instances severed at the jamb from the adjacent wall. New insulating units have been provided along the north wall of the athletic wing. Exterior doors are not insulated and their vision panels are not thermally broken or safety treated. Translucent panels a the natatorium appear to be past the end of their service life. The building has approximately 45 skylights. Indications of moisture penetration were not observed witht he skylights.

Rating: 3 Needs Replacement

Recommendations: Provide new windows throughout the entire building with integral blinds in learning areas. Exterior doors will need to be replaced as they are part of a hollow metal framed entrance system with single pane glazing.

Item	Cost	Unit	Whole Building	Auditorium (1955) 6,935 ft²	Natatorium (1955) 7,034 ft²	Original Building (1955) 153,115 ft²	Sum	Comments
Translucent Panels:	$125.00	sq.ft. (Qty)				2,500 Required	$312,500.00	(remove and replace)
Curtain Wall/Storefront System:	$65.00	sq.ft. (Qty)				30,253 Required	$1,966,445.00	(remove and replace)
Door and Window Panel Replacement	$200.00	each				50 Required	$10,000.00	(Hazardous Material Replacement Cost - See T.)
Sum:			$2,288,945.00	$0.00	$0.00	$2,288,945.00		

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G. Structure: Foundation

Description: Poured concrete foundation walls and columns were observed under the building. Steel columns are supported by the perimeter foundation walls.

Rating: 2 Needs Repair

Recommendations: Moisture was observed at the east end of the building where playing fields have a higher elevation than the grade around the building. 01-27-16 UPDATE: REPAIR CRACKING AND SPALLING CONCRETE FLOOR IN BASEMENT OF ORIGINAL 1955 BUILDING. REVISE QUANTITY OF AREA TO RECEIVE WATERPROOFING MEMBRANE ON 1955 ORIGINAL BUILDING. REVISE LF OF FOUNDATION DRAIN TILE ON 1955 ORIGINAL BUILDING. PROVIDE A SUMP PUMP BELOW EAST GYMNASIUM AND PROVIDE SLOPE IN FLOOR TO SUMP. 11-2-21 Update: Remove scope completed in 2020: partial waterproofing & drain tile.

Item	Cost	Unit	Whole Building	Auditorium (1955) 6,935 ft²	Natatorium (1955) 7,034 ft²	Original Building (1955) 153,115 ft²	Sum	Comments
Waterproofing Membrane:	$7.00	sq.ft. (Qty)				28,885 Required	$202,195.00	(include excavation and backfill)
Drainage Tile Systems / Foundation Drainage:	$18.00	ln.ft.				4,095 Required	$73,710.00	(include excavation and backfill)
Other: Floor Topping for Drainage	$6.00	sq.ft. (Qty)				500 Required	$3,000.00	Floor topping to shed water to existing sump.
Other: Install Sump Pump and Sump	$2,000.00	per unit				1 Required	$2,000.00	Cut concrete floor and install sump pump and sump.
Sum:			$280,905.00	$0.00	$0.00	$280,905.00		

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H. Structure: Walls and Chimneys

Description: Most of the exterior walls are not load bearing. The auditorium walls are likely load bearing and display signs of efflorescence. The chimney displays several repaired cracks in the mortar.

Rating: 2 Needs Repair

Recommendations: Even though a new roof has been provided over the auditorium the exterior walls should be cleaned and sealed to protect against future moisture penetration. 01-27-16 UPDATE: REPAINT STEEL LINTELS AND RE-CAULK. ADD WEEPS AT LINTELS ABOVE WINDOWS. REPLACE DAMAGED CONCRETE SILLS ON 1955 ORIGINAL BUILDING. PROVIDE EXTERIOR MASONRY CLEANING AND SEALING OF EXTERIOR MASONRY ON 1955 NATATORIUM AND 1955 ORIGINAL BUILDING. PROVIDE CONTROL JOINTS ON 1955 ORIGINAL BUILDING. PROVIDE TUCKPOINTING ON 1955 ORIGINAL BUILDING, 1955 AUDITORIUM AND 1955 NATATORIUM. REPLACE EXPANSION JOINT ON 1955 ORIGINAL BUILDING. REBUILD BRICK VENEER CORNER ON 1955 AUDITORIUM. 11-2-21 Update: Remove work completed in 2019: partial tuckpointing, cleaning & sealing; brick replacement.

Item	Cost	Unit	Whole Building	Auditorium (1955) 6,935 ft²	Natatorium (1955) 7,034 ft²	Original Building (1955) 153,115 ft²	Sum	Comments
Tuckpointing:	$5.25	sq.ft. (Qty)				1,700 Required	$8,925.00	(wall surface)
Exterior Caulking:	$5.50	ln.ft.				3,000 Required	$16,500.00	(removing and replacing)
Sill Replacement:	$45.00	ln.ft.				50 Required	$2,250.00	(remove and replace)
Install Control Joints	$60.00	ln.ft.				800 Required	$48,000.00	
Other: Expansion Joint	$50.00	sq.ft. (Qty)				50 Required	$2,500.00	Replace expansion joint
Other: Scrape and Paint Steel Lintels	$4.00	ln.ft.				3,000 Required	$12,000.00	Scrape and Paint Steel Lintels
Other: Weeps	$25.00	per unit				750 Required	$18,750.00	Install Weeps Above Window Lintels
Sum:			$108,925.00	$0.00	$0.00	$108,925.00		

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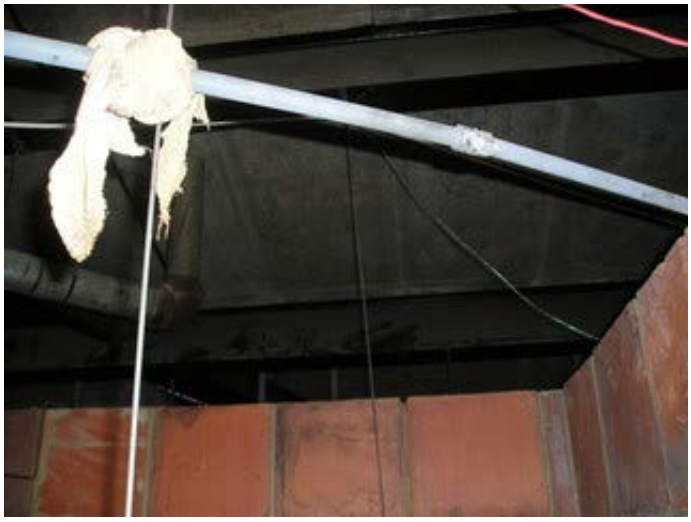
I. Structure: Floors and Roofs

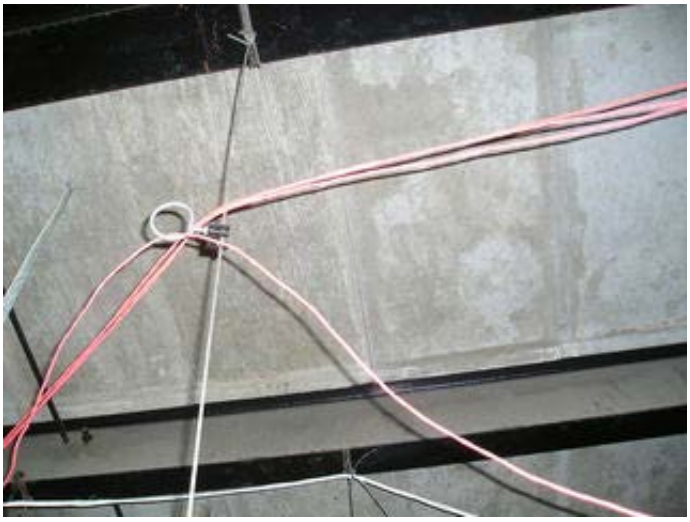
Description: The floor structure is a combination of concrete pan joists and poured concrete slab. The pitched roof structure consists of hollow core concrete planks on structural steel framing. Roof structure elsewhere in the building was not observable. The gymnasium is framed with tectum decking over clear span structural ribs.

Rating: 1 Satisfactory

Recommendations: No work is recommended at this time.

Item	Cost	Unit	Whole Building	Auditorium (1955) 6,935 ft²	Natatorium (1955) 7,034 ft²	Original Building (1955) 153,115 ft²	Sum	Comments
Sum:			$0.00	$0.00	$0.00	$0.00		





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J. General Finishes

Description: Most corridors have VCT flooring and walls clad with wood veneer wainscot on plaster walls. Separation between vinyl tiles was observed in most of the joints. The wood veneer displays slight indications of wear and minor scratching. Most ceilings are direct adhered acoustic tiles. Some signs of wear are visible. Carpeted floors and brick walls are present in the performing arts wing of the school. Most of the finishes display only minima signs of wear. The kitchen is utilized for production of meals served in-house as well as at for delivery to some of the middle schools. The food service equipment is functioning properly. Recent model toilet partitions were observed in the restroom. The partition doors have piano hinge hardware and the stalls are sized to accommodate grab bars. Wood athletic flooring was observed in the gymnasium. The flooring does not display any sings of deterioration.

Rating: 3 Needs Replacement

Recommendations: Provide new suspended ceiling in conjunction with installation of new sprinklers and ductwork. Provide new flooring where VCT is now in place. 01-27-16 UPDATE: REPLACE KITCHEN EQUIPMENT.

Item	Cost	Unit	Whole Building	Auditorium (1955) 6,935 ft²	Natatorium (1955) 7,034 ft²	Original Building (1955) 153,115 ft²	Sum	Comments
Paint:	$2.00	sq.ft. (of entire building addition)		Required	Required		$27,938.00	(partial finish - floor area/prep and installation)
Acoustic Ceiling:	$2.90	sq.ft. (Qty)		9,618 Required			$27,892.20	(partial finish - drop in/standard 2 x 4 ceiling tile per area)
Vinyl Enhanced Tile (VET):	$4.10	sq.ft. (Qty)		9,618 Required			$39,433.80	(tear out and replace per area; to be used in lieu of VCT)
Complete Replacement of Finishes and Casework (Middle):	$15.90	sq.ft. (of entire building addition)				Required	$2,434,528.50	(middle, per building area, with removal of existing)
Total Kitchen Equipment Replacement:	$190.00	sq.ft. (Qty)				2,500 Required	$475,000.00	(square footage based upon only existing area of food preparation, serving, kitchen storage areas and walk-ins. Includes demolition and removal of existing kitchen equipment)
Sum:			$3,004,792.50	$81,196.00	$14,068.00	$2,909,528.50		

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K. Interior Lighting

Description: The florescent lighting is a mixture of surface mounted with acrylic lense, surface mounted with acrylic wrap around lense and pendent mounted with louvered lense. The gym fixtures are high bay forescent fixtures. In 2012, the ballast and lamps have been upgraded to electronic energy efficient ballast and T8 lamps. Classroom lighting level is 28 FC, Science Room lighting levels are 23 FC and 57 FC, the Corridor lighting level is 22 FC, the East Gym is 65 FC and the Art Room is 67 FC. The classrooms have dual level lighting controls. (One row of lights per switch.) There are no dimming controls in the building. There are special lighting controls for the stage lighting and auditorium lighting.

Rating: 3 Needs Replacement

Recommendations: Provide complete replacement of lighting system due to installation of ducted HVAC systems and fire suppression systems.

Item	Cost	Unit	Whole Building	Auditorium (1955) 6,935 ft²	Natatorium (1955) 7,034 ft²	Original Building (1955) 153,115 ft²	Sum	Comments
Complete Building Lighting Replacement	$5.00	sq.ft. (of entire building addition)		Required	Required	Required	$835,420.00	Includes demo of existing fixtures
Sum:			$835,420.00	$34,675.00	$35,170.00	$765,575.00		

classroom lighting

classroom lighting

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L. Security Systems

Description: The security system consists of 8 exterior mounted cameras located around the building and entrance doors. There are 63 interior cameras. There are 9 key card entry doors. The front door is monitored by cameras both interior and exterior, with 2 way communication and a buzzer for visitors. It is also one of the key card entrance doors. The cameras report to computer screens located in the Security office. DVRs record locally the feedback from the cameras. There is no remote monitoring of the video system. The interior hallways have motion sensors tied to the security system. The exterior lighting consists of building mounted lighting and provides coverage for the building entrances. There are a few parking lot pole mounted lights for site lighting that provide additional lighting coverage. The system is compliant with OSFC design manual guidelines.

Rating: 3 Needs Replacement

Recommendations: The security system meets OSFC design manual guidelines, however, replace system due to new HVAC/fire suppression system. 01-27-16 UPDATE: PROVIDE SITE LIGHTING FOR 1955 ORIGINAL BUILDING, 1955 AUDITORIUM AND 1955 NATATORIUM.

Item	Cost	Unit	Whole Building	Auditorium (1955) 6,935 ft²	Natatorium (1955) 7,034 ft²	Original Building (1955) 153,115 ft²	Sum	Comments
Security System:	$1.85	sq.ft. (of entire building addition)		Required	Required	Required	$309,105.40	(complete, area of building)
Exterior Site Lighting:	$1.00	sq.ft. (of entire building addition)		Required	Required	Required	$167,084.00	(complete, area of building)
Sum:			$476,189.40	$19,764.75	$20,046.90	$436,377.75		

Security at Front Entrance Door

Camera in cafeteria

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M. Emergency/Egress Lighting

Description: The overall facility is equipped with emergency egress lighting system consisting of a LED exit signs and emergency lighting on a panel served by the emergency generator. The system is in good condition. The system is adequately provided throughout, and is compliant with OSFC design manual guidelines.

Rating: 3 Needs Replacement

Recommendations: Provide a complete replacement of emergency egress lighting due to installation of systems outlined in J, K, and U.

Item	Cost	Unit	Whole Building	Auditorium (1955) 6,935 ft²	Natatorium (1955) 7,034 ft²	Original Building (1955) 153,115 ft²	Sum	Comments
Emergency/Egress Lighting:	$1.00	sq.ft. (of entire building addition)		Required	Required	Required	$167,084.00	(complete, area of building)
Sum:			$167,084.00	$6,935.00	$7,034.00	$153,115.00		

Emergency exit light

Exterior lighting near entrance

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N. Fire Alarm

Description: The fire alarm system was updated 8-10 years ago. This system is an addressable system. There appears to be sufficient horns, strobes and pull stations. The system provides coverage for the facility to meet the requirements. This system is remotely monitored. The fire alarm system appears to be fully compliant with NFPA and OSFC standards. It is likely the current system would require modifications to accommodate the addition of a fire suppression system.

Rating: 3 Needs Replacement

Recommendations: Replace fire alarm system with the installation of the fire suppression system.

Item	Cost	Unit	Whole Building	Auditorium (1955) 6,935 ft²	Natatorium (1955) 7,034 ft²	Original Building (1955) 153,115 ft²	Sum	Comments
Fire Alarm System:	$1.50	sq.ft. (of entire building addition)		Required	Required	Required	$250,626.00	(complete new system, including removal of existing)
Sum:			$250,626.00	$10,402.50	$10,551.00	$229,672.50		

Main Fire Alarm panels

Fire Alarm devices

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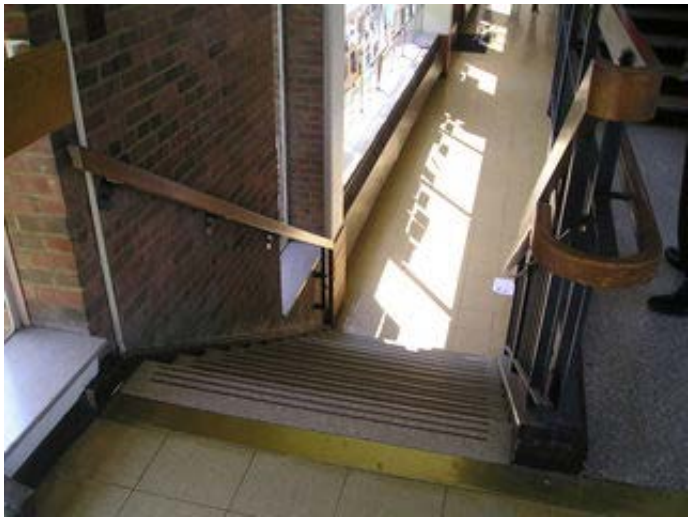
O. Handicapped Access

Description: Door clearances to most classrooms typically provided wheelchair maneuverability. However, door hardware is not ADA compliant. Sufficient ADA compliant rest rooms are provided as well. A lift is provided between the main corridor and the performing arts wing. However, the 3 academic wings don't have a means of wheelchair access. Door hardware is not ADA compliant. Signage lacks braille. About 50% of the water fountains int he building are wheelchair accessible. A full height mirror is provided in the rest rooms for wheelchair use.

Rating: 2 Needs Repair

Recommendations: Provide new door hardware of ADA compliant lever type throughout the building. Provide 2 power assist door openers at exterior doors. High contrast signage with embossed braille should be provided. 01-27-16 UPDATE: REVISE ADA HARDWARE ON INTERIOR DOORS IN 1955 ORIGINAL BUILDING, 1955 AUDITORIUM AND 1955 NATATORIUM TO DOOR REPLACEMENT. REVISE DOOR QUANTITY ON 1955 ORIGINAL BUILDING. PROVIDE ADA COMPLIANT HANDRAILS ON ATHLETIC WING RAMP AND CLASSROOM WING B & C IN 1955 ORIGINAL BUILDING. PROVIDE ELEVATOR (3 STOP) ON CLASSROOM WING OF 1955 ORIGINAL BUILDING. PROVIDE FOR 3 HANDICAP RAMPS AT 1955 ORIGINAL BUILDING.

Item	Cost	Unit	Whole Building	Auditorium (1955) 6,935 ft²	Natatorium (1955) 7,034 ft²	Original Building (1955) 153,115 ft²	Sum	Comments
Signage:	$0.20	sq.ft. (of entire building addition)		Required	Required	Required	$33,416.80	(per building area)
Ramps:	$40.00	sq.ft. (Qty)				150 Required	$6,000.00	(per ramp/interior-exterior complete)
Lifts:	$15,000.00	unit			3 Required		$45,000.00	(complete)
Elevators:	$42,000.00	each				3 Required	$126,000.00	(per stop, $84,000 minimum)
Replace Doors:	$1,300.00	leaf		12 Required	13 Required	232 Required	$334,100.00	(standard 3070 wood door, HM frame, door/light, includes hardware)
Other: Handrails	$43.00	ln.ft.				166 Required	$7,138.00	Provide ADA handrails on ADA Ramps
Sum:			$551,654.80	$16,987.00	$63,306.80	$471,361.00		



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P. Site Condition

Description: The nearly 23 acre site is surrounded by open green space and athletic fields. Soil conditions appear to be stable and most paved areas were safely walkable without unnecessary comingling of vehicular and pedestrian traffic. There were some limited areas of damaged pavement and ponding around the north side of the site.

Rating: 2 Needs Repair

Recommendations: Replace asphalt drive along south side of building with heavy duty asphalt. Replace damaged areas of concrete paved walk around the south side of the building. REPLACE ASPHALT PAVING. REPLACE HANDRAILS. REPLACE DOCK BUMPERS. 01-27-16 UPDATE: PROVIDE ADDITIONAL STORM CATCH BASINS AND PIPING ADJACENT TO STUDENT DINING (BETWEEN EAST GYM AND CLASSROOM WING) AND INTERIOR COURTYARD ON 1955 ORIGINAL BUILDING FOR SITE DRAINAGE. PROVIDE REPLACEMENT OF CONCRETE SIDEWALKS, STAIRS, RAMPS AND LANDSCAPING DUE TO EXCAVATION FOR EXTERIOR FOUNDATION WALL WATERPROOFING ON 1955 ORIGINAL BUILDING. 11-2-21 Update: Remove scope completed in 2020: partial sidewalk replacement & partial landscaping.

Item	Cost	Unit	Whole Building	Auditorium (1955) 6,935 ft²	Natatorium (1955) 7,034 ft²	Original Building (1955) 153,115 ft²	Sum	Comments
Replace Existing Asphalt Paving (heavy duty):	$30.60	sq. yard				500 Required	$15,300.00	(including drainage / tear out for heavy duty asphalt)
New Asphalt Paving (light duty):	$25.80	sq. yard				36 Required	$928.80	
Concrete Sidewalk:	$4.69	sq.ft. (Qty)				1,000 Required	$4,690.00	(5 inch exterior slab)
Exterior Hand / Guard Rails:	$43.00	ln.ft.				100 Required	$4,300.00	
Replace Concrete Steps:	$32.00	sq.ft. (Qty)				150 Required	$4,800.00	
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 **one** addition should have this item)
Sitework Allowance for Unforeseen Circumstances for buildings 100,000 SF or larger	$150,000.00	allowance				Required	$150,000.00	Include this one **or** the previous. (Applies for whole building, so only **one** addition should have this item)
Other: Loading Dock Bumpers	$2,000.00	per unit				1 Required	$2,000.00	Replace Loading Dock Bumpers
Other: Storm Piping	$110.00	ln.ft.				1,000 Required	$110,000.00	Provide additional site drainage.
Other: Storm Sttructures	$1,500.00	per unit				4 Required	$6,000.00	Provide storm catch basins
Sum:			$348,018.80	$0.00	$0.00	$348,018.80		

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Q. Sewage System

Description: AThe sanitary sewer system drains to the city system and is fair condition. No significant sytem deficiencies were reported by the school district. There is a glass pipe acid waste system serving the Science Classrooms with an acid neutralization sump accessible in the tunnel. The sump is no longer required to be maintained since no acids are used in the classrooms.

Rating: 1 Satisfactory

Recommendations: No work required.

Item	Cost	Unit	Whole Building	Auditorium (1955) 6,935 ft²	Natatorium (1955) 7,034 ft²	Original Building (1955) 153,115 ft²	Sum	Comments
Sum:			$0.00	$0.00	$0.00	$0.00		

Kitchen Grease trap access

Acid neutralization sump

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R. Water Supply

Description: The domestic water supply system is galvanized and copper and is tied to the city system. There is a 6'' water main that serves a 4'' domestic water line and a 4'' fire water line. There is no backflow preventer in the building, but there is a pressure reducing valve on the 4'' water service. The system provides adequate pressure and capacity for the facility's needs. The facility does have an automatic fire suppression system for the area that was previously used as a shop and the attached storage areas. The system is no longer required because the space is not used for a shop area. The staff indicates that they do not belive the system is still active. Due to the size of the building, the current water service size will likely not meet the requirements for a full fire suppression system for the building.

Rating: 3 Needs Replacement

Recommendations: Replace water main to meet the sprinkler requirements and install a backflow preventer. 01-27-16 UPDATE: PROVIDE FOR NEW BACKFLOW PREVENTER ON EXISTING DOMESTIC WATER SUPPLY.

Item	Cost	Unit	Whole Building	Auditorium (1955) 6,935 ft²	Natatorium (1955) 7,034 ft²	Original Building (1955) 153,115 ft²	Sum	Comments
Domestic Water Main	$40.00	ln.ft.				300 Required	$12,000.00	(new)
Other: Backflow Preventer	$8,000.00	per unit				1 Required	$8,000.00	Backflow Preventer
Sum:			$20,000.00	$0.00	$0.00	$20,000.00		

Pressure regulator at water entrance

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S. Exterior Doors

Description: New doors will be needed if entrance systems are replaced with thermally broken aluminum systems.

Rating: 3 Needs Replacement

Recommendations: Provide new insulated exterior doors with panic hardware. 01-27-16 UPDATE: REPLACE EAST GYMNASIUM DOORS (TOTAL OF 3) ON 1955 ORIGINAL BUILDING.

Item	Cost	Unit	Whole Building	Auditorium (1955) 6,935 ft²	Natatorium (1955) 7,034 ft²	Original Building (1955) 153,115 ft²	Sum	Comments
Door Leaf/Frame and Hardware:	$2,000.00	per leaf		12 Required	4 Required	38 Required	$108,000.00	(includes removal of existing)
Sum:			$108,000.00	$24,000.00	$8,000.00	$76,000.00		

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T. Hazardous Material

Description: Environmental assessment data not available at time of report.

Rating: 1 Satisfactory

Recommendations: No work is recommended at this time.

Item	Cost	Unit	Whole Building	Auditorium (1955) 6,935 ft²	Natatorium (1955) 7,034 ft²	Original Building (1955) 153,115 ft²	Sum	Comments
Environmental Hazards Form				EEHA Form	EEHA Form	EEHA Form	—	
Tank Insulation Removal	$8.00	sq.ft. (Qty)		0 Required	310 Required	450 Required	$6,080.00	
Duct Insulation Removal	$8.00	sq.ft. (Qty)		6,000 Required	50 Required	7,000 Required	$104,400.00	
Estimated Cost For Abatement Contractor to Perform Lead Mock-Ups	$1.00	per unit		0 Required	0 Required	5,000 Required	$5,000.00	
Special Engineering Fees for LBP Mock-Ups	$1.00	per unit		0 Required	0 Required	5,000 Required	$5,000.00	
Fluorescent Lamps & Ballasts Recycling/Incineration	$0.10	sq.ft. (Qty)		6,935 Required	7,034 Required	153,115 Required	$16,708.40	
Pipe Insulation Removal	$10.00	ln.ft.		100 Required	400 Required	1,400 Required	$19,000.00	
Pipe Insulation Removal (Crawlspace/Tunnel)	$12.00	ln.ft.		0 Required	0 Required	11,000 Required	$132,000.00	
Pipe Insulation Removal (Hidden in Walls/Ceilings)	$15.00	ln.ft.		150 Required	150 Required	3,000 Required	$49,500.00	
Laboratory Table/Counter Top Removal	$100.00	each		0 Required	0 Required	35 Required	$3,500.00	See J
Fire Door Removal	$100.00	each		0 Required	0 Required	10 Required	$1,000.00	See S
Non-ACM Ceiling/Wall Removal (for access)	$2.00	sq.ft. (Qty)		600 Required	600 Required	12,000 Required	$26,400.00	See J
Window Component (Compound, Tape, or Caulk) - Reno & Demo	$300.00	each		0 Required	0 Required	700 Required	$210,000.00	
Resilient Flooring Removal, Including Mastic	$3.00	sq.ft. (Qty)		6,500 Required	0 Required	95,000 Required	$304,500.00	See J
Carpet Removal (over RFC)	$1.00	sq.ft. (Qty)		1,100 Required	0 Required	10,000 Required	$11,100.00	See J
Sink Undercoating Removal	$100.00	each		0 Required	0 Required	22 Required	$2,200.00	
Other: EHA ACM Other	$1.00	per unit				5,000 Required	$5,000.00	Stage Curtain
Sum:			$901,388.40	$73,743.50	$11,033.40	$816,611.50		

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U. Life Safety

Description: The building is not equipped with a fire suppression system. Stair railings do not pass the 4'' sphere test. The facility is equipped with an 50 KW Kohler emergency generator. The diesal generator was installed in ± 2005 and is in good condition. The fuel supply is from a belly tank under the generator.

Rating: 3 Needs Replacement

Recommendations: Provide a new fire suppression system throughout the building. Provide chair lifts along the stairs at each of the 3 academic wings. Replace noncompliant railings with guard rails and handrails that meet all ADA and Life Safety requirements. 01-27-16 UPDATE: REPLACE HANDRAILS ON STAIR TOWERS IN 1955 ORIGINAL BUILDING. PROVIDE FOR STAIR ENCLOSURE FOR INTERIOR STAIRS TO MEET CODE REQUIREMENTS. PROVIDE FOR A NEW BACKFLOW PREVENTER. PROVIDE FOR PRE-ACTION FIRE SUPPRESSION SYSTEM IN ATTIC SPACE OF 1955 ORIGINAL BUILDIN.

Item	Cost	Unit	Whole Building	Auditorium (1955) 6,935 ft²	Natatorium (1955) 7,034 ft²	Original Building (1955) 153,115 ft²	Sum	Comments
Sprinkler / Fire Suppression System:	$3.20	sq.ft. (Qty)		6,935 Required	7,034 Required	153,115 Required	$534,668.80	(includes increase of service piping, if required)
Interior Stairwell Closure:	$5,000.00	per level				6 Required	$30,000.00	(includes associated doors, door frames and hardware)
Water Main	$40.00	ln.ft.				500 Required	$20,000.00	(new)
Handrails:	$5,000.00	level				6 Required	$30,000.00	
Other: Backflow Preventer	$8,500.00	per unit		1 Required			$8,500.00	Install New Backflow Preventer
Other: Attic Sprinklers	$3.50	sq.ft. (Qty)		74,672 Required			$261,352.00	Pre-Action Fire Suppression System for Affic Space
Other: Handrails	$43.00	ln.ft.				150 Required	$6,450.00	Replace Handrails @ Interior Stairs
Other: Provide safety glass at all interior door vision panels and adjacent sidelights and transoms	$358,200.00	lump sum				Required	$358,200.00	Current codes required safety provisions for glass adjacent to doors or near the floor.
Sum:			$1,249,170.80	$292,044.00	$22,508.80	$934,618.00		

Emergency Generator

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V. Loose Furnishings

Description: The loose furnishings around the building have a dated are dated in design. However they continue to perform well and only show minimal signs of wear. Maintenance personnel stated that repairs are required on a fairly infrequent, but consistent basis.

Rating: 2 Needs Repair

Recommendations: Provide new items as older damaged items are taken out of use. 01-27-16 UPDATE: REVISE CEFPI RATING FROM 6 TO 0-5.

Item	Cost	Unit	Whole Building	Auditorium (1955) 6,935 ft²	Natatorium (1955) 7,034 ft²	Original Building (1955) 153,115 ft²	Sum	Comments
CEFPI Rating 0 to 3	$5.00	sq.ft. (of entire building addition)				Required	$765,575.00	
Sum:			$765,575.00	$0.00	$0.00	$765,575.00		

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W. Technology

Description: The typical classroom is equipped with 2 data ports total (1 data, 1 VOIP, CAT 5 wire). Each classroom has a dedicated wireless access point (CAT 6E wire). Each classroom has phone capable of calling the office. The phone is used system is used by the office to contact the classrooms. There is a projector and audio system in every classroom. The coax cable system in every classroom is not being replaced as it fails, as it is rarely used. Fiber is used to connect the data closets and there are 5 data closets in the High School. All data closets have color coded wires based on the service district wide. The school has a PA system, and the PA system can be used in each classroom to contact the office, however this system is not used. This system meets the OSDM requirements. The facility is not equipped with a centralized clock system. Specialized electrical /sound requirements for gymnasium, student dining and music spaces are adequately provided. The facility has 4 computer labs for use by the students.

Rating: 3 Needs Replacement

Recommendations: The current system meets the requirements however, will need replaced with the installation of the HVAC system and fire suppression system.

Item	Cost	Unit	Whole Building	Auditorium (1955) 6,935 ft²	Natatorium (1955) 7,034 ft²	Original Building (1955) 153,115 ft²	Sum	Comments
MS portion of building with total SF > 100,000	$8.47	sq.ft. (Qty)				153,115 Required	$1,296,884.05	
Sum:			$1,296,884.05	$0.00	$0.00	$1,296,884.05		

typical classroom technology

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X. Construction Contingency / Non-Construction Cost

Renovation Costs (A-W)		$22,613,915.60
7.00%	Construction Contingency	$1,582,974.09
Subtotal		$24,196,889.69
16.29%	Non-Construction Costs	$3,941,673.33
Total Project		**$28,138,563.02**

Construction Contingency	$1,582,974.09
Non-Construction Costs	$3,941,673.33
Total for X.	**$5,524,647.42**

Non-Construction Costs Breakdown		
Land Survey	0.03%	$7,259.07
Soil Borings / Phase I Envir. Report	0.10%	$24,196.89
Agency Approval Fees (Bldg. Code)	0.25%	$60,492.22
Construction Testing	0.40%	$96,787.56
Printing - Bid Documents	0.15%	$36,295.33
Advertising for Bids	0.02%	$4,839.38
Builder's Risk Insurance	0.12%	$29,036.27
Design Professional's Compensation	7.50%	$1,814,766.73
CM Compensation	6.00%	$1,451,813.38
Commissioning	0.60%	$145,181.34
Non-Construction Contingency (includes partnering and mediation services)	1.12%	$271,005.16
Total Non-Construction Costs	**16.29%**	**$3,941,673.33**

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School Facility Appraisal - Shaker Heights City

Name of Appraiser	Bill Prenosil	**Date of Appraisal**	2015-02-09
Building Name	Shaker Heights Middle School		
Street Address	20600 Shaker Blvd		
City/Town, State, Zip Code	Shaker Heights, OH 44122		
Telephone Number(s)	(216) 295-4100		
School District	Shaker Heights City		

Setting: Urban

Site-Acreage	22.76	Building Square Footage	167,084
Grades Housed	7-8	Student Capacity	1,184
Number of Teaching Stations	32	Number of Floors	2
Student Enrollment	861		
Dates of Construction	1955,1955,1955		

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	Exterior Surfacing	Floor Construction
☐ Load bearing masonry	☑ Brick	☐ Wood Joists
☑ Steel frame	☐ Stucco	☐ Steel Joists
☑ Concrete frame	☐ Metal	☐ Slab on grade
☐ Wood	☐ Wood	☑ Structural slab
☐ Steel Joists	☐ Stone	

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Suitability Appraisal of **1.0 The School Site** for Shaker Heights MS Assessment - Shaker Heights CSD - CFAP Update (11-2-21)

1.0 The School Site	Points Allocated	Points
1.1 **Site is large enough** to meet educational needs as defined by state and local requirements	25	*25*
The 22.76 acre site meets all requirements for site size.		
1.2 **Site is easily accessible** and conveniently located for the present and future population	20	*18*
While located in the eastern portion of Shaker Heights, it is easily accessed from all parts.		
1.3 **Location** is removed from undesirable business, industry, traffic, and natural hazards	10	*10*
No undesirable or hazardous elements were observed near the school.		
1.4 Site is **well landscaped and developed** to meet educational needs	10	*8*
The school is surrounded by green space and athletic fields.		
1.5 ES Well equipped **playgrounds are separated** from streets and parking areas MS Well equipped **athletic and intermural areas are separated** from streets and parking HS Well equipped **athletic areas** are adequate with sufficient solid-surface parking	10	*10*
Several fields are located on the site, away from traffic and parking.		
1.6 **Topography** is varied enough to provide desirable appearance and without steep inclines	5	*4*
The site is relatively flat to accommodate all athletic fields.		
1.7 Site has stable, well drained **soil free of erosion**	5	*4*
Some instances of ponding were observed near the east end of the site.		
1.8 Site is suitable for **special instructional needs**, e.g., outdoor learning	5	*5*
Tables and other provisions for outdoor learning were observed.		
1.9 **Pedestrian services** include adequate sidewalk with designated crosswalks, curb cuts, and correct slopes	5	*5*
Such provisions were observed on the site.		
1.10 ES/MS Sufficient **on-site, solid surface parking** for faculty and staff is provided HS Sufficient **on-site, solid surface parking** is provided for faculty, students, staff and community	5	*5*
Sufficient parking for staff and visitors is provided.		
TOTAL - 1.0 The School Site	100	*94*

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Suitability Appraisal of **2.0 Structural and Mechanical Features** for Shaker Heights MS Assessment - Shaker Heights CSD - CFAP Update (11-2-21)

2.0 Structural and Mechanical Features	Points Allocated	Points
Structural		
2.1 Structure meets all **barrier-free** requirements both externally and internally	15	*7*
The site is generally flat and ramps were observed where needed. There are portions of the building which are inaccessible via wheelchair.		
2.2 **Roofs** appear sound, have positive drainage, and are weather tight	15	*11*
Some ponding was observed on the built-up roof as well as biological growth on the ballasted roof.		
2.3 **Foundations** are strong and stable with no observable cracks	10	*7*
Cracks were not observed. However, some water penetration was seen.		
2.4 **Exterior and interior walls** have sufficient expansion joints and are free of deterioration	10	*7*
Building joints were observed between the main building core and various wings. Expansion joints were not observed in the walls.		
2.5 **Entrances and exits** are located so as to permit efficient student traffic flow	10	*8*
Doors around the auditorium open to an area covered by a continuous roof overhang large enough to provide shelter from the elements. Shelter was not observed at the other doors.		
2.6 **Building ''envelope''** generally provides for energy conservation (see criteria)	10	*2*
The building envelope is dominated by single pane metal windows which offer no insulation value. It is breached by weather in some areas as well.		
2.7 Structure is **free of friable asbestos** and **toxic materials**	10	*6*
Maintenance personnel stated that ACM remaining in the building are of a non-friable nature.		
2.8 Interior walls permit sufficient **flexibility** for a variety of class sizes	10	*1*
Folding partitions or movable walls were not observed.		

Mechanical/Electrical	Points Allocated	Points
2.9 **Adequate light sources** are well maintained, and properly placed and are not subject to overheating	15	*11*
The majority of the areas have adequate light sources, and the lighting is maintained and not subject to overheating. Some of the fixtures are very old.		
2.10 **Internal water supply** is adequate with sufficient pressure to meet health and safety requirements	15	*15*
The internal water supply has sufficient pressure.		
2.11 Each teaching/learning area has adequate convenient **wall outlets**, phone and computer cabling for technology applications	15	*7*
There are not enough wall outlets to support the computer/technology equipment.		
2.12 **Electrical controls** are safely protected with **disconnect switches** easily accessible	10	*7*
Disconnect switches are easily accessible and there are no provisions for the disabled.		
2.13 **Drinking fountains** are adequate in number and placement, and are properly maintained including provisions for the disabled	10	*10*
There are adequate number of drinking fountains and provisions for disabled.		
2.14 Number and size of **restrooms meet requirements**	10	*10*
The number of fixtures and number of restrooms exceeds recommended quantity for OSDM. Size of restrooms are sufficient and meet ADA acess criteria.		
2.15 **Drainage systems** are properly maintained and meet requirements	10	*10*

The drainage systems were reported to be in good condition.		
2.16 **Fire alarms, smoke detectors, and sprinkler systems** are properly maintained and meet requirements	10	*6*
There is no sprinkler system and the fire alarm system is not up to date and does not meet NFPA and OSFC requirements.		
2.17 **Intercommunication system** consists of a central unit that allows dependable **two-way communication** between the office and instructional areas	10	*10*
The phone in each classroom provides the two way communication to the office.		
2.18 **Exterior water supply** is sufficient and available for normal usage	5	*5*
The exterior hose bibs are adequate.		
TOTAL - 2.0 Structural and Mechanical Features	200	*140*

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Suitability Appraisal of **3.0 Plant Maintainability** for Shaker Heights MS Assessment - Shaker Heights CSD - CFAP Update (11-2-21)

3.0 Plant Maintainability	Points Allocated	Points
3.1 **Windows, doors, and walls** are of material and finish requiring minimum maintenance	15	*6*
The appearance of the painted metal window frames is difficult to keep up. Doors and walls are constructed of materials requiring less upkeep.		
3.2 **Floor surfaces** throughout the building require minimum care	15	*15*
The floor surface is 9" vinyl tile in most parts of the building.		
3.3 **Ceilings and walls** throughout the building, including service areas, are easily cleaned and resistant to stain	10	*4*
The direct applied acoustic tiles are easily stained and falling in some cases.		
3.4 **Built-in equipment** is designed and constructed for ease of maintenance	10	*8*
Shelving and casework are original to the building, but are still performing well.		
3.5 **Finishes and hardware**, with compatible keying system, are of durable quality	10	*9*
Finishes on hardware has held its appearance over the life of the school. Most rooms are accessible by a master.		
3.6 **Restroom fixtures** are wall mounted and of quality finish	10	*4*
Restroom fixtures are floor mounted, but the porcelain finish is still in tact.		
3.7 Adequate **custodial storage space** with water and drain is accessible throughout the building	10	*6*
Adequate provisions for custodial storage and work were observed. A ladder must be manually placed in the custodial closet to access the attic area.		
3.8 Adequate **electrical outlets and power**, to permit routine cleaning, are available in every area	10	*10*
Adequate electrical services and outlets are provided for housekeeping.		
3.9 **Outdoor light fixtures, electrical outlets**, equipment, and other fixtures are accessible for repair and replacement	10	*10*
Sufficient illumination and outlets are provided for grounds keeping.		
TOTAL - 3.0 Plant Maintainability	100	*72*

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Suitability Appraisal of **4.0 Building Safety and Security** for Shaker Heights MS Assessment - Shaker Heights CSD - CFAP Update (11-2-21)

4.0 Building Safety and Security	Points Allocated	Points
Site Safety		
4.1 **Student loading areas** are segregated from other vehicular traffic and pedestrian walkways	15	*15*
Students load from buses directly on to sidewalk adjacent to the building.		
4.2 **Walkways**, both on and offsite, are available for safety of pedestrians	10	*10*
Safe walking paths are provided.		
4.3 **Access streets** have sufficient signals and signs to permit safe entrance to and exit from school area	5	*2*
Signage is provided. No signals are present.		
4.4 **Vehicular entrances and exits** permit safe traffic flow	5	*3*
Vehicular portals are safe. However, leaving the school grounds requires a circuitous drive through and adjacent neighborhood.		
4.5 ES **Playground equipment** is free from hazard MS Location and types of **intramural equipment** are free from hazard HS **Athletic field equipment** is properly located and is free from hazard	5	*5*
Hazards were not observed at the intramural areas.		
Building Safety	Points Allocated	Points
4.6 **The heating unit(s)** is located away from student occupied areas	20	*18*
Building systems are adequately partitioned off from student occupied areas.		
4.7 Multi-story buildings have at least **two stairways** for student egress	15	*15*
Sufficient stairs are provided for student egress.		
4.8 **Exterior doors** open outward and are equipped with panic hardware	10	*10*
Properly designed hardware is provided on outward swinging doors.		
4.9 **Emergency lighting** is provided throughout the entire building with exit signs on separate electrical circuits	10	*6*
Emergency lighting is provided throughout the building, but it is unlikely the exit signs are on separate electrical circuits due to the age of the building.		
4.10 **Classroom doors** are recessed and open outward	10	*10*
The doors are recessed on open in the direction of egress.		
4.11 **Building security systems** are provided to assure uninterrupted operation of the educational program	10	*4*
The building security system is limited to assure uninterrupted educational program.		
4.12 **Flooring** (including ramps and stairways) is maintained in a non-slip condition	5	*3*
The floors are not a tripping hazard. However, the 9'' tiles consistently show separation at the joints throughout.		
4.13 **Stair risers** (interior and exterior) do not exceed 6 1/2 inches and range in number from 3 - 16	5	*5*
Stair risers fall within these parameters.		
4.14 **Glass** is properly located and protected with wire or safety material to prevent accidental student injury	5	*0*
Vision panels in doors as well as sidelights lack wired glass or safety rated glass.		
4.15 **Fixed Projections** in the traffic areas do not extend more than eight inches from the corridor wall	5	*5*
Projections in the hallway are less than 8''.		

4.16 **Traffic areas** terminate at an exit or a stairway leading to an egress	5	*5*
Corridors lead to an exit or egress stair.		
Emergency Safety	Points Allocated	Points
4.17 Adequate **fire safety equipment** is properly located	15	*9*
Fire extinguishers are appropriately provided and located. Standpipe cabinets lack hoses.		
4.18 There are at least **two independent exits** from any point in the building	15	*15*
All areas are served by at least 2 exits.		
4.19 **Fire-resistant materials** are used throughout the structure	15	*11*
While structural materials are non combustible, wood veneer wall treatments are present throughout many of the corridors.		
4.20 Automatic and manual **emergency alarm system** with a distinctive sound and flashing light is provided	15	*10*
Audio and visual fire alarm systems are provided throughout but are not adequate in number.		
TOTAL - 4.0 Building Safety and Security	200	*161*

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Suitability Appraisal of **5.0 Educational Adequacy** for Shaker Heights MS Assessment - Shaker Heights CSD - CFAP Update (11-2-21)

5.0 Educational Adequacy	Points Allocated	Points
Academic Learning Space		
5.1 **Size of academic learning areas** meets desirable standards	25	*13*
Most classroom average less than 800 square feet. Science rooms are 836 square feet. These fall well below OSDM recommendations.		
5.2 **Classroom space** permits arrangements for small group activity	15	*11*
Small group activity can take place, but the space would be compressed.		
5.3 **Location of academic learning areas** is near related educational activities and away from disruptive noise	10	*10*
Disruptive noise was not observed in the academic areas.		
5.4 **Personal space** in the classroom away from group instruction allows privacy time for individual students	10	*6*
Privacy for personal space is not provided in the classrooms.		
5.5 **Storage for student materials** is adequate	10	*10*
Students are provided lockers to store personal items.		
5.6 **Storage for teacher materials** is adequate	10	*10*
Storage for teacher materials is inconsistently provided throughout the building.		
Special Learning Space	Points Allocated	Points
5.7 **Size of special learning area(s)** meets standards	15	*13*
Multiple rooms for special education were observed.		
5.8 **Design of specialized learning area(s)** is compatible with instructional need	10	*7*
The rooms are equipped with appropriate provisions, but the design does not seem specific to the function.		
5.9 **Library**/**Resource**/**Media Center** provides appropriate and attractive space	10	*4*
The media center design is not particularly engaging or stimulating. Color and finishes are not stimulating. Little visual interest is offered.		
5.10 **Gymnasium (or covered P.E. area)** adequately serves physical education instruction	5	*5*
Two gymnasiums are provided to meet physical education needs.		
5.11 ES **Pre-kindergarten and kindergarten space** is appropriate for age of students and nature of instruction MS/HS **Science** program is provided sufficient space and equipment	10	*8*
Chemical resistant tables surfaces are provided as are science storage areas. Science rooms are 836 square feet. This falls well below OSDM recommendations.		
5.12 **Music Program** is provided adequate sound treated space	5	*4*
Two music rooms are provided with space for individual practice. More storage space is needed.		
5.13 **Space for art** is appropriate for special instruction, supplies, and equipment	5	*2*
The art room is just over 700 sq. ft. and has inadequate storage. No kiln room is provided.		
School Facility Appraisal	Points Allocated	Points
5.14 **Space for technology education** permits use of state-of-the-art equipment	5	*4*
A computer lab as well as computers in the classroom are provided.		
5.15 Space for **small groups and remedial instruction** is provided adjacent to classrooms	5	*4*

Space for remedial instruction is provided by small rooms intermediate between the classooms.

5.16 **Storage for student and teacher material** is adequate	5	*5*

Students are provided lockers and teachers have areas between classrooms to store personal effects.

Support Space	Points Allocated	Points
5.17 **Teacher's lounge and work areas** reflect teachers as professionals	10	*10*

The teachers lounge provides space for tables and respite from the classroom.

5.18 **Cafeteria/Kitchen** is attractive with sufficient space for seating/dining, delivery, storage, and food preparation	10	*10*

The functions are properly supported by the food preparation and dining areas.

5.19 **Administrative offices** provided are consistent in appearance and function with the maturity of the students served	5	*5*

The design of the offices does not relate specifically to middle schoolers.

5.20 **Counselor's office** insures privacy and sufficient storage	5	*5*

Storage space and privacy are provided for the counselors.

5.21 **Clinic** is near administrative offices and is equipped to meet requirements	5	*5*

The clinic has 3 rooms and is equipped for student needs.

5.22 **Suitable reception space** is available for students, teachers, and visitors	5	*5*

Nearly 500 square feet of reception/waiting space is provided.

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

Administrators have privacy and adequate work space to perform their duties.

TOTAL - 5.0 Educational Adequacy	200	*161*

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Suitability Appraisal of **6.0 Environment for Education** for Shaker Heights MS Assessment - Shaker Heights CSD - CFAP Update (11-2-21)

6.0 Environment for Education	Points Allocated	Points
Exterior Environment		
6.1 Overall **design is aesthetically pleasing** to age of students	15	*12*
Wood veneer wall treatments contribute to the appeal of the interior as well.		
6.2 Site and building are **well landscaped**	10	*8*
Open green space, trees and shrubs are provided around the site.		
6.3 **Exterior noise and poor environment** do not disrupt learning	10	*10*
Disruptive elements were not observed near the site.		
6.4 **Entrances and walkways** are **sheltered** from sun and inclement weather	10	*7*
The only shelter exists along the auditorium entrances. Main entrances and exits have no shelter from the elements.		
6.5 **Building materials** provide attractive color and texture	5	*3*
The building exterior consists of a monotone brick and painted metal windows. The dentils on the roof overhangs and eaves provide some visual interest.		
Interior Environment	Points Allocated	Points
6.6 **Color schemes, building materials, and decor** provide an impetus to learning	20	*15*
The high levels of natural light and ceiling height provided provide a nice environment. Wood veneer wall treatments help to ''warm'' the environment somewhat. Use of color and contrast are inconsistent however.		
6.7 **Year around comfortable temperature and humidity** are provided throughout the building	15	*5*
Providing consistent building-wide temperature is difficult to achieve.		
6.8 **Ventilating system** provides adequate quiet circulation of clean air and meets 15cfm VBC requirement	15	*6*
The ventilation system does not meet the outside air requirements.		
6.9 **Lighting system** provides proper intensity, diffusion, and distribution of illumination	15	*12*
Many of the areas of the building meet the the required lighting level, but some do not.		
6.10 **Drinking fountains and restroom facilities** are conveniently located	15	*15*
Adequate drinking fountains and restroom facilities are provided throughout the building.		
6.11 **Communication among students** is enhanced by commons area(s) for socialization	10	*10*
The cafeteria provided adequate opportunity for interaction.		
6.12 **Traffic flow** is aided by appropriate foyers and corridors	10	*7*
Traffic is facilitated by corridors. However, the building layout results in long travel distances between various parts of the building.		
6.13 **Areas for students to interact** are suitable to the age group	10	*8*
Appropriately designed dining areas are available. Outdoor areas for socialization were not observed.		
6.14 **Large group areas are designed** for effective management of students	10	*4*
The gymnasium and auditorium are provided only one way to the rest of the school. The cafeteria is open to the corridor, thus confounding the ability to manage large numbers of students.		
6.15 **Acoustical treatment** of ceilings, walls, and floors provides effective sound control	10	*3*
Acoustic treatment was only observed on the ceilings in the form of direct applied acoustic tiles. Other materials are sound reflective.		

6.16 **Window design** contributes to a pleasant environment	10	*7*
The window design allows for high levels of natural sunlight. However, the actual windows are underperforming.		
6.17 **Furniture and equipment** provide a pleasing atmosphere	10	*8*
Most items are dated, but still performing well.		
TOTAL - 6.0 Environment for Education	200	*140*

LEED Observation Notes

School District:	Shaker Heights City
County:	Cuyahoga
School District IRN:	44750
Building:	Shaker Heights Middle School
Building IRN:	4457

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)

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)

Most of the fixtures are original construction and are not low flow fixtures. Replacement of the fixtures will meet this requirement. The use of non-potable water for toilet flushing would be possible, but costly in this existing building.

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)

There is some flat roof area where photovoltaic solar collector panels for possible on-site electrical generation. Replacement of the HVAC system would increase the efficiency, but ultimately use more energy when the outside air ventilation is increased to meet the code requirements.

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 then 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)

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)

The replacement of the HVAC system will increase the IEQ to meet the requirements.

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)

Justification for Allocation of Points - Shaker Heights City

Building Name and Level: **Shaker Heights Middle School**

7-8

Building features that clearly exceed criteria:

1. Wood veneer wainscot as a finish in the corridors adds to the interior environment in a way not observed in other schools. This design feature should remain in place during any future work to retain its contribution to the interior environment.
2. While the condition of the windows is very poor and inefficient, the area of window opening throughout the building provides and abundance of natural lighting views.
3.
4.
5.
6.

Building features that are non-existent or very inadequate:

1. Single pane metal windows account for almost 80% of the building envelope at classrooms wings and many corridors around the building. This glazing system offers no thermal benefit and is in some instances severed at the jamb from the adjacent wall. According to maintenance personnel, uncomfortably high temperatures are reported in warmer months and it is difficult to establish evenly distributed warmth in the colder months.
2. Playing fields adjacent to the east of the building are higher than the grade around the building by 3-4 feet. Consequently water from the fields runs to the building and is very present in the crawlspace near the east foundation wall.
3.
4.
5.
6.

Back to Assessment Summary

Environmental Hazards Assessment Cost Estimates

Owner:	Shaker Heights City
Facility:	Shaker Heights Middle School
Date of Initial Assessment:	Feb 9, 2015
Date of Assessment Update:	Nov 3, 2021
Cost Set:	2016

District IRN:	44750
Building IRN:	4457
Firm:	Ohio Facilities Construction Commission

Scope remains unchanged after cost updates.

Building Addition	Addition Area (sf)	Total of Environmental Hazards Assessment Cost Estimates	
		Renovation	Demolition
1955 Auditorium	6,935	$78,743.50	$78,743.50
1955 Natatorium	7,034	$11,033.40	$11,033.40
1955 Original Building	153,115	$811,611.50	$801,611.50
Total	167,084	$901,388.40	$891,388.40
Total with Regional Cost Factor (102.31%)	—	$922,210.47	$911,979.47
Regional Total with Soft Costs & Contingency	—	$1,147,509.26	$1,134,778.79

Environmental Hazards(Enhanced) - Shaker Heights City (44750) - Shaker Heights Middle School (4457) - Auditorium

Owner:	Shaker Heights City	**Bldg. IRN:**	4457
Facility:	Shaker Heights Middle School	**BuildingAdd:**	Auditorium
Date On-Site:	2015-02-09	**Consultant Name:**	Gandee & Associates, Inc.

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	Assumed Asbestos-Containing Material	6000	$8.00	$48,000.00
5.	Pipe Insulation Removal	Assumed Asbestos-Containing Material	100	$10.00	$1,000.00
6.	Pipe Fitting Insulation Removal	Not Present	0	$20.00	$0.00
7.	Pipe Insulation Removal (Crawlspace/Tunnel)	Not Present	0	$12.00	$0.00
8.	Pipe Fitting Insulation Removal (Crawlspace/Tunnel)	Not Present	0	$30.00	$0.00
9.	Pipe Insulation Removal (Hidden in Walls/Ceilings)	Assumed Asbestos-Containing Material	150	$15.00	$2,250.00
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	Reported / Assumed Asbestos-Free Material	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	Not Present	0	$6.00	$0.00
16.	Acoustical Panel/Tile Ceiling Removal	Not Present	0	$3.00	$0.00
17.	Laboratory Table/Counter Top Removal	Not Present	0	$100.00	$0.00
18.	Cement Board Removal	Not Present	0	$5.00	$0.00
19.	Electric Cord Insulation Removal	Not Present	0	$1.00	$0.00
20.	Light (Reflector) Fixture Removal	Not Present	0	$50.00	$0.00
21.	Sheet Flooring with Friable Backer Removal	Not Present	0	$4.00	$0.00
22.	Fire Door Removal	Not Present	0	$100.00	$0.00
23.	Door and Window Panel Removal	Not Present	0	$100.00	$0.00
24.	Decontamination of Crawlspace/Chase/Tunnel	Not Present	0	$3.00	$0.00
25.	Soil Removal	Not Present	0	$150.00	$0.00
26.	Non-ACM Ceiling/Wall Removal (for access)	Assumed Asbestos-Containing Material	600	$2.00	$1,200.00
27.	Window Component (Compound, Tape, or Caulk) - Reno & Demo	Not Present	0	$300.00	$0.00
28.	Window Component (Compound, Tape, or Caulk) - Reno Only	Not Present	0	$300.00	$0.00
29.	Resilient Flooring Removal, Including Mastic	Assumed Asbestos-Containing Material	6500	$3.00	$19,500.00
30.	Carpet Mastic Removal	Reported / Assumed Asbestos-Free Material	0	$2.00	$0.00
31.	Carpet Removal (over RFC)	Assumed Asbestos-Containing Material	1100	$1.00	$1,100.00
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)	**Total Asb. Hazard Abatement Cost for Renovation Work**			$73,050.00
36.	(Sum of Lines 1-34)	**Total Asb. Hazard Abatement Cost for Demolition Work**			$73,050.00

B. Removal Of Underground Storage Tanks — ☑ None Reported

	Tank No.	Location	Age	Product Stored	Size	Est.Rem.Cost
1.	(Sum of Lines 1-0)			**Total Cost For Removal Of Underground Storage Tanks**		$0.00

C. Lead-Based Paint (LBP) - Renovation Only — ☐ Addition Constructed after 1980

1.	Estimated Cost For Abatement Contractor to Perform Lead Mock-Ups		$0.00
2.	Special Engineering Fees for LBP Mock-Ups		$0.00
3.	(Sum of Lines 1-2)	**Total Cost for Lead-Based Paint Mock-Ups**	$0.00

D. Fluorescent Lamps & Ballasts Recycling/Incineration — ☐ Not Applicable

	Area Of Building Addition	Square Feet w/Fluorescent Lamps & Ballasts	Unit Cost	Total Cost
1.	6935	6935	$0.10	$693.50

E. Other Environmental Hazards/Remarks — ☐ None Reported

	Description		Cost Estimate
1.	Costs for lead-based paint mock-ups are included in assessment for 1955 (Original Building).		$0.00
2.	See Bulk Sample Record Nos. 2 & 10 for sampling results in this addition.		$0.00
3.	(Sum of Lines 1-2)	**Total Cost for Other Environmental Hazards - Renovation**	$0.00
4.	(Sum of Lines 1-2)	**Total Cost for Other Environmental Hazards - Demolition**	$0.00

F. Environmental Hazards Assessment Cost Estimate Summaries

1.	A35, B1, C3, D1, and E3	**Total Cost for Env. Hazards Work - Renovation**	$73,743.50
2.	A36, B1, D1, and E4	**Total Cost for Env. Hazards Work - Demolition**	$73,743.50

* 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"×12" 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) - Shaker Heights City (44750) - Shaker Heights Middle School (4457) - Natatorium

Owner:	Shaker Heights City	**Bldg. IRN:**	4457
Facility:	Shaker Heights Middle School	**BuildingAdd:**	Natatorium
Date On-Site:	2015-02-09	**Consultant Name:**	Gandee & Associates, Inc.

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	Assumed Asbestos-Containing Material	310	$8.00	$2,480.00
4.	Duct Insulation Removal	Assumed Asbestos-Containing Material	50	$8.00	$400.00
5.	Pipe Insulation Removal	Assumed Asbestos-Containing Material	400	$10.00	$4,000.00
6.	Pipe Fitting Insulation Removal	Not Present	0	$20.00	$0.00
7.	Pipe Insulation Removal (Crawlspace/Tunnel)	Not Present	0	$12.00	$0.00
8.	Pipe Fitting Insulation Removal (Crawlspace/Tunnel)	Not Present	0	$30.00	$0.00
9.	Pipe Insulation Removal (Hidden in Walls/Ceilings)	Assumed Asbestos-Containing Material	150	$15.00	$2,250.00
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	Reported / Assumed Asbestos-Free Material	0	$25.00	$0.00
14.	Hard Plaster Removal	Not Present	0	$7.00	$0.00
15.	Gypsum Board Removal	Not Present	0	$6.00	$0.00
16.	Acoustical Panel/Tile Ceiling Removal	Not Present	0	$3.00	$0.00
17.	Laboratory Table/Counter Top Removal	Not Present	0	$100.00	$0.00
18.	Cement Board Removal	Not Present	0	$5.00	$0.00
19.	Electric Cord Insulation Removal	Not Present	0	$1.00	$0.00
20.	Light (Reflector) Fixture Removal	Not Present	0	$50.00	$0.00
21.	Sheet Flooring with Friable Backer Removal	Not Present	0	$4.00	$0.00
22.	Fire Door Removal	Not Present	0	$100.00	$0.00
23.	Door and Window Panel Removal	Not Present	0	$100.00	$0.00
24.	Decontamination of Crawlspace/Chase/Tunnel	Not Present	0	$3.00	$0.00
25.	Soil Removal	Not Present	0	$150.00	$0.00
26.	Non-ACM Ceiling/Wall Removal (for access)	Assumed Asbestos-Containing Material	600	$2.00	$1,200.00
27.	Window Component (Compound, Tape, or Caulk) - Reno & Demo	Not Present	0	$300.00	$0.00
28.	Window Component (Compound, Tape, or Caulk) - Reno Only	Not Present	0	$300.00	$0.00
29.	Resilient Flooring Removal, Including Mastic	Not Present	0	$3.00	$0.00
30.	Carpet Mastic Removal	Not Present	0	$2.00	$0.00
31.	Carpet Removal (over RFC)	Not Present	0	$1.00	$0.00
32.	Acoustical Tile Mastic Removal	Not Present	0	$3.00	$0.00
33.	Sink Undercoating Removal	Not Present	0	$100.00	$0.00
34.	Roofing Removal	Reported / Assumed Asbestos-Free Material	0	$2.00	$0.00
35.	(Sum of Lines 1-34)	**Total Asb. Hazard Abatement Cost for Renovation Work**			$10,330.00
36.	(Sum of Lines 1-34)	**Total Asb. Hazard Abatement Cost for Demolition Work**			$10,330.00

B. Removal Of Underground Storage Tanks — ☑ None Reported

	Tank No.	Location	Age	Product Stored	Size	Est.Rem.Cost
1.	(Sum of Lines 1-0)	**Total Cost For Removal Of Underground Storage Tanks**				$0.00

C. Lead-Based Paint (LBP) - Renovation Only — ☐ Addition Constructed after 1980

1.	Estimated Cost For Abatement Contractor to Perform Lead Mock-Ups		$0.00
2.	Special Engineering Fees for LBP Mock-Ups		$0.00
3.	(Sum of Lines 1-2)	**Total Cost for Lead-Based Paint Mock-Ups**	$0.00

D. Fluorescent Lamps & Ballasts Recycling/Incineration — ☐ Not Applicable

	Area Of Building Addition	Square Feet w/Fluorescent Lamps & Ballasts	Unit Cost	Total Cost
1.	7034	7034	$0.10	$703.40

E. Other Environmental Hazards/Remarks — ☐ None Reported

	Description		Cost Estimate
1.	Costs for lead-based paint mock-ups are included in assessment for 1955 (Original Building).		$0.00
2.	See Bulk Sample Record No. 11 for sampling results in this addition.		$0.00
3.	(Sum of Lines 1-2)	**Total Cost for Other Environmental Hazards - Renovation**	$0.00
4.	(Sum of Lines 1-2)	**Total Cost for Other Environmental Hazards - Demolition**	$0.00

F. Environmental Hazards Assessment Cost Estimate Summaries

1.	A35, B1, C3, D1, and E3	**Total Cost for Env. Hazards Work - Renovation**	$11,033.40
2.	A36, B1, D1, and E4	**Total Cost for Env. Hazards Work - Demolition**	$11,033.40

* 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"×12" 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) - Shaker Heights City (44750) - Shaker Heights Middle School (4457) - Original Building

Owner:	Shaker Heights City	**Bldg. IRN:**	4457
Facility:	Shaker Heights Middle School	**BuildingAdd:**	Original Building
Date On-Site:	2015-02-09	**Consultant Name:**	Gandee & Associates, Inc.

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	Assumed Asbestos-Containing Material	450	$8.00	$3,600.00
4.	Duct Insulation Removal	Assumed Asbestos-Containing Material	7000	$8.00	$56,000.00
5.	Pipe Insulation Removal	Assumed Asbestos-Containing Material	1400	$10.00	$14,000.00
6.	Pipe Fitting Insulation Removal	Not Present	0	$20.00	$0.00
7.	Pipe Insulation Removal (Crawlspace/Tunnel)	Assumed Asbestos-Containing Material	11000	$12.00	$132,000.00
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	3000	$15.00	$45,000.00
10.	Dismantling of Boiler/Furnace/Incinerator	Reported / Assumed Asbestos-Free Material	0	$2,000.00	$0.00
11.	Flexible Duct Connection Removal	Not Present	0	$100.00	$0.00
12.	Acoustical Plaster Removal	Reported / Assumed Asbestos-Free Material	0	$7.00	$0.00
13.	Fireproofing Removal	Reported / Assumed Asbestos-Free Material	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	Assumed Asbestos-Containing Material	35	$100.00	$3,500.00
18.	Cement Board Removal	Not Present	0	$5.00	$0.00
19.	Electric Cord Insulation Removal	Not Present	0	$1.00	$0.00
20.	Light (Reflector) Fixture Removal	Not Present	0	$50.00	$0.00
21.	Sheet Flooring with Friable Backer Removal	Not Present	0	$4.00	$0.00
22.	Fire Door Removal	Assumed Asbestos-Containing Material	10	$100.00	$1,000.00
23.	Door and Window Panel Removal	Not Present	0	$100.00	$0.00
24.	Decontamination of Crawlspace/Chase/Tunnel	Not Present	0	$3.00	$0.00
25.	Soil Removal	Not Present	0	$150.00	$0.00
26.	Non-ACM Ceiling/Wall Removal (for access)	Assumed Asbestos-Containing Material	12000	$2.00	$24,000.00
27.	Window Component (Compound, Tape, or Caulk) - Reno & Demo	Reported Asbestos-Containing Material	700	$300.00	$210,000.00
28.	Window Component (Compound, Tape, or Caulk) - Reno Only	Not Present	0	$300.00	$0.00
29.	Resilient Flooring Removal, Including Mastic	Reported Asbestos-Containing Material	95000	$3.00	$285,000.00
30.	Carpet Mastic Removal	Reported / Assumed Asbestos-Free Material	0	$2.00	$0.00
31.	Carpet Removal (over RFC)	Assumed Asbestos-Containing Material	10000	$1.00	$10,000.00
32.	Acoustical Tile Mastic Removal	Not Present	0	$3.00	$0.00
33.	Sink Undercoating Removal	Assumed Asbestos-Containing Material	22	$100.00	$2,200.00
34.	Roofing Removal	Reported / Assumed Asbestos-Free Material	0	$2.00	$0.00
35.	Stage Curtain	Assumed Asbestos-Containing Material	lump sum		$5,000.00
36.	NEW Other ACM	Not Present	lump sum		$0.00
37.	(Sum of Lines 1-36)	**Total Asb. Hazard Abatement Cost for Renovation Work**			$791,300.00
38.	(Sum of Lines 1-36)	**Total Asb. Hazard Abatement Cost for Demolition Work**			$791,300.00

B. Removal Of Underground Storage Tanks — ☑ None Reported

	Tank No.	Location	Age	Product Stored	Size	Est.Rem.Cost
1.	(Sum of Lines 1-0)	**Total Cost For Removal Of Underground Storage Tanks**				$0.00

C. Lead-Based Paint (LBP) - Renovation Only — ☐ Addition Constructed after 1980

1.	Estimated Cost For Abatement Contractor to Perform Lead Mock-Ups		$5,000.00
2.	Special Engineering Fees for LBP Mock-Ups		$5,000.00
3.	(Sum of Lines 1-2)	**Total Cost for Lead-Based Paint Mock-Ups**	$10,000.00

D. Fluorescent Lamps & Ballasts Recycling/Incineration — ☐ Not Applicable

	Area Of Building Addition	Square Feet w/Fluorescent Lamps & Ballasts	Unit Cost	Total Cost
1.	153115	153115	$0.10	$15,311.50

E. Other Environmental Hazards/Remarks — ☐ None Reported

	Description	Cost Estimate
1.	See Bulk Sample Record Nos. 1 through 13 for sampling results in this addition.	$0.00
2.	There are some sampling issues associated with materials described on Bulk Sample Record Nos. 8 and 13 that require attention; refer to these Bulk Sample Records for additional information.	$0.00
3.		$0.00
4.	(Sum of Lines 1-3) **Total Cost for Other Environmental Hazards - Renovation**	$0.00
5.	(Sum of Lines 1-3) **Total Cost for Other Environmental Hazards - Demolition**	$0.00

F. Environmental Hazards Assessment Cost Estimate Summaries

1.	A37, B1, C3, D1, and E4	**Total Cost for Env. Hazards Work - Renovation**	$816,611.50
2.	A38, B1, D1, and E5	**Total Cost for Env. Hazards Work - Demolition**	$806,611.50

* 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"×12" 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.