

Building Information - Willoughby-Eastlake City SD (45104) - Willoughby Middle

Program Type	Expedited Local Partnership Program (ELPP)
Setting	Suburban
Assessment Name	Willoughby M_2010_TCI
Assessment Date	2010-03-16
Cost Set:	2010
Building Name	Willoughby Middle
Building IRN	41509
Building Address	36901 Ridge Rd
Building City	Willoughby
Building Zipcode	44094
Building Phone	440/975-3601
Acreage	19.60
Current Grades	6-8
Teaching Stations	42
Number of Floors	3
Student Capacity	975
Current Enrollment	971
Enrollment Date	2010-04-01
Enrollment Date is the date in which the current enrollment was taken.	
Number of Classrooms	39
Historical Register	NO
Building's Principal	Mr. Lawrence Keller
Building Type	Middle

[Next Page](#)

North elevation photo:



East elevation photo:



South elevation photo:



West elevation photo:



GENERAL DESCRIPTION

90,580 Total Existing Square Footage

1971 Building Dates

6-8 Grades

971 Current Enrollment

42 Teaching Stations

19.60 Site Acreage

Willoughby Middle School, which is not on the National Register of Historic Buildings, and originally constructed in 1971, is a 3 story, 90,580 square foot brick school building located in a suburban residential setting. The existing facility features a conventionally partitioned design, and does not utilize modular buildings. The structure of the overall facility contains masonry exterior wall construction, with masonry and drywall wall construction in the interior. The floor system consists of slab on grade and precast concrete. The roof structure is precast concrete and metal deck with joists. The roofing system of the overall facility is built-up asphalt with gravel ballast, installed in 1971 and subsequently repaired. The ventilation system of the building is inadequate to meet the needs of the users. The Classrooms are undersized in terms of the current standards established by the State of Ohio. Physical Education and Student Dining spaces consist of 6601 SF Primary Gymnasium with 3711 SF Auxiliary Gymnasium and separate Student Dining. The electrical system for the facility is inadequate. The facility is not equipped with a compliant security system. The building does not have a compliant automatic fire alarm. The facility is not equipped with an automated fire suppression system. The building is not reported to contain asbestos or other hazardous materials. The overall building is not compliant with ADA accessibility requirements. The school is located on a 19.06 acre site shared with South High School adjacent to residential properties. The property and play areas athletic facilities are partially fenced for security. Access onto the site is unrestricted. Site circulation is fair. There is dedicated space for school buses to load and unload on the site. Parking for staff, visitors and community events is inadequate.

The roof is in poor condition. The office does not have visual security to the front door. The site has grading issues with poor drainage. Many classrooms do not have windows. Ventilation in the building is reported to be poor. The exterior masonry has copious amounts of cracks and stains. The building is not ADA compliant. Circulation and wayfinding in the building is poor, with many unsecured corners and corridors.

[Previous Page](#)

[Next Page](#)

Building Construction Information - Willoughby-Eastlake City SD (45104) - Willoughby Middle (41509)

Name	Year	Handicapped Access	Floors	Square Feet
1971 Original	1971	no	3	90,580

[Previous Page](#)

[Next Page](#)

Building Component Information - Willoughby-Eastlake City SD (45104) - Willoughby Middle (41509)

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
1971 Original (1971)		8206		6601	2395		4051	877						3711
Master Planning Considerations														

[Previous Page](#)

[Next Page](#)

Existing CT Programs for Assessment

[Next Page](#)

[Previous Page](#)

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 - Willoughby Middle (41509)

District: Willoughby-Eastlake City SD				County: Lake		Area: Northeastern Ohio (8)	
Name: Willoughby Middle				Contact: Mr. Lawrence Keller			
Address: 36901 Ridge Rd Willoughby, OH 44094				Phone: 440/975-3601			
Bldg. IRN: 41509				Date Prepared: 2010-03-16		By: Karen L Walker	
				Date Revised: 2010-06-23		By: Karen L Walker	
Current Grades		6-8	Acreage:		19.60		
Proposed Grades		N/A	Teaching Stations:		42		
Current Enrollment		971	Classrooms:		39		
Projected Enrollment		N/A					
Addition		Date	HA	Number of Floors	Current Square Feet		
1971 Original		1971	no	3	90,580		
Total						90,580	
		*HA	= Handicapped Access				
		*Rating	=1 Satisfactory				
			=2 Needs Repair				
			=3 Needs Replacement				
		*Const P/S	= Present/Scheduled Construction				
FACILITY ASSESSMENT Cost Set: 2010				Rating	Dollar	Assessment	
A. Heating System				3	\$2,943,850.00	-	
B. Roofing				3	\$895,699.36	-	
C. Ventilation / Air Conditioning				1	\$5,000.00	-	
D. Electrical Systems				3	\$1,568,845.60	-	
E. Plumbing and Fixtures				3	\$1,049,060.00	-	
F. Windows				3	\$134,096.34	-	
G. Structure: Foundation				1	\$0.00	-	
H. Structure: Walls and Chimneys				2	\$352,240.50	-	
I. Structure: Floors and Roofs				2	\$30,000.00	-	
J. General Finishes				3	\$1,427,763.40	-	
K. Interior Lighting				3	\$452,900.00	-	
L. Security Systems				3	\$158,515.00	-	
M. Emergency/Egress Lighting				3	\$90,580.00	-	
N. Fire Alarm				3	\$135,870.00	-	
O. Handicapped Access				3	\$837,058.00	-	
P. Site Condition				2	\$341,436.50	-	
Q. Sewage System				3	\$22,500.00	-	
R. Water Supply				3	\$20,000.00	-	
S. Exterior Doors				3	\$62,000.00	-	
T. Hazardous Material				1	\$0.00	-	
U. Life Safety				3	\$584,385.00	-	
V. Loose Furnishings				2	\$362,320.00	-	
W. Technology				3	\$696,560.20	-	
X. Construction Contingency / Non-Construction Cost				-	\$2,973,333.61	-	
Total					\$15,144,013.51		

CEFPI Appraisal Summary					
Section	Points Possible	Points Earned	Percentage	Rating	Category
Cover Sheet					
1.0 The School Site	100	74	74%	Satisfactory	
2.0 Structural and Mechanical Features	200	127	64%	Borderline	
3.0 Plant Maintainability	100	54	54%	Borderline	
4.0 Building Safety and Security	200	147	74%	Satisfactory	
5.0 Educational Adequacy	200	122	61%	Borderline	
6.0 Environment for Education	200	107	54%	Borderline	
LEED Observations					
Commentary					
Total	1000	631	63%	Borderline	

Enhanced Environmental Hazards Assessment Cost Estimates			
Item	Rating	Dollar Assessment	Cost Factor
C=Under Contract			
Renovation Cost Factor			
Cost to Renovate (Cost Factor applied)			104.16%
Total			\$15,774,004.47
<i>The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.</i>			

[Previous Page](#)

1971 Original (1971) Summary

District: Willoughby-Eastlake City SD				County: Lake		Area: Northeastern Ohio (8)	
Name: Willoughby Middle				Contact: Mr. Lawrence Keller			
Address: 36901 Ridge Rd Willoughby, OH 44094				Phone: 440/975-3601			
Bldg. IRN: 41509				Date Prepared: 2010-03-16		By: Karen L Walker	
				Date Revised: 2010-06-23		By: Karen L Walker	
Current Grades		6-8	Acreage:		19.60		
Proposed Grades		N/A	Teaching Stations:		42		
Current Enrollment		971	Classrooms:		39		
Projected Enrollment		N/A					
1971 Original		1971	no	3	90,580		
Total					90,580		
*HA =		Handicapped Access					
*Rating =1		Satisfactory					
=2		Needs Repair					
=3		Needs Replacement					
*Const P/S =		Present/Scheduled Construction					
FACILITY ASSESSMENT Cost Set: 2010				Rating	Dollar Assessment	C	
A. Heating System				3	\$2,943,850.00	-	
B. Roofing				3	\$895,699.36	-	
C. Ventilation / Air Conditioning				1	\$5,000.00	-	
D. Electrical Systems				3	\$1,568,845.60	-	
E. Plumbing and Fixtures				3	\$1,049,060.00	-	
F. Windows				3	\$134,096.34	-	
G. Structure: Foundation				1	\$0.00	-	
H. Structure: Walls and Chimneys				2	\$352,240.50	-	
I. Structure: Floors and Roofs				2	\$30,000.00	-	
J. General Finishes				3	\$1,427,763.40	-	
K. Interior Lighting				3	\$452,900.00	-	
L. Security Systems				3	\$158,515.00	-	
M. Emergency/Egress Lighting				3	\$90,580.00	-	
N. Fire Alarm				3	\$135,870.00	-	
O. Handicapped Access				3	\$837,058.00	-	
P. Site Condition				2	\$341,436.50	-	
Q. Sewage System				3	\$22,500.00	-	
R. Water Supply				3	\$20,000.00	-	
S. Exterior Doors				3	\$62,000.00	-	
T. Hazardous Material				1	\$0.00	-	
U. Life Safety				3	\$584,385.00	-	
V. Loose Furnishings				2	\$362,320.00	-	
W. Technology				3	\$696,560.20	-	
X. Construction Contingency / Non-Construction Cost				-	\$2,973,333.61	-	
Total					\$15,144,013.51		
CEFPI Appraisal Summary							
Section		Points Possible		Points Earned		Percentage Rating Category	
Cover Sheet							
1.0 The School Site		100		74		74% Satisfactory	
2.0 Structural and Mechanical Features		200		127		64% Borderline	
3.0 Plant Maintainability		100		54		54% Borderline	
4.0 Building Safety and Security		200		147		74% Satisfactory	
5.0 Educational Adequacy		200		122		61% Borderline	
6.0 Environment for Education		200		107		54% Borderline	
LEED Observations							
Commentary							
Total		1000		631		63% Borderline	
Enhanced Environmental Hazards Assessment Cost Estimates							
C=Under Contract							
Renovation Cost Factor						104.16%	
Cost to Renovate (Cost Factor applied)						\$15,774,004.47	
<i>The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.</i>							

A. Heating System

Description: The existing heating system for the overall facility is composed of forced air heating systems utilizing mostly electric heat with some hot water boiler heating installed new in 1970 and early 2000's respectively. The units are in good condition. The heating system in the overall facility is part of the Original Construction and newly updated with each renovation. Heating is distributed through a forced air ducted system utilizing several air handlers with electric heaters and two additional air handlers with hot water coils. The heating system also includes terminal equipment such as perimeter baseboard electric heaters and miscellaneous electric unit heaters. With very limited capacity for simultaneous heating and cooling operation, this system is not compliant with the OSDM requirements for basic system type. The heating terminal equipment was installed in 1970 and new with each addition/renovation and is in good condition. The system does not comply with the 15 CFM per person fresh air requirements of the Ohio Building Code/mechanical code and Ohio School Design Manual. The non DDC type system temperature controls were installed in 1970 and are in working condition. The system does feature individual heating temperature controls in all spaces required by the OSDM. The overall system does not feature any central energy recovery systems. The facility is equipped with louvered interior doors in some rooms to facilitate Corridor utilization as return air plenums while others have a return air system. The existing system is ducted in majority of the areas, and area floor to structural deck heights will accommodate the installation of properly sized ductwork for a future Ohio School Design Manual approved system. The overall heating system is evaluated as being not in safe and efficient working order, though long term life expectancy of the existing system is anticipated. The facility is equipped with central air condition. The site does not contain underground fuel tanks that are currently in use.

Rating: 3 Needs Replacement

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

Item	Cost	Unit	Whole Building	1971 Original (1971)	Sum	Comments
HVAC System Replacement:	\$25.00	sq.ft.		90,580 ft ² Required	\$2,264,500.00	(includes demo of existing system and reconfiguration of piping layout and new controls, air conditioning)
Convert To Ducted System Replacement	\$7.50	sq.ft.		Required	\$679,350.00	(includes cost 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:			\$2,943,850.00	\$2,943,850.00		



Gas Fired Hot Water Boiler



Electric Unit Heater

[Back to Assessment Summary](#)

B. Roofing

Description: The roof over the overall facility is a built-up system that was installed in 1971 and 1997, and is in poor condition. The District reported current leaking along the loading dock walls and over the stage and student dining areas. Signs of past leaking were observed during the physical assessment. Access to the roof was gained by access doors that is are in poor condition addressed in section S. Fall safety protection cages are not required. There were observations of standing water on the roof above the loading dock wall. Precast concrete copings are in fair condition. Roof storm drainage is addressed through a system of roof drains which are properly located, and in poor condition. The roof is not equipped with overflow roof drains though they are needed on this building. Roof penetrations are in poor condition consistent with the roofing materials. There are not any covered walkways attached to this structure.

Rating: 3 Needs Replacement

Recommendations: Replace roof of overall facility to meet Ohio School Design Manual guidelines due to age of system and condition. Provide tapered insulation for both thermal insulation and to provide positive slope. Due to existing conditions roof drains require replacement. Overflow drains require installation. Roof ladders require installation on various roof surfaces.

Item	Cost	Unit	Whole Building	1971 Original (1971)	Sum	Comments
				90,580 ft ²		
Membrane (all types):	\$8.27	sq.ft. (Qty)		58,468 Required	\$483,530.36	(unless under 10,000 sq.ft.)
Remove/replace existing roof Drains and Sump:	\$1,200.00	each		40 Required	\$48,000.00	
Overflow Roof Drains and Piping:	\$2,500.00	each		40 Required	\$100,000.00	
Roof Insulation:	\$3.00	sq.ft. (Qty)		3,758 Required	\$11,274.00	(non-tapered insulation for use in areas without drainage problems)
Roof Insulation:	\$4.50	sq.ft. (Qty)		54,710 Required	\$246,195.00	(tapered insulation for limited area use to correct ponding)
Roof Access Ladder with Fall Protection Cage:	\$100.00	n.ft.		67 Required	\$6,700.00	(remove and replace)
Sum:			\$895,699.36	\$895,699.36		



Ponding and patches on built-up roofing



Built-up roofing in poor condition

[Back to Assessment Summary](#)

C. Ventilation / Air Conditioning

Description: The overall facility is equipped with a central air conditioning system. Central systems consisting of an air handler and a remote condenser or a rooftop cooling package system is provided. The ventilation system in the overall facility consists of unit ventilators and ducted air handlers installed initially in 1970 and new with each addition / renovation and are in good condition, providing fresh air to classrooms and other miscellaneous spaces such as Gymnasiums, Student Dining, Media Center etc. Relief air venting is provided by relief fans and roof vents. The ventilation system does not meet the Ohio Building Code 15 CFM per occupant fresh air requirement. The overall system is not compliant with Ohio Building Code and Ohio School Design Manual requirements. Dust collection systems are not required in this facility and no system is provided. The Art program is not equipped with a kiln. Exhaust systems for Restrooms, Locker Rooms, Kitchen, Gymnasiums, Storage Rooms, Custodial Closets and specialized areas are adequately placed, and in working condition.

Rating: 1 Satisfactory

Recommendations: Provide an air conditioning system to meet with Ohio Building Code and Ohio School Design Manual requirements. Pricing included in Item A. Provide kiln exhaust system for kiln listed in item J.

Item	Cost	Unit	Whole Building	1971 Original (1971)	Sum	Comments
				90,580 ft ²		
Kiln Exhaust System:	\$5,000.00	each		1 Required	\$5,000.00	
Sum:			\$5,000.00	\$5,000.00		



Roof Top A/C And Exhaust Fans



Unit Ventilator

[Back to Assessment Summary](#)

D. Electrical Systems

Description: There are two electrical main switch connections to the utility company service provided to the overall facility; one is a 1200 amp 480/277 volt, 3 phase, 4 wire connection to the lighting distribution panelboard, the second is a 1600 amp 480/277 volt, 3 phase, 4 wire connection to the heating distribution panelboard. Power is provided to the school by transformers within a vault room located near the rear of the school. The main distribution panels could be expanded to add additional capacity that would be required by the OSDM requirements. The Classrooms are equipped with adequate electrical outlets in most of the areas per OSFC recommendations. The typical Classroom contains usually 3 to 5 general purpose outlets with certain classrooms having added outlets used for Classroom computers, and television. There are some spaces that have no electrical outlets such as storage areas and small toilet rooms. The Corridors are equipped with adequate electrical outlets for electrical servicing. Exterior outlets are provided around the perimeter of the building, but are not GFI protected. The facility is equipped with a 15 KW emergency generator. There is a 30 amp disconnect switch which feeds the Fire Alarm panel. Adequate building lightning protection safeguards are not provided. The overall electrical system does not meet Ohio School Design Manual requirements due to age and availability of spare parts for the provided equipment.

Rating: 3 Needs Replacement

Recommendations: The entire electrical systems requires replacement to meet Ohio School Design Manual guidelines due to age.

Item	Cost	Unit	Whole Building	1971 Original (1971) 90,580 ft ²	Sum	Comments
System Replacement:	\$17.32	sq.ft.		Required	\$1,568,845.60	(Includes demo of existing system. Includes generator for life safety systems. Does not include telephone or data cable or equipment) (Use items below ONLY when the entire system is NOT being replaced)
Sum:			\$1,568,845.60	\$1,568,845.60		



Emergency Generator



Main Lighting & Heating Panels

[Back to Assessment Summary](#)

E. Plumbing and Fixtures

Description: The school contains 5 Large Group Restrooms for boys, 5 Large Group Restrooms for girls, and 8 Restrooms for staff. First floor kitchen area contains 1 triple bowl sink, 1 double bowl sink, and 2 hand sink. Boy's lower Level Restrooms contain 2 non-ADA wall mounted flush valve toilets, 2 non-ADA wall mounted lavatories, 4 non ADA urinals, and 11 shower heads. Girl's lower Level Restrooms contain 5 non-ADA wall mounted flush valve toilets, 2 non-ADA wall mounted lavatories, and 10 shower heads. Boys' first floor Large Group Restrooms contain 6 non-ADA wall mounted flush valve toilets, 16 non-ADA wall mounted flush valve urinals, 10 non-ADA wall mounted lavatories. Girls' first floor Large Group Restrooms contain 12 non-ADA wall mounted flush valve toilets, as well as and 12 non-ADA lavatories. Staff Restrooms contain 11 non-ADA wall mounted flush valve toilets, and 9 non-ADA wall mounted lavatories. . Condition of fixtures is good. The facility is equipped with 6 electric water coolers and 1 drinking fountain in good condition. The school does not meet the OBC requirements for fixtures. ADA requirements are not met for fixtures and drinking fountains see Item O. The facility contains 8 electric water coolers and 6 mop sinks.

Rating: 3 Needs Replacement

Recommendations: Provide additional new fixtures to replace existing fixtures because they are not the new low flow type and do not meet ADA requirements. Replace grease interceptor as part of plumbing replacement.

Item	Cost	Unit	Whole Building	1971 Original (1971)	Sum	Comments
				90,580 ft ²		
Back Flow Preventer:	\$5,000.00	unit		1 Required	\$5,000.00	
Domestic Supply Piping:	\$3.50	sq.ft.		Required	\$317,030.00	(remove / replace)
Sanitary Waste Piping:	\$3.50	sq.ft.		Required	\$317,030.00	(remove / replace)
Domestic Water Heater:	\$5,100.00	per unit		2 Required	\$10,200.00	(remove / replace)
Toilet:	\$3,800.00	unit		36 Required	\$136,800.00	(new)
Urinal:	\$3,800.00	unit		20 Required	\$76,000.00	(new)
Sink:	\$2,500.00	unit		45 Required	\$112,500.00	(new)
Electric water cooler:	\$3,000.00	unit		8 Required	\$24,000.00	(double ADA)
Replace faucets and flush valves	\$500.00	per unit		101 Required	\$50,500.00	(average cost to remove/replace)
Sum:			\$1,049,060.00	\$1,049,060.00		



Toilet room fixtures



Toilet room fixtures

[Back to Assessment Summary](#)

F. Windows

Description: The overall facility is equipped with non-thermally broken aluminum frame windows with single glazed non-insulated glazing type window system, which was installed at the time of construction and are in fair condition. Window system seals are in moderate condition, with no district reports of substantial air and water infiltration being experienced. Window system hardware is in moderate condition. The window system features surface mounted blinds, which are in moderate condition. The window system is not equipped with insect screens on operable windows. Hollow metal frame storefront window systems with tempered and non-tempered single glazing are found in the overall facility and are in poor condition. This facility does not feature any glass block windows. The school does not contain skylights. Window security grilles are not provided for ground floor windows. There is not a Greenhouse associated with this school.

Rating: 3 Needs Replacement

Recommendations: Provide a new insulated window system with integral blinds to meet with Ohio School Design Manual requirements. Replace storefront window system in the overall facility due to condition to meet with Ohio School Design Manual requirements.

Item	Cost	Unit	Whole Building	1971 Original (1971)	Sum	Comments
				90,580 ft ²		
Insulated Glass/Panels:	\$57.10	sq.ft. (Qty)		1,592 Required	\$90,903.20	(includes blinds)
Curtain Wall/Storefront System:	\$64.18	sq.ft. (Qty)		673 Required	\$43,193.14	(remove and replace)
Sum:			\$134,096.34	\$134,096.34		



Typical aluminum window system.



Typical hollow metal storefront system.

[Back to Assessment Summary](#)

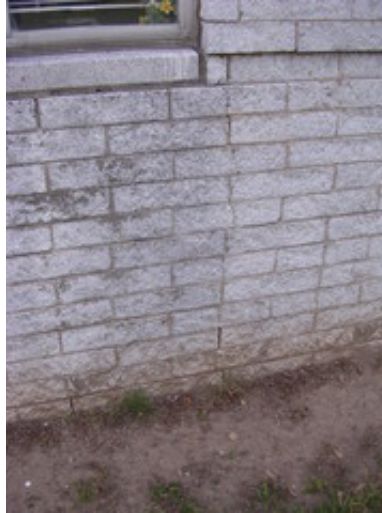
G. Structure: Foundation

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

Rating: 1 Satisfactory

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

Item	Cost	Unit	Whole Building	1971 Original (1971)	Sum	Comments
				90,580 ft ²		
Sum:			\$0.00	\$0.00		



Typical foundation condition.

[Back to Assessment Summary](#)

H. Structure: Walls and Chimneys

Description: The overall facility has a splitface concrete block veneer on a masonry bearing wall system which displayed locations of deterioration, and is in fair condition. The exterior masonry appears to have appropriately spaced and adequately caulked control joints in poor condition, although differential expansion appears to be occurring and several vertical cracks are apparent. Control joints are not provided at lintel locations at doors and windows. The school has sufficient expansion joints, and they are in poor condition. The exterior masonry has not been cleaned and sealed in recent years, and shows evidence of mortar deterioration in most areas and has locations of efflorescence and mold. Interior walls are concrete masonry units and metal stud framed partitions with gypsum board and are in fair condition. Interior masonry appears to have adequately spaced and caulked control joints in fair condition. Soffits are in poor condition. The window sills are concrete and are in fair condition. The exterior lintels are steel and precast, and are in fair condition. Chimneys are in fair condition although some mortar deterioration is apparent.

Rating: 2 Needs Repair

Recommendations: Provide tuckpointing in all areas of mortar deterioration as required through the overall facility. Provide masonry cleaning, sealing and caulking as required through the overall facility. Sawcut and caulk new appropriately spaced control joints in existing masonry as required through the overall facility. Recaulk existing control joints as required through the overall facility. Replace masonry lintel as required through the overall facility. Provide masonry sill at clerestory window.

Item	Cost	Unit	Whole Building	1971 Original (1971)	Sum	Comments
				90,580 ft ²		
Tuckpointing:	\$5.00	sq.ft. (Qty)		40,002 Required	\$200,010.00	(wall surface)
Exterior Masonry Cleaning:	\$1.50	sq.ft. (Qty)		48,890 Required	\$73,335.00	(wall surface)
Exterior Masonry Sealing:	\$1.00	sq.ft. (Qty)		48,890 Required	\$48,890.00	(wall surface)
Exterior Caulking:	\$5.50	n.ft.		1,001 Required	\$5,505.50	(removing and replacing)
Lintel Replacement:	\$250.00	n.ft.		36 Required	\$9,000.00	(total removal and replacement including pinning and shoring)
Sill Replacement:	\$45.00	n.ft.		48 Required	\$2,160.00	(remove and replace)
Coping Replacement Stone and Masonry:	\$100.00	n.ft.		44 Required	\$4,400.00	(remove and replace)
Install Control Joints	\$60.00	n.ft.		149 Required	\$8,940.00	
Sum:			\$352,240.50	\$352,240.50		



Expansion joint and vertical crack



Damaged expansion joint caulk

[Back to Assessment Summary](#)

I. Structure: Floors and Roofs

Description: The floor construction of the base floor of the overall facility is concrete slab on grade construction, and is in fair condition. No crawl space is present. The floor construction of the intermediate floors of the overall facility is precast concrete planks with concrete topping construction, and is in fair condition. Ceiling to structural deck spaces are sufficient to accommodate HVAC, electrical, and plumbing scopes of work in required renovations. The roof construction of the overall facility is precast concrete as well as metal joist and metal deck construction, and is in fair condition. A portion of the lower level roof serves as the concrete stoop for upper level. Cracks and leaks were reported by the district and evidence of past water infiltration was noted.

Rating: 2 Needs Repair

Recommendations: Replace portion of lower level roof that has signs of water infiltration.

Item	Cost	Unit	Whole Building	1971 Original (1971)	Sum	Comments
				90,580 ft ²		
Other: Replace concrete floor/roof	\$300.00	sq.ft. (Qty)		100 Required	\$30,000.00	Replace damaged roof slab
Sum:			\$30,000.00	\$30,000.00		



Previous roof leak



Gymnasium roof

[Back to Assessment Summary](#)

J. General Finishes

Description: The overall facility features conventionally partitioned Classrooms with carpet flooring, acoustical tile ceilings, as well as painted drywall and masonry wall finishes, and they are in poor condition. The overall facility has Corridors with vinyl tile flooring, acoustical tile ceilings, as well as painted masonry wall finishes, and they are in poor condition. The overall facility has Restrooms with terra cotta ceramic tile flooring, acoustical tile ceilings, as well as painted block wall finishes, and they are in fair condition. Toilet partitions are metal, and are in fair to poor condition. Classroom casework in the overall facility is wood and metal type construction with plastic laminate tops, is inadequately provided, and in poor condition. The typical Classroom contains zero lineal feet of casework, and Classroom casework provided ranges from none to 97 feet. Classrooms are provided adequate chalkboards, markerboards, and tackboards, which are in fair condition. The lockers, located in the Corridors, are adequately provided, and in fair to poor condition. The Art program is not equipped with a kiln. The facility is equipped with wood louvered and non-louvered interior doors that are flush mounted and recessed without proper ADA hardware and clearances, and in fair to poor condition. The Gymnasium spaces have rubberized flooring, exposed tectum ceilings, as well as painted masonry type wall finishes, and they are in fair condition. Gymnasium telescoping stands are metal in fair condition. Gymnasium basketball backboards are fixed and electronically operated type, and are in fair condition. The Media Center, located in the Original Constuction, has carpet flooring, exposed concrete and acoustical panel ceilings, as well as painted block wall finishes, and they are in fair condition. Student Dining, located in the Original Construction, has wood parquet flooring, acoustical tile ceilings, as well as painted block wall finishes, and they are in poor condition. OSDM-required fixed equipment for Stage is inadequately provided, and in poor condition. The existing Kitchen is full service facility, is undersized based on current enrollment, and the existing Kitchen equipment, mostly original to the building, is in fair to poor condition. The Kitchen hoods are in fair condition, and are equipped with the required UL 300 compliant wet chemical fire suppression system. The required 6" overhang on all three exposed sides of the cooking equipment is provided by the hood. Kitchen hood exhaust ductwork is of proper construction / material / insulation / and/or installed as required by the OSDM and OBMC. Walk-in coolers / freezers are located within the Kitchen spaces, and are in good condition.

Rating: 3 Needs Replacement

Recommendations: Provide complete replacement of finishes and casework due to non conformance with design manual and installation of systems in items A, C, D, E, and U. Funding for replacement of interior doors is provided in Item O, including doors here noted as being in poor condition. Provide the following kitchen equipment items: hot food cabinets, convection oven, refrigerated pass through, and dishwashing unit. Replace toilet partitions and accessories. Replace demountable partitions in office.

Item	Cost	Unit	Whole Building	1971 Original (1971) 90,580 ft²	Sum	Comments
Complete Replacement of Finishes and Casework (Middle):	\$14.58	sq.ft.		Required	\$1,320,656.40	(middle, per building area, with removal of existing)
Toilet Partitions:	\$1,000.00	per stall		15 Required	\$15,000.00	(removing and replacing)
Toilet Accessory Replacement	\$0.20	sq.ft.		Required	\$18,116.00	(per building area)
Art Program Kiln:	\$2,500.00	each		1 Required	\$2,500.00	
Remove Demountable Partitions / Install New GWB Partitions:	\$9.00	sq.ft. (Qty)		1,191 Required	\$10,719.00	(includes the demolition of the demountable partition, new partition with 5/8" abuse board, 10' high walls braced to structure above and the use of existing electric and data runs; unit price is based on floor area)
Convection Oven (double):	\$12,600.00	per unit		1 Required	\$12,600.00	
Hot Food Cabinet	\$6,150.00	unit		3 Required	\$18,450.00	
Reach-in Refrigerator/Freezer:	\$6,433.00	per unit		2 Required	\$12,866.00	
Dishwasher:	\$16,666.00	per unit		1 Required	\$16,666.00	
Total Kitchen Equipment Replacement:	\$190.00	sq.ft. (Qty)		1 Required	\$190.00	(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:			\$1,427,763.40	\$1,427,763.40		



Gathering area



Oven

[Back to Assessment Summary](#)

K. Interior Lighting

Description: The typical Classrooms of the facility are equipped with T-8 1'X4' modular surface mounted style fluorescent fixtures with single level switching. The Classrooms provide 60 to 70 footcandles of light which is adequate for the recommended 50 FC. The typical Corridors in the overall facility are equipped with T-8, 1'X4' recessed mounted fluorescent fixtures with single level switching. Corridor fixtures are in good condition, providing an average illumination of 20 to 30 FC; complying with the 20 FC recommended by the OSDM. The Gymnasium is equipped with surface mounted mercury vapor type lighting in good condition, providing an average illumination of 50 to 60 FC; complying with the 50 FC recommended by the OSDM. The Library is equipped with T-8, 1'X4' modular surface mounted fluorescent type lighting in good condition, providing an average illumination of 50 to 60 FC; complying with the 50 FC recommended by the OSDM. The Kitchen space is equipped with T-8 1'X4' modular surface mounted fluorescent type lighting fixtures with single level switching. Kitchen fixtures are in good condition, providing an average illumination of 70 to 80 FC, which is adequate for the 75-80 FC recommended by the OSDM. The Service Areas in the overall facility are equipped with pendant or surface mounted T-8 fluorescent type lighting and occasionally surface mounted incandescent fixtures in good condition. The typical Administrative spaces in the overall facility are equipped with 2'X4' recessed fluorescent fixtures in good condition, providing adequate illumination based on OSDM requirements. The overall lighting systems of the facility are compliant with Ohio School Design Manual requirements, but due to age and installation of a fire protection system will be replaced.

Rating: 3 Needs Replacement

Recommendations: Provide complete replacement of lighting system due to age, of lighting fixtures and installation of a fire protection system.

Item	Cost	Unit	Whole Building	1971 Original (1971)	Sum	Comments
Complete Building Lighting Replacement	\$5.00	sq.ft.		90,580 ft ²		
				Required	\$452,900.00	Includes demo of existing fixtures
Sum:			\$452,900.00	\$452,900.00		



Classroom Lighting



Cafeteria Lighting

[Back to Assessment Summary](#)

L. Security Systems

Description: The overall facility contains security head-end equipment, security lighting and multiple camera locations. The security system is in good condition. Motion detectors and keypads are adequately provided in main entries, central gathering areas, offices, main Corridors, and spaces where 6 or more computers are located. An automatic visitor control system is provided at main entrance. A compliant color CCTV camera is provided at main entry area. Security cameras and controls are provided for parking lots, central gathering areas, and main Corridors. CCTV is monitored in Administrative Area with the use of TV, VCR, and multiplexer. A compliant computer controlled access control system integrating alarms and video signals, with appropriate UPS backup, is provided. The system is equipped with card / biometric readers. The security system is adequately provided throughout, and the system is fairly adequate and compliant with Ohio School Design Manual guidelines. The exterior site lighting system is equipped with recessed mercury vapor entry lights in good condition. Pedestrian walkways are illuminated with street lighting in good condition. Parking and bus pick-up / drop off areas are illuminated with pole mounted mercury vapor fixtures in good condition. The exterior site lighting system does not provide adequate coverage per the OSDM guidelines.

Rating: 3 Needs Replacement

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

Item	Cost	Unit	Whole Building	1971 Original (1971)	Sum	Comments
				90,580 ft ²		
Security System:	\$1.75	sq. ft.		Required	\$158,515.00	(complete, area of building)
Sum:			\$158,515.00	\$158,515.00		



Interior Security Camera



Wall Mounted Security Panel

[Back to Assessment Summary](#)

M. Emergency/Egress Lighting

Description: The overall facility is equipped with an emergency egress lighting system consisting of incandescent illuminated exit signs and emergency floodlights. The system is in good condition and the emergency and egress lighting units are powered from a emergency panel via the emergency generator. The system is adequately provided throughout, and does meet Ohio School Design Manual requirements.

Rating: 3 Needs Replacement

Recommendations: Provide complete replacement of emergency / egress lighting system due to age to meet Ohio School Design Manual guidelines.

Item	Cost	Unit	Whole Building	1971 Original (1971)	Sum	Comments
				90,580 ft ²		
Emergency/Egress Lighting:	\$1.00	sq.ft.		Required	\$90,580.00	(complete, area of building)
Sum:			\$90,580.00	\$90,580.00		



Emergency Lighting



Ceiling Mounted Exit Sign

[Back to Assessment Summary](#)

N. Fire Alarm

Description: The overall facility is equipped with a fire alarm system, and in good condition, consisting of manual pull stations, bells, strobes and horns. The system is automatic and is monitored by a third party. It is equipped with audible horns, flow switches, tamper switches, smoke detectors and heat detectors. The system thus will not support addressable future fire alarm devices as specified. The system is adequately provided throughout, but does not have all capabilities as required. The system is not fully compliant with Ohio School Design Manual requirements.

Rating: 3 Needs Replacement

Recommendations: Provide complete replacement of fire alarm system due to age to meet OBC, NFPA, and Ohio School Design Manual guidelines

Item	Cost	Unit	Whole Building	1971 Original (1971)	Sum	Comments
				90,580 ft ²		
Fire Alarm System:	\$1.50	sq.ft.		Required	\$135,870.00	(complete new system, including removal of existing)
Sum:			\$135,870.00	\$135,870.00		



Fire Alarm Panel



Wall Mounted Fire Alarm Device

[Back to Assessment Summary](#)

O. Handicapped Access

Description: At the site, an accessible route is provided from the public right-of-way, the accessible parking areas, and from the passenger unloading zone to the main entrance of the school. An accessible route connects most areas of the site. The exterior entrances are not ADA accessible stoops and stairs. Access from the parking / drop-off area to an entry is facilitated by a curb ramp leading to a ramped sidewalk. Adequate handicap parking is not provided. Exterior doors are not equipped with ADA hardware. The main entry is not equipped with an ADA power assist door. Based on parking configuration, a second power assist is required at the Gymnasium entrance. No playground issues were considered due to existing grade configuration. On the interior of the building, space allowances and reach ranges are not compliant. An accessible route is not present through the facility. Ground and floor surfaces are compliant. Ramps and stairs do meet all ADA requirements. Elevation changes within the overall facility are facilitated by 4 stairwells in fair condition and 2 ramps in fair condition. Special provisions for floor level changes in this 3 level structure are insufficient due lack of lifts or elevators. This multistory building does not have a compliant elevator that accesses every floor. Access to the Stage is not facilitated by a chair lift, and is not required due to access from an intermediate level. Portions of the building have interior doors that are recessed, are not provided adequate clearances, and are not provided with ADA-compliant hardware. Portions of the building have interior doors that are flush mounted. No doors are provided with appropriate hardware. Ten ADA-compliant toilets are required, and none are currently provided. Ten ADA-compliant lavatories are required, and none are currently provided. Five ADA-compliant urinals are required, and none are currently provided. Two ADA-compliant showers are required, and none are currently provided. Three ADA-compliant electric water coolers are required, and none are currently provided. Toilet partitions are metal, and do not provide appropriate ADA clearances. ADA-compliant accessories are not adequately provided and mounted. Mirrors do not meet ADA requirements for mounting heights. Some toilet rooms have a masonry wing wall that prohibits appropriate handicap clearances. Health Clinic and Special Education restrooms are not compliant with ADA requirements. ADA signage is not provided on both the interior or the exterior of the building.

Rating: 3 Needs Replacement

Recommendations: Provide ADA-compliant signage, power assist door openers, chair lift, elevators, toilet partitions, and toilet accessories in the overall facility to facilitate the school's meeting of ADA requirements. Parking issues are corrected in Item P. Toilets, sinks, urinals, and water coolers are addressed in item D. Rework door openings that do not provide adequate clearance. Provide new doors, frames, and hardware for items addressed here and due to condition addressed in item J.

Item	Cost	Unit	Whole Building	1971 Original (1971)	Sum	Comments
				90,580 ft ²		
Signage:	\$0.10	sq.ft.		Required	\$9,058.00	(per building area)
Lifts:	\$15,000.00	unit		1 Required	\$15,000.00	(complete)
Elevators:	\$50,000.00	each		10 Required	\$500,000.00	(per stop, \$100,000 minimum)
Toilet Partitions:	\$1,000.00	stall		10 Required	\$10,000.00	(ADA - grab bars, accessories included)
ADA Assist Door & Frame:	\$7,500.00	unit		2 Required	\$15,000.00	(openers, electrical, patching, etc)
Replace Doors:	\$1,100.00	leaf		130 Required	\$143,000.00	(standard 3070 wood door, HM frame-classroom door/light, includes hardware)
Replace Doors:	\$5,000.00	leaf		10 Required	\$50,000.00	(rework narrow opening to provide 3070 wood door, HM frame, door/light, includes hardware)
Replace Doors:	\$5,000.00	leaf		19 Required	\$95,000.00	(rework opening and corridor wall to accommodate ADA standards when door opening is set back from edge of corridor and cannot accommodate a wheelchair.)
Sum:			\$837,058.00	\$837,058.00		



Toilet stall with grab bars



Curb ramp at parking lot

[Back to Assessment Summary](#)

P. Site Condition

Description: The 19.06 acre steeply sloped site is located in a suburban residential setting with generous tree and shrub type landscaping. The site is shared with South High School on a 66.09 acre campus. There are apparent problems with erosion or ponding on the north end of the property. The site is bordered by moderately traveled city streets. Multiple entrances onto the site do not facilitate proper separation of bus and other vehicular traffic. One way bus traffic is provided. There is a curbside bus loading and unloading zone beside the school, which is not separated from other vehicular traffic. Staff and visitor parking is facilitated by multiple asphalt and gravel parking lots in fair to poor condition, containing 64 asphalt spaces and approximately 30 gravel parking places, which does not provide adequate parking for staff members, visitors, and the disabled. The site and parking lot drainage design, consisting of sheet drainage, swales, catch basins, and storm sewers, does not provide adequate evacuation of storm water, and problems with parking lot ponding at dumpsters were reported. Concrete and asphalt curbs in poor condition are appropriately placed. Trash pick-up and service drive pavement is not heavy duty, is not equipped with a concrete pad area for dumpsters, and is in poor condition. The school is provided with a conventional loading dock, 300 square feet in size, and featuring traditional steel doors. The dock itself is in fair condition, and is not equipped with any related shipping & receiving dock equipment other than bumper pads. Concrete sidewalks are properly sloped, are located to provide a logical flow of pedestrian traffic, and are in fair condition. The athletic facilities are located on the South High portion of the campus, and are in fair condition. Site features are suitable for outdoor instruction, though no related equipment has been provided to facilitate doing so.

Rating: 2 Needs Repair

Recommendations: Replace damaged concrete curbs. Pave gravel parking area. Replace exterior handrails. Repair damaged soil areas. Provide extra parking spaces based on student population. Repair damaged concrete steps.

Item	Cost	Unit	Whole Building	1971 Original (1971)	Sum	Comments
				90,580 ft ²		
Replace Existing Asphalt Paving (heavy duty):	\$30.00	sq. yard		1,100 Required	\$33,000.00	(including drainage / tear out for heavy duty asphalt)
Additional Parking Spaces Required for Middle	\$110.00	per student		971 Required	\$106,810.00	(\$1,000 per parking space; 0.11 space per middle school student. Parking space includes parking lot drive space.)
Concrete Curb:	\$17.87	n.ft.		450 Required	\$8,041.50	(new)
Stabilize soil erosion:	\$2.50	sq.ft. (Qty)		450 Required	\$1,125.00	(includes stripping and re-grading)
Exterior Hand / Guard Rails:	\$42.50	n.ft.		140 Required	\$5,950.00	
Replace Concrete Steps:	\$32.00	sq.ft. (Qty)		20 Required	\$640.00	
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 between 0 SF and 100,000 SF	\$1.50	sq.ft.		Required	\$135,870.00	Include this one or the next. (Each addition should have this item)
Sum:				\$341,436.50	\$341,436.50	



Unpaved parking lot with dumpster location



Concrete steps

[Back to Assessment Summary](#)

Q. Sewage System

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

Rating: 3 Needs Replacement

Recommendations: Replace existing system due to age of pipe.

Item	Cost	Unit	Whole Building	1971 Original (1971)	Sum	Comments
				90,580 ft ²		
Sewage Main:	\$45.00	ln.ft.		500 Required	\$22,500.00	(include excavation and backfilling)
Sum:			\$22,500.00	\$22,500.00		



Sanitary piping below sink



Sanitary drainage Piping

[Back to Assessment Summary](#)

R. Water Supply

Description: The domestic water supply system is tied in to the municipal system. The District was not able to provide water supply flow test data. The existing domestic water service does meet the facility's current needs

Rating: 3 Needs Replacement

Recommendations: The facility is not equipped with an automated fire suppression system, and the existing water supply will not provide adequate support for a future system.

Item	Cost	Unit	Whole Building	1971 Original (1971)	Sum	Comments
				90,580 ft ²		
Domestic Water Main	\$40.00	n.ft.		500 Required	\$20,000.00	(new)
Sum:			\$20,000.00	\$20,000.00		



Domestic Water Piping at water heater



Domestic water piping at water heater

[Back to Assessment Summary](#)

S. Exterior Doors

Description: Typical exterior doors in the overall facility are hollow metal type construction, installed on hollow metal frames, and are in poor condition. Typical exterior doors feature single glazed non-insulated wired glass / tempered glass and non-tempered glass vision panels. Entrance doors in the overall facility are aluminum hollow metal type construction, installed on hollow metal frames, and are in poor condition. Entrance doors feature single glazed non-insulated tempered and non-tempered glass vision panels. There are no overhead doors in the facility.

Rating: 3 Needs Replacement

Recommendations: Replace all exterior doors in poor condition to comply with Ohio Building Code, ADA, and Ohio School Design Manual guidelines.

Item	Cost	Unit	Whole Building	1971 Original (1971)	Sum	Comments
				90,580 ft ²		
Door Leaf/Frame and Hardware:	\$2,000.00	per leaf		31 Required	\$62,000.00	(includes removal of existing)
Sum:			\$62,000.00	\$62,000.00		



Typical hollow metal entry door.



Typical hollow metal door.

[Back to Assessment Summary](#)

T. Hazardous Material

Description: The School District provided the AHERA three year reinspection reports, prepared by CTG Environmental LLC, and dated 2006, documenting known and assumed locations of asbestos and other hazardous materials. The report indicated that no friable or non-friable asbestos containing materials were known to be present in the building. No underground fuel oil storage tanks are on site. Due to the age of construction, little potential is present for lead paint.

Rating: 1 Satisfactory

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

Item	Cost	Unit	Whole Building	1971 Original (1971)	Sum	Comments
				90,580 ft ²		
Environmental Hazards Form				EHA Form	€	
Sum:			\$0.00	\$0.00		



Non ACM pipe insulation



Non ACM sound panels

[Back to Assessment Summary](#)

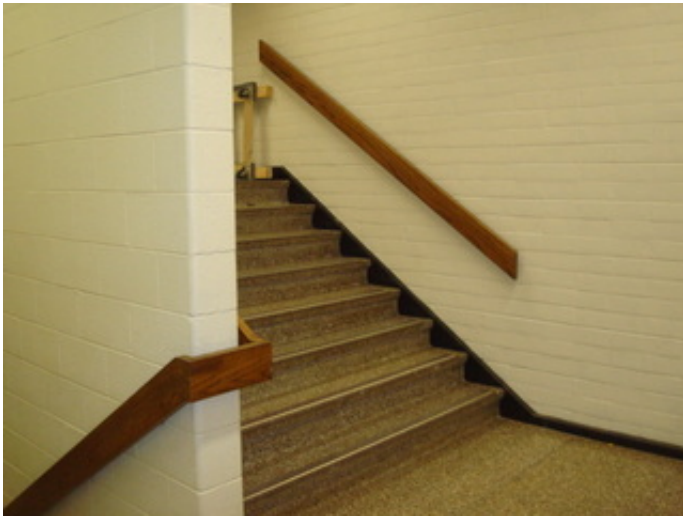
U. Life Safety

Description: The overall facility is not equipped with an automated fire suppression system. Exit corridors are situated such that dead-end corridors are not present. The facility features 4 interior stair towers, which are not protected by a two hour fire enclosure. The facility features 6 exterior concrete stairways providing egress from intermediate floors, which are in fair to poor condition. Guardrails do not meet the 4" ball test, and do not extend past the top and bottom stair risers as required by the Ohio Building Code. Stair towers wider than 5' do not have an intermediate handrail. The Kitchen hoods are in fair condition, and is equipped with the required UL 300 compliant wet chemical fire suppression system. The required 6" overhang of the cooking equipment is provided by the hood. Kitchen hood exhaust ductwork is of proper construction / material / insulation / and/or installed as required by the OSDM and OBCMC. The cooking equipment is interlocked to shut down in the event of discharge of the fire suppression system. Fire extinguishers are provided in sufficient quantity. Existing fire extinguishers are adequately spaced. The facility is equipped with an emergency generator. The emergency generator is a natural gas fired type unit, is located inside the building. The emergency generator is in poor condition, and does not provide adequate capacity for the future needs of the school. The existing water supply is provided by a tie-in to the municipal system, and is insufficient to meet the future fire suppression needs of the school. Rooms with a capacity greater than 50 occupants are not equipped with adequate egress.

Rating: 3 Needs Replacement

Recommendations: Provide new automated fire suppression system to meet Ohio School Design Manual guidelines. Provide increased water service of a capacity sufficient to support the fire suppression system, funding included in fire suppression funding. Provide new handrails at ramps to meet the requirements of the Ohio Building Code. Provide fire-rated enclosure around existing stair towers that connect more than 2 levels. Provide second door in rooms greater than 1000 square feet where not already provided.

Item	Cost	Unit	Whole Building	1971 Original (1971)	Sum	Comments
Sprinkler / Fire Suppression System:	\$3.25	sq.ft. (Qty)		90,580 ft ² Required	\$294,385.00	(includes increase of service piping, if required)
New Exterior Stair Enclosure	\$42,500.00	per level		6 Required	\$255,000.00	(all inclusive)
Handrails:	\$5,000.00	level		4 Required	\$20,000.00	
Other: Second egress door	\$3,000.00	each		5 Required	\$15,000.00	Provide second means of egress from room with more than 50 occupants
Sum:			\$584,385.00	\$584,385.00		



Handrail without extension



Fire extinguisher cabinet

[Back to Assessment Summary](#)

V. Loose Furnishings

Description: The typical Classroom furniture is generally consistant within rooms and mismatched by wings, and in generally fair to poor condition, consisting of student desks & chairs, teacher desks & chairs , desk height file cabinets, reading tables, computer workstations, bookcases, wastebaskets, and other. The facility's furniture and loose equipment were evaluated in item 6.17 in the CEFPI section of this report, and on a scale of 1 to 10 the overall facility received a rating of 4 due to observed conditions, and due to the fact that it lacks some of the Design Manual required elements.

Rating: 2 Needs Repair

Recommendations: Provide for replacement of outdated or inadequate furniture.

Item	Cost	Unit	Whole Building	1971 Original (1971)	Sum	Comments
				90,580 ft ²		
CEFPI Rating 4 to 5	\$4.00	sq. ft.		Required	\$362,320.00	
Sum:			\$362,320.00	\$362,320.00		



Life Skills Lab furniture



Classroom furniture

[Back to Assessment Summary](#)

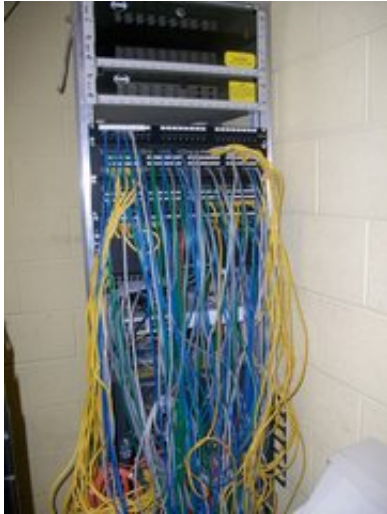
W. Technology

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

Rating: 3 Needs Replacement

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

Item	Cost	Unit	Whole Building	1971 Original (1971)	Sum	Comments
				90,580 ft ²		
ES portion of building with total SF > 69,360	\$7.69	sq. ft. (Qty)		90,580 Required	\$696,560.20	
Sum:			\$696,560.20	\$696,560.20		



Technology Main Frame



Typical Technology Outlets

[Back to Assessment Summary](#)

X. Construction Contingency / Non-Construction Cost

Renovation Costs (A-W)		\$12,170,679.90
7.00%	Construction Contingency	\$851,947.59
Subtotal		\$13,022,627.49
16.29%	Non-Construction Costs	\$2,121,386.02
Total Project		\$15,144,013.51

Construction Contingency	\$851,947.59
Non-Construction Costs	\$2,121,386.02
Total for X.	\$2,973,333.61

Non-Construction Costs Breakdown		
Land Survey	0.03%	\$3,906.79
Soil Borings / Phase I Envir. Report	0.10%	\$13,022.63
Agency Approval Fees (Bldg. Code)	0.15%	\$19,533.94
Construction Testing	0.25%	\$32,556.57
Printing - Bid Documents	0.27%	\$35,161.09
Advertising for Bids	0.03%	\$3,906.79
Builder's Risk Insurance	0.11%	\$14,324.89
Design Professional's Compensation	7.50%	\$976,697.06
CM Compensation	6.00%	\$781,357.65
Commissioning	0.42%	\$54,695.04
Maintenance Plan Advisor	0.11%	\$14,324.89
Non-Construction Contingency (includes partnering and mediation services)	1.32%	\$171,898.68
Total Non-Construction Costs	16.29%	\$2,121,386.02

[Back to Assessment Summary](#)

School Facility Appraisal

Name of Appraiser Karen L Walker **Date of Appraisal** 2010-03-16
Building Name Willoughby Middle
Street Address 36901 Ridge Rd
City/Town, State, Zip Code Willoughby, OH 44094
Telephone Number(s) 440/975-3601
School District Willoughby-Eastlake City SD

Setting: Suburban

Site-Acreage	19.60	Building Square Footage	90,580
Grades Housed	6-8	Student Capacity	975
Number of Teaching Stations	42	Number of Floors	3
Student Enrollment	971		
Dates of Construction	1971		

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

Type of Construction
 Load bearing masonry
 Steel frame
 Concrete frame
 Wood
 Steel Joists

Exterior Surfacing
 Brick
 Stucco
 Metal
 Wood
 Stone

Floor Construction
 Wood Joists
 Steel Joists
 Slab on grade
 Structural slab

[Back to Assessment Summary](#)

1.0 The School Site

School Facility Appraisal

		Points Allocated	Points
1.1	Site is large enough to meet educational needs as defined by state and local requirements <i>The site is a shared campus with South High and is large enough for educational needs.</i>	25	23
1.2	Site is easily accessible and conveniently located for the present and future population <i>The site is well located within the community.</i>	20	18
1.3	Location is removed from undesirable business, industry, traffic, and natural hazards <i>The location is in a suburban residential neighborhood.</i>	10	9
1.4	Site is well landscaped and developed to meet educational needs <i>The site is pleasantly landscaped and has potential for further educational improvements.</i>	10	8
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 <i>Athletic fields are part of the South High portion of the campus.</i>	10	3
1.6	Topography is varied enough to provide desirable appearance and without steep inclines <i>Topography is pleasantly sloped, but some erosion problems occur at the border between school buildings.</i>	5	3
1.7	Site has stable, well drained soil free of erosion <i>Some erosion was noted.</i>	5	2
1.8	Site is suitable for special instructional needs , e.g., outdoor learning <i>The site is suitable for outdoor learning, though no specialized instruction areas were provided.</i>	5	4
1.9	Pedestrian services include adequate sidewalk with designated crosswalks, curb cuts, and correct slopes <i>Pedestrians have access throughout the site, but sidewalks to the site are minimal.</i>	5	2
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 <i>The building has insufficient parking.</i>	5	2
TOTAL - The School Site		100	74

[Back to Assessment Summary](#)

2.0 Structural and Mechanical Features

School Facility Appraisal

Structural		Points Allocated	Points
2.1	Structure meets all barrier-free requirements both externally and internally <i>The structure is not handicap accessible throughout.</i>	15	4
2.2	Roofs appear sound, have positive drainage, and are weather tight <i>Roofs appear deficient, have positive drainage, and are not weather tight.</i>	15	4
2.3	Foundations are strong and stable with no observable cracks <i>Foundations are strong and stable with no significant cracks.</i>	10	8
2.4	Exterior and interior walls have sufficient expansion joints and are free of deterioration <i>Exterior walls have insufficient expansion joints and deterioration is evident. Interior walls have sufficient expansion joints and are free of significant deterioration.</i>	10	5
2.5	Entrances and exits are located so as to permit efficient student traffic flow <i>Entrances and exits are located so as to permit efficient student traffic flow. The corridors are undersized for the population of the school and per the design manual.</i>	10	6
2.6	Building "envelope" generally provides for energy conservation (see criteria) <i>Building "envelope" does not meet current ASHREA standards for energy conservation.</i>	10	4
2.7	Structure is free of friable asbestos and toxic materials <i>Structure is reportedly free of friable asbestos and toxic materials.</i>	10	9
2.8	Interior walls permit sufficient flexibility for a variety of class sizes <i>Interior walls do not permit sufficient flexibility for a variety of class sizes.</i>	10	5
Mechanical/Electrical		Points Allocated	Points
2.9	Adequate light sources are well maintained, and properly placed and are not subject to overheating <i>The lighting sources are well maintained, properly placed and are not subject to overheating; but should be replaced due to age and the requirement of the OSDM.</i>	15	9
2.10	Internal water supply is adequate with sufficient pressure to meet health and safety requirements <i>Provide a reduced pressure backflow preventer on the incoming supply, as well as future automated fire suppression system. Funding provided in Item U. The existing domestic water service does meet the facility's current needs. The system does not provide adequate flow capacity for the future needs of the school.</i>	15	15
2.11	Each teaching/learning area has adequate convenient wall outlets , phone and computer cabling for technology applications <i>Each teaching / learning area has adequate convinient wall outlets, phones and computer cabling for technology applications, but not neccessarily for all the requirements and specifications of the OSDM</i>	15	9

2.12	Electrical controls are safely protected with disconnect switches easily accessible <i>Electrical controls are safely protected with disconnect switches or over current devices and easily accessible, but due to age of the equipment should be replaced.</i>	10	6
2.13	Drinking fountains are adequate in number and placement, and are properly maintained including provisions for the disabled <i>Electric water coolers do not meet ADA requirements.</i>	10	10
2.14	Number and size of restrooms meet requirements <i>The quantity of restrooms provided is adequate for the population served.</i>	10	8
2.15	Drainage systems are properly maintained and meet requirements <i>The waste piping in the overall facility is cast iron, was installed in 1971. Replace sanitary waste piping in the overall facility due to the age of drainage piping.</i>	10	10
2.16	Fire alarms, smoke detectors, and sprinkler systems are properly maintained and meet requirements <i>Fire alarms, smoke detectors, etc. are properly maintained, but does not meet all requirements of the OSDM. There is not a sprinkler system in the facility.</i>	10	4
2.17	Intercommunication system consists of a central unit that allows dependable two-way communication between the office and instructional areas <i>Intercommunication system consist of a central unit that allows dependable two-way communication between the office and instructional areas, but due to age does not meet all requirements of the OSDM.</i>	10	6
2.18	Exterior water supply is sufficient and available for normal usage <i>The facility is not equipped with an automated fire suppression system, and the existing water supply will not provide adequate support for a future system.</i>	5	5
TOTAL - Structural and Mechanical Features		200	127

[Back to Assessment Summary](#)

3.0 Plant Maintainability

School Facility Appraisal

		Points Allocated	Points
3.1	Windows, doors, and walls are of material and finish requiring minimum maintenance <i>Windows, doors, and walls are of an age that material and finishes are requiring maintenance.</i>	15	8
3.2	Floor surfaces throughout the building require minimum care <i>Floor surfaces throughout the building require continued care.</i>	15	5
3.3	Ceilings and walls throughout the building, including service areas, are easily cleaned and resistant to stain <i>Ceilings and walls throughout the building, including service areas, are not easily cleaned and are not resistant to stain.</i>	10	4
3.4	Built-in equipment is designed and constructed for ease of maintenance <i>Built-in equipment is not designed and constructed for ease of maintenance.</i>	10	5
3.5	Finishes and hardware , with compatible keying system, are of durable quality <i>Finishes and hardware, with generally compatible with district-wide keying system, are of durable quality.</i>	10	5
3.6	Restroom fixtures are wall mounted and of quality finish <i>Some restroom fixtures are wall mounted and of quality finish, but not water efficient.</i>	10	5
3.7	Adequate custodial storage space with water and drain is accessible throughout the building <i>Adequate custodial storage space with water and drain is accessible throughout the building.</i>	10	8
3.8	Adequate electrical outlets and power , to permit routine cleaning, are available in every area <i>Adequate electrical outlets and power to permit routine cleaning are available in nearly every area except not GFI protected in some required areas.</i>	10	6
3.9	Outdoor light fixtures, electrical outlets , equipment, and other fixtures are accessible for repair and replacement <i>Outdoor light fixtures, equipment and other fixtures are accessible for repair and replacement. Outdoor electrical outlets are not protected by GFI outlets or circuit breakers.</i>	10	8
TOTAL - Plant Maintainability		100	54

[Back to Assessment Summary](#)

4.0 Building Safety and Security

School Facility Appraisal

Site Safety	Points Allocated	Points
<p>4.1 Student loading areas are segregated from other vehicular traffic and pedestrian walkways</p> <p><i>Student loading areas are not well segregated from other vehicular traffic and pedestrian walkways.</i></p>	15	7
<p>4.2 Walkways, both on and offsite, are available for safety of pedestrians</p> <p><i>Walkways, on site, but not offsite, are available for safety of pedestrians</i></p>	10	4
<p>4.3 Access streets have sufficient signals and signs to permit safe entrance to and exit from school area</p> <p><i>Access streets have sufficient signs to permit safe entrance to and exit from school area.</i></p>	5	3
<p>4.4 Vehicular entrances and exits permit safe traffic flow</p> <p><i>Vehicular entrances and exits permit reasonably safe traffic flow.</i></p>	5	3
<p>4.5 ES Playground equipment is free from hazard</p> <p>MS Location and types of intramural equipment are free from hazard</p> <p>HS Athletic field equipment is properly located and is free from hazard</p> <p><i>There are no dedicated intermural facilities. The site is shared with the high school which features adequate facilities.</i></p>	5	3

Building Safety	Points Allocated	Points
<p>4.6 The heating unit(s) is located away from student occupied areas</p> <p><i>Heating units are away from students.</i></p>	20	18
<p>4.7 Multi-story buildings have at least two stairways for student egress</p> <p><i>This multi-story building has at least two stairways for student egress.</i></p>	15	12
<p>4.8 Exterior doors open outward and are equipped with panic hardware</p> <p><i>Exterior doors open outward and are equipped with panic hardware.</i></p>	10	7
<p>4.9 Emergency lighting is provided throughout the entire building with exit signs on separate electrical circuits</p> <p><i>Emergency lighting is provided throughout the entire building with exit signs on separate electrical circuits from the emergency panel.</i></p>	10	8
<p>4.10 Classroom doors are recessed and open outward</p> <p><i>Some classroom doors are recessed and all open outward. ADA hardware is not provided.</i></p>	10	6
<p>4.11 Building security systems are provided to assure uninterrupted operation of the educational program</p> <p><i>Building security system are provided to assure uninterrupted operation of the education program in this facility.</i></p>	10	8

4.12	Flooring (including ramps and stairways) is maintained in a non-slip condition <i>Flooring (including ramps and stairways) is maintained in a non-slip condition.</i>	5	4
4.13	Stair risers (interior and exterior) do not exceed 6 1/2 inches and range in number from 3 - 16 <i>Stair risers (interior and exterior) do not exceed 6 1/2 inches and range in number from 3 - 16 per OBC.</i>	5	4
4.14	Glass is properly located and protected with wire or safety material to prevent accidental student injury <i>Some glass is properly located and protected with wire or safety material to prevent accidental student injury.</i>	5	3
4.15	Fixed Projections in the traffic areas do not extend more than eight inches from the corridor wall <i>Fixed Projections in the traffic areas do not extend more than eight inches from the corridor wall.</i>	5	4
4.16	Traffic areas terminate at an exit or a stairway leading to an egress <i>Traffic areas terminate at an exit or a stairway leading to an egress.</i>	5	4

Emergency Safety	Points Allocated	Points	
4.17	Adequate fire safety equipment is properly located <i>Adequate fire safety equipment is properly located.</i>	15	13
4.18	There are at least two independent exits from any point in the building <i>There are at least two independent exits from any point in the building.</i>	15	14
4.19	Fire-resistant materials are used throughout the structure <i>Fire-resistant materials are not used throughout the structure.</i>	15	10
4.20	Automatic and manual emergency alarm system with a distinctive sound and flashing light is provided <i>Automatic and manual emergency alarm system with a distinctive sound and flashing strobe lights is provided.</i>	15	12
TOTAL - Building Safety and Security		200	147

[Back to Assessment Summary](#)

5.0 Educational Adequacy

School Facility Appraisal

Academic Learning Space		Points Allocated	Points
5.1	<p>Size of academic learning areas meets desirable standards</p> <p><i>Size of academic learning areas does not meet desirable standards for most classrooms.</i></p>	25	15
5.2	<p>Classroom space permits arrangements for small group activity</p> <p><i>Due to being undersized, classroom spaces do not permit arrangements for small group activity.</i></p>	15	10
5.3	<p>Location of academic learning areas is near related educational activities and away from disruptive noise</p> <p><i>Location of academic learning areas is near related educational activities and not away from disruptive noise.</i></p>	10	5
5.4	<p>Personal space in the classroom away from group instruction allows privacy time for individual students</p> <p><i>Due to size of the classrooms, personal space is not well accommodated.</i></p>	10	6
5.5	<p>Storage for student materials is adequate</p> <p><i>Storage for student materials is not adequate. Lockers are in poor condition and corridors are too narrow for the double loaded configuration.</i></p>	10	5
5.6	<p>Storage for teacher materials is adequate</p> <p><i>Storage for teacher materials is not adequate.</i></p>	10	5

Special Learning Space		Points Allocated	Points
5.7	<p>Size of special learning area(s) meets standards</p> <p><i>Size of special learning areas are undersized and do not meet standards.</i></p>	15	7
5.8	<p>Design of specialized learning area(s) is compatible with instructional need</p> <p><i>Design of specialized learning areas are too small to be compatible with instructional needs.</i></p>	10	5
5.9	<p>Library/Resource/Media Center provides appropriate and attractive space</p> <p><i>Library/Resource/Media Center provides appropriate and attractive space. It is not acoustically separated from the circulation spaces.</i></p>	10	4
5.10	<p>Gymnasium (or covered P.E. area) adequately serves physical education instruction</p> <p><i>Gymnasium adequately serves physical education instruction.</i></p>	5	4
5.11	<p>ES Pre-kindergarten and kindergarten space is appropriate for age of students and nature of instruction</p> <p>MS/HS Science program is provided sufficient space and equipment</p> <p><i>Science program is not provided sufficient space, casework, or equipment.</i></p>	10	5

5.12	Music Program is provided adequate sound treated space <i>Music Program is provided adequate sound treated spaces.</i>	5	5
5.13	Space for art is appropriate for special instruction, supplies, and equipment <i>Space for art is appropriate for special instruction, supplies, and equipment.</i>	5	4

School Facility Appraisal

		Points Allocated	Points
5.14	Space for technology education permits use of state-of-the-art equipment <i>Space for technology education permits use of state-of-the-art equipment.</i>	5	4
5.15	Space for small groups and remedial instruction is provided adjacent to classrooms <i>Space for small groups and remedial instruction is provided adjacent to classrooms.</i>	5	4
5.16	Storage for student and teacher material is adequate <i>Storage for student and teacher material is adequate.</i>	5	4

Support Space

		Points Allocated	Points
5.17	Teacher's lounge and work areas reflect teachers as professionals <i>Teacher's lounge and work areas reflect teachers as professionals.</i>	10	7
5.18	Cafeteria/Kitchen is attractive with sufficient space for seating/dining, delivery, storage, and food preparation <i>The Cafeteria is a through way from academic spaces to athletic zones. The Kitchen is undersized.</i>	10	5
5.19	Administrative offices provided are consistent in appearance and function with the maturity of the students served <i>Administrative offices provided are consistent in appearance and function with the maturity of the students served. The administrative offices are not within visual control of the building entry.</i>	5	3
5.20	Counselor's office insures privacy and sufficient storage <i>Counselor's office insures privacy with sufficient storage.</i>	5	5
5.21	Clinic is near administrative offices and is equipped to meet requirements <i>Clinic is near administrative offices and is equipped to meet requirements. The toilet room is not ADA accessible.</i>	5	4
5.22	Suitable reception space is available for students, teachers, and visitors <i>Suitable reception space is not available for students, teachers, and visitors.</i>	5	3
5.23	Administrative personnel are provided sufficient work space and privacy <i>Administrative personnel are provided sufficient work space but not privacy.</i>	5	3

TOTAL - Educational Adequacy

200

122

[Back to Assessment Summary](#)

6.0 Environment for Education

School Facility Appraisal

Exterior Environment		Points Allocated	Points
6.1	Overall design is aesthetically pleasing to age of students <i>The overall building aesthetic is softened and enhanced by abundant trees and shrubs.</i>	15	7
6.2	Site and building are well landscaped <i>The site and building are well landscaped.</i>	10	9
6.3	Exterior noise and poor environment do not disrupt learning <i>The site is in a suburban residential neighborhood free from exterior distractions.</i>	10	9
6.4	Entrances and walkways are sheltered from sun and inclement weather <i>Shelter from weather is not provided.</i>	10	0
6.5	Building materials provide attractive color and texture <i>The exterior color palette is enhanced by trees and shrubs.</i>	5	1

Interior Environment		Points Allocated	Points
6.6	Color schemes, building materials, and decor provide an impetus to learning <i>The interior color scheme is dark and dated.</i>	20	10
6.7	Year around comfortable temperature and humidity are provided throughout the building <i>The building is air conditioned, though heating and cooling are inconsistent throughout the building.</i>	15	8
6.8	Ventilating system provides adequate quiet circulation of clean air and meets 15cfm VBC requirement <i>Ventilation does not meet proper air exchange requirements.</i>	15	5
6.9	Lighting system provides proper intensity, diffusion, and distribution of illumination <i>The lighting system provides proper intensity, diffusion and distribution of illumination for the facility.</i>	15	12
6.10	Drinking fountains and restroom facilities are conveniently located <i>Restrooms are remotely located from learning areas.</i>	15	10
6.11	Communication among students is enhanced by commons area(s) for socialization <i>Many areas are available for student interaction.</i>	10	8
6.12	Traffic flow is aided by appropriate foyers and corridors	10	2

Corridors are 40% below design manual standards for double loaded locker configurations.

6.13	Areas for students to interact are suitable to the age group <i>Areas for student interaction are appropriate.</i>	10	8
6.14	Large group areas are designed for effective management of students <i>Large group areas help ease traffic flow concerns.</i>	10	7
6.15	Acoustical treatment of ceilings, walls, and floors provides effective sound control <i>The building is not acoustically well separated.</i>	10	5
6.16	Window design contributes to a pleasant environment <i>Most classrooms do not have windows.</i>	10	2
6.17	Furniture and equipment provide a pleasing atmosphere <i>The furniture is mismatched and several pieces are in need of repair. Overall, the units are lacking from design manual standards.</i>	10	4
<hr/> TOTAL - Environment for Education		200	107

[Back to Assessment Summary](#)

LEED Observation Notes

School District: Willoughby-Eastlake City SD
County: Lake
School District IRN: 45104
Building: Willoughby Middle
Building IRN: 41509

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)

Construction activity pollution prevention can be successfully managed on this site. The site and building are not known to contain hazardous materials. The site is not known to be prime agricultural farmland, within a flood plain, habitat for an endangered species, within or near a wetland, or near a previously undeveloped body of water. The site is not within a community having a density of more than 60,000 square feet per acre. The site is not located on a previously developed site within 1/2 mile of a residential area with density of more than 10 units per acre. The site is not located within 1/2 mile of 10 basic services. The site has some pedestrian access between the schools and residential areas. The site is not a brownfield. The site is not located within 1/4 mile walking of a bus stop or 1/2 mile walking of a rail station. School busses do not have a dedicated lane on site. The site does not have sufficient bicycle storage or changing facilities. The site does not have sufficient parking capacity for fuel efficient or low emitting vehicles. The site meets exceeds current OSDM parking requirements. The site does have sufficient area to restore 50% to a natural state. The site has have more than 20% vegetative spaces. Storm water management and detention is mitigated through catch basins and swales. The hard surfaces of the site do not meet the high albedo reflectance requirements to mitigate heat island effect. The roof material does not meet the high albedo reflectance requirement to mitigate heat island effect. The site does not create light pollution. The site has sufficient area to create a master plan with stormwater management, open space, parking capacity, and heat island non-roof. The property is used by the community during or after hours.

characters remaining in Sustainable Sites.

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)

The building plumbing fixtures are not water conserving models. A baseline water consumption report is required for water efficiency LEED credits. The site does not irrigate. Recommendations in items E, Q and R enhance water use reduction targets.

characters remaining in Water Efficiency.

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)

An energy audit or fundamental commissioning of the system is required for a baseline for any energy optimization measures. The system does contain any equipment with the potential for CFCs and HCFCs. The building does not comply with current ASHRAE envelop standards. The system does not comply with current energy consumption requirements. Renewable energy appliances are not present on the site. The property does have sufficient area for wind turbines. The building does have sufficient roof area for solar panels. The building does not have a measurement and verification plan in place. The building does not purchase green power

characters remaining in Energy & Atmosphere.

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)

The building does have an area for the collection of recyclables, excluding yard waste. The building shell is viable for renovation. The interior partitions are not viable for renovation. The classrooms do not meet OSDM standards. No comments relating to construction credits for recycled content, regional products, rapidly renewable materials, or certified wood are included.

characters remaining in Material & Resources.

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 building does not meet the ASHRAE standards for indoor air quality. Smoking is not on site. The building does not have adequate acoustical separation of spaces. Outdoor air monitoring is not provided. Fresh air intake is through windows and central air units. The building ventilation is inadequate. Refer to items A and C for additional information. Indoor chemical and pollution is not controlled. Individual controls for thermal comfort and lighting levels are not provided. The building does not meet ASHRAE standards for thermal comfort levels. The building does not have a thermal comfort verification plan in place. The building does not have sufficient daylight to meet the 35 foot candle LEED requirement for most classrooms and other occupied spaces. The building does not have a system in place for mold prevention.

characters remaining in Indoor Environmental Quality.

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)

The school is within the region CGB271 Urban-Rural which capitalizes on credits pertaining to site storm water management quality and quantity, wastewater innovation, renewable energy, construction waste management, and rapidly renewable materials.

characters remaining in Innovation & Design Process.

Justification for Allocation of Points

Building Name and Level: **Willoughby Middle**

6-8

Building features that clearly exceed criteria:

1. The building has two Gymnasium spaces.
2. The site is a pleasantly sloped campus shared with South High School.
3. The Media Center has natural light from a clearstory system.
4. Many spaces are available for students to congregate.
5. The Student Dining space has original parquet floor pattern.
6. The building is primarily carpeted throughout to minimize noise.

Building features that are non-existent or very inadequate:

1. The primary Gymnasium is undersized.
2. Most classrooms do not have natural light.
3. The building is not handicap accessible.
4. Wayfinding in the building is awkward.
5. The roof is original to the building and reported to leak.
6. Corridors are narrow and do not allow for safe traffic flow of students.

[Back to Assessment Summary](#)

Environmental Hazards Assessment Cost Estimates

Owner:	Willoughby-Eastlake City SD
Facility:	Willoughby Middle
Date of Initial Assessment:	Mar 16, 2010
Date of Assessment Update:	Jun 23, 2010
Cost Set:	2010

District IRN:	45104
Building IRN:	41509
Firm:	The Collaborative, Inc.

Scope remains unchanged after cost updates.

Building Addition	Addition Area (sf)	Total of Environmental Hazards Assessment Cost Estimates	
		Renovation	Demolition
1971 1971 Original	90,580	\$0.00	\$0.00
Total	90,580	\$0.00	\$0.00
Total with Regional Cost Factor (104.16%)	<	\$0.00	\$0.00
Regional Total with Soft Costs & Contingency	<	\$0.00	\$0.00

Building Summary - Willoughby Middle (41509)

District: Willoughby-Eastlake City SD				County: Lake		Area: Northeastern Ohio (8)	
Name: Willoughby Middle				Contact: Mr. Lawrence Keller			
Address: 36901 Ridge Rd Willoughby, OH 44094				Phone: 440/975-3601			
Bldg. IRN: 41509				Date Prepared: 2010-03-16		By: Karen L Walker	
				Date Revised: 2010-06-23		By: Karen L Walker	
Current Grades		6-8	Acreage:		19.60		
Proposed Grades		N/A	Teaching Stations:		42		
Current Enrollment		971	Classrooms:		39		
Projected Enrollment		N/A					
Addition		Date	HA	Number of Floors	Current Square Feet		
1971 Original		1971	no	3	90,580		
Total						90,580	
		*HA	= Handicapped Access				
		*Rating	=1 Satisfactory				
			=2 Needs Repair				
			=3 Needs Replacement				
		*Const P/S	= Present/Scheduled Construction				
FACILITY ASSESSMENT Cost Set: 2010				Rating	Dollar Assessment	C	
A. Heating System				3	\$2,943,850.00	-	
B. Roofing				3	\$895,699.36	-	
C. Ventilation / Air Conditioning				1	\$5,000.00	-	
D. Electrical Systems				3	\$1,568,845.60	-	
E. Plumbing and Fixtures				3	\$1,049,060.00	-	
F. Windows				3	\$134,096.34	-	
G. Structure: Foundation				1	\$0.00	-	
H. Structure: Walls and Chimneys				2	\$352,240.50	-	
I. Structure: Floors and Roofs				2	\$30,000.00	-	
J. General Finishes				3	\$1,427,763.40	-	
K. Interior Lighting				3	\$452,900.00	-	
L. Security Systems				3	\$158,515.00	-	
M. Emergency/Egress Lighting				3	\$90,580.00	-	
N. Fire Alarm				3	\$135,870.00	-	
O. Handicapped Access				3	\$837,058.00	-	
P. Site Condition				2	\$341,436.50	-	
Q. Sewage System				3	\$22,500.00	-	
R. Water Supply				3	\$20,000.00	-	
S. Exterior Doors				3	\$62,000.00	-	
T. Hazardous Material				1	\$0.00	-	
U. Life Safety				3	\$584,385.00	-	
V. Loose Furnishings				2	\$362,320.00	-	
W. Technology				3	\$696,560.20	-	
X. Construction Contingency / Non-Construction Cost				-	\$2,973,333.61	-	
Total					\$15,144,013.51		
CEFPI Appraisal Summary							
Section		Points Possible		Points Earned		Percentage Rating Category	
Cover Sheet							
1.0 The School Site		100		74		74% Satisfactory	
2.0 Structural and Mechanical Features		200		127		64% Borderline	
3.0 Plant Maintainability		100		54		54% Borderline	
4.0 Building Safety and Security		200		147		74% Satisfactory	
5.0 Educational Adequacy		200		122		61% Borderline	
6.0 Environment for Education		200		107		54% Borderline	
LEED Observations							
Commentary							
Total		1000		631		63% Borderline	
Enhanced Environmental Hazards Assessment Cost Estimates							
C=Under Contract							
Renovation Cost Factor						104.16%	
Cost to Renovate (Cost Factor applied)						\$15,774,004.47	
<i>The Replacement Cost Per SF and the Renovate/Replace ratio are only provided when this summary is requested from a Master Plan.</i>							

[Previous Page](#)

Environmental Hazards - Willoughby-Eastlake City SD (45104) - Willoughby Middle (41509) - 1971 Original

Owner: Willoughby-Eastlake City SD
Facility: Willoughby Middle
Date:

Bldg. IRN: 41509
BuildingAdd: 1971 Original
Consultant Name:

A. Asbestos Containing Material (ACM)		AFM=Asbestos Free Material			
ACM Found		Status	Quantity	Unit Cost	Estimated Cost
1.	Boiler/Furnace Insulation Removal	Not Present	0	\$10.00	\$0.00
2.	Breeching Insulation Removal	Not Present	0	\$10.00	\$0.00
3.	Tank Insulation Removal	Not Present	0	\$8.00	\$0.00
4.	Duct Insulation Removal	Not Present	0	\$8.00	\$0.00
5.	Pipe Insulation Removal	Not Present	0	\$10.00	\$0.00
6.	Pipe Fitting Insulation Removal	Not Present	0	\$20.00	\$0.00
7.	Pipe Insulation Removal (Crawlspace/Tunnel)	Not Present	0	\$12.00	\$0.00
8.	Pipe Fitting Insulation Removal (Crawlspace/Tunnel)	Not Present	0	\$30.00	\$0.00
9.	Pipe Insulation Removal (Hidden in Walls/Ceilings)	Not Present	0	\$15.00	\$0.00
10.	Dismantling of Boiler/Furnace/Incinerator	Not Present	0	\$2,000.00	\$0.00
11.	Flexible Duct Connection Removal	Not Present	0	\$100.00	\$0.00
12.	Acoustical Plaster Removal	Not Present	0	\$7.00	\$0.00
13.	Fireproofing Removal	Not Present	0	\$15.00	\$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)	Not Present	0	\$2.00	\$0.00
27.	Window Component (Compound, Tape, or Caulk) - Reno & Demo	Not Present	0	\$300.00	\$0.00
28.	Window Component (Compound, Tape, or Caulk) - Reno Only	Not Present	0	\$300.00	\$0.00
29.	Resilient Flooring Removal, Including Mastic	Not Present	0	\$3.00	\$0.00
30.	Carpet Mastic Removal	Not Present	0	\$2.00	\$0.00
31.	Carpet Removal (over RFC)	Not Present	0	\$1.00	\$0.00
32.	Acoustical Tile Mastic Removal	Not Present	0	\$3.00	\$0.00
33.	Sink Undercoating Removal	Not Present	0	\$100.00	\$0.00
34.	Roofing Removal	Not Present	0	\$2.00	\$0.00
35.	(Sum of Lines 1-34)	Total Asb. Hazard Abatement Cost for Renovation Work			\$0.00
36.	(Sum of Lines 1-27)	Total Asb. Hazard Abatement Cost for Demolition Work			\$0.00

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

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

D. Fluorescent Lamps & Ballasts Recycling/Incineration <input type="checkbox"/> Not Applicable				
Area Of Building Addition	Square Feet w/Fluorescent Lamps & Ballasts	Unit Cost	Total Cost	
1.	90580	\$0.10	\$0.00	

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

F. Environmental Hazards Assessment Cost Estimate Summaries		
1.	A35, B1, C3, D1, and E1	Total Cost for Env. Hazards Work - Renovation
		\$0.00
2.	A36, B1, D1, and E2	Total Cost for Env. Hazards Work - Demolition
		\$0.00

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

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

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

