

# Building Information Report

Report for Location: Williamsburg Middle School

Date Printed: Friday, March 10, 2006

Project: Arlington Public Schools

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Building Name: Williamsburg Middle School  
Building Type: Secondary  
Address: 3600 N. Harrison Street  
Arlington VA 22207

Contact Name: Kathleen Francis  
Contact Phone: (703) 228-5450  
Contact Position: Principal

Occupant Response: Interview  
Individual Interviewed: Kathleen Francis, Eileen Wentzel, Tek Chea  
Ind. Interviewed Position: Principal, Asst. Principal, Chief Custodian

Year Construction: 1954, 1991, 2003

Drawing Availability: Fire Escape, Orig Plans

Grade Levels: 6-8

'05-'06 Enrollment: 937 Students

Building Area: 170,865 SF

Number Floors: 2

Sprinklers?: Partial

Replacement Cost: \$210.00 per SF

Total Replace. Cost: \$35,881,650

No. Of Relocatables: 13

## Assessment Costs by Priority:

Immediate	\$184,201
High	\$2,810,803
Medium	\$3,089,565
Low	\$3,104,407

Total Assessed Cost: \$9,188,976

FCI: 0.26

## Descriptive Comments

The property has one permanent building containing a total of 170,865 square feet. The building is a one and two-story structure. The total site area is approximately 26.6 Acres. The school was constructed in phases. The original building was completed in 1954 and received its last major renovations in 1991, and an addition in 2002. The building is constructed with reinforced concrete interior and exterior columns with masonry load bearing and non-load bearing walls. The upper floor is constructed with cast-in-place concrete joist slabs. The roof system is framed with open-web joists and wood fiber cement boards, with a BUR covering system. Exterior walls are faced with brick and an exterior insulation and finish system (EIFS). Exterior entrance doors are a mix of painted solid-core wood, hollow metal with a vision panel, and aluminum with a glass panel set in metal frames. Service doors are typically hollow metal with a painted finish. Windows are aluminum framed, double-glazed awning units, part of a ribbon window system.

The electrical service is 2,000 amps, 120/208 volt, three phase, four wire, alternating current. The electrical meter is located in the electrical room, and circuit breaker panels are located in each building wing. There is a diesel powered emergency generator located on the west side of the building. The generator provides power for fire protection systems, emergency lighting and security systems. The fuel tank is located above ground under the generator. Interior lighting is provided by pendant or flush mounted fluorescent fixtures.

Building plumbing supply and distribution piping are steel and copper. The water meter is located in an exterior vault. Sanitary piping within the building is cast iron. There is a sump pump in the boiler room. Domestic hot water is provided by a gas-fired water heater.

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Heating and cooling are provided by a four-pipe HW/CHW system serving air handling units and unit ventilators. Gas-fired boilers were installed in 1990. Chilled water is provided by two air-cooled chillers also installed in 1990. Additionally, there are several split system remote condensers located on the roof, which serve air handlers.

#### Requested Space Considerations

Construct new Art Space - undersized. Recommended 1,200 SF of additional space at an estimated cost of \$267,264. Request by school reviewed and in agreement with Space Analysis.

Reconfigure Administrative Space. Recommended reconfiguration of 4,500 SF at an estimated cost of \$600,975. Request by school subject to review by APS.

# Assessment Report

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## Williamsburg Middle School

### B20 Exterior Enclosure

CorrectionName	Subsystem Name	AreaName	Correction Notes	Reason	Priority	Category	UnitCost	Quantity	UOM	Cost
B2010-00-12C Correct Deteriorated Exterior Insulated Finish System by Selective Demo, Repair and Recoat	B2010 Exterior Walls	Building Wide	Replace portions damaged by birds and recoat all with reinforces EIFS coating system	Functionality	High	Def Maint	\$5.22	50000	BLDG SF	\$251,100
B2010-00-1C Correct Deteriorated Exterior Wall Masonry Construction by Selective Demo & Repair (Low)	B2010 Exterior Walls	Building Wide	A minimum portion of brick walls must be replaced, but 10% to 20 % of mortar joints must be repointed and a majority of caulking must be replaced	Damage/Wear	Medium	Def Maint	\$0.49	50000	BLDG SF	\$24,500
B2010-00-3C Correct Deteriorated Exterior Wall Masonry Construction by Selective Demo & Replace (High)	B2010 Exterior Walls	Building Wide	Rebuild portion of chimney exposed above roof including coping	Damage/Wear	High	Def Maint	\$0.98	1500	BLDG SF	\$1,470
B2030-00-13C Correct Non-existent Automatically Operating Doors for Accessibility by Demo Existing Doors and Install New	B2030 Exterior Doors	Building Wide		Enh Access	Low	Ed Adeq- Infra	\$8,673.97	4	EACH	\$34,696
B2030-00-2C Correct Deteriorated Ext Metal/Wood/Plastic Lam/Fibergis Door by Selective Demo & Replace (Median)	B2030 Exterior Doors	Building Wide	Replace exterior wood doors with hollow metal units	Damage/Wear	High	Def Maint	\$1.64	120000	BLDG SF	\$196,560
<b>Total Cost for B20 Exterior Enclosure</b>										<b>\$518,326</b>

### B30 Roofing

CorrectionName	Subsystem Name	AreaName	Correction Notes	Reason	Priority	Category	UnitCost	Quantity	UOM	Cost
B3010-00-2C Correct Deteriorated BUR or Shingle Roof by Demo & Replace (Median)	B3010 Roof Coverings	Building Wide	Built up roof of original building	Damage/Wear	Medium	Def Maint	\$2.91	90000	BLDG SF	\$262,080
B3013-00-1C Correct Inadequate Roof Pitch by Installing Insulation	B3013 Roof Insulation	Building Wide	Combine with roof replacement	Energy Conservation	Medium	Def Maint	\$3.89	90000	BLDG SF	\$350,280
B3040-00-2C Correct Deteriorated Base Flashing by Demo and Replace (Median)	B3040 Roof Base Flashing	Building Wide	Replace with roofing of original building	Damage/Wear	Medium	Def Maint	\$0.10	90000	BLDG SF	\$9,820
<b>Total Cost for B30 Roofing</b>										<b>\$621,180</b>

Priority Definitions: Immediate: Work to be performed as soon as possible  
 High: Work to be performed within 2 years  
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C10 Interior Construction

CorrectionName	Subsystem Name	AreaName	Correction Notes	Reason	Priority	Category	UnitCost	Quantity	UOM	Cost
C1011-00-1C Correct Deteriorated Operable Partitions by Demo and Replace	C1011 Operable Partitions	Building Wide	Replace deteriorated partitions with permanent, fixed partitions	Environmental Improvements	High	Ed Adbq-Infra	\$3.53	50000	BLDG SF	\$176,400
C1020-00-1C Correct Deteriorated Interior Doors by Selective Demo & Repair (Low)	C1020 Interior Door	Building Wide	Deteriorated finish and damaged veneers on wood doors	Damage/Wear	Medium	Def Maint	\$0.71	50000	BLDG SF	\$35,700
C1030-00-1C Correct Non Compliant Hand Rails by Demo and Replace	C1030 Fittings	Building Wide		ADA	Low	Def Maint	\$1.99	25000	BLDG SF	\$49,700
<b>Total Cost for C10 Interior Construction</b>										<b>\$261,800</b>

C30 Interior Finishes

CorrectionName	Subsystem Name	AreaName	Correction Notes	Reason	Priority	Category	UnitCost	Quantity	UOM	Cost
C3010-00-1C Correct Deteriorated Wall Finish by Repair or Refinish (Low)	C3010 Wall Finishes	Building Wide	Repaint interior with other renovations	Aesthetics	Medium	Def Maint	\$0.34	100000	BLDG SF	\$33,600
C3020-00-1C Correct Deteriorated Resilient Flooring or Carpet by Demo & Replace	C3020 Floor Finishes	Building Wide	Replace as wear requires	Aesthetics	Low	Def Maint	\$3.23	50000	BLDG SF	\$161,700
C3030-00-1C Correct Deteriorated Suspended Acoustical Ceiling by Demo & Replace	C3030 Ceiling Finishes	Building Wide	Replace water damaged tile	Aesthetics	High	Def Maint	\$2.41	20000	BLDG SF	\$48,160
C3030-00-1C Correct Deteriorated Suspended Acoustical Ceiling by Demo & Replace	C3030 Ceiling Finishes	Building Wide	Required at time of sprinkler installation	Life Safety	Low	Def Maint	\$2.41	140000	BLDG SF	\$337,120
<b>Total Cost for C30 Interior Finishes</b>										<b>\$580,580</b>

D30 HVAC

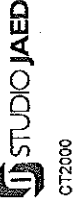
CorrectionName	Subsystem Name	AreaName	Correction Notes	Reason	Priority	Category	UnitCost	Quantity	UOM	Cost
D3020-00-1C Correct Deteriorated Heat Generating System by Demo & Replace (Low)	D3020 Heat Generation	Boiler Room	New boilers	Damage/Wear	Low	Def Maint	\$0.98	170856	BLDG SF	\$167,439
D3030-00-1C Correct Deteriorated Cooling Generating System by Demo & Replace (Low)	D3030 Refrigeration	Boiler Room	Replace two air cooled chillers and pumps to serve all areas of the building except for library, new addition, gym, auditorium, stage, and administration areas	Damage/Wear	Immediate	Def Maint	\$1.40	131572	BLDG SF	\$184,201

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CorrectionName	Subsystem Name	AreaName	Reason	Priority	Category	UnitCost	Quantity	UOM	Cost
D3030-00-1C Correct Deteriorated Cooling Generating System by Demo & Replace (Low)	D3030 Refrigeration	Building Wide	two condensing units serving two separate gym units (30 ton each) two cu serving one ahn for auditorium (2 evap coils) 30 tons each one cu 15 ton serving auditorium stage ahn	High	Def Maint	\$1.40	7000	BLDG SF	\$9,800
D3040-00-2C Correct Deteriorated HVAC Distribution System by Demo & Replace (Median)	D3040 HVAC Distribution	Building Wide	Replaces hot water distribution piping and pumps throughout school. Does not include new addition area.	Medium	Def Maint	\$3.92	157551	BLDG SF	\$617,600
D3060-00-2C Correct Deteriorated Controls & Instrumentation System by Demo & Replace (Median)	D3060 HVAC Instrumentation & Controls	Building Wide	The control system throughout the building, including the newer system(s) in the new addition area reported as not functioning properly. The existing, original pneumatic system, while somewhat updated, is beyond it's useful life. The entire system should be replaced.	High	Def Maint	\$6.08	170856	BLDG SF	\$1,038,121
D3090-00-1C Correct Deteriorated or Inadequate Dust Collector by Demo & Replace	D3090 Other Special HVAC Systems & Equipment	Other	Functionality	High	Def Maint	\$19,338.90	1	EACH	\$19,339

Total Cost for D30 HVAC \$2,036,500

D40 Fire Protection

CorrectionName	Subsystem Name	AreaName	Reason	Priority	Category	UnitCost	Quantity	UOM	Cost
D4010-00-2C Correct Non Existing Sprinkler System by New Installation	D4010 Sprinklers	Building Wide	Life Safety	Low	Def Maint	\$6.96	162949	BLDG SF	\$1,460,023

Total Cost for D40 Fire Protection \$1,460,023

D50 Electrical

CorrectionName	Subsystem Name	AreaName	Reason	Priority	Category	UnitCost	Quantity	UOM	Cost
D5010-00-2C Correct Deteriorated or Inadequate Building Electrical System by Demo & Replace (Median)	D5010 Electrical Service & Distribution	Building Wide	Functionality	Medium	Ed Adeq-Infra	\$8.65	85428	BLDG SF	\$739,123
D5010-00-9C Correct Inadequate Power Outlets by Add New (High)	D5010 Electrical Service & Distribution	Building Wide	Functionality	Medium	Ed Adeq-Infra	\$0.63	170856	BLDG SF	\$107,639
D5020-00-3C Correct Deteriorated or Inadequate Interior Lighting by Demo & Replace (High)	D5020 Lighting & Branch Wiring	Auditorium	Functionality	High	Def Maint	\$3.02	170856	BLDG SF	\$516,659

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CorrectionName	Subsystem Name	AreaName	Correction Notes	Reason	Priority	Category	UnitCost	Quantity	UOM	Cost
D5031-00-3C Correct Deteriorated or Inadequate Security System by Demo & Replace (High)	D5031 Security Access & Surveillance	Building Wide	For additional security the school administration would like a CCTV system installed	Life Safety	Medium	Ed Adeq-Infra	\$0.38	170856	BLDG SF	\$64,584
D5032-00-3C Correct Deteriorated or Inadequate Clock System by Demo & Replace (High)	D5032 Clock & Program Systems	Building Wide	Replace existing clocks with new atomic clock system with wireless transmitter to portable classrooms. This does not include the portable classrooms.	Functionality	High	Def Maint	\$1.22	170856	BLDG SF	\$208,103
D5033-00-3C Correct Deteriorated or Inadequate Intercom System by Demo & Replace (High)	D5033 Intercom Systems	Building Wide	The existing system is beyond its useful life and should be replaced	Functionality	Medium	Def Maint	\$0.39	170856	BLDG SF	\$66,976
D5036-00-3C Correct Deteriorated or Inadequate Technology System by Demo & Replace (High)	D5036 Technology System	Building Wide	This is to upgrade the classroom technology outlets to at least three outlets per classroom as well as install wireless network access throughout the school.	Functionality	Medium	Ed Adeq-Infra	\$0.94	170856	BLDG SF	\$160,263

Total Cost for D50 Electrical \$1,863,356

E10 Equipment

CorrectionName	Subsystem Name	AreaName	Reason	Priority	Category	UnitCost	Quantity	UOM	Cost
E1020-00-20C Correct Inadequate Signage to Mark Accessibility by Install New	E1020 Institutional Equipment	Building Wide	ADA	Medium	Ed Adeq-Infra	\$0.34	120000	BLDG SF	\$40,320

Total Cost for E10 Equipment \$40,320

E20 Furnishings

CorrectionName	Subsystem Name	AreaName	Reason	Priority	Category	UnitCost	Quantity	UOM	Cost
E2010-00-3C Correct Deteriorated or Inadequate Toilet Compartments & Accessories by Demo & Replace	E2010 Fixed Furnishings	Building Wide	Functionality	Medium	Def Maint	\$0.97	50000	BLDG SF	\$48,300
E2010-00-7C Correct Deteriorated or Inadequate Casework & Cabinetry by Repair & Refinish (Low)	E2010 Fixed Furnishings	Building Wide	Damage/Wear	Low	Def Maint	\$0.48	30000	BLDG SF	\$14,280
E2010-00-8C Correct Deteriorated or Inadequate Casework & Cabinetry by Demo & Replace (High)	E2010 Fixed Furnishings	Building Wide	Damage/Wear	Low	Def Maint	\$3.79	30000	BLDG SF	\$113,820
E2010-00-9C Correct Deteriorated or Inadequate Auditorium Seating by Demo & Replace	E2010 Fixed Furnishings	Building Wide	Damage/Wear	Medium	Def Maint	\$2.95	170856	BLDG SF	\$504,709

Total Cost for E20 Furnishings \$681,109

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**G20 Site Improvements**

CorrectionName	Subsystem Name	AreaName	Correction Notes	Reason	Priority	Category	UnitCost	Quantity	UOM	Cost
G2020-00-1C Correct Deteriorated Parking Lot by Patch & Repair (Low)	G2020 Parking Lots	Building Wide	Patch, seal coat and stripe	Damage/Wear	Low	Def Maint	\$10.14	3300	SQYD	\$33,449
G2020-00-5C Correct Insufficient Accessible Parking Spaces by Striping Paving and Installing Signs	G2020 Parking Lots	Building Wide		ADA	Medium	Def Maint	\$13.20	192	EACH	\$2,535
G2030-00-4C Correct Non Existing EXT ADA Ramps by Install New (Low)	G2030 Pedestrian Paving	Building Wide	Add 4 ramps at curbs	ADA	High	Ed Adeq- Infra	\$1.61	170656	BLDG SF	\$275,078
G2030-00-7C Correct Deteriorated Pedestrian Paving by Patch & Repair (Low)	G2030 Pedestrian Paving	Building Wide	Repair sidewalks that have settled	Functionality	High	Def Maint	\$0.64	16000	SOFT	\$10,304
G2041-00-3C Correct Deteriorated Athletic Courts by Refurbish	G2041 Athletic & Recreational Equipment	Building Wide	Tennis courts	Damage/Wear	Medium	Ed Adeq- Infra	\$3,756.20	6	EACH	\$22,537

Total Cost for G20 Site Improvements \$343,903

**G40 Site Electrical Utilities**

CorrectionName	Subsystem Name	AreaName	Correction Notes	Reason	Priority	Category	UnitCost	Quantity	UOM	Cost
G4020-00-1C Correct Deteriorated or Inadequate Pole Lighting by Demo & Replace	G4020 Site Lighting	Other	Pole light adjacent to generator is beginning to lean badly and should be re-installed	Damage/Wear	High	Def Maint	\$1.99	25000	BLDG SF	\$49,700

Total Cost for G40 Site Electrical Utilities \$49,700

**H10 Additional Space Requirements**

CorrectionName	Subsystem Name	AreaName	Correction Notes	Reason	Priority	Category	UnitCost	Quantity	UOM	Cost
H1020-00-5C Correct Non ADA Toilet by Demo & Reconfigure Space	H1020 Space Reconfiguration	Building Wide		ADA	Low	Educ Adeq	\$244.06	3000	BLDG SF	\$732,180

Total Cost for H10 Additional Space Require \$732,180

Total for: Williamsburg Middle School \$9,188,976

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Total Assessment Cost for Selection: \$9,188,976

*Assessment Summary by Priority*

Immediate	\$184,201
High	\$2,810,803
Medium	\$3,089,565
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# Ten Year Life Cycle Cost Report by System

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Task Type: Replacement

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
A10 Foundations										
A20 Basement Construction										
B10 Superstructure										
B20 Exterior Enclosure										
B30 Roofing										
C10 Interior Construction										
C20 Stairs										
C30 Interior Finishes										
D10 Conveying										
D20 Plumbing										
D30 HVAC			\$1,610,176.68		\$687,731.55		\$1,153,261.48			\$90,014.28
D40 Fire Protection			\$1,236,385.67							\$475,789.78
D50 Electrical			\$2,907,353.50		\$1,414,286.66		\$85,317.81			\$327,909.17
E10 Equipment										
E20 Furnishings										
F10 Special Construction										
F20 Selective Demolition										
G10 Site Preparation										
G20 Site Improvements										
G30 Site Civil Mech Utilities										
G40 Site Electrical Utilities										
G90 Other Site Construction										
H10 Additional Space Requirements										
Z10 General Requirements										
<b>TOTALS</b>			\$5,653,915.85		\$2,102,018.22		\$1,238,579.29			\$893,713.24