

## Summary of Findings

The Samuel F. B. Morse ES Facility located at 424 S. Pulaski Street in Baltimore, Maryland, was built in 1979. It comprises 66,966 gross square feet.

The total current deficiencies for this site, in 2011 construction cost dollars, are estimated at \$3,538,424. The 10 Yr Life Cycle Costs are estimated at \$4,354,810. The Ten-Year Repair Cost, calculated by adding the Building Condition Costs and the Ten-Year Life Cycle Renewal Cost is \$7,893,234.

### Facility Condition by Building

Number	Building Name	Gross Sq Ft	Built Date	Facility Condition Cost	Future Life Cycle Cost (Yr 1-10)	Repair Cost	Replacement Cost	Current + 10 Yr LC FCI	Cost Per Square Foot
098	Site Bldg 1	66,966	1979	\$913,840 \$2,624,584	\$324,426 \$4,030,384	\$1,238,266 \$6,654,968	\$14,322,860	46.46%	\$99.38
Totals		66,966		\$3,538,424	\$4,354,810	\$7,893,234	\$14,322,860	55.11%	\$117.87

### Cross Tab of Current Deficiencies

The following chart summarizes the current deficiencies for this site in a cross tab that shows the buildings systems down the left and the priority of the deficiency across the top. This listing includes current deficiencies including deferred maintenance, functional deficiencies, code compliance, Americans with Disabilities Act, and Capital Renewal categories.

### Facility Condition Cost - System by Priority

System	Priority					Total
	1	2	3	4	5	
Site	-	\$1,261	\$155,101	\$125,533	\$99,138	\$381,033
Roofing	-	\$6,567	\$646	-	-	\$7,213
Structural	-	-	-	-	-	\$0
Exterior	-	-	\$37,826	\$2,886	\$25,052	\$65,764
Interior	-	-	\$419,416	\$26,301	\$67,018	\$512,735
Mechanical	-	\$315,809	\$191,771	\$430,031	\$1,100	\$938,711
Electrical	\$4,845	\$104,993	-	-	\$18,351	\$128,189
Plumbing	-	\$1,404	\$10,279	\$187,579	\$35,964	\$235,226
Fire & Life Safety	\$186,412	\$50,619	\$158,390	-	\$98,000	\$493,421
Technology	-	-	\$49,219	\$254,967	\$124,437	\$428,623
Stairs & Elevators	-	\$40,691	-	-	-	\$40,691
Specialties	-	-	-	\$78,658	\$228,160	\$306,818
Total	\$191,257	\$521,344	\$1,022,647	\$1,105,954	\$697,221	\$3,538,424

The deficiencies have been further grouped according to the category of deficiency observed with its priority. ADA Compliance are code related concerns brought about by the Americans with Disabilities Act of 1990, in most cases after the school was constructed. Capital Renewal items include those items that have reached or exceeded their useful life. Code Compliance includes components of the building, other than ADA items, that do not comply with current codes. In many cases these may be 'grandfathered', however will have to be addressed under any major renovation scenarios. Deferred Maintenance includes items that have broken or are in need of repair prior to reaching the end of their useful life, and have not been addressed by the district's maintenance program due to a lack of funding. Educational Adequacy needs are items that are directly related to the instructional environment and support the educational mission at the school including, for instance, instructional aids, technology, supervision and security concerns. The Energy Efficiency category generally includes system wide replacements that are associated with a reduction in energy or water consumption. Furniture, Fixtures, and Equipment include three classifications associated with the district's ongoing program for replacing furniture and moveable equipment that has reached the end of its serviceable life in the custodial, food service, and instructional or administrative areas. A Functional Deficiency is typically one that is presently not in place and is needed at the site or facility.

#### Facility Condition Cost - Category by Priority

Category	Priority					Total
	1	2	3	4	5	
ADA Compliance	-	\$1,261	\$10,753	\$81,723	-	\$93,736
Capital Renewal	\$4,845	\$274,025	\$466,927	\$64,259	-	\$810,056
Code Compliance	\$186,412	-	-	-	\$99,987	\$286,400
Deferred Maintenance	-	\$90,446	\$186,454	\$132,090	\$60,462	\$469,453
Educational Adequacy	-	\$104,993	\$357,377	\$424,906	\$536,772	\$1,424,048
Functional Deficiency	-	\$50,619	\$1,137	\$402,976	-	\$454,731
Total	\$191,257	\$521,344	\$1,022,647	\$1,105,954	\$697,221	\$3,538,424

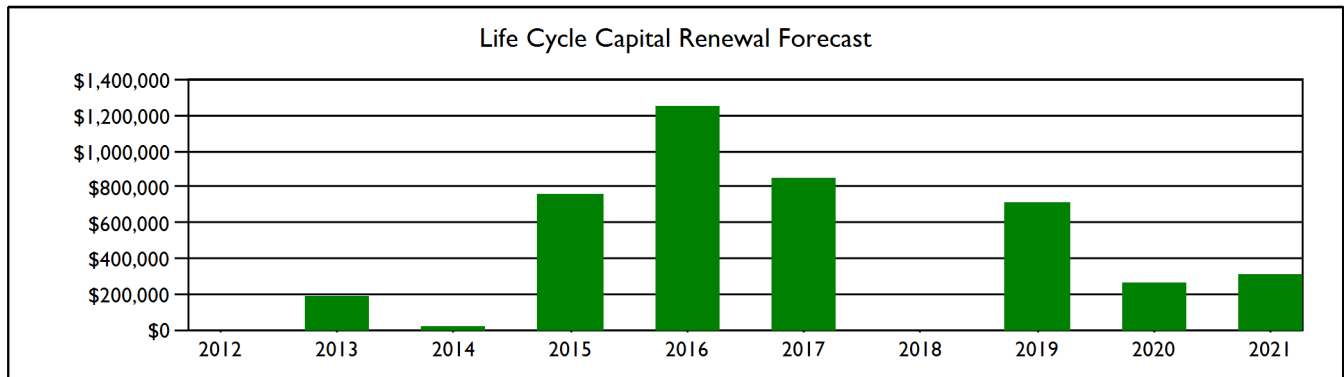
#### Life Cycle Capital Renewal Forecast

As part of the assessment process, this facility was analyzed according to its major building systems. Each system can be distinguished by its type, and each type of system or equipment has an expected serviceable life, at which point the system will in all likelihood require replacement. Life cycle capital renewal forecasts are developed by cataloguing system installation dates and comparing the ages to their expected life to determine the remaining life for that system. The assessment database incorporates a combination of building system data from two sources. The district maintains detailed information about roofing and paving according to the section, and that information was used to construct a life cycle capital renewal forecast for those systems. In cooperation with the State of Maryland, that data has been incorporated into the district's assessment database in order to provide a projection of capital renewal needs for the next ten years.

The following chart shows all current deficiencies and the subsequent ten-year life cycle capital renewal projections for major building systems where a component is expected to reach the end of its useful life and require capital funding for replacement. This chart shows the forecast in thousands (\$000s) for the next ten years.

## Capital Renewal Forecast

System	Life Cycle Capital Renewal Projections											Total	\$/GSF
	Current Deficiencies	Year 1 2012	Year 2 2013	Year 3 2014	Year 4 2015	Year 5 2016	Year 6 2017	Year 7 2018	Year 8 2019	Year 9 2020	Year 10 2021		
Site	381,033	0	0	0	148,969	0	19,174	0	156,283	0	0	\$324,426	\$4.84
Roofing	7,213	0	0	0	0	0	428,250	0	0	0	0	\$428,250	\$6.40
Structural	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0.00
Exterior	65,764	0	0	10,222	0	0	0	0	123,638	0	10,222	\$144,082	\$2.15
Interior	512,735	0	183,393	0	486,898	0	7,707	0	174,562	183,393	0	\$1,035,953	\$15.47
Mechanical	938,711	0	0	0	20,988	100,260	114,480	0	0	85,860	28,620	\$350,208	\$5.23
Electrical	128,189	0	0	0	0	1,149,940	0	0	246,116	0	0	\$1,396,056	\$20.85
Plumbing	235,226	0	0	0	0	0	4,865	0	19,853	0	0	\$24,718	\$0.37
Fire & Life Safety	493,421	0	0	0	102,217	0	0	0	0	0	270,332	\$372,549	\$5.56
Technology	428,623	0	0	0	0	0	0	0	0	0	0	\$0	\$0.00
Stairs & Elevators	40,691	0	0	0	0	0	95,400	0	0	0	0	\$95,400	\$1.42
Specialties	306,818	0	0	0	0	0	183,168	0	0	0	0	\$183,168	\$2.74
Other	0	0	0	0	0	0	0	0	0	0	0	\$0	\$0.00
<b>Total</b>	<b>3,538,424</b>	<b>0</b>	<b>183,393</b>	<b>10,222</b>	<b>759,072</b>	<b>1,250,200</b>	<b>853,044</b>	<b>0</b>	<b>720,452</b>	<b>269,253</b>	<b>309,174</b>	<b>\$4,354,810</b>	<b>\$65.03</b>



Samuel F. B. Morse ES Condition Assessment  
Assessment Findings

Facility Condition Index (FCI)

The Facility Condition Index (FCI) is used throughout the facility condition assessment industry as a general indicator of a building's health. The FCI is calculated by dividing the Ten-Year Repair cost by the Replacement Value. Costs associated with new construction are not included in the FCI calculation. As a rule of thumb, an FCI below 10% is considered good. An FCI above 75% would suggest that the building is a candidate for replacement.

The Samuel F. B. Morse ES facility has an overall FCI of 55.1%

The total current cost for all building deficiencies is \$3,538,424. There are \$913,840 in deficiencies at the site level that are included in the FCI calculation. In addition, the ten year life cycle renewal cost was \$4,354,810. The cost estimates were derived using a detailed listing of all noted deficiencies in the building. The cost to repair these deficiencies was then estimated using the cost data adjusted to Baltimore, Maryland (92.6% of national average).

The Replacement Value represents the estimated cost of replacing the current building with another building of like size, based on today's estimated cost of construction in the Baltimore, Maryland area. The estimated replacement cost for this facility is \$14,322,860.

The following pages provide a listing of all deficiencies and their associated cost for the site and building, followed by photos taken during the assessment.

## Site Level Deficiencies

### Site

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Existing Sidewalk Is Cracked And Poses A Hazard To Accessibility	ADA Compliance	100	SQFT	2	\$1,261	7883
Concrete Walks Are Damaged And Require Replacement	Capital Renewal	1,600	SF	3	\$23,433	7875
K Play Area Requires Replacement	Capital Renewal	1	Ea.	3	\$46,563	7876
Playground Equipment Requires Replacement	Educational Adequacy	1	Ea.	3	\$69,752	7877
Recess playground equipment is not fenced or buffered	Educational Adequacy	1	Ea.	3	\$4,600	497629
<b>Note:</b> Recess playground equipment is not fenced or buffered						
The Playground Impact Surface Does Not Meet ADA Guidelines For Accessible Play Surfaces	ADA Compliance	1,000	SQFT	3	\$10,753	7884
Concrete Paving Is Damaged And Requires Replacement	Capital Renewal	2	CAR	4	\$6,798	7873
Paved Play Requires Recoating And Resurfacing	Deferred Maintenance	3,000	SF	4	\$3,321	7878
The Curb Ramp Does Not Meet Minimum ADA Compliance Requirements	ADA Compliance	4	Ea.	4	\$11,593	7882
The Exterior Signage At The Accessible Parking Area Does Not Meet ADA Requirements	ADA Compliance	2	Ea.	4	\$568	7881
The Van Accessible Parking Spaces Are Not Properly Striped	ADA Compliance	1	Ea.	4	\$646	7879
The Van Accessible Parking Spaces Do Not Meet ADA Requirements	ADA Compliance	1	Ea.	4	\$893	7880
Bollards Are Damaged And Require Replacement	Deferred Maintenance	2	Ea.	5	\$4,692	9939
Paving Requires Restriping	Deferred Maintenance	23	CAR	5	\$867	7874
School lacks appropriate drop-off areas.	Educational Adequacy	1	Ea.	5	\$56,502	497244
<b>Note:</b> School lacks appropriate drop-off areas.						
School lacks marquee or marquee in poor condition.	Educational Adequacy	1	Ea.	5	\$37,078	529251
<b>Note:</b> School lacks marquee or marquee in poor condition.						
<b>Sub Total for System</b>		<b>16</b>	<b>items</b>		<b>\$279,318</b>	

### Interior

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Elementary School lacks appropriate way finding system.	Educational Adequacy	1	Ea.	5	\$29,136	529367
<b>Note:</b> Elementary School lacks appropriate way finding system.						
<b>Sub Total for System</b>		<b>1</b>	<b>items</b>		<b>\$29,136</b>	

### Electrical

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
School site lacks appropriate lighting.	Educational Adequacy	21	Ea.	2	\$104,993	497195
<b>Note:</b> School site lacks appropriate lighting.						
<b>Sub Total for System</b>		<b>1</b>	<b>items</b>		<b>\$104,993</b>	

### Fire & Life Safety

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Building not equipped with Card Key Access Control	Educational Adequacy	6	Ea.	3	\$158,390	497548
<b>Note:</b> Building not equipped with Card Key Access Control						
School lacks appropriate central surveillance equipment.	Educational Adequacy	1	Ea.	5	\$46,047	497052
<b>Note:</b> School lacks appropriate central surveillance equipment.						
School lacks appropriate number of surveillance cameras.	Educational Adequacy	16	Ea.	5	\$51,954	497092
<b>Note:</b> School lacks appropriate number of surveillance cameras.						
<b>Sub Total for System</b>		<b>3</b>	<b>items</b>		<b>\$256,390</b>	

### Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Phone System Is Inadequate And A System Should Be Installed For The Entire School	Educational Adequacy	66,966	SF	4	\$141,814	486248
<b>Note:</b> The Phone System Is Inadequate And A System Should Be Installed For The Entire School						
School lacks appropriate central PA equipment.	Code Compliance	1	Ea.	5	\$99,987	486622
<b>Note:</b> School lacks appropriate central PA equipment.						
<b>Sub Total for System</b>		<b>2</b>	<b>items</b>		<b>\$241,801</b>	

### Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Computer room lacks appropriate furniture.	Educational Adequacy	1	Ea.	5	\$2,201	486556
<b>Note:</b> Computer room lacks appropriate furniture.						
<b>Sub Total for System</b>		<b>1</b>	<b>items</b>		<b>\$2,201</b>	
<b>Sub Total for School and Site Level</b>		<b>24</b>	<b>items</b>		<b>\$913,840</b>	

**Building: 098 - Building 1****Site**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Fencing Is Damaged And Should Be Replaced (8' Chain Link Fence)	Deferred Maintenance	750	LF	4	\$63,301	5428
Gate Is Damaged And Requires Replacement	Deferred Maintenance	4	Ea.	4	\$38,414	5429
<b>Sub Total for System</b>		<b>2</b>	<b>items</b>		<b>\$101,714</b>	

**Roofing**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Re-Seal Metal Roof-To-Wall Flashing At Wall	Deferred Maintenance	1,800	LF	2	\$6,567	5445
Built Up Roofing (Bur) Covering Has Blisters That Should Be Repaired	Deferred Maintenance	4	Ea.	3	\$646	5446
<b>Sub Total for System</b>		<b>2</b>	<b>items</b>		<b>\$7,213</b>	

**Exterior**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Exterior door hardware is damaged and should be replaced	Deferred Maintenance	4	Ea.	3	\$11,399	5434
Exterior Metal Door Requires Repainting	Deferred Maintenance	5	Door	3	\$2,022	5433
The Brick Exterior Is Damaged And Requires Repointing	Deferred Maintenance	2,000	SF Wall	3	\$24,405	5431
The Brick Exterior Is Damaged And Requires Replacement	Capital Renewal	100	SF Wall	4	\$2,886	5432
The Exterior Requires Cleaning	Deferred Maintenance	10,000	SF Wall	5	\$25,052	5430
<b>Sub Total for System</b>		<b>5</b>	<b>items</b>		<b>\$65,764</b>	

**Interior**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Interior Doors Require Replacement	Capital Renewal	72	Door	3	\$68,676	5441
The Carpet Flooring Is Damaged And Requires Replacement	Capital Renewal	2,500	SF	3	\$27,052	5438
The Ceramic Tile Flooring Is Damaged And Requires Replacement	Capital Renewal	100	SF	3	\$2,021	5440
The Door does not have the Required Thumb / Key Lock	Educational Adequacy	36	Door	3	\$75,416	Rollup
The Interior Door Hardware is Damaged and Requires Replacement	Capital Renewal	108	Ea.	3	\$246,250	5442
The Acoustical Ceilings Tiles Are Damaged And Require Replacement	Capital Renewal	3,640	SF	4	\$25,549	5435
The Vinyl Composition Tile Flooring Is Damaged And Requires Replacement	Capital Renewal	80	SF	4	\$752	5439
Classroom door lacks the appropriate vision panel.	Educational Adequacy	7	Ea.	5	\$3,402	Rollup
Interior Brick/CMU Walls Require Repainting	Deferred Maintenance	7,000	SF	5	\$22,258	5437
Interior Toilet Partition Require Repainting	Deferred Maintenance	12	Ea.	5	\$2,869	5436
Large rooms lack capacity signs.	Educational Adequacy	4	Ea.	5	\$756	Rollup
Room lacks appropriate sound control.	Educational Adequacy	3,333	SF	5	\$8,598	Rollup
<b>Sub Total for System</b>		<b>12</b>	<b>items</b>		<b>\$483,598</b>	

**Mechanical**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Controls Are Inadequate And Should Be Repaired	Deferred Maintenance	25,000	SF	2	\$41,784	5451
The Air Handler HVAC Component Is Damaged And Requires Replacement	Capital Renewal	15,000	CFM	2	\$86,156	5456
The Boiler HVAC Component Is Damaged And Requires Replacement	Capital Renewal	2,802	MBH	2	\$100,487	5457
The HVAC Terminal Device Is Damaged And Requires Replacement	Capital Renewal	10	Ea.	2	\$46,904	5458
The Roof Condenser Is Damaged And Requires Replacement	Capital Renewal	15	TonAC	2	\$40,478	5447
Ductwork Is Damaged And Should Be Replaced	Capital Renewal	1,500	LF	3	\$52,931	5453
Test And Balancing Required	Deferred Maintenance	66,966	SF	3	\$138,840	5450
Duct Cleaning Required	Deferred Maintenance	35,000	SF	4	\$18,897	5452
Duct Register is Damaged And Should Be Replaced	Deferred Maintenance	15	Ea.	4	\$8,158	5454
Exhaust Fan Ventilation Is Missing And Should Be Installed	Functional Deficiency	8	Ea.	4	\$22,285	5455
Make-Up Air Inadequate And Should Be Increased	Functional Deficiency	35,000	SF	4	\$380,691	5449
HVAC Equipment is Abandoned and Requires Removal	Deferred Maintenance	1	Ea.	5	\$1,100	5459
<b>Sub Total for System</b>		<b>12</b>	<b>items</b>		<b>\$938,711</b>	

**Electrical**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Generator Is Damaged And Requires Replacement	Capital Renewal	15	KW	1	\$4,845	5463
Room does not have tamper-proof light switching.	Educational Adequacy	2	Ea.	5	\$1,175	Rollup
Room has insufficient electrical outlets.	Educational Adequacy	56	Ea.	5	\$15,258	Rollup
Room lacks controls to partially dim lights.	Educational Adequacy	3	Ea.	5	\$1,918	Rollup
<b>Sub Total for System</b>		<b>4</b>	<b>items</b>		<b>\$23,196</b>	

**Plumbing**

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
The Urinal Plumbing Fixtures Are Damaged And Should Be Installed	Deferred Maintenance	2	Ea.	2	\$1,404	5462
Roof Top Unit Condensate Drain Is Missing And Needed	Functional Deficiency	2	Ea.	3	\$1,137	5448
The Toilets Plumbing Fixtures Are Damaged And Should Be Installed	Deferred Maintenance	5	Ea.	3	\$9,142	5461

## Plumbing

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks private toilets.	Educational Adequacy	6	Ea.	4	\$83,463	Rollup
The Class Room Lavatories Plumbing Fixtures Are Missing And Should Be Installed	Educational Adequacy	8	Ea.	4	\$36,093	Rollup
The Restroom is Not ADA Compliant	ADA Compliance	300	SF	4	\$68,023	5427
Room lacks a drinking fountain.	Educational Adequacy	32	Ea.	5	\$32,339	Rollup
The Rest Room Lavatories Plumbing Fixtures Are Damaged And Should Be Cleaned	Deferred Maintenance	5	Ea.	5	\$3,625	5460
<b>Sub Total for System</b>		<b>8</b>	<b>items</b>		<b>\$235,226</b>	

## Fire & Life Safety

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Emergency Exit Signage Is Damaged Or Missing And Should Be Replaced	Code Compliance	8	Ea.	1	\$4,880	5464
Fire Alarm is Missing or Inadequate	Code Compliance	66,966	SF	1	\$181,533	5466
Security Alarm is Missing or Inadequate	Functional Deficiency	66,966	SF	2	\$50,619	5465
<b>Sub Total for System</b>		<b>3</b>	<b>items</b>		<b>\$237,031</b>	

## Technology

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room lacks audio enhancement system	Educational Adequacy	30	Ea.	3	\$32,396	Rollup
Room lacks wall or cabinet mounted media controller	Educational Adequacy	31	Ea.	3	\$16,824	Rollup
Fixed Projector is Missing and is Needed	Educational Adequacy	29	Ea.	4	\$70,822	Rollup
Room lacks interactive white board	Educational Adequacy	26	Ea.	4	\$42,331	Rollup
Room has insufficient data ports.	Educational Adequacy	67	Ea.	5	\$24,450	Rollup
<b>Sub Total for System</b>		<b>5</b>	<b>items</b>		<b>\$186,822</b>	

## Stairs & Elevators

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Elevator Cab And Or Controls Are Damaged Or Missing And Require Repair	Deferred Maintenance	1	Ea.	2	\$40,691	5444
<b>Sub Total for System</b>		<b>1</b>	<b>items</b>		<b>\$40,691</b>	

## Specialties

Deficiency	Category	Qty	UoM	Priority	Repair Cost	ID
Room has insufficient tack board area.	Educational Adequacy	17	Ea.	4	\$6,093	Rollup
Room has insufficient writing area.	Educational Adequacy	39	Ea.	4	\$44,291	Rollup
The Base Storage Cabinets Require Replacement	Capital Renewal	64	LF	4	\$28,274	5443
Room does not have sufficient cubbies.	Educational Adequacy	670	Ea.	5	\$144,699	Rollup
Room has an insufficient number of coat hooks.	Educational Adequacy	600	Ea.	5	\$15,010	Rollup
Room lacks appropriate amount of teacher storage.	Educational Adequacy	94	Ea.	5	\$58,266	Rollup
Room lacks the required demonstration table.	Educational Adequacy	1	Ea.	5	\$7,984	Rollup
<b>Sub Total for System</b>		<b>7</b>	<b>items</b>		<b>\$304,617</b>	
<b>Sub Total for Building 098 - Building 1</b>		<b>61</b>	<b>items</b>		<b>\$2,624,584</b>	
<b>Total for Campus</b>		<b>85</b>	<b>items</b>		<b>\$3,538,424</b>	



Samuel F. B. Morse ES Condition Assessment  
Supporting Photos



Main Entry



Playground



Cafeteria



Comp Lab



Library



Gym





Classroom



Classroom 2