



# Oakwood City Schools

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## Facility Condition Assessment Findings

2017



***emersion* DESIGN**

**FANNING  HOWEY**

## Introduction

Emersion Design, Fanning Howey and Ruetschle Architects were commissioned by Oakwood City Schools to develop long term Master Planning that included a detailed facility condition assessment for four school facilities consisting of 3 elementary schools, 1 high school/junior high school, and the administration office and the football stadium.

The Oakwood City Schools Facility Condition assessment was conducted using software developed by VFA, Inc. which combines facility assessment services with web-based software products in a comprehensive solution for the complete capital management lifecycle.

The key concept is “capital management lifecycle.” Traditionally, facility assessments evaluate a building at a single point in time. An assessment professional walks through a building and notes needs that must be addressed at that particular point in time. The professional may note items such as repairing a roof leak or replacing a window. While those are necessary and important items, they do not provide a complete picture of the physical needs of the building. The Ohio Facilities Construction Commission (OFCC) evaluates the current condition of the facility and often projects total system replacements as a part of that assessment.

The concept of “capital management lifecycle” is that in addition to immediate needs, the building is evaluated based on the lifecycle of the component systems. Perhaps there are no roof leaks in a building, but a roof was installed 18 years ago. Depending on the type of roof, it may have a 20 year lifespan. Therefore, while there is no immediate need in two years that the roof will reach the end of its useful life. Knowing that, a school district can factor the capital improvement cost of a new roof into its facility budget.

By assessing a building not only on its immediate needs, but on a potential future needs based on the lifecycle of the building components, a more comprehensive picture emerges of the true physical needs. The assessment becomes an asset management tool for the district rather than a simple listing of the immediate needs.

The facility condition assessment is based on the UniFormat standard for classifying building systems, specifications, cost estimating, and cost analysis. It is the industry standard in the United States and Canada. The elements are major components common to most buildings and include the following:

1. Substructure (foundation)
2. Shell (building structure, walls, windows, doors, roof, etc.)
3. Roofing
4. Interiors/Finishes (interior walls, windows, floors, etc.)
5. Services (HVAC, plumbing, electrical, etc.)
6. Equipment/Furnishings (furniture, casework, etc.)
7. Special Construction (onsite separate buildings)
8. Sitework (pavement, sidewalks, drainage, playgrounds, etc.)

Cost estimates are developed with the VFA software using updated RS Means database information.

### **Facility Condition Assessment Process**

The process to conduct Oakwood City Schools' Facility Condition Assessments involved 5 steps sequencing from conducting the facility assessments, review of those assessments, edit and finalize assessments, and complete a final report.

1. **Conduct Facility Condition Assessments**  
A team comprised of an architect, a mechanical engineer, an electrical designer and an educational technology designer conducted a facility condition assessment for Harman Elementary, Smith Elementary, Lange School, and the Oakwood High School/Junior High School. They walked through all areas of each building with members of the school district's facility team.
2. **Facility Condition Assessment Findings Draft Report**  
The Facility Condition Assessment Findings Report was developed by Fanning Howey.
3. **Review Findings Report with Oakwood City Schools**  
The Facility Condition Assessment Findings Report is to be reviewed with Oakwood City Schools at a meeting scheduled for with Emersion Design, Fanning Howey and Ruetschle Architects. A draft of the report was submitted prior to the meeting.
4. **Edit and Finalize Condition Assessment Findings**  
Clarification will be made and the Facility Condition Assessment Report finalized based on feedback and input from Oakwood City Schools.
5. **Submit Final Report**  
A final Facility Condition Assessment Findings Report will be submitted to the Oakwood City Schools.

### **Facility Condition Assessment Timeline**

The facility condition assessment process for Oakwood City Schools was started in July 2017 and will be completed in October 2017.

### **Facility Condition Assessment Findings**

The component of the report will be completed after meeting with the school district to review the draft report and then updating for a "Final" report.

### **Administration Office Narrative**

1. **Architectural**  
The finishes (flooring, wall finishes and ceilings), although dated, are not necessary in need of immediate replacement. The facility does not align with ADA requirements with regard to access to the front lobby and the toilet rooms. Exterior windows and doors should be considered for replacement to help improve the building envelope and improve the ability to heat and cool the spaces. Overall available space for school district operations could be improved in a new facility in terms of space available and interaction between departments and district operations.

2. Mechanical  
The heating and cooling systems are not designed to effectively maintain a comfortable environment for the occupants of the facility. An all new HVAC system must be considered. The plumbing systems are dated, but currently operating, nevertheless, new toiler rooms are needed for proper access and would result in needed new plumbing fixtures including water and sanitary piping.
3. Electrical  
Overall lighting and power in each space could be greatly improved with system replacement. This would result in energy use reduction and better lighter spaces and available to power for day to day operations. A new incoming electrical service will need to be considered to accommodate a new HVAC system.
4. Technology  
New technology system should be considered that will set the facility up for the next 10-15 years. A state of the art projection and presentation area is recommended for such a facility.

Costs associated with considering a complete updating to the existing facility would range from \$900,000 - \$1,400,000.

Oakwood City Schools  
VFA Assessment Summary Information  
Project No. 217054.00  
October 16, 2017

<u>Campus</u>	<u>Asset</u>	<u>Replacement Cost</u>	<u>2022 Renewal Cost (5 years)</u>	<u>RI</u>	<u>2027 Renewal Cost (10 years)</u>	<u>RI</u>	<u>2037 Renewal Cost (20 years)</u>	<u>RI</u>	<u>Building Area</u>
<b>Harman Elementary School</b>									
	Harman Original	\$ 12,973,867	\$ 4,904,514	37.8%	\$ 8,443,401	65.1%	\$ 10,645,268	82.1%	53,771
	Harman 2004	\$ 3,305,536	\$ 158,240	4.8%	\$ 385,455	11.7%	\$ 1,303,099	39.4%	13,700
<b>Total - Harman Elementary</b>		<b>\$ 16,279,403</b>	<b>\$ 5,062,754</b>	<b>31.1%</b>	<b>\$ 8,828,856</b>	<b>54.2%</b>	<b>\$ 11,948,367</b>	<b>73.4%</b>	<b>67,471</b>
<b>Smith Elementary School</b>									
	Smith Original	\$ 15,549,531	\$ 5,241,500	33.7%	\$ 8,611,747	55.4%	\$ 10,474,322	67.4%	64,446
	Smith 2004	\$ 3,076,320	\$ 163,680	5.3%	\$ 871,215	28.3%	\$ 1,632,585	53.1%	12,750
<b>Total - Smith Elementary</b>		<b>\$ 18,625,851</b>	<b>\$ 5,405,180</b>	<b>29.0%</b>	<b>\$ 9,482,962</b>	<b>50.9%</b>	<b>\$ 12,106,907</b>	<b>65.0%</b>	<b>77,196</b>
<b>Lange Elementary</b>									
	Lange Elementary	\$ 3,942,033	\$ 1,268,616	32.2%	\$ 2,476,693	62.8%	\$ 3,572,803	90.6%	16,338
<b>Total - Lange Elementary</b>		<b>\$ 3,942,033</b>	<b>\$ 1,268,616</b>	<b>32.2%</b>	<b>\$ 2,476,693</b>	<b>62.8%</b>	<b>\$ 3,572,803</b>	<b>90.6%</b>	<b>16,338</b>
<b>Oakwood High School / Junior High School</b>									
	Oakwood HS-JH Original	\$ 39,385,823	\$ 11,361,468	28.8%	\$ 16,894,204	42.9%	\$ 23,629,249	60.0%	163,237
	Oakwood HS-JH 2005	\$ 3,305,536	\$ 239,694	7.3%	\$ 621,731	18.8%	\$ 1,455,622	44.0%	13,700
<b>Total - High School/Junior High</b>		<b>\$ 42,691,359</b>	<b>\$ 11,601,162</b>	<b>27.2%</b>	<b>\$ 17,515,936</b>	<b>41.0%</b>	<b>\$ 25,084,871</b>	<b>58.8%</b>	<b>176,937</b>
<b>Total - Mack Hummon Field</b>		<b>NA</b>	<b>\$ 954,369</b>		<b>\$ 1,319,754</b>		<b>\$ 1,468,710</b>		
<b>Total for District</b>		<b>\$ 81,538,646</b>	<b>\$ 24,292,082</b>	<b>29.8%</b>	<b>\$ 39,624,200</b>	<b>48.6%</b>	<b>\$ 54,181,658</b>	<b>66.4%</b>	

**Oakwood City Schools**  
**VFA Assessment Summary Information**  
**All Buildings**

<u>Campus</u>	<u>Building System</u>		<u>2022 Renewal Cost</u>		<u>2027 Renewal Cost</u>		<u>2037 Renewal Cost</u>	<u>Building Area</u>
<b>All Buildings</b>								
	A. Subsurface		\$ 18,766	\$ 0.06	\$ 50,524	\$ 0.15	\$ 131,768	\$ 0.39
	B. Shell		\$ 680,044	\$ 2.01	\$ 1,913,942	\$ 5.66	\$ 2,369,014	\$ 7.01
	C. Roofing		\$ 1,248,563	\$ 3.69	\$ 2,239,954	\$ 6.63	\$ 2,337,177	\$ 6.92
	D. Interiors/Finishes		\$ 2,551,767	\$ 7.55	\$ 7,082,318	\$ 20.96	\$ 11,177,131	\$ 33.07
	E. MEPT		\$ 17,934,553	\$ 53.07	\$ 21,533,904	\$ 63.72	\$ 28,745,218	\$ 85.06
	F. Equipment/Furnishings		\$ 656,565	\$ 1.94	\$ 3,103,908	\$ 9.18	\$ 4,079,922	\$ 12.07
	G. Special Construction		\$ 394,611	\$ 1.17	\$ 508,522	\$ 1.50	\$ 508,522	\$ 1.50
	H. Sitework		\$ 807,214	\$ 2.39	\$ 3,191,129	\$ 9.44	\$ 4,833,445	\$ 14.30
	<b>Subtotal</b>		<b>\$ 24,292,083</b>		<b>\$ 39,624,201</b>		<b>\$ 54,181,657</b>	<b>337,942</b>
	General Requirements	5%	\$ 1,214,604		\$ 1,981,210		\$ 2,709,083	
	Design / Estimating Contingency	10%	\$ 2,429,208		\$ 3,962,420		\$ 5,418,166	
	Escalation	0%	\$ -		\$ -		\$ -	
	Premium for Phasing	3%	\$ 728,762		\$ 1,188,726		\$ 1,625,450	
	<b>Subtotal - Direct Costs</b>		<b>\$ 28,664,658</b>		<b>\$ 46,756,557</b>		<b>\$ 63,934,355</b>	<b>\$ 189.19</b>
	Soft Costs	18%	\$ 5,159,638		\$ 8,416,180		\$ 11,508,184	
	<b>Total Construction Cost Estimate</b>		<b>\$ 33,824,296</b>		<b>\$ 55,172,737</b>		<b>\$ 75,442,539</b>	<b>\$ 223</b>

**Oakwood City Schools**  
**VFA Assessment Summary Information**  
**Harman Elementary School**

<u>Campus</u>	<u>Building System</u>	<u>2022 Renewal Cost</u>	<u>2027 Renewal Cost</u>	<u>2037 Renewal Cost</u>	<u>Building Area</u>
<b>Harman Elementary School</b>					
	A. Subsurface	\$ 13,197	\$ 22,638	\$ 37,363	
	B. Shell	\$ 580,510	\$ 961,912	\$ 975,410	
	C. Roofing	\$ 145,878	\$ 318,319	\$ 324,992	
	D. Interiors/Finishes	\$ 978,811	\$ 2,248,271	\$ 3,029,235	
	E. MEPT	\$ 2,623,839	\$ 3,996,426	\$ 5,822,015	
	F. Equipment/Furnishings	\$ 616,021	\$ 762,935	\$ 762,935	
	G. Special Construction	\$ 49,130	\$ 49,130	\$ 49,130	
	H. Sitework	\$ 55,368	\$ 469,225	\$ 947,285	
	<b>Subtotal</b>	<b>\$ 5,062,754</b>	<b>\$ 8,828,856</b>	<b>\$ 11,948,365</b>	<b>67,471</b>
	General Requirements 5%	\$ 253,138	\$ 441,443	\$ 597,418	
	Design / Estimating Contingency 10%	\$ 506,275	\$ 882,886	\$ 1,194,837	
	Escalation 0%	\$ -	\$ -	\$ -	
	Premium for Phasing 3%	\$ 151,883	\$ 264,866	\$ 358,451	
	<b>Subtotal - Direct Costs</b>	<b>\$ 5,974,050</b>	<b>\$ 10,418,050</b>	<b>\$ 14,099,071</b>	<b>\$ 209</b>
	Soft Costs 18%	\$ 1,075,329	\$ 1,875,249	\$ 2,537,833	
	<b>Total Construction Cost Estimate</b>	<b>\$ 7,049,379</b>	<b>\$ 12,293,299</b>	<b>\$ 16,636,903</b>	<b>\$ 247</b>

\$ 11,924,529  
\$ (23,836)

**Oakwood City Schools**  
**VFA Assessment Summary Information**  
**Smith Elementary School**

<u>Campus</u>	<u>Building System</u>		<u>2022 Renewal Cost</u>		<u>2027 Renewal Cost</u>		<u>2037 Renewal Cost</u>	<u>Building Area</u>
<b>Smith Elementary School</b>								
	A. Subsurface		\$ 5,569	\$ 0.07	\$ 14,373	\$ 0.19	\$ 42,265	\$ 0.55
	B. Shell		\$ 52,638	\$ 0.68	\$ 271,376	\$ 3.52	\$ 476,009	\$ 6.17
	C. Roofing		\$ 397,045	\$ 5.14	\$ 433,528	\$ 5.62	\$ 433,530	\$ 5.62
	D. Interiors/Finishes		\$ 510,937	\$ 6.62	\$ 2,233,555	\$ 28.93	\$ 2,908,549	\$ 37.68
	E. MEPT		\$ 4,314,227	\$ 55.89	\$ 5,124,408	\$ 66.38	\$ 6,541,378	\$ 84.74
	F. Equipment/Furnishings		\$ 39,468	\$ 0.51	\$ 1,045,733	\$ 13.55	\$ 1,045,733	\$ 13.55
	G. Special Construction		\$ 29,974	\$ 0.39	\$ 29,974	\$ 0.39	\$ 29,974	\$ 0.39
	H. Sitework		\$ 55,324	\$ 0.72	\$ 330,015	\$ 4.28	\$ 629,470	\$ 8.15
	<b>Subtotal</b>		<b>\$ 5,405,182</b>		<b>\$ 9,482,962</b>		<b>\$ 12,106,908</b>	<b>77,196</b>
	General Requirements	5%	\$ 270,259		\$ 474,148		\$ 605,345	
	Design / Estimating Contingency	10%	\$ 540,518		\$ 948,296		\$ 1,210,691	
	Escalation	0%	\$ -		\$ -		\$ -	
	Premium for Phasing	3%	\$ 162,155		\$ 284,489		\$ 363,207	
	<b>Subtotal - Direct Costs</b>		<b>\$ 6,378,115</b>		<b>\$ 11,189,895</b>		<b>\$ 14,286,151</b>	<b>\$ 185</b>
	Soft Costs	18%	\$ 1,148,061		\$ 2,014,181		\$ 2,571,507	
	<b>Total Construction Cost Estimate</b>		<b>\$ 7,526,175</b>		<b>\$ 13,204,076</b>		<b>\$ 16,857,659</b>	<b>\$ 218</b>



**Oakwood City Schools**  
**VFA Assessment Summary Information**  
**Lange Elementary School**

<u>Campus</u>	<u>Building System</u>		<u>2022 Renewal Cost</u>		<u>2027 Renewal Cost</u>		<u>2037 Renewal Cost</u>	<u>Building Area</u>
<b>Lange Elementary School</b>								
	A. Subsurface		\$ -	\$ -	\$ 13,513	\$ 0.83	\$ 13,513	\$ 0.83
	B. Shell		\$ 43,748	\$ 2.68	\$ 65,039	\$ 3.98	\$ 65,039	\$ 3.98
	C. Roofing		\$ 147,834	\$ 9.05	\$ 169,395	\$ 10.37	\$ 169,935	\$ 10.40
	D. Interiors/Finishes		\$ 328,664	\$ 20.12	\$ 402,039	\$ 24.61	\$ 688,121	\$ 42.12
	E. MEPT		\$ 589,303	\$ 36.07	\$ 995,514	\$ 60.93	\$ 1,149,554	\$ 70.36
	F. Equipment/Furnishings		\$ 1,076	\$ 0.07	\$ 267,548	\$ 16.38	\$ 267,548	\$ 16.38
	G. Special Construction		\$ -	\$ -	\$ 18,985	\$ 1.16	\$ 18,985	\$ 1.16
	H. Sitework		\$ 157,989	\$ 9.67	\$ 544,660	\$ 33.34	\$ 1,200,648	\$ 73.49
	<b>Subtotal</b>		<b>\$ 1,268,614</b>		<b>\$ 2,476,693</b>		<b>\$ 3,572,803</b>	<b>16,338</b>
	General Requirements	5%	\$ 63,431		\$ 123,835		\$ 178,640	
	Design / Estimating Contingency	10%	\$ 126,861		\$ 247,669		\$ 357,280	
	Escalation	0%	\$ -		\$ -		\$ -	
	Premium for Phasing	3%	\$ 38,058		\$ 74,301		\$ 107,184	
	<b>Subtotal - Direct Costs</b>		<b>\$ 1,496,965</b>		<b>\$ 2,922,498</b>		<b>\$ 4,215,908</b>	<b>\$ 258</b>
	Soft Costs	18%	\$ 269,454		\$ 526,050		\$ 758,863	
	<b>Total Construction Cost Estimate</b>		<b>\$ 1,766,418</b>		<b>\$ 3,448,547</b>		<b>\$ 4,974,771</b>	<b>\$ 304</b>

**Oakwood City Schools**  
**VFA Assessment Summary Information**  
**High School/Junior High**

<u>Campus</u>	<u>Building System</u>		<u>2022 Renewal Cost</u>		<u>2027 Renewal Cost</u>		<u>2037 Renewal Cost</u>	<u>Building Area</u>
<b>High School/Junior High</b>								
	A. Subsurface		\$ -	\$ -	\$ -	\$ -	\$ 38,627	\$ 0.22
	B. Shell		\$ 3,148	\$ 0.02	\$ 615,615	\$ 3.48	\$ 852,556	\$ 4.82
	C. Roofing		\$ 557,806	\$ 3.15	\$ 1,318,712	\$ 7.45	\$ 1,408,720	\$ 7.96
	D. Interiors/Finishes		\$ 733,355	\$ 4.14	\$ 2,198,453	\$ 12.43	\$ 4,551,226	\$ 25.72
	E. MEPT		\$ 10,063,412	\$ 56.88	\$ 11,073,784	\$ 62.59	\$ 14,888,499	\$ 84.15
	F. Equipment/Furnishings		\$ -	\$ -	\$ 1,027,692	\$ 5.81	\$ 2,003,706	\$ 11.32
	G. Special Construction		\$ 65,507	\$ 0.37	\$ 160,433	\$ 0.91	\$ 160,433	\$ 0.91
	H. Sitework		\$ 177,935	\$ 1.01	\$ 1,121,247	\$ 6.34	\$ 1,181,103	\$ 6.68
	<b>Subtotal</b>		<b>\$ 11,601,163</b>		<b>\$ 17,515,936</b>		<b>\$ 25,084,870</b>	<b>176,937</b>
	General Requirements	5%	\$ 580,058		\$ 875,797		\$ 1,254,244	
	Design / Estimating Contingency	10%	\$ 1,160,116		\$ 1,751,594		\$ 2,508,487	
	Escalation	0%	\$ -		\$ -		\$ -	
	Premium for Phasing	3%	\$ 348,035		\$ 525,478		\$ 752,546	
	<b>Subtotal - Direct Costs</b>		<b>\$ 13,689,372</b>		<b>\$ 20,668,804</b>		<b>\$ 29,600,147</b>	<b>\$ 167</b>
	Soft Costs	18%	\$ 2,464,087		\$ 3,720,385		\$ 5,328,026	
	<b>Total Construction Cost Estimate</b>		<b>\$ 16,153,459</b>		<b>\$ 24,389,189</b>		<b>\$ 34,928,173</b>	<b>\$ 197</b>

**Oakwood City Schools**  
**VFA Assessment Summary Information**  
**Mack Hummon Field**

<u>Campus</u>	<u>Building System</u>		<u>2022 Renewal</u> <u>Cost</u>		<u>2027 Renewal</u> <u>Cost</u>		<u>2037 Renewal</u> <u>Cost</u>
<b>High School/Junior High</b>							
	A. Subsurface		\$ -	\$ -	\$ -	\$ -	\$ -
	B. Shell		\$ -	\$ -	\$ -	\$ -	\$ -
	C. Roofing		\$ -	\$ -	\$ -	\$ -	\$ -
	D. Interiors/Finishes		\$ -	\$ -	\$ -	\$ -	\$ -
	E. MEPT		\$ 343,772	\$ -	\$ 343,772	\$ -	\$ 343,772
	F. Equipment/Furnishings		\$ -	\$ -	\$ -	\$ -	\$ -
	G. Special Construction		\$ 250,000	\$ -	\$ 250,000	\$ -	\$ 250,000
	H. Sitework		\$ 360,598	\$ -	\$ 725,982	\$ -	\$ 874,939
	<b>Subtotal</b>		<b>\$ 954,370</b>		<b>\$ 1,319,754</b>		<b>\$ 1,468,711</b>
	General Requirements	5%	\$ 47,719		\$ 65,988		\$ 73,436
	Design / Estimating Contingency	10%	\$ 95,437		\$ 131,975		\$ 146,871
	Escalation	0%	\$ -		\$ -		\$ -
	Premium for Phasing	3%	\$ 28,631		\$ 39,593		\$ 44,061
	<b>Subtotal - Direct Costs</b>		<b>\$ 1,126,157</b>		<b>\$ 1,557,310</b>		<b>\$ 1,733,079</b>
	Soft Costs	18%	\$ 202,708		\$ 280,316		\$ 311,954
<b>Total Construction Cost Estimate</b>			<b>\$ 1,328,865</b>		<b>\$ 1,837,625</b>		<b>\$ 2,045,033</b>