FACILITIES NEEDS ASSESSMENT

STAMFORD PUBLIC SCHOOLS

888 Washington Boulevard
Stamford, Connecticut 06901
Domenick Tramontozzi

FACILITIES NEEDS ASSESSMENT

OF

NORTHEAST ELEMENTARY SCHOOL

82 Scofieldtown Road
Stamford, Connecticut 06903

PREPARED BY:

EMG
222 Schilling Circle, Suite 275
Hunt Valley, Maryland 21031
800.733.0660
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EMG Project #: 88166.09R-010.017
Date of Report: August 27, 2009
On-site Date: February 17 and 18, 2009

Replacement Reserves Report
Elementary Schools / Northeast Elementary / Annex Building, Elementary Schools / Northeast Elementary
8/27/2009

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Inflation	3.0%	4.0%	4.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%

Elementary Schools / Northeast Elementary / Annex Building

Report Section	ID	Cost Description	Lifespan (EUL)	Observed Age (EAge)	Remaining Life (RUL)	Quantity	Unit	Unit Cost *	Subtotal	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Deficiency Repair Estimate
9	1140	General painting cost per SF, minor prep work, single story bldg. (up to 15 feet)	10	6	4	2000	SF	$1.56	$3,125					$3,125						**$3,125**
9	1141	Asphalt shingles, removal and replacement of shingles	40	35	5	30	SQ	$424.94	$12,748						$12,748					**$12,748**
9	1143	Replace aluminum gutters	0	0	0	125	LF	$12.45	$1,556	$1,556										**$1,556**
9	1129	Gas-fired furnace 45 MBH no AC	25	19	6	1	EA	$1,707.49	$1,707							$1,707				**$1,707**
9	1130	Replace central panel	15	8	7	1	EA	$3,814.15	$3,814								$3,814			**$3,814**
Totals, Unescalated										**$1,556**	**$0**	**$0**	**$0**	**$3,125**	**$12,748**	**$1,707**	**$3,814**	**$0**	**$0**	**$22,951**
Soft Costs:																				
Architectural/Consultant Fees (10.0%)										**$156**	**$0**	**$0**	**$0**	**$312**	**$1,275**	**$171**	**$381**	**$0**	**$0**	**$2,295**
General Requirements (Bonds, Insurance, GC/CM Mark-up) (10.0%)										**$156**	**$0**	**$0**	**$0**	**$312**	**$1,275**	**$171**	**$381**	**$0**	**$0**	**$2,295**
Prevailing Wage/Labor Compliance (5.0%)										**$78**	**$0**	**$0**	**$0**	**$156**	**$637**	**$85**	**$191**	**$0**	**$0**	**$1,148**
Contingency (5.0%)										**$78**	**$0**	**$0**	**$0**	**$156**	**$637**	**$85**	**$191**	**$0**	**$0**	**$1,148**
Location Factor (1.11)										**$167**	**$0**	**$0**	**$0**	**$334**	**$1,364**	**$183**	**$408**	**$0**	**$0**	**$2,456**
Totals, Escalated (see inflation table above)										**$2,189**	**$0**	**$0**	**$0**	**$5,143**	**$22,030**	**$3,098**	**$7,267**	**$0**	**$0**	**$39,728**

* Markup has been included in unit costs.

Elementary Schools / Northeast Elementary

Report Section	ID	Cost Description	Lifespan (EUL)	Observed Age (EAge)	Remaining Life (RUL)	Quantity	Unit	Unit Cost *	Subtotal	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Deficiency Repair Estimate
1.2	1246	Directed Study of Electrical Equipment	0	0	0	1	EA	$5,216.40	$5,216	$5,216										**$5,216**
1.2	1147	Measured ADA Study of Property	0	0	0	1	EA	$6,930.00	$6,930	$6,930										**$6,930**
1.2	1407	Mold Study at Buildings	0	0	0	1	EA	$4,914.00	$4,914	$4,914										**$4,914**
1.2	1082	Follow-up Review by a Structural Engineer	0	0	0	1	EA	$8,190.00	$8,190	$8,190										**$8,190**
1.2	1083	Follow-up Engineering Review of Storm Drainage System	0	0	0	1	EA	$6,930.00	$6,930	$6,930										**$6,930**
3.1	1252	Install ADA recessed floor aluminum mats	15	15	0	120	SF	$157.64	$18,917	$18,917										**$18,917**
3.1	1261	ADA cane detection barrier rails	30	30	0	5	PR	$144.90	$725	$725										**$725**
3.1	5101	ADA, Renovate restroom for full compliance	20	20	0	16	EA	$15,120.00	$241,920	$241,920										**$241,920**
3.1	5100	Add new 2-story hydraulic elevator and enclosure	30	30	0	1	EA	$109,683.00	$109,683	$109,683										**$109,683**
3.1	5099	Northeast Elementary WheelChair Lift Install	0	0	0	1	EA	$207,244.80	$207,245	$207,245										**$207,245**
3.1	1256	ADA Drinking Fountain Cup Dispenser	15	14	1	12	EA	$69.30	$832		$832									**$832**
3.1	1257	ADA Strobe Fire Alarm	15	15	0	5	EA	$630.00	$3,150	$3,150										**$3,150**
3.1	1247	Regrade and level ADA parking stall	0	0	0	2	EA	$6,887.16	$13,774	$13,774										**$13,774**
3.1	1249	ADA, Parking lot access aisle striping	0	0	0	100	LF	$8.19	$819	$819										**$819**
3.1	1248	ADA, paint accessible parking space	5	4	1	2	EA	$207.90	$416		$416					$416				**$832**
3.1	1253	ADA, install/replace signage giving direction to accessible entrance	0	0	0	10	Sign	$134.01	$1,340	$1,340										**$1,340**
3.1	1251	ADA, paint van-accessible space with signage	5	4	1	1	EA	$277.20	$277		$277					$277				**$554**
3.1	1250	ADA, install/replace signage giving direction to accessible entrance	0	0	0	2	Sign	$134.01	$268	$268										**$268**
3.1	1255	ADA, install 2 - rail, 1-1/2" handrail on exterior ramp, wall mounted, one side	20	20	0	423	LF	$106.39	$45,005	$45,005										**$45,005**
5.2	4515	Remove and replace steel pipe railings, 3 rail galvanized,inc paint	0	0	0	360	LF	$114.51	$41,223	$41,223										**$41,223**
5.2	1038	Overlay asphalt	10	2	8	47.6	1000 SF	$963.02	$45,840									$45,840		**$45,840**
5.2	1034	Repair and Seal Coat asphalt	5	2	3	4.76	10000 SF	$5,848.92	$27,841				$27,841							**$27,841**
5.2	1049	Repair and seal coat asphalt (up to 10000 SF)	5	3	2	4820	SF	$0.63	$3,037			$3,037					$3,037			**$6,073**

Replacement Reserves Report
Elementary Schools / Northeast Elementary / Annex Building, Elementary Schools / Northeast Elementary
8/27/2009

Report Section	ID	Cost Description	Lifespan (EUL)	Observed Age (EAge)	Remaining Life (RUL)	Quantity	Unit	Unit Cost *	Subtotal	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Deficiency Repair Estimate
5.2	1045	Repair and Seal Coat asphalt	5	3	2	6.05	10000 SF	$5,848.92	$35,386			$35,386					$35,386			**$70,772**
5.2	1050	Replace asphalt curbs	10	9	1	350	LF	$14.63	$5,120		$5,120									**$5,120**
5.2	1044	Cut & Patch asphalt	10	9	1	400	SF	$3.86	$1,542		$1,542									**$1,542**
5.2	1086	Repair cracks at concrete 1/8" epoxy	20	19	1	80	LF	$42.97	$3,437		$3,437									**$3,437**
5.2	1051	Remove & replace 4' wide concrete sidewalk	25	24	1	20	LF	$40.65	$813		$813									**$813**
5.2	1046	Cut & Patch asphalt	10	9	1	600	SF	$3.86	$2,313		$2,313									**$2,313**
5.4	1232	Re-grading and establishment of ground cover at playing field	25	23	2	24	1000 SF	$702.80	$16,867			$16,867								**$16,867**
5.4	1085	Regrade & re-sod flat area adjacent to bldg	25	24	1	1	1000 SF	$3,222.80	$3,223		$3,223									**$3,223**
5.5	1088	Repair damaged chain link fence	10	8	2	20	10 FT	$232.91	$4,658			$4,658								**$4,658**
5.5	1233	Replace chain link fence, 6-foot high	20	18	2	240	LF	$37.31	$8,954			$8,954								**$8,954**
5.5	1231	Replace baseball backstop, small	20	18	2	2	EA	$9,398.34	$18,797			$18,797								**$18,797**
5.5	1235	Replace bleacher, outdoor portable, 3 to 5 tiers, per seat	20	18	2	80	Seat	$116.80	$9,344			$9,344								**$9,344**
5.5	5392	Capital Plan - Add Wall Mtd Exterior Lighting	15	15	0	10	EA	$594.72	$5,947	$5,947										**$5,947**
5.5	1087	Replace Aluminum pole-mounted double light 400 W HPS fixture and pole	20	12	8	2	EA	$8,644.36	$17,289									$17,289		**$17,289**
6.2	1263	Elevated Concrete Slab Replacement	0	0	0	150	SF	$190.26	$28,539	$28,539										**$28,539**
6.3	1103	Built-up roofing minor membrane repairs - (2% of roof area)	0	1	0	4	SQ	$571.22	$2,285	$2,285										**$2,285**
6.3	12070	Stamford Roof Assessment Roof Repair Recommendations	0	0	0	1	EA	$3,900.70	$3,901	$3,901										**$3,901**
6.3	1102	Single Ply EPDM, minor repairs - (2% of roof area)	0	1	0	10	Patch	$409.12	$4,091	$4,091										**$4,091**
6.3	1105	Prefinished Aluminum Parapet Coping	25	25	0	650	LF	$33.39	$21,704	$21,704										**$21,704**
6.4	1109	Surface applied protection to walls	25	25	0	20	CSF	$272.16	$5,443	$5,443										**$5,443**
6.4	4513	Pressure wash existing masonry	0	0	0	6200	SF	$1.34	$8,281	$8,281										**$8,281**
6.4	1107	Refinish EIFS, first floor	0	0	0	3	CSF	$487.62	$1,463	$1,463										**$1,463**
6.4	1108	General painting cost per SF, minor prep work, up to 4-story bldg.	10	5	5	7500	SF	$1.78	$13,325						$13,325					**$13,325**
6.4	4509	Caulking, polyurethane,1/4"x1/4", remove and replace	15	13	2	900	LF	$4.84	$4,355			$4,355								**$4,355**
6.4	1110	Remove and replace plywood siding	0	0	0	5000	SF	$4.94	$24,696	$24,696										**$24,696**
6.4	1258	Replace curtain wall system with double glazing	30	28	2	4500	SF	$94.19	$423,833			$423,833								**$423,833**
6.5	1052	Replace cast-in-place concrete stairs, no rails,including demo	25	24	1	40	LF Nosing	$38.28	$1,531		$1,531									**$1,531**
6.6	1122	Replace 3'-0" x 7'-0" aluminum storefront doors	50	50	0	22	EA	$2,588.67	$56,951	$56,951										**$56,951**
6.6	1117	Replace aluminum storefront 10' tall w/o door	25	24	1	10500	SF	$42.34	$444,528		$444,528									**$444,528**
6.6	1124	Replace 3'-0" x 7'-0" steel, insulated core, ptd. door	45	45	0	40	EA	$1,383.48	$55,339	$55,339										**$55,339**
6.6	1139	Fire door, wood, flush, 60 minute, incl. demo, with hardware	24	24	0	36	EA	$1,197.00	$43,092	$43,092										**$43,092**
6.6	1120	Replace loading dock bumpers 6"thick 10" high 36"long	10	9	1	10	EA	$242.30	$2,423		$2,423									**$2,423**
6.8	1137	Replace vinyl wall covering	15	12	3	50	CSF	$477.54	$23,877				$23,877							**$23,877**
6.8	1134	Replace Vinyl tile	18	15	3	4000	SY	$81.90	$327,600				$327,600							**$327,600**
6.8	1262	Sand and refinish hardwood floor	10	7	3	15000	SF	$6.93	$103,950				$103,950							**$103,950**
6.8	1131	Replace carpet - standard commercial	8	5	3	1000	SY	$63.23	$63,227				$63,227							**$63,227**
6.8	5884	Stamford - Lead Abatement Allowance	0	0	0	88445	SF	$1.45	$128,157	$128,157										**$128,157**
7.1	3119	Install Air-Conditioning at entire building	30	28	2	84000	SF	$16.22	$1,362,161			$1,362,161								**$1,362,161**
7.1	1094	Replace air handler 4,000 to 8,000 CFM	20	17	3	4000	CFM	$3.78	$15,120				$15,120							**$15,120**
7.1	1093	Replace air handler 8,000 to 12,000 CFM	20	17	3	9500	CFM	$1.68	$15,920				$15,920							**$15,920**
7.1	1095	Replace air handler 4,000 to 8,000 CFM	20	17	3	2000	CFM	$3.78	$7,560				$7,560							**$7,560**
7.1	1092	Replace Circulation pump 1/2 to 3/4 hp	15	8	7	4	EA	$3,584.70	$14,339								$14,339			**$14,339**
7.1	1096	PTAC through the wall unit 1-ton	10	6	4	23	EA	$941.85	$21,663					$21,663						**$21,663**

Replacement Reserves Report
Elementary Schools / Northeast Elementary / Annex Building, Elementary Schools / Northeast Elementary
8/27/2009

Report Section	ID	Cost Description	Lifespan (EUL)	Observed Age (EAge)	Remaining Life (RUL)	Quantity	Unit	Unit Cost *	Subtotal	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Deficiency Repair Estimate
7.1	1237	Single zone rooftop unit 12.5-ton	15	10	5	1	EA	$23,360.40	$23,360						$23,360					**$23,360**
7.1	1097	Single zone rooftop unit 3-ton	15	10	5	1	EA	$7,906.50	$7,907						$7,907					**$7,907**
7.1	1099	Single zone rooftop unit 3-ton	15	7	8	2	EA	$7,906.50	$15,813									$15,813		**$15,813**
7.1	1238	Single zone rooftop unit 4-ton	15	11	4	2	EA	$8,856.54	$17,713					$17,713						**$17,713**
7.1	1236	Single zone rooftop unit 6-ton	15	10	5	1	EA	$12,331.62	$12,332						$12,332					**$12,332**
7.1	5380	Capital Plan - Pneumatic Control to DDC Upgrade	15	15	0	88445	SF	$3.41	$302,004	$302,004										**$302,004**
7.2	1113	Replace flush valve & water closet	25	23	2	37	EA	$1,123.59	$41,573			$41,573								**$41,573**
7.2	1114	Replace urinal	35	33	2	10	EA	$1,277.51	$12,775			$12,775								**$12,775**
7.2	5393	Capital Plan - Install outdoor drinking fountain, pedestal type	0	0	0	4	EA	$2,451.56	$9,806	$9,806										**$9,806**
7.2	1115	Replace drinking fountain	10	8	2	12	EA	$1,505.70	$18,068			$18,068								**$18,068**
7.2	4535	Replace 2-inch copper pipe	25	23	2	600	LF	$62.31	$37,384			$37,384								**$37,384**
7.2	5394	Capital Plan - Install one inch copper pipe for drinking fountain	0	0	0	550	LF	$31.63	$17,394	$17,394										**$17,394**
7.2	1104	Replace cast iron pipe 6"	40	38	2	400	LF	$71.09	$28,436			$28,436								**$28,436**
7.2	5311	Asbestos removal, pipe fittings, 1 to 4 inch dia	0	0	0	1	EA	$3,780.00	$3,780	$3,780										**$3,780**
7.3	1244	Replace water source unit heaters with fan 43.9 MBH	30	25	5	10	EA	$1,128.96	$11,290						$11,290					**$11,290**
7.3	1243	Replace UST, Steel, Fuel oil storage, 5,000 gallon	30	21	9	1	EA	$87,483.06	$87,483										$87,483	**$87,483**
7.4	5285	Capital Plan -Add Electrical Distribution for Classroom and Office Technology	20	20	0	88445	SF	$3.26	$288,631	$288,631										**$288,631**
7.4	6072	Upgrade lighting for energy conservation	0	0	0	88445	SF	$5.92	$523,771	$523,771										**$523,771**
7.4	5284	Capital Plan - Clock and Bell System	15	15	0	75	EA	$1,244.07	$93,306	$93,306										**$93,306**
7.4	5283	Capital Plan - Communications & Security including alarms,internet wiring, communication systems and emergency lighting	15	15	0	88445	SF	$3.15	$278,602	$278,602										**$278,602**
7.4	6439	Install Diesel Generator 150KW	25	24	1	1	EA	$103,899.60	$103,900		$103,900									**$103,900**
7.4	1266	School Stage Audio Equipment	15	9	6	1	EA	$5,386.50	$5,387							$5,387				**$5,387**
7.4	1260	Replace stage lighting equipment	15	13	2	1	EA	$19,026.00	$19,026			$19,026								**$19,026**
7.6	4527	New Kitchen Hood and Ansul System, 7' long	25	25	0	1	EA	$30,125.34	$30,125	$30,125										**$30,125**
7.6	5389	Capital Plan - Smoke Detector Replacement	15	15	0	140	EA	$279.12	$39,076	$39,076										**$39,076**
7.6	1119	Fire alarm panel addressable, with voice	15	6	9	1	EA	$15,264.77	$15,265										$15,265	**$15,265**
8.1	1135	Paint interior walls, CMU,including surface prep	7	4	3	30000	SF	$1.12	$33,642				$33,642							**$33,642**
8.1	1138	Replace Terrazzo	0	74	0	10	CSF	$2,317.77	$23,178	$23,178										**$23,178**
8.1	1136	Replace acoustical ceiling tile system, fire rated,including demo	20	18	2	450	CSF	$627.48	$282,366			$282,366								**$282,366**
8.1	4523	Remove and replace institutional cabinet & Counter up to 5'	30	27	3	46	EA	$2,252.88	$103,632				$103,632							**$103,632**
8.1	4508	Horizontal Blinds aluminum 1" slats	7	5	2	9000	SF	$6.49	$58,401			$58,401							$58,401	**$116,802**
8.1	4531	Asbestos floor tile and mastic removal	0	0	0	36000	SF	$3.15	$113,400	$113,400										**$113,400**
8.2	1125	Replace Reach in Freezer 68 CF	15	7	8	1	EA	$9,179.86	$9,180									$9,180		**$9,180**
8.2	1126	Replace Reach in refrigerator 68 CF	15	8	7	2	EA	$8,884.56	$17,769								$17,769			**$17,769**
8.4	1112	Replace enamel steel wall hung lavatory and faucet	40	38	2	38	EA	$784.48	$29,810			$29,810								**$29,810**
Totals, Unescalated										**$2,829,211**	**$570,355**	**$2,415,230**	**$722,369**	**$39,376**	**$68,213**	**$6,080**	**$70,530**	**$88,121**	**$161,149**	**$6,970,634**
Soft Costs:																				
Architectural/Consultant Fees (10.0%)										**$282,921**	**$57,035**	**$241,523**	**$72,237**	**$3,938**	**$6,821**	**$608**	**$7,053**	**$8,812**	**$16,115**	**$697,063**
General Requirements (Bonds, Insurance, GC/CM Mark-up) (10.0%)										**$282,921**	**$57,035**	**$241,523**	**$72,237**	**$3,938**	**$6,821**	**$608**	**$7,053**	**$8,812**	**$16,115**	**$697,063**
Prevailing Wage/Labor Compliance (5.0%)										**$141,461**	**$28,518**	**$120,762**	**$36,118**	**$1,969**	**$3,411**	**$304**	**$3,527**	**$4,406**	**$8,057**	**$348,532**
Contingency (5.0%)										**$141,461**	**$28,518**	**$120,762**	**$36,118**	**$1,969**	**$3,411**	**$304**	**$3,527**	**$4,406**	**$8,057**	**$348,532**
Location Factor (1.11)										**$302,726**	**$61,028**	**$258,430**	**$77,294**	**$4,213**	**$7,299**	**$651**	**$7,547**	**$9,429**	**$17,243**	**$745,858**
Totals, Escalated (see inflation table above)										**$3,980,700**	**$826,564**	**$3,640,183**	**$1,132,289**	**$64,806**	**$117,880**	**$11,031**	**$134,379**	**$176,289**	**$338,502**	**$10,422,623**

Replacement Reserves Report
Elementary Schools / Northeast Elementary / Annex Building, Elementary Schools / Northeast Elementary
8/27/2009
* Markup has been included in unit costs.

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CERTIFICATION

EMG has completed a Comprehensive Facilities Needs Assessment of the subject property, Northeast Elementary School, located at 82 Scofieldtown Road, in Stamford, Connecticut.

The conclusions and recommendations presented in this report are based on the brief review of the plans and records made available to our Project Manager during the site visit, interviews of available Physical Plant personnel familiar with the Property, appropriate inquiry of municipal authorities, our Project Manager's walk-through observations during the site visit, and our experience with similar properties.

No testing, exploratory probing, dismantling or operating of equipment or in depth studies were performed unless specifically required under Section 2 of this report. This evaluation did not include engineering calculations to determine the adequacy of the Property's original design or existing systems. Although walk-through observations were performed, not all areas were observed (See Section 4.2 for areas observed). There may be defects in the Property, which were in areas not observed or readily accessible, may not have been visible, or were not disclosed by the Physical Plant personnel when questioned. The report describes property conditions at the time that the observations and research were conducted.

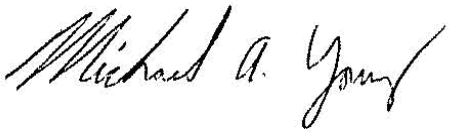
This report has been prepared on behalf of and exclusively for the use of City of Stamford, Connecticut Public Schools for the purpose stated within Section 2.0 of this report. The report, or any excerpt thereof, shall not be used by any party other than City of Stamford, Connecticut Public Schools or for any other purpose than that specifically stated in our agreement or within Section 2.0 of this report without the express written consent of EMG.

Any reuse or distribution of this report without such consent shall be at City of Stamford Public Schools and the recipient's sole risk, without liability to EMG.

Any questions regarding this report should be directed to Bill Champion at bchampion@emgcorp.com or at (800) 733-0660, Extension 6234.

Prepared by: Jill Orlov and Kevin Lantry,
Field Observers

Reviewed by:



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1. EXECUTIVE SUMMARY

1.1. SUMMARY OF FINDINGS

The property information is summarized in the table below. More detailed descriptions may be found in the various sections of the report and in the Appendices.

Property Information	
Address:	82 Scofieldtown Road, Stamford, Fairfield County, Connecticut, 06903
Year constructed:	1966 – Original building 1999 - 2 modular classrooms and Media Center Addition 2004 - Additional 2 modular classrooms 1940s – Annex Building
Current owner of property:	City of Stamford
School occupying building:	Northeast Elementary School
Current usage of property:	Elementary School
Management Point of Contact:	Domenic Tramontozzi and Robert Gerbert, Jr.
Acreage:	12.22 acres
Gross floor area:	88,445 Square Feet
Number of buildings:	One plus an annex building with attached garage
Number of stories:	Two and single-story
Parking type and number of spaces:	136 spaces in open lots
Building construction:	Masonry bearing walls and steel columns with steel frame roofing with gypsum roof decks.
Bay Column Spacing:	Approximately 23 feet
Interior vertical clearance:	Approximately 9 Feet
Roof construction:	Flat roofs -single ply roofing over original school and modular classrooms. Built-up membrane over Media Center.
Exterior Finishes:	Brick veneer with stone veneer accents and painted concrete masonry units (CMU) on original school. Painted wood siding and wood trim on modular classrooms Exterior insulation and finish system (EIFS), stone and painted concrete masonry units (CMU) on Media Center.
Heating and/or Air-conditioning:	Central heating system with two boilers supplying individual, finned-tube, radiator units and unit ventilators. Individual, window-mounted, air-conditioning equipment. Packaged rooftop units for modular classrooms and media center.

Property Information	
Fire and Life/Safety:	Fire alarm system, Security system, Fire sprinklers, hydrants, smoke detectors, alarms, and extinguishers.
Dates of visit:	February 17 and 18, 2009
Point of Contact (POC):	Ethan Margolis, Principal Michael Foster, Acting Head Custodian

Generally, the property appears to have been constructed within industry standards in force at the time of construction. The property appears to have been maintained in recent years and is in fair overall condition.

According to City of Stamford Public Schools personnel, the property has had a limited capital improvement expenditure program over the past three to seven years, primarily consisting of connecting to the public sewer system and roof finish replacement in 2002. Supporting documentation was not provided in support of these claims, but some of the work is evident.

1.2. FOLLOW-UP RECOMMENDATIONS

The following issues require additional study:

- The mobility impaired accessibility into and throughout the school, to the Annex Building and to the playgrounds is poor or non-existent. The only accessible entrance is at the Media Center. The lower floor of the school is not accessible without the addition of an elevator. Restrooms are not accessible. An accessibility specialist must be retained to analyze the existing condition, provide recommendations and, if necessary, estimate the scope and cost of any required repairs. The estimated cost to retain a specialist is included in the Replacement Reserves Report. Separate itemized costs for accessibility improvements are included in the Replacement Reserves Report.
- Evidence of significant erosion was observed along the south side of the building, near the ball fields and paved athletic areas. The maintenance staff also reported significant drainage problems such as ponding and overflow onto the pedestrian steps at the south elevation of the building. Additional drainage problems were reported at the west side of the building. The steep slope adjacent to the playground appears to be causing ponding along the west wall and subsequent flooding in the classrooms. It is recommended that a drainage study be performed in order to determine the proper corrective action for the drainage issues and recommend any necessary repairs in the area. The cost of the drainage study is included the Replacement Reserves Report. The costs of the corrective action and recommended repairs are to be determined by the study and are not included in this report.
- Isolated areas of the concrete masonry unit bearing walls are in poor condition. Stair step cracking and cracks through the concrete masonry units were observed in the Media Center, the upper level mechanical room and on the exterior brick veneer at the southeast corner near the transformer. An engineering professional must be retained to analyze the existing condition, provide recommendations and, if necessary, estimate the scope and cost of any required repairs. The estimated cost to retain an engineering professional is included in the Replacement Reserves Report. The cost for any possible subsequent repairs is not included in the cost tables. See Section 6.1 and 6.2 for additional information.
- Based on the numerous locations of isolated suspect mold, a mold assessment should be conducted by a health and safety professional with experience performing microbial investigations. In addition, the source of this moisture should be addressed in order to prevent future mold problems. The estimated costs of corrective action shall be determined as part of the mold assessment recommended. See Section 3.3 for further information. The estimated costs are included in the Replacement Reserves Report.

- The electrical power is reported to be inadequate for the property's demands. Administrative staff reported that the addition of computers has been limited due to inadequate electrical capacity. The maintenance staff reported frequent tripping of circuit breakers. It is recommended that the electrical system be upgraded to provide adequate capacity for the current building requirements. Prior to this work being done, an electrical survey and design study will be required to determine the required capacity and recommended upgrades. The estimated cost of the study is included in the Replacement Reserves Report. The costs of the upgrades are to be determined by the study and are not included in the Replacement Reserves Report.

1.3. OPINIONS OF PROBABLE COST

The estimates for the repair and capital reserves items noted within this PCR are attached to the front of this report, following the cover page.

These estimates are based on invoices and/or bid documents provided by the Owner and/or facility, construction costs developed by construction resources such as *R.S. Means* and *Marshall and Swift,* EMG's experience with past costs for similar properties, city cost indexes, and assumptions regarding future economic conditions.

1.3.1. Methodology

Based upon our observations, research and judgment, along with consulting commonly accepted empirical Expected Useful Life (EUL) tables; EMG will render our opinion as to when a system or component will most probably necessitate replacement. Accurate historical replacement records provided by the facility manager are typically the best source for this data. Exposure to the weather elements, initial system quality and installation, extent of use, the quality and amount of preventive maintenance exercised are all factors that impact the effective age of a system or component. As a result, a system or component may have an effective age that is greater or less than its actual age. The Remaining Useful Life (RUL) of a component or system equals the EUL less its effective age.

In addition to determining the EUL and the RUL for each major prime system and building component, EMG will categorize each cited deficiency within one of the following four Priorities:

Priority 1: Currently Critical (Immediate)

Items in this category require immediate action and include corrective measures to:

- Return a building component to normal operation
- Stop accelerated deterioration
- Replace items that have reached or exceeded their useful service life
- Correct a cited safety hazard

Priority 2: Potentially Critical (Years 1-2)

Items in this category require action in the next 1-2 years and include corrective measures to:

- Return a building component to normal operation
- Stop rapid deterioration
- Correct potential life safety issues and/or code hazards
- Correct building components that are experiencing Intermittent operations

Priority 3: Necessary – Not Yet Critical (Years 3-5)

Items in this category require appropriate attention to preclude predictable deterioration, potential downtime, additional damage and higher costs to remediation if deferred further.

Priority 4: Recommended (Years 6-10)

Items in this category represent a sensible improvement to the existing conditions. These are not required for the most basic function of the facility; however, Priority 4 projects will improve overall usability and/or reduce long-term maintenance costs.

Priority 5: Recommended (Years 11+)

Items in this category represent anticipated required capital expenditures due to Estimated Useful Life (EUL) only. These systems are generally in good operational condition, but will require replacement due to the system(s) finite life expectancy.

In addition to identifying and prioritizing all of the observed deficiencies, EMG will also provide the physical conditions of building components. The physical condition is typically defined as being in one of four categories: Good, Fair, Poor and Not Applicable. For the purposes of our assessments, the following definitions are used:

Good (G) =	Component or system is sound and performing its function. However, it may show signs of normal wear and tear, commensurate with its age; some minor remedial work may be required.
Fair (F) =	Component or system is performing adequately at this time but exhibits deferred maintenance, evidence of previous repairs, workmanship not in compliance with commonly accepted standards, is obsolete, or is approaching the end of its typical Expected Useful Life. Repair or replacement is required to prevent further deterioration, restore it to good condition, prevent premature failure, or to prolong its Expected Useful Life. Component or system exhibits an inherent deficiency of which the cost to remedy is not commensurate with the deficiency but is best remedied by a program of increased preventative maintenance or periodic repairs.
Poor (P) =	Component or system has either failed or cannot be relied upon to continue performing its original function as a result of: having realized or exceeded its typical expected useful life, excessive deferred maintenance, state of disrepair, an inherent design deficiency or workmanship. Present condition could contribute or cause the deterioration of contiguous elements or systems. Repair or replacement is required.
N/A =	Not Applicable

2. PURPOSE AND SCOPE

2.1. PURPOSE

The purpose of this report is to assist the Client in evaluating the physical aspects of this property and how its condition may affect the Client's financial decisions over time. For this Comprehensive Facilities Needs Assessment, the major independent building components were observed and their physical conditions were evaluated in accordance with ASTM E2018-01. These components include the site and building exteriors and representative interior areas. The estimated costs for repairs and/or capital reserve items are included in the enclosed cost tables. All findings relating to these opinions of probable costs are included in the relevant narrative sections of this Report.

The Physical Plant staff and code enforcement agencies were interviewed for specific information relating to the physical property, code compliance, available maintenance procedures, available drawings, and other documentation.

2.2. SCOPE

ASTM E2018-01 requires that any deviations from the Guide be so stated within the report. EMG's probable cost threshold limitation is reduced from the Guide's $3,000 to $1,000, thus allowing for a more comprehensive assessment on smaller scale properties. Therefore, EMG's opinions of probable costs that are individually less than a threshold amount of $1,000 are typically omitted from this PCR. However, comments and estimated costs regarding identified deficiencies relating to life, safety or accessibility items are included regardless of this cost threshold.

In lieu of providing written record of communication forms, personnel interviewed from the facility and government agencies are identified in Section 2.3. Relevant information based on these interviews is included in Sections 2.3, 3.1, and other applicable report sections.

The assessment team will visit each identified property to evaluate the general condition of the building(s) and site improvements, review available construction documents in order to familiarize themselves with and be able to comment on the in-place construction systems, life safety, mechanical, electrical and plumbing systems, and the general built environment. The assessment team will conduct a walk-through survey of the building(s) in order to observe building systems and components, identify physical deficiencies and formulate recommendations to remedy the physical deficiencies.

- As a part of the walk-through survey, the assessment team will survey 100% of the facility's interior. In addition, EMG will survey the exterior of the properties including the building exterior, roofs, and sidewalk/pavement.
- The assessment team will interview the building maintenance staff so as to inquire about the subject property's historical repairs and replacements and their costs, level of preventive maintenance exercised, pending repairs and improvements, and frequency of repairs and replacements.
- The assessment team will develop opinions based on their site assessment, interviews with City of Stamford, Connecticut Public Schools building maintenance staff and experience gained on similar properties previously evaluated. The assessment team may also question others who are knowledgeable of the subject property's physical condition and operation or knowledgeable of similar systems to gain comparative information to use in evaluation of the subject property.

- The assessment team may review documents and information provided by City of Stamford, Connecticut Public Schools building maintenance staff that could also aid the knowledge of the subject property's physical improvements, extent and type of use, and/or assist in identifying material discrepancies between reported information and observed conditions.
- EMG will provide City of Stamford, Connecticut Public Schools with Sustainable Alternative Recommendations that will concentrate on Utility Savings Potential, Health and Environmental Benefits.
- EMG will provide an Energy Benchmarking Analysis to establish energy performance with relation to similar types of buildings.

2.3. PERSONNEL INTERVIEWED

The following personnel from the facility and government agencies were interviewed in the process of conducting the Comprehensive Facilities Needs Assessment:

Name and Title	Organization	Phone Number
Mr. Ethan Margolis Principal	Northeast Elementary School	203.977.4469
Mr. Michael Foster Acting Head Custodian	Northeast Elementary School	203.977.4469
Mr. Gus Burreisci Project Manager	City of Stamford Public Schools	203.223.8118
Mr. Tony Olive Fire Marshal	Turn of River	203.322.0943
Administrative Assistant	Northeast Health Department	

The Comprehensive Facilities Needs Assessment was performed with the assistance of Ethan Margolis, Principal and Michael Foster, Acting Head Custodian, Northeast Elementary School, the on-site Points of Contact (POC), who were cooperative and provided information that appeared to be accurate based upon subsequent site observations. The on-site contacts are very knowledgeable about the subject property and answered most questions posed during the interview process. The POC's' management involvement at the property has been for the past ten years and approximately six months, respectively.

2.4. DOCUMENTATION REVIEWED

Prior to the Comprehensive Facilities Needs Assessment, relevant documentation was requested that could aid in the knowledge of the subject property's physical improvements, extent and type of use, and/or assist in identifying material discrepancies between reported information and observed conditions. The review of submitted documents does not include comment on the accuracy of such documents or their preparation, methodology, or protocol. The following documents were provided for review while performing the Comprehensive Facilities Needs Assessment:

- Site plan
- Floor plans
- Construction Plans
- Capital improvement summary

A prior Classroom Space Utilization Report was reviewed while performing the Comprehensive Building Condition Assessment. The report was prepared by Stanton Leggett and Associates and is dated September 14, 2001. Property condition and/or factual information discrepancies between the prior report and actual conditions are readily apparent based on the seven past years of additions and relocations of some classrooms and offices.

No other documents were reviewed. The Documentation Request Form is provided in Appendix E.

2.5. PRE-SURVEY QUESTIONNAIRE

A Pre-survey Questionnaire was sent to the POC prior to the site visit. The questionnaire is included in Appendix E. Information obtained from the questionnaire has been used in preparation of this Facilities Needs Assessment.

3. ACCESSIBILITY, CODE AND MOLD

3.1. ADA ACCESSIBILITY

Generally, Title III of the Americans with Disabilities Act (ADA) prohibits discrimination by entities to access and use of "areas of public accommodations" and "commercial facilities" on the basis of disability. Regardless of its age, these areas and facilities must be maintained and operated to comply with the Americans with Disabilities Act Accessibility Guidelines (ADAAG).

Buildings completed and occupied after January 26, 1992 are required to comply fully with the ADAAG. Existing facilities constructed prior to this date are held to the lesser standard of compliance to the extent allowed by structural feasibility and the financial resources available. As an alternative, a reasonable accommodation pertaining to the deficiency must be made.

During the Comprehensive Building Condition Assessment, a limited visual observation for ADA accessibility compliance was conducted. The scope of the visual observation was limited to those areas set forth in EMG's *Abbreviated Accessibility Checklist* provided in Appendix D of this report. It is understood by the Client that the limited observations described herein does not comprise a full ADA Compliance Survey, and that such a survey is beyond the scope of EMG's undertaking. Only a representative sample of areas was observed and, other than as shown on the Abbreviated Accessibility Checklist, actual measurements were not taken to verify compliance. ADA compliance issues inside spaces are not within the scope of the survey.

The facility does not appear to be accessible with Title III of the Americans with Disabilities Act. Elements as defined by the ADAAG that are not accessible as stated within the priorities of Title III, are as follows:

Parking

- Adequate number of designated parking stalls and signage for cars are not provided. The two existing stalls are too steep to be accessible. Provide additional stalls to right of main access aisle and ensure compliant slope of existing designated stalls and access aisles. Two additional standard stalls are required. Redirect all access routes toward the only accessible route which is into the Media Center.
- Adequate number of designated parking stalls and signage for vans are not provided. One required.
- Access aisles adjacent to parking spaces, crossing hazardous vehicle areas, from main roadways or public transportation stops to the building sidewalks and entrances are not provided.
- Signage directing to accessible parking or accessible building entrances to the facility are not provided. The only accessible entrance is into the Media Center. Directional signage at each parking lot.

Paths of Travel

- Obstacle or protrusion from wall impeding access. Drinking fountains protrude from walls. Five locations.
- Existing carpeting is not securely attached. The front lobby has loose carpets that create potential tripping hazards.
- Compliant signage indicating accessible entrances and general information is not provided. Approximately 10 locations.
- Stair handrails do not extend beyond the top and bottom risers. Six locations.
- Stair handrails and guardrails are not compliant based on heights and openings at the interior or exterior stairs including site stairs and retaining wall. See Section 6.5 for further information.
- Add visual alarm to existing audible fire alarm. Five locations.
- Install cup dispenser at an existing non-conforming water fountain. Twelve locations.

- Elevator required for access to lower level. Possibly feasible to add exterior shaft at courtyard.
- Playground is not accessible due to grade. Study to determine most feasible solution. Cost table includes a budgetary allowance for an exterior vertical wheelchair lift.

Restrooms

- Existing restroom doors are not wide enough to accommodate wheelchair access, and clear floor space beside the door swing is lacking. Complete redesign is required at all restrooms in the original building.

A full ADA Compliance Survey may reveal additional aspects of the property that are not in compliance.

Corrections of these conditions should be addressed from a liability standpoint, but are not necessarily code violations. The Americans with Disabilities Act concerns civil rights issues as they pertain to the disabled and its Accessibility Guidelines are not a construction code, although many local jurisdictions have adopted them as such. The estimated costs to address the achievable items noted above are included in the Replacement Reserves Report.

3.2. CODE INFORMATION AND FLOOD ZONE

According to Tony Olive of the Turn of River Fire Department, there are no outstanding fire code violations on file. The most recent inspection was conducted by the fire department in August 2008. The fire department inspects the property on an annual basis.

A message has been left with the Health Department concerning the well and former septic system. Pertinent information will be forwarded upon receipt.

According to the Flood Insurance Rate Map, published by the Federal Emergency Management Agency (FEMA) and dated November 17, 1993, the property is located in Zone X, defined as areas outside the one percent annual chance floodplain, areas of one percent annual chance sheet flow flooding where average depths are less than one foot, areas of one percent annual chance stream flooding where the contributing drainage area is less than one square mile, or areas protected from the one percent annual chance flood by levees. No Base Flood Elevations or depths are shown within this zone. Insurance purchase is not required in these zones. In communities that participate in the NFIP, flood insurance is available to all property owners and renters in this zone.

3.3. MOLD

EMG performed a limited visual assessment for the presence of mold, conditions conducive to mold, and evidence of moisture in readily accessible interior areas of the property.

No suspect mold was observed, but moisture was observed in the following areas:

- Media Center restroom ceiling. The area affected by the moisture was approximately five square feet in size and appears to be from an active roof leak.
- Media Center storage room ceiling. The area affected by the moisture was approximately six square feet in size and appears to be from an active roof leak.
- Media Center Teachers' Work Room ceiling. The area affected by the moisture was approximately one square foot in size and appears to be from an active roof leak.
- Media Center office. The area affected by the moisture was approximately 25 square feet in size. The area has been repainted on the interior but reoccurs; therefore, it appears that the water is infiltrating from the exterior wall or roof.

- Below grade storage areas. The area affected by the moisture was approximately 20 square feet in size and appears to be from water infiltration against the perimeter of the front. The area will require resloping on the exterior.

Suspect mold growth or moisture was observed in the following area:

- Media Center server room ceiling. The area affected by the moisture was approximately four square feet in size.

Prior to remediation by personnel specifically trained in the handling of hazardous materials, a mold assessment should be conducted by a health and safety professional with experience performing microbial investigations. In addition, the source of this moisture should be addressed in order to prevent future mold problems. The estimated costs of corrective action shall be determined as part of the mold assessment recommended. See Section 1.2 for follow up recommendations and costs.

Additional discussion and description of the correction efforts required with regard to the moisture infiltration issues are discussed in Sections 6.3 and 6.8 of this report, and associated costs are included within those sections.

4. EXISTING BUILDING EVALUATION

4.1. ROOM TYPES

The following table identifies the reported room types and mix at the subject property.

Room Types and Mix			
Quantity	**Type**	**Vacant Rooms**	**Down Rooms**
53	Classroom	0	0
8	Office	0	0
4	Mechanical	0	0
10	Storage	0	0
1	Gymnasium	0	0
1	Gymnasium/Cafeteria	0	0
1	Auditorium	0	0
1	Media Center	0	0
78	**TOTAL**	**0**	**0**

4.2. ROOMS OBSERVED

EMG observed 100 percent of the building in order to gain a clear understanding of the property's overall condition. Other areas accessed included the exterior of the property, a representative sample of the roofs, and the interior common areas.

All areas of the property were available for observation during the site visit.

A "down room" or area is a term used to describe a non-usable room or area due to poor conditions such as fire damage, water damage, missing equipment, damaged floor, wall or ceiling surfaces, or other significant deficiencies. According to the POC, there are no down rooms or areas. No down rooms or areas were observed during the site visit.

5. SITE IMPROVEMENTS

5.1. UTILITIES

The following table identifies the utility suppliers and the condition and adequacy of the services.

Site Utilities		
Utility	**Supplier**	**Condition and Adequacy**
Sanitary sewer	City of Stamford	Good
Storm sewer	City of Stamford	Good
Domestic water	Aquarian	Good
Electric service	CLMP	Fair
Natural gas service	Yankee Gas	Good

Observations/Comments:

- The water, sewer, and natural gas services appear to be adequate for the property.
- The electrical service is reportedly inadequate for the property. Refer to section 7.4 for further details regarding this issue.
- See Section 7.1 for descriptions and comments regarding the underground fuel storage tank.
- See Section 7.4 for descriptions and comments regarding the emergency generator.

5.2. PARKING, PAVING, AND SIDEWALKS

The main entrance drive is located along Scofieldtown Road, on the north side of the property. An additional entrance drive is accessed from High Ridge Road, at the east side of the property. The parking areas, drive aisles, and service drives are paved with asphalt.

Based on a physical count, parking is provided for approximately 136 cars. The parking ratio is 1.54 spaces per thousand square feet of floor area. The main parking lot is located at the north side of the building and contains 79 parking spaces, along with three handicapped-accessible stalls. The east parking lot is located on the southeast side of the school building and contains 57 parking spaces. All of the parking stalls are located in open lots. There are a total of three handicapped-accessible parking stalls, one of which is van-accessible.

Additional paved areas are located at the south end of the property and are used as outdoor athletic areas. The north section serves as a running track and the south section serves as a basketball court. Both sections are paved with asphalt. Portions of the playground areas at the west side of the property are also paved with asphalt.

The sidewalks along the front of the school building and near the parking lots are constructed of cast-in-place concrete. Cast-in-place concrete steps with metal handrails are located at grade changes near the east parking lot, at the south side of the building and near the playground areas at the west side of the property. An asphalt paved walking path is located along the north property line and extends along the west side of the entry drive from Scofieldtown Road to the Media Center entrance. The walking path continues along the west side of the school. Additional sections of asphalt paved walking paths are located along the service drive at the northeast corner of the building and in front of the annex building at the north side of the property.

The curbs are constructed of a combination of cast-in-place concrete curbing and extruded asphalt curbing placed at the edge of the pavement.

Observations/Comments:

- The asphalt pavement in the parking lots is in good condition with minor cracking observed. In order to maximize the pavement life, pothole patching, crack sealing, seal coating, and restriping of the asphalt parking areas will be required during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The parking lots will also require an overlay with new asphalt paving during the evaluation period in order to maintain the integrity of the overall pavement system. The estimated cost of this work is included in the Replacement Reserves Report.
- The asphalt pavement in the athletic areas and playground areas is in good to fair condition with minor cracking and isolated damage observed. Surface deterioration in the form of pot holes and cracking was observed in the service drive at the south end of the athletic areas. The damaged areas of paving must be cut and patched in order to maintain the integrity of the overall pavement system. The estimated cost of this work is included in the Replacement Reserves Report.
- Additional minor repairs, including patching, crack sealing and seal coating, of the paved athletic areas and playground areas will be required during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The asphalt paved walking paths are in fair condition. Significant cracking was observed in the walking path near the northeast corner of the building. Minor cracking was observed along the remainder of the asphalt paths. The damaged area near at the northeast corner of the building will require repairs. The estimated cost of this work is included in the Replacement Reserves Report.
- Additional minor repairs, including patching, crack sealing and seal coating, of the asphalt walking paths will be required during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The extruded asphalt curbs are in fair to poor condition. Significant areas of heavy damage were observed around the parking areas. The damaged sections of curbing will require replacement. The estimated cost of this work is included in the Replacement Reserves Report.
- The concrete curbs throughout the property are in good condition. Routine cleaning and maintenance will be required during the evaluation period.
- The concrete sidewalks throughout the property are in good to fair condition. Minor tripping hazards due to vertical displacement of the concrete were observed in the sidewalks at the front of the school building. It is recommended that the tripping hazards be repaired. The estimated cost of this work is included in the Replacement Reserves Report.
- The concrete steps were in good to fair condition. Isolated damage was observed on the steps near the playground areas and at the east parking lot. The damaged areas will require concrete repairs or replacement. The estimated cost of this work is included in the Replacement Reserves Report.

- The metal handrails were in generally good to fair condition. Painting is considered to be routine maintenance. The handrails at the steps near the east parking lot did not extend to the bottom of the steps. This creates a possible safety hazard. It is recommended that the handrail be extended to the bottom of the steps. In addition, the handrails will require replacement at the playground steps. The estimated cost of this work is included in the Replacement Reserves Report.

Sustainable Recommendations:

- A sustainable recommendation for asphalt is to use recycled asphalt pavement (RAP) from a local source. This will reduce carbon emissions from production and transportation of new asphalt material.
- A sustainable recommendation for concrete is to use recycled concrete aggregate (RCA) from a local source. This will reduce carbon emissions from production and transportation of new concrete material.

5.3. DRAINAGE SYSTEMS AND EROSION CONTROL

Storm water from the roofs, landscaped areas, and paved areas flows into on-site inlets and catch basins with underground piping connected to the municipal storm water management system.

Observations/Comments:

- Evidence of significant erosion was observed along the south side of the building, near the ball fields and paved athletic areas. The maintenance staff also reported significant drainage problems such as ponding and overflow onto the pedestrian steps at the south elevation of the building. Additional drainage problems were reported at the west side of the building. The steep slope adjacent to the playground appears to be causing ponding along the west wall and subsequent flooding in the classrooms. It is recommended that a drainage study be performed in order to determine the proper corrective action for the drainage issues and recommend any necessary repairs in the area. The cost of the drainage study is included in section 1.2. The costs of the corrective action and recommended repairs are to be determined by the study and are not included in this report.
- Minor erosion was observed at the front elevation of the school building, causing the ground to slope toward the base of the building. This may cause water damage to the foundation walls. It is recommended that fill dirt be added and the area be regraded to obtain the required slope for proper drainage away from the building. The estimated cost of this work is included in the Replacement Reserves Report.

Sustainable Recommendations:

- There are no sustainable recommendations for the drainage systems.

5.4. TOPOGRAPHY AND LANDSCAPING

The property slopes moderately downward from the west side of the property toward the east property line. The property slopes steeply from the playing fields on the south and playgrounds on the west towards the school building.

The landscaping consists of trees, shrubs, and grasses. Flowerbeds are located along the front of the building.

Surrounding properties include a private children's school to the northwest, Bethany Church, Stamford Historical Society and a commercial development to the east, and single-family residential developments to the north, south, and west.

A reinforced concrete retaining wall is located at the grade change between the paved athletic areas and the south elevation of the building. Painted metal railings are mounted on top of the retaining wall.

Observations/Comments:

- The topography and adjacent uses do not appear to present conditions detrimental to the property.
- The landscape materials are in good condition and will require routine maintenance during the evaluation period.
- The retaining wall is in fair condition. Cracking was observed in the concrete along the top and face of the retaining wall. It is recommended that the cracks be repaired and that the retaining wall be monitored for movement or stress cracking. The estimated cost of the repair work is included in the Replacement Reserves Report.

Sustainable Recommendations:

- There are no sustainable recommendations for landscaping.

5.5. GENERAL SITE IMPROVEMENTS

Property identification is provided by a post mounted sign adjacent to the main entrance drive from Scofieldtown Road. The school name is displayed on the front exterior elevation.

Site lighting is provided by property-owned, metal, streetlight standards. There are two light standards located in the main parking area. Site lighting is provided in the east parking lot by a single, wood, streetlight standard. The site light fixtures are controlled by timers.

Exterior building illumination is provided by surface-mounted light fixtures on the exterior walls. Recessed and surface-mounted light fixtures are located in the exterior soffits.

Two playground areas are located at the west side of the property. The south playground contains a jungle-gym structure and a swing set. The north playground contains a jungle-gym structure and two swing sets. Basketball goals are located in the south athletic area and in the south playground. The paved sections of the playgrounds and athletic areas are described in Section 5.2.

Two ball fields are located in the southwest corner of the property. The ball fields have compacted dirt infields and grass outfields. The backstop and line fences are constructed of chain link fencing with metal posts. The benches are constructed of metal and the bleachers are constructed wood.

Perimeter fencing is located along the east, west, and south property lines. Interior fencing is located around the paved athletic areas and the playground areas. The site fencing is constructed of chain link with metal posts.

Dumpsters are located in the parking areas and are placed on the asphalt paving. Two of the dumpsters are placed on a concrete pad. The dumpsters are not enclosed.

Observations/Comments:

- The property identification signs are in good condition. Routine maintenance will be required during the evaluation period.
- The exterior site and building light fixtures are in good condition. Based on their estimated Remaining Useful Life (RUL), the light standards will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- According to the client provided JMOA five year capital plan, additional exterior lighting is needed along the rear walkway. A budgetary cost allowance for this work is included in the Replacement Reserves Report.

- The site fencing is in good to fair condition. Damaged sections of chain link fencing were observed along the south athletic areas and the playground areas. The damaged fence sections will require replacement. The estimated cost of this work is included in the Replacement Reserves Report.
- The playground equipment is in good condition and will require routine maintenance during the evaluation period.
- There are no drinking fountains near the playgrounds. It is recommended that drinking fountains be installed at each playground. The estimated cost of this work is included in the Replacement Reserves Report.
- The basketball goals are in fair condition. Routine maintenance will be required during the evaluation period.
- The ball fields are in fair to poor condition. Rutting and erosion were observed on the field surfaces and damage was observed to the fencing and backstops. The ball fields will require refurbishment including field repair and replacements of backstops, line fencing and bleachers. The estimated cost of this work is included in the Replacement Reserves Report.
- The dumpsters are owned and maintained by the refuse contractor. The dumpster slabs are in good condition and will require routine maintenance during the evaluation period.

Sustainable Recommendations:

- A sustainable recommendation for site lighting is to install photo sensors on exterior lighting. This will reduce energy consumption by reducing the time the exterior lights are used.
- A sustainable recommendation for fencing is to install recycled PVC fence sections during fencing replacement.
- A sustainable recommendation for playground equipment is to install recycled PVC and metal play structures at the time replacement.

6. BUILDING ARCHITECTURAL AND STRUCTURAL SYSTEMS

6.1. FOUNDATIONS

According to the structural drawings, the foundations consist of cast-in-place, concrete, perimeter, wall footings with concrete foundation walls supported concrete slabs on grade. The foundation systems include reinforced, concrete, column pads.

The subterranean portions of the lower floor have load-bearing, masonry, perimeter, retaining walls.

Observations/Comments:

- The foundations and footings could not be directly observed during the site visit. There is no evidence of movement that would indicate excessive settlement.
- The subterranean walls are in good to fair condition. There is evidence of movement and evidence of water infiltration in the storage areas below grade at the front of the building. See Sections 3.2 and 5.3 for further information and costs.

Sustainable Recommendations:

- There are no sustainable recommendations for foundations.

6.2. SUPERSTRUCTURE

The modular classrooms are wood-framed structures and have load-bearing, wood-framed exterior and interior walls supporting the roof. The raised floors are constructed with wood joists and are sheathed with plywood.

The majority of the building has load-bearing, concrete masonry unit (CMU), exterior and interior walls, and interior steel columns, all supporting the upper floor and roof. The upper floors have concrete-topped metal decks and are supported by steel beams and open-web, steel joists. The roofs are constructed of metal decks supported by steel beams and open-web, steel joists. The roof decks are topped with lightweight gypsum.

Observations/Comments:

- The superstructure is exposed in some locations, allowing for limited observation. Floors appear to be plumb, level, and stable. There are significant signs of deflection and movement in the walls. Minor stair step cracking was observed in the upper level mechanical room and in the Media Center. These cracks should be monitored for further settlement. See Section 1.2 for follow up recommendations.
- The steel beams are exposed to the exterior on the Media Center. Diligent painting of the exposed steel will be required during the evaluation period. Peeling paint and beginning signs of corrosion in isolated areas are already showing. Scraping and painting are required immediately and throughout the evaluation period. The cost of this work is relatively insignificant; therefore the work can be performed through routine maintenance.

Sustainable Recommendations:

- There are no sustainable recommendations for the superstructure.

6.3. ROOFING

The primary roofs are classified as flat roofs. The roofs are finished with a single ply membrane. The roofs are insulated with rigid insulation boards.

The exterior perimeter walls extend above the surface of the roofs, creating parapet walls on the upper slope of the roofs. The roof membrane turns up the sides of the parapet walls and terminates at sheet metal copings. The roofs have sheet metal flashing elements. Other perimeters of the roof end at metal drip edges.

Storm water is drained from the roofs by internal drains that discharge into the underground storm drainage system. The drains on the modular classrooms empty into sheet metal leaders and discharge into the underground storm drainage system.

The secondary roof over the Media Center is classified as a shed roof. This roof and the surrounding flat roof are finished with mineral-surfaced cap sheet over a multi-ply, bituminous, built-up membrane. The roofs have sheet metal flashing elements. The roofs are insulated with rigid insulation. The Media Center roof is constructed of steel beams supporting wood joists topped with plywood.

The sloped roof drains to a gutter and downspout emptying on the lower flat roof section. The flat section has a slight slope and storm water is drained to a gutter and downspout system. The parapet in this area is topped with the membrane that turns up the side, over the top and terminates at the vertical exterior perimeter with a metal drip edge.

There are no attics. The roof structures are exposed or are concealed above acoustic tile ceilings.

Curb-mounted skylights provide natural illumination in some of the upper floor classrooms and corridors.

Observations/Comments:

- The single ply roof finishes are approximately ten years old. A copy of the warranty was requested, but was not available. The roofs are maintained by the in-house maintenance staff or a contractor as required.
- The fields of the single ply flat roofs are in good to fair condition. Evidence of water and debris build up was observed near the existing roof drains. During the next roof membrane replacement, resloping of the tapered insulation will be required to promote better drainage.
- Some cracking was observed at the sealant at joints over the modular classroom area. These areas will require immediate repair. These costs are included in the roof leak repairs mentioned below.
- The fields of the built up flat and shed roofs are in fair to poor condition. Some bulges were observed. These areas have a higher potential of cracking and creating roof leaks. Alligator cracking was also observed. Flooding in the Media Center north area was reported to occur during heavy rains. These areas can be repaired in conjunction with the active roof leaks mentioned below.
- According to the POC and based on observations, there are active roof leaks. There is evidence of active roof leaks in the Media Center. See Section 3.2 for specific locations. These leaks will require immediate repair. The estimated cost of this work is included in the Replacement Reserves Report.
- EMG also conducted a separate roof assessment for this project. Wet areas of insulation requiring repair were found during infrared scans of the roof. Additionally recommendations for anticipated roof replacement work are also provided in this report. Estimated costs from this report recommended during the evaluation period are included in the Replacement Reserves Report. See EMG project number 88166.09R-002.244 for more detailed discussion and findings.

- EMG also recommends topping the parapet walls with metal copings instead of the roofing membrane since this type of membrane does not handle sharp edges and cracks may develop. Metal copings are a better performing material for this use. The estimated cost of this work is included in the Replacement Reserves Report.
- There is no evidence of roof deck or insulation deterioration. The roof substrate and insulation should be inspected during any future roof repair or replacement work.
- There is no evidence of fire retardant treated plywood (FRT) and, according to the POC, FRT plywood is not used.
- The roof flashings are in good condition and will require routine maintenance during the evaluation period.
- The parapet walls and copings are in good condition and will require routine maintenance during the evaluation period.
- Roof drainage appears to be adequate. Clearing and minor repair of drain system components should be performed regularly as part of the Physical Plant's routine maintenance program.
- The skylights are in good condition and will require routine maintenance during the evaluation period.

Sustainable Recommendations:

- A sustainable recommendation for roofing is to replace the built up roofing with a light colored single ply membrane.

6.4. EXTERIOR WALLS

The exterior walls of portions of the school are finished with brick masonry veneer and painted concrete masonry units (CMU). The soffits are concealed and are finished with stucco. Portions of the exterior walls are accented with stone veneer at the front.

The exterior walls are also clad with a metal-framed, curtain wall system. The curtain wall system is anchored to the superstructure. The curtain wall has horizontal bands of glazed, vision panels. The spandrels are finished with factory finished metal panels.

Horizontal and vertical bands of sealant are installed at glazing joints, spandrel panel joints, and at joints between finish transitions.

The exterior walls of the Media Center addition are clad with an exterior insulation and finish system (EIFS) on concrete masonry units (CMU). Portions of the exterior walls are accented with stone veneer at the front. The rear walls are finished with split faced CMU. The soffit is concealed with perforated metal panels.

The exterior walls of the modular classrooms are finished with painted T-1-11 engineered wood siding.

Building sealants (caulking) are located between dissimilar materials, at joints, and around window and door openings.

Observations/Comments:

- The exterior finishes are in good to fair condition. The EIFS on the Media Center has some impact damage from possible vandalism which will require repairs. Painting and patching will be required during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The curtain wall system is in fair condition. Based on its estimated Remaining Useful Life (RUL) and single paned units creating energy waste, the curtain wall and sealant system will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.

- The plaster soffit on the east side of the school was observed to have cracks and should be repaired immediately. The cost of this work is relatively insignificant; therefore the work can be performed through routine maintenance.
- The office in the Media Center was observed to have moisture penetrating the walls. It appears to be coming from the roof or the exterior wall. EMG recommends a moisture barrier application to the exterior side of the wall as a possible solution in addition to the roof repairs mentioned above. The estimated cost of this work is included in the Replacement Reserves Report.
- An isolated area of the metal soffit at the Media Center is missing and bird nesting material was observed. The nesting material should be carefully removed and the area needs to be sealed off with new metal soffit material. The cost of this work is relatively insignificant; therefore the work can be performed through routine maintenance.
- An electrical penetration at the upper wall above the roof at the Media Center has an exposed hole from where the sealant has been pulled out. New sealant is required. The cost of this work is relatively insignificant; therefore the work can be performed through routine maintenance.
- It was reported that the modular classrooms are to be removed. Preliminary drawings were observed for permanent classrooms to be built at this and other locations connected to the original school building. It was reported by City of Stamford personnel that the modular structures are approximately 30 years old. Permanent structures should be explored. No additional costs are provided for the removal of the modular classrooms or building of permanent structures at this time.
- Unless the modular classrooms are removed, the T-1-11 engineered wood siding will require replacement based on its Remaining Useful Life and condition. This material will swell and delaminate if exposed to water over time if not diligently painted and sealed. Bulging and separated joints were observed. The material should be replaced with better performing siding. The estimated cost of this work is included in the Replacement Reserves Report.
- The sealant throughout the school is in poor condition. It is cracked and dry rotted throughout the original portions of the building. The expansion joints at the Media Center are cracked and in fair to poor condition. Based on their estimated Remaining Useful Life (RUL) and current conditions, the sealant and expansion joints will require replacement early in the evaluation period. The sealant costs are covered within the curtain wall and window replacements. The estimated cost of this expansion joint work is included in the Replacement Reserves Report.
- Replacement of sealant at the intake grilles on the exterior walls is also recommended. The estimated cost of this expansion joint work is included in the Replacement Reserves Report.
- The building will require periodic pressure washing to maintain its appearance and preserve the masonry finish. The estimated cost of this expansion joint work is included in the Replacement Reserves Report.

Sustainable Recommendations:

- A sustainable notation for the exterior of the majority of the building is there appears to be no insulation in the walls according to the construction documents. No insulation can be added between the brick veneer and the CMU. Interior furring strips with added insulation is a suggestion. When considering insulation upgrades and improvements, consider formaldehyde-free fiberglass batt insulation, insulation made from 80% recycled newsprint or 100% borate-based cellulose insulation (avoid ammonium sulfate–based products); install so that there are no gaps, voids, wind intrusion or compression of the insulation. The insulation and the air barrier (e.g. Sheetrock) should be continuous and aligned. Consider insulation levels that meet or exceed IECC 2006 required R-values.
- A sustainable recommendation for exterior finishes is to use low VOC sealant or caulking around exterior doors and windows and the paint finishes on the stucco.

6.5. EXTERIOR AND INTERIOR STAIRS

The exterior stairs are constructed of reinforced concrete. The handrails are constructed of metal.

The interior stairs are constructed of metal and have rubber tread covering concrete filled metal pans with closed risers. The handrails are constructed of metal.

Observations/Comments:

- The exterior stairs and handrails are in fair to poor condition. The exterior stair and landing at the left end of the front of the building are severely damaged and cracked. The potential for collapse appears to be a high risk. The landing has wide openings in the rail and is not at a code compliant height. This raised landing requires immediate replacement. Efflorescence was observed at the retaining wall adjacent to this location. The stair and retaining wall require epoxy patching and sealant to prevent water infiltration from further damage. The estimated cost of this work is included in the Replacement Reserves Report. See Section 3.1 for costs of the guardrail and handrail replacement work.
- The interior stairs and handrails are in fair to poor condition. The upper landings have acrylic sheets to prevent children from slipping through. One accident has already been reported. The railings at the stairs adjacent to the guardrails are of the same construction and opening widths. Immediate replacement with code compliant railings and balusters is required. Some of the stairs have railings on one side only and both sides are required. See Section 3.1 for costs of this work.

Sustainable Recommendations:

- A sustainable recommendation for the exterior stairs is to institute a Green Waste Management Plan that includes items from future construction/renovation. The plan should set a 50% recycle and/or salvage goal to reduce landfill disposal. Materials to be recycled and/or salvaged include: clean dimensional wood, plywood, concrete, CMU, brick, gypsum board, asphalt shingles, glass, carpet and pad, and pipe.
- A sustainable recommendation for interior stairs is to replace the rubber tread covers with linoleum.
- A sustainable recommendation for railings is to use low VOC coatings for the handrails and guardrails when repainting.

6.6. WINDOWS AND DOORS

The windows are part of an aluminum-framed, storefront system incorporating the entry doors. The windows are glazed with insulated panes set in metal frames at the Media Center only. The doors are fully-glazed, aluminum-framed doors set in the metal framing system.

The windows at the remainder of the building are metal-framed units with fixed units and operable hopper type units with single paned glazing.

The exterior classroom entrance doors are painted, hollow metal doors set in metal frames. The entrance doors have cylindrical locksets with knob handle hardware and keyed locking mechanisms.

The service doors are painted, metal doors set in metal frames. The doors have cylindrical locksets with knob handle hardware.

A total of one overhead door is located at the southeast storage area on the lower level. The overhead door is a coiling metal door and is equipped with an automatic opener.

The loading dock is not equipped with bumpers, covers, or leveling equipment.

Observations/Comments:

- The storefront window system is in good to fair condition. The system at the Media Center will require routine maintenance during the evaluation period.
- Some of the windows are a part of the metal-framed, curtain wall system described in Section 6.4.
- According to the POC, the property does experience a significant number of complaints regarding window leaks and window condensation. Based on the Remaining Useful Life and condition and that they are single paned with significant evidence regarding the lack of energy efficiency, all of the single paned windows should be replaced with insulated paned windows. The estimated cost of this work is included in the Replacement Reserves Report.
- The exterior doors and door hardware are in fair to poor condition. It was observed and reported that the locking mechanisms for the exterior doors are failing and prevent significant safety risks. Some rust and deterioration was observed on the exterior of some of the steel doors and frames. The storefront doors do not sit properly in their fittings including the metal thresholds and allow air infiltration at all joints to penetrate. Rust and swelling of hollow metal doors make it difficult to open and close the doors presenting significant safety risks. Immediate replacement of the single paned glazed doors, insulated storefront doors near the Media Center and the hollow metal doors is recommended, including resetting and stabilizing the thresholds and framing as required. The estimated cost of this work is included in the Replacement Reserves Report.
- The overhead door appears to be in good condition and will require routine maintenance during the evaluation period.
- The loading dock is in fair to poor condition. There are no bumpers except a steel strip around the perimeter and deterioration of the concrete was observed. Significant repairs are required and protection equipment, such dock bumper installation, is recommended to prevent future damage once repaired. The estimated cost of this work is included in the Replacement Reserves Report.

Sustainable Recommendations:

- A sustainable recommendation for windows is to replace all single paned windows with insulated paned units with thermal breaks.
- A sustainable recommendation for doors is to replace with insulated, energy efficient doors.

6.7. PATIO, TERRACE, AND BALCONY

Not applicable. There are no patios, terraces, or balconies. See Section 5.5 for descriptions of the playgrounds.

6.8. COMMON AREAS, ENTRANCES, AND CORRIDORS

The lobby contains display cases, bulletin boards and the entrance to the main administrative office. Corridors and the auditorium are accessed directly from the lobby and stairways are located off of the side entrances.

Classrooms and offices are accessed from corridors beyond the lobby and from corridors on each floor.

Common area restrooms located off of the lobby and a unisex restroom is located within the main office. There are a total of three common area restrooms. The only handicapped accessible restrooms are located in the Media Center and in the modular classroom wing.

The following table identifies the interior common areas and generally describes the finishes in each common area:

Common Area	Floors	Walls	Ceilings
Lobby	Polished stone	Stained wood paneling and exposed aggregate panels	Suspended acoustic tiles
Corridor	Terrazzo and vinyl tile	Painted concrete masonry units, exposed brick and vinyl wall covering	Suspended acoustic tiles and painted drywall
Common Area Restroom	Ceramic tile and terrazzo and vinyl tile	Ceramic tile and painted CMU	Painted plaster and suspended acoustic tiles
Office	Carpet	Painted drywall	Suspended acoustic tiles
Media Center	Carpet	Painted drywall and CMU	Exposed structure
Auditorium	Carpet and painted concrete with wood stage	Painted concrete masonry units	Adhered acoustic tiles
Cafeteria	Shared with Gym	Shared with Gym	Shared with Gym
Gymnasium	Wood	Painted concrete masonry units	Exposed structure

Observations/Comments:

- It appears that the interior finishes in the common areas have not been renovated within the last five to ten years.
- The interior finishes in the common areas are in good to fair condition. Based on its estimated Remaining Useful Life (RUL), the common area carpet will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- Interior painting and wall finish replacement will also be required during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The suspended ceiling tiles are mismatched and some are stained from active roof leaks. Suspended and adhered ceiling tile replacement will also be required during the evaluation period based on Remaining Useful Life (RUL) and condition. The estimated cost of this work is included in the Replacement Reserves Report.
- Settlement cracking was observed in the terrazzo flooring in the corridors. Partial replacement will be required. Prior to replacement, cutting and epoxy patching of the concrete substrate and the addition of control joints will be required. The estimated cost of this work is included in the Replacement Reserves Report.
- The wood flooring in the gymnasium and the auditorium stage are in good to fair condition. Refinishing will be required during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- In addition to this work and based on its estimated Remaining Useful Life (RUL), the vinyl tile flooring finishes will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.

- According to the client provided AHERA document flooring with asbestos-containing material is located in the majority of the classrooms, restrooms, and corridors. A cost allowance for proper removal and disposal of the asbestos-containing vinyl tile is included in the Replacement Reserves Report as part of the recommended vinyl tile replacement work. This allowance is based solely on the information presented in the client provided AHERA document. An excerpt of this AHERA document is included in the appendices. Identifying asbestos-containing material is not within the scope of this facility condition assessment.
- According to the client provided AHERA document damaged asbestos-containing material is located in classroom 229, in the form of cracked vinyl tile. The damaged tile will require repair as recommended in the AHERA report. The cost to repair the damaged material is relatively insignificant and is not included in the Replacement Reserves Report. This recommendation is based solely on the information presented in the client provided AHERA document. An excerpt of this AHERA document is included in the appendices. Identifying asbestos-containing material is not within the scope of this facility condition assessment.
- A cost allowance for the abatement of lead containing materials is included in the client provided JMOA five year capital plan. Lead containing materials were not reported; however, based on the cost budgeted in the capital plan, an allowance for lead abatement is included in Replacement Reserves Report.

Sustainable Recommendations:

- Sustainable recommendations for the interior finishes are to use low VOC paints, linoleum or cork flooring, and recycled material carpeting.

7. BUILDING (CENTRAL) MECHANICAL AND ELECTRICAL SYSTEMS

7.1. BUILDING HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC)

Heating is provided in the class rooms and offices by unit ventilators mounted along the exterior walls. The unit ventilators are supplied with heated water by the central system and supply fresh air to each conditioned space through an exterior wall louver. The units range in capacity from 1,000 to 1,500 CFM. The unit ventilators have limited control provided by local thermostats. Hot water supply is controlled by the computerized building energy management system (EMS).

Heating is provided in the auditorium and gymnasiums by high-capacity air handling units equipped with heating coils. The air handling units are located in the main level mechanical room and are supplied with heated water by the central system. There are a total of three air handling units. Air distribution is provided to supply air registers by ducts concealed above the ceilings. Return air grilles are located in each space. The air handling units are controlled by the building EMS. The following table describes the air handling units:

Air Handling Units					
Designation	**Location**	**Area Served**	**Air Flow**	**Cooling**	**Heating**
AHU-1	Main Level Mechanical Room	Auditorium	9,500 CFM	None	Hot water coil
AHU-2	Main Level Mechanical Room	Cafeteria/Gym	4,000 CFM	None	Hot water coil
AHU-3	Main Level Mechanical Room	Gymnasium	2,000 CFM	None	Hot water coil

Heating is provided in the restrooms by wall-mounted convection units. Heating is provided in the corridors, storage rooms and some offices by finned-tube radiant heat units. Supplemental heating is provided in closets and entrance vestibules by ceiling-mounted unit heaters. The heating units are supplied with hot water by the central system.

Hot water for the central heating system is supplied by two cast iron boilers. The boilers have dual-fuel capability, utilizing natural gas or fuel oil. Each boiler has a rated input capacity of 5,189 MBH and is located in the lower level mechanical room. The boilers are controlled by a central control panel through the EMS. Oil is supplied to the boilers by a fuel oil pump set and a 5,000-gallon underground storage tank (UST). The UST is located near the south elevation of the building.

Three active circulating pumps and one stand-by pump provide heated water to each temperature-controlled space via a two-pipe distribution system. The heating water loop is equipped with two expansion tanks. The expansion tanks have a capacity of 250 gallons each and are located in the boiler room. The heated water supplies the air handling units, baseboard heaters, and unit ventilators.

There is no central air-conditioning system. Cooling is provided in some classrooms by window-mounted air-conditioning units. There are a total of 23 window AC units.

Heating and cooling are provided in the media center and modular classroom buildings by individual, direct-expansion, constant-volume, packaged, rooftop-mounted, HVAC units. The cooling equipment uses R-22 as a refrigerant. The following table describes the rooftop units:

Packaged Rooftop Units				
Quantity	**Manufacturer**	**Cooling Capacity**	**Heating Type**	**Manufacture Year**
1	York	3 tons	Gas-fired	1999
1	York	6 tons	Gas-fired	1999
1	York	12.5 tons	Gas-fired	1999
1	Lennox	5 tons	Electric Resistance	2005
2	Trane	4 tons	Electric Resistance	1997
2	Carrier	3 tons	Electric Resistance	2002

The gymnasiums, auditorium, bathrooms and kitchen are ventilated by mechanical exhaust fans. High-capacity ventilation fans are mounted on the roof and are connected by concealed ducts to each ventilated space.

The heating and cooling system is controlled by a building energy management system (EMS), located in an office near the boiler room. The EMS provides individual control and performance data for the boilers, circulating pumps, rooftop units, air handling units, and the domestic water heating system. The system is actuated by pneumatic controls. The air compressor is located in the boiler room.

Observations/Comments:

- The HVAC systems are maintained by the in-house maintenance staff.
- The HVAC equipment varies in age. The boilers and unit ventilators were replaced in 2005 and 2006.
- The boilers appear to be in good condition and will require routine maintenance during the evaluation period.
- The underground storage tank could not be directly observed and is reported to be in good condition. Based on its estimated Remaining Useful Life (RUL), the UST will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The fuel oil pump set appears to be in good condition and will require routine maintenance during the evaluation period.
- The circulating pumps appear to be in good condition. Based on their estimated Remaining Useful Life (RUL), the pumps will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The air handling units appear to be in fair condition. Based on their estimated Remaining Useful Life (RUL), the air handling units will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The unit ventilators appear to be in good condition and will require routine maintenance during the evaluation period.
- The finned-tube radiant heat units appear to be in good condition and will require routine maintenance during the evaluation period.
- The wall-mounted convection units appear to be in good condition and will require routine maintenance during the evaluation period.

- The ceiling-mounted unit heaters appear to be in good condition. Based on their estimated Remaining Useful Life (RUL), the unit heaters will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The rooftop package units appear to be in fair condition. Based on their estimated Remaining Useful Life (RUL), the older rooftop units will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The window air-conditioning units appear to be in good condition. Based on their estimated Remaining Useful Life (RUL), the air-conditioning units will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The mechanical ventilation system and equipment appear to be in good condition and will require routine maintenance during the evaluation period. Equipment or component replacements can be performed as part of the Physical Plant's routine maintenance program. According to the client provided JMOA five year capital plan, a pneumatic control to DDC upgrade is planned. A budgetary cost allowance for this work is included in the Replacement Reserves Report.

Sustainable Recommendations:

- A sustainable recommendation for HVAC is to pursue the installation of a central air-conditioning system. This would reduce energy consumption by eliminating the use of small, less efficient air-conditioning units.
- An additional sustainable recommendation for HVAC is to replace the air handling units with modern air handlers, which include economizer modes and a centralized exhaust air system with an enthalpy wheel. This would reduce energy consumption by managing the amount of energy used in ventilating the areas supplied by the air handling units.
- An additional sustainable recommendation for HVAC is to equip the circulating pumps with high efficiency motors to reduce energy consumption.

7.2. BUILDING PLUMBING

The plumbing systems include the incoming water service, the cold water piping system, and the sanitary sewer and vent system. The risers and the horizontal distribution piping are reported to be copper. The sanitary sewer and vent systems are reported to be cast iron. The sanitary waste line is connected to the municipal sewer system via a force main. The sewage pumps are located along the service drive at the east side of the property. The domestic water meter is located in the storage room at the southeast corner of the building.

Domestic hot water is supplied by two gas-fired boilers. Each boiler has a rated input capacity of 300 MBH and is located in the lower level mechanical room. Domestic hot water storage is provided by a 250-gallon storage tank located in the lower level mechanical room.

The common area restrooms have commercial-grade fixtures and accessories, including water closets, urinals, and lavatories. Drinking fountains are located in the corridors and gymnasiums.

Observations/Comments:

- The plumbing system appears to be well maintained and in good to fair condition. The connections to the municipal domestic water system and sewer system were installed in 2004. The water pressure appears to be adequate.
- Intermittent issues have been reported with the sanitary waste lines within the building, including leaks and clogs. Based on the reported condition and estimated Remaining Useful Life (RUL), the waste lines will require sectional replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.

- Minor plumbing leaks have been reported. Based on the current condition and estimated Remaining Useful Life (RUL), the domestic water piping will require sectional replacement during the evaluation period. A budgetary cost allowance for this work is included in the Replacement Reserves Report.
- There is no evidence that the property uses polybutylene piping for the domestic water distribution system. According to the POC, polybutylene piping is not used at the property.
- The pressure and quantity of hot water appear to be adequate.
- The boilers appear to be in good condition and will require routine maintenance during the evaluation period.
- The accessories and fixtures in the common area restrooms are in fair condition. Minor damage, including chipping and corrosion, was observed to the restroom fixtures. Maintenance personnel reported frequent problems with the fixtures, including leaks and broken valves. Based on the observed condition and estimated Remaining Useful Life (RUL), the restroom fixtures will require replacement. The estimated cost of this work is included in the Replacement Reserves Report.
- The drinking fountains are in fair condition. Many of the fixtures are aging and are no longer functioning properly. The drinking fountain in the gymnasium was leaking at the time of the assessment and the drinking fountain in the south corridor was becoming loose from the wall. Based on the observed condition and estimated Remaining Useful Life (RUL), the drinking fountains will require replacement. The estimated cost of this work is included in the Replacement Reserves Report.
- According to the client provided JMOA five year capital plan, drinking fountains are planned for the playgrounds. A budgetary cost allowance for the water supply line and four fountains are included in the Replacement Reserves Report.
- According to the client provided AHERA document asbestos-containing material is located in the service entrance, the kitchen, storage room 3, and above the ceiling outside the gymnasium, in the form of pipe fitting insulation. A cost allowance for proper removal and disposal of the asbestos-containing pipe insulation is included in the Replacement Reserves Report as part of the recommended piping repair/replacement work. This allowance is based solely on the information presented in the client provided AHERA document. An excerpt of this AHERA document is included in the appendices. Identifying asbestos-containing material is not within the scope of this facility condition assessment.

Sustainable Recommendations:

- A sustainable recommendation for plumbing is to replace the restroom fixtures with water-saving devices, such as low-flow faucet aerators and low-flush volume toilets and urinals.

7.3. BUILDING GAS DISTRIBUTION

Gas service is supplied from the gas main at the adjacent public street. The gas meter and regulator are located adjacent to the service drive at the east side of the building. The gas distribution piping within the building and on the roof is malleable steel (black iron).

Observations/Comments:

- The pressure and quantity of gas appear to be adequate.
- The gas meter and regulator appear to be in good condition and will require routine maintenance during the evaluation period.
- Only limited observation of the gas distribution piping can be made due to hidden conditions. The gas piping is in good condition and, according to the POC, there have been no gas leaks.

Sustainable Recommendations:

- There are no sustainable recommendations for gas distribution.

7.4. BUILDING ELECTRICAL

The electrical supply lines run under the east service drive, to a pole-mounted transformer, which feeds the exterior-mounted electrical meter.

The main electrical service size is 1,600-Amps, 120/208-Volt, three-phase, four-wire, alternating current (AC). The electrical wiring is reportedly copper, installed in metallic conduit. Circuit breaker panels are located throughout the building.

The building is equipped with a public address and intercom system, which allows communication between the main office and each classroom. The control unit is located in the main office. The auditorium is equipped with a stage lighting system and a sound system.

A natural gas-powered, 45 kW (56.25-kVA), emergency generator is located in the generator room at the southeast corner of the building. The generator provides back-up power for elements of the fire and life safety systems and refrigeration equipment.

Observations/Comments:

- The on-site electrical systems are owned and maintained by the utility company. This includes transformers, meters, and all elements of the on-site systems.
- The electrical power is reported to be inadequate for the property's demands. Administrative staff reported that addition of computers has been limited due to inadequate electrical capacity. Maintenance staff reported frequent tripping of circuit breakers. It is recommended that the electrical system be upgrade to provide adequate capacity for the current building requirements. Prior to this work being done, an electrical survey and design study will be required to determine the required capacity and recommended upgrades. The estimated cost of the study is included in section 1.2. The costs of the upgrades are to be determined by the study. According to the client provided JMOA five year capital plan, electric service upgrades are planned. A budgetary cost allowance for this work is included in the Replacement Reserves Report. This allowance also includes upgrades for classroom, office, and teacher technology upgrades.
- The switchgear, circuit breaker panels, and electrical meter appear to be in good to fair condition and will require routine maintenance during the evaluation period. Minor damage including loose wiring and junction boxes was observed on the roof. It is recommended that these items be corrected as part of routine maintenance at the property.
- The interior lighting is in fair condition. Upgrades and replacements to the interior lighting have not been performed in recent years. Based on energy conservation and current condition, EMG recommends replacing all lighting fixtures with high-efficiency fluorescent light fixtures or LED fixtures. The estimated cost of this work is included in the Replacement Reserves Report.
- The public address system is reportedly in fair condition. The control unit was replaced in 2005. Administrative staff reported that announcements cannot be heard in all classrooms and that most classrooms did not have the ability to call the office. It is recommended that the public address system be upgraded to allow proper communication with all classrooms. According to the client provided JMOA five year capital plan, the PA system and other communication upgrades are planned. A budgetary cost allowance for this work is included in the Replacement Reserves Report. This allowance also includes upgrades for phone, internet, alarm and emergency lighting improvements.
- According to the client provided JMOA five year capital plan, clock and bell upgrades are planned. A budgetary cost allowance for this work is included in the Replacement Reserves Report.

- The auditorium stage lighting system appears to be the originally installed equipment. Based on its estimated Remaining Useful Life (RUL), the auditorium lighting system will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The auditorium sound system appears to be in good condition. Based on its estimated Remaining Useful Life (RUL), the sound system will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The generator is in fair condition and is reportedly tested on a weekly basis. The generator is reportedly inadequate for the current use of the building. Many areas of the building are not provided with emergency power due to the limitations of the generator; these areas include but are not limited to the restrooms. Based on its capacity estimated Remaining Useful Life (RUL), it is recommended that the generator be replaced with a larger unit. This work should be coordinated with the electrical system upgrades. The estimated cost of this work is included in the Replacement Reserves Report.

Sustainable Recommendations:

- A sustainable recommendation for building electrical is to install occupancy sensors in place of light switches in classrooms, offices and restrooms throughout the building.

7.5. ELEVATORS AND CONVEYING SYSTEMS

Not applicable. There are no elevators or conveying systems.

7.6. FIRE PROTECTION SYSTEMS

The fire protection systems consist of a wet-pipe sprinkler system, portable fire extinguishers, smoke detectors, pull stations, and alarm horns. A fire department hose connection is located on the east exterior wall of the building. Hardwired smoke detectors are located throughout the corridors. The nearest fire hydrant is located along the property's drive aisles and is approximately 80 feet from the building.

Common areas and corridors are equipped with battery back-up exit lights, illuminated exit signs, pull stations, alarm horns, and strobe light alarms.

Fire sprinkler risers are located in the storage room at the southeast corner of the building. The system is equipped with a backflow preventer.

A central fire alarm panel is located in the electrical room at the southeast corner of the building and monitors the pull stations, smoke detectors, and flow switches. An annunciator panel is located in the main office. The alarm panel also sounds the alarm and automatically notifies the monitoring service or the fire department in the event of trouble.

The building is equipped with a security system, including motion sensors and door alarms. The central security panel is located in the main office and is monitored by Sonitrol.

Observations/Comments:

- Information regarding fire department inspection information is included in Section **3.2.**
- The fire sprinklers appear to be in good condition and are inspected by a qualified contractor on a routine basis. The fire sprinklers will require routine maintenance during the evaluation period.
- The fire extinguishers are tested annually and appear to be in good condition. The fire extinguishers were tested and inspected within the last year.
- The pull stations and alarm horns appear to be in good condition and will require routine maintenance during the evaluation period.

- According to the client provided JMOA five year capital plan, smoke detector upgrades are planned. A budgetary cost allowance for this work is included in the Replacement Reserves Report.
- According to the client provided JMOA five year capital plan, smoke detector upgrades are planned. A budgetary cost allowance for this work is included in the Replacement Reserves Report.
- Exit sign and emergency light replacement is considered to be routine maintenance.
- The central alarm panel appears to be in good condition and is tested regularly by a qualified fire equipment contractor. Equipment testing is not within the scope of a Facilities Needs Assessment. Based on the estimated Remaining Useful Life (RUL), and because replacement parts and components for this type of equipment may be obsolete, the alarm panel will require replacement over the assessment period. The estimated cost of this work is included in the Replacement Reserves Report.
- The security panel appears to be in good condition. Equipment testing is not within the scope of a Facilities Needs Assessment.
- The commercial kitchen is not equipped with a dry-chemical, fire suppression system. It is recommended that a dry-chemical "Ansul" type fire protection system be installed above all cooking surfaces. The estimated cost of this work is included in the Replacement Reserves Report.

Sustainable Recommendations:

- There are no sustainable recommendations for fire protection.

8. INTERIOR SPACES

8.1. INTERIOR FINISHES

The following table generally describes the interior finishes in units:

Typical Space Finishes			
Room	**Floor**	**Walls**	**Ceiling**
Classrooms	Vinyl tile	Stained wood panels, painted drywall, vinyl wall covering and painted CMU	Suspended acoustic tiles
Maintenance Shop and Storage	Unfinished	Unfinished	Exposed structure
Kitchens	Terrazzo	Painted concrete masonry units	Suspended acoustic tiles
Restrooms	Ceramic tile and terrazzo	Painted concrete masonry units	Suspended acoustic tiles

The interior doors are stained, solid-core, wood and metal doors set in metal frames. The interior doors have cylindrical locksets with knob handle hardware.

Observations/Comments:

- The interior finishes are in good to fair condition. Based on the Estimated Useful Life and the observed conditions, replacement of the carpeting, ceiling tiles and painting is recommended during the term. The costs are included in the Replacement Reserves Report.
- The interior doors and door hardware are in fair to poor condition. It was reported that the locking mechanisms can only be locked from outside of the classroom which presents a significant safety hazard during school lock downs. The locks and hardware should be replaced immediately. One door in room 116 was difficult to open and should be repaired or replaced immediately. The costs are included in the Replacement Reserves Report.
- The blinds and shades in the classrooms and offices are in good to fair condition. Based on the Estimated Useful Life and the observed conditions, replacement of the blinds and shades is recommended during the term. The costs are included in the Replacement Reserves Report.
- The cabinetry in the classrooms is in fair condition. Based on the Estimated Useful Life and the observed conditions, cabinetry replacements are recommended during the term. The costs are included in the Replacement Reserves Report.
- At least two small makeshift classes are set up in the corridors.

Sustainable Recommendations:

- Sustainable recommendations for the interior finishes are to use low VOC paints, linoleum or cork flooring, and recycled material carpeting.

8.2. COMMERCIAL KITCHEN EQUIPMENT

The kitchen area has a variety of commercial kitchen appliances, fixtures, and equipment. The kitchen includes the following major appliances, fixtures, and equipment:

Appliance	Comment
Refrigerators	Walk-in, Upright, Milk Coolers (2)
Freezers	Walk-in, Upright
Range	Gas
Convection Oven	Electric (2)
Griddles / Grills	None
Fryers	None
Hood	Exhaust ducted to exterior
Steamer	Yes
Dishwasher	None
Microwave	None
Steam tables	Stainless steel (2)
Work tables	Stainless steel
Shelving / Carts	Stainless steel

Observations/Comments:

- The kitchen appliances appear to be in good condition and will require routine maintenance during the evaluation period.
- The refrigeration equipment appears to be in good to fair condition. Based on their estimated Remaining Useful Life (RUL), some of the reach-in refrigeration units will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.

Sustainable Recommendations:

- A sustainable recommendation for the cooking equipment is to replace the appliances and refrigeration units with Energy Star rated or equivalent equipment.

8.3. HVAC

See Section 7.1 for building mechanical systems.

8.4. PLUMBING

Domestic water is supplied by the central system described in Section 7.2. .

9. OTHER STRUCTURES

An annex building consists of two buildings linked by an interior walkway and is located at the north end of the property near the main entrance drive. The annex building is constructed of stone masonry veneer and painted concrete masonry unit bearing walls. Portions of the exterior walls have painted T-1-11 engineered wood siding. The roof is a gabled structure with asphalt shingle finish. The roof structure is concealed and is assumed to be wood joists construction with plywood substrate. The exterior doors are hollow metal with metal frames. The windows are metal framed single-paned units. The garage section has an automatic overhead door.

The annex building is heated by gas-fired, forced-air furnace. The furnace is located in a mechanical closet, accessed from the exterior of the building. Cooling is provided by an individual, window mounted air-conditioning unit. Domestic water is provided to the building through a well system. Domestic hot water is provided by a 40-gallon electric water heater. The water heater is located in the mechanical closet. The incoming electrical service is provided to an electric meter mounted on the exterior wall. The building is equipped with a fire alarm system, including pull stations and alarm horns with strobe lights. The fire alarm control panel is located in an interior closet. An annunciator panel is located near the building entrance. The building is equipped with a security system, which is monitored by Sonitrol.

Observations/Comments:

- The exterior finishes are in good to fair condition. Painting and patching will be required during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The roof finishes are in fair condition. Based on the Remaining Useful Life and condition, the shingles will require replacement. The estimated cost of this work is included in the Replacement Reserves Report.
- The storm water is edge drainage only and is carving a rut along the building. The installation of gutters and downspouts are recommended. The estimated cost of this work is included in the Replacement Reserves Report.
- The window units are in fair condition. Based on the Remaining Useful Life and condition and that they are single paned with significant evidence regarding the lack of energy efficiency, all the single paned windows should be replaced with insulated paned windows. The estimated cost of this work is included in the Replacement Reserves Report.
- The exterior doors appear to be in fair condition. The locking hardware is missing on the west side entrance. The lock will require immediate replacement. The cost of this work is relatively insignificant; therefore the work can be performed through routine maintenance.
- T-1-11 engineered wood siding is not a good exterior finish material based on swelling with water if not diligently painted and sealed. The material should be replaced with an exterior grade siding. The cost of this work is relatively insignificant; therefore the work can be performed through routine maintenance.
- The sealant is in poor condition. It is cracked and dry rotted throughout the original portions of the building. Based on their estimated Remaining Useful Life (RUL) and current conditions, the sealant will require replacement early in the evaluation period. The cost of this work is relatively insignificant; therefore the work can be performed through routine maintenance.
- The overhead garage door appears to be in good condition and will require routine maintenance.
- The forced-air furnace is in good condition. Based on its estimated Remaining Useful Life (RUL), the furnace will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.

- The window mounted air-conditioning unit is in fair condition. The cost to replace the air-conditioning unit is relatively insignificant and the work can be performed as part of the property management's routine maintenance program. The cost of this work is not included in the cost tables.
- The domestic water heater is in fair condition. The cost to replace the water heater is relatively insignificant and the work can be performed as part of the property management's routine maintenance program. The cost of this work is not included in the cost tables.
- The fire alarm panel appears to be in good condition. Based on the estimated Remaining Useful Life (RUL), and because replacement parts and components for this type of equipment may be obsolete, the alarm panel will require replacement over the assessment period. The estimated cost of this work is included in the Replacement Reserves Report.
- The security system appears to be in good condition. The security system is monitored and maintained by Sonitrol.

Sustainable Recommendations:

- Sustainable recommendations for the exterior finishes are to use recycled and light colored roofing finishes.

10. ENERGY BENCHMARKING

This section is pending additional information from the client.

11. APPENDICES

APPENDIX A: Photographic Record

APPENDIX B: Site and Floor Plans

APPENDIX C: Supporting Documentation

APPENDIX D: EMG Abbreviated Accessibility Checklist

APPENDIX E: Pre-Survey Questionnaire and Documentation Request Checklist

APPENDIX F: Acronyms and Out of Scope Items

APPENDIX G: Resumes for Report Reviewer and Field Observer

APPENDIX A:
PHOTOGRAPHIC RECORD

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-010.017 **Project Name: Northeast Elementary School**

Photo #1:	Front entrance signage

Photo #2:	Front elevation and main entrance

Photo #3:	East elevation

Photo #4:	Southeast corner – loading dock area

Photo #5:	Rear/south elevation of gymnasium

Photo #6:	South elevation of classrooms at original school building

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-010.017 **Project Name: Northeast Elementary School**

Photo #7:	Modular classroom addition on south end of building

Photo #8:	West elevation

Photo #9:	Junction between original school and Media Center

Photo #10:	Rear/west elevation of Media Center

Photo #11:	North elevation of Media Center

Photo #12:	Front/east elevation of Media Center and only handicapped route

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-010.017 **Project Name: Northeast Elementary School**

Photo #13:	Roof overview of original school building

Photo #14:	Built up roofing over Media Center

Photo #15:	Exposed structure of Media Center with isolated rust

Photo #16:	Missing soffit panel at Media Center

Photo #17:	East side courtyard

Photo #18:	Cracked built up roofing and parapet wall topped with built up membrane

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-010.017 **Project Name: Northeast Elementary School**

Photo #19:	Cracking at single ply membrane over modular section

Photo #20:	Evidence of ponding on original school building

Photo #21:	Service door condition

Photo #22:	Sealant condition

Photo #23:	Side entrance with low guardrail and cracked landing

Photo #24:	Underside of cracked landing on side entrance

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-010.017 **Project Name: Northeast Elementary School**

Photo #25:	Storefront doors not set properly. Threshold bent from non level substrate

Photo #26:	Loading dock conditions

Photo #27:	Main entry drive

Photo #28:	Main parking lot

Photo #29:	East parking lot

Photo #30:	Service drive at south end of property

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-010.017 **Project Name: Northeast Elementary School**

Photo #31:	Asphalt damage in service drive

Photo #32:	Paved athletic area

Photo #33:	Asphalt walking path

Photo #34:	Asphalt damage at asphalt walking path

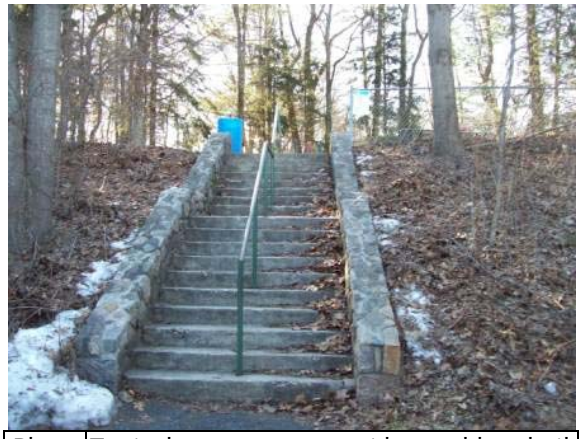


Photo #35:	Typical concrete steps with metal handrail

Photo #36:	Damage to concrete steps

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-010.017 **Project Name: Northeast Elementary School**

Photo #37:	Damage to asphalt curbing

Photo #38:	Erosion at front elevation of building

Photo #39:	Erosion at south side of building, from baseball fields

Photo #40:	Area of reported drainage problems at south side of building

Photo #41:	Cracking along top of retaining wall

Photo #42:	Cracking along face of retaining wall

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-010.017 **Project Name: Northeast Elementary School**

Photo #43:	Site lighting

Photo #44:	Jungle gym playground equipment

Photo #45:	Swing set playground equipment

Photo #46:	Basketball goal

Photo #47:	Baseball field and backstop

Photo #48:	Damaged site fencing

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-010.017 **Project Name: Northeast Elementary School**

Photo #49:	Main lobby

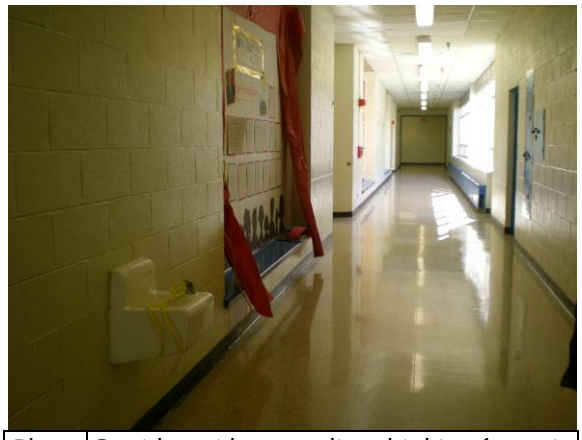


Photo #50:	Corridor with protruding drinking fountain

Photo #51:	Typical classroom

Photo #52:	Cracks in corridor flooring finish

Photo #53:	Auditorium

Photo #54:	Auditorium stage

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-010.017 **Project Name: Northeast Elementary School**

Photo #55:	Damage to EIFS at Media Center

Photo #56:	Typical sink and toilet room in some classrooms

Photo #57:	Common restroom

Photo #58:	Common restroom

Photo #59:	Classroom door hardware with no locking mechanism from interior

Photo #60:	Stairwell with acrylic at top landing but no protection along stair portion of railing

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-010.017 **Project Name: Northeast Elementary School**

Photo #61:	Makeshift classroom in corridor

Photo #62:	Typical storage area in some classrooms

Photo #63:	Media Center

Photo #64:	Media Center ADA unisex restroom

Photo #65:	Evidence of roof leak at Media Center storage room

Photo #66:	Suspect mold in Media Center server room

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-010.017 **Project Name: Northeast Elementary School**

Photo #67:	Water infiltration at Media Center office

Photo #68:	Settlement cracking in Media Center

Photo #69:	Classroom in modular wing

Photo #70:	Restroom in modular wing

Photo #71:	Gymnasium

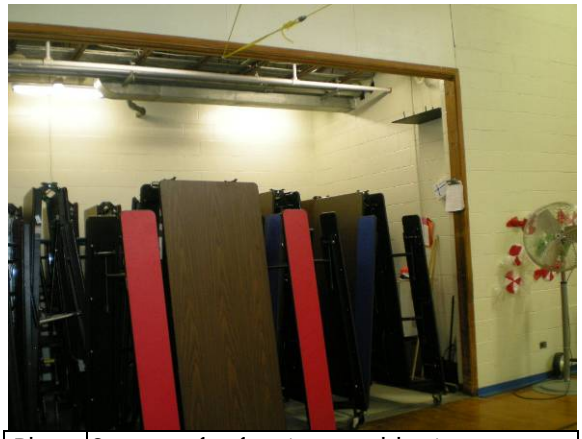


Photo #72:	Storage of cafeteria use tables in gymnasium

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-010.017 **Project Name: Northeast Elementary School**

Photo #73:	Storage under stairwell

Photo #74:	Water infiltration at subterranean wall in storage area at front of building

Photo #75:	Cracking at southeast corner near transformer

Photo #76:	Small classroom with skylight

Photo #77:	Accessible parking area

Photo #78:	Main entrance to school. Not accessible.

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-010.017 **Project Name: Northeast Elementary School**

Photo #79:	Boiler (1 of 2)

Photo #80:	Boiler control unit

Photo #81:	Fuel oil underground storage tank

Photo #82:	Fuel oil pump set

Photo #83:	Hot water circulating pumps

Photo #84:	Typical unit ventilator

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-010.017 **Project Name: Northeast Elementary School**

Photo #85:	Typical finned-tube radiant heat unit

Photo #86:	Typical convection unit

Photo #87:	Air handling unit (1 of 3)

Photo #88:	Auditorium exhaust fan

Photo #89:	Typical rooftop unit

Photo #90:	Typical window air conditioning unit

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-010.017 **Project Name: Northeast Elementary School**

Photo #91:	Domestic water boilers

Photo #92:	Domestic hot water storage tank

Photo #93:	Domestic water service connection

Photo #94:	Sanitary waste force main pumping station

Photo #95:	Typical restroom fixtures

Photo #96:	Prior repairs to drain lines

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-010.017 **Project Name: Northeast Elementary School**

Photo #97:	Typical urinal fixtures

Photo #98:	Typical toilet fixture

Photo #99:	Gas meter and regulator

Photo #100:	Gas lines in boiler room

Photo #101:	Electric meter

Photo #102:	Electrical transformer

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-010.017 **Project Name: Northeast Elementary School**

Photo #103:	Main breaker panel

Photo #104:	Emergency generator

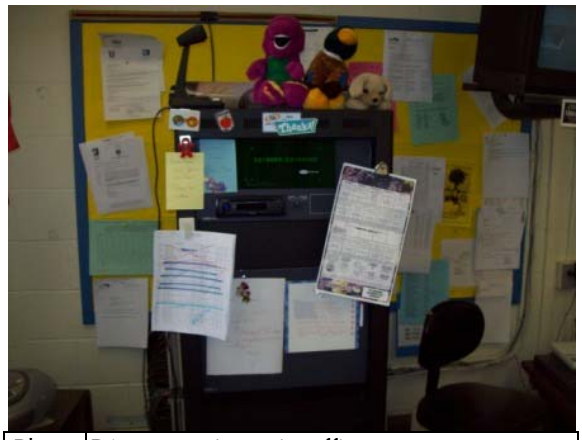


Photo #105:	PA system in main office

Photo #106:	Typical PA call panel in classroom

Photo #107:	Lighting controls for auditorium

Photo #108:	Sound system controls for auditorium

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-010.017 **Project Name: Northeast Elementary School**

Photo #109:	Fire alarm annunciator panel

Photo #110:	Fire alarm battery panel

Photo #111:	Backflow preventer for sprinkler system

Photo #112:	Fire sprinkler risers

Photo #113:	Fire alarm pull station and alarm horn with strobe light

Photo #114:	Typical illuminated exit sign

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-010.017 **Project Name: Northeast Elementary School**

Photo #115:	Security panel

Photo #116:	Kitchen exhaust hood without fire protection

Photo #117:	Kitchen equipment

Photo #118:	Tray rack and steam table

Photo #119:	Walk in refrigerator and freezer

Photo #120:	Walk in refrigeration compressor units

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-010.017 **Project Name: Northeast Elementary School**

Photo #121:	Annex building – west elevation

Photo #122:	Garage attached to Annex building

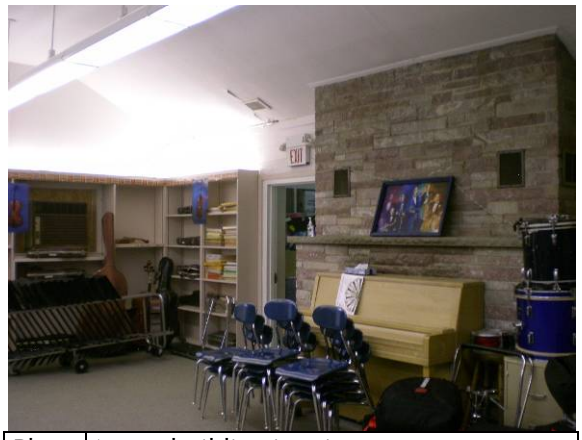


Photo #123:	Annex building interior

Photo #124:	Restroom in Annex building

Photo #125:	Furnace for annex building

Photo #126:	Air conditioning unit for annex building

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-010.017 **Project Name: Northeast Elementary School**

Photo #127:	Incoming water service for annex building

Photo #128:	Domestic water heater for annex building

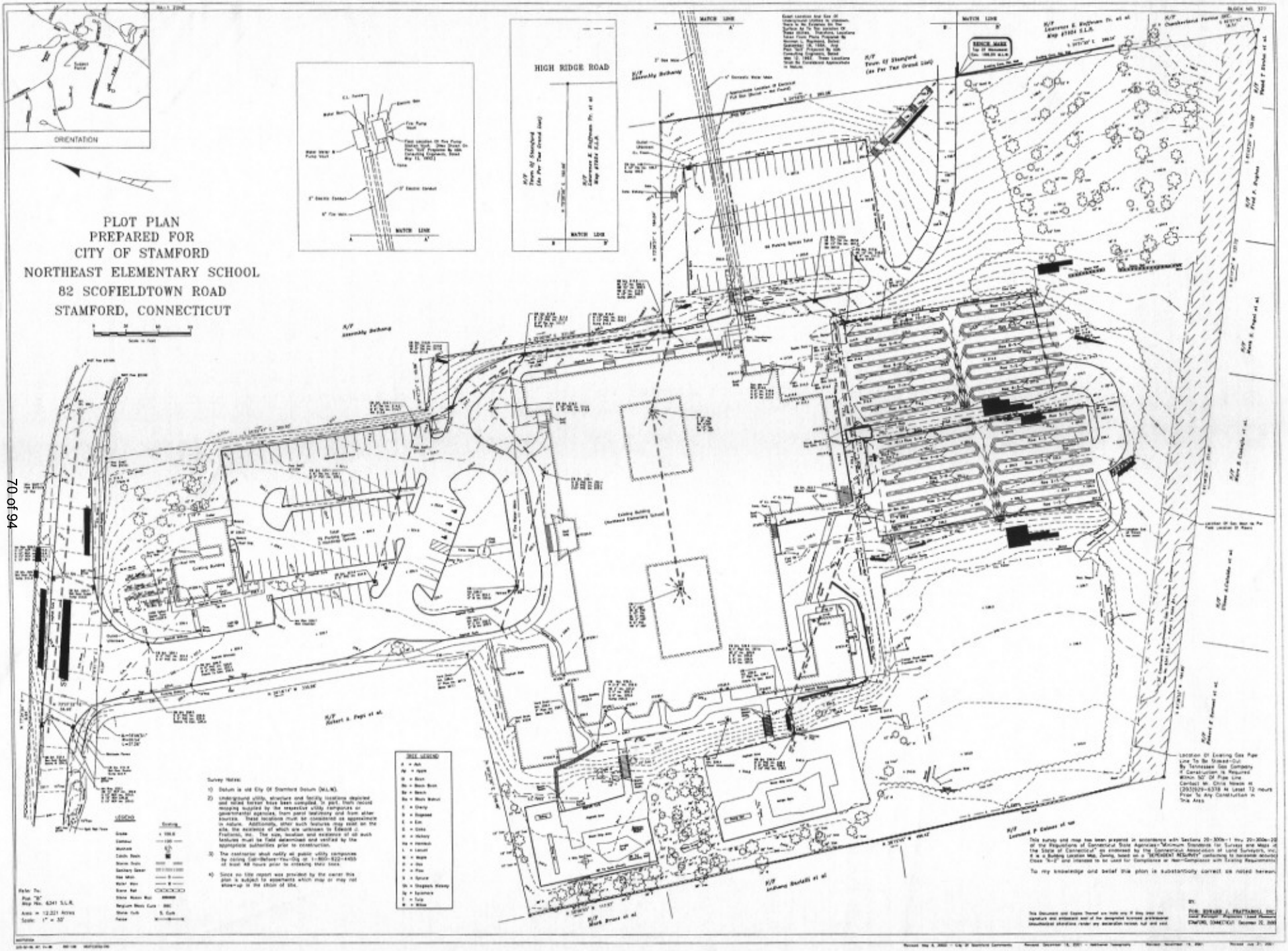
Photo #129:	Main breaker panel for annex building

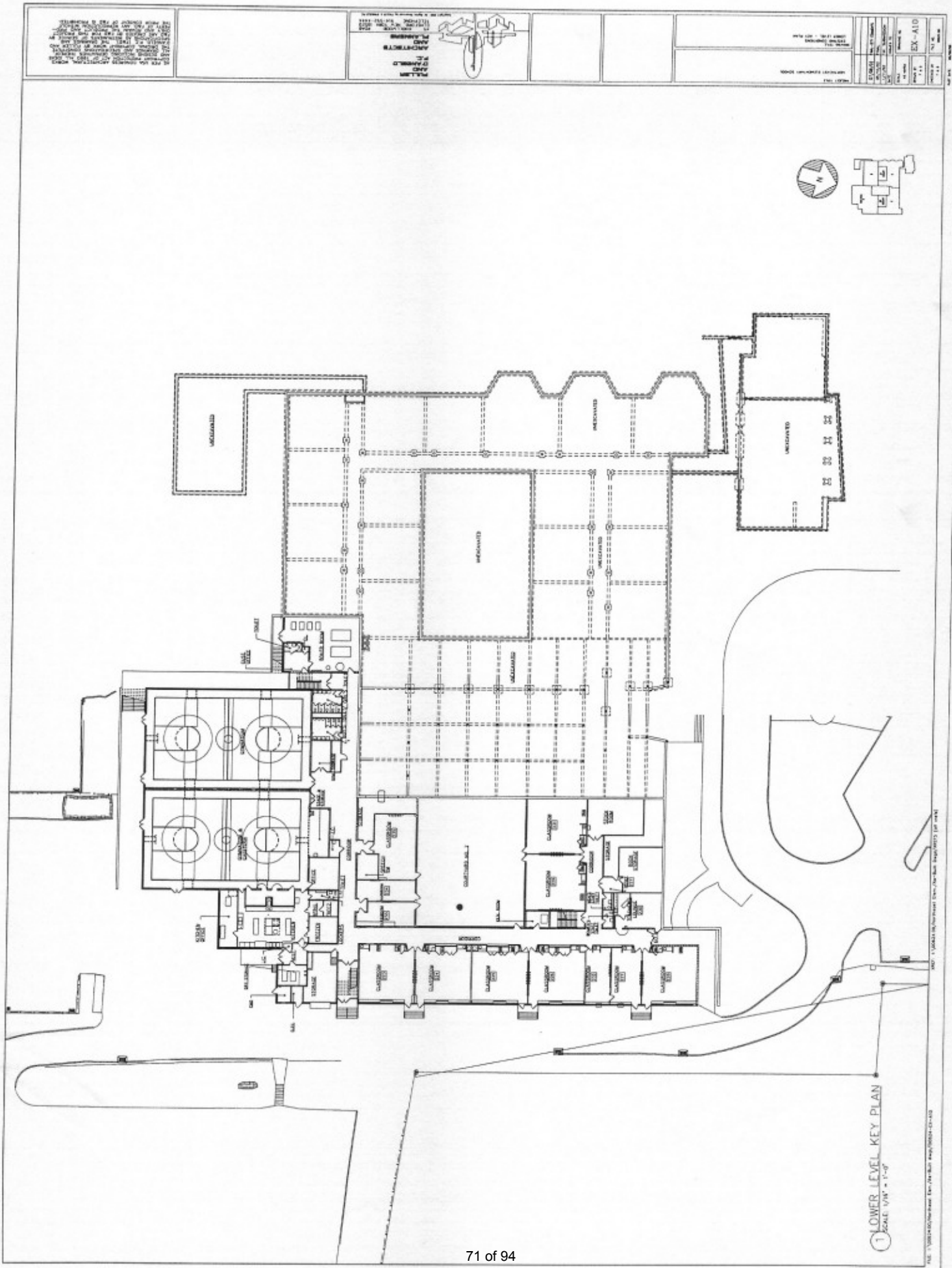
Photo #130:	Fire alarm annunciator panel for annex building

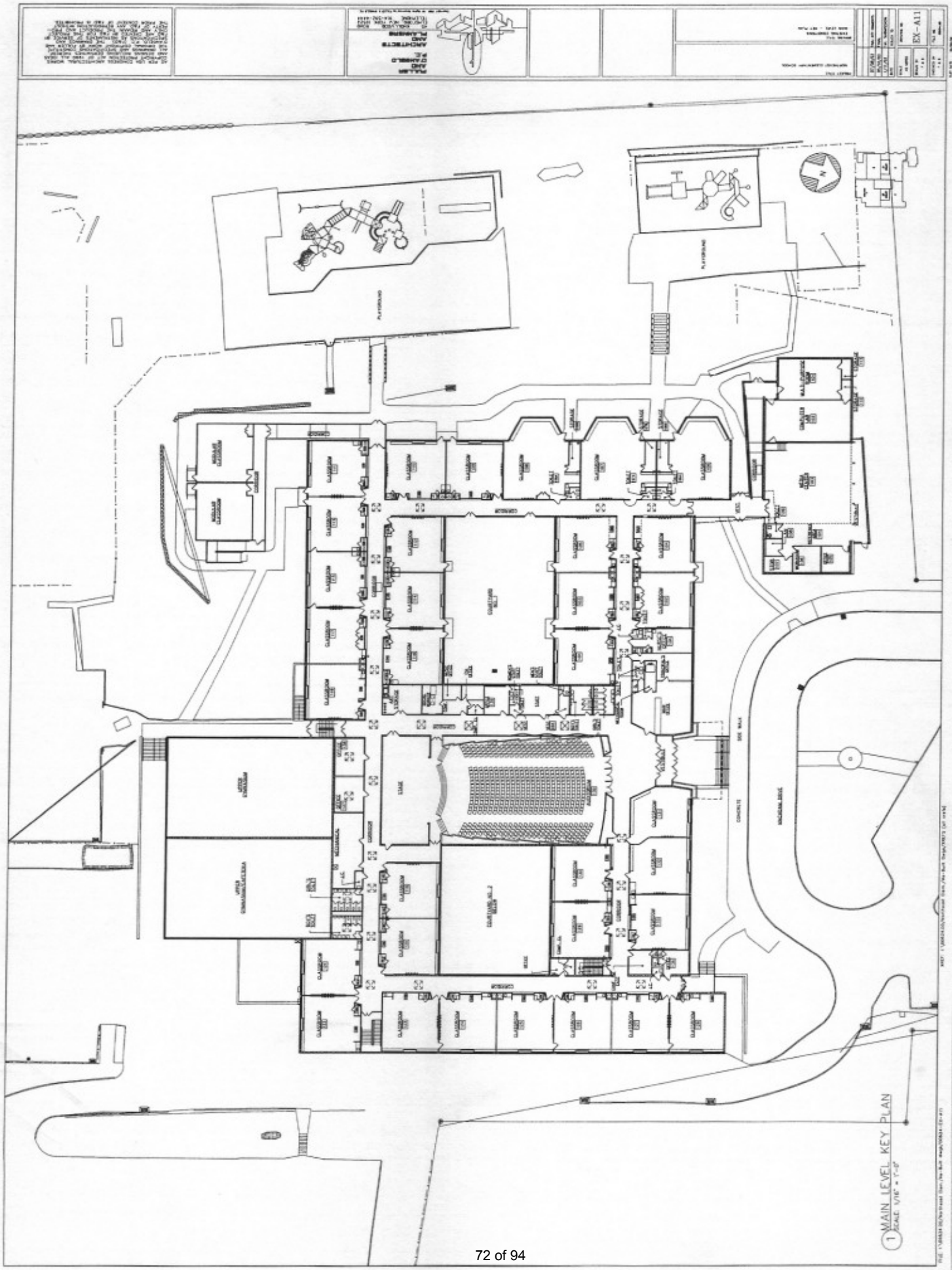
Photo #131:	Fire alarm pull station and security key pad for annex building

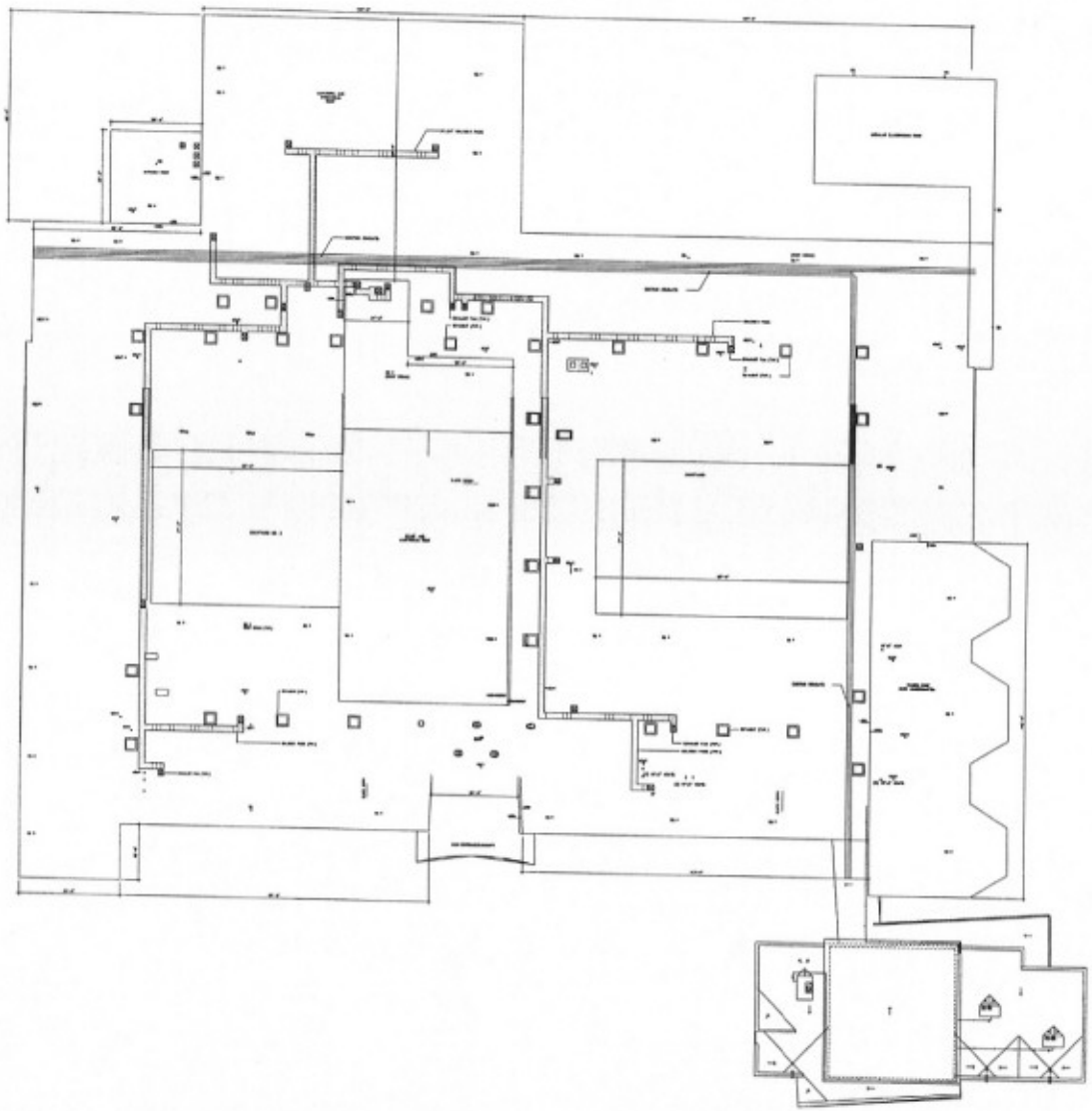
Photo #132:	Missing locking device at Annex building

APPENDIX B:
SITE AND FLOOR PLANS

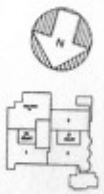

ORIENTATION
HIGH RIDGE ROAD
PLOT PLAN
PREPARED FOR
CITY OF STAMFORD
NORTHEAST ELEMENTARY SCHOOL
82 SCOFIELDTOWN ROAD
STAMFORD, CONNECTICUT
Survey Notes:
1) Datum is old City Of Stamford Datum (M.L.W.).
2) Underground utility structure and facility locations depicted and noted hereon have been compiled in part, from record mapping supplied by the respective utility companies or governmental agencies, from paint testimony and from other sources. These locations must be considered as approximate in nature. Additionally, other such features may exist on the site, the existence of which are unknown to Edward J. Frattaroli, Inc. The size, location and existence of all such features must be field determined and verified by the appropriate authorities prior to construction.
3) The contractor shall notify all public utility companies by calling Call-Before-You-Dig at 1-800-922-4455 at least 48 hours prior to initiating their tasks.
4) Since no title report was provided by the owner this plan is subject to easements which may or may not show-up in the chain of title.
Location Of Existing Gas Pipe Line To Be Staked-Out By Tennessee Gas Company If Construction Is Required Within 50' Of Pipe Line Contact Mr. Chris Nieves At (203)329-6378 At Least 72 Hours Prior To Any Construction In This Area
This survey and map has been prepared in accordance with Sections 20-300b-1 thru 20-300b-20 of the Regulations of Connecticut State Agencies "Minimum Standards for Surveys and Maps in the State of Connecticut" as endorsed by the Connecticut Association of Land Surveyors, Inc. It is a Building Location Map, Zoning, based on a "SUBURBAN RESURVEY" conforming to horizontal accuracy Class "A-2" and intended to be used for Compliance or Non-Compliance with Zoning Requirements.
To my knowledge and belief this plan is substantially correct as noted hereon.
This Document and Copies Thereof are Invalid Without the signature and embossed seal of the designated licensed professional. Unauthorized alterations render any association thereto null and void.
EDWARD J. FRATTAROLI, INC.
STAMFORD, CONNECTICUT December 21, 2000


EX-A10
1 LOWER LEVEL KEY PLAN
SCALE 1/16" = 1'-0"


EX-A11
1 MAIN LEVEL KEY PLAN
SCALE: 1/16" = 1'-0"



1 ROOF KEY PLAN
SCALE: 1/16" = 1'-0"



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APPENDIX C:
SUPPORTING DOCUMENTATION

FOR YOUR RECORDS ONLY. DO NOT SUBMIT TO EPA.

Please keep this Facility Summary for your own records; do not submit it to EPA. Only the Statement of Energy Performance (SEP), Data Checklist and Letter of Agreement need to be submitted to EPA when applying for the ENERGY STAR.

Facility
Northeast Elementary School
84 Scofieldtown Road
Stamford, CT 06903

Facility Owner
Stamford Public School
82 Lockwood Avenue
Stamford, CT 06901

Primary Contact for this Facility
N/A

General Information

Northeast Elementary School	
Gross Floor Area Excluding Parking: (ft^2)	88,445
Year Built	1966
For 12-month Evaluation Period Ending Date:	November 30, 2008

Facility Space Use Summary

Northeast Elementary School	
Space Type	K-12 School
Gross Floor Area(ft^2)	88,445
Open Weekends?	No
Number of PCs	160
Number of walk-in refrigeration/freezer units	2
Presence of cooking facilities	Yes
Percent Cooled	100
Percent Heated	30
Months[o]	12
High School?	No
School District[o]	N/A

Energy Performance Comparison

	Evaluation Periods		Comparisons		
Performance Metrics	**Current** (Ending Date 11/30/2008)	**Baseline** (Ending Date 08/31/2008)	**Rating of 75**	**Target**	**National Average**
Energy Performance Rating	28	27	75	N/A	50
Energy Intensity					
Site (kBtu/ft^2)	73	73	47	N/A	60
Source (kBtu/ft^2)	124	126	80	N/A	102
Energy Cost					
$/year	$ 2,620,263.76	$ 2,564,931.23	$ 1,680,245.93	N/A	$ 2,148,458.18
$/$ft^2$/year	$ 29.63	$ 29.00	$ 19.00	N/A	$ 24.29
Greenhouse Gas Emissions					
$MtCO_2e$/year	474	481	304	N/A	389
$kgCO_2e/ft^2$/year	5	5	3	N/A	4

More than 50% of your building is defined as K-12 School. Please note that your rating accounts for all of the spaces listed. The National Average column presents energy performance data your building would have if your building had an average rating of 50.

Notes:
o - This attribute is optional.
d - A default value has been supplied by Portfolio Manager.

APPENDIX D:
EMG ABBREVIATED ACCESSIBILITY CHECKLIST

Property Name: Northeast Elementary School
Date: February 17 & 18, 2009
Project Number: 88166.09R-010.017

EMG Abbreviated Accessibility Checklist					
	Building History	**Yes**	**No**	**N/A**	**Comments**
1.	Has the management previously completed an ADA review?		✓		
2.	Have any ADA improvements been made to the property?		✓		
3.	Does a Barrier Removal Plan exist for the property?		✓		
4.	Has the Barrier Removal Plan been reviewed/approved by an arms-length third party such as an engineering firm, architectural firm, building department, other agencies, etc.?			✓	
5.	Has building ownership or management received any ADA related complaints that have not been resolved?		✓		
6.	Is any litigation pending related to ADA issues?		✓		
	Parking	**Yes**	**No**	**N/A**	**Comments**
1.	Are there sufficient parking spaces with respect to the total number of reported spaces?		✓		
2.	Are there sufficient van-accessible parking spaces available (96" wide/ 96" aisle for van)?		✓		
3.	Are accessible spaces marked with the International Symbol of Accessibility? Are there signs reading "Van Accessible" at van spaces?			✓	
4.	Is there at least one accessible route provided within the boundary of the site from public transportation stops, accessible parking spaces, passenger loading zones, if provided, and public streets and sidewalks?	✓			
5.	Do curbs on the accessible route have depressed, ramped curb cuts at drives, paths, and drop-offs?	✓			
6.	Does signage exist directing you to accessible parking and an accessible building entrance?		✓		

EMG Abbreviated Accessibility Checklist					
	Ramps	**Yes**	**No**	**N/A**	**Comments**
1.	If there is a ramp from parking to an accessible building entrance, does it meet slope requirements? (1:12)			✓	
2.	Are ramps longer than 6 ft complete with railings on both sides?			✓	
3.	Is the width between railings at least 36 inches?			✓	
4.	Is there a level landing for every 30 ft horizontal length of ramp, at the top and at the bottom of ramps and switchbacks?			✓	
	Entrances/Exits	**Yes**	**No**	**N/A**	**Comments**
1.	Is the main accessible entrance doorway at least 32 inches wide?	✓			
2.	If the main entrance is inaccessible, are there alternate accessible entrances?			✓	The lower floor is not accessible without the addition of an elevator.
3.	Can the alternate accessible entrance be used independently?			✓	
4.	Is the door hardware easy to operate (lever/push type hardware, no twisting required, and not higher than 48 inches above the floor)?	✓			
5.	Are main entry doors other than revolving door available?	✓			
6.	If there are two main doors in series, is the minimum space between the doors 48 inches plus the width of any door swinging into the space?	✓			
	Paths of Travel	**Yes**	**No**	**N/A**	**Comments**
1.	Is the main path of travel free of obstruction and wide enough for a wheelchair (at least 36 inches wide)?	✓			
2.	Does a visual scan of the main path reveal any obstacles (phones, fountains, etc.) that protrude more than 4 inches into walkways or corridors?	✓			Drinking fountains
3.	Are floor surfaces firm, stable, and slip resistant (carpets wheelchair friendly)?		✓		Front entrance mat is loose and presents a tripping hazard
4.	Is at least one wheelchair-accessible public telephone available?		✓		
5.	Are wheelchair-accessible facilities (toilet rooms, exits, etc.) identified with signage?		✓		

EMG Abbreviated Accessibility Checklist					
6.	Is there a path of travel that does not require the use of stairs?		✓		
7.	If audible fire alarms are present, are visual alarms (strobe light alarms) also installed in all common areas?		✓		
	Elevators	**Yes**	**No**	**N/A**	**Comments**
1.	Do the call buttons have visual signals to indicate when a call is registered and answered?			✓	
2.	Is the "UP" button above the "DOWN" button?			✓	
3.	Are there visual and audible signals inside cars indicating floor change?			✓	
4.	Are there standard raised and Braille marking on both jambs of each host way entrance?			✓	
5.	Do elevator doors have a reopening device that will stop and reopen a car door if an object or a person obstructs the door?			✓	
6.	Do elevator lobbies have visual and audible indicators of car arrival?			✓	
7	Does the elevator interior provide sufficient wheelchair turning area (51" x 68")?			✓	
8.	Are elevator controls low enough to be reached from a wheelchair (48 inches front approach/54 inches side approach)?			✓	
9.	Are elevator control buttons designated by Braille and by raised standard alphabet characters (mounted to the left of the button)?			✓	
10.	If a two-way emergency communication system is provided within the elevator cab, is it usable without voice communication?			✓	
	Restrooms	**Yes**	**No**	**N/A**	**Comments**
1.	Are common area public restrooms located on an accessible route?	✓	✓		In Media Center and modular classroom wing only
2.	Are pull handles push/pull or lever type?	✓			
3.	Are there audible and visual fire alarm devices in the toilet rooms?		✓		
4.	Are corridor access doors wheelchair-accessible (at least 32 inches wide)?	✓	✓		In Media Center and modular classroom wing only

EMG Abbreviated Accessibility Checklist					
5.	Are public restrooms large enough to accommodate a wheelchair turnaround (60″ turning diameter)?	✓	✓		In Media Center and modular classroom wing only
6.	In unisex toilet rooms, are there safety alarms with pull cords?	✓			
7.	Are stall doors wheelchair accessible (at least 32″ wide)?		✓		
8.	Are grab bars provided in toilet stalls?	✓	✓		In Media Center and modular classrooms only
9.	Are sinks provided with clearance for a wheelchair to roll under (29″ clearance)?	✓			
10.	Are sink handles operable with one hand without grasping, pinching or twisting?	✓	✓		In Media Center and modular classroom wing only
11.	Are exposed pipes under sink sufficiently insulated against contact?	✓	✓		In Media Center and modular classroom wing only
12.	Are soap dispensers, towel, etc. Reachable (48″ from floor for frontal approach, 54″ for side approach)?	✓			
13.	Is the base of the mirror no more than 40″ from the floor?	✓			

APPENDIX E:
PRE-SURVEY QUESTIONNAIRE AND DOCUMENTATION REQUEST CHECKLIST

PRE-SURVEY QUESTIONNAIRE

This questionnaire was completed by the property owner, the owner's designated representative, or someone knowledgeable about the subject property. ***This completed form*** was ***presented to EMG's Field Observer on the day of the site visit***.

Project Name:	**Northeast Elementary School**	**Project Number:**	**88166.09R-010.017**
Person completing form:	**Ethan Margolis and Michael Foster**	**Date:**	**February 17 & 18, 2009**
Association with Project:	**Principal and Acting Head Custodian**	**Phone Number:**	**203.977.4469**
Years associated w/Proj.:	**10**	**Fax Number:**	
Current Owner:		**Estimated Value:**	

Unk = Unknown, NA = Not Applicable

	Yes	No	Unk	NA	Comments
1. Does the property have full-time maintenance personnel on site?	✓				
2. Have there been any capital improvements in the last five years?	✓				
If so, are details available?	Public sewer connection. Roof - 2002				
3. Are there any unresolved building, fire, or zoning code issues?		✓			
If so, what additional info is available?					
4. Are there any "down", unusable units?		✓			
5. Are there any problems or hazards at the property?	✓				ADA and leaks in Media
6. Has the property ever had an ADA accessibility review?		✓			
If so, is a copy available?					
7. Does a Barrier removal plan exist for the property?		✓			
8. Are there any unresolved accessibility issues at the property?	✓				
9. Is there any pending litigation concerning the property?		✓			
10. Is site drainage adequate?		✓			
11. Has a termite inspection occurred within the last year?	✓				
Is a copy of an inspection report available?					
12. Are there any problems with foundations or structures?	✓				Cracking
If so, are there plans to address?					
13. Is there any water infiltration in basements or crawl spaces?				✓	
14. Are there any wall or window leaks?	✓				
15. Are there any poorly insulated areas?	✓				
16. Are there any current roof leaks at the property?	✓				
17. Are any roof finishes more than ten years old?		✓			
18. Is the roofing covered by a warranty or bond?			✓		
19. Is Fire Retardant Treated (FRT) plywood used at the property?			✓		
20. Does the property have an exterior insulation and finish system (EIFS) with a synthetic stucco finish	✓				
21. Do the utilities (electric, gas, sewer, water) provide adequate service?		✓			

	Yes	No	Unk	NA	Comments
22. Is the property served by an on site water system?	✓	✓			Annex building on well
23. Is the property served by an on site septic system?	✓	✓			Annex building on sewer
24. If present, do irrigation systems function properly?				✓	
25. Are HVAC systems at the property inspected and maintained, at a minimum, annually?	✓				
26. Is the HVAC equipment more than ten years old?	✓				
27. Do any of the HVAC systems use R-11, 12, or 22 refrigerants?	✓				
28. Do tenants contract for their own HVAC work?		✓			
29. Has any HVAC system, or any other part of the property, ever contained visible suspect mold growth?			✓		
If so, where and when?					
30. Has the property ever been tested for indoor air quality or suspect mold?	✓				
If so, where and when? Results?					
31. Is there a response action in place to prevent mold growth or respond to its presence?	✓				
If so, describe. Is a copy available?					
32. Are the water heaters/boilers more than ten years old?		✓			
33. Is polybutylene piping used at the property?		✓			
34. Are there any plumbing leaks or water pressure problems?	✓				Drinking fountains and sinks
35. Are the any leaks or pressure problems with natural gas service?		✓			
36. Does any part of the electrical system use aluminum wiring?		✓			
37. Do Residential units have a min. of 60-Amp service or Commercial units have a min. 200-Amp service?				✓	
38. Has elevator equipment been replaced in the last ten years?				✓	
39. Are the elevators maintained by a contractor on a regular basis?				✓	
40. Is the elevator emergency communication equipment functional?				✓	
41. Is the elevator emergency communication equipment ADA compliant?				✓	
42. Have the fire/life safety systems been inspected within the last year?	✓				
43. Are there any smoke evacuation or pressurization systems?		✓			
44. Are there any recalled Omega or Central brand fire sprinkler heads that have not yet been replaced?		✓			
45. Are there any emergency electrical generators?	✓				
46. Are the generators maintained on a regular basis?	✓				
47. Do tenants contract for their own improvement work?				✓	
48. Are tenants responsible for any roof, HVAC, or exterior wall maintenance, repair, or replacement?				✓	
If so, what, where and how?					

	Yes	No	Unk	NA	Comments
49. Have there been previous due diligence, engineering, environmental, or geological studies done?	✓				
If so, are copies available?					
50. Is there anything else that EMG should know about when assessing this property? If so, what?		✓			

On the day of the site visit, provide EMG's Field Observer access to all of the available documents listed below. Provide copies if possible.

INFORMATION REQUIRED

1. All available construction documents (blueprints) for the original construction of the building or for any tenant improvement work or other recent construction work.

2. A site plan, preferably 8 1/2" X 11", which depicts the arrangement of buildings, roads, parking stalls, and other site features.

3. For commercial properties, provide a tenant list which identifies the names of each tenant, vacant tenant units, the floor area of each tenant space, and the gross and net leasable area of the building(s).

4. For apartment properties, provide a summary of the apartment unit types and apartment unit type quantities, including the floor area of each apartment unit as measured in square feet.

5. For hotel or nursing home properties, provide a summary of the room types and room type quantities.

6. Copies of Certificates of Occupancy, building permits, fire or health department inspection reports, elevator inspection certificates, roof or HVAC warranties, or any other similar, relevant documents.

7. The names of the local utility companies which serve the property, including the water, sewer, electric, gas, and phone companies.

8. The company name, phone number, and contact person of all outside vendors who serve the property, such as mechanical contractors, roof contractors, fire sprinkler or fire extinguisher testing contractors, and elevator contractors.

9. A summary of recent (over the last 5 years) capital improvement work which describes the scope of the work and the estimated cost of the improvements. Executed contracts or proposals for improvements. Historical costs for repairs, improvements, and replacements.

10. Records of system & material ages (roof, MEP, paving, finishes, furnishings).

11. Any brochures or marketing information.

12. Appraisal, either current or previously prepared.

13. Current occupancy percentage and typical turnover rate records (for commercial and apartment properties).

14. Previous reports pertaining to the physical condition of property.

15. ADA survey and status of improvements implemented.

16. Current / pending litigation related to property condition.

Your timely compliance with this request is greatly appreciated.

APPENDIX F:
ACRONYMS AND OUT OF SCOPE ITEMS

ASTM E2018-01 ACRONYMS

ADA - The Americans with Disabilities Act
ASTM - American Society for Testing and Materials
BOMA - Building Owners & Managers Association
BUR - Built-up Roofing
DWV – Drainage, Waste, Ventilation
EIFS - Exterior Insulation and Finish System
EMF – Electro Magnetic Fields
EMS - Energy Management System
EUL - Expected Useful Life
FEMA - Federal Emergency Management Agency
FFHA - Federal Fair Housing Act
FIRMS - Flood Insurance Rate Maps
FRT- Fire Retardant Treated
FOIA - U.S. Freedom of Information Act (5 USC 552 et seq.) and similar state statutes.
FOIL - Freedom of Information Letter
FM - Factory Mutual
HVAC - Heating, Ventilating and Air-conditioning
IAQ - Indoor Air Quality
MEP – Mechanical, Electrical & Plumbing
NFPA - National Fire Protection Association
PCR - Property Condition Report
PML - Probable Maximum Loss
RTU - Rooftop Unit
RUL - Remaining Useful Life
STC – Sound Transmission Class
UBC – Uniform Building Code

Ref #	Section 8: ASTM E 2018-01 Out of Scope Items
8.4.1.8	***Utilities:*** Operating conditions of any systems or accessing manholes or utility pits.
8.4.2.2	***Structural Frame and Building Envelope:*** Entering of crawl or confined space areas (however, field observer should observe conditions to the extent easily visible from the point of access to the crawl or confined space areas), determination of previous substructure flooding or water penetration unless easily visible or if such information is provided.
8.4.3.2	***Roofs:*** Walking on pitched roofs, or any roof areas that appear to be unsafe, or roofs with no built-in access, or determining any roofing design criteria.
8.4.4.2	***Plumbing:*** Determining adequate pressure and flow rate, fixture-unit values and counts, or verifying pipe sizes and verifying the point of discharge for underground systems.
8.4.5.2	***Heating:*** Observation of flue connections, interiors of chimneys, flues or boiler stacks, or -owned or maintained equipment.
8.4.6.2	***Air-conditioning and Ventilation:*** Evaluation of process related equipment or condition of owned/maintained equipment.
8.4.7.2	***Electrical:*** Removing of electrical panel covers, except if removed by building staff, EMF issues, electrical testing, or operating of any electrical devices. Process related equipment or owned equipment.
8.4.8.2	***Vertical Transportation:*** Examining of cables, sheaves, controllers, motors, inspection tags, or entering elevator/escalator pits or shafts
8.4.9.1	***Life Safety / Fire Protection***: Determining NFPA hazard classifications, classifying, or testing fire rating of assemblies.
8.4.10.2	***Interior Elements:*** Operating appliances or fixtures, determining or reporting STC (Sound Transmission Class) ratings, and flammability issues/regulations.

Ref #	Section 11: ASTM E 2018-01 Out of Scope Items
11.1	*Activity Exclusions* - The activities listed below are generally excluded from or otherwise represent limitations to the scope of a Comprehensive Building Condition Assessment prepared in accordance with this *guide*. These should not be construed as all-inclusive or implying that any exclusion not specifically identified is a Comprehensive Building Condition Assessment requirement under this *guide*.
11.1.1	Removing or relocating materials, furniture, storage containers, personal effects, debris material or finishes; conducting exploratory probing or testing; *dismantling* or operating of equipment or appliances; or disturbing personal items or *property* which obstructs access or visibility.
11.1.2	Preparing *engineering* calculations (civil, structural, mechanical, electrical, etc.) to determine any *system's*, *component's*, or equipment's adequacy or compliance with any specific or commonly accepted design requirements or *building codes*, or preparing designs or specifications to remedy any *physical deficiency*.
11.1.3	Taking measurements or quantities to establish or confirm any information or representations provided by the *owner* or *user* such as: size and dimensions of the *subject property* or *subject building*, any legal encumbrances such as easements, dwelling unit count and mix, building *property* line setbacks or elevations, number and size of parking spaces, etc.
11.1.4	Reporting on the presence or absence of pests such as wood damaging organisms, rodents, or insects unless evidence of such presence is readily apparent during the course of the *field observer's walk-through survey* or such information is provided to the *consultant* by the *owner*, *user*, property manager, etc. The *consultant* is not required to provide a *suggested remedy* for treatment or remediation, determine the extent of infestation, nor provide *opinions of probable costs* for treatment or remediation of any deterioration that may have resulted.
11.1.5	Reporting on the condition of subterranean conditions such as underground utilities, separate sewage disposal *systems*, wells; *systems* that are either considered process-related or peculiar to a specific tenancy or use; waste water treatment plants; or items or *systems* that are not permanently installed.

Ref #	Section 11: ASTM E 2018-01 Out of Scope Items
11.1.6	Entering or accessing any area of the premises deemed to pose a threat of *dangerous or adverse conditions* with respect to the *field observer* or to perform any procedure, which may damage or impair the physical integrity of the *property*, any *system*, or *component*.
11.1.7	Providing an opinion on the condition of any *system* or *component,* which is *shutdown,* or whose operation by the *field observer* may significantly increase the registered electrical demand-load. However, *consultant* is to provide an opinion of its physical condition to the extent reasonably possible considering its age, obvious condition, manufacturer, etc.
11.1.8	Evaluating acoustical or insulating characteristics of *systems* or *components*.
11.1.9	Providing an opinion on matters regarding security of the *subject property* and protection of its occupants or *users* from unauthorized access.
11.1.10	Operating or witnessing the operation of lighting or other *systems* typically controlled by time clocks or that are normally operated by the building's operation staff or service companies.
11.1.11	Providing an environmental assessment or opinion on the presence of any environmental issues such as asbestos, hazardous wastes, toxic materials, the location and presence of designated wetlands, IAQ, etc.
11.2	*Warranty, Guarantee and Code Compliance Exclusions* - By conducting a Comprehensive Building Condition Assessment and preparing a PCR, the *consultant* is merely providing an opinion and does not warrant or guarantee the present or future condition of the *subject property,* nor may the Comprehensive Building Condition Assessment be construed as either a warranty or guarantee of any of the following:
11.2.1	any *system's* or *component's* physical condition or use, nor is a Comprehensive Building Condition Assessment to be construed as substituting for any *system*'s or equipment's warranty transfer inspection;
11.2.2	compliance with any federal, state, or local statute, ordinance, rule or regulation including, but not limited to, *building codes*, safety codes, environmental regulations, health codes or zoning ordinances or compliance with trade/design standards or the standards developed by the insurance industry. However, should there be any conspicuous *material* present violations *observed* or reported based upon *actual knowledge* of the *field observer* or the *PCR reviewer*, they should be identified in the PCR;
11.2.3	compliance of any material, equipment, or *system* with any certification or actuation rate program, vendor's or manufacturer's warranty provisions, or provisions established by any standards that are related to insurance industry acceptance/approval such as FM, State Board of Fire Underwriters, etc.
11.3	Additional/General Considerations:
11.3.1	Further Inquiry - There may be physical condition issues or certain physical improvements at the *subject property* that the parties may wish to assess in connection with a *commercial real estate transaction* that are outside the scope of this *guide*. Such issues are referred to as non-scope considerations and if included in the PCR, should be identified under Section 10.9.
11.3.2	*Non-Scope Considerations* - Whether or not a *user* elects to inquire into non-scope considerations in connection with this *guide* is a decision to be made by the *user*. No assessment of such non-scope considerations is required for a Comprehensive Building Condition Assessment to be conducted in compliance with this *guide*.

APPENDIX G:
RESUMES FOR REPORT REVIEWER AND FIELD OBSERVER

BILL CHAMPION, PMP

Program Manager

Cost Segregation Manager

Education

- MBA from the University of Rochester (Simon)
- MS in Mechanical Engineering from the State University of New York at Buffalo
- BS in Mechanical Engineering from the State University of New York at Buffalo

Project Experience

- ***Housing Authority of the City of Pittsburgh, Pittsburgh, PA*** – Mr. Champion was a member of the Quality Assurance Review Team for this Physical Needs Assessment portfolio that encompassed over 6,114 housing units within 20 separate communities in City of Pittsburgh, Pennsylvania. The objective of the PNA was to provide a general description of all physical improvements that the Client would need to undertake to bring its properties, including dwellings and non-dwellings structures, to a level that will provide safe, decent and sanitary living conditions for the residents. Mr. Champion utilized his engineering expertise to ensure that the methodology and protocol were not compromised during the execution of the assessment.
- ***George Mason University, Fairfax, VA***- As Program Manager, Mr. Champion was responsible for meeting with the Client and developing a specific program that exceeded the Client's expectations. The program was designed to provide facility condition assessments and prepare a database for tracking, systems, building components, deficiencies and replacements. This database was customized further to include a detailed equipment inventory. This database was designed based on Client input and the end user in mind. Mr. Champion's ability to troubleshoot issues allowed EMG to conduct this program effectively and maintain the schedule and budget.
- ***University of Virginia, Charlottesville, VA*** – Mr. Champion performed Facilities Condition Audits on academic buildings on the campus of The University of Virginia. He evaluated building condition and systems, outlined physical deficiencies and gave recommendations for prioritizing them to maximize safety and minimize long-term costs.

Industry Tenure

- A/E: 1994
- EMG: 2002

Related Experience

- Multifamily Housing Portfolios
- Government Agency Portfolios
- K-12 Education Portfolios
- Higher Education Portfolios
- Retail Portfolios
- Industrial Portfolios

Industry Experience

- Multi-family Housing
- Cost Segregation
- Government
- Retail
- Industrial
- K-12 Education
- Higher Education

Active Licenses / Registrations

- Certified Project Management Professional (PMP) by the Project Management Institute, # 50241
- Engineer in Training in the State of New York, # 046094
- Member- American Society of Mechanical Engineers

Regional Location

- Baltimore, Maryland

MICHAEL A. YOUNG

Senior Engineering Consultant

Education

- BS, Agricultural Engineering, The University of Georgia, Athens, Georgia

Project Experience

- ***Hospitality, Nationwide –*** Mr. Young served as the technical lead on a Property Condition Evaluation portfolio. A number of additional studies were required during the completion of this portfolio that were critical to the client in determining property needs.
- ***Healthcare - Skilled Nursing and Assisted Living, Nationwide -*** Mr. Young was the technical lead for a 183 site portfolio of SNF/ALF properties. He reviewed reports, participated in kick-off and progress meetings and provided summaries and follow-on studies/issues matrices to the client. All projects were completed on schedule and delivered on time to the client.
- ***Retail/Office – Bank, Nationwide –*** Mr. Young served as the technical lead for a 75 property portfolio of bank properties. The objective of the portfolio was to provide Property Condition Assessment reports addressing any property needs required and anticipated during the evaluation period.
- ***Multi-Family, Nationwide -*** Mr. Young was the technical lead for a Property Condition Assessment portfolio of approximately 43 Multi-Family Residential properties. Many of the properties in this portfolio required or were currently experiencing major renovation work. Other properties were under construction. Accurate state of renovation/construction and costs for any remaining work were significant to the client to make an effective business decision.
- ***Industrial - Packaging, Southern U.S. –*** Mr. Young was the technical lead for a Property Condition Assessment portfolio of approximately 34 industrial properties. The objective of the portfolio was to provide initial preliminary field reports and cost tables for each property and ultimately a full Property Condition Assessment report, including immediate repairs and reserve replacements.
- Michael has completed in excess of 150 Property Condition Assessments (debt reports) and Property Condition Evaluations (equity reports) while at EMG.
- Michael has reviewed or been technically involved in excess of 1,000 Property Condition Assessments (debt reports), Property Condition Evaluations (equity reports), and other due diligence related reports while at EMG.

Industry Tenure

- A/E: 1996
- EMG: 2004

Related Experience

- Healthcare/Senior Housing Portfolios
- Industrial/Warehouse Portfolios
- National Hotel Chain Portfolios
- Multifamily Housing Portfolios
- Manufactured Home Community Portfolios
- Retail Portfolios

Industry Experience

- Healthcare/Senior Living Housing
- Hospitality
- Retail
- Multifamily Housing
- Affordable Housing/HUD
- Office
- Industrial/Warehouse Facilities
- Manufactured Home Communities

Regional Location

- Atlanta, GA

JILL E. ORLOV

Technical Report Reviewer

Education

- Masters of Architecture, University of Pennsylvania, Philadelphia, PA
- BS, Architecture, University of Virginia, Charlottesville, VA

Project Experience

- ***Hotel Property, Pittsburgh, PA –*** As Project Manager, Ms. Orlov performed a property condition assessment of this 132 unit, six-story hotel property. She reviewed the condition of the building structure and systems and developed a thorough report. Her work helped EMG complete this project on time and on budget.
- ***Nursing Home, Charleston, SC –*** Ms. Orlov completed a property condition assessment of this 89,900 square feet building consisting of 148 units. During her evaluation of the facility, she conducted interviews with the property manager and maintenance staff. Her findings included information on existing building conditions, site improvements, mechanical and electrical systems and code accessibility information.
- ***Office Building, Richmond, VA –*** Ms. Orlov completed a property condition assessment on this 31,000 square feet, two and three story office building located in Richmond. She conducted interviews with the property manager and maintenance staff. Findings included information on existing building conditions, site improvements, mechanical and electrical systems and code and accessibility information.
- ***Higher Education Stadium, Fairfax, VA –*** Ms. Orlov completed a property condition assessment on this 162,221 square feet, three story sports arena building located in Fairfax. She conducted interviews with the property manager and maintenance staff. Findings included information on existing building conditions, site improvements, mechanical and electrical systems and code and accessibility information. The client found her structural and roof observations critical to their final business decision. This project was a part of a large portfolio of projects EMG completed for our client.

Industry Tenure

- A/E: 1991 - 2004
- EMG: July, 2004 to present

Industry Experience

- Government Facilities
- Office
- Industrial
- Housing/Multi-family
- K-12
- Higher Education
- Hospitality
- Healthcare
- Retail

Active Licenses/Registration

- Architectural, MD

Special Skills & Training

- AUTOCAD, 2000

Regional Location

- Baltimore, MD

KEVIN M. LANTRY

Project Manager

Education

- BS, Mechanical Engineering, Purdue University School of Mechanical Engineering, 2003

Project Experience

- **Kettering Tower, Dayton, OH –** Project Manager. Completed a Property Condition Assessment of this 30-story building in downtown Dayton. The 486,000 square foot facility contains office and retail space and an attached six level parking garage.
- **Two Illinois Center, Chicago, IL –** Project Manager. Completed an Equity Level Property Condition Evaluation of this 32-story building in Chicago's East Loop office district. The 1.2 million square foot facility contains office and retail space along with a four level subterranean parking garage.
- **Orange County Parks Depreciation Study, Orange County, CA** – Project Manager. Performed facility assessments on over 20 harbor, beach and park properties, including recreational facilities, maintenance facilities, and offices. Compiled data into individual Property Condition Reports, which included a Depreciation Study and 10-year Capital Plan for each facility.
- **Detroit Public Housing, Detroit, MI –** Project Manager. Completed Physical Needs Assessments for six large-scale public housing developments in the Detroit area. Input costs to a modernization budget using software developed by EMG and the Detroit Housing Commission.
- **Alan Bible Federal Building, Las Vegas, NV –** Project Manager. Completed a Level IV Web Building Engineering Report (BER) for the US Government General Services Administration. Evaluated the mechanical, plumbing, and elevator systems as part of the assessment team sent by EMG to analyze all building components.
- **First Energy Facility Assessments, Multiple Sites, PA -** Project Manager. Performed facility assessments on over forty sites for a large electric utility in central and eastern Pennsylvania. Evaluated a wide range of sites, including district offices, regional headquarters and maintenance facilities. Compiled results into individual Facility Condition Reports and EMG's Assetcalc software to be used by the client for capital planning and facility investment purposes.

Industry Tenure

- A/E: 2001
- EMG: August, 2004

Related Experience

- GSA Assessment Team

Industry Experience

- Industrial
- Commercial
- Multi-family Residential

Special Skills & Training

- ISO 9000
- AutoCAD
- VFA Facility Certified
- Cross Trained for Environmental Assessments

Memberships

- ASHRAE
- ASME

Regional Location

- Indianapolis, IN