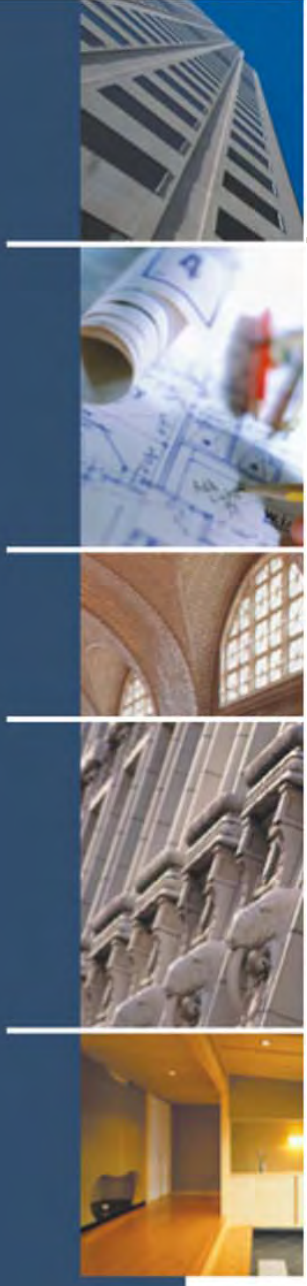

FACILITIES NEEDS ASSESSMENT

STAMFORD PUBLIC SCHOOLS

888 Washington Boulevard
Stamford, Connecticut 06901
Domenick Tramontozzi

FACILITIES NEEDS ASSESSMENT

OF

TURN OF RIVER MIDDLE SCHOOL

117 Vine Road
Stamford, Connecticut 06905

PREPARED BY:

EMG
222 Schilling Circle, Suite 275
Hunt Valley, Maryland 21031
800.733.0660
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EMG Project #: 88166.09R-014.017
Date of Report: August 29, 2009
On-Site Date: April 6 and 7, 2009

Replacement Reserves Report
Middle Schools / Turn of River Middle School
8/29/2009

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%

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	3368	HVAC system study	0	0	0	1	EA	$9,135.00	$9,135	$9,135										**$9,135**
1.2	3357	Measured ADA Study of Property	0	0	0	1	EA	$6,930.00	$6,930	$6,930										**$6,930**
1.2	3358	Mold Study at Buildings	0	0	0	1	EA	$3,339.00	$3,339	$3,339										**$3,339**
3.1	3359	Install ADA recessed floor aluminum mats	15	15	0	100	SF	$63.00	$6,300	$6,300										**$6,300**
3.1	3391	ADA cane detection barrier rails	30	30	0	3	PR	$144.90	$435	$435										**$435**
3.1	3388	Replace school door knobs with ADA lever	20	20	0	40	EA	$682.92	$27,317	$27,317										**$27,317**
3.1	3404	ADA, lower existing toilet room accessories and mirrors	0	0	0	2	EA	$115.11	$230	$230										**$230**
3.1	3403	Add ADA Grab Bar and blocking	20	19	1	2	EA	$1,575.00	$3,150		$3,150									**$3,150**
3.1	3480	Add ADA handrail extensions to existing metal handrails	30	29	1	24	EA	$441.00	$10,584		$10,584									**$10,584**
3.1	3481	Modify Exsiting Guardrails with metal grid or panels to close openings	30	30	0	96	LF	$146.16	$14,031	$14,031										**$14,031**
3.1	3399	ADA, Renovate restroom for full compliance	20	19	1	5	EA	$15,120.00	$75,600		$75,600									**$75,600**
3.1	3476	Add new 2-story hydraulic elevator and enclosure	30	29	1	1	EA	$109,683.00	$109,683		$109,683									**$109,683**
3.1	3477	Add new 2-story hydraulic elevator and enclosure	30	29	1	1	EA	$109,683.00	$109,683		$109,683									**$109,683**
3.1	3417	Install new wheelchair lift 3 'to 8'	20	20	0	1	EA	$18,078.30	$18,078	$18,078										**$18,078**
3.1	3405	Replace lavatory with ADA lever handles	20	19	1	2	EA	$699.30	$1,399		$1,399									**$1,399**
3.1	3398	ADA Drinking Fountain Cup Dispenser	15	14	1	2	EA	$69.30	$139		$139									**$139**
3.1	3397	ADA Strobe Fire Alarm	15	15	0	9	EA	$630.00	$5,670	$5,670										**$5,670**
3.1	3380	ADA, paint accessible parking space	5	4	1	4	EA	$207.90	$832		$832					$832				**$1,663**
3.1	3379	ADA, paint van-accessible space with signage	5	4	1	1	EA	$277.20	$277		$277					$277				**$554**
3.1	3378	ADA - Install signage indicating Accessible Parking, pole mounted	20	19	1	1	EA	$134.01	$134		$134									**$134**
3.1	3394	ADA, install/replace signage giving direction to accessible entrance	0	0	0	4	Sign	$134.01	$536	$536										**$536**
3.1	3381	ADA, install/replace signage giving direction to accessible entrance	0	0	0	4	Sign	$134.01	$536	$536										**$536**
3.1	3385	Install handrail at exterior steps	20	20	0	164	LF	$65.65	$10,766	$10,766										**$10,766**
3.1	3384	Install 2 - rail, 1-1/2" handrail on either side of exterior ramp	30	29	1	30	LF	$178.23	$5,347		$5,347									**$5,347**
3.1	3406	ADA, Wrap drain pipes below accessible lavatory	0	0	0	2	EA	$81.90	$164	$164										**$164**
5.2	3382	Replace concrete stairs	0	0	0	100	SF	$85.05	$8,505	$8,505										**$8,505**
5.2	3370	Seal Coat and stripe asphalt, no repairs	5	4	1	5	10000 SF	$4,315.53	$21,578		$21,578					$21,578				**$43,155**
5.2	3376	Replace concrete curbs	25	24	1	600	LF	$38.12	$22,869		$22,869									**$22,869**
5.2	3377	Replace asphalt curbs	10	9	1	250	LF	$14.63	$3,657		$3,657									**$3,657**
5.2	3369	Cut & Patch asphalt	10	9	1	500	SF	$3.86	$1,928		$1,928									**$1,928**
5.2	3373	Remove and replace asphalt path 4' wide	15	12	3	800	LF	$19.15	$15,322				$15,322							**$15,322**
5.2	3375	Remove & replace 4' wide concrete sidewalk	25	22	3	55	LF	$40.65	$2,236				$2,236							**$2,236**
5.2	3372	Remove and replace asphalt path 4' wide	15	15	0	300	LF	$19.15	$5,746	$5,746										**$5,746**

Replacement Reserves Report
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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	3374	Remove & replace 4' wide concrete sidewalk	25	25	0	315	LF	$40.65	$12,804	$12,804										**$12,804**
5.3	3383	Storm drainage improvement allowance to mitigate ponding	0	0	0	1	EA	$148,207.50	$148,208	$148,208										**$148,208**
5.4	3751	Point stone retaining wall	25	24	1	3500	LF	$5.68	$19,889		$19,889									**$19,889**
5.4	3390	Re-grading landscape and establishment of ground cover	25	24	1	1400	SY	$11.48	$16,070		$16,070									**$16,070**
5.4	3386	Mature Tree Removal or major trimming	0	0	0	3	EA	$1,108.80	$3,326	$3,326										**$3,326**
5.4	6694	Shrub/tree planting beds	20	20	0	300	EA	$74.34	$22,302	$22,302										**$22,302**
5.5	3402	High pressure sodium fixture 250 W	20	20	0	10	EA	$1,239.56	$12,396	$12,396										**$12,396**
5.5	3408	Remove and replace 4-foot chain link fence	10	9	1	140	LF	$27.87	$3,902		$3,902									**$3,902**
5.5	3411	Replace chain link fence, 6-foot high	20	19	1	500	LF	$37.31	$18,654		$18,654									**$18,654**
5.5	3414	Replace baseball backstop, large	20	17	3	1	EA	$11,748.24	$11,748				$11,748							**$11,748**
5.5	3415	Re-grading and establishment of ground cover at playing field	25	24	1	30	1000 SF	$3,222.80	$96,684		$96,684									**$96,684**
5.5	3412	Replace bleacher, outdoor portable, 3 to 5 tiers, per seat	20	19	1	32	Seat	$116.80	$3,738		$3,738									**$3,738**
5.5	3413	Replace bleacher, outdoor portable, 3 to 5 tiers, per seat	20	20	0	36	Seat	$116.80	$4,205	$4,205										**$4,205**
5.5	6713	Install underground irrigation system	0	0	0	60000	SF	$1.26	$75,600	$75,600										**$75,600**
5.5	6695	New Aluminum pole-mounted double light 400 W HPS fixture and pole	0	0	0	6	EA	$8,651.16	$51,907	$51,907										**$51,907**
6.3	12213	Stamford Roof Assessment - BUR Roof Replacement	20	20	0	430	SQ	$1,702.13	$731,914	$731,914										**$731,914**
6.3	3431	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	12212	Stamford Roof Assessment Roof Repair Recommendations	0	0	0	1	EA	$1,773.22	$1,773	$1,773										**$1,773**
6.4	6696	Pressure wash existing masonry	0	0	0	20000	SF	$1.34	$26,712	$26,712										**$26,712**
6.4	3447	Scrape and paint exterior metal	7	6	1	7500	LF	$1.97	$14,742		$14,742							$14,742		**$29,484**
6.4	3444	Remove and replace plywood siding	0	0	0	4000	SF	$4.94	$19,757	$19,757										**$19,757**
6.4	3446	Caulking, expansion joints,1"x1/2", remove and replace	15	14	1	5000	LF	$7.95	$39,753		$39,753									**$39,753**
6.4	3436	Repair precast concrete panels due to minor cracks and rust	20	19	1	40	CSF	$725.76	$29,030		$29,030									**$29,030**
6.4	3439	General painting cost per SF, minor prep work, up to 4-story bldg.	10	8	2	5000	SF	$1.78	$8,883			$8,883								**$8,883**
6.5	6698	Capital Plan - Replace Stairwell Door Hold-opens	0	0	0	1	EA	$25,200.00	$25,200	$25,200										**$25,200**
6.5	3451	Rubber Steps	0	0	0	540	SF	$40.16	$21,684	$21,684										**$21,684**
6.5	3449	Replace pressure treated ramp	20	18	2	160	SF	$112.90	$18,063			$18,063								**$18,063**
6.6	3454	Minor repairs to concrete loading dock	0	0	0	250	SF	$50.84	$12,710	$12,710										**$12,710**
6.6	6697	Rekey exsiting locks and new Master Key system	30	30	0	380	Door	$79.83	$30,337	$30,337										**$30,337**
6.6	3456	Replace loading dock bumpers 6"thick 10" high 36"long	10	9	1	20	EA	$242.30	$4,846		$4,846									**$4,846**
6.7	3432	Replace damaged concrete	30	30	0	200	SY	$450.99	$90,198	$90,198										**$90,198**
6.8	3472	Replace folding leaf, vinyl faced, to 18' high	0	0	0	1400	SF	$147.66	$206,723	$206,723										**$206,723**
6.8	3469	Paint interior walls, CMU,including surface prep	7	4	3	25000	SF	$1.12	$28,035				$28,035							**$28,035**
6.8	6699	Capital Plan - Install Sound Attenuation at walls/ceilings	0	0	0	13	CSF	$882.00	$11,466	$11,466										**$11,466**
6.8	3467	Sand and refinish hardwood floor	10	6	4	7000	SF	$6.93	$48,510					$48,510						**$48,510**
6.8	3466	Replace Vinyl tile	18	10	8	2000	SY	$81.90	$163,800									$163,800		**$163,800**

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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
6.8	3457	Replace carpet - standard commercial	8	6	2	775	SY	$63.23	$49,001			$49,001								**$49,001**
6.8	3470	Replace acoustical ceiling tile system, fire rated,including demo	20	15	5	185	CSF	$627.48	$116,084						$116,084					**$116,084**
6.8	6706	Capital Plan - Repair/Replace Stage Rigging	0	0	0	1	EA	$107,100.00	$107,100	$107,100										**$107,100**
6.8	3460	Asbestos floor tile and mastic removal	0	0	0	5000	SF	$3.15	$15,750	$15,750										**$15,750**
6.8	6708	Stamford - Lead Abatement Allowance	0	0	0	142000	SF	$1.26	$178,920	$178,920										**$178,920**
7.1	3416	Install Air-Conditioning at entire building	30	29	1	128000	SF	$16.22	$2,075,674		$2,075,674									**$2,075,674**
7.1	4169	Replace fan coil unit 2.5 ton	15	8	7	4	EA	$3,101.88	$12,408								$12,408			**$12,408**
7.1	3462	Replace air handler 2500-3000 CFM	15	14	1	5	EA	$4,037.04	$20,185		$20,185									**$20,185**
7.1	4017	Replace fan coil unit 3 ton	15	14	1	4	EA	$1,907.64	$7,631		$7,631									**$7,631**
7.1	4162	Replace fan coil unit 1.5 ton	15	9	6	3	EA	$2,033.30	$6,100							$6,100				**$6,100**
7.1	3455	Replace Unit Ventilator 1250 CFM	15	14	1	53	EA	$9,683.10	$513,204		$513,204									**$513,204**
7.1	4166	Replace fan coil unit 2 ton	15	8	7	5	EA	$2,426.60	$12,133								$12,133			**$12,133**
7.1	3465	Replace air handler 4,000 to 8,000 CFM	20	19	1	7500	CFM	$3.78	$28,350		$28,350									**$28,350**
7.1	4168	Replace fan coil unit 2.5 ton	15	14	1	2	EA	$3,101.88	$6,204		$6,204									**$6,204**
7.1	4164	Replace fan coil unit 2 ton	15	14	1	1	EA	$2,426.60	$2,427		$2,427									**$2,427**
7.1	3464	Replace air handler 8,000 to 12,000 CFM	20	19	1	10000	CFM	$1.68	$16,758		$16,758									**$16,758**
7.1	3757	Circulation Pump 5 HP	20	22	0	3	EA	$6,424.74	$19,274	$19,274										**$19,274**
7.1	3756	Circulation Pump 7.5 HP	20	22	0	2	EA	$6,892.20	$13,784	$13,784										**$13,784**
7.1	3763	Pad-Mounted Condenser 2-ton	15	14	1	1	EA	$2,954.70	$2,955		$2,955									**$2,955**
7.1	3760	Replace Roof-Mounted Condenser 2.5-ton	15	8	7	4	EA	$3,204.18	$12,817								$12,817			**$12,817**
7.1	3418	Replace rooftop unit 5-10 tons (heating and cooling)	15	12	3	4 @ 4	Ton	$1,688.40	$27,014				$27,014							**$27,014**
7.1	3765	Pad-Mounted Condenser 2.5-ton	15	14	1	2	EA	$3,204.18	$6,408		$6,408									**$6,408**
7.1	3759	Replace Roof-Mounted Condenser 2-ton	15	8	7	5	EA	$3,230.64	$16,153								$16,153			**$16,153**
7.1	3758	Replace Roof-Mounted Condenser 1.5-ton	15	9	6	3	EA	$2,832.48	$8,497							$8,497				**$8,497**
7.1	3764	Pad-Mounted Condenser 3-ton	15	14	1	4	EA	$3,332.70	$13,331		$13,331									**$13,331**
7.1	3453	Replace UST, Steel, Fuel oil storage, 10,000 gallon	25	24	1	1	EA	$134,929.62	$134,930		$134,930									**$134,930**
7.2	3443	Replace flush valve & water closet	25	23	2	43	EA	$1,123.59	$48,314			$48,314								**$48,314**
7.2	3445	Replace urinal	35	32	3	19	EA	$1,277.51	$24,273				$24,273							**$24,273**
7.2	3448	Replace china wall hung lavatory and faucet	35	34	1	41	EA	$807.16	$33,093		$33,093									**$33,093**
7.2	3442	Replace drinking fountain	10	5	5	3	EA	$1,505.70	$4,517						$4,517					**$4,517**
7.2	3441	Replace drinking fountain	10	9	1	7	EA	$1,505.70	$10,540		$10,540									**$10,540**
7.2	6714	Capital Plan - Install outdoor drinking fountain, pedestal type	0	0	0	4	EA	$2,451.56	$9,806	$9,806										**$9,806**
7.2	6715	Capital Plan - Install one inch copper pipe for drinking fountain	0	0	0	500	LF	$31.63	$15,813	$15,813										**$15,813**
7.2	3452	Replace water heater, commercial 100 gal	15	11	4	1	EA	$7,162.50	$7,162					$7,162						**$7,162**
7.2	3755	Remove Asbestos insultion from pipe up to 4-inch dia	0	0	0	200	LF	$12.60	$2,520	$2,520										**$2,520**
7.4	3754	Replace UST, Steel, Fuel oil storage, 550 gallon	25	20	5	1	EA	$50,924.16	$50,924						$50,924					**$50,924**

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7.4	3438	Breaker panel 100 amps, comm. 14 circuits	40	39	1	18	EA	$1,798.27	$32,369		$32,369									**$32,369**
7.4	6701	Rewire all circuits to new panel	40	39	1	20000	SF	$6.99	$139,860		$139,860									**$139,860**
7.4	3440	Breaker panel 225 amps, 32 circuits	40	39	1	6	EA	$3,445.85	$20,675		$20,675									**$20,675**
7.4	6702	Rewire all circuits to new panel	40	39	1	10000	SF	$6.99	$69,930		$69,930									**$69,930**
7.4	6700	Breaker panel 400 amps, 277/480 v, 42 circuit	40	39	1	1	EA	$10,362.24	$10,362		$10,362									**$10,362**
7.4	6711	Upgrade lighting for energy conservation	0	0	0	128000	SF	$5.92	$758,016	$758,016										**$758,016**
7.4	3437	Room intercom units	10	3	7	53	EA	$205.54	$10,894								$10,894			**$10,894**
7.4	3433	Replace Diesel Generator 30KW	25	24	1	1	EA	$30,316.67	$30,317		$30,317									**$30,317**
7.4	6704	Install Diesel Generator 150KW	25	24	1	1	EA	$103,899.60	$103,900		$103,900									**$103,900**
7.4	3435	Replace stage audio equipment	15	6	9	1	EA	$19,026.00	$19,026										$19,026	**$19,026**
7.4	6707	Asbestos electrical insulation, removal 300 LF	0	0	0	1	EA	$5,733.00	$5,733	$5,733										**$5,733**
7.6	3427	Install Fire Sprinklers	30	30	0	4000	SF	$4.98	$19,908	$19,908										**$19,908**
7.6	3419	Install Ansul System at kitchen hood	20	20	0	1	EA	$6,142.50	$6,143	$6,143										**$6,143**
7.6	6709	Capital Plan - Add new annunciator panel at main lobby	0	0	0	1	EA	$18,900.00	$18,900	$18,900										**$18,900**
7.6	3430	Fire alarm panel addressable, with voice	15	6	9	1	EA	$15,264.77	$15,265										$15,265	**$15,265**
8.1	3474	Remove and replace concrete floor with resilient flooring	0	74	0	60	CSF	$1,523.40	$91,404	$91,404										**$91,404**
8.1	3473	Fire door, wood, flush, 60 minute, incl. demo, with hardware	24	22	2	60	EA	$1,197.00	$71,820			$71,820								**$71,820**
8.1	3468	Paint interior walls, CMU,including surface prep	7	4	3	28800	SF	$1.12	$32,296				$32,296							**$32,296**
8.1	3463	Replace Vinyl tile	18	10	8	4500	SY	$81.90	$368,550									$368,550		**$368,550**
8.1	3471	Replace acoustical ceiling tile system, fire rated,including demo	20	15	5	415	CSF	$627.48	$260,404						$260,404					**$260,404**
8.1	3461	Asbestos floor tile and mastic removal	0	0	0	40000	SF	$3.15	$126,000	$126,000										**$126,000**
8.2	3753	Replace Freestanding Gas Oven 3 or more sections	20	19	1	2	EA	$20,922.30	$41,845		$41,845									**$41,845**
8.2	3424	Range 6-burner 36" wide	20	19	1	1	EA	$2,916.95	$2,917		$2,917									**$2,917**
8.2	3423	Replace cooler 6' long	15	8	7	1	EA	$5,898.46	$5,898								$5,898			**$5,898**
Totals, Unescalated										**$3,018,297**	**$3,938,030**	**$196,082**	**$140,924**	**$55,672**	**$431,929**	**$37,284**	**$70,303**	**$547,092**	**$34,291**	**$8,469,903**
Soft Costs:																				
Architectural/Consultant Fees (10.0%)										**$301,830**	**$393,803**	**$19,608**	**$14,092**	**$5,567**	**$43,193**	**$3,728**	**$7,030**	**$54,709**	**$3,429**	**$846,990**
General Requirements (Bonds, Insurance, GC/CM Mark-up) (10.0%)										**$301,830**	**$393,803**	**$19,608**	**$14,092**	**$5,567**	**$43,193**	**$3,728**	**$7,030**	**$54,709**	**$3,429**	**$846,990**
Prevailing Wage/Labor Compliance (5.0%)										**$150,915**	**$196,901**	**$9,804**	**$7,046**	**$2,784**	**$21,596**	**$1,864**	**$3,515**	**$27,355**	**$1,715**	**$423,495**
Contingency (5.0%)										**$150,915**	**$196,901**	**$9,804**	**$7,046**	**$2,784**	**$21,596**	**$1,864**	**$3,515**	**$27,355**	**$1,715**	**$423,495**
Location Factor (1.11)										**$322,958**	**$421,369**	**$20,981**	**$15,079**	**$5,957**	**$46,216**	**$3,989**	**$7,522**	**$58,539**	**$3,669**	**$906,280**
Totals, Escalated (see inflation table above)										**$4,246,743**	**$5,707,032**	**$295,530**	**$220,893**	**$91,628**	**$746,430**	**$67,653**	**$133,945**	**$1,094,473**	**$72,030**	**$12,676,357**

* Markup has been included in unit costs.

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CERTIFICATION

EMG has completed a Comprehensive Facilities Needs Assessment of the subject property, Turn of River Middle School, located at 117 Vine 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.

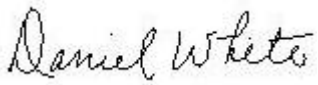
No testing, exploratory probing, dismantling or operating of equipment or in depth studies were performed unless specifically required under Section 2 of this report. This evaluation did not include engineering calculations to determine the adequacy of the Property's original design or existing systems. 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 Mark Chamberlain, Field Observers

Reviewed by: 

Daniel White
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Director - Asset Management Consulting
800.733.0660, x6234
bchampion@emgcorp.com

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:	117 Vine Road, Stamford, Fairfield County, Connecticut, 06905
Year constructed:	Original construction in 1963 Modular addition in 1997
Current owner of property:	City of Stamford
School occupying building:	Turn of River Middle School
Current usage of property:	Middle School
Management Point of Contact:	City of Stamford Engineering, Domenic Tramontozzi and Robert Gerbert, Jr. 203.977.5534 phone 203.977.4137 fax
Site acreage:	28.54 acres
Gross floor area:	128,000 Square Feet
Number of buildings:	One
Number of stories:	One to two with partial basement
Parking type and number of spaces:	109 spaces in open lots
Building construction:	Concrete encased steel frame with concrete-topped metal decks
Bay Column Spacing:	Approximately 28 Feet
Interior vertical clearance:	Approximately 9'-4"
Roof construction:	Flat roofs with built-up membrane on majority and single ply membrane on modular addition
Exterior Finishes:	Brick veneer with painted concrete encasement of steel structure
Heating and/or Air-conditioning:	Central heating system with three boilers. Heated water supplies air handling units, cabinet units, perimeter baseboard radiant heat units and unit ventilators. Split system air-conditioning units are provided for cooling of the offices, media center, computer room and some classrooms. Four packaged rooftop units for modular classrooms. One portable air-conditioning unit is located in the Nurses office.
Fire and Life/Safety:	Fire sprinklers, fire alarm system, security system, hydrants, smoke detectors, alarms, fire extinguishers (no automatic sprinkler system for modular classrooms)
Dates of visit:	April 6 & 7, 2009

Property Information	
Point of Contact (POC):	Michael Fernandes and Ken Kulis

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 years, primarily consisting of new roofing for modular addition and overlay of asphalt at teacher's parking lot. 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:

- Access throughout the school for mobility impaired is poor or non-existent. The main floor is accessible from the teacher's parking lot; although, the lower floor classrooms, the music classrooms, the second floor classrooms, and the Media Center are not accessible without the addition of an elevator and a lift. The music classrooms are located down a short set of stairs. 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 various interim accessibility improvements are included in the Replacement Reserves Report.
- Based on the numerous locations of moisture and water infiltration, 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. Several areas of vinyl tile were observed to be separating and worn at the seams; which may be indicative of moisture under the tiles. Isolated areas of moisture stained ceiling tiles and drywall were observed in classrooms and corridors. Wet conditions were observed at the south entrance. 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 building is not equipped with central cooling. The areas supplied cooling are as follows; offices, media center, computer room and some classrooms. It is recommended that an HVAC contractor evaluate the building for the potential reconfigure and design of installing a central cooling system for the entire building. This would allow for a more comfortable indoor environment in the building throughout the year. The cost of the follow-up evaluation is included in the Replacement Reserves Report. In addition, costs are included in Section 7.1 for installing central cooling throughout the building.
- There may be unresolved Fire Code violations. See Section 3.2 of the Facilities Needs Assessment for descriptions and comments.
- The following issues should be considered.
- Verify that any alterations, installations, or other improvements since the project was first constructed and occupied have been properly permitted and approved by municipal agencies.
- Verify that no defective materials or equipment are used at the property.

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 & 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 five 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
Michael Fernandes Principal	Turn of River Middle School	203.977.4285
Ken Kulis Head Custodian	Turn of River Middle School	203.977.4900
Phyllis Brown Assistant Principal	Turn of River Middle School	203.977.4285
Mr. Gus Burreisci Project Manager	City of Stamford Public Schools	203.223.8118
Captain Antonio L. Olive Jr. Fire Marshal	Turn of River Fire Department	203.329.7728

The Comprehensive Facilities Needs Assessment was performed with the assistance of Michael Fernandes, Principal and Ken Kulis, Head Custodian, Turn of River Middle 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 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 two and three years 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:

- Pier and footing construction documents for the modular addition by Arthur Building Systems dated August 1, 1997
- Construction documents by Sherwood, Mills and Smith dated January 2, 1962
- Roof Warranty information – Northeast Panel Company April 22, 1999.

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. Two new stalls are required and existing stalls are severely faded.
- Adequate number of designated parking stalls and signage for vans are not provided. One stall is required.
- Signage indicating accessible parking spaces for cars and vans are not provided. One existing stall is missing a vertical sign.
- Signage directing to accessible parking or accessible building entrances to the facility are not provided. Four signs are required.

Ramps

- Existing exterior ramps and stairs are not equipped with the required handrails. Due to vandalism, the existing ramps and stairs will require new handrails of sturdy construction and connection detailing. Costs include addition of handrails where there are none, such as at the balcony stair on the north elevation and front and side entrances, and replacement of non-compliant guardrail with openings over four inches at entrance to north balcony. A total of 30 LF is needed for both sides of ramp and 164 LF for stairs.

Entrances/Exits

- Lever action hardware is not provided at all accessible locations. This includes but is not limited to classrooms, Media Center, and Main Office. Ensure locking mechanism allows for classrooms to be locked from within room. A total of 40 are required.

Paths of Travel

- Obstacle or protrusion from wall impeding access. The drinking fountains protrude into the paths of travel. Wing walls or cane detection should be installed at each protruding water fountain. Three set of cane barrier rails are required.
- Existing recessed mats are not securely attached and are creating potential tripping hazards at the side entrance. A total of 100 SF is required.
- Stair handrails do not extend beyond the top and bottom risers. A total of 24 are required.
- Existing interior stair balusters have openings larger than four inches and should be replaced or modified. A total of 96 LF are required.
- Compliant signage indicating accessible entrances and general information is not provided.

  A total of four are required.
- Add visual alarm and audible fire alarm in restrooms and common areas. A total of nine are required.
- Install cup dispenser at an existing non-conforming water fountain.

  A total of two are required.

Elevators

- Upper and lower levels are not accessible without the addition of two elevators. In addition, some areas such as some music classrooms have stair access only and will require a wheelchair lift (refer to section 7.5).

Restrooms

- Existing adult restrooms nearest the main office do not have handicapped accessible stalls. EMG recommends combining two stalls into one accessible stall in the women's and removing the partitions and making the men's restroom into a single user room. Due to unknown individual occupancy and/or uses and possible local code requirements it is recommended that the local building department be consulted prior to removal of any permanent plumbing fixtures (i.e.: toilets, urinals and/or lavatories). The provided resolution is for achieving accessibility only and does not take into consideration any required fixture counts which could vary with each structure. The cost estimate includes but is not limited to adding grab bars, paddle faucet handles, drain pipe insulation, lowering accessories and replacing finishes as required. Currently, they are both labeled for adult use only. The pair of student restrooms on the upper floor will be required to have accessibility when the elevator is installed. EMG recommends combining two stalls into one accessible stall in each. EMG recommends removing the partitions and making the lower level restroom into a single user room for students and adults once the elevator is added. A total of five complete renovations will be required as follows; main floor (2), upper floor (2) and lower floor (1).
- Install grab bars in accessible stalls at 36" above the floor. A total of two are required.

  Modify existing toilet room accessories and mirrors. A total of two are required.
- Modify existing lavatory faucets to paddle type faucets. A total of two are required.
- Wrap drain pipes below lavatory with insulation; protect against contact with hot, sharp, or abrasive surfaces. A total of two are required.

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 records on file relating to this school. The previous Fire Marshal left no records when Fire Marshal Olive took over on July 1, 2008. EMG recommends that the school contact the fire department immediately to commence annual inspections.

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:

- Classroom 111. The area affected by the moisture was approximately two square feet in size.
- Classroom 105. The area affected by the moisture was approximately four square feet in size.
- Girls' restroom next to classroom 110. The area affected by the moisture was approximately two square feet in size.
- Girls' restroom next to music classroom 98. The area affected by the moisture was approximately one square foot in size.
- Art classroom 102. The area affected by the moisture was approximately one square foot in size.
- Media Center. The area affected by the moisture was approximately ten square feet in size.
- Teachers' Lounge. The area affected by the moisture was approximately four square feet in size.
- Side entrance off south parking lot. Water infiltrates this entrance lobby at the floor and at the ceiling. The windows and doors are reportedly being replaced this summer. Sealant should be installed immediately until the replacements are made.

Additional discussion and description of the correction efforts required with regard to the moisture infiltration issues are discussed in Sections 6.3, 6.6 and 6.8 of this report, and associated costs are included within those sections.

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.

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. The estimated costs are not included in the tables. See Section 1.2 for further follow up study information.

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**
32	Homerooms	0	0
16	Non-homeroom classrooms not including Art & Music (111, 101, 203, 202A & 202B, 220, 122, 120, 115A, 108, 106, 104, 82, 82B, 81, 80B, 80A)	4 (Lower level not used)	2
48	**Total classrooms**		
3	ESL	0	0
6	Bi-Lingual	0	0
9	Language Arts – Core, including 3 LA Enrichments	0	0
6	Social Studies - Core	0	0
7	Math Core, including 1 Math Enrichment	0	0
6	Science - Core	0	0
2	Foreign Language	0	0
2	Art	0	0
3	Music (plus auditorium stage)	0	0
14	Office	0	0
1	Conference Room	0	0
1	OT shared with Speech	0	0
2	Mechanical	0	0
12	Storage	0	0
1	Gymnasium - dividable	0	0
2	Auxiliary Gym/Exercise	0	0
2	Cafeteria including teachers' cafe	0	0
1	Auditorium	0	0
1	Media Center	0	0
2	Computer Lab	0	0
80	**TOTAL**	**4**	**2**

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 and based on observation, there were two down rooms or areas due to damaged flooring being renovated.

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 & Adequacy**
Sanitary sewer	City of Stamford	Good
Storm sewer	City of Stamford	Good
Domestic water	Aquarian	Good
Electric service	CL&P	Good
Natural gas service	Yankee Gas	Good

Observations/Comments:

- The utilities provided appear to be adequate for the property.
- 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 and underground fuel storage tank.

5.2. PARKING, PAVING, AND SIDEWALKS

The main entrance drive is located along Vine Road on the north 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 109 cars. The parking ratio is 0.85 spaces per thousand square feet of floor area. All of the parking stalls are located in open lots. The main parking lot is located at the south side (right side) of the building and contains 60 parking spaces, of which two are handicapped-accessible stalls. The parking area along the front drive lane (west elevation) contains 18 parking spaces. The parking lot located at the north side (rear) of the building contains 15 parking spaces. The parking area along the rear drive lane (north elevation) contains 14 parking spaces. There are no van-accessible stalls.

The sidewalks at the property consist of asphalt sidewalks along the front and side drive lanes, at portions along the rear of the building and areas adjacent to the modular building. An asphalt sidewalk also leads to the adjacent neighborhood at the south elevation. The sidewalks adjacent to the building and along the rear drive lane are constructed of cast-in-place concrete. A portion of the rear concrete sidewalk adjacent to the building has an overlay of asphalt. An asphalt paved walking path is located at the northeast elevation (rear of the building), which leads to the playfields.

Cast-in-place concrete steps, some with metal handrails, are located at grade changes at the front and side elevations.

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 is in good to poor condition. There is an isolated area of ponding at the rear parking lot, adjacent to the modular building. In order to restore positive drainage to the affected area, the paving must be replaced and re-graded 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 paving area around the drainage inlet, at the northwest corner of the building, has significant deterioration. The damaged area of asphalt must be cut and patched with new asphalt in order to maintain the integrity of the overall pavement system. This work is recommended concurrent with the aforementioned asphalt repairs and costs are included above.
- There are also significant signs of cracks or surface deterioration and the surface seal coating is badly worn and pavement markings are difficult to identify throughout the parking areas. Crack sealing, seal coating, and restriping of the asphalt paving will be required within the year to prevent further deterioration. The estimated cost of this work is included in the Replacement Reserves Report.
- In addition to the pavement repairs noted above, pothole patching, crack sealing, seal coating, and restriping of the asphalt pavement will be required during the evaluation period to maximize the pavement life. The estimated cost of this work is included in the Replacement Reserves Report.
- The asphalt sidewalks are in fair to poor condition. There are significant areas of settlement, cracking, deterioration and some tripping hazards, as noted at the front and side elevations of the building and areas adjacent to the modular building. The damaged areas of the asphalt sidewalks will require replacement within the year. The estimated cost of this work is included in the Replacement Reserves Report.
- In addition to the aforementioned asphalt sidewalk replacements; based on the estimated Remaining Useful Life (RUL) and current condition, an asphalt sidewalk replacement program will be required during the evaluation. The estimated cost of this work is included in the Replacement Reserves Report.
- As stated in Section 5.3, installation of a drainage inlet, adjacent to the modular building, is recommended due to improper drainage at this area. Replacement of the asphalt sidewalks adjacent to the modular building is recommended concurrent with installation of the drainage inlet. Ensure proper slope of all sidewalks away from the building to provide proper site drainage.
- The concrete sidewalks are in fair to poor condition. Tripping hazards occur on the sidewalk along the rear drive lane, due to vertical displacement between the concrete sidewalks and curb. In addition, there is a section of concrete sidewalk that contains severe deterioration, with a portion that is collapsing, located adjacent to the building at the rear elevation. This is the section of concrete sidewalk that has an overlay of asphalt. It is recommended that all damaged concrete sidewalks and tripping hazards be repaired or replaced within the year. The estimated cost of this work is included in the Replacement Reserves Report.
- In addition to the aforementioned concrete sidewalk repair/replacements; based on the estimated Remaining Useful Life (RUL) and current condition, a concrete sidewalk replacement program will be required during the evaluation. The estimated cost of this work is included in the Replacement Reserves Report.
- Replacement of the flag pole concrete base is recommended concurrent with replacement of the adjacent concrete sidewalk. Costs for this work are included above.
- The concrete and asphalt curbs throughout the property are in good to poor condition. There are isolated areas of deteriorated, shifting, and displacement of curbing, as noted along the front entrance drive lane and parking lot areas. Replacement of all damaged concrete and asphalt curbing will be required within the year. The estimated cost of this work is included in the Replacement Reserves Report.
- The asphalt paved walking path at the rear of the school leading to the playfield is in good condition. Routine cleaning and maintenance will be required during the evaluation period.
- The concrete steps are in good to poor condition. Isolated damage and cracking areas was observed on the steps at the front and side elevation of the building. The concrete damaged areas will require repair or replacement. 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:

- There is no evidence of storm water runoff from adjacent properties.
- The custodial personnel reported inadequate drainage and ponding issues at the rear of the modular building (east elevation). During heavy raining periods, water flows towards the modular building (at the connection corridor between the main building and modular building) and underneath the slab, resulting in movement of the slab. It is recommended that a drainage inlet, piped to the underground storm water system, be installed to provide proper site drainage. The estimated cost of this work is included in the Replacement Reserves Report.
- This work is recommended concurrent with replacement of the asphalt sidewalks adjacent to the modular building, as stated in Section 5.2.

Sustainable Recommendations:

- There are no sustainable recommendations for the drainage systems.

5.4. TOPOGRAPHY AND LANDSCAPING

The property slopes gently downward from the east side of the property toward the west property line.

The landscaping consists of trees, shrubs, and grasses.

Surrounding properties include single-family residential developments.

Stone masonry retaining walls are located at the front, side and rear elevations of the building.

Observations/Comments:

- The topography and adjacent uses do not appear to present conditions detrimental to the property.
- The landscape materials are in good condition, requiring routine maintenance during the evaluation period; however, some landscape trees were noted over-hanging the roof surfaces, as noted at the courtyard. In addition, one tree at the rear of the building (adjacent to the rear sidewalk) is splitting and leaning towards the building. To prevent clogging of the roof drainage system and also prevent damage to the building exterior walls and roof, removal of the splitting tree and tree trimming of all trees growing close to the building or over-hanging the roof surface is recommended within the year. The estimated cost of the repair work is included in the Replacement Reserves Report.
- The landscaping at various locations at the right, left and rear elevations of the building are partially barren and will require re-grading and reestablishment of ground cover. Shrub and some tree replacement plantings are required as well. The estimated cost of this work is included in the Replacement Reserves Report.

- The stone masonry retaining walls are in good to poor condition. There are areas that are damaged or deteriorated, with cracking occurring at the mortar joints, as noted at the front, side and rear retaining walls. In addition, the sloped stone masonry retaining walls along the front and side elevations have significant deterioration of mortar joints, and loose stones, requiring repair and pointing. The estimated cost of this work is included in the Replacement Reserves Report.
- In addition to the aforementioned stone masonry retaining walls, there are significant areas of vine growth, vegetation growth and moss growth at the stone retaining walls, as noted at the front, side and rear elevations of the building. In order to prevent premature deterioration of the retaining walls, removal of all vegetation/moss growth, followed by pressure washing, will be required. This work is recommended prior to repair/pointing of the stone masonry retaining walls. The estimated cost of this 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. The school name is displayed on the front exterior elevation.

Site lighting is provided by property-owned, wood, streetlight standards. The light standards are spaced along the drive aisles throughout the parking areas. Light fixtures mounted on wood poles are located along walkways and drive aisles throughout the property.

Exterior building illumination is provided by surface-mounted light fixtures on the exterior walls. Surfaced mounted light fixtures are located at the front covered walkway.

A perimeter fence is located along portions of the south and southeast property lines. The fence is constructed of chain link with metal posts. Chain link fencing also encloses the kitchen refrigeration units at the rear of the building.

Metal guardrails are located at various locations in the parking lots and drive lanes.

One ball field is located at the southeast elevation of the property. The ball field has a compacted dirt infield and grass outfield. The backstop and line fences are constructed of chain link fencing with metal posts. The bleachers are constructed of wood and metal and are enclosed by chain link fencing.

Three soccer fields are located adjacent to the ball field. Two of the soccer fields are equipped with fixed metal-framed field goals and netting. One soccer field has portable metal-framed field goals and netting.

There is one bleacher, adjacent to the soccer fields, constructed of wood and metal.

There is a ball field located at the northeast elevation of the property, surrounded by chain link fencing.

Dumpsters are located adjacent to the rear loading dock and one is placed on the asphalt pavement and one is 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 overall condition; however, according to the POC, the building lights have poor illumination at the rear elevations of the building. The lack of adequate illumination is a safety hazard. Based on these observations, installation of additional building light fixtures will be required immediately, to provide for necessary levels of night lighting for security measures. The estimated cost of this work is included in the Replacement Reserves Report.
- The site fencing varies from good to poor condition. The chain link fencing, located adjacent to the ball field at the southeast elevation and the fencing located along the sidewalk leading to the adjacent neighborhood at the south elevation have areas that are failing, damaged, corroded and weathered. The affected portions of the fence must be replaced. The estimated cost of this work is included in the Replacement Reserves Report.
- The metal guardrails are in good condition and will require routine maintenance during the evaluation period.
- The ball field is in good condition and will require routine maintenance during the evaluation period.
- The ball field bleachers and chain link backstops are in good to fair condition. There are loose sections of fencing on the backstop that can be repaired as part of routine maintenance. In addition, based on the estimated Remaining Useful Life (RUL) and condition, the bleachers and backstops will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The soccer fields are partially barren and will require re-grading and reestablishment of ground cover. The estimated cost of this work is included in the Replacement Reserves Report.
- The soccer ball field goals are in good to fair condition. The field goals will require painting and replacement of netting during the evaluation period. The cost of this work is relatively insignificant and 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 soccer ball field bleacher is in poor condition. There are damaged and missing seats. Replacement of the bleacher is recommended within the year. The estimated cost of this work is included in the Replacement Reserves Report.
- The ball field located at the northeast elevation of the property is maintained by the City of Stamford.
- The sport fields are not currently irrigated. The installation of an underground irrigation system is recommended. The estimated cost of this work is included in the Replacement Reserves Report.
- The dumpsters are owned by the City of Stamford. The dumpsters are in good condition, requiring 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 play structures at the time of 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. The foundation systems include reinforced, concrete, column pads.

The subterranean basement has load-bearing, concrete 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 basement walls are in good condition. There is no significant evidence of movement or water infiltration except for one location. Water reportedly infiltrates the foundation walls over the main telephone equipment in the basement at the northeast corner. Some minor spalling at the foundation and the adjacent walkway were observed in the area on the exterior. Repairs and sealant are required. Monitoring this area for continued leaking will be necessary. No costs are included at this time.

Sustainable Recommendations:

- There are no sustainable recommendations for foundations.

6.2. SUPERSTRUCTURE

The building has structural steel columns supporting the upper floor and roofs. The upper floor has concrete-topped metal decks and is 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 concrete. The majority of the beams and columns are encased in concrete.

The modular addition is set on concrete piers and the wood substrate and floor joists are connected to an extended concrete slab on grade at the corridor.

Observations/Comments:

- The superstructure is exposed in some locations, allowing for limited observation. Walls and floors appear to be plumb, level, and stable in the main portion of the building. There are no significant signs of deflection or movement in the main portion of the building.
- The slab at the connection to the modular addition is not stable and is exhibiting upheaval and water intrusion. See Section 5.3 for further information regarding drainage at grade. Water appears to flow through the underside of the connecting corridor. The slab is heaved in this area due to freezing and thawing cycles. Once the drainage is repaired, modifications and replacements of the connecting structural slab are required. The estimated cost of this work is included in the Replacement Reserves Report.

Sustainable Recommendations:

- There are no sustainable recommendations for superstructure.

6.3. ROOFING

The primary roofs are classified as flat roofs. The roofs are finished with a mineral-surfaced cap sheet over a multi-ply, bituminous, built-up membrane. Some of the roofs also have stone ballast. The modular addition has a single-ply EPDM membrane. The roofs are insulated with rigid insulation boards.

The exterior perimeter walls extend slightly above the surface of the roofs, creating very low curbs. The roof membrane turns up the sides of the curb walls and terminates at sheet metal drip edges or gravel stops. The roofs have sheet metal flashing and built-up base and edge flashing.

Storm water is drained from the roofs by internal drains. Some of the internal drains discharge through the exterior elevation and onto a paved area draining towards the parking area.

The modular addition has gutters and downspouts that discharge onto paved and landscaped areas.

Curb-mounted skylights provide natural illumination in some of the upper floor areas.

There are no attics. The roof structures are exposed.

Observations/Comments:

- The roof finishes vary in age. The modular roof is approximately five years old. The roof over the auditorium, covered walkway and art/music area appears to be over 20 years old and the remainder of the roofing is reportedly ten years old. Reportedly approximately a third of the roofs are covered by a 20 year warranty. A copy of the warranty is attached in Appendix C. The roofs are maintained by the in-house maintenance staff and a contractor is retained as required.
- The fields of the primary roofs are in good to poor condition. Significant moss build up was observed on the older roof areas and isolated ponding was observed in numerous locations on the older roofs and some minor ponding was observed on the roof over the classrooms 103 through 111. The moss build up is indicative of poor roof drainage. Based on their estimated Remaining Useful Life (RUL) and condition, the roof membranes will require replacement during the evaluation period. The newest roof was in fair condition and some bubbled areas were observed during the inspection. This roof will require earlier replacement than the projected lifespan due to existing conditions. The estimated cost of this work is included in the Replacement Reserves Report.
- The EPDM roof on the modular addition is in good condition and will require routine maintenance during the evaluation period.
- According to the POC, there are some active roof leaks. There is evidence of active roof leaks. See Section 3.3 for areas of leaking. The roof leaks will require immediate repairs. 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.
- 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. The addition of tapered insulation will be required when the roofs are replaced to direct water to existing roof drains. This can be done in conjunction with the roofing replacement.

- 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 curb walls are in good condition and will require routine maintenance during the evaluation period.
- Roof drainage appears to be inadequate at the older roof sections. Clearing and minor repair of drain system components should be performed regularly as part of the school's routine maintenance program. Significant ponding was observed at each of the drains at the covered walkway roofing indicative of clogged drains.
- 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 black built up roofing with a light colored single ply membrane.

6.4. EXTERIOR WALLS

The exterior walls are finished with brick masonry veneer and painted, concrete encasements at the structural members. The soffits are concealed and are finished with stucco.

The modular addition is finished with painted T1-11 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 poor condition. The cantilevered fire exit balcony is structurally unsound and is causing the brick to spall at the corner of the building. Once the balcony is replaced, the affected brick will require replacement. See Section 6.7 for balcony replacement costs. The paint coating on the concrete is peeling in isolated areas. Some cracking and minor spalling was also observed at the steel encasements. Epoxy sealant and partial replacements of damaged sections will be required. Pressure washing, painting and patching will be required during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The engineered wood siding is in fair condition. This material is not a sturdy material for outside use and unless routinely painted and sealed at the joints, deterioration occurs rapidly. Due to the transient and nature of the modular addition, EMG recommends full replacement with a permanent structure. See Section 5.3 and 6.2 for further information regarding the drainage issues and structural issues related to the construction of the modular addition. In addition to the drainage issue at grade, the downspout in this area discharges tight against the modular elevation where the flashing is exposed and sloped inward towards the building. During siding replacement, the flashing will require replacement and should slope properly for positive drainage away from the building. Costs are included in the tables for exterior finish and flashing replacements in lieu of full addition replacement at this time. The estimated cost of replacing the siding and flashing is included in the Replacement Reserves Report.
- The sealant, control joints and expansion joints are dry-rotted and separated allowing for water infiltration. Based on their estimated Remaining Useful Life (RUL) and condition, the sealant and expansion joints will require replacement early in the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The steel brick lintels are in fair condition. They are exhibiting rust and corrosion. Scraping and painting are required. The estimated cost of this work is included in the Replacement Reserves Report.

Sustainable Recommendations:

- Sustainable recommendations for the use of low VOC sealant/caulking around windows, doors, control joints and change of finish and low VOC paints.

6.5. EXTERIOR AND INTERIOR STAIRS

The interior stairs are constructed of steel and have closed risers and painted steel treads. The balusters are constructed of metal and have wood handrails.

The exterior stairs at the main building are constructed of reinforced concrete. The handrails are constructed of metal. Several of the exterior stairs have no handrails.

The exterior stairs and ramps at the modular addition are constructed of wood. The stairs have closed risers and wood treads. The balusters are constructed of wood. The wall-mounted handrails are constructed of metal.

Observations/Comments:

- The exterior and interior stairs, balusters, and handrails are in fair to poor. Most of the modular stair and ramp handrails are missing due to vandalism. See Section 3.1 for replacement costs of handrails. The balusters are damaged and some of the floor boards are warped at the ramp. Based on its estimated Remaining Useful Life (RUL) and condition, the ramp and balusters will require replacement early in the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The balusters on the interior stairs have opening wider than four inches which is a life safety code violation. These stair balusters require immediate replacement or modification. In addition, the railings do not extend at the top and bottom landings. See Section 3.1 for replacement costs.
- According to the client provided JMOA five year capital plan, the installation of stairwell door hold opens is required. The estimated cost of this work is included in the Replacement Reserves Report.
- It was reported that the interior stairs at exit doors get slippery when wet. EMG recommends painting all the interior stairs with a non-skid coating or installing a non-skid surface material. Due to the nature of this issue being a life safety concern, this work should be completed immediately. The estimated cost of this work is included in the Replacement Reserves Report.

Sustainable Recommendations:

- A sustainable recommendation for exterior stairs and ramps is to replace the pressure treated wood with alternative sources such as composite material, sustainably managed and grown hardwood or high-density polyethylene. Disposal of pressure treated wood should be in lined landfills to avoid leaching of harmful chemicals into the ground.
- A sustainable recommendation for the interior stairs is to use of low VOC paints and stains.

6.6. WINDOWS AND DOORS

The windows are part of an aluminum-framed, storefront system incorporating the entry doors. The windows are glazed with single panes set in metal frames. The doors are fully-glazed aluminum-framed units set in the metal framing system such as at the courtyards or are hollow metal at the entrances and fire exits.

Some of the windows are operable awning style units.

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

The loading dock area is equipped with bumpers.

Observations/Comments:

- The storefront window system is in fair to poor condition. All of the windows and doors are reportedly being replaced this summer. The costs are already budgeted and; therefore, no additional costs are included in the report. One window off of the courtyard adjacent to the cafeteria has been damaged and is missing the glass. This window should be replaced immediately. Routine maintenance will be required including sealant, weather-stripping and painting to maintain the integrity of the new systems.
- According to the POC, the property does experience a significant number of complaints regarding window leaks and window condensation. There is evidence of window leaks and condensation.
- The exterior doors and door hardware are in fair to poor condition. See above for replacement information.
- The dock equipment is in fair to poor condition. Cracked concrete, rusted steel angles and deteriorated bumpers were observed. No bumpers were observed at the dumpsters which may be contributing to some impact damage. Additional bumpers and replacement of the existing bumpers are recommended. Epoxy injection repairs, crack sealing and partial replacements of damaged concrete and steel are also recommended. A cost allowance for this work is included in the Replacement Reserves Report.
- The school should be fitted with a master key system or an electronic locking system. The estimated cost of this work is included in the Replacement Reserves Report.

Sustainable Recommendations:

- A sustainable recommendation for windows is to replace with double paned windows with a thermal break.
- A sustainable recommendation for doors is to replace with double paned units and insulated metal doors. Weather-stripping replacement is also recommended.

6.7. PATIO, TERRACE, AND BALCONY

Concrete-paver walkways are located in the courtyards. The courtyards serve as outdoor gathering areas.

A concrete balcony cantilevers off of the art and music classrooms on the north side. The concrete is supported by internal steel structure which is tied into the main building structure. A concrete encased, steel structured guard wall extends the length of the balcony.

Observations/Comments:

- The concrete pavers are in poor condition. There are significant signs of movement, settlement, and overgrowth. The paver covered walkways are reportedly part of the replacement planned for the summer. No additional costs are in the tables for this work.
- The balcony framing, deck and guard wall are in poor condition. This balcony acts as a fire exit and is exhibiting severely deteriorated steel structure and spalled concrete. Some of the steel was corroded through. The balcony does not appear safe and EMG recommends immediate replacement. A cost allowance for this work is included in the Replacement Reserves Report.

Sustainable Recommendations:

- There are no sustainable recommendations for the balcony and courtyards.

6.8. COMMON AREAS, ENTRANCES, AND CORRIDORS

The lobby contains bulletin boards and display cases. Corridors are accessed directly from the lobby.

Classrooms and offices are accessed from corridors beyond the lobby. Stairways are located down corridors accessing the upper level classrooms and Media Center and the basement classrooms.

Adult use restrooms are located near the main lobby. There is a total of five staff or public restrooms, including one unisex and three sets of student restrooms including the locker rooms.

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

Common Area	Floors	Walls	Ceilings
Lobby	Suspect asbestos tile and recessed entry mat	Exposed brick	Suspended acoustic tiles
Corridor	Vinyl tile and isolated polished stone pavers	Painted CMU, vinyl wall covering, storefront system or exposed brick	Suspended acoustic tiles
Restrooms	Ceramic tile and vinyl tile	Painted CMU, FRP and ceramic tile	Suspended acoustic tiles or painted plaster
Office	Carpet	Painted plaster or CMU	Suspended acoustic tiles
Media Center	Carpet	Painted plaster or CMU	Suspended acoustic tiles
Auditorium	Painted concrete and carpet	Stained wood panels and exposed brick	Painted plaster
Cafeteria	Vinyl tile	Painted concrete masonry units and painted drywall	Suspended acoustic tiles
Gymnasium	Wood	Painted concrete masonry units and movable panels	Exposed structure
Locker rooms	Painted concrete	Painted concrete masonry units	Painted structural concrete block and plaster
Auxiliary Gyms	Wood	Painted concrete masonry units	Painted structural concrete block

Observations/Comments:

- It appears that the interior finishes in the common areas have not been renovated within the last five years.
- The interior finishes in the common areas are in good to poor condition. Based on its estimated Remaining Useful Life (RUL) and conditions, the common area carpet and vinyl tile will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The wood flooring in the gymnasium, auxiliary gymnasiums and auditorium stage are in fair condition. Refinishing will be required during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The folding partition in the gymnasium is in fair to poor condition. The doors will require replacement due to the condition. The estimated cost of this work is included in the Replacement Reserves Report.
- Interior painting will also be required during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.

- Suspended ceiling tile replacement will also be required 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, the installation of sound proofing is required at the gym corridor walls. The estimated cost of this work is included in the Replacement Reserves Report.
- According to the client provided JMOA five year capital plan, new stage equipment is required at the auditorium. A cost allowance for 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 many 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.
- 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:

- A sustainable recommendation for the interior finishes is to use recycled rubber tire tiles for the recessed walk off matt replacement and 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 and cooling are provided in the modular classrooms by individual, direct-expansion, constant-volume, electric, packaged, rooftop-mounted, HVAC units. There are a total of four units, with an average capacity of 4 tons. 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**
4	American Standard (The Trane Company)	4 tons	Electric Resistance	1997

Air distribution is provided to supply air registers by ducts concealed above the ceilings. Return air grilles are located in each space. The heating and cooling system are controlled by local thermostats.

Hot water for the central heating system is supplied by three cast iron boilers. The boilers have dual-fuel capability, utilizing natural gas or fuel oil. Each boiler has a rated input capacity of 5,862 MBH and is located in the basement mechanical room. The hot water loop contains four expansion tanks.

Fuel oil is supplied to the boilers by a fuel oil pump set and a 10,000-gallon underground storage tank (UST). The UST is located adjacent to the loading dock beneath the landscaped area at the rear elevation of the building.

Circulating pumps provide heated water to each temperature-controlled space via a two-pipe distribution system. The heated water supplies the air handling units, cabinet radiant units, baseboard radiant units, and unit ventilators.

Heating is provided in the classrooms 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 have an airflow capacity of 500 to 1,500 CFM each. 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 offices and some classrooms by perimeter, baseboard-mounted, finned-tube, radiant heat units. The radiant units are supplied with heated water by the central system. Heating is provided in the restrooms, stairwells, lobby and corridors by recessed or wall-mounted finned-tube radiant heat units. Heating is provided in auxiliary gym, custodian office and loading dock areas by ceiling-mounted unit heaters. The heating units are supplied with hot water by the central system.

Heating is provided in the auditorium, kitchen, gymnasium and lower level areas by high-capacity, air handling units equipped with heating coils. The air handling units are supplied with heated water by the central system. 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					
Quantity	**Location**	**Area Served**	**Air Flow**	**Cooling**	**Heating**
1	Basement	Kitchen	7,500 CFM	None	Hot water coil
4	Gym - Ceiling-Mounted	Boys & Girls Gymnasiums	2,500 CFM each	None	Hot water coil
1	Loft above Classroom at Lower Level	Auditorium	10,000 CFM	None	Hot water coil
1	Lower Level Classroom #80	Lower Level Classrooms	2,225 CFM	None	Hot water coil
1 (New unit)	Lower Level Classroom #82	Lower Level Classrooms	2,225 CFM	None	Hot water coil

The cafeteria, kitchen, auditorium, bathrooms, and other areas 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.

Cooling is provided in the offices, media center, computer room and some classrooms by split-system air-conditioning units. There are a total of 21 condensing units. The condensing units supply interior ceiling-mounted or wall-mounted fan coil units. The quantity and capacity of the condensing units are as follows; **3** – 1.5-ton, **7** – 2-ton, **6** – 2.5-ton and **5** – 3-ton. The condensing units are mounted on the roof (12 units) or pad-mounted on grade (9 units). The cooling equipment uses R-22 as a refrigerant.

Cooling is provided in the custodian office and classroom #80A by individual through-wall air-conditioning units. There are a total of two AC units.

One portable air-conditioning unit is located in the Nurses office.

Heating is provided in the corridor leading to the modular classrooms by two electric baseboard-mounted finned-tube radiant heat units.

The heating system is controlled by a building energy management system (EMS), located in the custodian office. The EMS provides individual control and performance data for the boilers, circulating pumps, air handling units, unit ventilators and the domestic water heating system. The system is actuated by pneumatic controls. The air compressor is located in a room at the basement.

Observations/Comments:

- The HVAC systems are maintained by the in-house maintenance staff.
- The HVAC equipment varies in age. The boilers were replaced in 2003. The condensing units range in age from 3 to 18 years old. The package units are 12 years old. The unit ventilators are original. The air handing units are original, except for one unit. HVAC equipment is reportedly replaced on an "as needed" basis.

- The building is not equipped with central cooling. The areas supplied cooling are as follows; offices, media center, computer room and some classrooms. It is recommended that an HVAC contractor evaluate the building for the potential reconfigure and design of installing a central cooling system for the entire building. This would allow for a more comfortable indoor environment in the building throughout the year. The estimated cost of this work is included in the Replacement Reserves Report. The cost of the follow-up evaluation is included in section 1.2.
- The rooftop-mounted, packaged, HVAC units appear to be in good condition. Based on the estimated Remaining Useful Life (RUL), the units will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The boilers appear to be in good condition and will require routine maintenance during the evaluation period.
- The expansion tanks appear to be in good condition and will require routine maintenance during the evaluation period.
- 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 circulating pumps will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The underground 10,000-gallon 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 unit ventilators appear to be in fair condition. Based on its estimated Remaining Useful Life (RUL) and condition, the unit ventilators will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The finned-tube radiant heat 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. Routine maintenance will be required during the evaluation period.
- The air handling units appear to be in good to fair condition. Based on their estimated Remaining Useful Life (RUL) and condition, 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 split system air-conditioning units appear to be in good. Based on their estimated Remaining Useful Life (RUL), the condensing units and fan coil units will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The through-wall air-conditioning units appear to be in good condition. Based on the estimated Remaining Useful Life (RUL), the AC units will require replacement during the evaluation period. The cost of replacement 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 portable AC unit in the Nurses office appears to be in good condition. Based on the estimated Remaining Useful Life (RUL), the AC unit will require replacement during the evaluation period. The cost of replacement 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 electric baseboard heaters appear to be in fair condition. Based on the estimated Remaining Useful Life (RUL) and condition, the electric baseboard heaters will require replacement during the evaluation period. The cost of replacement 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 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.

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 split-system 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 water meter is located in a vault adjacent to the street.

Domestic hot water is supplied by one 100-gallon, gas-fired, water heater. The water heater is located in the basement mechanical room.

A domestic water booster pump system is located in the basement mechanical room.

A dual pump sewage system is located at the lower level of the building, adjacent to the restroom. The sewage pumps eject the waste into the municipal sanitary sewer system.

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

Observations/Comments:

- The plumbing system appears to be well maintained and in good condition. The water pressure appears to be adequate. The plumbing system will require routine maintenance during the evaluation period.
- 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 water heater appears to be in good condition. Based on its estimated Remaining Useful Life (RUL), the 100-gallon water heater will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The domestic water booster system appears to be in good condition. Routine maintenance will be required during the evaluation period.
- The sewage pumps are reported to be in good condition. Equipment testing is not within the scope of a Facilities Needs Assessment. The sewage pump system will require routine maintenance during the evaluation period.

- According to the client provided AHERA document flooring with asbestos containing material is located in some pipe and pipe fitting insulation. A cost allowance for proper removal and disposal of the asbestos containing insulation is included in the Replacement Reserves Report as part of the recommended 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. EMG observed approximately 200 LF of exposed suspect asbestos pipe covering at the custodian office and loading dock area. It is recommended that all suspect asbestos pipe covering be removed within the year. Remediation of all suspect asbestos pipe covering is recommended by personnel specifically trained in the handling of hazardous materials. The estimated cost of this work is included in the allowance discusses above.
- The accessories and fixtures in the restrooms are in good to fair condition. There was one missing lavatory sink noted in the 1st floor girl's restroom and the lavatory sinks were found with metal brackets for added support at the 2nd floor girl's restroom. Based on the estimated Remaining Useful Life (RUL) and condition, the restroom fixtures will require replacement. The estimated cost of this work is included in the Replacement Reserves Report.
- The drinking fountains are in good to fair condition. Based on the estimated Remaining Useful Life (RUL) and condition, the drinking fountains will require replacement. The estimated cost of this work is included in the Replacement Reserves Report.
- Drinking fountains are not currently provided at the sport fields. A budgetary cost allowance for the water supply line and four fountains are included in the Replacement Reserves Report.

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 on the adjacent public street. The gas meter and regulator are located in the basement of the building. The gas distribution piping within the buildings is malleable steel (black iron).

Observations/Comments:

- The pressure and quantity of gas appear to be adequate.
- The gas meter and regulator appears 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 underground to a transformer vault that feed the interior-mounted electrical meter.

The main electrical service size is 2,000-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 commutation between the main office and each classroom. The public address control unit is located in the main office. The auditorium is equipped with a stage lighting system and a sound system.

A diesel-powered, 30-kW, emergency generator is located in the basement. The generator provides back-up power for elements of the fire and life safety systems. The fuel tank is a 550-gallon underground storage tank (UST), located at the rear of the building in close proximity to the generator.

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 appears to be adequate for the property's demands; however, according to the client provided JMOA five year capital plan, the installation of a sub-panel with new wiring for school computers is planned. The estimated cost of this work is included in the Replacement Reserves Report.
- The switchgear, circuit breaker panels, and electrical meter appear to be in good to fair condition, requiring routine maintenance during the evaluation period. Several circuit breaker panels were observed aged and worn, as noted at the kitchen and electrical closets. Based on their estimated Remaining Useful Life (RUL) and condition, some of the circuit breaker panels will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- 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 appears to be in good condition. Based on its estimated Remaining Useful Life (RUL), the public address system will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The auditorium lighting system appears to be in good condition. Replacement costs for stage equipment are also discussed in Section 6.8.
- According to the client provided AHERA document flooring with asbestos containing material is located at the stage wiring. A cost allowance for proper removal and disposal of the asbestos containing insulation is included in the Replacement Reserves Report as part of the recommended stage improvement 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.
- The auditorium sound system appears to be in good condition. Based on its estimated Remaining Useful Life (RUL), the stage sound system will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.

- The receptacles and electrical equipment adjacent to the drinking fountains and potentially other wet locations are not all ground fault protected. Ground fault circuit interrupt ("GFCI") type receptacles are required by NEC, Article 210.8. Installation of ground fault circuit interrupt receptacles will be required as a life and safety requirement. The cost of this work is relatively insignificant and 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 electrical equipment noted at the fire protection equipment room off the corridor adjacent to the cafeteria does not have proper working space or access. Sufficient access and working space shall be provided and maintained about all electrical equipment to permit ready and safe operation and maintenance of such equipment. Enclosures housing electrical apparatus that are controlled by a lock(s) shall be considered accessible to qualified persons. Provide clearance at all electrical and mechanical equipment for easy access and work space, as required by NFPA 70 Article 110, paragraph 110.26. No costs are included in the tables, as this work can easily be accomplished by the on-site maintenance personnel as part of routine maintenance procedures.
- The exterior wall-mounted receptacle outlet was noted without a "GFCI" type receptacle and cover, adjacent to the building main entrance doors. Replacement of this outlet is recommended with an approved "UL" listed "GFCI" type receptacle with a sealed cover for use in wet areas. The cost of this work is relatively insignificant and 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 generator is in fair condition and is reportedly tested on a weekly basis. Based on its estimated Remaining Useful Life (RUL) and condition, the 30-kW generator will require replacement during the evaluation period. EMG recommends increasing the size of the current generator to adequately meet the back-up needs of the school. According to the client provided JMOA five year capital plan, the new wiring for the generator is planned. The estimated cost of this work is included in the Replacement Reserves Report.
- The estimated cost of this work is included in the Replacement Reserves Report.
- The underground 550-gallon 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.

Sustainable Recommendations:

- A sustainable recommendation for building electrical is to install occupancy sensors in place of light switches at the bathrooms.

7.5. ELEVATORS AND CONVEYING SYSTEMS

There are no elevators or wheelchair lifts in the building.

Observations/Comments:

- There is no elevator in the building. In order to provide wheelchair-accessible routes within the two-story portions of the building, installation of two elevators is recommended. The estimated cost of this work is included in the Replacement Reserves Report (refer to section 3.1).
- There is no wheelchair lift in the building. In order to provide a wheelchair-accessible route to the auditorium stage, installation of a wheelchair lift is recommended. The estimated cost of this work is included in the Replacement Reserves Report (refer to section 3.1).

Sustainable Recommendations:

- A sustainable recommendation for the elevator is to equip the hydraulic pumps with high efficiency motors to reduce energy consumption.

7.6. FIRE PROTECTION SYSTEMS

The fire protection systems consist of a wet-pipe sprinkler system (except in the modular building), portable fire extinguishers, smoke detectors, pull stations, and alarm horns. Siamese connections are located on the exterior of the buildings. Hardwired smoke detectors are located throughout the common areas. The nearest fire hydrants are located along the property's drive aisles and are approximately 25 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 a fire protection equipment room off the corridor adjacent to the cafeteria. The system is equipped with a backflow preventer.

A central fire alarm panel is located at the basement mechanical room and monitors the pull stations, smoke detectors, and flow switches. An annunciator panel is located in the entrance vestibule. The alarm panel also sounds the alarm and automatically notifies the monitoring service or the fire department in the event of trouble.

The commercial kitchen is equipped with an exhaust hood; however, there was no fire suppression system observed.

The building is equipped with a security system, including motion sensors, door alarms and security cameras. The security panels are located at various locations throughout the building and are monitored by Sonitrol.

The walls of the fire stairwells are finished with exposed masonry. The stairs discharge at the ground floor, directly to the interior and exterior of the building.

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 modular building is not equipped with an automatic sprinkler system for fire suppression. Installation of a complete fire suppression piped sprinkler system, throughout the modular building, is recommended as a life safety issue. The estimated cost of this work is included in the Replacement Reserves Report.
- 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.
- Smoke detector replacement is considered to be routine maintenance.
- 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.
- According to the client provided JMOA five year capital plan, the installation of a new annunciator panel at the main lobby is planned. 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.
- The exit stairwells appear to have been constructed in accordance with applicable codes in force at the time of construction. The stairwells appear to be in general compliance.
- The stairwell doors and door hardware are fire-rated. Components bearing certification labels are displayed on the doors. New fire doors were recently installed at the stairwells, with the remaining doors scheduled for replacement.

Sustainable Recommendations:

- A sustainable recommendation for fire protection is to install Energy Star rated illuminated "LED" exit signs.

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 or suspected asbestos tile	Painted concrete masonry units	Suspended acoustic tiles or painted drywall or exposed structure (basement level classrooms)
Maintenance Shop & Storage	Exposed concrete	Painted concrete masonry units	Exposed structure
Kitchens	Quarry tile	Painted concrete masonry units	Suspended acoustic tiles - coated
Restrooms	Ceramic tile	Painted plaster or ceramic tile	Suspended acoustic tiles

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

Observations/Comments:

- The interior finishes are in fair to poor condition. Based on the Estimated Useful Life and the observed conditions, replacement of the vinyl tile, subflooring, carpeting 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. A significant amount of the interior doors have delaminating veneer. Based on the Estimated Useful Life and the observed conditions, replacement of the doors is recommended during the evaluation term. The costs are included in the Replacement Reserves Report.
- Classrooms cannot be locked from inside and this presents a life safety situation. Replacement of the door hardware is recommended immediately. The costs are included in the Replacement Reserves Report - See Section 3.1.
- The flooring in the basement level classrooms is in poor condition to the vinyl tile being placed over particle board. Some demolition work has begun. EMG recommends removing all the substrate and finish flooring and pouring a concrete slab substrate before finish flooring is replaced. A cost allowance is included in the 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.

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 (1), Chest (2)
Freezers	Walk-in (1)
Ranges	Gas
Ovens	Gas
Griddles / Grills	None
Fryers	None
Hood	Exhaust ducted to exterior
Dishwasher	None
Microwave	None
Ice Machines	None
Steam tables	Yes
Work tables	Stainless steel
Shelving	Stainless steel

Observations/Comments:

- The kitchen appliances appear to be in good to fair condition. Based on their estimated Remaining Useful Life (RUL), some of the kitchen appliances will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The refrigeration equipment appears to be in good condition. Based on their estimated Remaining Useful Life (RUL), some of the refrigeration units will require replacement during the evaluation period. The estimated cost of this work is included in the Replacement Reserves Report.
- The main kitchen cooking area is equipped with an exhaust hood; however, an Ansul system was not observed and will require installation of a fire suppression system at the hood. The cost for this work is included in Section 7.6.

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

Not applicable. There are no major accessory structures.

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-014.017 **Project Name: Turn of River Middle School**

Photo #1:	Front entrance elevation (west facing elevation)

Photo #2:	Side entrance and covered walkway and partial elevation of auditorium

Photo #3:	West elevation of auditorium and classrooms

Photo #4:	North elevation along service drive

Photo #5:	Service drive area at rear

Photo #6:	West elevation of modular addition

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #7:	North elevation of modular addition

Photo #8:	East elevation of modular showing connection to main building

Photo #9:	Gymnasium

Photo #10:	Exterior stairs with no railings and partial south elevation

Photo #11:	Main entrance

Photo #12:	Partial south elevation showing storm water discharge onto parking lot

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #13:	ADA entrance and parking at south entrance

Photo #14:	Loose stones with deteriorated mortar along front and side entrances

Photo #15:	Damaged column from former concrete block wall attachment

Photo #16:	Damaged concrete screen wall at west courtyard

Photo #17:	Rusted through door frame at west courtyard entrance

Photo #18:	Patched base of column enclosure

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #19:	Deteriorated expansion joint

Photo #20:	Spalling brick veneer under cantilevered fire exit balcony at north elevation

Photo #21:	Corroded concrete and rusted through steel support at cantilevered balcony

Photo #22:	Damaged concrete sidewalk at connection to fire exit balcony

Photo #23:	Deteriorated sealant

Photo #24:	Asphalt overlay and open railing at sidewalk connection to fire exit balcony

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #25:	Rusting fan coil grille and rusting and deteriorating brick angle

Photo #26:	Damaged concrete slab at north elevation

Photo #27:	Loading dock area with no bumpers at dumpster and damaged concrete dock

Photo #28:	Spalled areas at loading dock

Photo #29:	Warping floor boards at access ramp to modular addition

Photo #30:	Cracked column base cover and foundation

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #31:	Cracked column cover at top of building

Photo #32:	Exposed cavity at service door frame.

Photo #33:	Corroded and spalled concrete door sill at service door with exposed rebar

Photo #34:	Damaged foundation at southwest corner

Photo #35:	Condition of paint at concrete structural covering

Photo #36:	Condition of base at flag pole

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #37:	Courtyard pavers condition and partial elevations

Photo #38:	Courtyard elevation towards auditorium

Photo #39:	Modular addition slab connection at service yard area

Photo #40:	Roof overview of modular addition and partial roof around east courtyard

Photo #41:	Roof overview of central building spine including main office and cafeteria

Photo #42:	Roof overview along south section

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #43:	Roof overview of covered walkway and auditorium

Photo #44:	Courtyard elevations and roofs along classroom corridor and broken glass panel at right

Photo #45:	Main lobby

Photo #46:	Condition of suspect asbestos tile flooring at main lobby

Photo #47:	Main office entrance with knob handle hardware and damaged door

Photo #48:	Corridor along main office

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #49:	Nurse's bed area with portable air conditioning and dental chair

Photo #50:	Non-compliant guardrail and handrail at stair

Photo #51:	Typical corridor

Photo #52:	Women's restroom closest to main entrance

Photo #53:	Condition of windows – showing moss growth

Photo #54:	Curled recessed walk-off mat at north side entrance creating trip hazard

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #55:	Water infiltration at north side entrance

Photo #56:	Evidence of water infiltration at ceiling of north side entrance

Photo #57:	Typical classroom

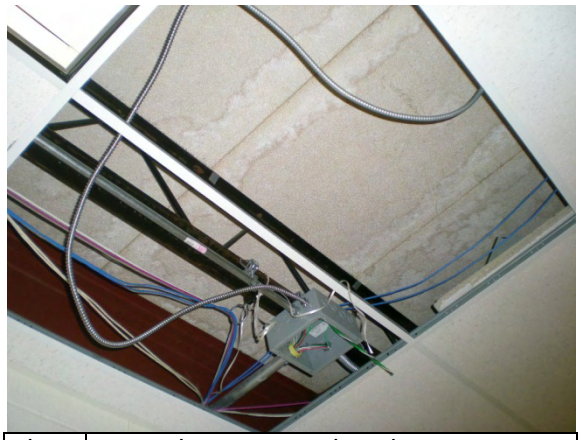


Photo #58:	Exposed structure within classroom showing water stains

Photo #59:	Loose bank of lockers – not securely attached into wall

Photo #60:	Classroom 115 with small classroom carved out. Access through 115 only

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #61:	Interior classroom off 115

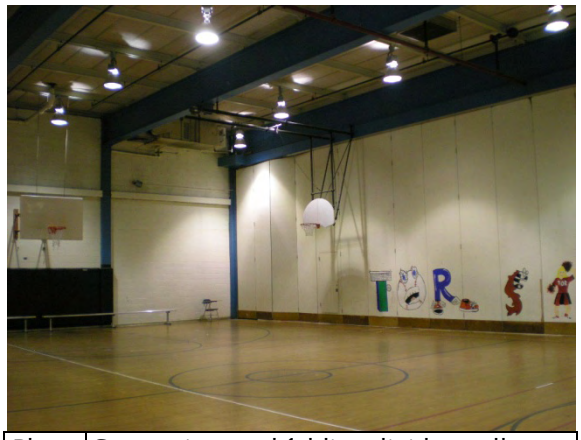


Photo #62:	Gymnasium and folding divider wall

Photo #63:	Condition of masonite at base of folding divider wall

Photo #64:	Exercise gym

Photo #65:	Girl's locker room

Photo #66:	Former shower area now used for bulk paper storage

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #67:	Computer lab

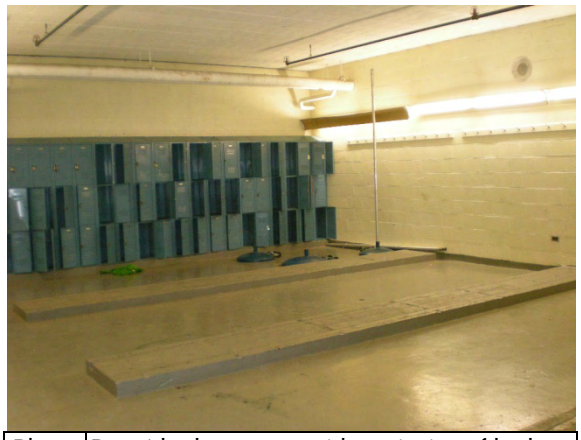


Photo #68:	Boys' locker room with majority of lockers removed and damaged lighting

Photo #69:	Broken seals at modular addition

Photo #70:	Loose Promethean projector

Photo #71:	Student restroom

Photo #72:	Student restroom

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #73:	Water stains in student restroom

Photo #74:	Kitchen finishes

Photo #75:	Cafeteria

Photo #76:	Suspect asbestos tile condition in classroom

Photo #77:	Projecting drinking fountain into path of travel. Also non-compliant due to twisting controls

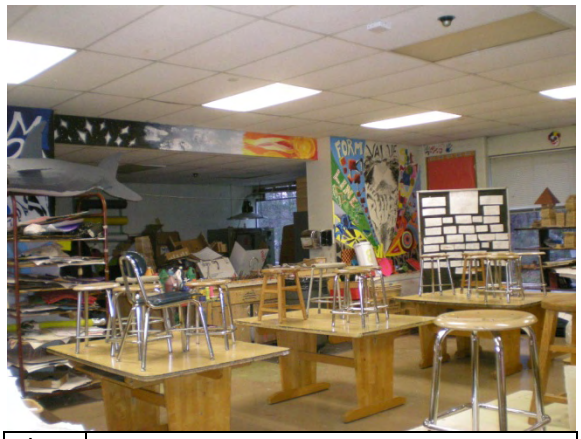


Photo #78:	Art room

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #79:	Music room with high ceilings and acoustic treatment

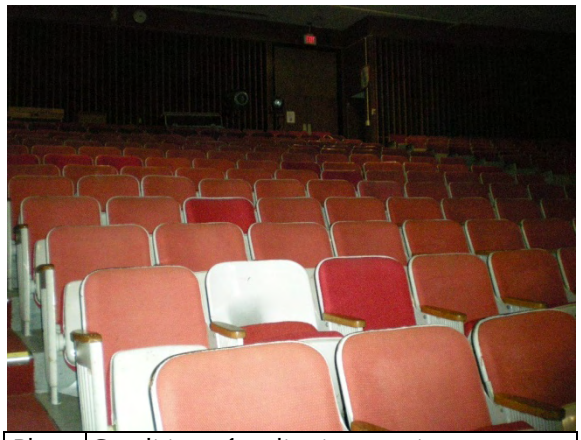


Photo #80:	Condition of auditorium seating

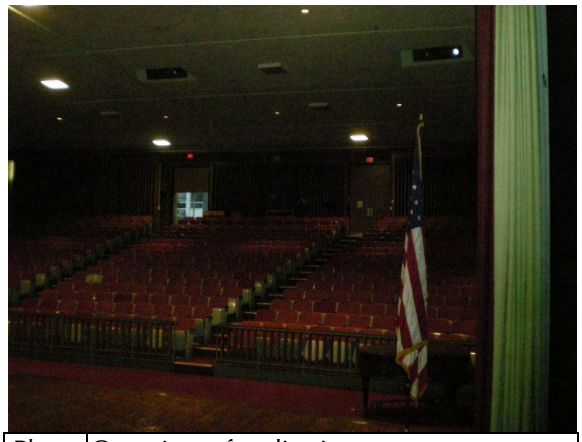


Photo #81:	Overview of auditorium

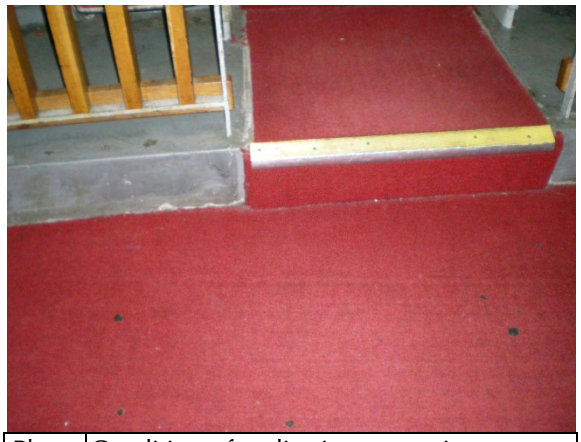


Photo #82:	Condition of auditorium carpeting

Photo #83:	Lower level classroom with damaged flooring undergoing renovation

Photo #84:	Moisture damaged flooring in lower level classroom

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #85:	Moisture infiltration over main telephone equipment in basement

Photo #86:	Heaving slab at connection to modular addition

Photo #87:	Assistant Principal's office on 2nd level

Photo #88:	Windowless classroom 204

Photo #89:	Entrance to Media Center with knob handle hardware

Photo #90:	Media Center - 2nd level

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #91:	Project site and signage at main entrance

Photo #92:	Front elevation of building and building identification signage (west elevation)

Photo #93:	Main property entrance drive off Vine Road

Photo #94:	Parking lot at rear of building (north elevation)

Photo #95:	Parking lot at right side of building (south elevation)

Photo #96:	Parking area along front drive lane

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

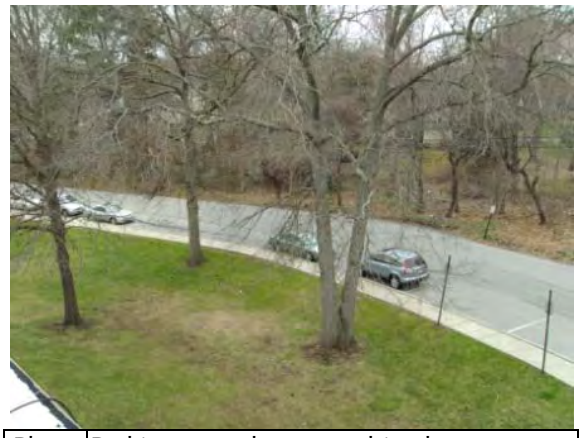


Photo #97:	Parking area along rear drive lane

Photo #98:	Accessible parking at right side of building (south elevation)

Photo #99:	Ponding at asphalt pavement at rear parking lot

Photo #100:	Alligator cracking at asphalt pavement rear of building

Photo #101:	Worn pavement and striping at right side of building

Photo #102:	Asphalt sidewalk and curbing at front elevation

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #103:	Asphalt sidewalk and curbing at side elevation

Photo #104:	Asphalt condition at sidewalk leading to adjacent neighborhood (south elevation)

Photo #105:	Asphalt condition at sidewalk adjacent to modular building

Photo #106:	Asphalt walking path leading to playfields at the northeast elevation

Photo #107:	Settlement and cracking at asphalt sidewalk at left side of building

Photo #108:	Asphalt deterioration and tripping hazard at the sidewalk

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #109:	Asphalt deterioration at sidewalk leading to adjacent neighborhood (south elevation)

Photo #110:	Concrete sidewalk leading to main entrance

Photo #111:	Concrete sidewalk at front elevation

Photo #112:	Concrete sidewalk at side elevation

Photo #113:	Concrete sidewalk and curbing along rear drive lane

Photo #114:	Tripping hazard at concrete sidewalk adjacent to rear drive lane

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #115:	Deteriorated asphalt on top of concrete sidewalk at rear of building

Photo #116:	Collapsing concrete sidewalk at rear of building (adjacent to retaining wall)

Photo #117:	Shifting concrete curbing along front sidewalk

Photo #118:	Deteriorated concrete curb at south elevation

Photo #119:	Displaced asphalt curbing at south parking lot

Photo #120:	Concrete steps with metal handrails

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #121:	Deterioration at concrete steps at side elevation

Photo #122:	Deterioration at concrete steps at front elevation

Photo #123:	Inadequate drainage at rear of modular building (east elevation)

Photo #124:	Stone masonry retaining walls along side elevation of building

Photo #125:	Stone masonry retaining wall at rear of building

Photo #126:	Loose stones and deteriorated mortar at sloped stone retaining wall (front elevation)

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #127:	Vegetation growth at sloped stone masonry retaining wall (side elevation)

Photo #128:	Deteriorated mortar and vine growth at rear stone retaining wall

Photo #129:	Deterioration at rear stone retaining wall

Photo #130:	Deteriorated mortar at rear stone retaining wall

Photo #131:	Cracking mortar at stone retaining wall at left side of building

Photo #132:	Deterioration at stone retaining wall along rear drive lane

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #133:	Tree overhanging roof surface at courtyard

Photo #134:	Tree splitting and leaning towards building at rear elevation

Photo #135:	Barren landscaping at rear of building (east elevation)

Photo #136:	Barren landscaping and deterioration at drainage inlet - rear of building (northwest elevation)

Photo #137:	Wood pole light along rear drive lane

Photo #138:	Building-mounted wall light

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #139:	Chain link fencing along sidewalk leading to adjacent neighborhood (south elevation)

Photo #140:	Chain link fencing adjacent to ball field (southeast elevation)

Photo #141:	Chain link fencing along perimeter at southeast elevation

Photo #142:	Damaged chain link fencing along perimeter at southeast elevation

Photo #143:	Overview of ball field and soccer fields (east elevation)

Photo #144:	Ball field

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #145:	Chain link backstop at ball field

Photo #146:	Loose fencing at backstop

Photo #147:	Bleachers at ball field

Photo #148:	Soccer field

Photo #149:	Metal-framed field goal at soccer field

Photo #150:	Bleacher at soccer field (damaged and missing seats

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #151:	Damaged bleacher seat at soccer field

Photo #152:	Landscape drainage inlet at play fields

Photo #153:	Dumpsters at the rear loading dock

Photo #154:	Rooftop package units for the modular classrooms

Photo #155:	Hot water heating boilers (1 of 3) at basement mechanical room

Photo #156:	Boiler expansion tanks

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #157:	Hot water circulating pumps

Photo #158:	Underground 10,000-gallon fuel oil storage tank at rear of building

Photo #159:	Air Handling Unit (AHU) at basement

Photo #160:	Air Handling Unit at loft above classroom #82

Photo #161:	Air Handling Unit at classroom #80

Photo #162:	Air Handling Unit at classroom #82 (new unit)

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #163:	Air Handling Unit at gymnasium

Photo #164:	Recessed cabinet radiant unit

Photo #165:	Wall-mounted cabinet radiant unit

Photo #166:	Perimeter baseboard radiant heat unit at classroom

Photo #167:	Original unit ventilator at classroom

Photo #168:	Rooftop condensing units and exhaust fans

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #169:	Pad-mount condensing units at courtyard

Photo #170:	Pad-mount condensing unit at front of school

Photo #171:	Unit heater at custodian office

Photo #172:	Portable AC unit at Nurses office

Photo #173:	Through-wall AC unit at custodian office

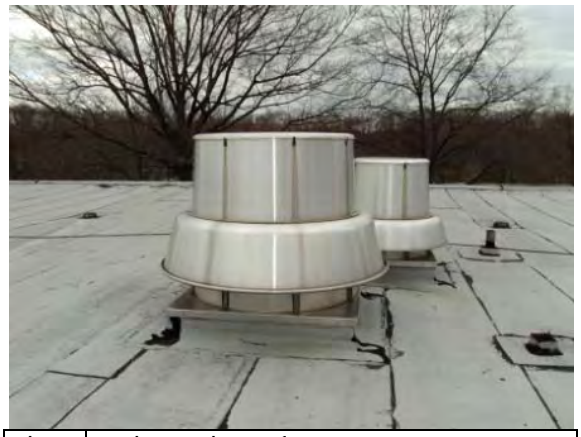


Photo #174:	Kitchen exhaust fans

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #175:	Domestic water heater at basement mechanical room

Photo #176:	Domestic water booster system at basement mechanical room

Photo #177:	Dual sewage pump system at lower level

Photo #178:	Overview of common area restroom

Photo #179:	Common area restroom lavatory sinks

Photo #180:	Boys common area restroom urinals

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #181:	Floor-mounted toilet at restroom

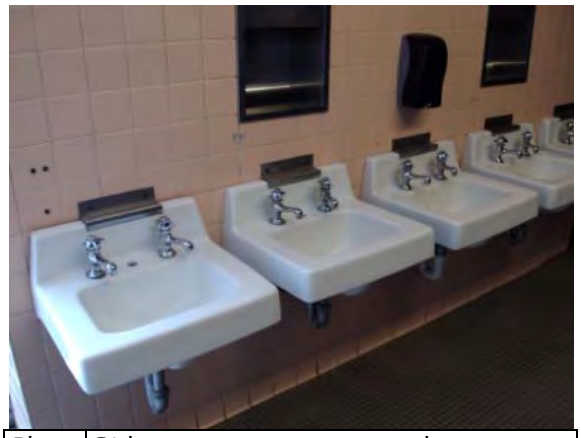


Photo #182:	Girls common area restroom lavatory sinks with wall-bracket for added support

Photo #183:	Girls common area restroom missing a lavatory sink

Photo #184:	Common area drinking fountain at corridor

Photo #185:	Common area drinking fountain at corridor missing GFCI outlet

Photo #186:	Suspect ACM at pipe covering at custodian office

Photo #187:	Damaged suspect ACM at pipe covering at custodian office

Photo #188:	Gas metering at basement

Photo #189:	Main electrical switchgear in basement of building

Photo #190:	Electric meter at main electrical room

Photo #191:	School PA system equipment at office

Photo #192:	PA system call button and speaker in classroom

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #193:	Auditorium lighting controls

Photo #194:	Auditorium audio controls

Photo #195:	Emergency generator in basement

Photo #196:	Generator underground fuel storage tank at rear of building

Photo #197:	Original circuit breaker panels in kitchen

Photo #198:	Original circuit breaker panels in electrical closet

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #1339:	Replacement circuit breaker panel

Photo #1340:	Blocked circuit breaker panels at fire suppression room

Photo #135:	Exterior outlet missing GFCI and cover at main entrance

Photo #136:	Auditorium stage requiring a wheelchair lift for accessibility

Photo #137:	Fire suppression risers

Photo #138:	BFP for fire sprinkler system

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #139:	Fire hydrant at left side of building

Photo #140:	Central fire alarm panel at basement mechanical room

Photo #141:	Annunciator panel at entry vestibule

Photo #142:	Exhaust hood without Ansul fire suppression

Photo #143:	Fire pull station and strobe alarm

Photo #210:	Smoke detector and illuminated exit sign

Photo #211:	Cabinet-mount fire extinguisher

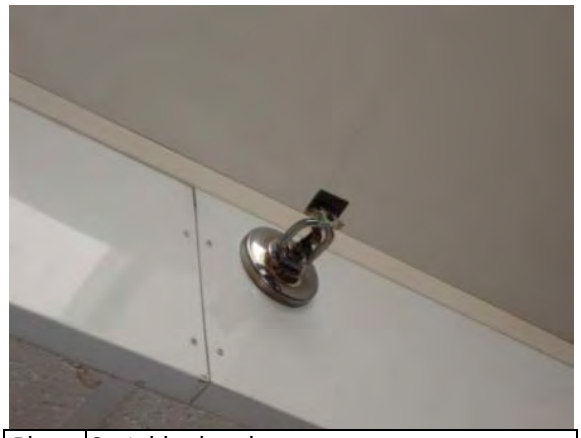


Photo #212:	Sprinkler head

Photo #213:	Siamese connection at rear of building

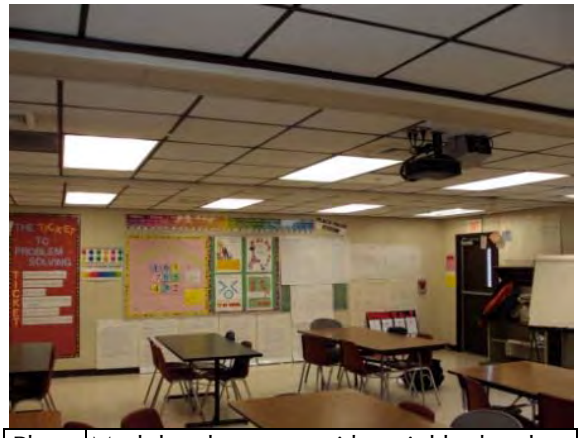


Photo #214:	Modular classroom with sprinkler heads

Photo #215:	Original kitchen gas range

Photo #216:	Kitchen steamer

EMG PHOTOGRAPHIC RECORD

Project No.: 88166.09R-014.017 **Project Name: Turn of River Middle School**

Photo #217:	Chest cooler

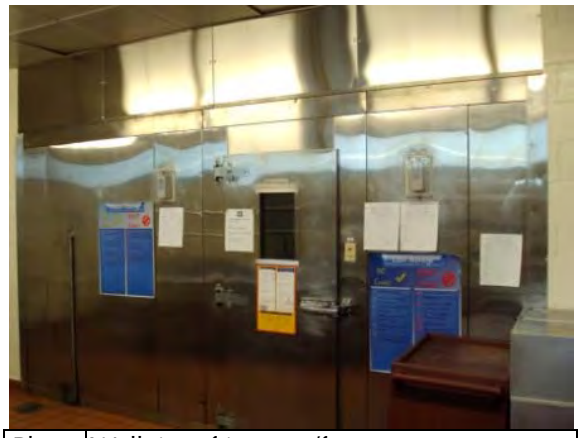


Photo #218:	Walk-in refrigerator/freezer

Photo #219:	Original gas ovens

Photo #220:	Kitchen work tables and 3-compartment sink and faucets

APPENDIX B:
SITE AND FLOOR PLANS

TURN OF RIVER MIDDLE SCHOOL

City of Stamford

digital orthophotography - flight date April 1998
parcel lines under revision

100 0 100 200 Feet

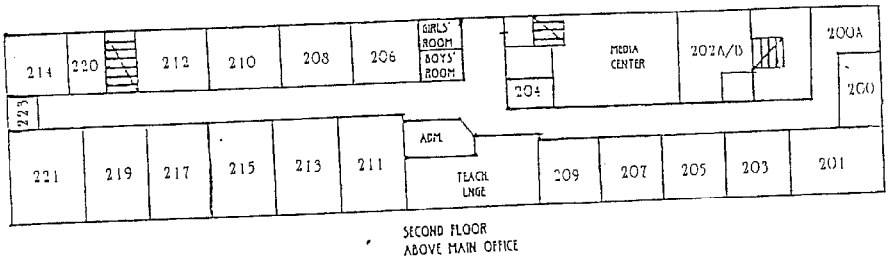
1:2400

Map printed 2/17/2002

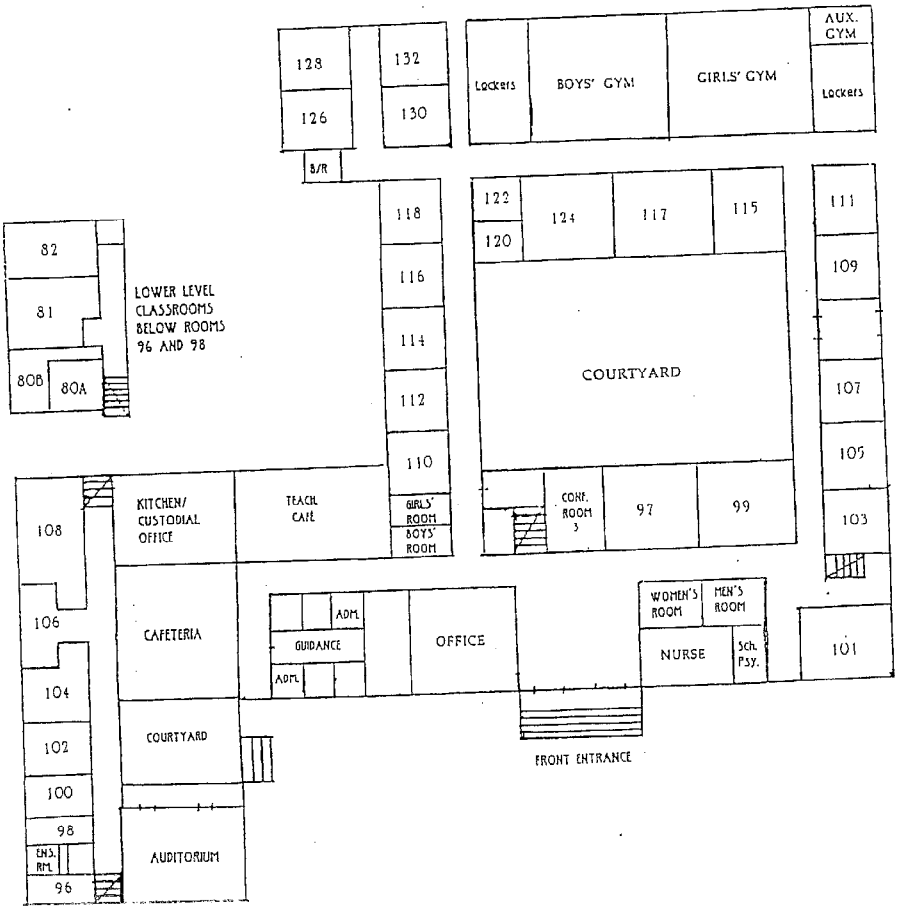
N

AREA OF PROPOSED NEW SEWER CONNECTION TO EXISTING CITY SANITARY SYSTEM. SEE ATTACHED SKETCHES AND DRAWING FOR DETAILED INFORMATION
EXISTING PROPERTY LINES (TYP.)
BASEBALL FIELD
VINE ROAD
SERVICE
COURT
COURT
N
TURN OF RIVER
MIDDLE SCHOOL
RAD 7/80
SITE PLAN
NOT TO SCALE

T.O.R. SCHOOL FLOOR PLAN



SECOND FLOOR
ABOVE MAIN OFFICE



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APPENDIX C:
SUPPORTING DOCUMENTATION

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APPENDIX D:
EMG ABBREVIATED ACCESSIBILITY CHECKLIST

Property Name: Turn of River Middle School
Date: April 6 and 7, 2009
Project Number: 88166.09R-014.017

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?		✓		

EMG Abbreviated Accessibility Checklist					
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?		✓		
	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 a 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?	✓			
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

EMG Abbreviated Accessibility Checklist					
3.	Are floor surfaces firm, stable, and slip resistant (carpets wheelchair friendly)?		✓		Recessed mats are buckling
4.	Is at least one wheelchair-accessible public telephone available?		✓		
5.	Are wheelchair-accessible facilities (toilet rooms, exits, etc.) identified with signage?		✓		
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?	✓			
2.	Are pull handles push/pull or lever type?		✓		

EMG Abbreviated Accessibility Checklist					
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)?		✓		
5.	Are public restrooms large enough to accommodate a wheelchair turnaround (60″ turning diameter)?		✓		
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?		✓		
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?		✓		
11.	Are exposed pipes under sink sufficiently insulated against contact?		✓		
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:	**Turn of River Middle School**	**Project Number:**	**88166.09R-014.017**
Person completing form:	**Michael Fernandes and Ken Kulis**	**Date:**	**April 6-7, 2009**
Association with Project:	**Principal and Head Custodian**	**Phone Number:**	**203.977.4285**
Years associated w/Proj.:	**2 and 3 years**	**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?					
3. Are there any unresolved building, fire, or zoning code issues?		✓	✓		None reported, but no fire inspection by department on file
If so, what additional info is available?					
4. Are there any "down", unusable units?	✓	✓			Stated none, but most basement classrooms are unusable due to flooring conditions
5. Are there any problems or hazards at the property?	✓				Popping tiles in classroom 82 due to substrate
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?		✓			
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?		✓			

	Yes	No	Unk	NA	Comments
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?		✓			Water pressure problems reported, but now have booster pump
22. Is the property served by an on-site water system?		✓			
23. Is the property served by an on-site septic system?		✓			
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?	✓				Ok – last year
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?	✓				Only pressure issue, but booster works
35. Are the any leaks or pressure problems with natural gas service?	✓				Low pressure reported for north end of Stamford in general
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?	✓				

	Yes	No	Unk	NA	Comments
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?					
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.	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.
2. A site plan, preferably 8 1/2" X 11", which depicts the arrangement of buildings, roads, parking stalls, and other site features.	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.
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).	10. Records of system & material ages (roof, MEP, paving, finishes, furnishings).
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.	11. Any brochures or marketing information.
5. For hotel or nursing home properties, provide a summary of the room types and room type quantities.	12. Appraisal, either current or previously prepared.
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.	13. Current occupancy percentage and typical turnover rate records (for commercial and apartment properties).
7. The names of the local utility companies which serve the property, including the water, sewer, electric, gas, and phone companies.	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
FNA – Facilities Needs Assessment
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: August, 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

DANNY WHITE

Project Manager

Project Experience

- ***City of Dallas Assessments (Dallas Zoo), Dallas, TX –*** As a Project Manager, Mr. White performed facility condition assessments of approximately 100 buildings comprising over 320,000 SF, and 95 acres of infrastructure at the Dallas Zoo. Buildings included offices, auditoriums, garages, maintenance facilities, warehouses, restrooms, animal hospital, schools, and various exhibit and animal holding structures. Additional Dallas assessments included the Arlington Hall Conservatory and the Royal Preston Library. The scope of work included assessment of structural exterior and interior building systems and finishes, major mechanical equipment, electrical supply and distribution, and related site improvements. Repair and replacement costs were provided for a 20 year evaluation term. Mr. White also served as a Technical Report Reviewer (TRR) for final review of various other assessment reports.
- ***County of San Diego Assessments, San Diego, CA –*** Mr. White served as a Project Manager and provided facility condition assessments (FCA) of County of San Diego properties. The scope of work included the assessment of numerous buildings and infrastructures including the Kearney Mesa Juvenile Detention Facility, Juvenile Hall, San Diego Courthouse Plant, Law Library, Air Pollution Control District, Levant Adoption Center, and Palomar Mountain Park and Road Maintenance Station. Reports were generated giving broad details of structural, mechanical, electrical, and site elements and event recommendations for a 20-year evaluation term. Mr. White also served as a Technical Report Reviewer (TRR) during the final stages of the assessments reviews.
- ***City of San Buenaventura Assessments, Ventura, CA –*** Mr. White served as a Project Manager on the San Buenaventura Public Housing physical needs assessments (PNA) project. Structures assessed included multi-family housing apartments, senior citizen multi-level towers, rental offices, community centers, and maintenance buildings. Structural, mechanical, electrical, and site systems and finishes were assessed for current condition and cost recommendations for a 20-year term. Interviews were conducted with maintenance and administrative personnel to discuss known deficiencies. Findings were used to establish Expected Useful Life (EUL), and Remaining Useful Life (RUL) of the systems and components.

Industry Tenure

- A/E: 1988
- EMG: 2007

Related Experience

- Educational Facility Condition Assessment reports
- Assisted Living Portfolios
- Retail Portfolios
- Hospitality Portfolios

Industry Experience

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

Special Skills & Training

- Roof Inspection & Management - Diagnosis & Repair – RIEI
- Pavement Management University of Illinois

Regional Location

- Norfolk - Virginia Beach, VA

- ***GE Healthcare Financial Services, Multiple Cities –*** As a Project Manager, Mr. White performed eight property condition assessments (PCA) of this portfolio of Genesis Health Care Nursing Homes. The average property size was 48,000 square feet and an average of 140 units. He reviewed the condition of the building structural, mechanical, and electrical systems, and the site infrastructure and developed a thorough report. Repair and replacement costs were provided for a 12 year reserve term. His work helped EMG complete this project on schedule and within the budget.
- ***Barclays Capital Real Estate Inc, Multiple Cities –*** As a Project Manager, Mr. White performed three property condition assessments (PCA) of this portfolio of hospitality properties, including Potomac Mills Courtyard, Potomac Mills Residence Inn, and Springfield TownePlace Suites located in Northern Virginia. The average property size was 80,000 square feet and an average of 124 units. He reviewed the condition of the building structural, mechanical, and electrical systems, and the site infrastructure and developed a thorough report. Repair and replacement costs were provided for a 7 year reserve term. His work helped EMG complete this project on schedule and within the budget.
- ***Lord and Taylor – Fair Oaks Mall, Fairfax, VA –*** As a Project Manager, Mr. White performed a property condition assessment of this retail property. The building occupies 3.67 acres of the Fair Oaks Mall property and is 159,876 square feet in size. He reviewed the condition of the building structural, mechanical, and electrical systems, and the site infrastructure and developed a thorough report. He interviewed management personnel of Lord and Taylor and the Fair Oaks Mall to determine site maintenance responsibilities. Repair and replacement costs were provided for a 12 year reserve term. His work helped EMG complete this project on schedule and within the budget.

City Government Experience

- ***Virginia Beach Municipal Center , Virginia Beach, VA –*** As a Project Engineer/Technician, Mr. White performed structural facility condition assessment of City Hall, Voter Registration Building, Police Station, Court Support Building, Special Education Building, Heating Plant and related infrastructure within the City of Virginia Beach Municipal Complex. Buildings ranged in size from 28,000 to 90,000 square feet. His team met with the Director of Maintenance to discuss known conditions prior to commencing a thorough visual inspection of designated high profile facilities. Inspection scheduling involved strict visit guidelines in order to minimize disruption of normal business activities. Special consideration was required in conjunction with planned major mechanical and structural systems replacements and the anticipated need for removal of known hazardous materials in ceilings and attics. Deficiencies collected included preventative and recurring maintenance items. He created a prioritized backlog of maintenance and repair to affected structural systems for a 10 year plan. An inventory of roof section types and quantities was provided to the client. His work insured the timely completion of the project within the budget guidelines.

Higher Education Experience

- ***Haskell Indian University, Lawrence, KS –*** As a Project Engineer/Technician, Mr. White performed structural facility condition assessment as part of an inspection team. Facilities inspected included administrative offices, maintenance shops, classrooms, cafeteria and gymnasium. His team met with the facility managers to discuss known deficiencies, environmental concerns, and safety issues throughout the approximately 300,000 square feet of assigned buildings. Ideas were exchanged for ways to increase the budget allocation for repairs and upgrades through the identification of some not easily detected deficiencies. He created a prioritized maintenance and repair strategy for a 10 year plan. An inventory of exterior structural components was also provided to the client. His work insured the team's completion of the project within the time constraints and budget.

Department of Defense

- ***US Naval Submarine Base Kings Bay, GA*** – As a Facilities Maintenance Specialist with the federal government, Mr. White applied his expertise in the structural assessment of the nearly one million square feet Trident Training Facility. The comprehensive assessment of interior, exterior, and roof system components was challenging due to size, accessibility, and security. He met with the facility manager to obtain construction drawings, contact names for the various departments, and a history of deficiencies. He provided an overall condition analysis of the building and a brief narrative and inventory of each major structural system. A 5 year maintenance plan was formulated for recurring and deferred maintenance complete with fundable estimates generated from RS Means estimating software. Mr. White entered the deficiency cost data into the activity's maintenance action plan software which is reported to the Department of Defense for budget planning.

MARK F. CHAMBERLAIN

Project Manager

Education

- Coursework Completed In Business Administration, Manchester Community College, Manchester, CT, 1985

Project Experience

- ***Stafford County Public Schools, Stafford, Virginia*** - Mr. Chamberlain, a professional well-versed in this industry's standards, has performed several Building Condition Assessments on public schools. During his evaluations of the facilities, he conducted interviews with the Facilities Assessment Engineer and Maintenance Staff. His findings included information on existing building conditions to include electrical, security and energy efficient lighting systems.
- ***CitiBank's, New York, Connecticut & Pennsylvania*** – Mr. Chamberlain conducted Facility Condition Assessments (FCA) for several Citibank branch locations. His findings included information on existing building conditions, site improvements, interior finishes, mechanical and electrical systems and code and accessibility information.
- ***Foxchase at Alexandria, Alexandria, VA –*** Mr. Chamberlain performed a Physical Needs Assessment (PNA) on one of the largest multi-family properties in the eastern United States. Project consisted of 2,113 dwelling units contained in 200 buildings on 88 acres. Responsibilities included recommending immediate repair items and replacement reserve items over the loan term.
- ***Carriage House Apartments, Petersburg, VA*** – The Moisture Infiltration & Mold Assessment conducted by Mr. Chamberlain at this multi-family property was to identify moisture infiltration-related issues. Upon the on-site assessment, he provided a formal written report to assist the client in identifying and resolving the moisture infiltration deficiencies observed to a level that will provide safe, decent and sanitary living conditions for the residents.
- ***155 Commerce Way, Dover, DE –*** Mr. Chamberlain performed a Property Condition Assessment (PCA) on this 111,632 SF commercial building consisting of office and warehouse space. His knowledge of structural and mechanical building elements was crucial to the level of detail required for this assessment. The report was clear and concise, yet thorough. He provided the information that was essential to the client's needs.

Industry Tenure

- A/E: 1987
- EMG: August, 2006

Industry Experience

- Commercial
- Office
- Higher Education
- Industrial
- K-12
- Retail/Wholesale
- Housing/Multi-family
- Nursing Home Facilities
- Assisted Living Portfolios
- Public Housing Portfolios

Active Licenses/Registration

- Certified Level I & Building Science Thermographer 2005

Special Skills & Training

- EPA/AHERA Certified Asbestos Inspector / Management Planner 2004
- EPA Model Lead Paint Risk Assessor 2003
- Certified Level I & Building Science Thermographer 2005
- HUD Sponsored Multi-Family Accelerated Processing (MAP) Training Hartford, Connecticut 2001
- Advanced Building Diagnostics and Repairs 2004
- Building Moisture – Avoiding Building Envelope and Mechanical Systems 2003

Regional Location

- Baltimore, MD

JILL E. ORLOV

Technical Report Reviewers

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 foot 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 foot, 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.
- ***Government Transit Building, Charlottesville, VA –*** Ms. Orlov performed a property condition assessment on this 2000 square foot public service building located in Charlottesville. This included observations of the facility and systems, interview with property staff and research of municipal records. This project was a part of a large portfolio of projects EMG completed for our client.

Industry Tenure

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

Industry Experience

- Industrial
- Hospitality
- Retail

Active Licenses/Registration

- Architectural, MD

Special Skills & Training

- AUTOCAD, 2000

Regional Location

- Baltimore, MD