

FACILITIES STUDY

BRIARCLIFF MANOR UNION FREE SCHOOL DISTRICT

October 21, 2019



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TABLE OF CONTENTS

Purpose/Scope..... III

Goals and Objectives IV, V

Definition of Priorities..... VI, VII

Recommended Items:

Facility Items and Costs: **Todd Elementary School**..... 1-10

Facility Items and Costs: **Briarcliff Middle School/Briarcliff High School** 11-22

Total Cost Summary..... 23

PURPOSE

BBS Architects, Landscape Architects, & Engineers, P.C. was engaged by the District to conduct a visual survey to determine the present condition of the District's school buildings. This study is intended to provide a framework for budgetary planning and scheduling of capital renovation projects and other major maintenance work.

SCOPE

This Architectural/Engineering report includes, but is not limited to, an evaluation of the buildings, its subsystems, and supporting site facilities, to determine their present condition and to recommend necessary/essential repairs and/or improvements to the facilities. This report takes into account health and safety, preservation and prevention of deterioration, operating economy, compliance with new codes and regulations, and the addition of new systems and facilities to improve the overall operation of the buildings.

This report also considers the life expectancy of the facilities components, estimated cost of each recommended repair, replacement or renovation item together with energy savings, payback, etc., and it is arranged in such a fashion that it may be used, in the future, as a catalog guide and reference document by the Library.

The report indicates the priority of essential repairs, replacements, or renovations to aid in determining whether to handle the work required through several annual phases or by means of a larger construction program covering all items.

Please take note that two aspects of the buildings have been specifically excluded from this report. These are the evaluation of each facility for the presence of asbestos and/or lead for which abatement work may become necessary and the evaluation of the facilities for full accessibility for the disabled. The age of the facilities suggests that asbestos may have been used in construction. Some accessibility recommendations have been incorporated, but this does not constitute a complete evaluation.

GOALS AND OBJECTIVES

Certain facilities and their systems have been affected due to age and obsolescence. Our examination indicates that essential repairs, replacements, and retrofitting can result in savings in energy and overall economy of operation, as well as providing increased safety for buildings occupants and decreased rate of deterioration of the buildings.

Our evaluation includes, but is not limited to:

- Site Facilities
- Exterior Walls, Masonry
- Exterior Walls, Cladding
- Interior Walls, Floors, & Ceilings
- Windows and Doors
- Roofs
- Energy Conservation
- Boilers
- Domestic Hot Water Heaters
- Fuel Tanks
- Hot Water Circulating Pumps
- Code Requirements
- Fuel Oil Pumpsets
- Air Handling Units
- Exhaust Fans
- Automatic Temperature Controls
- Electric Service
- Electrical Equipment
- Lighting Fixtures
- PA/Intercom Systems
- Piping
- Plumbing Fixtures
- Backflow Preventers
- Finishes

Estimates have been made from the data collected to indicate how systems should be repaired, replaced, or upgraded based on such criteria as age, condition, reliability, and efficiency.

Where present equipment of the facility is in good condition or has recently been repaired with good results and efficiencies and life expectancy are high, such equipment should be retained.

In cases where facility equipment or systems are very old, unreliable, inefficient, or obsolete, with short life expectancy, such items should be replaced with new, more modern equipment or systems. These items are addressed in the facilities study.

Each item is evaluated on the following basis:

- A. Health and safety.
- B. Cost of repair or replacement.
- C. Reliability.
- D. Efficiency.
- E. Payback period.
- F. Life expectancy.

Observed items for the facility are covered in the body of this report. Each item is given a priority number between I and V, with each priority being as defined under "Definition of Priorities". Priorities are based upon health and safety, code requirements, energy efficiency, and facility appearance. These priorities are based purely on facility condition. The School District should consider its internal priorities in the evaluation of any individual items.

In addition to our physical investigation of the facility, discussions conducted with the building's principals, head custodians, and the Director of Facilities, Superintendent of Schools, Assistant Superintendent for Business, Director of Technology & Athletic Director have been made part of the evaluation process.

All items, including probable maintenance items, have been included in the report for completeness. Where the designation "Local" exists in lieu of an estimated cost in the report, this work could be designated by the District as work intended to be completed by maintenance personnel. Some items may have received a designation "Further Review Required". These items are listed as such to inform you of the condition and to make you aware that a more in-depth evaluation of the specific item is required to determine corrective measures and to properly evaluate costs.

Since the estimates are given prior to any preliminary design of the project, the costs shown are conservative. All estimates are given based upon an outside prime contractor performing the work as a combined project, including bonding, insurance, prevailing wages, competitive bidding, etc.

DEFINITION OF PRIORITIES

Priority IA

Safety:	<u>Required</u> to assure physical safety and health to occupants, employees, and public.
Mandate:	Mandated by law, regulation, or code, with compliance <u>required</u> .

Priority IB

Safety:	<u>Recommended</u> to assure physical safety and health to occupants, employees, and public.
Mandate:	“Grandfathered”. Mandated by law, regulation, or code, with compliance <u>recommended</u> to upgrade conditions that preexisted current regulations.

Priority II

Preservation:	Prevent further deterioration of structure and components of facility.
Program:	Alterations to buildings systems due to program modifications or new programs.
Safety:	<u>Significantly</u> contributes to reducing accidental injury to occupants and damage to structure.

Priority III

Preservation:	Stop progressing deterioration of surfaces and non-structural components of the facility.
Program/Service:	Greatly facilitates a basic program or service.
Safety:	Encourage and assist safe use of facilities.
Economic:	Pays for itself in one (1) or two (2) years.

Priority IV

- Preservation: Restore non-progressing deterioration of structure.
- Program/Service: Contributes to the enhancement and/or effectiveness of existing service or program.
- Economic: Pays for itself in three (3) to five (5) years.

Priority V

- Cosmetic: Improves facility in appearance.
- Economic: Pays for itself in six (6) years or more.

Recommended Items

ARCHITECTURAL ITEMS	Cost	BBS Priority
1 Add new exterior poured concrete ADA ramp at student entrance.	\$ 371,000	IA
2 Add fall protection to existing dome skylights (21 locations).	\$ 29,400	IA
3 Replace damaged/mold gypsum walls at Boiler Rm. vestibule.	\$ 11,200	IA
4 Add missing closers to existing doors at Rms. 215, 216, 217, 220, 221, 222, 225, 226, 227, 232, 231, closets (8), 230, 233, 234, 235, 236, 210, 211, 212, 213 and 214 (Allowance 30 locations).	\$ 33,600	IA
5 Remove locksets and replace with exist deceives at Music Rms. 163 and 164.	\$ 5,600	IA
6 Remove hold open and thumb turn devices at doors (Allowance 10 locations).	\$ 3,500	IA
7 Add missing Corridor door at Copy Rm.	\$ 7,000	IA
8 Replace plexi-glass/unmarked glass with safety glass at doors, sidelights or display cases (8 locations, Allowance 650 sf).	\$ 27,300	IA
9 Renovate and enlarge Nurse's Office toilet for ADA accessibility.	\$ 77,000	IA
10 Add single occupancy ADA toilet at Faculty Room.	\$ 119,000	IA
11 Renovate and enlarge Toilet Rms (near Rm. 156 and 125) for ADA .	\$ 208,325	IA
12 Provide District-Wide portable lift for ADA accessibility.	\$ 77,000	IA
13 Add missing handrails at interior ramps (wall or post mounted).	\$ 168,000	IA
14 Stage curtains not identified as Inherently Flame Retardant.	\$ 12,000	IA
15 Remove corridor lockers where egress width is reduced to less than 8'-0" wide when locker doors are open (near Classroom 174).	\$ 3,500	IA

Recommended Items

ARCHITECTURAL ITEMS - CONTINUED	Cost	BBS Priority
16 Remove and replace corridor partition/doors with wood louvers and gypsum infills (at Storage/Custodial Rms) with rated CMU construction and doors. Extend demising walls to underside of roof deck. (3 locations).	\$ 97,450	IB
17 Additional storm drainage and piping near Library.	\$ 35,000	II
18 Repair exterior concrete stairs/railings at Classrooms 117, 118/119 and 114/115 and 109/110. Replace exterior stair/railings at Kitchen (consider ramp for food service deliveries). Replace guardrail/railing at exterior stair to Lower Level Utility Room.	\$ 185,000	II
19 Repair leaks at Corridor windows (near interior courtyards).	\$ 17,500	II
20 Replace EPDM roof areas (1995).	\$ 619,000	II
21 Replace TPO roof areas (2002).	\$ 2,352,000	II
22 Install missing gutters and downspouts at pitched roof. Reconnect existing loose or missing downspouts.	\$ 105,000	II
23 Replace damaged/deteriorated Corridor doors (Allowance 65 doors).	\$ 455,000	II
24 Security vestibule upgrades (transaction window and security film over existing glazing).	\$ 32,900	II
25 Replace damaged/deteriorated asphalt and sub-base at parking lot and driveways.	\$ 1,545,600	III
26 Replace deteriorated and uneven concrete sidewalks and curbs. Widen front walks for uniformity and maintenance.	\$ 646,800	III
27 Additional playground equipment and fencing to alleviate crowding.	\$ 385,000	III
28 Replace damaged/deteriorated asphalt at outdoor play areas (open/closed courtyards and basketball court).	\$ 291,000	III
29 Replace caulking at masonry control joints and expansion joints.	\$ 30,800	III

Recommended Items

ARCHITECTURAL ITEMS - CONTINUED	Cost	BBS Priority
30 Tuckpoint mortar joints and replace damaged brick.	\$ 112,000	III
31 Power wash soiled brick (caused by missing gutters).	\$ 60,200	III
32 Prep and paint exposed steel columns and canopies.	\$ 47,600	III
33 Replace exterior classroom and corridor wood door frames/transoms with aluminum frames and doors (17 locations).	\$ 350,000	III
34 Prep and paint exterior fire escape (Rm. 212) and adjacent stair railings.	\$ 10,500	III
35 Tuckpoint and caulk joints at cast stone window sills.	\$ 49,000	III
36 Abate presumed VAT and install new finish flooring at Rooms 231, 232 and Stair near Classroom Rm. 212.	\$ 51,800	III
37 Allowance for repairs TPO roof areas (2002).	\$ 140,000	III
38 Replace carpeting at Music Rms. 163 and 164.	\$ 33,810	III
39 Provide single key system (replace 125 cores) to match 2002 addition.	\$ 26,250	III
40 Replace stainless steel tray slide at serving line counter for uniform height and width.	\$ 10,500	III
41 Replace interior casework (below window sill) and sink cabinets at Classrooms 231 and 232 (approximately 55 l.f.).	\$ 52,000	III
42 Replace all Corridor acoustical ceiling system and light fixtures.	\$ 1,008,000	III
43 Replace chain link fence/slats at fuel tank enclosure.	\$ 14,000	IV
44 Remove inactive incinerator chimney below the roof level.	\$ 185,000	IV
45 Replace grass field with synthetic turf.	\$ 2,380,000	IV
46 Repair water damaged soffit at main entrance.	\$ 7,000	IV

Recommended Items

ARCHITECTURAL ITEMS - CONTINUED	Cost	BBS Priority
47 Replace all corridor finish flooring and cove base due to tile separation and aesthetic uniformity.	\$ 472,500	IV
48 Replace classroom finish flooring and cove base due to tile separation (2002 addition).	\$ 152,575	IV
49 Add Class A FRP panels at Kitchen over existing painted gypsum walls.	\$ 67,200	IV
50 Construction ceiling panels and soffits to improve aesthetics at exposed HVAC pipes and electrical conduits in Corridors (3 locations).	\$ 209,475	IV
51 Replace Maintenance/Storage buildings with new pre-fabricated type building (approx. 2000 s.f.).	\$ 805,000	IV
52 Prep and paint corridor walls.	\$ 220,650	V
53 Sand and refinish wood platform at Multi-Purpose/Cafeteria.	\$ 5,600	V
54 Relocate dumpsters with new concrete pad and chain link fence/slats.	\$ 24,150	V
ARCHITECTURAL TOTAL	\$ 14,446,285	

Recommended Items

HVAC ITEMS	Cost	BBS Priority
1 Replace six older type rooftop exhaust fans to restore to proper operation, and provide adequate ventilation in the bathroom areas.	\$ 120,000	IA
2 Provide a relief air path from classroom 111, which was subdivided from classroom 110.	\$ 10,000	IA
3 Ensure that all rooftop exhaust fans are turned on during occupied times. It was observed during our walkthrough that several of the bathroom fans did not appear to be on. Upgrade controls as required.	\$ 50,000	IA
4 Cap all unused ducts in room 155 storage room as required by code.	\$ 5,000	IA
5 Replace all single wall underground fuel oil storage tank supply lines with new double walled lines, as per the previous report.	\$ 50,000	IB
6 Provide humidity controls on the two unit ventilators in the library to alleviate the musty odor as discussed.	\$ 15,000	IB
7 Properly sleeve the two library unit ventilators to prevent possible freeze up of the unit coils.	\$ 20,000	II
8 Upgrade all classroom automatic temperature controls to DDC to allow for improved comfort and monitoring.	\$ 375,000	III
9 Provide day/night DDC controls on the kitchen hood exhaust fan and the bathroom exhaust fans, which run continuously.	\$ 50,000	III
10 Replace select heating system isolation valves to allow for proper emergency repairs or maintenance.	\$ 150,000	III
11 Remove the birds nest from the exhaust grille on the exterior of the building.	N/A	III
12 Provide an air curtain at the main drop off entrance to properly heat the area during pickup and drop off periods.	\$ 15,000	III

Recommended Items

HVAC ITEMS (CONTINUED)	Cost	BBS Priority
13 Replace the temporary one speed unit vent motors with the correct two speed motors to restore the units to proper operation Assume 30 locations.	\$ 150,000	III
14 Provide Variable Speed Drives (VSD's) on all heating hot water circulating pumps to increase comfort levels and energy efficiency in the building.	\$ 20,000	III
15 Provide air conditioning in the nine step rooms as discussed. Estimate is based upon ductless split units.	\$ 405,000	III
16 Upgrade remaining bathroom exhaust fans to provide for proper ventilation. Assume seven fans total.	\$ 140,000	III
17 Replace the server closet A/C units as discussed, and provide high temperature alarms. Assume three units total.	\$ 135,000	III
HVAC TOTAL	\$ 1,710,000	

PLUMBING ITEMS	Cost	BBS Priority
1 Provide a separate drinking fountain basin in room 217, and remove the bubbler from the classroom sink as required by code.	\$ 5,000	IA
2 Provide a natural gas leak detection system in the boiler room area.	\$ 50,000	IB
3 Replace six exterior hose faucets to restore to proper operation.	\$ 30,000	III
4 Replace seven waterless urinals with new low flow urinals as discussed.	\$ 42,000	III
5 Provide additional plumbing isolation valves throughout the building to provide for partial shutdowns in the event of an emergency or maintenance issue.	\$ 125,000	III

Recommended Items

PLUMBING ITEMS (CONTINUED)	Cost	BBS Priority
6 Replace the older type rusted electric domestic water heater in the slop sink area, which is nearing the end of it's life expectancy.	\$ 20,000	III
7 Replace the AO Smith domestic hot water storage tank with a new gas fired domestic hot water heater as discussed.	\$ 75,000	III
PLUMBING TOTAL	\$ 342,000	

ELECTRICAL ITEMS	Cost	BBS Priority
1 Provide exit lighting, fire alarm pull stations, and raise the light fixture in the small courtyard.	\$ 15,000	IA
2 Retrofit the original Metropolitan circuit breaker panel in the slop sink and fill all missing spaces as required by code.	\$ 20,000	IA
3 Replace the non-functional exit signs in the larger courtyard, as well as adding pull stations and one horn/strobe unit.	\$ 15,000	IA
4 In the other larger courtyard, replace the non-functional exit signs, and add two fire alarm pull stations as required.	\$ 12,500	IA
5 In the front courtyard provide pull stations and replace the non-functional exit signs as required.	\$ 10,000	IA
6 Re-attach the hanging smoke detector in the custodial break room, and replace the missing light fixtures lenses.	N/A	IA
7 Provide additional security lighting by the dumpster area as discussed.	\$ 25,000	II
8 Retrofit the original Frank Adams circuit breaker panels, for which replacement parts are no longer available. Assume six panels total.	\$ 120,000	II
9 Provide volume controls on the public address speakers in certain areas as requested. Assume 15 areas.	\$ 20,000	II
10 Reactivate the door ajar system and tie into the security camera system as discussed, and extend to all keyed exterior doors.	\$ 100,000	II

Recommended Items

ELECTRICAL ITEMS (CONTINUED)	Cost	BBS Priority
11 Provide hardwired carbon monoxide detectors tied into the building's fire alarm system to replace the current battery and line voltage detectors.	\$ 17,500	II
12 Provide dedicated electric power to the IT closets as discussed.	\$ 40,000	II
13 Add four pole lights in the rear parking area to provide for proper illumination levels.	\$ 100,000	II
14 Provide additional CCTV Security cameras as discussed to provide for proper coverage of the premises, and upgrade remaining older cameras. Assume 25 additional camera locations.	\$ 225,000	II
15 Relocate pull station and break glass station out of the security vestibule to prevent activation of the fire alarm system in the event of a lockdown.	\$ 5,000	II
16 Repair the card access control system and provide additional access points. Allow for lockdown of the building from the main office as was available at one time.	\$ 50,000	II
17 Replace ten deteriorated light poles per the pervious report.	\$ 100,000	II
18 Relocate three light poles as per the previous report.	\$ 40,000	II
19 Provide card access points at every classroom door location for better access control and lockdown.	\$ 300,000	II
20 Provide magnetic hold open devices on all classroom doors, which are currently chocked open, to allow the doors to close automatically in the event of an emergency. Install smoke detection in classrooms as necessary.	\$ 300,000	II
21 Upgrade the Aiphones to allow them to ring in the main office as	\$ 15,000	II
22 Provide video monitors in the front entry vestibule to show select other cameras to act as a deterrent.	\$ 10,000	II

Recommended Items

ELECTRICAL ITEMS (CONTINUED)		Cost	BBS Priority
23	Provide one button lockdown system in select locations through a proximity card system as discussed.	\$ 40,000	II
24	Provide eight new electric hand dryers in the student bathrooms to provide for a more hygienic, environmentally friendly installation.	\$ 60,000	III
25	Replace all T-8 fluorescent lighting with new LED lighting with daylight harvesting, new occupancy sensors and dimming capability.	\$ 500,000	III
26	Reprogram or repair the exterior lighting controller(s) as some of the lighting was on during the time of our walkthrough.	N/A	III
27	Replace the screw in fuse type panel in the repair garage with a new 100 amp circuit breaker panel.	\$ 15,000	III
28	Replace the cluster type lighting in the multi-purpose room to improve light distribution levels.	\$ 40,000	III
29	Upgrade the lighting in the library to improve illumination levels.	\$ 35,000	III
30	Replace the older sound system in the gym to improve system performance.	\$ 50,000	III
31	Provide an emergency generator for the heating system as per the previous report.	\$ 150,000	III
32	Provide an emergency generator for IT and the Administration area as per the previous report.	\$ 200,000	III
33	Add four post solid racks in all data closets as discussed.	\$ 30,000	III
34	Provide surge suppression at the main switchgear location to eliminate power surges.	\$ 30,000	III
35	Protect all fiber optic ceiling run above hallway ceilings, which was not run in conduit.	\$ 50,000	IV

Recommended Items

ELECTRICAL ITEMS (CONTINUED)	Cost	BBS Priority
36 Remove all abandoned wiring throughout the ceilings of the buildings as discussed.	\$ 100,000	V
37 Provide a lightning protection system on the roof of the building to protect from a major lightning strike.	\$ 150,000	V
ELECTRICAL TOTAL	\$ 2,990,000	
 <u>TODD ELEMENTARY SCHOOL TOTALS</u>		
ARCHITECTURAL TOTAL	\$ 14,446,285	
HVAC TOTAL	\$ 1,710,000	
PLUMBING TOTAL	\$ 342,000	
ELECTRICAL TOTAL	\$ 2,990,000	
BUILDING TOTAL	\$ 19,488,285	

Recommended Items

ARCHITECTURAL ITEMS	Cost	BBS Priority
1 Install Rescue Window stickers at missing locations (Rms. 122, 123 and 124).	Local	IA
2 Remove cloth banner from connecting egress door between Rm. 203/215 at High School.	Local	IA
3 Replace guardrail at exterior Auditorium ramp with proper height and baluster spacing at High School.	\$ 25,200	IA
4 Firestop/seal penetrations and top of wall in Auditorium Mechanical Rm., Switchgear Rm. and Art Rm. at High School.	\$ 24,500	IA
5 Replace non-rated door in Boiler Rm. at High School.	\$ 6,300	IA
6 Provide required rated separation between Maresca Center and Corridor with doors/partition (near Rm. 102) at High School.	\$ 22,750	IA
7 Create alcove and reverse door swing toward corridor in spaces over 1000 sf at Classrooms 101/102 and 209/210 (with folding partitions) at Middle School.	\$ 165,250	IA
8 Replace plexi-glass/unmarked glass with tempered safety glass at doors, sidelights, stairwells or display cases at High School (Allowance 475 sf).	\$ 19,950	IA
9 Repair missing spray applied fireproofing over structural steel columns/braces in Mechanical Room at Middle School.	\$ 3,500	IA
10 Firestop/seal penetrations and top of wall in Electrical Rm. (near Rm. 218) at Middle School.	\$ 4,750	IA
11 Replace existing knob type locksets with ADA lever handles.	\$ 16,800	IA
12 Add missing closers to existing Corridor doors and Science Prep. Rm. doors (allowance 25) at High School.	\$ 28,000	IA
13 Remove corridor locksets and replace with exist devices in Music Rm. 130/131 and L.G.I. Rm. 108 at High School. (Exit door blocked by electrical equipment at L.G.I.).	\$ 5,600	IA

Recommended Items

ARCHITECTURAL ITEMS - CONTINUED	Cost	BBS Priority
14 Install missing railing at ramp in Music Room at Middle School.	\$ 2,100	IA
15 Remove corridor lockers where egress width is reduced to less than 8'-0" wide when locker doors are open at High School.	\$ 21,000	IA
16 Remove manual hold open devices at Gymnasium Corridor doors (replace door closer or add magnetic holders).	\$ 4,480	IA
17 Remove floor stops (w/ padlocks) in Boys/Girls toilet rooms at High School (near Rm. 120).	\$ 700	IA
18 Create alcove and reverse door swing toward corridor in spaces over 1000 sf at Classrooms 100, 101, 103, 104, 134 and 229 at High School.	\$ 247,800	IA
19 Enlarge and renovate student toilet rooms for ADA accessibility at High School (four locations).	\$ 1,479,800	IA
20 Add ADA toilet room to Main Office at Middle School.	\$ 84,000	IA
21 Replace guardrail/ballusters and handrails in interior stairwells (four locations) at High School.	\$ 138,600	IB
22 Replace damaged, coated or bulging brick and tuckpoint mortar joints (both sides) at fuel tank/electrical enclosure. Tuckpoint mortar joints and replace damaged brick at High School.	\$ 265,000	II
23 Replace exterior concrete stairs/handrails at parking lot (3) and upper level tennis courts. (excludes MS entry and MS Cafeteria stairs).	\$ 490,000	II
24 Replace EPDM roof areas (2002) and modify masonry/flashing (excludes Gym) at Middle School.	\$ 2,181,725	II
25 Replace damaged/clogged roof leader and scupper (near loading dock) at Middle School.	\$ 2,450	II
26 Replace EPDM roof areas (1998), skylights and modify masonry/flashing (excludes Gym) at High School.	\$ 4,898,775	II

Recommended Items

ARCHITECTURAL ITEMS - CONTINUED	Cost	BBS Priority
27 Replace damaged/deteriorated Corridor doors at High School (Allowance 25 doors).	\$ 175,000	II
28 Security vestibule upgrades (transaction window and security film over existing glazing at High School and Middle School.	\$ 32,900	II
29 Replace caulking at masonry control joints and expansion joints at Middle School and High School.	\$ 85,200	III
30 Replace Stadium synthetic turf (reuse/replenish EPDM infill), new goals and perimeter netting. (Deduct \$70,000 to keep existing goals/netting) (Add \$56,000 to increase turf face weight from 46oz to 50oz)	\$ 840,000	III
31 Replace Baseball/Soccer/Lacrosse synthetic turf (reuse/replenish EPDM infill). (Deduct \$85,000 to keep existing goals/netting) (Add \$70,000 to increase turf face weight from 46oz to 50oz).	\$ 1,071,000	III
32 Window and transom replacement including exterior doors at Rms. 131, 135, 134 and First Floor Corridor at Lightwell 2 (opposite Library).	\$ 173,250	III
33 Replace carpet in Music Rm. 90 at Middle School.	\$ 23,758	III
34 Provide acoustical panels, dividing curtain and paint walls in Gym at Middle School.	\$ 148,400	III
35 Replace acoustical ceiling systems and new LED lighting in all Corridors at High School.	\$ 1,065,000	III
36 Repair gypsum ceiling (clerestory) and paint exposed structure/rood deck in Cafeteria at Middle School.	\$ 22,500	III
37 Replace Auditorium seating (200 seats) at Middle School.	\$ 107,800	III
38 Provide single key system (replace 200 cores) at High School.	\$ 42,000	III
39 Interior renovations of Cafeteria/Kitchen (including food service equipment and loose furniture).	\$ 2,404,500	III
40 Interior renovations of Maresca Center.	\$ 1,513,575	III

Recommended Items

ARCHITECTURAL ITEMS - CONTINUED	Cost	BBS Priority
41 Interior renovations of Boys/Girls Locker Rm. at High School (including lockers, toilets, showers, offices and storage).	\$ 3,255,000	III
42 Interior renovations of Technology Lab (Rm. 120) at High School (including casework/furniture and dust collection system).	\$ 758,500	III
43 Interior renovations of Boys/Girls Locker Rm. at Middle School (including lockers, toilets, showers, offices and storage).	\$ 1,050,000	III
44 Interior renovations of Science Rms. 205, 206, 307 and 308 (excludes prep rooms) at Middle School (including casework/furniture).	\$ 1,415,680	III
45 Interior renovation to combine HS/MS Nurse's Office (Spatial estimate, location to be determined. Allowance 1250 sf).	\$ 420,000	III
46 Replace damaged/deteriorated asphalt and sub-base at parking lot and driveways (excludes entry drive).	\$ 1,736,000	III
47 Replace deteriorated and uneven concrete sidewalks and curbs.	\$ 945,000	III
48 Prep and paint exposed exterior structural members.	\$ 65,750	III
49 Replace Corridor finish flooring at High School.	\$ 948,500	IV
50 Replace Softball scoreboard.	\$ 70,000	IV
51 Additional grandstand seating (315) at Stadium.	\$ 241,000	IV
52 Additional bleacher seating (225) at Baseball field	\$ 105,000	IV
53 Replace grass field with synthetic turf.	\$ 2,380,000	IV
54 Provide ceiling panels/soffits to improve aesthetics at exposed HVAC pipes, electrical conduits and structure in main Corridors at High School (includes new LED lighting).	\$ 674,250	IV
55 Widen separate single cross corridor doors to pairs (three locations) at Middle School.	\$ 136,500	IV

Recommended Items

ARCHITECTURAL ITEMS - CONTINUED	Cost	BBS Priority
56 Remove window/HVAC and provide new exterior door from Library to 'Academia' courtyard at Middle School.	\$ 49,000	IV
57 Replace Maintenance/Storage building with new pre-fabricated type building (approx. 2000 s.f.).	\$ 805,000	IV
58 Replace acoustical ceiling system with painted sheathing in exterior receiving area at High School.	\$ 9,800	V
59 Paint Corridor walls at High School.	\$ 188,500	V
ARCHITECTURAL TOTAL:	\$ 33,097,393	

HVAC ITEMS	Cost	BBS Priority
1 It was reported that the building exhaust fans were controlled by an old day/night control system, that no longer works. This system should be repaired or replaced, as these fans are required to operate whenever the school is occupied. This is one of a few control system items, which are all priced individually, but should be addressed as a whole.	\$ 50,000	IA
2 Replace the non-functional exhaust fan in the main electrical meter room to restore to operation.	\$ 20,000	IA
3 Uncover the combustion air intake louver in the boiler room, and provide a motorized damper to automatically close the damper when the boilers are not firing.	\$ 20,000	IA
4 Provide an exhaust fan in the copy room adjacent to the nurses office, and vent directly to the exterior. The current fan exhausts into the hallway currently.	\$ 20,000	IA
5 Provide a new transfer grille in the art room 121 storage room to restore to original operation. Original grille has been permanently covered over.	\$ 10,000	IA

Recommended Items

HVAC ITEMS (CONTINUED)	Cost	BBS Priority
6 Replace the two HS gym exhaust units. One unit has a failed motor, and the second unit has no power to the unit.	\$ 40,000	IA
7 Provide heat and AC to the rear entrance adjacent to the MS Tech Shop. Currently the area has no source of heat or A/C, and gets cold in the winter and hot in the spring and fall.	\$ 100,000	IA
8 Repair the insulation on the MS cafeteria ductwork to eliminate condensation from dripping down onto the ceiling and then on down to the walls and floor.	\$ 25,000	II
9 Provide heat, ventilation and air conditioning in the security guards area in the security vestibule to replace the temporary electric space heater.	\$ 40,000	II
10 Repair the insulation on the duct above the ceiling in HS room 110, which also drips onto the ceiling, and eventually down into the space.	\$ 15,000	II
11 Provide a Variable Frequency Drive (VFD) on the MS Cafeteria chilled water A/C unit supply fan, add a humidity sensor, and add controls to allow for the unit to better dehumidify the cafeteria, which is reported to get cool and humid.	\$ 35,000	II
12 Repair the chilled water pipe insulation in the MS/HS, especially at valves or saddles, where condensation forms and leaks down onto the hung ceiling tiles.	\$ 100,000	II
13 Provide a full dust collection system in the MS tech shop to replace the existing air cleaner.	\$ 275,000	II
14 Replace the non-functional greenhouse fan and provide thermostatic control of the new fan for proper operation.	\$ 20,000	II
15 Replace 15 original rooftop exhaust fans, which are at or nearing end of life expectancy, to restore to proper operation.	\$ 300,000	II
16 Provide two smaller gas fired condensing boilers in the boiler room to increase heating system efficiency in the shoulder seasons.	\$ 400,000	III

Recommended Items

HVAC ITEMS (CONTINUED)	Cost	BBS Priority
17 Provide Variable Speed Drives (VSD's) on the heating hot water circulating pumps to improve heating system efficiency, and also reduce inadvertent over heating as well.	\$ 60,000	III
18 Replace 7 older Carrier rooftop HVAC units, which are nearing the end of their life expectancy. New units will also improve comfort conditions and system energy efficiency. The units on the gyms will be replaced as part of the current gym roof replacement.	\$ 1,400,000	III
19 Provide supplemental air conditioning in the MS guidance area, which reportedly overheats, in spite of the current air conditioning system.	\$ 100,000	III
20 Replace the server closet A/C units as discussed, and provide high temperature alarms. Assume six units total.	\$ 270,000	III
21 Upgrade the entire Automatic Temperature Control (ATC) system which currently consists of an older JCI Metasys panel as well as original pneumatic controls. Provide a new full DDC System to improve overall comfort levels, as well as eliminating the resultant over and under heating conditions. Provide new temperature sensors with a three degree adjustment band and an override feature.	\$ 750,000	III
22 Provide Rawal Valves and new humidity controls for the HS Cafeteria rooftop unit to reduce the humidity in the space.	\$ 25,000	III
23 Install a control valve on the fin tube radiation in HS science room 104, to prevent the space from overheating.	\$ 5,000	III
24 Repair the air conditioning in the unit ventilator in room 123 to restore to operable condition.	\$ 20,000	III
25 Interlock the MS kitchen hood exhaust system with the cafeteria makeup air unit to prevent the exhaust hood from running 24/7.	\$ 10,000	III
26 Provide air conditioning in the HS and MS locker rooms as discussed.	\$ 600,000	IV
HVAC TOTAL	\$ 4,710,000	

Recommended Items

PLUMBING ITEMS	Cost	BBS Priority
1 Provide air gaps on all kitchen equipment drains as required by code.	\$ 20,000	IA
2 Perform maintenance on the acid neutralizing pit in the HS electrical room adjacent to room 110, to reduce odors and restore system to proper operation.	\$ 20,000	IA
3 Repair or replace the non-functional urinal in the men's room adjacent to the HS nurses office.	\$ 6,000	IA
4 Repair or replace the non-functional hallway water cooler adjacent to room 121.	\$ 6,000	IA
5 Repair or replace the non-functional drinking fountain adjacent to room 230.	\$ 6,000	IA
6 Repair or provide a new domestic hot water recirculation system and pumps for the Middle School to allow for hot water in the building in a timely manner as required by code.	\$ 100,000	IA
7 Provide a natural gas leak detection system in the boiler room area.	\$ 50,000	IB
8 Provide a permanently piped tempered emergency eyewash station in the dark room at the HS to replace the existing bottle type eyewash stations.	\$ 5,000	IB
9 Repair the reported leak in the MS 7th grade faculty bathroom.	\$ 10,000	II
10 Provide a natural gas stove in the MS Home and Careers room as discussed, complete with piping and an emergency shutoff system.	\$ 25,000	II
11 Replace the trough type sinks and faucets in the student bathrooms to improve hand washing as discussed. Assume ten locations.	\$ 100,000	III
12 Provide trap seals on floor drains that continuously dry out as discussed.	\$ 10,000	III
13 Provide a sink in the Middle School main office area as requested.	\$ 15,000	III

Recommended Items

PLUMBING ITEMS (CONTINUED)	Cost	BBS Priority
14 Replace nine waterless urinals with new low flow urinals.	\$ 54,000	III
15 Replace ten exterior hose faucets to restore to proper operation.	\$ 50,000	III
16 Provide twelve additional plumbing isolation valves throughout the building to provide for partial shutdowns, in the event of an emergency or maintenance issue.	\$ 175,000	III
17 Scrape and paint all rusted rooftop gas piping to restore to proper condition.	\$ 25,000	IV
PLUMBING TOTAL	\$ 677,000	
ELECTRIC ITEMS	Cost	BBS Priority
1 The HS has a combination off bell/strobe units as well as horn/stroke units, which is not allowed by code. Convert all existing bell/strobe units over to the more prevalent horn/strobe unit configuration. Assume 50 units,	\$ 75,000	IA
2 Provide blank covers in the electrical panel adjacent to the dark room to restrict access to the panel interior.	\$ 2,500	IA
3 Replace the missing light fixture lens in the dark room to restrict unauthorized access to the lamps.	\$ 500	IA
4 Remove all storage from in front of the main electrical switchgear as required by code.	N/A	IA
5 Provide exit and emergency lighting in the HS chorus room, as it is classified as an area of assembly, and requires same.	\$ 10,000	IA
6 Provide exit lighting, emergency lighting, horn/strobe units and fire alarm pull stations in the library courtyard.	\$ 18,000	IA
7 Firestop all penetrations in the MS second floor electrical room as required by code.	\$ 5,000	IA

Recommended Items

ELECTRIC ITEMS (CONTINUED)	Cost	BBS Priority
8 Provide additional CCTV security cameras as discussed to provide for proper coverage of the premises, and upgrade remaining older cameras. Assume 75 additional camera locations.	\$ 500,000	II
9 Provide magnetic hold open devices on large group spaces including the theatre, libraries, band/chorus rooms, gymnasiums, student cafeterias, etc., to allow for lockdowns as discussed. Assume 20 doors total.	\$ 120,000	II
10 Repair the card access control system and provide additional access points as discussed. Also, allow for lockdown of the building from the main office as was available at one time.	\$ 100,000	II
11 Replace the classroom telephone handset cords with steel cable type cords to limit damage and static on lines.	\$ 75,000	II
12 Provide a hardwired fiber optic line for CCTV cameras, license plate reader(s) and a data connection at the guard booth as discussed.	\$ 30,000	II
13 Upgrade the Aiphones to allow them to ring in the main offices as originally intended.	\$ 15,000	II
14 Run a fiber optic line out to the fields to allow for hardwired communication.	\$ 40,000	II
15 Provide card access points at every classroom door location for better access control and lockdown.	\$ 600,000	II
16 Reactivate the door ajar system and extend to all keyed exterior doors.	\$ 150,000	II
17 Provide video monitors in the front entry vestibule to show select other cameras to act as a deterrent.	\$ 10,000	II
18 Provide a one button lockdown system in select locations, through a proximity card system.	\$ 80,000	II
19 Replace the missing occupancy sensor guard in the MS gymnasium.	N/A	II

Recommended Items

ELECTRIC ITEMS (CONTINUED)	Cost	BBS Priority
20 Add four additional exterior security lighting poles on the far side of the front parking lot for adequate illumination levels.	\$ 100,000	II
21 Provide magnetic hold open devices on all classroom doors to allow the doors to close automatically in the event of an emergency. Install smoke detection in classrooms as necessary.	\$ 650,000	II
22 Provide hardwired carbon monoxide detectors tied into the building's fire alarm system to replace the current battery and line voltage detectors.	\$ 25,000	II
23 Replace electric to light poles as per the previous report.	\$ 50,000	II
24 Replace electrical feeders to the chiller as per the previous report.	\$ 100,000	II
25 Provide dedicated electrical power to IT closets as discussed.	\$ 80,000	II
26 Replace all T-8 fluorescent lighting with new LED lighting with daylight harvesting, new occupancy sensors and dimming capability. The District could consider an Energy Performance Contract (EPC) to complete this work, as well as other energy saving measures, at no cost to the District, as the work pays for itself out of the energy savings.	\$ 950,000	III
27 Add electric hand dryers to student bathrooms as discussed, to provide for a more hygienic, environmentally friendly installation. Assume 10 locations.	\$ 75,000	III
28 Add four post solid racks in all data closets as discussed.	\$ 60,000	III
29 Provide surge suppression at the main switchgear location to eliminate power surges.	\$ 30,000	III
30 Add a video board to the HS gymnasium as requested.	\$ 25,000	III
31 Replace the older Sound systems in the HS and MS gyms with new systems.	\$ 125,000	III

Recommended Items

ELECTRIC ITEMS (CONTINUED)	Cost	BBS Priority
32 Upgrade the auditorium sound and theatrical lighting systems to improve system performance.	\$ 500,000	III
33 Repair or replace the dampers on the solar tubes in room 134 to restore to proper operation.	\$ 20,000	III
34 Protect all fiber optic cabling run above hallway ceilings, which was not run in conduit.	\$ 100,000	IV
35 Remove all abandoned wiring throughout the ceilings of the building as discussed.	\$ 200,000	V
36 Provide a lightening protection system on the roof of the building to protect from a major lightning strike.	\$ 300,000	V
ELECTRICAL TOTAL	\$ 5,221,000	
<u>HIGH SCHOOL/MIDDLE SCHOOL TOTALS</u>		
ARCHITECTURAL TOTAL	\$ 33,097,393	
HVAC TOTAL	\$ 4,710,000	
PLUMBING TOTAL	\$ 677,000	
ELECTRICAL TOTAL	\$ 5,221,000	
BUILDING TOTAL	\$ 43,705,393	

Briarcliff Manor UFSD							Totals
Todd Elementary School							\$19,493,285
Middle/High School							\$43,705,393
TOTAL FACILITIES STUDY COSTS							\$63,198,678
<u>PRIORITY SUB-TOTALS</u>							
<u>SCHOOL</u>							<u>TOTAL</u>
	IA	IB	II	III	IV	V	
Todd ES	\$1,415,925	\$212,450	\$5,328,900	\$7,692,860	\$4,342,750	\$500,400	\$19,493,285
Middle/HS	\$2,691,480	\$193,600	\$11,615,850	\$22,371,913	\$6,134,250	\$698,300	\$43,705,393
TOTAL (By priority)	\$4,107,405	\$406,050	\$16,944,750	\$30,064,773	\$10,477,000	\$1,198,700	\$63,198,678