



HABEEB & ASSOCIATES  
ARCHITECTS

# FACILITY CONDITION ASSESSMENT

## BOYLSTON ELEMENTARY SCHOOL

200 Sewall Street, Boylston, MA 01505



150 LONGWATER DR  
NORWELL MA  
02061-1647  
781-871-9804

100 GROVE ST  
SUITE 303  
WORCESTER MA  
01605-2630  
774-206-3360

habeebarch.com

FINAL REPORT: August 14, 2023  
H&A JN 2102.03

D E D I C A T E D   T O   E X C E E D I N G   O U R   C L I E N T S '   E X P E C T A T I O N S



<b>1) Acknowledgments .....</b>	<b>3</b>
<b>2) Introduction .....</b>	<b>5</b>
<b>3) Executive Summary .....</b>	<b>9</b>
<b>4) How to Read This Assessment .....</b>	<b>13</b>
<b>5) Assessment .....</b>	<b>17</b>
<b>6) Existing Conditions Photographs .....</b>	<b>31</b>
<b>7) Appendices .....</b>	<b>35</b>
Appendix A: H&A Drawings .....	A-1 – A-2

---

PAGE INTENTIONALLY LEFT BLANK



## **Berlin-Boylston Regional School District**

Director of Finance and Operations

Nancy Konisky

Director of Facilities

Daniel Ayala

## **Architectural Consultant**

### **Habeeb & Associates Architects**

150 Longwater Drive, Norwell, MA 02061  
781-871-9804

#### **Senior Project Manager**

Kevin M. Provencher, AIA, LEED AP BD+C

[kprovencher@habeebarch.com](mailto:kprovencher@habeebarch.com)

#### **Job Captain**

James Pongsa, Assoc. AIA

[jpongsa@habeebarch.com](mailto:jpongsa@habeebarch.com)

### **Habeeb & Associates Architects**

100 Grove Street, Suite 303, Worcester, MA 01605  
781-871-9804

#### **Job Captain**

Hilary McDonald, AIA

[hmcDonald@habeebarch.com](mailto:hmcDonald@habeebarch.com)

---

PAGE INTENTIONALLY LEFT BLANK

**Description of scope:**

Habeeb & Associates Architects (H&A) prepared this Facility Condition Assessment of the Boylston Elementary School for the Berlin-Boylston Regional School District.

**Purpose of report:**

The Facility Condition Assessment was developed to address the physical structure and mechanical, electrical, plumbing, fire protection, sewage disposal, security, and information technology systems of the Boylston Elementary School in Boylston, MA. This assessment identifies the deficiencies of the school, including both maintenance repairs and regulatory compliance, with associated costs. The deficiencies are prioritized into immediate, short and long-term needs that will allow the school district to prepare a capital plan to address the annual operating costs to protect the investment in this facility.

**Methodology:**

The Assessment is based upon visual inspection, review of available documents, and interviews with Facilities personnel. H&A conducted an interview with Daniel Ayala, Director of Facilities on April 19, 2023, followed by a tour of the facility. Additionally, the H&A team was provided with drawings prepared by Drummey Rosane Anderson, Inc. describing the building construction completed in 1999. Existing deficiencies and concerns were observed and noted by the design team.

The tables and photographs included in the Facility Condition Assessment detail the recommendations and associated costs for addressing the deficiencies identified. Estimated costs for projects to be completed in future years contain escalation factors to account for inflation.



### Conclusions:

The deficiencies observed are related to usage and age of the building. Improvements are recommended to provide an environment suitable for 21st Century learning practices. It is recommended that this Assessment be used with consideration of the Facilities goals as defined by the Berlin-Boylston Regional School District, including:

- Optimize the classroom learning environment.
- Enhance safety and security.
- Decrease life cycle costs.
- Improve ongoing operations and maintenance.
- Replace obsolete building components and systems.
- Reduce energy costs.



**BUILDING DATA****BOYLSTON ELEMENTARY SCHOOL**

GENERAL INFORMATION:	
Building:	Boylston Elementary School
Address:	200 Sewall Street, Boylston, MA 01505
Director of Finance and Operations:	Nancy Konisky
Director of Facilities:	Daniel Ayala
CODE CLASSIFICATION:	
Occupancy:	Educational
Construction Type:	IIB
BUILDING HISTORY:	
Original Building:	1955
Addition:	1999
SITE / BUILDING AREA:	
Site Area:	17.3 Acres
Total Building Area:	61,413 GSF
Lower Level Area:	Not Applicable
First Floor Area:	61,413 GSF
Second Floor Area:	Not Applicable
SITE COMPONENTS:	

Parking/Driveways:	Bituminous paving - circular drop off area at main entry, driveway and parking areas to the south and west of the gymnasium. Paved roadway from Sewall Street. One-way drive aisle wraps around entire building	Storm Drainage:	Surface drainage to catch basins within paved areas dispensing to head wall culvert and swale in grassy area east of the building. Roof edge gutter system on metal roof edge and internal roof drains at flat roofs collect underground and dispense at east headwall and swale.
Walkways:	Concrete at main entrance, around circular drop-off, extending from side and rear parking lots to gymnasiums entrances, and at rear building entrances. Bituminous walkways leading from one-way drive aisle to entrances on north side of building.	Play Areas:	Wood chip play area with play structures. Paved basketball courts and play area. Playing fields north of the school.
Lighting:	Pole lighting at driveway from Sewall Street, circular drop-off, and along drive aisle east and south of the building. Lighting mounted on the building and at building entrances.		



## INTRODUCTION

### BUILDING DATA (continued)

### BOYLSTON ELEMENTARY SCHOOL

ARCHITECTURAL COMPONENTS:		MECHANICAL / ELECTRICAL COMPONENTS:	
Foundation:	Reinforced concrete.	Water Service:	4" water service w/ backflow preventer. Municipal water supply.
Super Structure:	Structural steel and reinforced CMU block.	Domestic Hot Water:	Single gas-fired domestic water heater.
Roof Structure:	Sloped & Flat Roof Areas: 3" or 1-1/2" galvanized roof decking on steel beam framing or open web K joists. Open web steel LH joists at gymnasium.	Sanitary System:	Onsite septic w/ sand filtration, effluent pump station w/ force main to recirculating sand filter.
Exterior Walls:	Insulated 6" stud wall, gypsum wall board finish, cavity w/ either brick or CMU masonry veneer. 8" CMU, 2" insulation, cavity w/ either brick or CMU masonry veneer at lower walls. 8" CMU w/ insulated metal panel on "Zee" channel attachments at gymnasium upper walls.	Fire Suppression:	Building is fully-sprinklered with wet fire sprinkler system. 6" sprinkler service w/ double check valve and standpipes. (3) hydrants on north and west side exterior.
Roofing:	Low-slope EPDM membrane w/ pre-finished metal roof edge, downspouts, and gutters. Standing-seam metal roof over Library.	Heating/ Cooling Systems:	Two dual fuel gas-fired hot water boilers. Unit ventilators (no A/C) at classrooms. (3) Packaged rooftop air handlers w/ DX cooling at Administration, Media Center and Computer Lab. (2) Packaged rooftop heating and ventilating units at Gymnasium (1), and Music and Kitchen (1). Unit heaters in multiple locations.
Window Systems:	Aluminum frames, thermally broken, w/ double pane glazing and interior screen system.		
Exterior Doors	Insulated aluminum entry and egress doors, insulated glazing, and aluminum frames		
Interior Doors	Wood or hollow metal doors w/ painted hollow metal frames and side lites.	Electric Service:	800 Amp electrical service. 75 kW gas-fired emergency generator. Typical T8 lighting with LED upgrades in areas. Emergency egress lighting and exit signs on life safety panel. Monitored addressable fire alarm system. Monitored infrared motion detector security system.
Stairs:	Cast-in-place concrete w/ wood treads, risers and nosings at stage. Rubber treads, risers and nosings in corridor stair.		
Interior Walls:	Metal stud walls with gypsum wall board finish or brick masonry veneer, smooth-face structural CMU.		
Wall Finishes:	Paint over gypsum wall board and brick masonry veneer and CMU; Glazed block and ground face CMU in corridors. Ceramic tile in restrooms.		
Floor Finishes	VCT throughout corridors and classrooms. Carpet in Administration wing and Library. Ceramic tile in restrooms. Rubber sports flooring in gymnasium. Epoxy flooring in Kitchen. Wood stage flooring.		
Ceiling Finishes:	Predominantly suspended acoustic tile in corridors, classrooms, toilet rooms and offices. Areas of painted gypsum wall board ceilings at corridor transitions, Library and around skylights. Exposed deck in gym and entry corridor areas.		



This Summary categorizes the recommended capital improvements for the Boylston Elementary School, including the school building and site elements, based on staff interviews, observations, and review of available drawings. The building consists of 61,413 square feet on a single level. The original 1955 building was 32,560 square feet, with a 28,853 square foot addition completed in 1999.

Work Items identified by this Assessment are assigned a Priority category based on urgency, ongoing maintenance, life cycle costs and other concerns that compromise the teaching environment. In summary, Priorities are categorized by the following descriptions:

**Priority 1** – Critical

**Priority 2** – Necessary – Not Yet Critical

**Priority 3** – Does Not Meet Current Codes for New Construction but “Grandfathered”

Refer to Section 4, How to Read This Assessment for detailed Priority descriptions and calculation methodology.

The Boylston Elementary School has been in operation for sixty-eight years, has been well maintained and is in generally good condition. However due to the building's age, there are critical work items that are urgently needed to maintain the safety and usefulness of the building. Many of the building's exterior systems and finishes, including the EPDM roof system and portions of the masonry veneer wall systems, have deteriorated due to age and exposure and require either replacement or repair. The standing seam roofs above the library and kindergarten classrooms are severely corroded and failing. Roofing replacement is urgently needed in these areas. Additionally, water has been infiltrating through the flooring in the corridor outside of Boys Restroom 1072. The cause of the infiltration is unknown and further investigation to locate the water source is urgently recommended. Select mechanical equipment - such as the rooftop turbine ventilators, hot water circulation pump valves, a non-operable rooftop exhaust fan, and a unit heater in the sprinkler room – have all deteriorated to the point of needing urgent repair or replacement. Additionally, the building currently requires a new server and new Smart SLP40wi projectors.

Priority 2 addresses other, less critical Work Items that are not immediately necessary, but will continue to deteriorate without maintenance, repair, or replacement, such as bituminous parking lots, classroom casework, interior carpets, and toilet compartments. Replacement of critical building equipment is recommended for building elements approaching the end of their life cycle, including



## EXECUTIVE SUMMARY

---

rooftop air handlers and exhaust fans, classroom unit ventilators, the kitchen make-up air unit, hot water boilers and kitchen equipment. To meet current codes and operational standards, all interior fluorescent lighting fixtures should be upgraded to LED, and new wireless access points and Epson projectors should be installed. Additionally, Priority 2 Work Items address finishes that are deteriorated and require repair or replacement to maintain appearance standards. Interior peeling hollow metal doors and frames, cracked vinyl floor tile, and stained ceiling tiles were observed in multiple locations throughout the facility, and should be repaired or replaced.

Priority 3 Work Items do not meet current codes for new construction. No action is required at this time, however if a substantial renovation or a substantial building addition is performed in the future, building codes may require this corrective work in addition to the work planned. Some example Priority 3 Work Items include exterior and interior handrail and guardrail modifications at ramps, modification of staff restrooms for required accessible clearances, replacing non-accessible drinking fountains with accessible bottle-filling stations and modification of the reception desk to allow for accessible approach. Priority 3 Work Items are also recommended to improve the usefulness of the facility and optimize operations, such as updating the pneumatic building control system to a fully integrated building management system, and upgrading the existing data cabling, phone and camera systems.

The Assessment indicates in current dollars, that over \$11.8 million dollars is estimated to be required to address the entirety of facility deficiencies. Of this total, over \$6.2 million is considered Priority 1 needs, approximately \$4.45 million is considered Priority 2 needs, and over \$1.1 million for Priority 3 needs. When reviewing the phased cost of the scope items deferred to five and ten years out, a total of over \$14 million dollars is needed to address the facility deficiencies. As inflation affects these costs, and mandated wage rates and building materials costs continue to increase, delaying the repairs is expected to increase the costs to complete these repairs.

It should be noted that deferring maintenance and repairs of the identified deficiencies will increase these costs, as additional deterioration of the façade and site occur, and the building systems continue to age. There is potential for additional damages to the building finishes through moisture infiltration and additional costs for repairs to outdated equipment.





Category	Priority 1	Priority 2	Priority 3	Total
<b>Building Summary</b>		<b>Boylston Elementary School</b>		
<b>1. SITE</b>	11,765	57,200	1,300	70,265
<b>2. BUILDING ENVELOPE</b>	6,167,434	0	0	6,167,434
<b>3. BUILDING INTERIORS</b>	13,000	707,551	49,855	770,406
<b>4. MECHANICAL</b>	8,294	2,336,134	838,929	3,183,357
<b>5. ELECTRICAL, DATA, SECURITY, COMMUNICATION, AV SYSTEMS</b>	34,450	1,350,174	236,450	1,621,074
<b><sup>1</sup>Total:</b>	6,234,943	4,451,059	1,126,534	11,812,536
<b><sup>1</sup>Total Inflated @ 6% for Priority 2, 4% for Priorities 3-4 and Compounded Annually</b>	7,005,582	5,415,394	1,667,546	14,088,521

<sup>1</sup>Totals include Soft Costs (30%): Contingency, Administration and A/E Fees.

---

PAGE INTENTIONALLY LEFT BLANK

## EXECUTIVE SUMMARY

The *Executive Summary* recaps the *Total Inflated* row from the bottom of the Building Summary sheets. These costs are then totaled at the bottom to indicate a combined proposed capital expenditure per scope. This is intended to make it easier for the reader to review and compare the overall costs for each of the scopes.

## SUMMARY

The *Summary* recaps the *Total* row from the bottom of each category for the subject building, separated into scopes. This is intended to make it easier for the reader to review and compare the overall costs for each of the categories together with the scopes for the subject building.

## FACILITY CONDITION ASSESSMENT

The following is a list and brief description of the column and row headings of the Facility Condition Assessment sheets.

### Description

The *Descriptions* are the work items identified during our inspection. They usually consist of the building component and its deficiencies; and a recommendation for correcting the deficiency.

### Quantity

The number of items: (For example, if the work item is for “unit ventilators replacement” the building in question may have a *Quantity* of 60 unit ventilators to be replaced).

### Unit

The *Units* are identified by a two-letter code. The unit codes are as follows:

- SF – Square Foot
- SY – Square Yard
- LF – Linear Foot
- LS – Lump Sum
- EA – Each

### Unit Cost

The *Unit Cost* is the cost of one *Quantity* of a work item. Unit costs are preliminary construction cost estimates only and are generally based on the following references: *Means Square Foot Cost Data*; *Means Construction Costs Data*; in house cost data; professional experience; and information provided by various contractors and suppliers.

## HOW TO READ THIS ASSESSMENT

---

### Total

The *Total* column is determined by the following equation:  $\text{QUANTITY} \times \text{UNIT} = \text{TOTAL}$ .

### Total with Soft Costs

This assessment provides preliminary construction costs associated with *Soft Costs*. *Soft Costs* generally include a contingency, (typically 10% to 15%) for unforeseen conditions; indirect administrative expenses such as legal costs, printing and advertising (typically 5% to 10%); and architectural and engineering costs (typically 10% to 15%) for a total soft cost estimate. We used a *Soft Cost* of 30% of the *total* cost in this assessment. The *Total with Soft Costs* is determined by the following equation:  $\text{TOTAL} \times 1.30 = \text{TOTAL W/ SOFT COST}$ .

Some projects may require higher or lower *Soft Costs* depending on the type and extent of project selected. Work items listed are provided as a guide to develop repair and renovation projects with preliminary construction cost estimates. The actual scope of a project could include a combination of work items, i.e. new ceilings and new lighting. Some other projects may require finishes, e.g. painting, which may not necessarily be broken out for that project.

### Priority 1 – Critical

- Conditions in this category require immediate action, cause a safety hazard, or require immediate correction to stop further deterioration.

### Priority 2 – Necessary – Not Yet Critical

- Conditions in this category require attention to deter further deterioration or failure.
- Conditions in this category will make an improvement to the existing building systems and existing conditions.
- Conditions in this category are finishes that have deteriorated and require maintenance or repair to maintain aesthetic standards.

### Priority 3 – Does Not Meet Current Codes for New Construction but “Grandfathered”

- Conditions in this category do not conform to existing codes but are “Grandfathered” in their current condition. No action required at this time, but should work be needed on them, required corrections will need to be made to comply with current code.
- Conditions in this category are recommended to improve the usefulness of the facility and optimize operations

**Totals Column** (work items)

The *Totals* column is the sum of Priority columns 1, 2, and 3, for each work item. The *Totals* column also shares the sum of the *Total* row and *Total Inflated* rows at the lower right corner.

**Total Row** (scopes)

The *Total* row is the sum of the Priority columns 1, 2, 3 and *Totals* column, for each category. The *Total* row and *Total Inflated* rows are totaled at the lower right corner.

**Total Inflated Row**

The *Total Inflated* row is the sum of Priority columns 1, 2, and 3 *Totals* column for each category multiplied by a coefficient to determine the inflated cost and then compounded annually.

*Priority 1* is shown with an inflation factor of 6% for work to be performed within a 2 yr period.

*Priority 2* is shown with an inflation factor of 4% for work to be performed within a 5 yr period.

*Priority 3* is shown with an inflation factor of 4% for work to be performed within a 10 yr period.

The *Total* row and *Total Inflated* rows are totaled at the lower right corner.

The Assessment is broken into five categories with specific evaluation concerns in each:

**1. Site**

Storm Drainage  
Drives and Walks  
Landscaping  
Site Improvements  
Play Areas  
Sewage Disposal System  
Accessible Parking and Entrance Approach

**2. Building Envelope**

Roofs  
Exterior Walls  
Windows  
Exterior Entrances and Doors  
Thermal Insulation  
Accessible Egress and Ingress  
Building Structural System

**3. Building Interiors**

Floor Finishes  
Wall Finishes  
Ceiling Finishes  
Interior Doors and Corridors  
Code Compliance Issues  
Accessibility for the Disabled

**4. Mechanical**

Domestic Hot Water Heaters  
Cold Water Services  
Gas Services  
Piping for Plumbing Systems  
Plumbing Fixtures  
Heating System  
Cooling System  
Piping for Heating Systems  
Temperature Controls  
Ventilation

**5. Electrical, Data, Security, Communication, AV Systems**

Main Services and Distribution  
Convenience Power  
Fire Alarm Systems  
Lighting Systems  
Emergency Lighting Systems  
Site Lighting  
Video Surveillance  
Access Control

BMS Server  
Wireless Access Points  
Switches  
Network Wiring  
Telephone  
Clock System  
Projectors

---

PAGE INTENTIONALLY LEFT BLANK

Category	Priority 1	Priority 2	Priority 3	Total
<b>Building Summary</b>		<b>Boylston Elementary School</b>		
<b>1. SITE</b>	11,765	57,200	1,300	70,265
<b>2. BUILDING ENVELOPE</b>	6,167,434	0	0	6,167,434
<b>3. BUILDING INTERIORS</b>	13,000	707,551	49,855	770,406
<b>4. MECHANICAL</b>	8,294	2,336,134	838,929	3,183,357
<b>5. ELECTRICAL, DATA, SECURITY, COMMUNICATION, AV SYSTEMS</b>	34,450	1,350,174	236,450	1,621,074
<b><sup>1</sup>Total:</b>	6,234,943	4,451,059	1,126,534	11,812,536
<b>Total Inflated @ 6% for Priority 1, 4% for Priorities 2-3 and Compounded Annually</b>	7,005,582	5,415,394	1,667,546	14,088,521

<sup>1</sup>Totals include Soft Costs (30%): Contingency, Administration and A/E Fees.

## ASSESSMENT

Work Item Description	Qty	Unit	Unit Cost	Total	<sup>1</sup> Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
<b>1. SITE</b>					<b>BOYLSTON ELEMENTARY SCHOOL</b>				
<b>1.1 Drives and Parking Lots:</b> Bituminous paving shows some minimal cracking and aging. Patch and sealcoat bituminous paving.	100	SY	40.00	4,000	5,200		5,200		5,200
<b>1.2 Bituminous Curbing:</b> Bituminous curbing is damaged/missing in some areas. Replace bituminous curbing at drives and parking lot.	330	LF	20.00	6,600	8,580	8,580			8,580
<b>1.3 Granite Curbing:</b> Some granite curbs at the parking lot at the corners are heavily damaged. Replace with new granite curbs.	40	LF	30.00	1,200	1,560	1,560			1,560
<b>1.4 Concrete Ramp and Sidewalks:</b> Concrete sidewalks have small areas of deterioration. Patch and repair to match existing.	5	SY	50.00	250	325	325			325
<b>1.5 Storm Drainage:</b> Some storm drains show signs of settling. Reset existing storm drains.	2	EA	10,000.00	20,000	26,000		26,000		26,000
<b>1.6 Exterior Handrails:</b> Exterior handrail extension does not meet the ADA code. Extend the handrail extension 12" beyond top of slope.	1	LS	1,000.00	1,000	1,300			1,300	1,300
<b>1.7 Timber Guardrail:</b> Two sections on the timber guardrail were damaged. Replace these two sections with new.	1	LS	1,000.00	1,000	1,300	1,300			1,300
<b>1.8 Effluent Pump Station:</b> Pumps are approaching end of useful service life. Replace pumps with new equipment.	2	EA	10,000.00	20,000	26,000		26,000		26,000
<b>Total</b>						11,765	57,200	1,300	70,265
<b>Total Inflated @ 6% for Priority 1, 4% for Priorities 2-3 and Compounded Annually</b>						13,219	69,593	1,924	84,736

<sup>1</sup>Total includes Soft Costs (30%): Contingency, Administration and A/E Fees.



Work Item Description	Qty	Unit	Unit Cost	Total	<sup>1</sup> Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
<b>2. BUILDING ENVELOPE</b>					<b>BOYLSTON ELEMENTARY SCHOOL</b>				
<b>2.1 EPDM Roofs:</b> The existing EPDM roofing membrane has been leaking and is at the end of its life expectancy. Replace with new PVC roofing system.	56,000	SF	75.00	4,200,000	5,460,000	5,460,000			5,460,000
<b>2.2 Roof Drains:</b> Some roof drains will need to be replaced along with the new roof system.	5	EA	2,500.00	12,500	16,250	16,250			16,250
<b>2.3 Metal Roof System:</b> Existing metal standing seam roofing and painted finish is failing and rusting in many areas. Replace with new roofing system.	4,200	SF	90.00	378,000	491,400	491,400			491,400
<b>2.4 Roof Snow Guards:</b> Replace the snow guard along with the new roof system.	130	LF	25.00	3,250	4,225	4,225			4,225
<b>2.5 Downspout and splash block:</b> Splash blocks are missing at the downspout. Install new splash blocks.	7	EA	50.00	350	455	455			455
<b>2.6 Damaged Masonry Walls:</b> Replace cracked and spalling bricks.	30	SF	630.00	18,900	24,570	24,570			24,570
<b>2.7 Repoint brick masonry mortar joints:</b> Repoint brick masonry walls at the ramp and various parts of the building.	144	SF	45.00	6,480	8,424	8,424			8,424
<b>2.8 Staining and Efflorescence:</b> Power wash and clean at various locations of ground face block and brick veneer masonry walls.	12,000	SF	7.00	84,000	109,200	109,200			109,200
<b>2.9 Exterior Wood Doors:</b> Replace old exterior wood doors at the kitchen with new FRP door and frame.	1	EA	1,000.00	1,000	1,300	1,300			1,300
<b>2.10 Exterior Wall Sealant Joints:</b> Remove dry and cracked sealant at masonry control joints and replace with new backer rod and sealant.	1,500	LF	15.00	22,500	29,250	29,250			29,250

## ASSESSMENT

Work Item Description	Qty	Unit	Unit Cost	Total	<sup>1</sup> Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
<b>2. BUILDING ENVELOPE</b>					<b>BOYLSTON ELEMENTARY SCHOOL</b>				
<b>2.11 Roof Canopy Soffit:</b> Roof Canopy Soffit by Exterior Door 10 is rotting and falling apart. Replace with new plywood soffit, painted.	1	LS	500.00	600	780	780			780
<b>2.12 Window Screen:</b> Replace broken window screens at double hung windows.	5	EA	100.00	500	650	650			650
<b>2.13 Bird Nest Removal:</b> Remove and clean bird nests at various at building connectors.	1	LS	500.00	500	650	650			650
<b>2.14 Active Water Infiltration on Ground Face Block at the Gym:</b> Further investigation will be required to determine the source of water infiltration. Investigate and prepare recommendations.	1	LS	10,000.00	10,000	13,000	13,000			13,000
<b>2.15 Roof Hatch Guardrail:</b> Add safety guardrail at roof hatch.	1	LS	2,500.00	2,500	3,250	3,250			3,250
<b>2.16 Roof Edge Guardrail:</b> Add portable safety guardrail at roof edge near make-up air unit.	1	LS	3,100.00	3,100	4,030	4,030			4,030
<b>Total</b>						6,167,434	0	0	6,167,434
<b>Total Inflated @ 6% for Priority 1, 4% for Priorities 2-3 and Compounded Annually</b>						6,929,729	0	0	6,929,729

<sup>1</sup>Total includes Soft Costs (30%): Contingency, Administration and A/E Fees.

Work Item Description	Qty	Unit	Unit Cost	Total	<sup>1</sup> Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
<b>3. BUILDING INTERIORS</b>					<b>BOYLSTON ELEMENTARY SCHOOL</b>				
<b>3.1 Ceiling Finishes:</b> Library - GWB Ceiling in Library is damaged and peeling from water damage. Patch, repair and repaint damaged ceiling areas.	40	SF	30.00	1,200	1,560		1,560		1,560
<b>3.2 Ceiling Finishes:</b> Remove and replace damaged/ stained ACT ceiling tiles in various locations throughout building.	400	SF	10.00	4,000	5,200		5,200		5,200
<b>3.3 Wall Finishes:</b> Grout is failing or missing in areas of tiled restrooms Boys 1072 and Girls 1073. Re-grout tile in failing areas.	30	LF	20.00	600	780		780		780
<b>3.4 Floor Finishes:</b> Water is infiltrating through the floor and has deteriorated the VCT flooring in the corridor outside of Boys Restroom 1072. It is recommended to perform further investigation through the corridor wall in order to locate the water source and thereby provide a solution to future infiltration.	1	LS	10,000.00	10,000	13,000	13,000			13,000
<b>3.5 Floor Finishes:</b> Carpet - Carpet is stained, damaged and past its expected useful life. Replace existing carpet with new in all locations throughout building.	5,560	SF	15.00	83,400	108,420		108,420		108,420
<b>3.6 Floor Finishes:</b> Replace damaged or cracking VCT tiles in various areas throughout building.	3,500	SF	12.00	42,000	54,600		54,600		54,600
<b>3.7 Floor Finishes:</b> Kitchen - Existing epoxy kitchen flooring is cracked and stained. Replace the epoxy floor with new.	1,250	SF	16.00	20,000	26,000		26,000		26,000
<b>3.8 Floor Finishes:</b> Entry Vestibule - Recessed walk-off mats in entry vestibules are damaged and torn. Replace existing recessed walk-off mats with new.	160	SF	15.00	2,400	3,120		3,120		3,120

## ASSESSMENT

Work Item Description	Qty	Unit	Unit Cost	Total	<sup>1</sup> Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
<b>3. BUILDING INTERIORS</b>					<b>BOYLSTON ELEMENTARY SCHOOL</b>				
<b>3.9 Stairs:</b> Rubber stair treads and risers are stained and worn. Remove and replace all existing rubber stair treads and risers.	40	SF	50.00	2,000	2,600		2,600		2,600
<b>3.10 Stairs:</b> Guardrails - Existing guardrails at interior ramp and stairs have excessive spacing between guard elements. Replace guardrails to provide proper spacing and comply with accessibility standards.	25	LF	250.00	6,250	8,125			8,125	8,125
<b>3.11 Stairs:</b> Handrails - Existing handrails at interior ramp and stairs do not have adequate extension at landings. Revise handrails to extend min. 12" parallel beyond top and bottom stairs and ramps to comply with accessibility standards.	6	EA	250.00	1,500	1,950			1,950	1,950
<b>3.12 Doors:</b> Interior hollow metal doors and frames are corroded and peeling. Repaint hollow metal doors and frames in various locations throughout building.	1,250	SF	15.00	18,750	24,375		24,375		24,375
<b>3.13 Casework:</b> Classrooms - classroom casework and associated hardware is damaged, worn, and in a state of disrepair. Replace all existing classroom casework and associated hardware with new.	580	LF	500.00	290,000	377,000		377,000		377,000
<b>3.14 Casework:</b> Cubbies - Open wood cubbies in corridor are worn and showing signs of age. Replace with new units.	120	LF	200.00	24,000	31,200		31,200		31,200
<b>3.15 Casework:</b> Library - Wood veneer Library circulation desk is peeling, dented and deteriorated. Remove and replace existing circulation desk with new.	1	LS	10,000.00	10,000	13,000		13,000		13,000

Work Item Description	Qty	Unit	Unit Cost	Total	<sup>1</sup> Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
<b>3. BUILDING INTERIORS</b>					<b>BOYLSTON ELEMENTARY SCHOOL</b>				
<b>3.16 Toilet Partitions</b> - Metal toilet and urinal partitions are rusting and showing signs of wear. Replace with new overhead-braced high-density polyethylene toilet and urinal partitions.	19	EA	2,000.00	38,000	49,400		49,400		49,400
<b>3.17 Gymnasium Bleachers:</b> Gymnasium bleachers are showing signs of wear. Refinish stationary wood bleachers in gymnasium.	360	SF	22.00	7,920	10,296		10,296		10,296
<b>3.18 ADA Sink Access - Casework:</b> Existing sinks do not provide adequate knee space for wheelchair approach per accessibility standards. Remove existing casework and counters in these locations and replace with new casework, providing 30" min. wide knee space access to sinks.	5	EA	2,000.00	10,000	13,000			13,000	13,000
<b>3.19 ADA Door Approach:</b> Teacher Restroom 107A - The sink in Teacher Restroom 107A impedes on the required accessible door approach clearance. Reconfigure Teacher Restroom 107A to provide min. 12" door approach clearance in compliance with accessibility standards.	1	LS	5,000.00	5,000	6,500			6,500	6,500
<b>3.20 ADA Grab Bars:</b> Teacher Restroom 107A and Kitchen Restroom: Provide grab bars in restrooms in compliance with accessibility standards.	2	EA	300.00	600	780			780	780
<b>3.21 ADA Service Counter:</b> Admin. Reception Desk - The existing reception desk does not provide a low service counter for wheel chair approach. Reconfigure reception desk to provide a low service counter in compliance with accessibility standards.	1	LS	2,000.00	2,000	2,600			2,600	2,600

## ASSESSMENT

Work Item Description	Qty	Unit	Unit Cost	Total	<sup>1</sup> Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
<b>3. BUILDING INTERIORS</b>					<b>BOYLSTON ELEMENTARY SCHOOL</b>				
<b>3.22 ADA Handrails at Stairs:</b> Stage - The stairs leading to the stage do not have handrails on the side adjacent to the gymnasium. Add guard and handrails at both stage stairs in compliance with accessibility standards.	12	LF	250.00	3,000	3,900			3,900	3,900
<b>3.23 ADA Nurse Office:</b> Nurse Office toilet room is not accessible. Reconfigure and renovate entire bathroom with accessible fixtures and new finishes.	1	LS	10,000.00	10,000	13,000			13,000	13,000
<b>Total</b>						13,000	707,551	49,855	770,406
<b>Total Inflated @ 6% for Priority 1, 4% for Priorities 2-3 and Compounded Annually</b>						14,607	860,844	73,798	949,248

<sup>1</sup>Total includes Soft Costs (30%): Contingency, Administration and A/E Fees.

Work Item Description	Qty	Unit	Unit Cost	Total	<sup>1</sup> Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
<b>4. MECHANICAL</b>					<b>BOYLSTON ELEMENTARY SCHOOL</b>				
<b>4.1 Turbine Ventilators:</b> Rooftop turbine ventilators are corroded. Replace with new units.	4	EA	250.00	1,000	1,300	1,300			1,300
<b>4.2 Circulation Pump Valves:</b> Hot water circulation pump valves are leaking and require replacement.	3	EA	400.00	1,200	1,560	1,560			1,560
<b>4.3 Pipe Insulation:</b> Insulation is damaged at boilers. Replace with new.	10	LF	4.00	40	52	52			52
<b>4.4 Pipe Insulation:</b> Domestic hot water piping is missing insulation at boiler room. Add to existing piping as required.	10	LF	4.00	40	52	52			52
<b>4.5 Classroom Unit Ventilators:</b> Units are approaching the end of useful life expectancy. Replace with new units.	41	EA	8,375.00	343,375	446,388		446,388		446,388
<b>4.6 RTU-1:</b> Packaged 2390 CFM rooftop air handling unit at Administration is beyond expected service life. Replace with new unit.	1	EA	9,675.00	9,675	12,578		12,578		12,578
<b>4.7 RTU-2:</b> Packaged 5000 CFM rooftop air handling unit at Media Center is beyond expected service life. Replace with new unit.	1	EA	22,800.00	22,800	29,640		29,640		29,640
<b>4.8 RTU-3:</b> Packaged 2000 CFM rooftop air handling unit at Computer Lab is beyond expected service life. Replace with new unit.	1	EA	11,175.00	11,175	14,528		14,528		14,528
<b>4.9 Kitchen Hood Exhaust EF-15:</b> Rooftop kitchen hood 6000 CFM exhaust fan is beyond expected useful service life. Exposed ductwork is corroded. Replace with new equipment.	1	LS	10,000.00	10,000	13,000		13,000		13,000

## ASSESSMENT

Work Item Description	Qty	Unit	Unit Cost	Total	<sup>1</sup> Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
<b>4. MECHANICAL</b>					<b>BOYLSTON ELEMENTARY SCHOOL</b>				
<b>4.10 Exhaust Fan EF-16:</b> Rooftop 240 CFM exhaust fan is non-operable. Replace existing exhaust fan with new unit.	1	EA	2,500.00	2,500	3,250	3,250			3,250
<b>4.11 Rooftop Unit HV-1:</b> 2280 CFM unit is beyond expected useful service life. Replace with new equipment.	1	LS	30,000.00	30,000	39,000		39,000		39,000
<b>4.12 Rooftop Unit HV-2:</b> 6000 CFM unit is beyond expected useful service life. Replace with new equipment.	1	LS	65,000.00	65,000	84,500		84,500		84,500
<b>4.13 Rooftop Unit HV-3:</b> 6000 CFM unit is beyond expected useful service life. Replace with new equipment.	1	LS	65,000.00	65,000	84,500		84,500		84,500
<b>4.14 Kitchen Make-Up Air Unit HV-4:</b> 7600 CFM unit is beyond expected useful service life. Duct insulation is failing. Replace with new equipment.	1	LS	90,000.00	90,000	117,000		117,000		117,000
<b>4.15 Boilers:</b> Hot water boilers are approaching end of useful service life. Replace with new equipment.	2	EA	400,000	800,000	1,040,000		1,040,000		1,040,000
<b>4.16 Unit Heater:</b> Unit heater in Sprinkler Room is blowing cold air. Replace unit with new.	1	EA	1,100.00	1,100	1,430	1,430			1,430
<b>4.17 Building Management System:</b> Pneumatic control system is obsolete technology. Replace with fully integrated BMS.	61,413	SF	10.00	614,130	798,369			798,369	798,369
<b>4.18 Drinking Fountains:</b> Replace non-accessible drinking fountains with accessible bottle filling stations.	3	EA	5,400.00	16,200	21,060			21,060	21,060
<b>4.19 Kitchen Equipment:</b> Kitchen equipment is near the end of expected useful service life. Replace with new equipment.	1	LS	350,000	350,000	455,000		455,000		455,000



Work Item Description	Qty	Unit	Unit Cost	Total	<sup>1</sup> Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
<b>4. MECHANICAL</b>					<b>BOYLSTON ELEMENTARY SCHOOL</b>				
<b>4.20 Maintenance Garage:</b> Garage does not include floor drain or gas/oil separator. Provide drain, separator and associated piping.	1	LS	15,000.00	15,000	19,500			19,500	19,500
<b>4.21 Gas Piping:</b> Paint exterior gas piping.	1	LS	500.00	500	650	650			650
<b>Total</b>						8,294	2,336,134	838,929	3,183,357
<b>Total Inflated @ 6% for Priority 1, 4% for Priorities 2-3 and Compounded Annually</b>						9,319	2,842,264	1,241,820	4,093,403

<sup>1</sup>Total includes Soft Costs (30%): Contingency, Administration and A/E Fees.

## ASSESSMENT

Work Item Description	Qty	Unit	Unit Cost	Total	<sup>1</sup> Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
<b>5. ELECTRICAL, DATA, SECURITY, COMMUNICATION, AV SYSTEMS</b>					<b>BOYLSTON ELEMENTARY SCHOOL</b>				
<b>5.1 Lighting Systems:</b> Replace fluorescent lighting with LED fixtures throughout.	61,413	SF	15.00	921,195	1,197,554		1,197,554		1,197,554
<b>5.2 Effluent Pump Station:</b> Extend standby power to pump station.	300	LF	50.00	15,000	19,500		19,500		19,500
<b>5.3 Alarm Monitoring:</b> Add Alarm Monitoring to Stand-By Generator.	1	LS	2,500.00	2,500	3,250		3,250		3,250
<b>5.4 Alarm Monitoring:</b> Add Alarm Monitoring to Septic Tank Float Alarm System.	1	LS	2,500.00	2,500	3,250		3,250		3,250
<b>5.5 Server:</b> Install new Dell PowerEdge R520.	1	EA	14,000.00	14,000	18,200	18,200			18,200
<b>5.6 Wireless Access Points:</b> Install new AeroHive AP250 Devices.	28	EA	800.00	22,400	29,120		29,120		29,120
<b>5.7 Switches:</b> Install new AeroHive SR2324P (POE).	2	EA	2,500.00	5,000	6,500		6,500		6,500
<b>5.8 Switches:</b> Install new HP 2910al-48G-POE+.	6	EA	2,500.00	15,000	19,500		19,500		19,500
<b>5.9 Network Wiring:</b> Upgrade existing data cabling.	61,423	SF	1.50	92,135	119,775			119,775	119,775
<b>5.10 Phone System:</b> Update system with Avaya IP Office 500 V2a System.	50	EA	750.00	37,500	48,750			48,750	48,750
<b>5.11 Bell/Schedule System:</b> Update system with Simplex Grinnell IP System.	1	LS	10,000.00	10,000	13,000		13,000		13,000
<b>5.12 CCTV Camera System:</b> Update system with Avigilon IP System.	1	LS	50,000.00	50,000	65,000			65,000	65,000
<b>5.13 UPS System:</b> Update system with SMART UPS 1500.	5	EA	450.00	2,250	2,925			2,925	2,925
<b>5.14 AV Systems:</b> Install new SMART SLR40wi projectors.	5	EA	2,500.00	12,500	16,250	16,250			16,250

Work Item Description	Qty	Unit	Unit Cost	Total	<sup>1</sup> Total w/ Soft Costs	Priority 1	Priority 2	Priority 3	Totals
<b>5. ELECTRICAL, DATA, SECURITY, COMMUNICATION, AV SYSTEMS</b>					<b>BOYLSTON ELEMENTARY SCHOOL</b>				
<b>5.15 AV Systems:</b> Install new SMART SLR60wi projectors.	4	EA	2,500.00	10,000	13,000		13,000		13,000
<b>5.16 AV Systems:</b> Install new Epson projectors.	14	EA	2,500.00	35,000	45,500		45,500		45,500
<b>Total</b>						34,450	1,350,174	236,450	1,621,074
<b>Total Inflated @ 6% for Priority 1, 4% for Priorities 2-3 and Compounded Annually</b>						38,708	1,642,693	350,004	2,031,405

<sup>1</sup>Total includes Soft Costs (30%): Contingency, Administration and A/E Fees.

---

PAGE INTENTIONALLY LEFT BLANK

BOYLSTON ELEMENTARY SCHOOL – SITE



1.1 Slight bituminous deterioration at driveway.



1.2 Damaged bituminous curbs.



1.4 Small area of deterioration at the concrete sidewalk.



1.5 Settling storm drain and deterioration of bituminous pavement.



1.6 Handrail extension does not meet ADA requirement.



1.7 Damaged timber guardrail.



## EXISTING CONDITIONS PHOTOGRAPHS

### BOYLSTON ELEMENTARY SCHOOL – BUILDING ENVELOPE



2.1 Ponding near roof drain.



2.3 Deteriorating standing seam metal roof system.



2.6 Cracked and spalling bricks.



2.8 Staining and efflorescence at ground face blocks.



2.11 Deteriorated soffit by Door #10.



2.14 Water infiltration at ground face block by the gym.



BOYLSTON ELEMENTARY SCHOOL – BUILDING INTERIORS



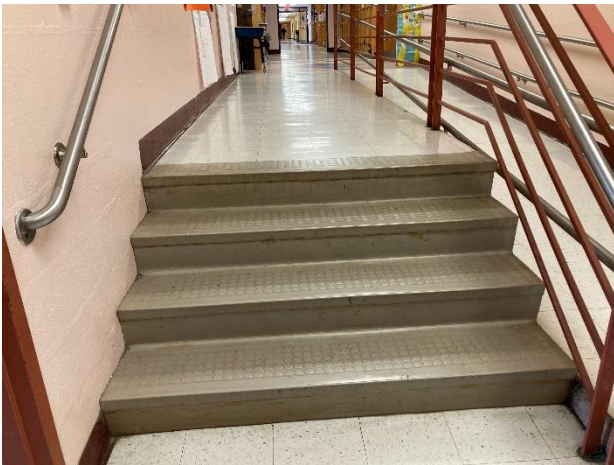
3.2 Stained ACT tiles in corridor.



3.4 Water infiltrating and deteriorating VCT flooring in corridor.



3.7 Cracks in epoxy flooring in kitchen.



3.9 Deteriorated rubber stairs and non-compliant guard and hand rails.



3.12 Corroded and peeling hollow metal door and frame.



3.13 Damaged classroom casework and hardware.



## EXISTING CONDITIONS PHOTOGRAPHS

### BOYLSTON ELEMENTARY SCHOOL – MECHANICAL, ELECTRICAL, DATA, SECURITY, COMMUNICATION, AV SYSTEMS



4.5 Outdated classroom unit ventilators.



4.7 Outdated rooftop air handling unit.



4.18 Non-accessible drinking fountains in gymnasium.



4.19 Outdated kitchen equipment.



4.21 Corroded exterior gas piping.



5.1 Suspended fluorescent light fixtures in classroom.

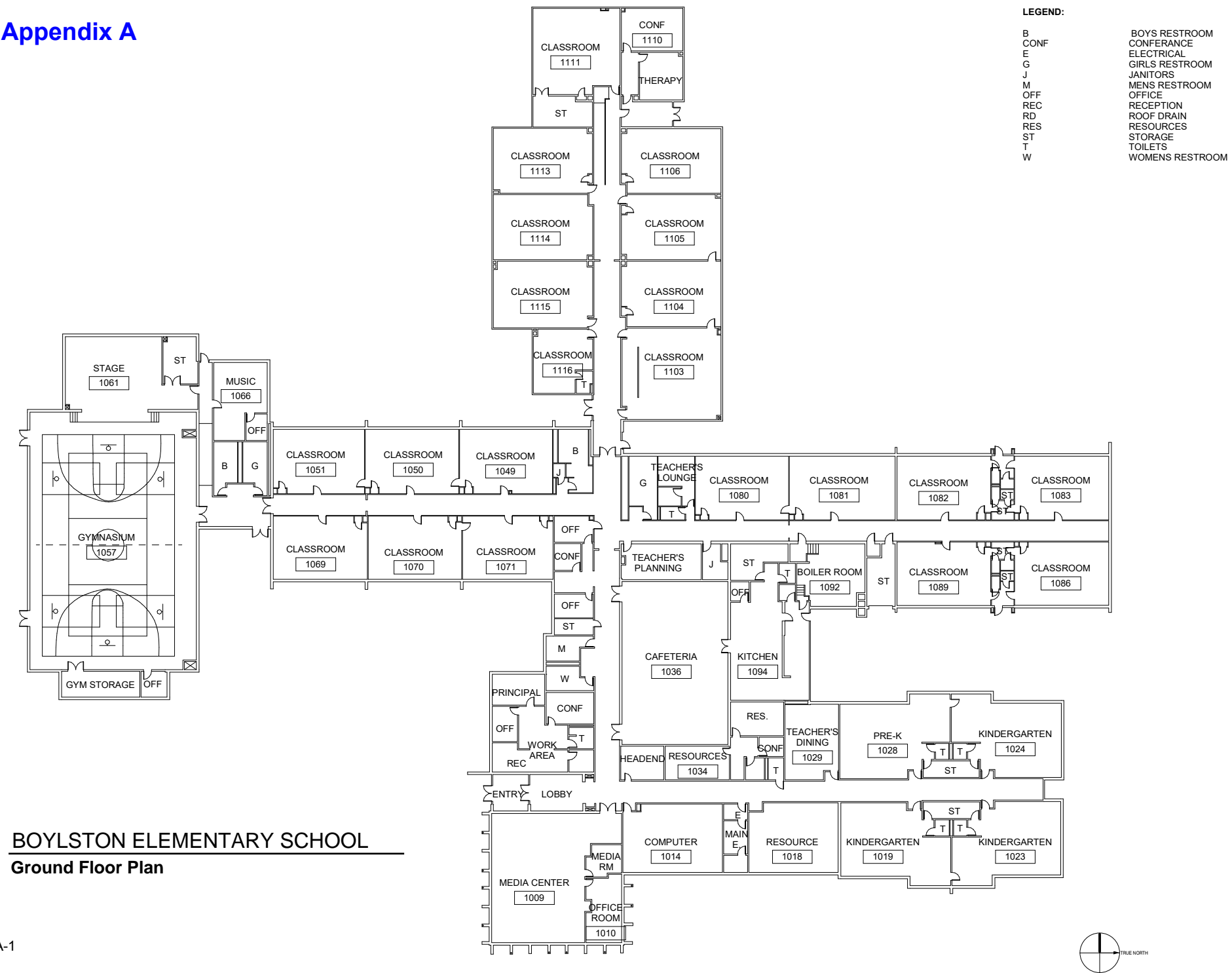


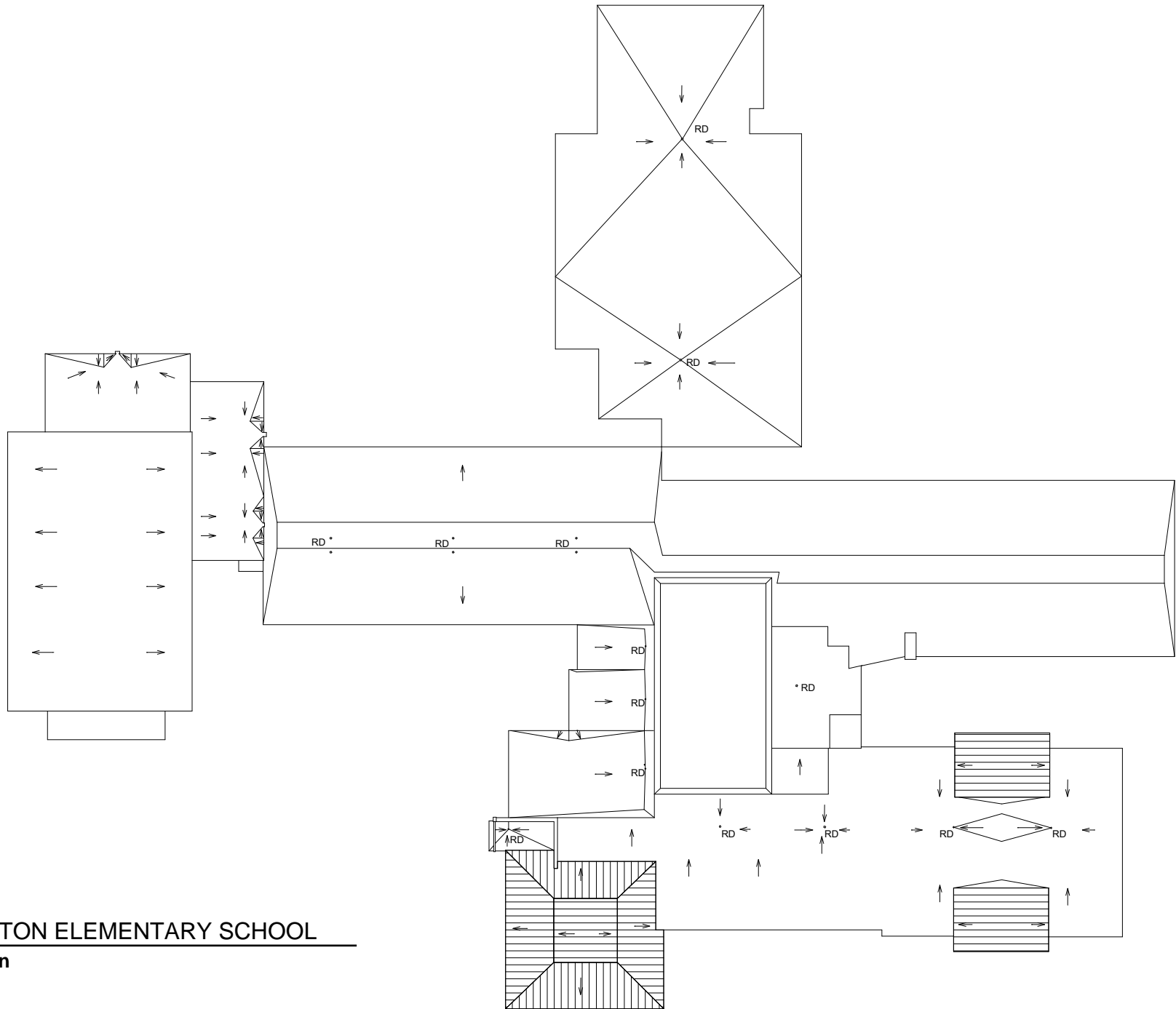
**Appendix A: H&A Drawings**

Boylston Elementary School – Ground Floor Plan

Boylston Elementary School – Roof Plan

Appendix A





**BOYLSTON ELEMENTARY SCHOOL**  
**Roof Plan**

